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Essays on the Consumption, Saving, and Borrowing Behavior of Poor Households: Dissertation Summary

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This thesis examines micro-level borrowing, saving, and consumption behavior of the poor in the United States. The four chapters of this thesis address several important policy-relevant issues related to the well-being of the poor, including the ability of households to maintain well-being during unemployment; the well-being of single mothers transitioning from welfare to work; and the impacts of welfare reform on saving.

Chapter 1 examines whether credit markets help poor households maintain well-being during spells of unemployment. Recent research has suggested that unsecured debt such as credit cards can help poor households insure against earnings variation—a role traditionally served by public welfare programs. To address this question I use data from two nationally representative surveys to examine how consumption and borrowing respond to transitory spells of unemployment. The results provide strong evidence that low-asset households are constrained from unsecured credit markets, suggesting that these credit markets are not a safety net for the most disadvantaged households. In addition, evidence of excess sensitivity of consumption suggests that many households are not fully insured against shortfalls in income during unemployment.

The second chapter addresses the issue of why the poor in the United States tend to have very low rates of saving. I consider whether eligibility requirements under public transfer programs affect the asset holdings of the poor. Variation in eligibility rules over time and across states provides a natural experiment that is exploited to examine the effects of these rules on household asset holdings—in particular, vehicle assets. Concerns about transportation for low-income households have risen as recent changes in welfare policy have placed significant emphasis on the importance of work. Most recipients are now required to work in order to maintain eligibility. Owning a car to commute to work, however, may violate eligibility rules. This creates a potential obstacle to employment for those transitioning from welfare to work. I find that restrictions on vehicle equity have had a measurable effect on the probability of owning a vehicle for households with significant exposure to welfare.

Chapter 3, which is a joint effort with Bruce Meyer, evaluates the merit of consumption and income measures of the material well-being of the poor. We begin with conceptual and pragmatic reasons that favor income or consumption. Then, we empirically examine the quality of standard data by studying measurement error and underreporting, and by comparing micro-data from standard surveys to administrative micro-data and aggregates. We also compare low reports of income and consumption to other independent measures of hardship and well-being. While income is predominantly used as a measure of well-being for the poor, the evidence we present supports a stronger consideration of consumption. The closer links between consumption, well-being, and its better measurement for poor households favors the use of consumption when setting benefits and evaluating transfer programs.

The final chapter, which is also a collaborative effort with Bruce Meyer, examines how the dramatic changes in tax and welfare policies in the 1980s and 1990s affected the material well-being of low-educated single mothers. During this period, transfer income fell noticeably for these women, but earnings increased because more single mothers were working. Building off of the analysis in Chapter 3, we use consumption to capture changes in well-being over time. Using data from both the Consumer Expenditure Survey and the Panel Study of Income Dynamics, we find that the material conditions of single mothers did not decline in recent years, either in absolute terms or relative to comparison groups. This pattern holds for the average single mother as well as for low-educated single mothers at low quantiles of the consumption distribution. In most cases, our evidence suggests that the material conditions of single mothers have improved slightly.

Chapter 1
Borrowing During Unemployment: Unsecured Debt as a Safety Net

Chapter 1 explores two questions related to a household's ability to maintain its well-being during unemployment: Does unsecured debt help households supplement lost earnings during unemployment, and does limited access to such credit have important welfare implications? These questions are of considerable concern to policymakers, given the large literature showing that poor households are not fully insured against unemployment spells (Dynarski and Gruber 1997). Moreover, these questions have become particularly relevant in the United States as consumers increasingly rely on unsecured debt to finance consumption. During the 1980s and 1990s, there was tremendous growth in unsecured debt for U.S. households. Average household balances on unsecured loans doubled in real terms between 1984 and 1999. By 1998, more than 75 percent of all U.S. households had at least one credit card and nearly half of all households carried outstanding balances on these accounts. Growth in credit card debt has been most striking among households below the poverty line. Some researchers suggest that these poor households use this debt to smooth consumption across spells of unemployment (Bird, Hagstrom, and Wild 1999). The issue of how poor households maintain consumption during unemployment is particularly interesting at a time when other traditional safety nets, such as Aid to Families with Dependent Children (AFDC) or Temporary Assistance for Needy Families (TANF), are narrowing their coverage by imposing time limits and/or work requirements.

