



Philippine Institute  
for Development Studies  
*Surian sa mga Pag-aaral  
Pangkaunlaran ng Pilipinas*

# Policy Notes

ISSN 1656-5266

No. 2007-07 (December 2007)

## Pitfalls in targeting

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**J**n November 2005, the government launched its hunger mitigation initiative consisting of two programs: the Food-for-School Program (FSP) and the Tindahan Natin Program (TNP) amidst rising concerns about the prevalence of hunger. The FSP is a conditional food transfer program that provides a kilo of rice to families suffering from severe hunger, through their children in Department of Social Welfare and Development (DSWD)-accredited day care centers and Department of Education (DepEd)-operated public elementary schools. On the other hand, TNP is a targeted food price subsidy program that aims to ensure the availability of low-priced basic food commodities (rice and instant noodles) to poor families through Tindahan Natin outlets.

An appreciation of how well these programs fare in directing their intended benefits to

the poor is important because their success in this regard has a large bearing on program effectiveness and efficiency. In turn, who benefits from the FSP and TNP is dependent on the targeting mechanism used to identify the beneficiaries of the program.

This *Policy Notes* assesses the targeting rules used for the two programs and determines how adequately (or inadequately) they enable the benefits of the programs to reach their intended beneficiaries.

### Targeting: some definitions

Targeting is a means of increasing the efficiency of a program by increasing the benefits that the poor can get with a fixed program budget (Coady, Grosh, and

*PIDS Policy Notes* are observations/analyses written by PIDS researchers on certain policy issues. The treatise is holistic in approach and aims to provide useful inputs for decisionmaking.

This *Notes* is based from PIDS Discussion Paper Series No. 2007-10 titled "Who benefits from the Food-for-School Program and Tindahan Natin Program: lessons in targeting" by the same authors. The authors are Senior Research Fellow and Supervising Research Specialist, respectively, at the Institute. The views expressed are those of the authors and do not necessarily reflect those of PIDS or any of the study's sponsors.

*Any targeting method...will most likely fail to include some of the poor while including some nonpoor households. Good targeting minimizes both errors of exclusion and of inclusion. An error of exclusion occurs when intended beneficiaries are not able or permitted to participate in the intervention while an error of inclusion takes place when an intervention reaches individuals who are not intended to be beneficiaries.*

Hoddinott 2004).<sup>1</sup> Conversely, it is a means that will allow the government to reduce the budget requirement of a program while still delivering the same level of benefits to the poor (Box 1).

Any targeting method, however, will most likely fail to include some of the poor while including some nonpoor households. Good targeting minimizes both errors of exclusion and of inclusion. An error of exclusion occurs when intended beneficiaries are not able or permitted to participate in the intervention while an error of inclusion takes place when an intervention reaches

individuals who are not intended to be beneficiaries.

Given this perspective, estimates of under-coverage rates and leakage rates may be used to assess the performance of alternative targeting mechanisms. The under-coverage rate (a measure of the exclusion error) is the ratio of the number of poor households who do not participate in the program to the total number of poor households. On the other hand, the leakage rate (a measure of the inclusion error) is the ratio of number of nonpoor beneficiaries to the total number of beneficiaries.

Targeting also involves costs: (a) administrative costs (e.g., costs of collecting information), (b) private costs (i.e., cost households incur in order to participate in the program), (c) social costs (refers to the stigma involved in being publicly identified as poor or needy), and (d) incentive costs (including negative incentive effects like reduced work effort and crowding out of private transfers). The higher these costs are, the smaller will be the portion of the program budget that will be available for distribution as benefits to the beneficiaries. Thus, in evaluating which targeting method is appropriate, one has to weigh the benefits from reduced leakage against the cost of implementing finer targeting methods.

#### Box 1. Why targeting matters

##### Illustrative example

Total population	100
Poor population	50

*Higher per capita transfer with fixed budget (say, PhP1,000)*

With perfect targeting:	PhP20 benefit per beneficiary
With no targeting:	PhP10 benefit per beneficiary

*Smaller budget with fixed per capita transfer to the poor (say, PhP10)*

With perfect targeting:	PhP500 (or 50% budget savings)
With no targeting:	PhP1,000

<sup>1</sup> Coady, D., M. Grosh, and J. Hoddinott. 2004. *Targeting of transfers in developing countries: review of lessons and experience*. Washington, D.C.: World Bank.

### Assessing the hunger mitigation programs: how well are they targeted?

#### *Food-for-School Program<sup>2</sup>*

First and foremost, the Food-for-School Program is an intervention that is meant to address hunger among poor families. It is also meant to improve school attendance of the children of these households by assuring them of having one kilo of rice on their tables every day as long as their children go to school or to the day care centers.

