On the Targeting and Redistributive Efficiencies of Alternative Transfer Instruments

David Coady and Emmanuel Skoufias

In response to tightening government finances in the wake of structural adjustment reforms and other budgetary shocks in developing countries, the desire to design more efficient poverty-alleviation (or transfer) programs has become central. There has been a movement toward policy instruments that target budgets more efficiently to the poor. One common approach to evaluating the relative efficiency of alternative programs has been to compare *leakage* and *undercoverage* rates or the closely related concepts of *E-mistakes* and *F-mistakes*. While such indicators capture some aspects of the welfare impacts from better targeting, they also have shortcomings. For example, the under-coverage and leakages approach focuses on the identity of the recipients but ignores the size and distribution of the budget.

Organization of the Paper

This paper sets out a simple general equilibrium model for the evaluation of alternative transfer programs (or policy instruments). Using this model, the authors derive the total welfare impact for a range of policy instruments as the sum of the *direct* effect on welfare plus the *indirect* welfare effect arising from the need to restore equilibrium in product and factor markets as well as to public finances. As is the case with most of the analyses of the distributional impact of programs, the paper focuses exclusively on the direct welfare impact of programs.

The authors then derive the so-called *distributional characteristic* of a policy instrument as the welfare-weighted sum of transfers across

The so-called distributional characteristic of a policy instrument "can be additively decomposed into two components: one that captures its targeting efficiency, the other, its redistributive efficiency."

households divided by the unweighted sum of transfers, i.e., the transfer budget. The authors show how this distributional characteristic can be additively decomposed into two components: one that captures its *targeting efficiency*, the other, its *redistributive efficiency*. Using these measures, they provide an interpretation of the commonly used leakage and undercoverage rates (and other indices based on these concepts) within standard welfare theory. Essentially, one can interpret such indices as special (and restrictive) cases of the targeting efficiency index. Not only do these measures fail to capture the relative redistributive efficiencies of policy instruments, they also implicitly assume a set of value judgments consistent only with the commonly used poverty gap.

Illustration of the Decomposition Using Data from Mexico

The authors then apply this technique to evaluate the relative targeting and redistributive efficiencies of alternative policy instruments using the recent shift in Mexico's poverty alleviation strategy toward better-targeted transfer schemes. The point of departure is one where universal food (i.e., cereals) subsidies constitute the main plank of the poverty alleviation strategy. However, these are perceived as being poorly targeted with much leakage of benefits to nonpoor households.

While a number of alternative targeting strategies could have been considered, the authors chose to evaluate two broad approaches:

demographic and poverty targeting. Demographic targeting involves giving transfers only to households with children, similar to the child benefit in many developed countries. Poverty targeting involves giving transfers only to households classified as poor according to some—usually welfare-based—criterion. The actual program implemented in Mexico is a combination of these two approaches, with an element of geographic targeting also involved.

Using the decomposition technique described above, the authors are able to demonstrate that the gains from switching from universal food subsidies to demographic transfers come predominantly from improvements in redistributive efficiency, while the gains in switching to poverty transfers come predominantly from improvements in targeting efficiency. Also, the gains from the latter reform are substantially higher than from the former reform. By combining both, the distributional power of the actual program, in terms of its ability to get a large percentage of the budget into the hands of those who need it the most, is a vast improvement on universal food subsidies.

Keywords: social welfare, transfers, targeting, redistribution, leakage, undercoverage

Recent FCND Discussion Papers

Cash Transfer Programs with Income Multipliers: PROCAMPO in Mexico, Elisabeth Sadoulet, Alain de Janvry, and Benjamin Davis, January 2001 ***DP99***

Participation and Poverty Reduction: Issues, Theory, and New Evidence from South Africa, John Hoddinott, Michelle Adato, Timothy Besley, and Lawrence Haddad, January 2001 ***DP98***

Socioeconomic Differentials in Child Stunting Are Consistently Larger in Urban Than in Rural Areas, Purnima Menon, Marie T. Ruel, and Saul S. Morris, December 2000 ***DP97***

Attrition in Longitudinal Household Survey Data: Some Tests for Three Developing-Country Samples, Harold Alderman, Jere R. Behrman, Hans-Peter Kohler, John A. Maluccio, and Susan Cotts Watkins, October 2000 ***DP96***

Attrition in the Kwazulu Natal Income Dynamics Study 1993-1998, John Maluccio, October 2000 ***DP95***

Targeting Urban Malnutrition: A Multicity Analysis of the Spatial Distribution of Childhood Nutritional Status, Saul Sutkover Morris, September 2000 ***DP94***

Mother-Father Resource Control, Marriage Payments, and Girl-Boy Health in Rural Bangladesh, Kelly K. Hallman, August 2000 ***DP93***

Assessing the Potential for Food-Based Strategies to Reduce Vitamin A and Iron Deficiencies: A Review of Recent Evidence, Marie T. Ruel and Carol E. Levin, July 2000 ***DP92***

Comparing Village Characteristics Derived From Rapid Appraisals and Household Surveys: A Tale from Northern Mali, Luc Christiaensen, John Hoddinott, and Gilles Bergeron, July 2000 ***DP91***

FCND BRIEFS

International Food Policy Research Institute

IFPRI

**2033 K Street, N.W.
Washington, D.C. 20006 U.S.A.**

The so-called distributional characteristic *of a policy instrument* "can be additively decomposed into two components: one that captures its *targeting efficiency,* the other, its *redistributive* efficiency."*—DP100