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EFFECTS OF ASSETS ON ATTITUDES AND BEHAVIORS:
ADVANCE TEST OF A SOCIAL POLICY PROPOSAL

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Advance Test of A Social Policy Proposal

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Abstract

Raising asset limits and creating individual development accounts have been proposed in welfare reform. In part the rationale for these proposals is that assets have positive effects on attitudes and behaviors, including long-term planning, greater work effort, and improved social connectedness. The Panel Study of Income Dynamics (PSID), between 1968 and 1972, included a wide range of attitude and behavioral measures.

In this study, data from the PSID are analyzed to test for the following: a) the effect of assets on attitudes and behaviors; b) the effect of attitudes and behaviors on assets; c) the effect of income on attitudes and behaviors; and d) the effect of attitudes and behaviors on income. A path analytic model is estimated using LISREL. Results indicate modest effects of some assets that are (a) consistently positive as predicted, and (b) overall as strong as the effects of income. Results support the proposition that assets have a positive effect on expectations and confidence about the future; influence people to make specific plans with regard to work and family; induce more prudent and protective personal behaviors; and lead to more social connectedness with relatives, neighbors, and organizations. These results suggest that policy demonstrations are desirable.

Keywords: Social Policy, Asset Based Policies; Asset Effects on Attitudes; Asset Effects on Behaviors; LISREL.

Effects of Assets on Attitudes and Behaviors: Advance Test of A Social Policy Proposal Rationale

In his 1994 welfare reform proposal, President Clinton included a number of measures to increase asset limits and create special savings accounts called individual development accounts (IDAs). These proposals, presented as legislation, were sponsored by Senators Daniel Moynihan, Edward Kennedy and others; and by Representatives Sam Gibbons, Dick Gephardt and others. Other proposals for IDA demonstrations had already been introduced by Representatives Tony Hall, Bill Emerson and Cardiss Collins, and by Senator Bill Bradley. Almost every welfare reform proposal, Republican and Democrat, would raise asset limits to encourage saving. This bipartisan emphasis on asset building is a new, and untested, approach to anti-poverty policy.

Assets are typically viewed as a storehouse for future consumption, but they may have important psychological and social effects as well. A fundamental theme in American culture suggests that wealth and property holding may have positive impacts on personal well-being, social status, and citizen participation. This theme has deep historical roots and a long-lasting influence in public policy. It is an idea that was expounded by Thomas Jefferson, recorded in the observations of Alexis de Tocqueville, and later invoked as a rationale for such policies as the Homestead Act, government-backed home mortgage lending programs, employee stock ownership plans, and proposals for ownership of public housing.[i]

However, specification of psychological and social effects of asset holding is not well developed. Typically, effects of asset holding have been presented as broad normative statements (e.g., Thomas Jefferson) or as sweeping narrative observations (e.g., Alexis de Tocqueville). To be sure, a number of eminent scholars, including Adam Smith, Karl Marx, Max Weber, Thorstein Veblen, William James, and others, have commented in various ways on effects of property holding, but clear propositions have seldom been formulated. The discussion has been more in the realm of social philosophy than social science. The aim of this paper is to provide an empirical test of the effects of assets on attitudes and behaviors.

Studies of Attitudes, Behavior, and Economic Status

In related research, several studies have been undertaken to assess relationships among attitudes, behaviors, and subsequent changes in labor force participation and income. Duncan and Hill (1975) examine the extent to which attitudes such as efficacy, trust, aspiration and ambition, risk avoidance, connectedness, time horizon, and economizing behavior affect economic status. Their study examines the effect of attitudes, behaviors, and economic status over a five year period between 1968 and 1972. These researchers conclude that the effects of attitudes and behaviors on economic status are negligible, and "despite the fact that some attitudes and behavior patterns had statistically significant effects on income change, they did not have powerful effects" (Duncan and Hill, 1975, p.99). Andrisani (1977) studies the relationship between internal-external attitudes and labor market experience. Based on modest effects he concludes that internal-external attitudes are systematically related to labor market experiences such as growth in average hourly earnings and occupational attainment. Duncan and Morgan (1981), on the other hand, conclude that attitudes are not important in explaining economic success.