The beneficiaries of the program are households in selected geographic areas with children who are preschool or Grade 1 pupils in public elementary schools or children who attend DSWD-accredited day care centers (DCCs).

#### Targeting mechanism

To identify the geographic areas that are covered by the program, the FSP makes use of the Food Insecurity and Vulnerability Information Mapping System (FIVIMS).<sup>3</sup> The FSP is targeted to include *all* the preschool/Grade 1 pupils in *all* public schools as well as *all* the children enrolled in *all* DSWD-supervised day care centers in the following areas:

- All the municipalities and cities (17) in the National Capital Region (NCR);
- All the municipalities (49) of the provinces classified as very, very vulnerable (VVV) in the FIVIMS;
- All the 5th and 6th class municipalities (283) of the provinces classified as very vulnerable (VV) and vulnerable (V) in the FIVIMS;
- All the 4th class municipalities (27) in the VV and V provinces where there are no 5th and 6th class municipalities; and
- All the 3rd class municipalities (3) in the VV and V provinces where there are no 4th, 5th, and 6th class municipalities.

Thus, the FSP combines geographic targeting with institutional targeting at the level of the public school or day care center. Geographic targeting under the FSP occurs at two levels. First, the most food-insecure and vulnerable (i.e., poorest) provinces are identified and selected. Second, because of an implicit recognition that the province is too big a unit to be homogeneous in terms of food insecurity/poverty, the FSP deems it appropriate to identify and select the relatively more food-insecure (i.e., poorer) municipalities within each of the poorest provinces. Once a municipality is selected to

<sup>2</sup> The analysis done here refers to the implementation of the FSP and the TNP in 2006. However, targeting of the FSP in 2007 made use of the 2003 *Family Income and Expenditure Survey* (FIES) following its official release in October 2006. The application of the same counterfactual analysis that was done in this section to the 2007 FSP yields similar results. However, it appears that difference in leakage/undercoverage rates arising from the use of more recent data is dwarfed by the difference that results when the small area estimates of poverty incidence are used.

<sup>3</sup> The FIVIMS is designed to identify food-insecure and vulnerable provinces in the country. It is anchored on an index that is composed of 12 core indicators (Valientes et al. 2006), namely: (1) ratio of per capita income to per capita expenditure, (2) poverty incidence, (3) median family income, (4) ratio of food expenditure to total household expenditure, (5) ratio of cereal food expenditure to total food expenditure, (6) unemployment rate, (7) cohort survival rate at the elementary level, (8) percentage of families with working children, (9) percentage of households with safe water, (10) percentage of underweight children, (11) percentage of underweight adults, and (12) percentage of agricultural land under tenancy.

be part of the FSP, however, all preschool and Grade 1 pupils in all the identified public schools (and all children enrolled in the DSWD-supervised day care centers) in said municipality automatically become eligible to receive the benefits of the program.

### **Weaknesses of targeting rule**

The FSP shares the advantages of most other geographically targeted social transfer programs. It is administratively simple and inexpensive to implement. However, the evidence suggests that FSP's brand of geographic targeting can still be improved to increase the program's efficiency and effectiveness. These potential efficiency gains may be gleaned and better appreciated by considering three counter-factual scenarios: one where the existing targeting rule prevails, and two scenarios where alternative targeting rules are applied.

International experience suggests that geographical targeting works best when poverty differs across regions but is similar within regions, i.e., there is within-region homogeneity (Hoddinott 1999).<sup>4</sup> In the Philippines, evidence indicates that the within-province variation is more important than the between-province variation in explaining the total variation in poverty incidence across municipalities. In particular, the analysis of variance of the small area estimates (SAE)<sup>5</sup> of municipal level poverty incidence shows that between-province variation accounts for a mere 32 percent of the total variation in municipal level poverty

incidence. It is perhaps the implicit recognition of this result that prompted the FSP implementers to differentiate municipalities within the different target provinces according to the LGU income classification.

The ranking of municipalities according to their income class does not correlate well with their ranking according to small area estimate of poverty incidence. This is true whether one is looking at the ranking of municipalities within a province or the ranking of municipalities across the nation. For instance, 155 (or 50%) of the 313 municipalities in the VV and V provinces are found not to be among the poorest municipalities even within each of these provinces under the FIVIMS.

In order to gain a better appreciation of these issues, the leakage rates, the under-coverage rates, and the share of the poor in program benefits are estimated for the existing targeting rule and for two counterfactual scenarios where alternative targeting rules are applied. Under the first alternative targeting rule (or alternative rule #1), the FSP is targeted to the SAE's poorest municipalities in each of the VV and V provinces under FIVIMS rather than to the 5th and 6th income class municipalities in

<sup>4</sup> Hoddinott, J. 1999. *Targeting: principles and practice*. International Food Policy Research Institute.

