Poverty in the US and the UK: relative measurement and relative achievement

***Rebecca Shwalb* and *Michael Wiseman* compare US and UK measures of poverty, and the two countries' progress in reducing poverty, especially among children.**

Given the controversies about UK poverty policy and the improbability that the government's 2010 goal for halving child poverty will be met, those concerned with poverty might be forgiven for being a bit glum. Sometimes it helps to know that things could be worse. Looking at the US can be useful in achieving this reassurance.

Counting the poor, UK style

We begin by detailing how poverty is assessed in the UK. In the 'headline' version, people are poor if they live in a household where weekly income net of taxes but not housing costs falls short of 60% of median income as calculated from data in the Family Resources Survey (FRS) conducted by the Department of Work and Pensions (DWP).

In 2006/07, for a family of four with two children age 5 and 14, this poverty threshold was £346 per week or £18,000 per year. The fact that poverty is defined by comparison with the median income among all UK residents makes this a 'relative' measure.

A second measure is based not on the current median income but on the median income in 1998/99 adjusted for inflation. In 2006/07, for the family of four, the poverty threshold on this baseline was £298 per week or £15,500 per year. Defining poverty by comparison with a fixed standard makes this baseline an 'absolute' measure.

1998/99 is the baseline for measuring progress against the government's goal of halving child poverty (the proportion of children living in families deemed poor by the current standard) by 2009/10. So this absolute measure does not shift as general living standards change over time.

Table 1 reports the prevalence of poverty in the UK for three fiscal years, measured 'before housing costs': 1998/99 (the baseline), 2004/05 and 2006/07 (the most recent data available). We report 2004/05 because it is in this year that the decline in UK poverty appears to have halted.

Looking first at the assessment based on current standards, we see the basis for policy-maker angst. After a modest overall decline in the poverty rate over the first six years of the period, poverty measured by contemporary incomes has increased, even among children, the target of Prime Minister Tony Blair's original goal-setting.

Table 1: The UK poverty achievement, 1998-2007
Percentage of persons in age group living in households with 'equilivised income' less than 60% of median income

	Using contemporary median			Using baseline (1998/99*) median		
Age group	1998/99	2004/05	2006/07	1998/99	2004/05	2006/07
All	19%	17%	18%	19%	11%	12%
Children	26%	21%	22%	26%	13%	13%
Working-age	15%	14%	15%	15%	10%	10%
Pensioners	27%	21%	23%	27%	13%	15%

* Denotes UK fiscal year, 1 April 1998 to 31 March 1999.
Source: Department for Work and Pensions

From a baseline perspective, the story is somewhat different: the aggregate poverty rate fell by eight percentage points over the six years after 1998/99, and the child poverty rate was halved. But since 2004, even on the absolute standard the prevalence of poverty overall has increased, and there has been no further progress with reducing child poverty.

Counting the poor, US style

The US poverty measure is a relic of President Johnson's 'war on poverty' of the early 1960s. It was constructed by the Social Security Administration based on food budgets specified by the Department of Agriculture for 'temporary or emergency use when funds are low', and a survey estimate that in the 1950s, households spent on average one-third of their incomes on food.

Not only is the relative poverty rate higher in the US than in the UK, but those who are poor in the US are typically in deeper poverty

A family was defined as poor if its income was less than three times the relevant food budget. Income was defined by the Current Population Survey (CPS, the only national data source for annual family income then available): it was pre-tax and post-

cash transfers. The 'relevant budget' was one appropriate to a family's composition, varying by number of children and total family size, with adjustments made for single and older people.

The results of the first application of the standard were published in 1965. With only minor changes, this standard has been used ever since, with values adjusted only for changes in prices. Like the UK's 1998/99 baseline, the US has an 'absolute' poverty standard, but it is far more antiquated. In 2006, the poverty threshold for a family of four was $20,444. The overall prevalence of official poverty in the US is low (13% in 2007). As Figure 1 illustrates, it is virtually unchanged over the past decade.