In looking at this research overall, two features are evident. First, most of the studies focus on effects of attitudes and behavior on subsequent economic status, rather than vice versa (although occasionally researchers have examined effects of income on social and psychological factors; see Duncan and Hill, 1975). Second, most of the measures of economic status are based on some measure of income or an income-needs ratio. There is little systematic research on assets and their possible relationships with attitudinal and behavioral variables.

Studies Relating Assets with Social and Psychological Variables

There is a long history of cross-national research on correlates of property holding in anthropology and sociology (Rudman, 1992, provides an excellent review). Most of the work is ethnographic, although limited systematic studies have appeared in the last half-century. The unit of analysis in these studies is not at the individual or household level, and the work generally

does not speak to attitudinal and behavioral variables. Much of this body of work has a marked ideological bias either categorizing the harmful results or extolling the virtues of private property.

In modern sociology we find a large literature associating assets with social power (Mills, 1956; Kolko, 1962; Domhoff, 1971), but the focus is typically on the social power of the upper class, where assets are concentrated. There is little attempt to examine effects of asset holding among other population groups, or to specify propositions that might be tested in heterogeneous populations.

Some noteworthy exceptions, stating clear hypotheses and using empirical data, are by Kohn et al. (1990), who systematically test psychological effects of asset holding, including self-directedness and intellectual flexibility, in Japan, Poland, and the United States; and Vosler and Page-Adams (1993), who test the relationship between property holding and depression among auto workers in the United States. In both of these studies, significant effects of asset holding are found after controlling for income and education.

As an additional step toward formulating this idea in terms accessible to systematic analysis, Sherraden (1990, 1991) has developed propositions regarding attitudinal and behavioral effects of asset holding. The suggested effects include greater household stability, increased long-term thinking and planning, increased effort in maintaining and enhancing assets, increased human capital development, increased risk taking, greater personal efficacy and self esteem, increased social status, increased community involvement, and increased political participation. These propositions are stated at a general level, but they invite systematic tests. Haveman (1992) suggests that Sherraden may have "the signs on the relevant coefficients correct," but that confirmatory evidence is lacking.

For obvious reasons, it is very desirable to test asset-based policy proposals in advance, using any available empirical data. However, because assets and their effects have not been a focus of previous theory and research, most data sets do not offer opportunities for such tests. Fortunately, between 1968 and 1972, and only in these years, the Panel Study of Income Dynamics (PSID) included a wide range of attitudes and behaviors. When combined with PSID

asset measures of savings and house value, we have an opportunity -- as far as we know the only existing opportunity -- for a longitudinal test. In addition, we can simultaneously test for two major alternative explanations. The first alternative explanation is that attitudes and behaviors cause assets rather than vice versa. The second alternative explanation is that income, not assets, affects attitudes and behaviors. These different explanations are not mutually exclusive. It is likely that both income and assets affect attitudes and behaviors in similar directions, but to some extent independently; and the relationship between assets and attitudes and behaviors probably works both ways (Sherraden, 1991).

In this paper, we take a step toward testing the general theoretical statement that assets have effects on certain attitudes and behaviors (usually thought of as positive). Taking into account the theoretical statement and the two alternative explanations, we test for the following: a) the effect of assets on attitudes and behaviors; b) the effect of attitudes and behaviors on assets; c) the effect of income on attitudes and behaviors; and d) the effect of attitudes and behaviors on income.

