

**The Effects of Holding Assets on Social and Economic Outcomes of Families:
A Review of Theory and Evidence**

**A Report in the Series
Poor Finances: Assets and Low-Income Households**

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Poor Finances: Assets and Low-Income Households

INTRODUCTION TO THE SERIES

Economic security throughout the life course is intrinsically linked to both income and asset ownership. The majority of current social policies focus primarily on income supports and social services. However, building assets can also help individuals, families, and communities expand their economic horizons.

America has a longstanding history of promoting ownership, as reflected in existing policies to promote home and business ownership, investment, and saving. New opportunities for people to save and become asset owners will likely increase the number of individuals and families able to build assets and improve the economic security of all Americans. Greater inclusivity and accessibility of traditional approaches to expanding ownership may make it easier for lower and middle income families to save. Still, while theory and evidence suggest that improved asset-based policies may promote development of low-income individuals and families, and perhaps communities and society as a whole, research in this area of asset development is in its infancy. There is still much to learn.

Poor Finances: Assets and Low-Income Households is a series of reports on poverty, asset building, and social policy. The purpose of the series is to assess the nascent state of knowledge and policy development and to synthesize recent progress in these areas. Specifically, the reports in the series will:

- evaluate what is known regarding the measures, distributions, determinants, and effects of asset holding;
- develop a portrait of the assets of low-income households;
- develop conceptual frameworks for viewing assets and liabilities;
- assess the strengths and weaknesses of data sources on assets and liabilities;
- chart directions for future research;
- examine the effects of means-tested program policies on asset building; and
- inform subsequent discussions of public policy.

While the focus of this series of reports is on asset accumulation and asset-based policies for low-income individuals and families, the conceptual frameworks developed are not limited to low-income populations. This broad approach is an effective way to identify the overall critical issues that relate to asset holding for all populations. Where appropriate, however, various reports point out when the framework specifically applies to low-income, minority, and single parent households. This distinction is important because these subgroups are particularly vulnerable to low asset accumulation. The definition of low-income used in the series of reports is necessarily imprecise. The reports reflect a broad literature synthesis and definitions of low-

income are not uniform across studies, surveys, or public programs. However, low-income can be broadly thought of as affecting households in the bottom income quintiles.

This report in the series, “Effects of Asset Holding,” provides a conceptual framework on the effects of asset holding and reviews the empirical literature based on this framework. The report distills the main findings on how assets influence economic, social, psychological, and child well-being and provides empirical support for the benefits of asset building.

Why Assets Are Important

In describing why assets are important, it is useful to begin by distinguishing income from assets. *Incomes* are flows of resources. They are what people receive as a return on their labor or use of their capital, or as a public program transfer. Most income is spent on current consumption. *Assets* are stocks of resources. They are what people accumulate and hold over time. Assets provide for future consumption and are a source of security against contingencies. As investments, they also generate returns that generally increase aggregate lifetime consumption and improve a household’s well-being over an extended time horizon.

The dimensions of poverty, and its relative distribution among different social classes, are significantly different when approached from an assets perspective, as opposed to an income perspective. Those with a low stock of resources to draw on in times of need are asset poor. This *asset poverty* may leave them vulnerable to unexpected economic events and unable to take advantage of the broad opportunities offered by a prosperous society. Many studies have found that the rate of asset poverty exceeds the poverty rate as calculated by the traditional measure, which is based on an income standard. Many U.S. households have little financial cushion to sustain them in the event of a job loss, illness, or other income shortfall. Also, social and economic development of these households may be limited by a lack of investment in education, homes, businesses, or other assets. To the extent that low resource holdings limit the potential for social and economic development, understanding how those with limited assets can build up their asset base is likely to be an important policy issue.

Income and Assets in Public Policy

Outside of education, traditional social programs that assist low-income populations have focused mainly on income and social services that fulfill basic consumption needs, which have been essential to the well-being of families and children. An asset-based approach could complement this traditional approach and could shift the focus to the long-term development of individuals, families, and communities. This focus provides a broader picture of the dynamics of poverty among the low-income population.

Asset-based policy has many potential meanings. These include policies to promote the accumulation and preservation of financial wealth, tangible property, human capital, social capital, political participation and influence, cultural capital, and natural resources. While all of

these meanings have value, building financial wealth and tangible nonfinancial assets for the purpose of household social and economic development is the focus of this series of reports.

The United States and many other countries already have large asset-based policies. In many cases, these operate through the tax and employer-based systems, so that public transfers occur via tax benefits (e.g., home mortgage interest deduction; tax breaks for contributions to a variety of retirement accounts; tax-preferred education accounts and College Savings Plans; benefits for other emerging policies, such as Medical Savings Accounts). These asset-based policies have grown rapidly in recent years and today represent a significant proportion of overall federal expenditures and tax subsidies.

Asset Policy for Low-Income Households

Low-income individuals and families frequently do not participate in existing asset-based mechanisms. The reasons may be threefold. First, this population is less likely to own homes, investments, or retirement accounts, where most asset-based policies are targeted. Second, with little or no federal income tax liability, the low-income have little or no tax incentives, or other incentives, for asset accumulation. Third, asset limits in means-tested transfer policies have the potential to discourage saving by the low-income population. In many respects, this population does not have access to the same structures and incentives for asset accumulation. The potential of asset building to promote long-term development of low-income households motivates this series of reports. *Poor Finances: Assets and Low-Income Households* attempts to serve as a central resource that provides a comprehensive assessment and critique of the current and emerging knowledge base regarding asset building for low-income individuals and families.

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EXECUTIVE SUMMARY

This report examines the effects of asset-holding and asset accumulation on individuals and families from theoretical and empirical perspectives. The report pays special attention to the way assets affect low-income families, while recognizing that research on this topic is limited. The goal of the report is to distill the main findings from the vast theoretical and empirical literature on how assets influence economic and social well-being. The first step is to present a conceptual framework based largely on our classification of existing literature in economics, psychology, and sociology. The second step is to bring together the empirical findings relevant to the categories specified in the conceptual framework. The report concludes with suggestions for future research, especially related to the role of assets in the lives of low-income families.

Conceptual Framework Hypotheses and Empirical Findings

Key findings from the conceptual framework and related empirical findings are summarized below. The majority of empirical studies in the literature do not attempt to control for the “endogeneity” of assets. That is, the studies do not establish that assets are the cause of certain outcomes, rather than simply being associated with the outcomes but caused by other factors. Therefore, most results should be interpreted as associations and relationships, not as causal effects or impacts. We reserve causal terms such as “effect” and “impact” for findings where the methods used are more likely to support a causal relationship. In addition, a limited number of studies exist for many outcomes, and findings on assets’ relationship to social well-being and civic engagement are mixed. These limitations are reflected in the suggestions for future research.

- ***Assets and net worth.*** Conceptually, the benefits from assets generally require individuals to increase their net worth, but in some cases (e.g., car and homeownership), asset ownership can help families even when the effects on net worth are modest.
- ***The effects of asset holding on income.*** Conceptually, assets can raise income directly through interest, dividends, capital gains, and the flow of services (such as housing services). Assets can also raise income indirectly, for example, through owning a car and its effect on improving job opportunities. Assets can limit the variability of income by diversifying income sources (by having income from assets as well as from work) or magnify the variability of income if assets are closely tied to income (e.g., stock in one’s own company and the company fails.) Empirically, financial asset holdings and car ownership are associated with positive income and employment outcomes, with some evidence that the relationship is causal.
- ***The effects of asset holding on consumption.*** Conceptually, a central role of assets is to cushion the decline in consumption that might otherwise arise with a sudden income loss. Families can draw down their assets or use assets as collateral to borrow and replace lost

income, thus potentially experiencing a smaller loss in consumption. Empirically, we find evidence that access to credit and assets are importantly related to consumption and material hardship, but no attempt to measure a causal relationship.

- ***The effects of asset holding on future assets.*** Conceptually, access to modest liquid financial assets can help people obtain assets on good terms, by providing funds for the down payment on a house or car. Homeownership is of special importance partly because mortgages typically require monthly contributions to the loan principal. Although the impact on long-term net worth of buying one's home versus investing in other assets is uncertain, homeownership appears to reduce the risks of large increases in housing costs. Empirically, our review finds preliminary evidence that homeownership and assets are strongly positively related, though there are no convincing attempts to measure a causal relationship. There is a surprisingly low annual nominal appreciation rate on homeownership (2–5 percent), but a higher rate (8.6 percent) when one accounts for important factors such as the implicit rent received from homeownership. The benefits of homeownership are lower for low-income and minority families than for moderate- and high-income families. We also find a causal relationship between participation in an Individual Development Account (IDA) program and homeownership for blacks and business equity for whites.
- ***The effects of asset holding on self-sufficiency.*** Conceptually, assets give people the opportunity to pursue desired occupations or self-employment and convey a greater sense of personal efficacy. People with assets can choose how to use available resources, for their own consumption, for helping their children, or for contributing to the needs of others. Empirically, financial assets are positively associated with income and negatively associated with welfare receipt for women experiencing marital disruption, suggesting that assets may be associated with self-sufficiency.
- ***Effects of asset holding on social well-being and civic engagement.*** Conceptually, the economic benefits of asset holding may lead to social benefits, including increased household stability and reduced tension during periods of unemployment. Homeownership and other assets may help low-income families gain respectability, residential stability, a sense of control, and to become more involved in their communities. The empirical findings on the relationships between asset holding and social well-being and civic engagement are limited and provide mixed results, with some finding no relationships and others finding positive relationships.
- ***Effects of asset holding on child well-being.*** Conceptually, enhanced family and residential stability derived from asset holding are likely to help children improve their educational outcomes and feel more rooted in their community. Empirically, a relatively large empirical literature suggests that homeownership improves children's educational

attainment and decreases teenage pregnancy, among other potential effects. Homeownership's effects likely work through its role in increasing residential stability.

