

Consumption and the Poor:
What We Know and What We Can Learn

Bruce D. Meyer
University of Chicago and NBER

and

James X. Sullivan
University of Notre Dame

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I. Introduction

We have been instructed to examine the theoretical and scientific issues in consumption among low-income families. In implementing these instructions, we first make the case for the use of consumption data in addition to income data in measuring well-being. Second, we summarize some of the key findings with consumption data and suggest some areas of research and policy where consumption data may be especially useful. Third, we describe some of the analytical difficulties and data quality issues with consumption data and how the data may be improved. Given the constraints of a short memo, the coverage here is incomplete.

To motivate why one should consider increased research and policy use of consumption data, a few observations are in order. The distinction between consumption and income data has several important substantive implications. First, reported consumption greatly exceeds reported income in commonly used household surveys for those at the bottom of the distribution of resources. This fact can be found elsewhere such as in Rogers and Gray (1994), but an extensive analysis of this issue is in Meyer and Sullivan (2003). Table 1 taken from this paper indicates that the 10th percentile of consumption among low-educated single mothers is 40 percent higher than the 10th percentile of income. Substantial evidence indicates that a likely explanation for this pattern is income under-reporting, but there are many unresolved questions. Second, there are large differences between the groups of individuals who are income poor and those who are consumption poor. Third, recent income and consumption patterns have diverged sharply as can be seen in Figure 1. Poverty rate trends for adults, children and the elderly are very different using consumption than using income (Johnson and Smeeding, 1998). On the one hand, 1993-2000 CPS and CE Survey data indicate sharp drops in the bottom decile of the income distribution for single mothers and large increases through much of the remainder of the bottom half of the distribution. On the other hand, consumption data from the CE Survey as well as PSID food consumption suggest that consumption has changed little throughout the distribution (Meyer and Sullivan, 2004).

Consumption data combined with income data allow one to obtain a more complete picture of the well-being of the poor. Well-being is more tangible when expressed in terms of housing characteristics, food consumption, household appliances and other material goods. Researchers can examine the choices poor families make given their constraints, such as whether poor families spend their money differently than non-poor families. Researchers can also examine if price differences across groups or changes over time have differentially affected the poor.

II. Preliminaries: Definitions, Samples, Income and Consumption Measures

We begin by comparing income and consumption based measures of well-being for disadvantaged families. In particular, we look at families that can be selected based on demographic characteristics, such as low-educated single mothers or the disabled, rather than selecting a sample based on having low values for the outcome of interest, such as low income or low consumption, as this could bias any comparisons of income and consumption. We focus on single mothers and their children because they constitute a

large share of the poor, especially poor children. One initial caveat on the results below is that while some of these findings have been confirmed for other families, further analyses should be performed to examine the generality of the results.

In order to compare income and consumption, some useful definitions are:
true income after-taxes = the inflow of money and near money,
true expenditures = the outflow of money, and
true consumption = private resources used.

Since we want measured income to capture resources at a family's disposal we will subtract imputed tax payments and add in the value of Food Stamps. Expenditures are converted to consumption by replacing housing and vehicle expenses with the service flow of consumption from their ownership, and excluding investments such as schooling, and medical care.

III. Comparing the Quality of Income and Consumption Data

In previous work we evaluate the merits of income and consumption as measures of well-being (Meyer and Sullivan, 2003). We divide the relevant factors in comparing income and consumption measures of well-being into conceptual and measurement issues. The conceptual issues can further be divided into those that involve saving and those that do not.

Conceptual arguments as to whether income or consumption is a better measure of the material well-being of the poor almost always favor consumption. For example:

- Consumption captures permanent income, the long-run resources available to a family.
- Consumption reflects the insurance value of government programs and credit markets.

These arguments all rely on true current expenditures not equaling true income due to saving or borrowing. Given the low level of assets and limited access to credit markets, these arguments are less important for the poor, particularly single mothers, than for others.

A second set of conceptual arguments does not rely on the ability of the poor to save or borrow. These arguments emphasize that:

- Consumption includes the flow of resources from durable goods.
- Consumption can be disaggregated into components that are of interest in themselves.
- In-kind transfers such as cars or government provided health care are omitted from income or hard to impute, but are at least partially captured by consumption.

- Non-medical consumption may be a better way to account for differences in access to health care.
- One can account for relative price changes.
- One may not want to count illicit spending. On the one hand, consumption measures might be preferred because these measures exclude legitimate income spent on illicit activities. On the other hand, one might prefer income measures if one wants to exclude illegitimate income that is used to finance legitimate consumption.