Data and Procedures

A large proportion of the research on attitudes, behavior, and economic status is based on the Panel Study of Income Dynamics (PSID). The PSID is an on-going longitudinal survey of 5000 families, begun in 1968, conducted by the Survey Research Center at the University of Michigan (Hill, 1992). The study began with 4,802 households -- 1,872 low-income households were drawn from the Survey of Economic Opportunity and another 2,930 households were drawn from the national sampling frame of the Survey Research Center (Hill, 1992). Heads of household from PSID were selected to study the relationship between assets and attitudes and behaviors. Our final sample has 2,871 cases after filtering the data for accuracy and for those who were heads of household in both 1968 and 1972. The mean age is 43 years. Overall, 75 percent of the household heads are male and 25 percent are female. Regarding race, 66 percent are white, 32 percent are black, and the remaining 2 percent are Puerto-Rican, Mexican, or other.

Fortunately, it is possible to use the PSID to explore effects of assets on attitudes and behaviors and vice versa. Specifically, we can examine the effects of assets on prudence, efficacy, horizons, connectedness, and effort (variables explained below). However, the analysis is constrained by certain limitations in the data set. As with Duncan and Hill (1975), we restrict our analysis to a five year period from 1968 to 1972 because data on attitudes and behaviors have not been collected after 1972.[ii]

The PSID data set also enables us to examine simultaneously the two major alternative explanations. Accordingly, we examine the effect of income while testing for the effect of assets on attitudes and behaviors; and we also test for the second alternative explanation, that attitudes and behaviors affect assets rather than vice versa. All the effects were simultaneously estimated as a path model of directly observed variables using LISREL 8. A causal model with directly observed variables, such as the one tested here, is also classified as Submodel 2 in LISREL (Jöreskog and Sörbom, 1989, chap. 4). This is a class of models where the dependent and explanatory variables are directly observed.

Variables such as house value and income are directly observed and are used as such in the path model. All of the attitude and behavior variables and the savings variable are indices derived from other observed variables. Every index used in this analysis was derived, by the PSID staff, from a combination of weighting and aggregation of responses to specific sets of observed variables. The primary reason for using the PSID indices is that they have been used in previous analyses (Duncan and Hill, 1975; Andrisani, 1977; Duncan and Morgan, 1981), and we can thus compare our results with the relevant related research. Each index in the present study is used as an observed variable. Computation of a measurement model is not relevant since we used each of the indices as an observed variable; therefore we use a path model instead of a structural equation model with latent variables. Variables associated with each of the summated indices are specified in the footnotes.

Unlike traditional path models, it is possible to simultaneously estimate all effects in a path analysis model for directly observed variables using LISREL. In the traditional path

analytic model, one obtains reduced form equations first, and then solves for the structural

parameters (Jöreskog and Sörbom, 1989). Whereas in LISREL, a path model is considered as a

system of equations and all structural coefficients are estimated directly and the reduced form is

obtained as a by-product (Jöreskog and Sörbom, 1993). In causal models of directly observed

variables there are no latent variables, only directly measured variables: y's and x's. Since there

are no latent constructs, a measurement model and the associated factor loadings (represented in

LAMBDA-x, and LAMBDA-y matrices), and correlations of measurement error (represented in

THETA-DELTA, and THETA-EPSILON matrices) are not relevant and therefore not estimated.

Matrices representing factor loadings are fixed to identity, and matrices of measurement error are

fixed to zero (Bollen, 1989, p. 147). Moreover, in this submodel, the covariance matrix of

independent constructs is assumed to be an unconstrained free covariance matrix of x variables

(Jöreskog and Sörbom, 1989, p. 146).

We estimated the effect of assets in 1968 on all the attitudes and behaviors in 1972, while

controlling for effects of the respective attitudes and behaviors in 1968. Similarly, we estimated

the effects of attitudes and behaviors in 1968 on assets in 1972 while controlling for time one

effects of assets and income. Both sets of effects were tested simultaneously in the same model.

In addition, we simultaneously estimated the effects of income in 1968 on attitudes and behaviors

in 1972, and vice versa, in the same model.