- ***Effects of asset holding on health and psychological well-being.*** Conceptually, by helping people meet unanticipated health care costs and thus encouraging them to seek appropriate diagnosis and treatment, assets can improve health outcomes. The empirical literature presents some evidence that assets positively affect health and psychological well-being in a causal way. More studies find a positive association between assets and health and psychological well-being, but without causal evidence.
- ***Adverse consequences of asset accumulation.*** Conceptually, assets can hurt families who make unwise investments, borrow too heavily or at too high a cost, face high transaction costs, or neglect critical current needs to save. Our review finds limited empirical evidence about the adverse consequences of asset building efforts. Four papers raise concerns about homeownership, especially for low-income families, while a fifth paper raises concerns about decreased consumption while building assets, though the more serious effects are for a small share of respondents.

The empirical findings, even if limited, highlight important and largely positive relationships between asset holding and outcomes measuring economic well-being, child-well being, and health and psychological well-being outcomes. These positive findings provide some empirical support for asset-based social policy. The literature measuring the effects of asset holding on outcomes, however, is still in its early stages, especially with regard to effects on low-income families. We suggest several directions for future research to answer key policy-relevant questions.

Suggestions for Future Research

- ***Measure the causal relationship between asset holding and outcomes.*** Demonstrating causal relationships is a gold standard to strive for in empirical research, whether in assessing the impacts of asset holdings or any other area. The literature measuring relationships between asset holding and outcomes has barely begun to measure causal relationships. Of the roughly 25 studies reviewed, only 9 attempted to control for the endogeneity of assets. Without controlling for this, we cannot know the causal effect of assets on outcomes. Empirical research measuring causal relationships between asset holdings and outcomes such as economic mobility, material hardship, self-sufficiency, and social well-being is a high priority for future research.
- ***Measure the impact of homeownership for middle and low-income groups.*** Future research measuring financial returns to homeownership could incorporate appreciation, implicit rent, mortgage costs, tax implications, forced savings, as well as rent and housing risk. Only one of the identified studies measures the total return to homeownership. More

empirical evidence on the short-term and long-term impacts of homeownership for low-income families is another high priority. The general assumption often is that homeownership is good, even for very low-income families. Researchers could identify under what circumstances this assumption is accurate or inaccurate.

- ***Further assess the benefits and consequences of asset holding for low-income, low-education, and minority households.*** In general, more empirical evidence is needed to assess the benefits and consequences of assets for low-income, low-education, and minority households.
- ***Reassess the mortgage income tax deduction along with other subsidies to asset holding.*** The mortgage income tax deduction provides much stronger homeownership incentives for moderate- and high-income families than for low-income families because low-income families are less likely to itemize their tax deductions, pay lower income tax rates, and own less expensive homes with smaller mortgages and mortgage interest payments. As the mortgage income tax deduction is not a refundable credit, it has no benefit for those very low-income families with no federal income tax liability. Policy research can reassess the mortgage income tax deduction and provide suggestions for increasing incentives for homeownership among those low-income families.
- ***Consider the type of assets when measuring effects.*** Our review suggests that findings on the relationship between assets and outcomes depend on the types of assets considered. For example, financial assets are most important in some studies, while non-financial tangible assets such as cars and homes are more important in others. As such, an examination of specific types of assets, if data allow, would enhance understanding in this area. Net worth could also be considered as a specific measure of assets. We found little empirical evidence on the potentially important effects of net worth on outcomes.
- ***Assess the impact of the interaction of financial literacy and assets on social and economic outcomes.*** The effects of assets may vary systematically with the level of financial knowledge. If so, the gains from assets might be raised significantly with the addition of expanded financial education, especially for low- and middle-income families.

I. INTRODUCTION

Assets are rights or claims related to property, both tangible (financial and physical assets) and intangible (e.g., human capital). They are a stock of resources that can be converted into a flow of income, and provide individuals and families with security and with the capacity to increase their living standards. To achieve these purposes, people save and invest in financial, physical, and human capital assets.

The rationale for government involvement in asset-based social policy is that encouraging asset accumulation, especially among low-income and lower-middle income families, will lead to positive social and economic outcomes, both for the families themselves and for others in society. Until recently, asset-based policies were not a priority for helping poor and near-poor families. Certainly, asset-based policies, including favorable tax treatment for retirement savings, homeownership, and other assets, have encouraged asset holding by middle- and high-income families. But, these tax-based asset-building incentives do little for the poor or near-poor since they pay little or no federal income taxes. Some policymakers favor extending the potential benefits of asset development by trying to reach low- and lower-middle income families.

In any consideration of new policies to do so, one must confront several questions. First, which policies can best stimulate asset-holding and sounder balance sheets? Second, if various policies are effective, what are their likely costs and benefits? In particular, can expanding asset ownership yield significant economic and non-economic gains among those with low incomes? This report focuses on the second set of questions by examining a body of evidence about the benefits as well as possible adverse consequences of asset accumulation and asset holding among low-income families. As we will see, existing studies offer considerable evidence but often less than definitive answers about the extent to which the accumulation and holding of assets benefit low-income families.

A. Brief Overview, Motivation, and Questions to be Answered

Assets convey an array of economic and social benefits. People must sacrifice current consumption in order to accumulate and retain assets, but in doing so, they have the potential to raise their long-term incomes, gain economic security, and improve their psychological well-being. In some ways, the availability of assets is especially critical for low-income families. Individuals at the economic margins are much more likely to experience severe material hardships when they lack assets or the ability to borrow to deal with an economic shock, such as unemployment.¹ Yet, until recently, few researchers or policymakers considered how assets affect the lives of poor or near-poor families. The nearly exclusive focus has been on raising current incomes and not on whether families use some of their income to save, invest, and build assets.

¹ Some low-income families will turn to social benefit programs, but others are ineligible or reluctant to participate.

The report’s assessment of the effects of assets is organized around three questions: (1) What are the significant financial benefits of possessing assets? (2) What are the significant non-financial benefits of possessing assets? and (3) What are the adverse consequences of individual level asset building efforts?

The report does not take up the question of what factors determine asset levels, a topic covered in the *Poor Finances* report titled “Determinants of Asset Building.” At the same time, we recognize that the possibility that the impacts of assets, especially how people use their assets, may depend on how people built their assets—whether the resources came from savings, from gifts or inheritances, or from an unanticipated jump in asset values. Certainly, the effects of assets will depend on the level of debt and the short-term/long-term composition of debt undertaken to accumulate the assets. Nonetheless, this report’s review of the effects of assets and net worth assumes the accumulation process has already taken place.

The next section briefly points to the central economic, sociological, and psychological theories for how assets affect outcomes. Section III offers an overview of the main data sets and methodologies used to test these and other arguments. In Section IV, we examine the theoretical rationale for expecting specific effects of assets and review the empirical literature testing these and related effects. The categories of effects are: how assets influence economic well-being, social well-being, child well-being, civic engagement, and health and psychological well-being. For the purpose of this report, we limit the scope of the review primarily to assets other than human capital assets and consider human capital only peripherally.

II. BRIEF OVERVIEW OF ECONOMIC AND OTHER THEORIES

The theoretical literature on the rationale for asset accumulation by households is vast. A convenient starting point is economic theory, which generally assumes that people make decisions about assets and other aspects of economic life by maximizing their self-interest, subject to constraints.² In multi-period economic models, individuals try to optimize their lifetime satisfaction by maximizing the present value of their lifetime income. Accumulating assets (and borrowing) provide ways in which the timing of an individual’s consumption can differ from an individual’s income. The life cycle model proposed by Ando and Modigliani (1963) is central to the rationale for individuals to borrow, save, and accumulate assets. In life cycle models, smoothing consumption involves borrowing when young, building up savings in middle age, and dissaving after retirement. In addition to providing freedom for the allocation of consumption over time, assets can raise permanent income, depending on whether people earn an unusually low or high return on investments, and can allow people to make bequests.

² In recent years, economists and psychologists have developed the field of behavioral economics to account for non-rational factors in savings and asset allocation decisions under risk and uncertainty. For a series of key papers in this literature, see Camerer, Loewenstein, and Rabin (2004).

Another economic rationale for accumulating and sustaining assets is the precautionary motive. Assets can help families deal with unforeseen contingencies that sharply reduce incomes.³ Unemployment and disability are examples of unforeseen shocks that suddenly lower income, but need not lower consumption by the same amount so long as assets are available as a cushion. Asset accumulation also offers a way for households to increase permanent income because of the time value of money and because of opportunities to earn high, though sometimes risky, rates of return.⁴ Some assets, such as automobiles and housing units, can increase economic welfare by providing a flow of services that might be more costly and/or more risky to rent than to own (Sinai and Souleles 2005); these assets may contribute indirectly to incomes as well by helping workers obtain and keep their jobs (Raphael and Stoll 2001).

Sociological and psychological theories link assets to social interactions and to complex motivations affecting assets and investments. These disciplines focus on how assets affect people's feelings of security, their motivations to take risks, their self-efficacy, and their identity. The central reference to this literature, especially as it relates to low-income families, is Michael Sherraden's 1991 book, *Assets and the Poor*. Many other studies present theories that highlight potential social and psychological effects of asset-holding (e.g., Edin 2001; DiPasquale and Glaeser 1999; Rossi and Weber 1996; and Oliver and Shapiro 1995).

Although it is difficult to test the causal impacts of assets on outcomes, a substantial empirical literature has emerged that offers sometimes strong and sometimes only suggestive evidence. Many of the relevant studies use similar data sets and methods. The next section analyzes the strengths and weaknesses of the data and methods commonly used. We then present a framework for classifying the topics before examining theories and empirical studies on each topic.

III. OVERVIEW OF DATA AND METHODS USED IN THE EMPIRICAL LITERATURE

The primary emphasis in our review is on studies dealing with large, representative samples within the United States. To observe actual effects of assets will nearly always require data over a long time period, certainly more than one year. Ideally, such data come from panels in which respondents are followed over time. Yet even when panel data are available, tracking assets and linking assets to outcomes poses difficult data and methodological challenges.