To address these empirical questions, I use panel data from two nationally representative surveys—the Survey of Income and Program Participation (SIPP) and the Panel Study of Income Dynamics (PSID)—to examine whether borrowing and consumption are responsive to transitory spells of unemployment. I allow for heterogeneity in access to credit markets by looking at households with different levels of initial assets. I also consider the borrowing behavior of low-asset households separately because these households cannot use savings to self-insure against income shortfalls. Thus, unsecured debt is the only mechanism by which these low-asset households can transfer income intertemporally. Exploiting a rich set of information in the data about the nature of unemployment spells, I identify spells which are both unexpected and transitory. I then use these spells to capture the effect of unemployment-induced earnings variation on borrowing behavior in an instrumental variables model.

I find that households with some initial wealth do in fact borrow during unemployment spells, increasing unsecured debt by an average of 10 cents for each dollar of earnings lost. By contrast, households with low initial wealth do not use unsecured debt to supplement lost earnings. Sensitivity analysis shows that these findings are robust to many different specifications.

To address the related question of whether restricted access to these credit markets has negative welfare implications for households facing an income shortfall, I examine how consumption responds to these transitory unemployment spells. I again consider whether the response differs for households with and without assets. The results show that the consumption of low-asset households is more responsive than that of households with assets. Moreover, sensitivity analyses show that these differences cannot be entirely explained by heterogeneity in the nature of unemployment shocks across asset groups, or by disparities in the income elasticity of consumption at different levels of permanent income.

The analysis in this chapter is the first to test empirically the extent to which households borrow from unsecured credit markets to supplement lost earnings. The results provide strong evidence that current credit markets are not a viable safety net for low-asset households. The fact that consumption falls in response to transitory spells of unemployment suggests that these low-asset households are short on liquidity during unemployment. It also indicates that the unemployment insurance program does not sufficiently insure low-asset households against earnings shortfalls. Moreover, differences in the responses of consumption to unemployment for households with and without assets imply that low-asset households experience greater losses in material well-being due to restricted access to unsecured credit. Addressing these concerns, some researchers have suggested adding a loan provision to the unemployment insurance program (Flemming 1978). Adverse incentive effects, however, are likely to confound any policy aimed at providing credit to unemployed workers who are constrained from private credit markets. The design of a policy to extend credit to the unemployed would benefit from further research to address concerns about moral hazard and other potential adverse effects of extending credit to unemployed workers.

Chapter 2
The Effects of Welfare Reform on Saving and Vehicle Ownership for the Poor

Recent research has clearly shown that low-income households in the United States do not save (Orszag 2001). What is less clear is the reason for this lack of saving. One potential cause is the structure of public transfer programs (Hubbard, Skinner, and Zeldes 1995). All of the major U.S. transfer programs targeted for low-income households, including TANF, Food Stamps, Medicaid, and Supplemental Security Income (SSI), are means tested—eligibility requires a recipient's income and assets to be below a specified level. Some assets, such as vehicles, have exemptions that allow households to exclude a certain amount of equity in that asset from the asset test. Asset limits may encourage potential recipients to keep few assets in order to satisfy asset tests. Similarly, asset exemptions may encourage low-income households to hold certain types of assets, affecting not only saving rates but asset allocation, as well.

There are several reasons why policymakers are concerned with the saving behavior of the poor. First, low saving rates may make it more difficult for poor households to invest in education, own a home, or make other significant investments in physical or human capital. This will be particularly true if these poor households do not have access to perfect credit markets, as is suggested in Chapter 1. Second, without a buffer of savings, poor households are not self-insured against income shortfalls, and these households may consequently become more dependent on public transfer programs. Some researches have suggested that low saving rates among the poor limit economic mobility, exacerbating the cycle of poverty (Sherraden 1991). Recently, programs have been designed to encourage saving among the poor. For example, many states have provided funding for Individual Development Accounts (IDAs). These accounts match savings withdrawals that are used for homeownership, education, or small business investments.

Chapter 2 examines whether asset restrictions under the AFDC/TANF program have affected the asset holdings—in particular, vehicle assets—of poor households. There are several important reasons to focus on vehicle equity in this context. First, vehicles make up a very significant share of total wealth for households with limited resources. These poor households are more likely to have vehicle equity than any other type of asset. Second, restrictions on vehicle assets may particularly affect welfare recipients transitioning into the labor force. Under these reforms, welfare recipients are expected to work in order to be eligible for benefits. However, if a potential welfare recipient purchases a vehicle in order to commute to work, this person may consequently fail the asset test for eligibility under AFDC/TANF. Lack of adequate means of transportation has often been cited by welfare recipients as a major obstacle to employment. Two-thirds of all newly created jobs are located in the suburbs, but 75 percent of all welfare recipients live in urban cities or rural areas. Third, exemptions for vehicle equity may distort asset allocation, encouraging households to substitute vehicle equity for other types of assets. For example, more than 20 states currently exempt from the asset test the full value of at least one vehicle. These exemptions may induce poor households to substitute vehicle assets for financial assets. This may impede savings growth for these households, as vehicle equity tends to depreciate more rapidly than more liquid assets. Lastly, the variation in vehicle exemptions over time and across states far exceeds the changes in the limits governing other assets, suggesting that policy changes may be particularly important for vehicle equity. Nevertheless, the effects of asset restrictions on vehicle ownership have been largely overlooked in previous research.