Control Variables

Age, race, gender, education of the head of household, and a variable indicating the

presence of young children in the family are used as control variables. Age is the reported age of

the head of household and education is the number of years of school completed by the head of

household. Race (1 = white, 0 = non-white) and gender (1 = male, 0 = female) are ordinal

variables that have been dummy coded. The question -- how old is the youngest child under 18

in family unit? -- is used as our control for presence of young children in the family. Values for

this variable range between 1 indicating the presence of a child less than two years, and 9

indicating the presence of no children under the age of eighteen.[iii] These control variables are of

no theoretical or policy interest in the present discussion. Nonetheless, controls are used here to remove doubt about independence of asset effects.

Variables of Theoretical and Policy Interest

The variables in this study are *house value*, *savings, income, prudence*, *efficacy*, *horizons*, *connectedness* and *effort*. House value, savings and income in 1968 are independent variables affecting attitudes and behaviors in 1972 after controlling for the effects of attitudes and behaviors in 1968. Attitudes and behaviors in 1968 are independent variables affecting assets and income in 1972 after controlling for the effects of assets and income in 1968. All of these effects were estimated while simultaneously controlling for the effects of demographic variables identified above.

The *house value* measure is used as an indicator of asset holdings. For all those respondents who do not own a home, this variable indicates a value of zero and for those who own a home, the actual value of the home is reflected in this variable. Whether a person currently lives in a rental property and the amount of rent they pay is assessed separately from home ownership elsewhere in the survey. Appropriate accuracy codes have been used to filter out inaccurate estimates of house value, and 1968 house values were adjusted to 1972 dollars. Household savings is the other asset variable. The *savings* measure is the reserve funds index, which is a measure of savings undertaken by a family. A score of 5 indicates that the family has current savings of two or more months of income and a score of 1 indicates that the family does not have any savings. The savings reserve index was computed by the PSID staff using three other specific variables. In the first question respondents were asked if they had savings in the form of checking or savings accounts or governmental bonds. Another question assessed the extent of savings as a proportion of income. A third variable used in the computation of the reserve funds index reflected the extent of savings in the past five years.[iv] The original reserve fund index variable was reversed in order to make signs consistent throughout. The *income* measure refers to total family money income. This includes labor market earnings, public and

private income transfers, rent, and interest income for all members of the family. Income in 1968 was adjusted to 1972 dollars.

Attitude and behavior variables are *prudence*, *efficacy*, *horizons*, *connectedness*, and *effort*. [v] All are indices developed and previously used by the Survey Research Center of the University of Michigan. Prior use of the indices adds to their usefulness in the current analysis. *Prudence* is a modified form of the risk avoidance index developed by the PSID staff. [vi] Risk avoidance is considered positive in this context because it "is not the potentially beneficial entrepreneurial risk but rather is undue or unnecessary risk, indicated by excessive cigarette smoking, failure to fasten seat belts, having inadequate medical insurance or savings or operating uninsured vehicles" (Duncan and Hill, 1975, p.74). In our analysis, unlike the original risk avoidance index, the index for prudence does not incorporate the adequacy of savings as one of the proxy measures. In other words, measure of prudence is the same as the risk avoidance index minus the reserve funds measure. We undertook this alteration in the risk avoidance index to avoid confounding variables, because one of our asset variables is the savings reserve index. *Efficacy* is the efficacy-planning index developed by PSID staff from responses to specific questions about feelings, expectations, and confidence about the future.[vii] The index reflects a respondent's satisfaction with self and confidence about the future (Survey Research Center, 1972a). *Horizons* is the horizon proxies index, which includes responses to questions about obtaining a new job, having more children, and having specific educational goals for one's children.[viii] Horizons is an index of the specificity of a respondent's plans concerning labor market participation and family (Ehrlich, 1975). Horizons index indicates whether individuals have explicit plans to move to obtain a new job; explicit plans to have more children; and specific educational goals for ones children. *Connectedness* is an index of connectedness to sources of information and help. The index assesses whether a respondent is in contact with relatives and neighbors or is active in certain organizations.[ix] Both the horizon proxies index and the connectedness index have been termed "advantageous behaviors" in prior research (Duncan