Measurement issues related to income and consumption are more evenly split, with key arguments favoring income and other important arguments favoring consumption.

- Income data are easier to collect and therefore are often collected for larger samples. Nevertheless, taxes need to be imputed to obtain disposable income.
- The large sample sizes of income datasets favor income, but simple comparisons of sample size are misleading in many contexts because consumption data are less variable.
- For most people, income is easier to report given administrative reporting and a small number of sources of income. Working against this point is the confidentiality and sensitivity of income.
- Furthermore, for analyses of families with few resources the usual arguments for income are less valid. These families tend to have many income sources. Moreover, many of these sources tended to go unreported (i.e. informal work) or significantly under-reported (i.e. transfers).
- Income appears to be substantially under-reported, especially for categories of income important for those with few resources. These points have been emphasized by Edin and Lein (1997), based on their ethnographic study of single mothers. In addition, much of the under-reporting may be affected by changes in policies, and the extent of under-reporting appears to have changed over time.

Meyer and Sullivan (2003) provide evidence that for disadvantaged groups consumption is a better predictor of well-being than income. For example, we examine other measures of material hardship or adverse family outcomes for those with very low consumption or income. These problems 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.

Meyer and Sullivan (2003) also provides evidence that commonly used household surveys have substantial under-reporting of key components of income. Weighted micro-data from these surveys, when compared to administrative aggregates, show that government transfers and other income components are severely under-reported and the degree of under-reporting has changed over time. Comparisons of survey micro-data to administrative micro-data for the same individuals also indicate severe under-reporting of government transfers in survey data. There is also some under-reporting of expenditures, but because expenditures often exceed income, we might be more concerned about over-reporting of consumption, of which there is little evidence.

We also present strong evidence that income under-reporting and mis-measurement are particularly problematic for those with few resources such as low-educated single mothers.

Expenditures for those near the bottom greatly exceed reported income. This result is evident in the percentiles of the expenditure and income distributions, and in comparisons of average expenditures and income among low-educated single mothers (Table 1). These differences between expenditures and income cannot be explained with evidence of borrowing or drawing down wealth; we show that these families rarely have substantial assets or debts. In fact, fewer than half of all single mothers with a high school degree or less have any financial assets (Sullivan, 2004). We argue that the difference between income and consumption for these disadvantaged families is largely explained by the misreporting of income. Thus, we conclude that for poor single mothers a sensible conceptual starting point is that true income equals true expenditures. In other words, for the families on whom we focus—those with limited resources—saving or dissaving to compensate for fluctuations in income is minimal.

IV. Areas for Study of Income Data that Would Clarify the Merits of Consumption Data:

- We need a more comprehensive study that matches administrative transfer data and survey data. If the survey data had both income and consumption information, we could answer some key questions about the nature of income under-reporting and potential biases in various types of studies.
- Ethnographic work suggests that a substantial portion of income for poor families comes from informal work. However, little is known on the extent to which earnings from informal work is captured in surveys.
- We should explore the explanations for unsatisfactory income and consumption reporting including the sensitivity of the topic of income, the number of categories of income or consumption, and the burden of reporting.

V. What Have We Already Learned from Consumption Research?

- Fewer people have extremely low resources at their disposal than suggested by income data. This result does not necessarily mean poverty is less of a problem because you might want to use different poverty thresholds for consumption than for income since consumption is a different yardstick.
- Different people are consumption poor than are income poor. There is some evidence indicating that consumption poverty measures imply relatively higher poverty rates for children than for the elderly. Where the poor are located will change if one moves to a consumption measure.
- As elaborated on in the introduction, poverty and well-being trends over time are different for income and consumption.
- Consumption is more strongly correlated with other independent measures of well-being than is income. For example, families with low consumption are more likely to experience other hardships than families with low income.
- Given the under-reporting of income and the stronger association between consumption and well-being, the evidence favors using consumption as a benchmark when deciding on benefit standards and as an outcome measure when evaluating transfer programs.

