

New Comparative Measures of Income, Material Deprivation, and Well-Being

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Most societies, rich and poor, seek to measure progress in reducing poverty and need, as indicated by material deprivation or social exclusion. The yardsticks used to assess progress and policy impact mainly include income-based poverty, but broader measures of poverty based on consumption, wealth, and material deprivation are also now coming into use. Both Europeans and Americans also have a strong interest in reducing income inequality: It is reported as a “serious problem” by two-thirds of survey respondents in the U.S. and over 90 percent of respondents in Europe (Förster & D’Ercole, 2009). However, although both agree that income inequality is a social ill, there is far less consensus on how to attack the problem. Income inequality rose in most rich nations in the Organisation for Economic Cooperation and Development (OECD) over the 1990–2005 period, but by considering both tails of the income distribution, we see that most of the rise in inequality was generated by increases at the top of the distribution or by the ratio of the 90th percentile income to the median income, and not by changes at the bottom or by the ratio of the 10th percentile to the median (Förster & D’Ercole, 2009; Salverda, Nolan, & Smeeding, 2009). Many analysts look at the Gini coefficient and see rising inequality if the Gini increases.²³ They are, of course, technically correct. But a change in a single-parameter coefficient like the Gini does not show which part of the distribution changed, and different changes have different policy implications. If the rich pull away from the middle class, the policy implications are likely to be very different than if the poor fall farther behind the middle class.

ABSOLUTE VERSUS RELATIVE MEASURES

At the Joint OECD/University of Maryland Conference on Measuring Poverty, Income Inequality, and Social Exclusion: Lessons from Europe, the major debate, as expected, was about poverty measurement in absolute (fixed line with respect to income changes) versus relative (fully changing with income) terms. While this topic has been debated before (for example, Notten & Neubourg, 2007; Smeeding, 2006), it was especially prominent at this meeting. The absolute-poverty-line backers argued that there should be a widely agreed upon poverty market basket that is held constant, except for consumer price index changes, and therefore is fixed in real terms. In economic terms, the absolute poverty line has an income elasticity of zero. The relative-poverty cadre argued that poverty lines ought to rise (or fall) fully with the middle household income, and therefore the relative line has an income elasticity of 1. Of course, the choice of the measure depends on one’s philosophy of poverty measurement. There is also a middle ground whereby one could “anchor” the relative poverty line in a given year and measure progress in reducing absolute poverty since that time by comparing contemporary income to price changes in that older median line, as well as measuring fully relative poverty as defined above. The United Kingdom now follows such an approach (U.K. Department of Work and Pensions, 2008). Using such an anchored measure, almost all rich nations made progress against poverty between 1990 and 2000, though that progress has been halted or reversed since 2002 (Smeeding, 2006).

Many American academics favor the absolute approach on which the official U.S. statistics are measured, while most Europeans believe in a fully relative approach, with the European Union (EU) formally agreeing in the mid-1990s to measure poverty and social exclusion by incomes less than 60 percent of the annual median income. Progress against poverty by such an exacting and high relative standard has been slow in Europe and elsewhere. It is interesting that, in the new world of global economic recession, we might actually find that relative poverty decreases (depending on how the median household fares), while absolute poverty increases in 2008 and 2009 (due to falling real incomes across the entire distribution).