<sup>5</sup> The National Statistical Coordination Board (NSCB 2005) estimated small area estimates of municipal level poverty incidence by combining data from the 2000 *Family Income and Expenditure Survey* (FIES), the 2000 *Census of Population and Households* (CPH) and the 2000 *Labor Force Survey* (LFS).

the same provinces. For the second alternative targeting rule (alternative targeting rule #2), meanwhile, the FSP is targeted directly to the SAE's poorest municipalities instead of targeting the poorest provinces first before selecting the target municipalities within each of the target provinces.

The results of the counterfactual simulations show that both the leakage and under-coverage rates are reduced while the share of the benefits going to the poor is increased when these alternative targeting rules are applied.<sup>6</sup> Specifically, the leakage rate in the DepEd component declines from 62 percent under the existing targeting rule to 55 percent under alternative targeting rule #1. Conversely, the share of the poor in total program benefits increases correspondingly from 38 percent to 45 percent for the DepEd component.

Under alternative targeting rule #2, the results show that 230 (or 61%) out of the 379 cities/municipalities that were originally targeted under the FSP would not be eligible to receive FSP benefits under the DepEd component. In other words, these municipalities/cities targeted under the DepEd component of the FSP in 2006 are not the poorest municipalities/cities from a global perspective. This number includes all the cities and municipalities in the NCR.

The inclusion in the FSP of all cities and municipalities in the NCR results in a substantial leakage of FSP benefits to nonpoor

beneficiaries. This is in view of the fact that while the NCR accounts for 49 percent of the total number of beneficiaries under the DepEd component of the FSP, it has the lowest poverty incidence (6.9%) among all provinces/regions in the country. Consequently, it accounts for 71 percent of the total number of nonpoor households who benefit from the program. The cost of this leakage is the price government has to pay to gain political support from a more visible and vocal constituency to ensure budget support for the program.

Given this, it is not surprising that the resulting reduction in the leakage rate, if alternative targeting rule #2 were applied, is dramatic as it drops to 24 percent assuming that the actual number of beneficiaries reached in 2006 is maintained (Table 1).

On the other hand, the program's ability to reach poor households is found to improve with the adoption of either one of the two alternative targeting rules. With the application of alternative targeting rule #1, the undercoverage rate in the DepEd component decreases from 80 percent under the existing targeting rule to 72 percent. Meanwhile, if alternative targeting rule #2 were followed, the undercoverage declines further to 53 percent.

<sup>6</sup> Only the results of the counterfactual simulation for the DepEd component are shown in this *Policy Notes*. For the results of the simulations for the DSWD component, refer to PIDS Discussion Paper No. 2007-10. It should be pointed out that the results for the DSWD component are similar to those of the DepEd component.

**Table 1. Leakage rate and undercoverage rate under alternative targeting rules for DepEd component of FSP, 2006 (in percent)**

Targeting Rule	Leakage Rate	Undercoverage Rate	Share of the Poor in Total Transfers
FIVIMS priority provinces and municipalities according to income class	62	80	38
FIVIMS priority provinces and municipalities according to SAE	55	72	45
Directly to municipalities according to SAE; same number of actual beneficiaries as now	24	53	76

of 14 kg of rice per week.<sup>7</sup> A family ID cum passbook is issued by the LGU-P/C/MSWDOs to the beneficiaries for identification and monitoring purposes.

The selection/identification of TNP household beneficiaries is the responsibility of the DSWD in coordination

### *Tindahan Natin Program*

The TNP has two components. On the one hand, the program provides DSWD loan assistance/credit to SEA-K Kabayan, SEA-K Association, or SEA-K individual beneficiaries with retail store business in strategically located sites that are accessible to intended beneficiaries of the TNP.

As with the FSP, the identification of the target provinces for the TNP stores is based on the FIVIMS. Once a province is targeted for TNP, the DSWD, National Food Authority (NFA), LGU, and the Barangay Council are then tasked to ensure that the number of TNP stores in the LGU will be adequate.

On the other hand, as originally designed, only eligible TNP household beneficiaries may purchase food items at NFA's prescribed selling prices from the TNP stores. Eligible beneficiaries can only purchase a maximum

with the LGU-P/C/MSWDOs and the barangay councils. In principle, the target beneficiaries of the TNP are families who have incomes below the food threshold. At present, however, there are no longer any restrictions placed on who may buy the subsidized rice/noodles from the TNP stores. As such, all households within the catchment area of the TNP store are allowed to purchase the subsidized food items.

