Measuring Extreme Deprivation in the United States: Is Income or Consumption the Right Measure?

Consumption measures of poverty attempt to take the resources that families expend on consumption and assign them a cash value, with the goal of estimating a dollar value for what that family consumes over some period of time. Some researchers argue that a consumption-based measure of poverty may more directly reveal the resources available to families and be a more direct measure of material well-being than an income-based measure of poverty (Bavier 2014; Meyer & Sullivan 2003). Chandy and Smith (2014), for example, report that the World Bank prefers a consumption-based measure of poverty when estimating rates of global poverty (although some countries do use income-based measures), in part because people in developing countries often survive solely on resources that never take the form of cash, such as raising and tending to livestock or subsistence farming.

In $2.00 a Day, we use an income-based rather than consumption-based measure in part because of concerns regarding the quality of available survey data that captures household consumption (see more on this below). But more importantly, our central argument is that cash resources have a particular salience in the United States. The various forms of non-cash aid available to the American poor are important—even vital. Yet reductions in the accessibility of cash among the poorest of the poor in America signal a decline in a critical component of “capability” well-being, to borrow from Amartya Sen (1999). To be without cash income in the United States is to be without a flexible resource that is vital to having a chance of bettering one’s circumstances in this country. As two experts on global poverty put it, living without cash in the U.S. might be thought of as a kind of “purgatory,” and the rise of $2-a-day poverty here implies “a severe form of poverty in both a practical and intangible sense” (Chandy & Smith 2014, p. 15).

Data Quality of Consumption Survey Estimates

Building on Shaefer & Edin (2013), Chandy and Smith (2014) estimate the rate of $2-a-day poverty for all U.S. households using the SIPP, rather than only for households with children. They also account for a wider variety of in-kind programs (such as the National School Lunch Program, imputing a cash value for food eaten by kids at school). Despite these differences in their analyses, their baseline results “are roughly of the same magnitude as those of Shaefer and Edin and serve to reaffirm their core findings” (p.4).

Chandy and Smith then turn to the income and expenditure measures in the Consumer Expenditure Survey (CE). By comparing low levels of consumption to income, they find little evidence of a relationship between very low levels of reported income and very low levels of reported consumption. Based on this evidence, they argue that the American
poor consume more than their incomes would suggest, and that there may not be a direct relationship between low-income and low-consumption.

Yet this analysis depends entirely on the quality of the CE data. The CE is currently undergoing a major redesign as a result of widespread concerns about data quality. There is evidence that the survey may be unrepresentative of households at the very bottom, and the CE survey has very low-quality measures of income.

The CE income data generally yields some of the worst public program reporting rates across any major household survey (Meyer, Mok and Sullivan, 2009). For example, comparing the most recent SNAP reporting rates across SIPP, CPS, and CE, the SIPP has a much higher reporting rate (76.4%) than CPS (54.6%), which in turn is much higher than the CE (37.2%). According to these estimates, just over a third of SNAP dollars are reported in the CE.

The only other major household survey to include significant expenditure and income data is the Panel Study of Income Dynamics (PSID). It is generally agreed upon that in terms of measuring income among the poor, the SIPP > PSID > CE. In the PSID data, previous research has found that consumption dips at very low levels of income, although consumption does remain higher than income, likely for many of the reasons described in $2.00 a Day.

Some research offers evidence that consumption estimates from national representative surveys have a stronger association with key material hardship outcomes among some population subgroups (such as single mother households, see Meyer & Sullivan 2003). However, to our knowledge there is no paper that shows that consumption is better than income in measuring hardship across the population writ large, and the two measures generally paint qualitatively similar pictures of well-being among poor families with children. Existing analyses in which consumption fares the best against income are largely based on the low quality CE income data. When a comparison is made with the PSID, the consumption and income data perform much more similarly (Meyer & Sullivan 2003). For other sub-groups, such as the mature population, there is preliminary evidence that income is much more clearly associated with material hardship than expenditures (Levy, 2015). Thus, A great deal more research is needed to determine which is the more uniformly superior “instrumental” measure of well-being for the U.S. population.

Divergent Trends or Divergent Samples?

A broader literature has for some time noted a divergence in trends between consumption poverty estimates produced by the CE and income poverty estimates from the Current Population Survey (CPS) since roughly the year 2001 (Meyer & Sullivan 2009). Until recently, these studies have called into question the value of income based poverty measures. However, Bavier (2014) argues that this divergence between surveys is not
explained by fundamental differences in what is captured by a consumption-based poverty measure as opposed to an income-based measure. Instead, it may be the result of differences between the CE sample and the samples of other major household surveys.

Bavier finds that trends in poverty rates based on adjusted income (accounting for taxes and public program benefits) in the CPS and consumption data from the CE matched quite closely during the period 1984 to 2000. However, after that point in the CE, both the consumption poverty estimates and the income poverty estimates began a rapid decline that followed a starkly different path from income poverty rates recorded in the CPS and other major household surveys over this period. Thus, if one were to look only at the income poverty estimates from the CE, Bavier argues that one would see the same divergence from the income data of the other major household surveys that one sees in the CE’s consumption data.

Since the release of Bavier (2014), some researchers have raised questions about the above analysis in terms of whether Bavier’s calculation of income in the CE was conducted correctly. However, Bavier offers another test of the CE’s representativeness by using consumption (expenditure) data from the PSID. PSID did not include a full battery of core household expenditure questions until the mid-2000s, and even today the reference period for these questions is not consistent across expenditure questions. However, there are a subset of expenditure questions that remained consistent starting in 1999, and when estimates based on these questions are compared to the results from a similar set of questions in the CE, the resulting divergence leads to the same conclusion as the previous test—that of the CE breaking away from peer surveys after 2000. The PSID consumption data remain in line with the CPS and its peers, while the CE takes a different path.

Thus, at the very least, there remains considerable disagreement across the primary nationally representative data sources that can be used to construct trends over time in consumption/expenditure poverty estimates. While numerous major data sets measuring income (CPS, SIPP, PSID) and one major data set measuring expenditures (PSID) yield qualitatively similar results on trends in poverty over time. A single dataset measuring consumption (CE) shows a different trend.

Given all these issues, in $2.00 a Day, we rest our case on numerous sources of data. Following Edin’s initial qualitative insights from her qualitative research in Baltimore in 2010, we began to test a hypothesis that there had been a deterioration in the circumstances of America’s poorest families with the most reliable, nationally representative household survey data available, the Survey of Income and Program Participation (SIPP). We then checked our findings from the SIPP against numerous other sources of data, including SNAP administrative records, school reports of homeless children, and data on utilization of charitable emergency food programs. Finally, for a number of years we conducted in-depth ethnographic research in four sites across the
country, seeking out families whom we believe would register as $2-a-day poor if they were survey respondents in the SIPP. All these sources of data paint a strikingly consistent picture of worsening conditions faced by the nation’s poorest families. Our analyses of these diverse data sources can be found here.