and Hill, 1975). *Effort* is the real earning acts index, which is composed of behaviors that result

in non-money income or investment in human capital (Survey Research Center 1972a, p. 364);

this has been termed a "coping behavior" by Duncan and Hill (1975).[x] In the current analysis, we

do not employ a distinction between advantageous behaviors and coping behaviors (for a

discussion of the content and construction of indexes used in this analysis, see Survey Research

Center 1972a, pp. 363-72; 1972b, pp. 787-92).

Together, the five attitude and behavior variables are the closest approximations that

PSID data provide to the hypothesized asset effects suggested by Sherraden (1990, 1991).

Overall, these variables represent desirable personal and social attributes consistent with the aims

of social policy. Horizons, connectedness, and effort are particularly relevant to the content of

the current welfare reform debate. See Table 1 for descriptive statistics of all variables used in

the analysis.

Table 1
Descriptive Statistics of Assets, Income, Attitude and Behavioral
Variables Used in Path Analysis

| | 1968 | | 1972 | |
Variable	Mean	Std.Dev	Mean	Std.Dev
House Value	9110.49	12590.57	11699.55	14165.68
Savings	2.73	1.72	2.66	1.74
Income	8656.49	6925.67	10140.22	7776.04
Prudence	4.69	1.27	3.68	1.16
Efficacy	3.38	1.68	3.01	1.54
Horizons	4.27	1.30	4.28	1.02
Connectedness	5.89	1.70	6.02	1.64
Effort	1.85	1.30	2.13	1.49

Results

  The overall fit of the baseline structural equation model was adequate. The model has a

Goodness of Fit Index (GFI) of .96; Adjusted Goodness of Fit Index of (AGFI) of .81;

Comparative Fit Index (CFI) of .94 and a Relative Fit Index (RFI) of .74. While GFI indicates a

very good fit, the chi-square measure of fit indicated a less than adequate fit ($\chi 2$=1115.40, df=48,

p= .0). Discrepancy among measures of fit can be easily explained. It is known that some

measures of model fit -- chi-square measure of fit is foremost among them -- are prone to sample

size effects. As sample size becomes large so does the chi-square statistic, leading one to falsely

reject a model even if the model has an adequate fit (Yadama and Pandey, in press). Because our

analysis is based on a large sample size (N=2871), it is reasonable to expect large chi-square

values and therefore we relied on other measures of fit that are not as affected by sample size.

Our results indicate that several of the errors in equations (ζs) predicting the dependent variables

are correlated. Errors in equations predicting income and house value were allowed to correlate

and so were errors in equations predicting savings and horizons. The final model, with the loss

of only two degrees of freedom, is a markedly improved model with excellent indicators of fit.

The fit of our model improved upon freeing these error terms ($\chi 2$ = 383.22, df = 46, p =.0; GFI =

.99; AGFI = .93; CFI = .98; RFI = .91). The root mean square residual for the final model is low

(RMR = .021), and the root mean square error of approximation (RMSEA) is .051 (P-Value for

test of close fit = .40), both measures indicating a good overall fit.

  Table 2 reports results of our analysis testing for the effect of income and assets on

attitudes and behaviors and vice versa. Effects of each asset variable on the five attitude and

behavior measures are assessed only after controlling for age, race, gender, education, age of

youngest child, and the effect of the time one score of a given dependent variable. Coefficients

for control variables are not reported here because they are not of analytical interest (however,

readers may be interested to know that effects of assets actually increase in the presence of

control variables, while effects of income diminish). As stated above, income is included in the analysis as an alternative explanation for attitudes and behaviors.