A. Data Sources Used in the Literature

Survey data used to examine the effects of assets commonly come from the following four surveys: the Panel Study of Income Dynamics (PSID), the Survey of Income and Program Participation (SIPP), the National Longitudinal Survey of Youth (NLSY), and the National Survey of Families and Households (NSFH). This is not surprising, as all four data sets are

³ See, for example, Keynes (1936), Deaton (1991), and Haveman and Wolff (2000).

⁴ For an excellent review of modern economic thinking on these issues, see Bodie and Merton (2000).

longitudinal, contain a rich set of correlates and outcomes of interest—important strengths for evaluating the effects of asset building—and are nationally representative of the U.S. population or a subset of the U.S. population.⁵

Researchers have also used other data sources to examine the benefits and consequences of possessing assets. These include experimental data from an American Dream Demonstration Individual Development Account (IDA) program in Oklahoma (Mills et al. 2006), survey data from multiple American Dream Demonstration IDA program sites (Moore et al. 2001), the American Housing Survey (Nichols 2005), the Current Population Survey (CPS) (Kane 1994), the Health and Retirement Study (HRS) (McGarry and Schoeni 1995), the National Survey of America’s Families (NSAF) (Scanlon and Adams 2000), and Office of Housing Enterprise Oversight housing price indices (Goetzmann and Spiegel 2002), among others. These and other studies are summarized in the Appendix.

Strengths and Limitations of Data Sources

The primary strengths of the PSID, SIPP, NLSY, and NSFH are their ability to follow individuals over time and their inclusion of measures of assets and of key outcomes. Longitudinal data are important because they better enable researchers to distinguish between the true effects of assets and the effects of other factors that lead some people to accumulate more assets than others. By using longitudinal data, the researcher can potentially account for selection into asset holding and for reverse causation—the possibility that observed outcomes are determining asset levels rather than asset levels determining outcomes. These tools permit better estimates of the causal effect of assets. Experimental, longitudinal data, such as that from the IDA program in Oklahoma, are best able to distinguish true asset effects from other factors, but are less generalizable to the broader population of U.S. families.

Studying the effects of assets requires rich data on the personal and family characteristics and other correlates of assets as well as several outcomes of interest. The Survey of Consumer Finances (SCF) is less used in this literature because, while rich in asset data and thus strong in measuring assets, the SCF measures only a modest set of background and outcome variables and provides data on individuals only at one point in time.

B. Methods Used in the Literature

Empirical research documenting a positive association between asset holdings and outcomes provides encouraging support for theoretical hypotheses about the benefits of asset holdings. That is, associations can point us in the right direction. However, establishing causal relationships between asset holdings and outcomes is the gold standard to strive for, whether in assessing the impacts of asset holdings or any other area. The studies we examine use both

⁵ Another report in the *Poor Finances* series, “Assessing Asset Data on Low-Income Households: Current Availability and Options for Improvement,” provides more details on these and other asset-related data sources. It is available at <http://aspe.hhs.gov/hsp/07/PoorFinances/data/index.htm>.

descriptive and multivariate methods to measure the relationship between asset holdings and outcomes. The methods employed differ in their ability to determine associations and causation. A particularly important issue in our context that often limits our ability to measure causal impacts is the endogeneity of assets. Below, we explain why controlling for this endogeneity and measuring causation are important and the different descriptive and multivariate methods used in the literature.

Why Controlling for the Endogeneity of Assets is Important

Homeownership is an example of an asset that is an endogenous variable. This and other assets are embedded in interactive relationships between ownership and outcomes. Owning a home may be the result or the cause of such correlated individual outcomes as good citizenship or parenting (DiPasquale and Glaeser 1999, pp. 356, 381-392). Technically speaking, a variable is endogenous if it is correlated with the error term of the regression for any reason. Practically speaking, to determine whether a variable is potentially endogenous, we must consider whether other factors (education, financial literacy) are correlated both with the outcome variable (good citizenship or parenting) and with the explanatory variable of interest (homeownership). It may be that education or other factors are causing the outcome of interest, say good citizenship, but the positive correlation between assets and the outcome are mistaken as a causal role for assets. When research does not take account of all factors other than assets that are both correlated with assets and the outcome, the estimate of the effect of assets on the outcome variable will be biased. In fact, all the measures from the regression may be biased. When a single explanatory variable in a regression (such as asset holding) is endogenous, it generally results in biased estimates of the effects of all explanatory variables in the regression. The result is potentially biased estimates of the effects of asset holding (e.g., homeownership) and all other explanatory variables (e.g., age, race/ethnicity) on the outcome of interest (economic well-being, child well-being).

For example, parents who own housing may systematically differ from parents who rent housing in terms of observable characteristics (such as educational attainment) and unobservable characteristics (such as motivation and altruism). The same characteristics that make some parents more likely to own may also make those parents more likely to be good citizens, bring up successful children, or achieve other positive outcomes. As a result, homeownership may be credited for the effect of differences in these characteristics. While it is relatively easy to control for observable characteristics, it is difficult to take account for unobservable differences among households (Green and White 1997, p. 453). As a second example, a finding that shows that owners are more likely to know the names of their congressional representatives may mean (1) that owners are more knowledgeable about politics because they are owners [asset causes knowledge], (2) that knowledgeable persons become owners [knowledge causes assets, also known as reverse causation], (3) both [simultaneous outcomes], or (4) that better educated people are both more likely to be owners and more likely to be knowledgeable [education not

assets is responsible for the increased knowledge] (Rossi and Weber, p. 9). Appropriate econometric methods that control for the endogeneity of asset holding are needed to sort out the first causal relationship from the other potential relationships.

The majority of methods used in the literature do not attempt to control for the endogeneity of assets. Therefore, most results should be interpreted as associations and relationships, not as effects or impacts. Many authors use language suggesting a causal relationship between assets and outcomes (see the Author's Principal Conclusions column of in the Appendix table), when in fact the method used does not support a causal relationship. Where the evidence does not support a causal relationship, we use terms such as "associated" and "related" to describe the findings (Findings column in Appendix). We reserve causal terms such as "affect," "effect," and "impact" for findings where the methods used are more likely to support a causal relationship.

Descriptive Methods

Three main types of descriptive analyses are used in the literature to measure outcomes for families holding assets (e.g., a home or car): (1) presenting means without a comparison group (Moore et al. 2001), (2) comparing costs or returns on financial investments (Baker 2005; Baker and Baribeau 2003; Duda and Belsky 2001; Goetzmann and Spiegel 2002), and (3) comparing means longitudinally (e.g., before and after home purchase) (Reid 2004). In general, non-experimental descriptive analysis, as used by these studies, do not control for the endogeneity of assets. However, descriptive analyses that involve comparisons—either cross-sectionally or longitudinally (before/after) do a better job of controlling for endogeneity than analyses without comparisons.

Multivariate Methods

Four main types of multivariate methods are used in the literature to measure the relationship between asset holding (e.g., homeownership) and outcomes while controlling for other factors. Multivariate methods control for observed factors included in the regression (e.g., age, race/ethnicity), and in some cases unobserved factors, and thus the endogeneity of asset holding.

Ordinary least squares (OLS), logit, probit, general linear model (GLM), and hierarchical regression control for observable characteristics included in the regression, but not generally for unobservable characteristics and thus not for the endogeneity of asset holding. OLS, logit, and probit regression models are used by Aaronson (1999), Bynner and Despotidou (2001), DiPasquale and Glaeser (1999), Jencks and Mayer (1989), Green and White (1997), Henretta (1984), McGarry and Schoeni (1995), Raphael and Rice (2002), Reid (2004), Rossi and Weber (1996), Sullivan (2005), Williams (2003), and Zhan and Sherraden (2003). GLM and hierarchical regressions are used by Scanlon and Adams (2000). Some of these studies use more

than one type of method, with a second method attempting to control for endogeneity, and so are listed below.

Instrumental variables (IV) regression does control for the endogeneity of assets if appropriate instruments are used. IV regression techniques are used by Aaronson (1999), Cho (1999), DiPasquale and Glaeser (1999), Haurin, Parcel, and Haurin (2002), Raphael and Rice (2002), and Sullivan (2005). To be an appropriate instrument, an instrumental variable must be related to the endogenous asset variable (e.g., homeownership) and must not be related to the outcome (e.g., child well-being) except for through the endogenous asset variable.

Individual-level fixed effects regression as used by McGarry and Schoeni (1995) control for time-invariant unobserved characteristics and thus largely control for the endogeneity of assets.

Simultaneous equations models control for the endogeneity of assets if proper instruments or covariance restrictions are used. Bivariate probit models with instruments for homeownership (the relative cost of owning versus renting) are used by Green and White (1997). Full information maximum likelihood models are used by Kane (1994) but to control for the endogeneity of parent's education, not parent's homeownership. Simultaneous estimation of a path model of directly observed variables is used by Yadama and Sherraden (1996).

Experimental program designs, such as that used by Mills et al. (2006), control for the endogeneity of program participation to encourage asset building by randomly assigning program applicants into treatment or control groups. Because program participation is assigned independently of other characteristics that affect outcomes (such as ability to save or make wise investment decisions), we can ignore these other characteristics and simply measure the difference in outcomes (such as homeownership) of those randomly assigned to participate in the IDA program and those randomly assigned not to participate.

Strengths and Limitations of Methods

Both descriptive and multivariate methods have their strengths and limitations. Descriptive methods are easy to understand and provide important results about the relationship (positive, negative, or no relationship; magnitude of the relationship) between assets and outcomes. They are an important first step in empirical research. However, in a non-experimental setting, descriptive methods do not generally control for the endogeneity of asset holding because they do not control for factors other than the relationship between the two variables of interest. Multivariate methods bring the benefits of controlling for additional observed characteristics and allow us to learn about conditional relationships: the relationship between two variables while holding other observed factors constant. However, as noted, not all multivariate methods control for unobserved factors (such as financial literacy and individual preferences) that are key to controlling for the endogeneity of asset holding.

