

will show higher inequality and higher poverty, since combining households and assuming that each member has the same income or consumption amounts to a mean-preserving reduction in spread, see Haddad and Kanbur (1990). Since most surveys retain the same practices over time, trends in inequality and poverty are unlikely to be misleading, at least for these reasons, but the absolute levels will be incorrect, and international comparisons will be compromised.

I.I.S. Measuring means versus measuring dispersion

Surveys are usually designed to measure *means*, not dispersion, and there is a wide variety of designs that will measure means accurately, but will give very poor estimates of inequality, of poverty, or of other quantities that depend upon higher moments. Consider the measurement of income in an agricultural society where, to take an extreme case, all agricultural income is received in the month of the harvest. A design in which one twelfth of the sample is interviewed in each month and asked to report the previous month's income will generate an estimate of average income that is unbiased. **But** even if every household has the same annual income, the survey will appear to show that 100 percent of income is concentrated in the hands of 7.5 percent of households, and that 92.5 percent of households are "absolutely poor". Some surveys avoid these problems, at least in part, by revisiting households on a seasonal basis, but most do not. Once again, international comparisons of inequality and poverty are rendered meaningless, and in predominately agricultural societies with variable and weather-affected harvests, there will even be spurious shifts in apparent dispersion between different surveys in the same country, so that even the time path of inequality can be obscured.

The variability of income is one reason why many analysts prefer to use consumption as a basis for measurement. But consumption is not immune to the problem. Different surveys use different reporting periods, from a day to a year. Some purchases are made infrequently, and households stock up when they shop, so that the shorter the reporting period, the larger will be the apparent dispersion. For example, suppose that everyone has consumption c but that purchases are random, with a fraction p of households buying cp^{-1} during the reporting period, and the rest buying nothing. Simple calculation gives:

$$E(x) = c; V(x) = c^2(1-p)p^{-1} \quad (3)$$

where x is reported expenditure. As the reporting period becomes shorter, p will get smaller, and although the mean is unaffected, the variance will rise. There is no point in comparing distributions of expenditures from different