VI. What are Some of the Opportunities for New Research with Consumption Data?

- Some of the vast literature on the effect of income on outcomes may merit reexamination. Studies of the effect of consumption on outcomes may find stronger relationships than studies of the effect of income on outcomes.
- The components of consumption can also be useful. For example, one may want to disaggregate consumption to look at price changes, the effects of increased work, etc. To date, there is little evidence on how consumption changes with work.
- Researchers can examine the spending patterns of poor families in order to analyze family functioning and decision-making based on how resources are allocated within the family. It would be helpful if it were easier to separate out spending on children and other family members.
- To obtain a fairly complete measure of material well-being, one can move beyond consumption and income by incorporating time use data, in-kind transfers from the government and other individuals, measures of health coverage, and housing characteristics. These steps are probably easier to make with consumption data.

VII. What are the Analytical Difficulties and Data Quality Issues with Consumption Data?

- Total expenditures in the CE Interview Survey do not align well with PCE aggregates. Moreover, the ratio of total expenditures from the CE Survey to PCE aggregates has declined over time. Also, it is difficult to compare components of expenditures to an aggregate benchmark.
- While the PSID provides food and housing consumption data, other important components of consumption are missed.
- The CE Survey, which is the only U.S. survey to measure total expenditures, does not provide data on the value of housing subsidies. These subsidies could account for a substantial fraction of consumption for poor families.
- There is only limited information on in-kind transfers from family and friends in consumption datasets.
- Interview refusal and item non-response rates are high in most national surveys. Attrition rates in the CE survey have increased.
- The homeless are generally missed in nationally representative surveys.
- There are open questions about a two-week diary survey for distributional analyses as opposed to information about mean expenditures. There is an 11 percent higher standard deviation of consumption in quarterly data compared to annual data. This potential problem is likely much more severe with data gathered over two weeks because the periodicity of many purchases is long so that a two week measure does not give an accurate indicator of the distribution of more long-term expenditures.

VIII. How might we improve consumption data in the U.S.?

- To better impute housing flows in the consumption surveys we should ask the value of free or subsidized rent.
- We should consider adding a small consumption module to some standard surveys. A small number of consumption questions may provide very useful information as suggested by Browning, Crossley and Weber (2003), and Meyer and Sullivan (2003).
- There is some suggestion from intensive household interviews that asking about income and consumption in the same survey could improve the reporting of both.

- If we were to add more complete wealth questions to the CE survey, even as a one-time event or occasional supplement, we could better determine the internal consistency of cases where reported expenditures exceed reported income. Wealth also provides another useful measure of well-being.
- It would be helpful to combine consumption data with time-use data. Such data would allow the analysis of substitution between market and non-market time as well as time-use in home production.
- It would be helpful if it were easier to separate out spending on children and other family members. It would also be beneficial if one could separate out work expenses from other expenditures.

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Table 1
 Distribution of Real Income, Expenditures, and Consumption
 Single Mothers Without a High School Degree, Ages 18-54, 1991-1998