IV. CONCEPTUAL FRAMEWORK AND EMPIRICAL EVIDENCE FOR THE EFFECTS OF ASSET HOLDING

The framework by which we explore theories and empirical evidence distinguishes between five potential impacts of asset holding: on economic well-being, social well-being, child well-being, civic engagement, and health and psychological well-being. We present the analysis of each potential effect first by considering the literature and the main hypotheses and then by reviewing empirical studies. Drawing selectively on a vast literature, we discuss the theory that applies to the population as a whole, but also raise additional points that arise in examining the effects of asset holding on low-income, minority, or single-mother households.

Before turning to the individual topics, we clarify a few general points. The distinction between assets and net worth is a good first step. Often, policy advocates use the terms interchangeably, but the differences are important. For most purposes, it is expanding net worth, not simply increasing asset ownership that allows people to raise their long-term incomes. This means increasing the value of what people own in assets by more than the value of what people own in debt. However, sometimes, an asset may be important even if the result is to provide liquidity for contingencies (either directly from liquid assets or indirectly from loans from asset-based collateral) without raising total net worth. Owning a home or a car could yield positive effects even if the asset values are matched by debt, but these circumstances could also generate negative effects if an economic shock leads to declines in asset values or an inability to service the debt. In what follows, we focus the discussion on asset ownership, with the assumption that people are able to accumulate assets beyond their debt obligations.

The report deals with both financial assets and non-financial tangible assets, but recognizes distinctions within and between these classes of assets. Financial assets include stocks, mutual funds, bonds, bank accounts, some life insurance policies, pensions, and cash. Although these are all financial assets, they differ markedly with respect to other characteristics, such as the degree of liquidity, risk, and expected return. Some of these assets may be offset by or financed by debt, either short-term or long-term. Non-financial tangible assets include physical units privately owned by the individual. These include owner-occupied housing, automobiles or other vehicles, consumer durables, land, aspects of privately-held businesses, and real estate holdings for investment purposes. The equity or net worth in these assets is their market value less any debt secured by the asset.

The appendix table illustrates the linkages between assets and a variety of outcomes. Note that the relationship is potentially simultaneous. More assets might lead to higher income or better health, which, in turn, might lead to higher levels of assets. The framework embodied in the appendix table divides asset effects into influences on economic well-being, social well-being and civic engagement, child well-being, and health and psychological well-being.

The Appendix summarizes the findings we draw from the literature, along with the principal conclusions of the authors if they differ from our findings. The findings we report may differ from those of the authors if the author(s) has a different focus than ours or if the author(s) draws different conclusions (usually causal) from the results than we do (usually not causal).

A. Effects of Asset Holding on Economic Well-Being

How are financial and non-financial assets important to economic well-being? Assets can raise economic well-being by increasing current and future levels of income and by reducing the variability of income and consumption. In this section, we present a conceptual framework and an empirical synthesis of asset effects on several aspects of economic well-being, including income, consumption and material hardship, future assets, and self-sufficiency.

Effects of Asset Holding on Income

Conceptual Framework. Assets can influence income in three main ways. First, financial assets can generate cash income directly through interest and dividend payments as well as capital gains on sales of stocks or bonds. Capital gain income materializes when the value of assets increase. Assets may also offer a way to increase the level of lifetime income and not just the timing of consumption. Most assets yield a positive return on savings. For example, one can purchase essentially risk-free U.S. Treasury bonds (I-bonds) and even guarantee a positive, though modest, return above the rate of inflation. Given this reality, the assets accumulated by saving \$100 today will permit \$135 worth of consumption 15 years from now, assuming an interest rate of 2 percent per year. Of course, if the return exceeds 2 percent, the gain in the real value of lifetime consumption will be more than \$35. Thus, those willing to sacrifice and accept a lower level of consumption today can insure a higher level of total consumption over one's lifetime.

Second, physical (non-financial, tangible) assets can yield a flow of services (such as housing services) or raise real income by allowing people to pay less for other services (e.g., car instead of taxi). Sometimes, the increase in real income may come about through added leisure, perhaps linked to a decrease in commuting time. Third, assets may allow people to achieve higher incomes by extending their job search, by financing direct costs of job search (e.g., transportation), reducing commuting time (Raphael and Stoll 2001) and by investing in education and training. In a sense, the use of assets for these purposes typically represents a reallocation of investments from liquid assets to investments in job search that may yield a high return, in the form of higher wage rates.

How assets affect the variability of income depends on an individual's asset portfolio. The investments in job search can lower the time between jobs and thus reduce the variability of income. Some assets involve a natural diversification of income sources. Usually, changes in income from employment are not correlated with income derived from bonds, from the direct use of housing services, or from capital gains in housing. Another possibility is that income from work (based on human capital) can vary positively (negatively) in response to losses (gains) from financial and non-financial assets (Bodie, Merton, and Samuelson 1992). On the other hand, assets might decline together with earnings. In a town that suffers a large, sudden recession and outflow of jobs, the losses in earnings associated with unemployment are reinforced by capital losses in home values. In general, assets generally lower the variability of total income if they are not highly correlated with other sources of income.

Empirical findings. Several studies find support for the idea that assets raise incomes of relatively low-income people. Financial assets and car ownership are associated with positive income and employment outcomes, with some evidence that the relationship is causal. Bynner and Despotidou (2001, p. 3) find that savings and investments at age 23 are positively associated with labor market experience at age 23 to 33. Moore et al. (2001) report that forty-one percent of IDA participants said they were more likely to increase work hours and 61 percent said they were more likely to increase their income in other ways (p. 47). However, neither of these studies control for the endogeneity of assets. Raphael and Rice (2002, p. 124) show that car ownership increases employment and hours worked, but not necessarily wages. This evidence is indicative of a causal effect since the authors control for the endogeneity of car ownership. Cho (1999) finds that financial assets are positively associated with the economic well-being of women one year after marital disruption. Estimates by Cho (1999) indicate that other forms of assets, including home equity and the value of business or real property, are not statistically significantly associated with economic well-being.

Effects of Asset Holding on Consumption

Conceptual framework. Assets may raise the level and growth of consumption and typically lower the variability of consumption and level of material hardship. Assets can raise consumption options not simply because of the asset-induced gains in income. Owning assets may allow people to avoid paying extremely high interest rates by reducing the need to borrow and by providing sufficient collateral to be able to borrow at low or moderate interest rates. By improving the ability of families to limit their borrowing costs by having assets to use, liquidate or borrow against, families that must borrow may experience a smaller loss in consumption.

Assets as “buffer stocks” may help smooth consumption in the short-term. Of course, almost by definition, savings means foregoing consumption during the phase at which people accumulate assets. The buffer stocks from accumulated savings may help people avoid large sacrifices in consumption when income falls temporarily below long-term levels (Deaton 1991;

Haveman and Wolff 2000). Building up assets to hold as buffer stocks is a primary motivation to save and accumulate assets; people hold these resources as a precaution against some shock, such as disability or unemployment, that suddenly lowers incomes (Skinner 1988; Zeldes 1989). Skinner projects that as much as 56 percent of total lifetime savings arise as families take precautions against income uncertainty and uncertainty about one's lifespan. Some savings for this purpose may go into a private disability or retirement insurance policies, which we may think of as complementing the disability and retirement insurance policies built into the nation's Social Security system. Skinner suggests another effect of assets accumulated for precautionary purposes: When people die before adverse shocks use up precautionary savings, the money passes to the next generation as bequests.

The role of assets in consumption smoothing may be critical for low-income families. The ability to have access to cash (either from assets or borrowing) may exert a significant effect on the experience of material hardship (Mayer and Jencks 1991). A short-term crisis can have a much more serious and long-term impact when the family experiences hunger, eviction, or the shutoff of utilities than when the family faces a decline in living standards from a much higher starting point, perhaps due to a layoff, disability, or the loss of a spouse who might be providing care for children. Without assets, people who experience hardships will bear high costs to recover and these costs will lower long-term consumption.

Using assets to hedge risks is another way assets can smooth consumption. Consider, for example, the risk of a sudden decline in demand for workers in a particular occupation or industry. Workers can hedge against the potential losses to their permanent incomes should such a risk materialize. One method is to hold a portfolio of assets that move in the opposite direction from assets in their own industry. Taking the opposite strategy, investing in their own firm or assets that move together with their own job prospects, is riskier and carries the danger of losing many assets at the very time when the worker is most in need (Bodie and Merton 2000).

Accumulating personal assets may be one way to raise the living standards of retirees. In fact, a large share of accumulated assets is earmarked for retirement through the use of defined benefit and defined contribution private pension plans as well as personal savings. In addition, Social Security and Medicare benefits can be the primary sources of asset values of low- to moderate-income older Americans.

Physical assets can help people hedge against price increases and the associated losses in the real value of consumption. For example, owning a home may serve as a hedge against increases in rents and therefore lower the variability of consumption (Sinai and Souleles 2005). Owning a car may hedge against increased prices of transportation associated with taxis, buses, and other transportation. Owning a washing machine may lessen the risk of higher prices of using laundromats.

Empirical findings. Our review indicates empirical evidence that access to credit and assets are importantly related to consumption and material hardship. However, we did not find papers that attempt to measure a causal relationship between the effects of assets and consumption and material hardship. Jencks and Mayer (1989, p. 109) show that a family's ability to borrow \$500 in the event of an emergency does as much to reduce hardship as tripling family income, all else equal but without controlling for the endogeneity of access to credit. Sullivan (2005) finds that households with assets use unsecured debt to borrow when faced with temporary shortfalls in earnings and thus maintain consumption. Households with low assets do not borrow—likely because they do not have sufficient access to credit—and their consumption falls. This study controls for reverse causation (that assets affect borrowing, not borrowing affecting assets) by measuring the relationship between assets in an earlier time period and current borrowing. According to Jencks and Mayer (1989), homeowners report fewer hardships than tenants with the same income and needs, suggesting that homeownership and material hardship are related. But, they do not control for the endogeneity of homeownership.