In this analysis we find a number of significant but modest effects (Table 2). Five out of ten standardized coefficients relating the two asset variables and five attitude and behavior variables are significant, all in the expected direction. As predicted, savings has a significant positive effect on prudence (b = .20, p ≤.01), efficacy (b = .10, p ≤.01), horizons (b = .19, p ≤.01), and connectedness (b = .05, p ≤.05). The other proxy asset variable, house value, had one significant effect on horizons (b = .07, p ≤.01). Effort is the only variable not related to either of the asset variables.

Table 2
Standardized Path Coefficients for Changes in Attitudes, Behaviors, Assets and Income at time one (1968) on Attitudes, Behavior, Assets and Income at time two (1972)

Variable	Prudence (1972)	Efficacy (1972)	Horizons (1972)	Connectedness (1972)	Effort (1972)	House-Value (1972)	Savings (1972)	Income (1972)
Prudence (1968)	.38** (22.40)	--	--	--	--	.05** (4.12)	.04** (3.00)	.03** (2.73)
Efficacy (1968)	--	.37** (21.40)	--	--	--	.00 (0.04)	.04** (3.03)	.05** (4.32)
Horizons (1968)	--	--	.16** (8.69)	--	--	.03** (2.68)	.03* (2.15)	.10** (8.22)
Connectedness (1968)	--	--	--	.42** (24.78)	--	-.02 (-1.34)	.02 (1.35)	.01 (0.98)
Effort (1968)	--	--	--	--	.34** (19.40)	.02* (2.04)	-.08** (-5.92)	.00 (0.27)
House-Value (1968)	.05* (2.35)	.03 (1.42)	.01 (0.44)	.02 (0.81)	.00 (0.08)	.61** (41.57)	.07** (3.85)	.08** (5.38)
Savings (1968)	.22** (11.75)	.12** (6.43)	.10** (5.11)	.02 (1.27)	.02 (1.03)	.06** (4.19)	.54** (31.98)	.00 (0.00)
Income (1968)	.02 (1.02)	.07** (3.31)	.16** (7.38)	.05* (2.44)	.02 (0.94)	.19** (12.88)	.08** (4.42)	.68** (46.28)
R-Square	.23**	.21**	.11**	.20**	.12**	.61**	.41**	.62**

Note: T-ratios are in parentheses. Estimates are computed using LISREL VIII.
Source: Panel Study of Income Dynamics, heads of household in 1968 and 1972, N=2871.
*$p \leq .05$. **$p \leq .01$.

Alternative Explanations

As alternative explanations, we turn first to the possibility that it is income rather than assets that affects attitudes and behaviors. Looking at standardized path coefficients (Table 2), two out of five effects of income on attitudes and behaviors are significant and positive, as follows: prudence (b = .05, p ≤ .05), and horizons (b = .05, p ≤ .05). Efficacy, connectedness, and effort are not significantly related to income. While there are some income effects, as anticipated, it is noteworthy that the income effects are overall not as prominent and strong as the savings effects (Table 2).

We turn next to the possibility that attitudes and behaviors cause assets rather than vice versa. We have estimated the effects of attitudes and behaviors on savings, house value and income (Table 2). Four out of ten effects relating to assets are significant: prudence has a significant positive effect on house value b = .05, p ≤ .01) but not on savings; efficacy has a significant positive effect on savings (b = .05, p ≤ .01); connectedness has a significant positive effect on savings (b = .04, p ≤ .01); effort has a significant effect on house value (b = .03, p ≤ .05). One relationship is significant in the opposite direction: effort has a significant negative effect on savings (b = -.06, p ≤ .01). Overall, the effects of attitudes and behaviors on assets are in the predicted pattern, but quite modest.

Discussion and Conclusion

While this test of asset effects is far from perfect, it does have two highly desirable features: (1) it is longitudinal and (2) it simultaneously considers two alternative explanations. All of this occurs in a single statistical test. In this regard, the design of the analysis is as concise and elegant as we could hope. Seldom in social science research do we have an opportunity for a simultaneous test of key competing theories. We are very fortunate indeed that a data set existed which made the test possible.