Cross-national comparisons of living standards are difficult. Translating $20,444 into pounds can't be done with exchange rates since they are influenced by many factors not directly associated with the cost of living.

A good fallback is the OECD's 'purchasing power parity', which measures the ratio of the prices in national currencies of the same goods or services in different countries. Using the OECD's sterling/dollar measure for 2006, the US poverty threshold amounts to £13,300 per year – well below both the £18,000 current and £15,500 baseline UK standards for 2006/07.

The shortcomings of the US standard are legion. Its empirical basis was lost long ago. While the fixed poverty standard has stayed constant in real terms since 1963, median family income has increased by 66%. Surely any meaningful poverty standard should reflect this changing social context.

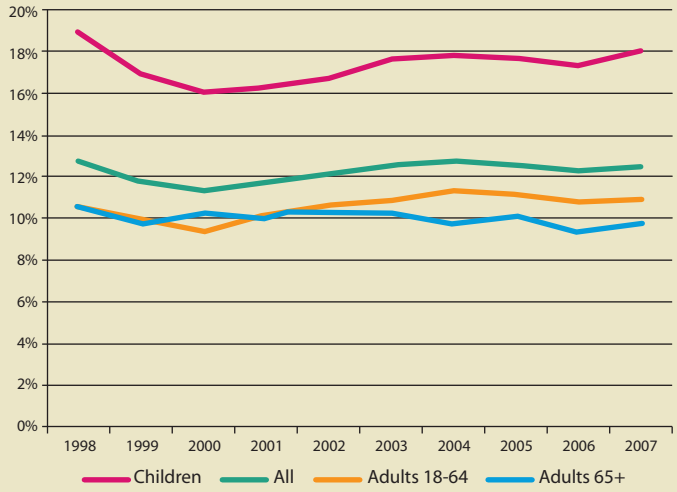
Moreover, while the income measure may have been appropriate for the early 1960s, it excludes major sources of poverty-targeted benefits today, either because they come through the tax system (and hence are not 'pre-tax') or are earmarked for food, shelter or other merit goods (and hence are not strictly cash income).

The most important examples of these excluded resources are food stamps (delivered through ATM-like bank cards usable only in food stores), the 'earned income tax credit' (EITC, the inspiration for the UK's Working Tax Credit), housing subsidies and Medicaid, the national health insurance system for low-income individuals and families.

The amounts involved are not trivial. In the fiscal year ending in 2006, total food stamp benefits amounted to $30 billion, EITC payments $39 billion, housing subsidies $33 billion and Medicaid a whopping $304 billion. In contrast, total federal and state payments under the major cash transfer programme for families with children ('temporary assistance for needy families') amounted to just $26 billion.

We are not the first to point out these issues, and our list of faults is far from exhaustive. So far the poverty standard survives

Figure 1: US poverty rates (official standard), 1998-2007



principally because virtually any alteration would raise the poverty count.

This is not to say attempts have not been made. In 1995, the National Academy of Science proposed a new poverty standard combining consumption and relative income standards. While the recommendations have yet to be adopted, the agency responsible for poverty assessment, the Bureau of the Census, has published 'experimental' measures of poverty based on the recommendations. Thanks to the Bureau's efforts, we can come close to replicating the UK poverty measure using US data.

US poverty, UK style

How do we apply UK methodology to the US? In short, we change the income measure and we change the standard. There is one big difference in the approaches that we can't yet overcome, but the results are interesting nonetheless. Let's backtrack a bit and review what we have to match.

The source for UK poverty estimates is the DWP's 'households below average income' report. This definition of income is sweeping, including: 'net earnings; profit or loss from self-employment after income tax and National Insurance; all social security benefits and tax credits, including Social Fund grants; occupational and private pension income; investment income; maintenance payments; top-up loans and parental contributions for students, educational grants and payments; the cash value of certain forms of income in kind such as free school meals, free welfare milk and free school milk and free TV licences for the over 75s'.