Not surprisingly, households often forgo consumption in order to accumulate assets. In studying asset accumulation among low-income families, Moore et al. (2001) find that thirty percent of Individual Development Account (IDA) participants said they had less money for leisure, eight percent said they had to give up food or other necessities (p. 20), and 35 percent said they were less likely to save outside their IDAs.

Effects of Asset Holding on Future Assets

Conceptual framework. Access to even modest liquid financial assets may be important for an initial purchase, such as paying a security deposit on a desired rental unit and for making a down payment on a home or car. The terms by which families can purchase needed goods are usually much less onerous for those with these assets. High levels of assets can improve long-term economic well-being by fostering new outlets for the productive use of savings. Those who build up financial or other assets are better able to take advantage of special opportunities when they materialize. Families with assets can, for example, shift their allocation toward a microenterprise or a self-employment activity. Instead of having to borrow, often at high rates, to enter these fields, asset-holders can liquidate one investment and enter another. Those with liquid assets can take risks without having to worry about losing key physical assets, like a home or car. Some assets, such as homes, may induce and encourage added savings. When a homeowner paints her house or adds a room, she is performing non-market work in which all of the added income is invested in raising the home's value.

The asset with the highest net worth for most American families is their home. From a financial perspective, homeownership has four major potential effects compared to renting. First, a home is an investment whose value may rise or fall and lead to large changes in a family's net worth. Second, the financing of homeownership through mortgages that require principal as well

as interest payments may be a mechanism for inducing “forced savings.” Although renters could in principle save a comparable amount each month, they do not face the same institutional pressure to save.⁶ Third, homeownership may act as a hedge against rising rentals in the community. Homeownership with a fixed-rate mortgage allows a family to lock in one of its primary expenditures and not face the risks of sudden price increases (Sinai and Souleles 2005). Having the security of fixed living expenses is probably of special importance to low-income families. Fourth, homeownership can raise after-tax income relative to renting because of the tax advantages of homeownership. Of important note, low-income families subject to little or no federal income tax do not reap these advantages. In fact, low-income families may face a financial disadvantage if they move to homeownership—the loss of rental and public housing subsidies (Carasso et al. 2005).

Evaluating the financial return to homeownership is complicated because one must take account of the interest costs of the mortgage payments (Nichols 2005), the benefit of the mortgage income tax deduction, the stream of implicit rents (net of maintenance and property taxes) conveyed by the home that substitutes for the rent homeowners would otherwise have to pay, and the way homeownership acts as a hedge against rent increases in the market. As discussed in the empirical findings below, accounting for these various components, especially the implicit rent, has large effects on measures of the return to homeownership.

Empirical findings. Our review reveals experimental evidence that participation in IDA programs can increase homeownership and business equity (the research likely captures a causal relationship). Our review also reveals preliminary evidence that homeownership and asset levels are strongly positively related (though no attempts to measure a causal relationship). There is a surprisingly low appreciation rate on house prices of owner-occupied units, but a higher rate of return for homeowners after accounting for such important factors as the implicit rent received from homeownership.

While controlling for the endogeneity of IDA program participation with a controlled field experiment, Mills et al. (2006) find that eligibility for the IDA program raised homeownership rates by almost 10 percentage points over 4 years for black renters, but reduced their financial assets and business ownership, possibly indicating the need to liquidate assets to afford down payments and housing transition costs. The IDA program had no effects on homeownership for white renters, but their business equity rose. Overall, the IDA program had no statistically significant effect on net worth, which may be explained by the short 4 year time frame and the initial costs associated with home purchase and other asset investments.

With no controls for the endogeneity of homeownership, Rossi and Weber (1996, pp. 12-13) find that: (1) homeowners have about \$6,000 more in savings and about \$5,000 more in

⁶ Those homeowners with interest-only mortgages are the exception since the provisions of these mortgages do not require principal payments on an ongoing basis.

mutual funds than renters; (2) homeowners are more likely to have credit card debt, installment debt, and personal bank loans; and (3) homeowners are less likely to have education loans and to have bills more than 90 days overdue. Similarly, an earlier report in this *Poor Finances* series, “The Balance Sheets of Low-Income Households” finds that in 2004, homeowners had total asset holdings 24 times greater than renters (\$289,900 vs. \$12,200); and had debt 12 times greater than renters (\$95,800 vs. \$7,800). Additionally, homeowners were 4 times less likely to be delinquent on debt, and had net worth 46 times greater than renters (\$184,000 vs. \$4,000) (Carasso and McKernan 2006). These relationships between homeownership and assets and net worth, while not causal, support the hypothesis that homeownership leads to substantial financial returns.

However, some studies on actual returns to homeownership suggest that homeownership does not generate substantial financial returns. Reid (2004) and Goetzmann and Spiegel (2002) find only a three to five percent annual nominal return to homeownership, using descriptive statistics to compute mean returns in the Panel Study of Income Dynamics (PSID) and Office of Housing Enterprise Oversight housing price indices, respectively (see Appendix). Both argue that financial assets, such as the Treasury bill, provide greater financial returns and less risk—and are thus an attractive alternative to homeownership. Goetzmann and Spiegel argue that if homeownership is encouraged, the potential homeowners should be informed of the risks (p. 272).

As described above in the conceptual framework, the potential effects of homeownership are not measured by housing price appreciation alone. One must also account for mortgage costs (Nichols 2005), the benefit of the mortgage income tax and property tax deduction, and most importantly, the stream of implicit rents (net of maintenance and property taxes) received from the home must be included. A homeowner receives housing services from a home that would otherwise have to be paid by renting or some alternative housing arrangement. In addition, homeowners can benefit from “forced savings” induced through mortgages that require principal as well as interest be paid. Both the riskiness of housing as an asset as well as the hedge that housing provides against future rent increases in the absence of homeownership (Sinai and Souleles (2005) could be considered. Measuring the total returns to homeownership is complicated but important in any effort to understand the true effects of homeownership on net worth.

Nichols (2005) estimates a total rate of return that incorporates many of these financial homeownership effects and underscores the importance of accounting for them. He calculates an annualized average rate of return of 8.6 percent for the 1985 through 2002 time period when the appreciation rate, implicit rent, mortgage contract, and the mortgage income tax deduction are all accounted for. The implicit rent makes the largest contribution to the total rate of return. Based on nominal appreciation alone, he calculates an average rate of return of 1.9 percent; adding in implicit rent increases the return to 9.8 percent; subtracting the cost of the mortgage contract

decreases the return to 8.5 percent, and adding the mortgage income tax deduction increases the rate to 8.6 percent.

The total rate of return may be higher than the 8.6 percent measured by Nichols because his base 1.9 percent appreciation rate is measured by self-reported values from the American Housing Survey rather than market transactions as measured by the Office of Housing Enterprise Oversight housing price indices. In addition, measures that account for both the housing asset risk and the hedge provided against rent risk may well find that rent risk is greater, as suggested by Sinai and Souleles (2005). Future research on the effects of homeownership on financial returns could incorporate appreciation, implicit rent, mortgage costs, the tax implications, forced savings, as well as rent and housing risk.

The benefits of homeownership may be lower for low-income and minority families than for moderate- and high-income families (Baker 2005, Baker and Baribeau 2003, McCarthy, Van Zandt, and Rohe 2002, Nichols 2005, Reid 2004, Scanlon and Page-Adams 2000). As Baker (2005) explains, low-income families have taxable incomes too low to benefit from mortgage interest deductions. And, the median period of homeownership is shorter (only four years) meaning that transaction costs are higher for low-income families. In addition, low-income and minority households are likely to pay more in mortgage costs. Nichols (2005) estimates that—relative to average households—low-income, low-education, and black households have a higher probability of a negative return on a home and lower rates of return and appreciation. The mortgage contract augments these negative effects possibly because low-income, low-education, and black households make lower down payments and have higher remaining mortgage balances.

On a more positive note for low-income households, Duda and Belsky (2001) calculate that homeownership is relatively less risky for those purchasing low-cost homes rather than more expensive homes. Case and Marynchenko (2002) find that for low-income households in Chicago, Boston, and Los Angeles, homeownership has generally been a good investment, helping families accumulate assets and increase their net worth. Returns to homeownership, however, vary depending on the time period and geographic location (Case and Marynchenko 2002, McCarthy, Van Zandt, and Rohe 2002). There have been significant periods of decline in Boston and Los Angeles that have led to losses and periods of negative equity for low-income households (p. 248, 252, 255).

Effects of Asset Holding on Self-Sufficiency

Conceptual framework. Assets may allow people the resources to specialize in certain occupations and not have to produce everything required for the household. Assets might encourage appropriate risk-taking among low-income families in the form of small business or microenterprise; these investments might allow for greater diversification across asset classes. One other way assets may improve economic well-being is by helping families minimize or

eliminate their need for income support programs, which in turn encourages greater self-sufficiency. Assets can help people respond to temporary shocks. A family with zero or minimal assets might have to apply for income support program benefits and subsequently be subject to high marginal tax rates and work disincentives. Although welfare programs (such as TANF) increasingly require work and provide only temporary benefits, this experience may still have stigmatizing and other problematic effects. Unfortunately, the presence of asset tests in these social programs may discourage asset-building among low-income families or exclude families from obtaining needed assistance until they liquidate their assets.⁷

Assets can bring individuals a greater sense of personal efficacy and power. They enable people to choose whether to consume their resources today for some valued good or service or, for example, to provide a special grant or a bequest to their children. Asset-holders can use their resources for people outside the family as well.