Results support some of the hypothesized effects. One of the asset variables -- savings -- has significant effects in the predicted direction on three of the attitude and behavioral variables.

House value has a significant positive effect on prudence. Also, we can say that the savings and house value effects on attitudes and behaviors occur above and beyond the effects of income. In addition, we can offer a cautious statement of causality. Because of the construction of the statistical tests across longitudinal data, we can say that savings at one point in time affects attitudes and behaviors at a second point in time. We can also draw a similar conclusion for the effect of house value on prudence.

In this study, savings stands out as being particularly important in possibly influencing attitudes and behaviors. These effects are consistent with Sherraden's broadly stated propositions in that assets (1) have a positive effect on expectations and confidence about the future, (2) influence people to make specific plans with regard to work and family, (3) induce more prudent and protective personal behaviors, and (4) lead to more social connectedness with relatives, neighbors, and organizations. Clearly, much more work remains to be done in theoretically specifying and confirming these asset effects, but overall results suggest that the thinking is "on the right track."

One of the dependent variables, effort, is unrelated to assets. The general proposition is that when people have assets, they put in more effort in maintaining those and other assets. Although home-ownership and other literature largely supports this view, the current study does not. As an alternative proposition, perhaps when people have assets they tend to purchase services (home repair, car repair) and do not try as hard for human capital improvements (training for a new job, going back to school). This question is certainly fundamental to any consideration of asset-based social policy, and more studies are needed.

Looking at the first alternative explanation, the effects of income on attitudes and behaviors are not as strong as the effects of savings. This finding should give us considerable pause. Social policy in Western welfare states is dominated by the provision of income, either as "social insurance" or means-tested transfer. If savings provide equal or stronger effects on attitudes or behaviors -- and at the same time, economic development of households-- then perhaps more social policy should promote asset accumulation in this form.

In a test of the second alternative explanation -- that attitudes and behaviors cause assets -- we find that attitudes and behaviors do have some significant effects on asset accumulation. Thus, without overstating the strength of the findings, it appears that "it works both ways" in the sense that assets lead to more positive attitudes and behaviors, and the same attitudes and behaviors lead to more assets. This is perhaps an empirical glimpse of a "virtuous circle" in household development-- assets lead to more positive attitudes and behaviors, which in turn lead to more assets, and so on.

Turning to research issues, these results, while not overwhelming, suggest that assets deserve as much attention as income in studies that relate economic status with psychological and social variables. Moreover, the traditional emphasis on studying economic status as an outcome of attitudes and behaviors should be expanded to include the reverse proposition: in this case, that assets positively affect certain attitudes and behaviors.

Considering the restricted five year time period used in this analysis, it is also possible that the observed effects could be different -- either larger or disappear altogether -- over a longer time period. Ideally, future longitudinal tests would incorporate a longer time frame (although absence of attitudinal and behavioral measures in the PSID since 1972 is a problem in this regard). Future studies should also include more robust measures of attitudes and behaviors. It would also be helpful if future research examined these questions through a variety of methods.

Regarding asset-based policy demonstrations, at this writing the State of Iowa has passed legislation for an IDA demonstration over five years. Several small IDA projects are underway at local agencies around the country. Evaluation designs for most IDA experiments are to include social and psychological effects. President Clinton's proposal for an IDA demonstration also would require testing social and psychological effects. Given the results of this study, we conclude that the policy demonstrations are warranted.

Notes

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[i] A related proposal in public policy is the idea of capital accounts, primarily for youth, which have been suggested by Tobin (1970), Haveman (1988), and Sawhill (1989). These proposals are for a single lump-sum distribution late in adolescence, which might be thought of as a multi-purpose voucher for health, welfare, and education choices. However, the intention of these proposals is to provide a fund for welfare consumption choices. Effects of asset holding, other than for consumption choices, have not been discussed by these authors.