'Income tax payments; National Insurance contributions; contributions to occupational, stakeholder and personal pension schemes; insurance premia payments made in case of sudden loss of earnings; council tax; maintenance and child support payments made; and parental contributions to students living away from home' are all subtracted.

Therefore, instead of pre-tax, post-transfer cash income, we are working with post-tax, post-transfer income. Post-transfer income includes benefits provided in kind or earmarked for specific expenditure, such as free welfare milk and winter fuel payments.

The most significant unaccounted benefit is probably the subsidy implicit in the below-market rents charged for units managed by local housing authorities or not-for-profit housing associations – 'social housing.' Similarly, the UK income measure does not include an estimate of the value of rent saved by the substantial majority of households resident in their own homes. Inclusion in official publications of measures of poverty 'after housing costs' is one way of trying to avoid these problems.

The new US administration should confront the need for reformulating the poverty measure

We can more or less do the same with US data. We take all the cash income now counted in the poverty measure, add the value of educational benefits, food stamp benefits, subsidised school lunches, low-income energy assistance, maintenance and child support payments and other income received, and subtract net income taxes (thereby adding the EITC), mandatory payroll deductions and property taxes on owner-occupied housing.

There are lots of little differences left that don't account for much, including the fact that we don't have information on maintenance and child support payments paid, and we've doubts about the appropriateness of the way DWP accountants treat certain types of mandatory payments. But we're close in concept, especially when considering income before housing costs.

What we're not close in is time frame. The problem is that the US poverty measure is based on responses to the Annual Social and Economic Supplement to the CPS, a face-to-face interview with an adult respondent in approximately 60,000 households, conducted largely in March, with some interviewing in February and April.

Interviews are obtained in about 90% of eligible households. The survey is timed to coincide with the mid-April deadline for filing federal and state income tax returns for the previous calendar year. Unlike in the UK, the vast majority of individuals and families in the US file annual tax returns, and this means that at the time of the survey, most have a reasonably good sense of what their income was in the previous year.

Like the US poverty rate, the UK poverty measure is based on a household survey, the FRS, which has a participation rate of about 65%. The realised sample size is approximately 28,000 households, with 24,000 'fully cooperating'. Thus, the FRS is smaller than the CPS (reducing precision) and response rates are lower (raising more serious concerns about bias).

On the other hand, the FRS attempts to interview all adults residing at sampled addresses (rather than generally relying on a single respondent), so the quality of incomes data may be higher. Unlike the CPS, the FRS is a continuous sample, with interviewers in the field each month. The survey cycle is the fiscal year, from April to March.

Income questions posed in the FRS focus on the current time period, so if a respondent is paid fortnightly, he or she must report that fact and fortnightly earnings. Based on the amount and payment interval, these data are converted into a weekly income measure. The end result, accumulated over the entire fiscal year cycle, is a sample-based distribution of weekly income, and this is the basis of the poverty estimates.

We can't match the weekly UK perspective with CPS data – and we're not sure we would want to if we could. There is considerable fluctuation in income over the course of a year for people in many professions and especially among the self-employed. Much of this fluctuation is no surprise, and people save or borrow to smooth out consumption over the ups and downs of the year.

Thus, in assessing real poverty, a longer perspective makes sense. But just what specifically that sensible interval should be is unclear. Whatever interval might be best, we can't duplicate the intervals used in UK data in the US. In addition, we must compare data collected for the calendar year in the US with data for the fiscal year in the UK. Therefore we will be comparing, for example, calendar year 2006 data for the US to 2006/07 data for the UK, recognising that only nine of the 12 months of 2006 are in FRS survey data for 2006/07.

Perhaps more important than this slight temporal mismatch is the likelihood that the higher-frequency FRS data will show much variability that would be averaged out were annual data to be used. This means estimated poverty rates will be higher using short-period data (as in the UK) than would be calculated using annual totals (as in the US). Our current poverty comparison will therefore be biased against the UK.