UPDATING THE U.S. POVERTY MEASURE

Efforts to revise the U.S. absolute poverty measure require resolving many thorny issues, as seen in Johnson (2009). In employing different measures of poverty, European and developing nations have addressed many of the same issues, and their experience can enrich our own thinking. In Europe as well as the developing world, the income elasticity of the poverty line, while not 1, is clearly not zero either. Indeed, a paper by Ravallion and Chen (2009) compares the “official” national poverty lines in 116 countries (700 observations) with real incomes over the period from 1981 to 2006. They find that their data are consistent with an income elasticity of the poverty line of about 0.65, not far from the classic U.S. estimate of 0.75 (Fisher, 1996; Kilpatrick, 1973). The U.S. poverty line was fully half of median income in 1963, but had fallen to 27 percent of the median by 2006 (Blank, 2008; Smeeding, 2006). An acceptable middle ground outcome for the United States, and possibly for Europe as well, might be to have a poverty line that is higher than the current absolute poverty line developed in the 1960s and which also rises in real terms over time in response to increases in the general standard of living and the rising cost of a basket of goods and services—as recommended by the report of the National Academy of Sciences (Citro & Michael, 1995). While the poverty line would increase from the current line, the change would not be directly tied to income changes, but rather to a basket of goods and services deemed necessary for a minimally adequate living standard. In any case, the poverty standard would rise with real incomes (Johnson, 2009). How great the resulting elasticity might be is hotly debated in American policy circles. But it is clear that the elasticity is indeed above zero. Not only should the poverty measure rise with national income, but also the new market basket ought to reflect the costs of going to work and other necessities, as proposed by both the National Academy of Sciences (NAS) (Citro & Michael, 1995) and Blank and Greenberg (2008).

Of course, poverty measures require two components: a measure of economic need, as discussed above, and a comparable measure of resources (like income) to meet those needs. The resource measure also was the subject of much comment at the conference. The resource measure employed by the rest of the rich world is annual disposable household income, which subtracts direct taxes and adds in the cash value of refundable tax credits (like the Earned Income Tax Credit, EITC), near cash benefits like Supplementary Nutritional Assistance Program (SNAP, historically known as the Food Stamp Program), and housing allowances. These are the income definition guidelines for inequality and poverty measurement set by almost all major statistical offices in the Canberra Group report (2001) and now used by the OECD and by the European Union (EU). Additional comment on this revised poverty measure can be found in Johnson (2009), but a change in the U.S. income or resource definition to something like this definition is also clearly called for.

If we are to chart progress against fighting poverty, including the effects of recent changes in the safety net, the poverty line measure and the income measure used to evaluate antipoverty effects need to be changed. Indeed, the recent U.S. federal stimulus package that was enacted as part of the American Recovery and Reinvestment Act (ARRA) contains about \$175 billion in direct aid to individuals, including \$20 billion in additional SNAP funding, \$40 billion for expanded unemployment insurance benefits, and \$70 billion in refundable tax credits, including the EITC. Only the expanded unemployment benefits would be counted as fighting poverty by the official U.S. statistics. The rest are outside the bounds of the current poverty measure. In my own state of Wisconsin, the combined effects of the new EITC, the state EITC, and the refundable tax credits now exceed \$8,000 at the maximum for a family with two children and earnings of \$15,000 (Reimer, 2009). This represents a very large impact for a policy explicitly designed and targeted to enhance incomes and remove families with children from poverty, and yet we do not count it using the current poverty measure.

MEASUREMENT AND CONCEPTUAL ISSUES

Förster & D'Ercole (2009), Tóth and Medgyesi (2009), Maquet and Stanton (2009), and Ravallion and Chen (2009) presented papers in the first session which covered the span of nations from the rich OECD to the entire EU 27 to 119 less rich countries. As far as I know, such a common discussion based on various sets of harmonized data could not be done and was not done before this historic session. Thirty years ago, the evidence base for cross-national analyses of poverty and inequality was empty. In the mid-1980s, the Luxembourg Income Study (LIS) became available and now offers over 30 nations' cross-sectional income and asset data in rich countries, as well as Latin America. These efforts were closely followed by the creation of comparative Cross-National "Equivalent" panel income data Files (CNEF) for up to five countries in the early 1990s, followed in 1994 by the EU's first crossnational coordinated panel income survey, the European Community Household Panel (ECHP), for 12 nations. The ECHP was superseded more recently by the 2005 EU Statistics on Income and Living Conditions (SILC) for 27 EU nations plus a few additional neighboring countries. The EU-SILC has become the EU reference source for income, poverty, and social exclusion, though it is unavailable for direct analysis by non-EU-sponsored researchers at this time. The main contribution of the EU-SILC was to provide data on the 12 newest EU member states (as well as the older 15) in comparable terms. Further transparency in its measures (sampling, response rates, imputation procedures) and its open use by those outside the EU would further add to the growing armada of income and well-being data available to researchers worldwide. At the heart of a large part of the monetary comparisons of well-being is the development of more complete and accurate indices for Purchasing Power Parity (PPP) that can be used to measure "real incomes" across increasingly diverse nations. For more on the perils of using PPPs with microdata, see Bradbury and Jäntti (2001).

