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International evidence on the impact of transfers and taxes on alternative poverty indexes

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Abstract

Changes in the headcount rate are the standard metric for gauging how public transfers and taxes affect poverty. An alternative strategy is to rely on distribution-sensitive indexes (Sen, 1976, 1981). How would the measured impacts of policy change if such an approach were used? This study provides new empirical evidence based on Luxembourg Income Study data for 17 countries. Poverty is measured using three indexes from the class developed by Foster et al. (1984), one of which is the headcount rate. Estimates of the policy impacts are obtained by computing index values with before- and after-policy income. Evidence is also provided on the determinants of cross-country differences in index values and policy effectiveness.

Keywords: Poverty measurement; Distribution-sensitive poverty indexes; Luxembourg Income Study; Anti-poverty policy

1. Introduction

This study examines how changes in income due to government transfers and taxes affect alternative indexes of poverty. Standard analyses have focused on headcount rates (percent of the population which is identified as poor), gauged using

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either the official poverty thresholds or ones adjusted to overcome their perceived shortcomings.[2] Doing so assumes, implicitly or explicitly, that reducing the number of poor people is the sole objective of policy. Such an approach provides useful information, but is also seriously incomplete and potentially misleading, in light of Sen's (1976, 1981) seminal and influential work.

Sen (1976, 1981) argued that poverty indexes should minimally satisfy two criteria beyond including the number of poor individuals: the *monotonicity* axiom, which requires overall poverty to increase if the income of a poor person decreases; and, the *transfer* axiom, which directs overall poverty to rise whenever resources are transferred from a poor person to another person with more resources. Thus, focusing on the headcount rate alone ignores two other ways by which transfers and taxes can affect poverty. That is, government policies might affect not only the number of poor people, but also, and independently, the depth of their poverty and the distribution of resources among the poor (their relative deprivation). Ignoring these other effects of government programs can produce a seriously misleading picture of how programs affect poverty, and lead to misguided decisions about program viability.[3]

In broad terms, investigations of how policy affects poverty have proceeded along two lines. One approach has measured how much poverty changes when individuals' incomes are reduced by the value of government transfers received and taxes paid, with no account taken of possible changes in behavior. Transfers have included cash payments, the values (either market or fungible) of non-cash payments, or both. Taxes have covered levies at both the federal and state levels. Depending on the types of transfers and taxes considered, and the population under study, the measured effects of policy can be relatively large, changing the headcount poverty rate by several percentage points. A second method has studied the possible disincentives for wealth-creating activities resulting from government polices, and the likely effects on incomes (see, e.g., Murray, 1984). Several studies suggest that the behavioral impacts of these disincentives appear to be relatively small (see, e.g., Atkinson and Morgensen, 1993; Burtless and Haveman, 1987; Danziger et al., 1981; Kenworthy, 1998; Moffitt, 1992), although some disagreement remains.[4]

[2] See Orshansky (1965, 1969) and Fisher (1992) for a discussion of official procedures for measuring poverty in the United States. Comprehensive reviews of associated issues are found in Ruggles (1990), Panel on Poverty and Family Assistance (1995), Jorgensen (1998), and Triest (1998).

[3] Some studies have separately examined the effects of transfers and taxes on either the poverty gap or on overall income inequality (as opposed to inequality among the poor which is emphasized by Sen). Gramlich et al. (1993) and US Bureau of the Census (2001) estimate the effects of taxes and transfers on overall income inequality as measured by the Gini coefficient. Paglin (1980) provides evidence about the impact of in-kind transfers on the poverty gap. None of these studies has addressed the impact on more comprehensive poverty measures such as those studied here.

[4] Burtless (1994) points out that even if programs provide work disincentives that reduce effort by small amounts, the associated earnings loss among the poor families could equal a large fraction of the income payments that they receive. He cites examples from federally sponsored negative income tax experiments during the 1970s in which the loss could reasonably be considered large and others in which the loss could be considered small.