Self-targeted food subsidies and voice: Evidence from the Philippines

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ARTICLE INFO

ABSTRACT

This paper studies the targeting outcomes of a self-targeted rice subsidy program in the Philippines. We find modest within-community targeting outcomes, but weak between-community targeting. This appears to be because, controlling for the direct influence of household characteristics, participation was lower in poorer communities. These inter-community differentials are strongly correlated with several proxies for citizen "voice", including education, income, and access to other public services. This suggests that self-targeting outcomes are not simply a function of the good selected for subsidy, but are also influenced by variations in communities' access to usable services; that these variations favor richer communities; and that efforts to enhance consumer voice in disenfranchised communities would facilitate targeting improvements.

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Introduction

Governments often self-target food subsidies or other transfer payments. Self-targeting can be attractive when it is difficult or costly to identify who should be eligible to receive benefits (Houssou and Zeller, 2011; Swaminathan and Misra, 2001), or politically challenging to exclude people from the program (e.g., Adams, 2000; Tuck and Lindert, 1996). The standard approach to self-targeting food is to select products that are nutritionally sound, but have low or even negative income elasticities of demand (e.g., Ahluwalia, 1993; Alderman and Lindert, 1998). This encourages greater use of the program by poor households than by rich households. These income elasticities of demand can be further reduced by imposing higher costs of participation on richer buyers of subsidized products through queuing or work requirements (Rogers and Coates, 2002). Unfortunately, despite these efforts to ensure negative income elasticities, self-targeted transfer programs tend to have higher targeting errors than programs that use most other targeting mechanisms (Coady et al., 2004).

One possible reason for these higher overall targeting errors is that, *ceteris paribus*, a household's propensity to participate in the program may be lower if it resides in a poorer community. This would weaken the program's geographic targeting outcomes. Such regressive variations in participation proclivities could occur for many reasons. Subsidized food outlets may be unevenly distributed, with more outlets or more convenient outlets available in rich communities. Alternately, if the per capita food allocation is not sufficiently higher in more vulnerable communities, then higher excess demand in vulnerable communities will lead to more rationing, and more frequent stock-outs. The quality of food and customer service (for example, the length of queues or store hours) may also be lower in poorer communities. Each of these regressive tendencies could be driven or exacerbated by a regressive distribution of political "voice" across communities, which may limit the ability of more vulnerable communities to demand better service (Hirschman, 1970, Ch. 3).

We examine this possibility by studying the targeting performance of a national rice subsidy program administered by the Philippines National Food Authority (NFA) prior to 2008. After demonstrating that the program did not successfully target the most vulnerable provinces and communities, we investigate the prediction that, holding constant all the usual determinants of food subsidy utilization, a household's tendency to participate in the program was higher if it resided in a community that was richer and had greater voice. We know of no previous study that has studied this prediction.

These concerns about access to usable distribution services, self-targeting and voice resonate with three sets of findings from previous work. First, studies have shown that limited access to usable food distribution services influences program uptake in

several ways. Unintentional differences in the quality of food and service between the subsidized and private markets influence household demand for subsidized and unsubsidized food (Balakrishnan and Ramaswami, 1997; Ramaswami and Balakrishnan, 2002). Even where demand for the subsidized product is robust, supply-side constraints on program access can prevent consumers from utilizing their entire quota of subsidized food (Khera, 2011a). Targeting studies, which show significant failures in geographic targeting of programs by central authorities often allude to such constraints (e.g., Galasso and Ravallion, 2005; Murgai and Zaidi, 2005). In this vein, the current paper is focused on anti-poor patterns of participation between communities that appear to reflect unintended variations in program quality and access.