In the mid-1990s, OECD began work on secondary analyses of national data sets using the 2001 Canberra report as a guide. This work culminated in the 2008 report *Growing Unequal?*, which is already in its third printing. At the same time that the OECD and LIS were proceeding, the World Bank was compiling secondary datasets on inequality for a large range of nations, though not without some critique (Atkinson & Brandolini, 2001). This work and related efforts at the World Bank produced the "POVCALC" meso-data set, which has been widely used by the bank for analyses of poverty in the developing world. Soon the new Luxembourg Middle-Income Countries (LMICS) project will fill in and add context by uniting the richest 30-plus nations already in LIS with the next 20 to 25 richest "middle-income" countries, including Brazil, China, India, many "Asian tiger" countries, and South Africa. The four papers mentioned above all argue for the importance of developing indicators that are responsive to policy changes. It is clear that in societies with as wide a disparity in real income measures as the new European Union—with the median in the richest countries six times that of the poorest, according to Tóth and Medgyesi (2009)—measures in addition to income alone are needed to chart progress against poverty and deprivation. Indeed, Maquet and Stanton (2009) show a completely inverse relationship between relative poverty (60 percent of median income in each nation) and material deprivation as measured by the EU index. Hence, rich countries with greater inequality and larger spreads between the median and the 60 percent poverty line were high poverty but low material deprivation nations; and the poorer countries had in general more compressed distributions and therefore lower relative poverty, but higher material deprivation. The notion of what constitutes material deprivation or social exclusion is also debated (see also Gilbert, 2009). Issues related to need versus choice are at the heart of the debate. While everyone agrees that not having enough money to pay the mortgage or rent, buy food, or pay for heating are good measures of deprivation, some other measures are more open to debate. The *Breadline Britain* survey and report (Gordon & Pantazis, 1997) makes a very nice distinction between those who "don't want" something and those who "can't afford" it, versus those that just "don't have" it. The "can't afford" notion is clearly preferable for deprivation measurement and for social exclusion.

However, choice will always remain at the heart of the differences. For example, Americans work more hours per year than workers in any rich country, with the major difference being weeks worked per year (Alesina, Glaser, & Sacerdote, 2005). Most Europeans enjoy a minimum of four weeks a year in paid vacation, and count anyone without a minimum amount of paid vacation as socially excluded. It is doubtful that an American measure of exclusion would include such an element. Similarly, before the current housing slump, Americans were spending an increasingly larger fraction of their incomes on housing than they had in past decades. To some, this is a matter of need. Indeed, the British tradition until recently was to measure poverty “after housing costs.” From this perspective, there is a limit on how much one can spend on housing, and therefore those above the limit are somehow materially deprived. But as Blank (2004) argues, most Americans are now living in larger and better quality houses with more features than ever before. In the American case, high housing outlays are, for the most part, a choice (though not always a good one, as we have recently seen), not a sign of deprivation. In the end, I would agree with Brian Nolan and Chris Whelan (2009) that both income poverty *and* material deprivation provide useful insights on the human condition. But I would also take care about how we measure deprivation.