### **Targeting mechanism**

The TNP, like the FSP, employs the FIVIMS to implement geographic targeting at the level of the province. For the TNP below the level of the province, however, targeting is done at the regional level jointly by the National Nutrition Council (NNC), DSWD, NFA, LGUs, and the local SWDOs. The TNP targets the actual location of TNP stores below the level of the municipality (i.e., at the barangay level) on the basis of a rapid poverty mapping that was conducted by the DSWD just prior to the start of the TNP.<sup>8</sup>

Said poverty appraisal focused on the

<sup>7</sup> The weekly allocation per family is based on the average per capita rice consumption of 115 kg per year.

<sup>8</sup> This information was based on a telephone interview with an official of Region IV-A.

prevalence of malnutrition and lack of rice supply. Such an approach has the potential advantage of the fieldworker being able to detect the special circumstances of the different areas in a more timely manner. The main drawback of this approach though is the difficulty of maintaining uniformity and consistency across municipalities (barangays) within and, most especially, across provinces (municipalities). It may also be perceived as open to favoritism and/or political interference.

Closer scrutiny of the actual location of the TNP stores and the corresponding number of beneficiaries served reveals the unevenness in the quality of the targeting below the level of the province. For instance, some target provinces appeared to have made use of the LGU income classification in targeting municipalities (e.g., Abra and La Union).<sup>9</sup> Other provinces (e.g., Agusan provinces, Surigao del Norte, and Palawan) seem to have a good sense of which municipalities are SAE poor while others appear to have no discernable targeting pattern (e.g., Surigao del Sur, Ifugao, Romblon, Albay, Camarines Norte) and have thereupon excluded many poor municipalities while including many nonpoor municipalities.

The location of TNP stores also appears to have been dictated by their accessibility to major road networks. Since the TNP store operator shoulders the hauling cost of transporting the commodities to the store, it is not surprising that the TNP tends to have

a greater presence in the more urbanized areas.

Given the geographic distribution of the TNP stores across the country as well as the number of beneficiaries served by these stores, the leakage rate of the TNP is estimated to be equal to 66 percent for the entire program and 59 percent if NCR stores are not included.<sup>10</sup> This implies that 66 percent of the program benefits accrue to nonpoor households.

### Conclusions and recommendations

The results of the above assessment highlight the pitfalls of geographic targeting based on the provincial level poverty incidence and income class of municipalities, namely:

- ranking of municipalities according to their income class does not correlate well with ranking according to small area estimate of poverty incidence, and
- within-province variation is more important than the between-province variation in explaining the total variation in the poverty incidence across municipalities.

Said results suggest that significant improvements in targeting can be achieved if one targets municipalities directly using small area estimates of poverty incidence which have recently become available.

<sup>9</sup> However, not all 5th and 6th class municipalities of Abra are targeted. The same is true of Surigao del Norte but it is notable that those included are also those which are SAE poor.

<sup>10</sup> These figures are computed based on the small area estimates of poverty incidence at the municipal level.

International experience also suggests that combining household targeting (using verified means test or proxy means test) with geographic targeting can improve accuracy (Coady, Grosh, and Hoddinott 2004). As such, it would be useful to assess the gains, if any, of complementing geographic targeting (using small area estimates) with direct household targeting (using some variant of community-based monitoring systems). Potential gains would then have to be evaluated vis-à-vis the cost of direct household targeting. Such an assessment would require firm estimates of the:


- *full* cost of installation and maintenance, and
- potential gains from household targeting in terms of exclusion rates and leakage rates.

At the same time, the experience of the FSP and TNP underscores the importance of thinking more carefully about the appropriate role of the central government and local government units in targeting. On the one hand, the FSP experience points to the

possibility of the central government getting it wrong. On the other hand, the TNP highlights the opportunities and risks involved in allowing LGUs to play a major role in targeting. It demonstrates how some provinces are able to perform better than others in identifying the poor within their jurisdictions.

Given this, it is important to balance the lower transactions and information costs, on the one hand, and the suboptimal outcomes from local rent-seeking and local capture arising from a greater LGU role in targeting, on the other. In principle, the proximity of local governments to the people enables them to deliver services more efficiently than the more remote central government. However, the decentralization of targeting decisions may tempt local officials to manipulate and exploit local information, especially when the gains from the program are perceived to be large.

In this regard, there are important advantages of a system that combines centralized design and database management with localized collection of data. Under such setup, it is important to put into place mechanisms like NG-LGU cost sharing arrangements and financial incentives to LGUs to ensure quality at all levels.

Finally, the need for up-to-date and more disaggregated statistics (at the very least at the level of the municipalities) cannot be overemphasized. 

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The *Policy Notes* series is available online at <http://www.pids.gov.ph>. Reentered as second class mail at the Business Mail Service Office under Permit No. PS-570-04 NCR. Valid until December 31, 2007.