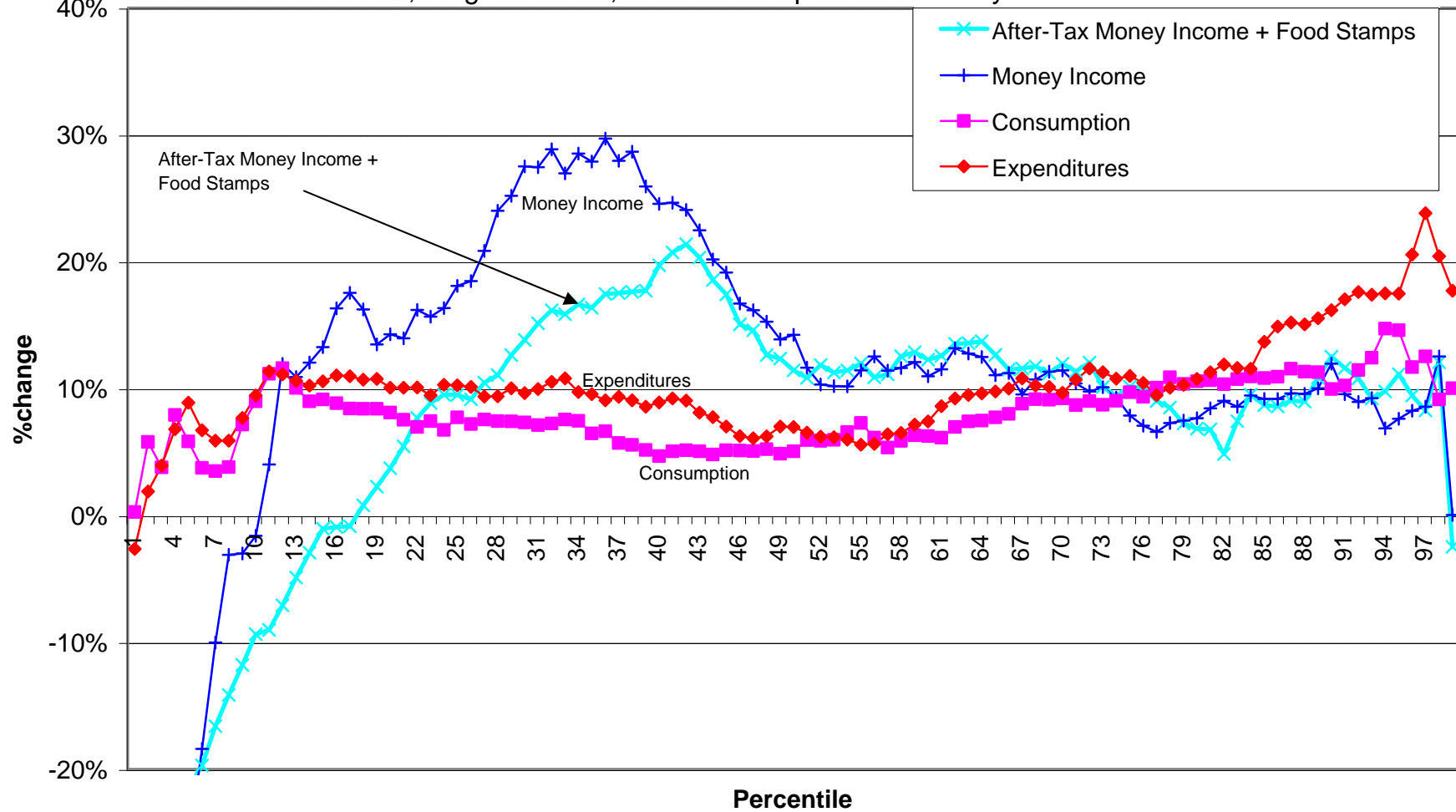
	Percentiles					
	10th	20th	30th	50th	80th	90th
Total Family Income (CPS)						
(1) Income of family at the given percentile of income	5,098	6,842	8,151	10,294	17,077	22,493
(2) Mean income for families below given percentile of income	2,848	4,478	5,491	6,957	9,268	10,427
Total Family Income (CE)						
(3) Income of family at the given percentile of income	4,551	6,704	7,875	10,335	16,475	22,873
(4) Mean income for families below given percentile of income	3,066	4,364	5,375	6,837	8,999	10,132
(5) Mean income for families below given percentile of expenditures	7,342	7,671	8,068	8,857	10,240	10,956
Total Family Expenditures (CE)						
(6) Expenditures of family at the given percentile of expenditures	6,681	8,504	9,880	12,685	20,295	25,747
(7) Mean expenditures for families below given percentile of expenditures	5,585	6,655	7,510	9,021	11,609	12,820
(8) Mean expenditures for families below given percentile of income	14,213	12,574	11,885	11,866	12,858	13,483
Total Family Consumption (CE)						
(9) Consumption of family at the given percentile of consumption	6,748	8,510	9,982	12,753	19,838	24,677
(10) Mean consumption for families below given percentile of consumption	5,541	6,653	7,527	9,067	11,603	12,734
(11) Mean consumption for families below given percentile of income	14,443	12,729	11,859	11,927	13,025	13,736

Source: Meyer and Sullivan (2003)

Notes: Single mothers are defined as female family heads living with at least one child of their own. All figures are indexed to 2000 dollars using the PCE deflator, and expressed on an equivalence scale. The figures reflect income, expenditure, and consumption behavior for the years 1991-1998. All income numbers are after tax, and include all money income plus the cash value of food stamps. All figures are at the family level including all related members, and are weighted.

Figure 1

Changes in Income, Expenditures, and Consumption Relative to Poverty Line at Each Percentile, 1993-1995 to 1997-2000, Single Mothers, Consumer Expenditure Survey



Source: Meyer and Sullivan (2004b)

Note: All data are from the Consumer Expenditure Survey. Each outcome is sorted by itself, so, for example, households at low quantiles of Income are not necessarily the same households at low quantiles of expenditures. The sample includes single mothers between the ages 18-54 living with their own children only. "Incomplete income reporters" are excluded. Money income follows the Census definition of all monetary income. This is the income measure used to determine poverty rates.