In theory, the effect of asset restrictions on saving behavior is not clear. The effect of these high implicit tax rates on asset holdings will depend on the household's existing asset portfolio and likelihood of participating in these transfer programs. For example, relaxing asset restrictions may encourage saving for likely participants with few assets, because these households can accumulate more assets while still satisfying the asset test. On the other hand, for some households with asset holdings above the original asset limits, the more relaxed asset limits make the transfer program more attractive. These households may find it optimal to reduce asset holdings in order to maintain the option of participating in the program. Because some assets are partially exempt from the asset tests, these restrictions can also affect asset allocation. Although the overall effect of asset restrictions on asset holdings is ambiguous in theory, empirical analysis can provide evidence on the true effect of these restrictions.

Using data on vehicle assets from the Consumer Expenditure Survey (CE), I examine the response of asset holdings to changes in asset restrictions, exploiting two different sources of exogenous variation in these restrictions: 1) the Omnibus Budget Reconciliation Act of 1981, which established more uniform restrictions on liquid assets across states, and much more rigid limits on vehicle equity; and 2) federal waivers which gave states greater freedom to set program rules in the 1990s, resulting in an increase in the limits set on both liquid assets and vehicle equity in some states. I estimate probit models that control for time-invariant unobserved heterogeneity across states.

Although the analysis of the effects of the federal overhaul of the asset test rules in the early 1980s are inconclusive, I find fairly strong evidence that the loosening of asset restrictions in the 1990s resulted in greater holdings of vehicle assets for low-educated single mothers. For example, vehicle limits reduce the probability of owning a car by 13 percent for low-educated single mothers. A $1000 increase in the vehicle limit results in a 6.7 percent increase in vehicle ownership rates.

Chapter 3
Measuring the Well-Being of the Poor Using Income and Consumption

Chapter 3, written with Bruce Meyer, examines the quality of income and consumption measures of material well-being. Income is almost exclusively used to measure economic deprivation in the United States. For families with limited resources, where the extent of material deprivation is most important, there is little evidence to support the reliability of income measures. Moreover, there is significant evidence suggesting that income is badly measured for the poor. In developing countries, unlike the United States, consumption is the standard measure of material well-being. While there are obvious differences between developing and developed countries, such as the extent of formal employment, these distinctions are blurred when looking at the poor in developed countries who may do little formal work. Also, there are reasons to believe that consumption is better-measured than income for poor families.

This chapter considers both conceptual and measurement issues, and compares income and consumption measures to other measures of hardship or material well-being. Our analysis begins by exploring the conceptual and pragmatic reasons why consumption might be better or worse than income. We then consider several empirical strategies to examine the quality of income and consumption data.

We show that conceptual arguments regarding whether income or consumption is a better measure of material well-being of the poor almost always favor consumption. Consumption captures permanent income, reflects the insurance value of government programs and credit markets, better accommodates illegal activity and price changes, and is more likely to reflect private and government in-kind transfers which are particularly important sources of support for families with low cash incomes. For example, recent changes in Medicaid are likely to substantially affect family well-being without affecting measured family income. On the other hand, non-medical consumption measures would reflect Medicaid changes. If single mothers spend less out-of-pocket on health care, they can spend more on food and housing or other goods and services.

Reporting arguments for income or consumption are more evenly split. For many households, income is easier to report (particularly when it comes from one source). Findings by Bound and Krueger (1991) support the idea that income is easy to report—more than 40 percent of Current Population Survey (CPS) respondents report earnings that are within 2.5 percent of IRS earnings. This argument is probably the main reason why most surveys rely on income measures and it is persuasive for many demographic groups. Consumption, on the other hand, often has a large number of components, and therefore, may be difficult to report.

However, for some demographic groups that are particularly important from a poverty and public policy perspective, such as low-educated single mothers, this argument is not compelling. For low-educated single mothers, income often comes from many other sources besides earnings in formal employment. For these disadvantaged families, transfer income (which is consistently underreported in surveys) and off-the-books income (which is likely to be unreported in surveys) account for a greater fraction of total income. With many sources of income that do not appear on a W-2 statement, accurate reporting is much less likely. Furthermore, households with limited resources tend to spend a large fraction of their resources on only a few consumption categories, namely food and housing. Food and housing together constitute nearly 70 percent of the consumption of low-educated single mothers, and thus provide a reasonable measure of material well-being. This suggests that consumption may be easier to report than income for these households—an argument supported by ethnographic research (Edin and Lein 1997).