NEW MEASURES OF WELL-BEING

In rich nations, poverty is not measured by consumption for several reasons. First and foremost is the difficulty in measuring consumption over an appropriate period. Second, most consumption data is collected for the purpose of providing weights for measuring the consumer price index, not for measuring consumption *per se*. Moreover, consumption or expenditure surveys have small samples—7,000 in the U.S. Consumer Expenditure Survey (CEX) in recent years—and many nations only do them periodically, such as every five years. Finally, while income data is also secondarily (and for the most part poorly) collected along with consumption data in most nations’ CEX files, there has been little or no attempt to make a household balance sheet with allocations of income to consumption or changes in debts or assets. In the United States, the last CEX to do so was conducted in 1960 to 1961. In the European Community, consumption was briefly considered for poverty measurement (Hagenaars, De Vos, & Zaidi, 1994), but then quickly abandoned due to survey size, periodicity, and difficulty of harmonization across the EU 12 at that time. Instead, the EU began the ECHP and used income from that survey for their first official low income or poverty measures, now followed by the SILC, as mentioned above. The United Kingdom’s *Family Expenditure Survey* was used to measure income poverty and expenditures, but not expenditure poverty, for several decades. It was replaced in the 1990s by the *New Income Survey* in order to improve income measurement. This survey is the basis for the official U.K. poverty estimates. Consumption-based poverty measurement is not widely practiced in any rich nation. However, in the poorest nations most analysts prefer to measure consumption instead of income.

In middle- and low-income countries, the case is therefore very different, yet still problematic. Peter Lanjouw (2009) argues that in a developing or middle-income country like Brazil, consumption is a better measure of well-being than income, though he admits that consumption is difficult to measure. Most middle- and lower income countries collect both consumption (and expenditure) data and income data, along with remittances (private transfers) and public direct taxes and transfers. These countries also collect a great deal of information about production for own consumption or barter, especially in rural areas.

If we stick to the Haig-Simons income definition [consumption plus (or minus) change in net worth equals income], then capacity to consume and consumption are likely not that different when it comes to measurement practice. The new Luxembourg Middle-Income Country Study (LMICS) is facing the trade-offs between income and consumption measures head on. Income is preferred in cities and places where wages and salaries are most prevalent and where cash and near-cash social insurance benefits and income transfers are beginning to be provided. But in rural areas, where “self-employment” (production

for own consumption) is the largest source of income, consumption may be a preferable measure of well-being.

The spread between income and consumption in rural versus urban areas is very high in nations like Brazil, China, and India. Therefore, measuring poverty by comparing consumption or income with one “national” poverty line may produce very disparate results, mainly reflecting the wide differences in living standards in rural versus urban places. In such situations, one might also use regional or local area poverty lines and incomes to more accurately measure poverty and deprivation (see Gao et al., 2008).

Assets, debts, financial stress, imputed rent (IR) on owner-occupied homes, and imputed capital income (CI) are much more likely to become a part of rich nations’ measures of well-being and poverty than are comparable consumption data. Indeed, the Canberra report (2001, pp. 62–69) template, which currently guides income distribution statistics in many nations, has called for the addition of imputed rent and capital income, including capital gains or losses, as well as better income measures for middle-income countries and inclusion of in-kind income. The Canberra report focused mainly on income measurement and did not cover the use of wealth or asset data separately from the flows that come from these stocks. In the future, we ought to consider such approaches.

Using German data, Frick and Grabka’s conference paper (2009) finds that capital income (CI) and imputed rent (IR) have become increasingly important sources of economic inequality over the last two decades. Net IR (including adjustments for the cost of owning) tends to exert a dampening effect on inequality and relative poverty, very much driven by the increasing share of outright ownership among the middle class and especially among the elderly. In Germany they find a much stronger role of imputed CI in increasing overall inequality as capital income flows occur mainly to the income rich, especially among the non-elderly. The items in their measure of CI are limited, and the imputation procedure is less well developed than is the IR estimate. In fact, due to a recent project at the EU, in which conference authors were participants, we have good and comparable measures of IR for at least five major OECD nations (Frick & Grabka, 2003), and we also have less-well-developed measures for additional OECD nations (Marin & Zaidi, 2007). But until additional measures of CI flows are available for a number of countries, one must think hard about how to include a better measure of capital income in our poverty and income distribution data.

