Geographic Targeting: Its Effects on Poverty Reduction

How effective is geographic targeting as a means for channeling public resources to the poor? Drawing on several Latin American case studies, the LSMS working paper Measuring the Effects of Geographic Targeting on Poverty Reduction responds to this question.

In Latin America, low or negative growth, tight fiscal constraints, and a movement toward reducing the role of the state have led many governments to replace nation-wide social assistance programs with targeted interventions. These new programs are designed to identify the poorest groups and more efficiently direct benefits to them.

Of the different targeting strategies, geographic targeting is attractive due to its simplicity. Existing aggregate indicators (e.g., infant mortality or school enrollment rates) can be used to determine priority regions; administrative costs can be kept low as neither a means test nor a cadre of social workers is needed to identify beneficiaries.

The paper provides planners with technical advice regarding the design of geographically-targeted programs, based on World Bank experience to date. It also performs simulations, using data sets from Jamaica, Mexico and Venezuela, to illustrate the relative benefits of alternative targeting techniques on poverty.

In deciding which regions should be included in the program, the most common approach is to begin with a budget ceiling. Costs of including each region can then be estimated, giving first priority to those regions that are most poor.

An alternative is to allow many (or all) regions to participate in the program, but to vary their budget allocation based on the level of need indicated by the poverty measure used. While often an attractive option politically, it can be more challenging to administer in large, populous countries with numerous and disparate regions.

How Effective is Geographic Targeting?

In order to evaluate how well geographic targeting actually works, the paper conducts several simulations comparing the outcomes of alternative programs. Geographic targeting is weighed against outcomes under untargeted programs (a uniform transfer and general food subsidy), as well as a targeted food stamp program. Program effectiveness is measured by the change in the poverty rate produced, as well as “undercoverage” (the proportion of poor excluded) and “leakage” (the proportion of non-poor included).

Overall the results demonstrate that compared to untargeted programs, geographic targeting is more effective; however, a combination of geographic targeting and further fine-tuning (such as means testing) is most effective.
Simulations for the case of Jamaica show that geographic targeting performs better than food subsidies and uniform transfers (both non-targeted programs): the leakage rate is lower (46.1 compared to 70.0 and 77.0 for uniform transfers and general food subsidy, respectively), and poverty reduction is greater (-0.55% to -0.04% and -0.32%). Undercoverage is, of course, nil for the untargeted programs, and it is only in this sense that such programs produce a more favorable outcome.

Simulation results comparing a geographic targeting scheme in Jamaica with the actual Jamaican Food Stamp Program (which uses means testing and self-selection) are less conclusive -- neither one produces targeting efficiency that is clearly superior to the other. The Food Stamp Program produces a slightly smaller reduction in the poverty rate (-.03% compared to -.55%) and higher rates of leakage (47.5% to 46.1%), but has lower rates of undercoverage (65% compared to 76.8%).

A final simulation for Jamaica using a combination of these targeting mechanisms -- geographic targeting, means testing and self-selection -- produces no significant improvement in the poverty rate and involves a higher rate of undercoverage, despite reducing leakage (to 25.5%).

Fine-tuning Geographic Targeting

Can the efficiency of geographic targeting be improved through fine-tuning? Simulations for Mexico suggest that targeting below the level of state, that is, to particular municipalities and even smaller localities, does in fact produce substantial gains in efficiency. As the targeting of a given program becomes more precise geographically, undercoverage and leakage rates fall and the impact on poverty improves (see table).

However, targeting according to geographic units below the level of state or province presents some practical challenges. Disaggregated data may not exist in many countries, and is costly (and time-consuming) to generate. And, it may be politically difficult to offer program benefits to some communities, within a narrowly defined region, while excluding others.

Policy Conclusions

Targeting based on geographic location is a useful mechanism for transferring benefits to the poor. Programs are relatively simple to implement. No complicated means testing is required in order to distribute benefits, and priority regions can often be identified using existing aggregate data.

Geographic targeting is a more efficient way of reducing poverty than a universal (untargeted) program. But compared with other targeting strategies (means testing and self-selection) the benefits of geographic targeting are inconclusive.

Combining geographic targeting with means testing and/or self-selection targeting methods may improve outcomes. But the greatest gains to efficiency will probably result from fine-tuning targeting to smaller geographic units -- such as municipalities and villages over states and provinces. Given greater information requirements, though, such fine-tuning may be hard to achieve in the near future.