Empirical findings. Few empirical studies have tested these outcomes. Cho's (1999) results show that financial assets are positively associated with income and negatively associated with welfare receipt for women experiencing marital disruption. These findings indicate that assets may be associated with self-sufficiency. Further research is necessary to examine the link between assets and self-sufficiency and to determine whether the link is causal.

B. Effects of Asset Holding on Social Well-Being and Civic Engagement

Conceptual framework. Asset holding can increase household stability by raising the economic stability of household members. Unemployment is a frequent problem for low-income families. When men lose their jobs, they are more likely to divorce (Charles and Stephens 2004). Unemployment can contribute to depression (Liem and Liem 1988), anger, child and/or spousal abuse, alcohol use, and poor academic performance and psychological health of children (Kalil and Ziol-Guest 2005). Since many low-income workers are not covered by Unemployment Insurance, the only way to prevent serious hardships and to mitigate worries about financial outcomes is to draw on assets or borrow. But, borrowing is difficult and costly, especially when assets are unavailable (Sullivan 2005). Those with assets can avoid hardship more easily by drawing directly on liquid assets or by using assets as collateral for loans to pay for basic expenses.

Homeownership can mitigate the impact of economic shocks or add to the severity of the shock. Economic shocks may be particularly important for low-income families who are less likely to have stable income. Homeowners with low mortgages have low net housing costs and thus one major need can be met despite losses of other income sources. In addition, homeowners are immune to sudden rent increases linked to an economic boom. For homeowners with substantial mortgages, the responses to an economic shock vary. Losing a job can pose serious

⁷ For more information on this issue, see another report in the *Poor Finances* series, "The Effect of Welfare and IDA Programs on Asset Holdings," available at <http://aspe.hhs.gov/hsp/07/PoorFinances/assets/index.htm>.

problems for homeowners in meeting mortgage payments, just as renters facing job loss have trouble paying rent. When families are unable to meet mortgage payments and banks foreclose on the loans, homeownership can mean significant losses in savings relative to renting and investing in financial assets. Renters, in contrast, can adjust relatively quickly by moving to lower rent units. For homeowners, the transition is difficult. The home is not a liquid asset that can be quickly sold. But, homeowners with equity can either access a home equity loan until they return to work or sell their home.

The high transaction costs of buying and selling homes may limit the ability of homeowners to make quick adjustments to shocks. At the same time, the higher transaction costs of buying over renting a home may reduce turnover and increase residential stability. This higher stability may have implications for neighborhoods and social interactions. One is that areas with high shares of homeowners may have more long-term residents and thus greater participation in neighborhood activities. Another potential impact of the higher residential stability induced by homeownership is the increase in the social capital of neighborhoods. Homeowners may expect to stay and have more incentive than renters to invest in making friends with neighbors and their families and thus providing connections to jobs and other opportunities.

Both their greater permanence in a neighborhood and the incentive to maintain or increase property values may encourage homeowners to expand their involvement in civic organizations, to participate in local anti-crime initiatives, to contribute to efforts to keep neighborhoods clean, and to lobby for good local schools. With the rapid rise in homeowner associations and condominiums, homeownership and civic participation are very directly linked to governance through restrictions on voting rights to owners and through management supervised by owners representing all other owners (Nelson 2005).

Finally, having enough assets to have some choice over one's residential location can increase a family's access to high quality services, since location affects access to high quality schools, parks, and other community resources. As described below in the empirical findings, few papers have examined the empirical relationship between assets and social well-being and the few that have provide mixed results. This is an opportunity for future empirical research to provide additional measures of the relationship between homeownership and social well-being, while controlling for the endogeneity of homeownership.

Other possible effects of homeownership include psychological benefits which in turn can effect other outcomes. Homeowners may gain satisfaction and self-esteem from the control they have over key aspects of their living arrangements (Rossi and Weber 1996). Homeownership could lead people to plan for a longer time horizon and a greater orientation to the future because of their expected tenure in the neighborhood and their concerns about neighborhood development and home values. These potential effects, often unobservable, may in turn affect other outcomes such as child well-being and civic engagement.

Empirical findings. Empirical evidence of the effects of assets on social well-being and civic engagement are mixed. On one hand, DiPasquale and Glaeser (1999) find evidence both in the United States and Germany that homeownership is strongly correlated with variables that attempt to measure good citizenship and social capital, such as civic engagement. The relationship is smaller, but still statistically significant in models that control for the endogeneity of homeownership with individual-level fixed effects. As mentioned, individual-level fixed effects control for time-invariant unobserved characteristics and thus largely control for the endogeneity of assets. A large portion of the effect of homeownership comes from the lower mobility of homeowners. In addition, Moore et al. (2001, p. 47) report that about half of current Individual Development Account (IDA) participants said they were more likely to have good relationships with family members. About one-third said they were more likely to be involved in their neighborhoods and about one-third said they were more likely to be respected in their communities.

On the other hand, studies by Bynner and Despotidou (2001), Reid (2004), and Rossi and Weber (1996, pp. 17-18, 20) find mixed evidence on the relationship between assets, social well-being, and civic engagement. Bynner and Despotidou find that voting shows no association with savings and investments, but political interest is positively associated with savings and investments. Reid finds that neighborhood benefits from renting to owning were minimal for low-income whites, though substantial for low-income minorities. Rossi and Weber (1996) find that homeowners are not consistently more likely to be members of social networks and homeowner-renter differences on marriage and family behavior are not great. They also find that homeowners and renters do not differ substantially in their general political interest, though homeowners are almost consistently more engaged in local politics than renters.

Both Reid (2004) and Rossi and Weber (1996) base their findings on descriptive analyses and Bynner and Despotidou base their findings on OLS regressions—none of which control for the endogeneity of assets. The strong demographic differences between homeowners and renters revealed by Rossi and Weber (1996) suggest that controlling for both measured and unmeasured differences between homeowners and renters (that is controlling for the endogeneity of homeownership) is important. Future research could examine whether there is a strong relationship between assets and social well-being or civic engagement and whether that relationship is causal.

C. Effects of Asset Holding on Child Well-Being

Conceptual framework. The added stability that assets convey may be beneficial to children. Because economic shocks may have less serious consequences for families with assets, parents are better able to deal with family tensions and thus more likely to remain together and avoid large income losses from divorce or separation. The higher residential stability resulting from homeownership can affect schooling outcomes for children. Children may feel more rooted in the community and maintain friendships when they are less likely to experience residential

instability. The stability of schools and friends is likely to encourage increased involvement in extracurricular activities, including access to jobs.

Assets other than homes may improve educational outcomes for children as well, perhaps by lowering their worries about falling into extreme poverty. Asset holding by parents can help children directly through small gifts or loans for a down payment on a car, deposit on a home or an apartment, and a place to live temporarily

Asset holding may lead to improvements across generations. Those with assets are better able to make gifts and bequests to their children. For some proponents of asset-based policy (e.g., Oliver and Shapiro 1995; Sherraden 1991), potential effects on the next generation are the primary rationale. The increases in consumption, and household and residential stability associated with assets, may increase child well-being and children's long-term economic welfare.

Assets may change cognition, which in turn may change behavioral outcomes. As Zhan and Sherraden (2003) find, assets lead to improved educational outcomes for children, and part of the statistical effect operates through parental expectations of children's educational achievement. This is one of the few examples of a specified theory tested in research on asset effects. Holding assets provides an example for children that they can accumulate wealth and that asset accumulation is a normal part of adulthood.

The ownership of homes and other property may promote civic engagement, since the quality of the community and property taxation affects home values. Also, the homeownership-induced increase in residential stability creates incentives for participation because of the ability to enjoy the fruits of any improved community outcomes. Other social benefits from homeownership can accrue to communities and families as well.

Empirical findings. A large empirical literature on the relationship between homeownership and child well-being indicates that homeownership improves child's well-being through improved educational attainment and decreased teenage pregnancy, among other potential effects. As hypothesized in the conceptual framework, homeownership's effects likely work through homeownership's role in increasing residential stability (Aaronson 2000) as well as school quality, although some of the effect may also be due to a selection bias for those families who become homeowners. Green and White (1997) find that homeownership decreases teenage pregnancy and improves children's educational attainment, while controlling for the endogeneity of homeownership. These findings are particularly important for low-income households. Homeownership is also positively associated with improved children's emotional and cognitive development (Haurin, Parcel, and Haurin 2002), educational attainment (Kane 1994), academic performance (Zhan and Sherraden 2003), increased participation in extracurricular activities (Scanlon and Adams 2000), and decreased behavioral problems (Scanlon and Adams 2000).

Parental homeownership and home value may also be related to children's future homeownership status. Henretta (1984, pp. 134-135, 157) reports that parent's homeownership and home value at the time the child last lived at home are positively associated with the future grown child's homeownership and home value, though the relationships differ slightly for blacks and whites. Other findings suggest that homeownership by parents may affect the housing decisions of children through expectations, for whites, and through expectations and gifts for blacks. These results are consistent with the hypothesis that asset holding affects child well-being through gifts, bequests, and expectations, as described in the conceptual framework.

Besides homeownership, other types of assets are also positively related to child-well being. Zhan and Sherraden (2003) find that savings of \$3,000 or above are positively associated with mothers' expectations and children's high school graduation. Williams (2003, pp. 88-89) shows that household income and wealth are positively associated with children's cognitive development, health, and behavioral development. McGarry and Schoeni (1995) present evidence that wealthy parents are more likely to transfer cash to their children and vice versa.

Not all reported empirical relationships between assets and child-well being are positive. According to Zhan and Sherraden (2003, p. 199-201), savings are not associated with child's academic performance and homeownership is not associated with child's academic achievement. Bynner and Despotidou (2001) find that savings and investments at age 23 are not associated with improved parenting outcomes at age 27 as measured by child's reading. And, Haurin, Parcel, and Harin (2002) report that homeownership is only marginally or not associated with child cognition and child behavior. The paucity of non-positive relationships in the literature leaves one wondering whether non-positive relationships are under reported.