Brandolini, Magri, and Smeeding (2009) take a different tack; instead of only turning wealth stocks into CI flows, they consider the role of stocks of wealth alone. They compute measures of income net worth (by which wealth stocks are turned into flows for a number of countries), but they also introduce a relatively new concept of wealth poverty. They also tell us how assets and debts might improve or complement income-based measures of disadvantage. Poverty is generally defined as income (or sometimes expenditure) insufficiency, but the economic condition of a household also depends on its real and financial asset holdings as well as on the possibility of accessing the credit market and forestalling unexpected debts they might face. Using various indicators of household net worth, they explore asset poverty and compare its intersection with income poverty. They develop new measures of financial stress and vulnerability (inability to pay rent, loans, credit card debts, mortgages), which complement the material deprivation measures presented by others. These measures are based on the new 10-nation cross-national asset data from the Luxembourg Wealth Study (LWS) and on the SILC. In the end, Brandolini, Magri, and Smeeding present a convincing case on how access to credit, debt, and net worth might complement existing measures of income poverty, especially among the elderly, homeowners, and debtors. The United States ought to make better use of such data in its deprivation and well-being measures.

In 2001, the Canberra report set the stage for greater comparability among income distribution and poverty statistics for rich nations. As Förster and D’Ercole (2009) attest, almost all OECD nations use the definition of disposable income after taxes and benefits (including near-cash transfers). More controversial are attempts to measure well-being using health and education subsidies as income measures (Garfinkel, Rainwater, & Smeeding, 2006). Now, eight years later, we are moving beyond this

definition, into the areas where the Canberra report mentions future development, while also utilizing new data on asset position and financial stress. These are great beginnings, and while all need additional study and estimation, the field of economic and social well-being measurement is moving forward at a rapid clip.

CROSS-NATIONAL LEARNING IN POLICY AS WELL AS MEASUREMENT

One of the great advantages of cross-national analyses of social policy, such as those underway with APPAM and coordinated by Doug Besharov, is the fact that many major social policy, redistribution, and poverty issues are almost universal. Many papers at the conference discussed the antipoverty effectiveness of policy, but few connected the dots across the nations. Income support in old age, avoiding child poverty, the tax transfer treatment of lone parents, subsidizing education, and the employability of young males and older manual workers with poor job skills are important policy issues in all rich nations. Indeed, different countries' approaches to these problems offer natural experiments in which one can compare the effectiveness, costs, and equity of different policy responses. But one also finds that there are no "magic bullets" that solve any one of these problems to everyone's satisfaction. Every country needs to find its own set of programs and policies that fit its institutions, history, culture, and values.

However, many solutions appeal to a broad range of nations, and the potential for cross-national learning about effective antipoverty programs is vast—and the learning goes both ways. For example, an American contribution is the EITC, a program that encourages market work and makes work pay more than the prevailing wage for low earners. Various versions of the EITC are copied in many rich nations at present. Child allowances and refundable tax credits are now being adopted more readily by Americans, while they have been part and parcel of rich OECD nations' income packages for decades. And various experiments with need-based aid to mostly lone parents, using carrots—like the EITC and child care subsidies—and sticks—like work requirements in TANF—are now a large part of the comparative landscape. Americans in turn are learning from the developing world about Conditional Cash Transfers (CCT) like *Opportunades* in Mexico and *Bolsa Familia* in Brazil, whereby support is given in return for behaviors related to work effort and parenting (maintaining child health and keeping children in school). The programs clearly reduce poverty, and also increase access to health care and education. Indeed, the mayor of New York City has embarked upon just such a policy experiment, which is now being evaluated by MDRC. Support in old age via a minimum social retirement benefit and the use of "active labor market policies" for re-skilling the structurally unemployed are also being compared across nations. It appears that both the measurement of and solutions to the poverty problem are progressing in large part as a result of cross-national policy exchanges as well as by developing comparable cross-national measures of well-being.

CONCLUSION

More than most, I have been part of these issues since we began the Luxembourg Income Study (LIS) in 1983. The LIS represents a major step forward in the crossnational dialogue about measuring income, poverty, and well-being—a dialogue that was not even a glimmer in my eye 26 years ago. As the Joint OECD/University of Maryland conference demonstrated, there is now a strong groundwork for crossnational comparisons, including learning about measuring well-being and its distribution, about comparable poverty measurement, about poverty outcomes, and about the effectiveness of efforts designed to reduce poverty. This is a solid achievement and a credit to APPAM's leadership in comparative cross-national social policy research.

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²³ The Gini coefficient is the most popular single-parameter measure of the inequality in a country's income distribution.

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