[ii] More reliable data on assets were gathered in 1984; however, since PSID data on attitudes and behaviors precedes the more reliable data on assets, it is not possible to examine the effect of assets on attitudes and behaviors after 1972.

[iii] Age of youngest child in 1968 is represented by variable V120. For specific details of this variable see Survey Research Center (1972b, p.25).

[iv] For details on the particular variables and the computational method for the reserve funds index see Survey Research Center (1972b, p. 261). The savings measure in the savings reserve index is truncated. It does not differentiate those that only have savings of two months' income from those who have savings greater than two months' income. While asset-based policy demonstrations do not limit themselves to encouraging savings of only two months' income, we are limited by the available data on savings included in the PSID.

[v] A note regarding two attitude and behavioral indexes that are available in the PSID but not employed in this analysis: An aspiration-ambition index is not used because it has resulted in counter intuitive effects in the past and the measure may be flawed. Duncan and Hill (1975, p.64) find a negative effect of income on the aspiration-ambition index, which they suggest obtains from certain components of the index, such as planning for or doing something about a better job, which are components generally associated with unsatisfactory income. An

economizing behavior index is not used because we can find no proposition in the literature that suggests a relationship between asset holding and economizing behavior (indeed, we might anticipate the opposite). Duncan and Hill (1975) discuss other possible behavioral measures at length.

[vi] Prudence (modified risk avoidance index of PSID) is constructed by summing the standardized responses to questions about holding auto insurance, medical insurance and personal smoking habits. One other question that is used to compute the index dealt with personal savings. To avoid any measurement confounding between the risk avoidance index and one of the asset variables (savings and reserve index) we re-computed Prudence by partialing out the contribution of the savings variable. Prudence is represented by a revised form of variables V397 (1968) and V2945 (1972) in our analysis. For details on the variable numbers and the specific questions used to compute this index see Survey Research Center (1972a, p.364) and Duncan and Hill (1975, p.74).

[vii] Efficacy (efficacy-planning index of PSID) is computed using five questions measuring a personal sense of effectiveness in carrying out plans and also a general future orientation of the respondent. Respondents were asked whether they thought life would work out; if they generally get to carry out the plans they envisioned; if they were future oriented or lived from day to day. In our path analysis we used the efficacy-planning index for 1968 (V419) and 1972 (V2939) to assess the effect of assets while controlling for time one effects. For greater detail on the questions and the variables see Survey Research Center (1972a, p.367) and Duncan and Hill (1975, pp.83-89).

[viii] Horizons (horizons proxies index of PSID) is computed using responses to questions about explicit plans to move to obtain a new job, explicit plans to have more children, specific educational goals for one's children. All asset effects on the horizons index are examined after controlling for the effects of prior Horizons. Horizons index for 1968 is V391 and for 1972 it is

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V2946. For greater detail see Survey Research Center (1972a, p.364) and Ehrlich (1975, pp.189-207) for prior application of the Horizons index.

[ix] Connectedness (the connectedness index of PSID) determines the extent to which a head of household is in touch with sources of information and help. "Contact with relatives and neighbors belonging to organizations, and use of the media are hypothesized to enhance opportunities for information and its potential use" (Survey Research Center, 1972a, p.363). This index is computed using nine specific variables that assess attendance at organizations; use of the media; acquaintance with neighbors and relatives; and participation in any labor union (Survey Research Center, 1972a, p.363; Duncan and Hill, 1975, p.113). The connectedness index is represented by variables V393 (1968) and V2947 (1972).

[x] Effort (real earnings acts index of PSID) indicates behaviors which result in nonmoney income or investment in human capital. The index is constructed from responses to questions on the extent of home repair, car repair, home gardening and other productive money saving or human capital accumulation activities undertaken in one's spare time. The index is calculated from responses to four specific questions (see Duncan and Hill, 1975, pp.94-96). The effort index is represented by variables V395 (1968) and V2943 (1972).