We employ several different empirical strategies that show that income is underreported and measured with substantial error, especially for those with few resources such as low-educated single mothers. Expenditures for those near the bottom decile greatly exceed reported income. Households in the bottom decile of the income distribution outspend their disposable income by more than a factor of four. We also show that these differences between expenditures and income cannot be explained with evidence of borrowing or drawing down wealth, as these families rarely have substantial assets or debts.

We provide evidence that commonly used household surveys have substantial underreporting of key components of income. Weighted micro-data from these surveys, when compared to administrative aggregates, show that government transfers and other income components that are particularly important for those with few resources are severely underreported. For example, cash welfare, which accounts for more than a quarter of total income for single mothers in the bottom decile of the income distribution, is underreported by about a third in the CPS. Furthermore, the degree of under-reporting has changed over time and these changes in underreporting are arguably correlated with policy changes, because the reforms have encouraged people to move towards greater involvement in the formal labor market. There is also some underreporting of expenditures, but because expenditures often exceed income, we might be more concerned about over-reporting of consumption, of which there is little evidence. Also, underreporting of consumption is not likely to be correlated with policy changes.

Finally, we compare other independent measures of material hardship or adverse family outcomes for those with very low consumption or income. These material hardships are more severe for those with low consumption than for those with low income, indicating that consumption does a better job of capturing well-being for disadvantaged families.

Both conceptual arguments and empirical evidence present a strong case for consumption. Our analysis suggests that consumption should be used more often in studies of the well-being of disadvantaged households. We also argue that the closer link between consumption and well-being (and its better measurement for poor households) favors the use of the former when setting benefits and evaluating transfer programs.

Chapter 4
The Effects of Welfare and Tax Reform: The Material Well-Being of Single Mothers in the 1980s and 1990s

Chapter 3 provides the motivation for using consumption in Chapter 4, also written with Bruce Meyer, to analyze the effects of welfare and tax reform on the material well-being of single mothers. Recently, state and federal policymakers dramatically changed tax and transfer programs for single mothers. Perhaps most notable were the overhaul of the federal welfare program in 1996 and the expansions in the earned income tax credit in the early to mid 1990s. These changes encouraged work and discouraged welfare receipt, and the results have been quite noticeable. Welfare caseloads declined by more than 40 percent in the four years after their peak in March of 1994, and the increases in employment and earnings of single mothers sharply accelerated after 1993. The goal of this final chapter is to examine the material conditions of single mothers and their families before and soon after welfare and tax reform in order to assess the net effects of recent policy changes on the well-being of these families.

Using data from the CE and the PSID, we examine the consumption patterns of single mothers and their families. We examine both absolute changes in the consumption of single mothers and changes relative to those for two comparison groups: single women without children and married mothers. We estimate quantile regressions at both the 15th and 25th percentiles of the consumption distribution in order to capture the effect of these reforms for more disadvantaged households.

Our results show that the level of total consumption for single mothers increases in real terms throughout this period. In relative terms, there is some evidence that consumption for single mothers near the bottom of the consumption distribution increased over the 1990s, and this increase is also noticeable for less skilled single mothers. In most cases, we see a statistically significant increase in relative total consumption for single mothers between 1984–1990 and 1996–2000. Our results also show that some of these gains in consumption for single mothers occur after 1995, but these changes are quite small and in many cases they are not statistically significant. Nevertheless, we provide strong evidence that the material well-being of single mothers has not appreciably declined as a result of recent reforms.

Our evaluation of the effects of welfare reform adds to the existing literature in several ways. First, by looking at all single mothers, as opposed to only those on welfare, we are able to capture both the direct effect of reforms on current and past recipients, as well as effects on those induced not to receive welfare. Second, we use household consumption to evaluate the effects of welfare reform on the well-being of single mothers. The arguments for why consumption is a better measure of material well-being than income are explained in Chapter 3. Third, rather than just looking at levels of consumption, we compare the consumption behavior of single mothers to two separate comparison groups. Assuming other economic changes that occurred in the past decade affected both single mothers and the comparison groups similarly, this approach enables us to isolate the effects of welfare and tax changes. Lastly, we are able to strengthen these initial findings by analyzing consumption behavior from two independent data sources. The similar patterns of consumption changes that emerge from the PSID and the CE suggest that our results are fairly robust.

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