That leaves us with a choice of standard and a small demographic comparability problem. We use the same OECD equivalence scale as the DWP employs, and we adopt as the poverty standard 60% of median income. We identify children as anyone under age 18 and we treat everyone aged 65 or older as the equivalent of UK 'pensioners' even though in the UK women are deemed pensioners at 60.

The latest available UK data are for 2006/07, so we make our US calculations for 2006. The results appear in Table 2. For the family of four, 60% of median income is $34,000, 66% higher than the

Table 2: Contemporary poverty rates, 2006 (US) and 2006/07 (UK)
Percent of 'equilivised income' before housing costs

	Below 60%		Below 50%		Ratio, 50/60	
Age group*	US	UK	US	UK	US	UK
All	23%	18%	17%	11%	0.72	0.61
Children	29%	22%	20%	12%	0.71	0.55
Working-age	20%	15%	14%	9%	0.72	0.60
Pensioners	31%	23%	22%	13%	0.72	0.57

*For US data, children are persons age under 18, 'working age' persons are adults 18-64, 'pensioners' are persons age 65+. For UK data, children are persons under 16 or 16-19 and living with parents while in 'full-time non-advanced education or in unwaged government training.' Pensioners include women 60+, men 65+.
Source: Department for Work and Pensions, and authors' calculations

official US standard. Using the OECD measure of purchasing power parity, this is equivalent to £22,150, significantly above the current UK standard of £18,000.

We do two calculations, the first using 60% of median, the second using 50% of median. Consider first the comparison with the 60%-of-median standard. The difference between the two countries' results is dramatic across the board, but it is children who are of greatest concern.

In the UK, consideration might be given to shifting analysis of poverty from income to consumption

For children, US poverty rates are 32% higher than in the UK, 29% of the child population compared with 22%, using the relative income standard. This 29% finding is also 11 percentage points higher than the official US rate (see Figure 1).

The differences are larger using the 50% standard and so the ratios of the 50% figure to the 60% figure in the third set of comparisons are significantly larger for the US than the UK. The implication is that not only is the relative poverty rate higher in the US than in the UK, but those who are poor in the US are typically in deeper poverty. 72% of people considered poor on the 60% standard in the US have incomes below half the median; this is true for 61% of people similarly poor in the UK.

Recall that given generally higher incomes, the US 60%-of-median threshold, recalculated in pounds, is significantly higher than the UK equivalent: £22,150 (US) versus £18,000 for the family of four. What would happen were we to apply the UK current standard to US data?

It turns out we can come close using the data in Table 2. The UK 60% threshold is approximately equal in dollar terms to the US 50% threshold. Thus, as a first approximation, we can compare the numbers for the UK in the 'below 60%' column with the numbers for the US in the adjacent 'below 50%' column.

For each age group, the two numbers are similar. If anything, judged on this particular UK standard, the prevalence of child poverty is lower in the US. Nevertheless, the poor in the US are much worse off in comparison with the general living standard.

Were the comparison to be pushed further, it is likely the outcome would depend on matters not accounted for in Table 2 – the effect of much broader availability of subsidised social housing in the UK, differences in the proportion extremely poor, differences in the quality of available schooling and health care, and contrast in matters addressed in the UK's measures of material deprivation.

Conclusions and opportunities

Of course, we don't really believe that knowing the US does so much worse on poverty should reassure those concerned with achieving UK poverty goals. Nevertheless, the difference is striking.

There are messages for both sides of the discussion. On the US side, we hope that the new administration confronts the need for reformulating the poverty measure in a way that reflects both current living standards and current policy emphasis on support provided through programmes like the EITC, food stamps and housing subsidies.

On the UK side, the time span for income assessment seems an important matter for study, and some consideration might be given to shifting analysis of poverty from current income to consumption, which is generally a better indicator of family resources. Finding ways to achieve higher rates of cooperation with the FRS would also seem essential given the survey's importance in assessing the government's progress.

Both sides need to review the way in which housing subsidies and the benefits from owner-occupied housing are incorporated in poverty assessment.

But nothing should distract from the most important question: however we measure it, how do we reduce poverty, especially among children?

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