D. Effects of Asset Holding on Health and Psychological Well-Being

Conceptual framework. Assets may help low-income families create an orientation to the future. By aspiring to homeownership, for example, the prospect of asset-building can lengthen the time horizons of low-income people. Some assets, such as homes, can encourage people to save, as they see how today's sacrifice can raise future living standards. Sherraden (1991) sees assets as sometimes stimulating additional non-market productive activity. A good example is when homeowners spend time maintaining and upgrading their homes.

It is possible that holding assets can lead to better physical and mental health. The availability of assets might help people meet unanticipated health care costs and thus encourage people to seek appropriate diagnosis and treatment. Another possibility is that by improving economic security, assets may reduce the stress individuals experience when worried about or experiencing sudden income losses. Finally, building assets may bring people satisfaction and a sense of efficacy in knowing they were able to accomplish something worthwhile. People are likely to be happier if they have the additional security of asset ownership.

Empirical findings. The empirical literature yields some evidence that assets positively affect health and psychological well-being. Yadama and Sherraden (1996, pp. 3, 5) find that assets (as measured by savings and in one instance house value) 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 greater social connectedness with relatives, neighbors, and organizations. They estimate a simultaneous estimation path model of directly observed variables to control for endogeneity.

Three other papers in the literature measure a positive association between assets and health and psychological well-being. Bynner and Despotidou (2001) find that asset holding is associated with positive health outcomes. According to the study by Moore et al. (2001), IDA participants self-report that they felt more confident about their futures (93 percent), more economically secure (84 percent), and more in control of their lives (85 percent) because they had IDAs (p. 46). Effects on planning were somewhat less common with about 60 percent of respondents saying they were more likely to make educational and retirement plans. Rossi and Weber (1996) report that homeowners regard themselves as having a greater sense of well-being than renters, but only marginally so.

E. Adverse Consequences of Asset Holding

Conceptual framework. Although assets clearly add to economic resources, problems can arise in the process of building and managing assets. One possibility is that building up assets will involve borrowing at rates that exceed the rates of return on assets. If a family borrows at a ten percent annual interest rate to buy a stock rising at only three percent per year, the family's effort to build up assets will leave the family worse off. A second example noted above is that homeownership might hurt families financially if they cannot meet mortgage payments, face high transaction costs, and see little or no gain in the value of their property. Because job losses in an area may be closely associated with declines in house values, this problem may inhibit job search and geographic mobility. Finally, worries about potential losses may lead to stress among those holding assets.

Another problem is that people may invest in very risky assets and lose their savings. In this case, the sacrifices they made to accumulate savings end up as fruitless and potentially discouraging. Some individuals may spend so much time managing or maintaining their assets that they lose focus on their jobs and family life. Conflict might arise in families as they debate the wisdom of choosing a high- or lower-risk investment. It is possible though unusual for people to neglect pressing current needs in their quest to build assets. For most people, this is a less serious problem than finding the will to make a sure sacrifice today for a future potential benefit. Forcing strict limits on current consumption in order to accumulate assets may create stress, as people face a conflict between pursuing two strong goals.

In general, adverse consequences come about not because of the presence of assets but their inappropriate allocation. Some forms of assets, such as retirement assets, are less liquid and are penalized if used to withdraw resources for a greater need or emergency. Thus, people should typically have some liquid assets available as a precaution. Still, even some locked-in assets can sometimes be used as collateral for loans to deal with these sudden needs. And many retirement plans do allow emergency withdrawals.

Empirical findings. Our review yields limited empirical evidence about the adverse consequences of asset building efforts. Four papers raise concerns about homeownership, while a fifth paper confirms decreases in important consumption while families build up assets, though the more serious effects are for a small share of respondents. Reid (2004, p. 32) finds that homeowners run significant risks of returning to renters in the first years of homeownership. These outcomes may take place because many homeowners lack the savings to cope with crises such as unemployment or health problems. Reid also presents estimates that low-income homeowners experience lower levels of house price appreciation than do higher income borrowers. Goetzmann and Spiegel (2002) report that nearly all housing markets displayed negative risk-adjusted returns over the past 20 years and warn that devoting too much of an individual's asset/finance portfolio to home investment is risky. As mentioned above, the concern that people devote too much of their finance portfolio to home investment requires further study, especially in light of the important new finding (Sinai and Souleles 2005) that homeownership allows people to avoid the serious risk renters face of sharp increases in market rents. More evidence on the short-term and long-term impacts of homeownership, especially for low-income families, is also an important area for future research.

The literature provides some evidence about another concern raised in the conceptual framework—that homeowners are less mobile than renters. Dietz and Haurin (2003) find that homeowners are less mobile in their job search than are renters because of higher transaction costs of moving and perhaps because of greater ties to their neighborhood and community (p. 439). Stability can be desirable from a housing and social perspective but less desirable if the result is long-term unemployment.

Finally, there is evidence that a small share of people neglect pressing current needs in their quest to build assets. Among low-income participants in IDA programs, Moore et al. (2001) report that only 8 percent reported they had to give up food or other necessities, they had less money for leisure (30 percent), but 9 percent felt more stressful about the future. About 30 percent had less money for leisure when they saved.

V. CONCLUSION AND SUGGESTIONS FOR FUTURE RESEARCH

The idea that asset-holding generates an array of positive social and economic effects, with or without increases in net worth, is increasingly common. This paper examines what we know

about the relationships between asset holding and economic well-being, social well-being and civic engagement, child well-being, and health and psychological well-being. The empirical findings highlight important and largely positive relationships between asset holding and outcomes measuring economic well-being, child-well being, and health and psychological well-being. The findings on the way assets related to social well-being and civic engagement are mixed.

Since the majority of empirical studies in the literature do not attempt to control for the endogeneity of assets, most of our knowledge is about the correlation between assets and outcomes; we know less about the causal impacts of asset holding. Moreover, for some outcomes, a limited number of studies exist. These limitations are reflected in the suggestions for future research. Although several studies do provide support for asset-based social policy, the literature measuring the effects of asset holding on outcomes is still in its early stages, especially with regard to effects on low-income families.

Suggestions for Future Research

- ***Measure the causal relationship between asset holding and outcomes.*** Demonstrating causal relationships is a gold standard to strive for in empirical research, whether in assessing the impacts of asset holdings or any other area. The literature measuring relationships between asset holding and outcomes has barely begun to measure causal relationships. Of the roughly 25 studies reviewed, only 9 attempted to control for the endogeneity of assets. Without controlling for the endogeneity of assets, we cannot know the causal effect of assets on outcomes. Empirical research measuring causal relationships between asset holdings and outcomes is a high priority for future research.
- ***Measure the total return to homeownership for middle and low-income groups.*** Future research measuring financial returns to homeownership could incorporate appreciation, implicit rent, mortgage costs, tax implications, forced savings, as well as rent and housing risk. Only one of the identified studies measures the total return to homeownership.
- ***Measure the impacts of homeownership, especially for low-income families.*** More empirical evidence on the short-term and long-term impacts of homeownership for low-income families is another high priority. The general assumption often is that homeownership is good, even for very low-income families. Researchers could identify under what circumstances this assumption is accurate or inaccurate.
- ***Further assess the benefits and consequences of asset holding for low-income, low-education, and minority households.*** In general, more empirical evidence is needed to assess the benefits and consequences of assets for low-income, low-education, and minority households.

- ***Further assess the benefits and consequences of the mortgage income tax deduction along with other subsidies to asset holding.*** The mortgage income tax deduction provides much stronger homeownership incentives for moderate- and high-income families than for low-income families because low-income families are less likely to itemize their tax deductions, more likely to have lower income tax rates, and more likely to own less expensive homes with smaller mortgages and mortgage interest payments. As the mortgage income tax deduction is not a refundable credit, it has no benefit for those very low-income families with no federal income tax liability. Policy research can further assess how the mortgage income tax deduction could be modified to increase incentives for homeownership among lower-income families.
- ***Measure the effect of assets on economic mobility and material hardship.*** Future research has the potential to improve estimates of the mechanisms by which asset accumulation affects economic mobility and material hardships. Theoretically, modest asset levels might limit access to benefit programs and thus have little effect on hardship. Although most studies find assets are helpful in lowering hardship, the evidence is far from conclusive. Such studies require researchers to conduct a long-term follow-up and identify exogenous factors that cause asset-holding to vary.
- ***Measure the effect of asset holding on self-sufficiency.*** Further research in this area would allow for the examination of the link between assets and self-sufficiency and to determine whether the link is causal.
- ***Measure the effects of asset holding on social well-being and civic engagement.*** Research measuring the causal relationship between asset holding and social well-being and civic engagement would provide valuable insights into the potential effects of asset holding.
- ***Consider the type of assets when measuring effects.*** Our review suggests that findings on the relationship between assets and outcomes depend on the types of assets considered. For example, financial assets are most important in some studies, while non-financial tangible assets such as cars and homes are more important in others. As such, an examination of specific types of assets, if data allow, would enhance understanding in this area. Net worth could also be considered as a specific measure of assets. We found little empirical evidence on the potentially important effects of net worth on outcomes.
- ***Assess the impact of the interaction of financial literacy and assets on social and economic outcomes.*** The effects of assets may vary systematically with the level of financial knowledge. If so, the gains from assets might be raised significantly with the addition of expanded financial education, especially for low- and middle-income families.

VI. REFERENCES

- Aaronson, Daniel. 2000. "A Note on the Benefits of Homeownership." *Journal of Urban Economics* 47: 356-69.
- Ando, A., and F. Modigliani. 1963. "The 'Life Cycle' Hypothesis of Saving: Aggregate Implications and Tests." *American Economic Review* 53: 55-84.
- Baker, Dean. 2005. "Who's Dreaming? Homeownership Among Low Income Families." Washington, D.C.: Center for Economic and Policy Research.
- Baker, Dean, and Simone Baribeau. 2003. "Homeownership in a Bubble: The Fast Path to Poverty?" Washington, D.C.: Center for Economic and Policy Research.
- Bodie, Zvi, and Robert C. Merton. 2000. *Finance*. New York: Prentice Hall.
- Bodie, Zvi, Robert C. Merton, and William F. Samuelson. 1992. "Labor Supply Flexibility and Portfolio Choice." *Journal of Economy Dynamics and Control* 16: 427-449.
- Bynner, John, and Sofia Despotidou. 2001. "The Effects of Assets on Life Chances." London: Center for Longitudinal Studies, Institute for Education.
- Camerer, Colin, George Loewenstein, and Matthew Rabin (eds). 2004. *Advances in Behavioral Economics*. New York: Russell Sage Foundation. Princeton University Press.
- Carasso, Adam, Elizabeth Bell, Edgar O. Olsen, and C. Eugene Steuerle. 2005. "Improving Homeownership Among Poor and Moderate-Income Households." Opportunity and Ownership Project Policy Brief No. 2, June. Washington, DC: The Urban Institute.
- Carasso, Adam and Signe-Mary McKernan. 2006. "The Balance Sheets of Low-Income Households: What We Know about Their Assets and Liabilities." A Report in the Series Poor Finances: Assets and Low-Income Households Series. Washington: The Urban Institute.
- Case, Karl E., and M. Marynchenko. 2002. "Home Price Appreciation in Low- and Moderate-Income Markets." In *Low-Income Homeownership: Examining the Unexamined Goal*, edited by N. P. Retsinas and E. S. Belsky. Cambridge, MA: Joint Center for Housing Studies and Washington, DC: Brookings Institution Press.
- Charles, Kofi and Melvin Stephens, Jr. 2004. "Job Displacement, Disability, and Divorce." *Journal of Labor Economics*. Vol. 22 (2). 489-522.
- Cho, Esther Y. 1999. "The Effects of Assets on the Economic Well-Being of Women After Marital Disruption." Center for Social Development Working Paper No. 99-6, Saint Louis, MO: Center for Social Development, Washington University in Saint Louis.
- Corporation for Enterprise Development. 2004. *Hidden in Plain Sight: A Look at the \$335 Billion Federal Asset-Building Budget*. Washington, D.C.: Corporation for Enterprise Development.
- Deaton, Angus. 1991. "Saving and Liquidity Constraints." *Econometrica* 59(5): 1221-1248.
- Denton, Nancy A. 2001. "Housing as a Means of Asset Accumulation: A Good Strategy for the Poor?" In *Assets for the Poor: The Benefits of Spreading Asset Ownership*, edited by

- Thomas M. Shapiro and Edward N. Wolff. The Ford Foundation Series on Asset Building, 232-66. New York, NY: Russell Sage Foundation.
- Dietz, Robert D. and Donald R. Haurin. 2003. "The Social and Private Micro-Level Consequences of Homeownership." *Journal of Urban Economics* 54(2003): 401-450.
- DiPasquale, Denise, and Edward L. Glaeser. 1999. "Incentives and Social Capital: Are Homeowners Better Citizens?" *Journal of Urban Economics* 45: 354-84.
- Duda, Mark, and Eric S. Belsky. 2002. "Asset Appreciation, Timing of Purchases and Sales, and Returns to Low-Income Homeownership." In *Low Income Homeownership: Examining the Unexamined Goal*, edited by Nicholas P. Retsinas and Eric S. Belsky. Washington, D.C.: Brookings Institution Press.
- Edin, Kathryn. 2001. "More than Money: The Role of Assets in the Survival Strategies and Material Well-Being of the Poor." In *Assets for the Poor: The Benefits of Spreading Asset Ownership*, edited by T. M. Shapiro, and E. N. Wolff. The Ford Foundation Series on Asset Building, 206-231. New York, NY: Russell Sage Foundation.
- Goetzman, William N., and Matthew Spiegel. 2002. "Policy Implications of Portfolio Choice in Underserved Mortgage Markets." In *Low-Income Homeownership: Examining the Unexamined Goal*, edited by N. P. Retsinas and E. S. Belsky. Cambridge, MA: Joint Center for Housing Studies and Washington, DC: Brookings Institution Press.
- Green, Richard, and Michelle White. 1997. "Measuring the Benefits of Homeowning: Effects on Children." *Journal of Urban Economics* 41: 441-61.
- Haurin, Donald R., Toby L. Parcel, and R. Jean Haurin. "The Impact of Homeownership on Child Outcomes." In *Low-Income Homeownership: Examining the Unexamined Goal*, edited by N.P. Retsinas, and E.S. Belsky. Joint Center for Housing Studies. Washington: Brookings Institution Press.
- Haveman, Robert, and Edward N. Wolff. 2005. "Who Are the Asset Poor? Levels, Trends, and Composition, 1983-1998". In *Inclusion in the American Dream: Assets, Poverty and Public policy*, edited by Michael Sherraden, 61-86. New York: Oxford University Press.
- Henretta, John C. 1984. "Parental Status and Child's Home Ownership." *American Sociological Review* 49(1): 131-40.
- Kalil, Ariel and Kathleen M. Ziol-Guest. 2005. "Single Mothers' Employment Dynamics and Adolescent Well-Being." *Child Development* 76(1): 196-211.
- Kane, Thomas. 1994. "College Entry by Blacks Since 1970: The Role of College Costs, Family Background, and the Returns to Education." *Journal of Political Economy* 102(5): 878-911.
- Keynes, John M. 1936. *The General Theory of Employment, Interest, and Money*. New York: Harcourt.
- Liem R and J.H. Liem. 1988. "Psychological Effects Of Unemployment On Workers And Their Families." *Journal of Social Issues* 44(4): 87-105.
- Mayer, Susan, and Christopher Jencks. 1989. "Poverty and the Distribution of Material Hardship." *The Journal of Human Resources* 24(1): 88-114.

- McGarry, Kathleen, and Robert F. Schoeni. 1995. "Transfer Behavior in the Health and Retirement Survey." *Journal of Human Resources* 30(Supplement): S184-226.
- Midgley, James. 1999. "Growth, Redistribution, and Welfare: Towards Social Investment." *Social Service Review* 77(1): 3-21.
- Mills, Gregory, William G. Gale, Rhiannon Patterson, and Emil Apostolov. 2006. "What Do Individual Development Accounts *Do*? Evidence from a Controlled Experiment." Washington, DC: The Brookings Institution.
- Moore, Amanda, Sondra Beverly, Mark Schreiner, Michael Sherraden, Margaret Lombe, Esther Y. N. Cho, Lissa Johnson, and Rebecca Vonderlack. 2001. *Saving, IDA programs, and Effects of IDAs: A Survey of Participants*. St. Louis, MO: Washington University in St. Louis, Center for Social Development.
- Nelson, Robert H. 2005. *Private Neighborhoods and the Transformation of Local Government*, Washington, DC: Urban Institute Press.
- Nichols, Joseph B. 2005. "Mortgage Contracts and the Heterogeneity in the Total Return on Housing." Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, D.C.
- Oliver, Melvin L., and Thomas M. Shapiro. 1995. *Black Wealth/White Wealth: A New Perspective on Racial Inequality*. New York: Routledge.
- Raphael, Stephen, and Lorien Rice. 2002. "Car Ownership, Employment, and Earnings." *Journal of Urban Economics* 52(1): 109-30.
- Raphael, Stephen, and Michael A. Stoll. 2001. "Can Boosting Minority Car Ownership Rates Narrow Inter-Racial Employment Gaps?" *Brookings-Wharton Papers on Urban Affairs* 2: 99-137.
- Reid, Caroline. K. 2004. "Achieving the American Dream? A Longitudinal Analysis of the Homeownership Experiences of Low-Income Households." Center for Studies in Demography and Ecology Working Paper, No. 04-04. Seattle: Center for Studies in Demography and Ecology, University of Washington.
- Rohe, William M., Shannon Van Zandt, and George McCarthy. 2002. "Social Benefits and Costs of Homeownership." In *Low-Income Homeownership: Examining the Unexamined Goal*, edited by N.P. Retsinas, and E.S. Belsky. Joint Center for Housing Studies. Washington: Brookings Institution Press.
- Rossi, Peter H., and Eleanor Weber. 1996. "The Social Benefits of Homeownership: Empirical Evidence from National Surveys." *Housing Policy Debate* 7(1): 1-35.
- Scanlon, Edward, and Deborah Page-Adams. 2000. "Homeownership and Youth Well-Being: An Empirical Test of Asset-Based Welfare," Center for Social Development, Washington University, St. Louis, MO.
- Sherraden, Michael. 1991. *Assets and the Poor: A New American Welfare Policy*. NY: M.E. Sharpe.
- Sinai, Todd, and Nicholas S. Souleles. 2005. "Owner-Occupied Housing as a Hedge against Rent Risk." *The Quarterly Journal of Economics* 120(2): 763-789.

- Skinner, Jonathan. 1988. "Risky Income, Life Cycle Consumption, and Precautionary Savings." *Journal of Monetary Economics* 22(2): 237-55.
- Sullivan, James X. 2005. "Borrowing During Unemployment: Unsecured Debt as a Safety Net." Notre Dame: University of Notre Dame.
- Williams, Trina Rachelle. 2003. "The Impact of Household Wealth and Poverty on Child Development Outcomes: Examining Asset Effects." Ph.D. diss., Washington University: St. Louis.
- Yadama, Gautam, and Michael Sherraden. 1996. "Effects of Assets on Attitudes and Behaviors: Advance Test of a Social Policy Proposal". *Social Work Research* 20:3-11.
- Zeldes, Stephen P. 1989. "Optimal Consumption with Stochastic Income: Deviations from Certainty Equivalence." *Quarterly Journal of Economics* 104(2): 275-98.
- Zhan, Min, and Michael Sherraden. 2003. "Assets, Expectations, and Educational Achievement." *Social Service Review* 77(2): 191-211.