Second, studies of transfer programs have shown that systematic variations between potential beneficiaries in variables that are not usually considered in the design of these programs can create targeting errors. For example, Barrett and Clay (2003) show that variations in reservation wages across households can detract from the targeting outcomes of food for work programs, and Ravallion (2009) argues that decentralizing eligibility requirements can reduce targeting effectiveness if poorer local governments set more restrictive criteria for access. Similarly, we examine the possibility that effective targeting is hindered by differences in communities' access to usable services, which result from local institutional processes, but are not directly considered in program design.

Third, voice is an important theme in the literatures on both food security and public services delivery. There are many excellent studies of the role of political processes and citizen voice in preventing famines (e.g., Dreze and Sen, 1989; Rubin, 2011). Improvements in transparency and citizen voice are found to reduce corruption in the delivery of subsidized food (Khera, 2011b) and other public services (Reinikka and Svensson, 2004a,b). Such evidence, and case studies of institutional reforms, give rise to the widely accepted argument that measures to enhance voice significantly improve access to subsidized food programs (Dreze and Khera, 2010). International comparisons of the targeting outcomes of transfer programs are consistent with this argument, showing that national measures of voice are correlated with better targeting outcomes (Coady et al., 2004). The 2004 World Development Report (World Bank, 2004) summarizes a voluminous body of research showing that unintentional variations between communities in access to quality education and health services influence utilization, and that these variations are driven by disparities in citizen voice. Our work does likewise for a self-targeted food subsidy.

The NFA subsidy program provides, in several respects, a suitable case study of the relationship between voice, access to usable services, and self-targeting outcomes. First, the program was self-targeted by design. It was universal – all consumers could access it, and officially unrationed – no rules limiting per consumer purchases were prescribed. Second, prices were set below market clearing so that rationing mechanisms had to be devised locally, and some of them clearly reduced access to quality services. Third, there is evidence that excess demand was indeed higher in poorer communities. Fourth, the program was administered by the same body according to the same rules across the country. This permits a relatively clean examination of between-community variations in participation. Fifth, the Philippines government collects the appropriate data for investigating such variations. We use a large geographically stratified and clustered survey dataset that should capture the diversity of local conditions, and were able to match these data to a wide range of proxies for voice and local market conditions from two other databases. Finally, our analysis and previous work (Reyes et al., 2009) both suggest that NFA rice had a negative income elasticity of demand, so weak self-targeting outcomes require an explanation.

The remainder of this paper is structured as follows: The next two sections describe our data and the NFA program. The following section and Appendix A set up the problem empirically, showing that poorer and more vulnerable provinces experienced higher food price inflation, but were not much more likely to benefit from the program. The remaining sections ask whether these weak geographic targeting outcomes can be attributed to variations in access to usable services. We begin that analysis by presenting a targeting decomposition which shows that while program targeting outcomes are progressive, especially within communities, there is significant unmet potential for between-community targeting. We argue that this weak geographic targeting involves more than simple administrative decisions about where to situate outlets. Next, we show that, controlling for the direct influence of household characteristics and retail rice prices, participation was lower in poorer communities, which helps to explain why self-targeting works better within communities than between communities. We also show that these inter-community differentials are strongly correlated with several proxies for citizen voice. Appendix B provides some circumstantial evidence that rationing of subsidized rice was more acute in needier communities. We conclude by discussing the implications of our findings.

Data

We combine three data sources in this paper. The first, the 2006 Family Income and Expenditure Survey (FIES) is a multi-stage stratified random sample covering 38,483 households collected by the Philippines National Statistical Office (NSO). Each household was visited twice, once in July 2006 and once in January 2007, responding each time to the same survey instrument. The publicly released FIES data-sets contain only annual aggregates of household variables based on these two samples. Each household was asked to self-report the average weekly consumption of each major food type, as well as unit prices. Unfortunately, the unit price data are not distributed to the public, and we are therefore constrained to work with data on NFA rice expenditures.

The Philippines has 17 regions, divided into 85 provinces. The FIES sampling frame contains 1567 geographic strata, delineated by province, urbanity, the proportion of dwellings that are permanent structures, the importance of agricultural employment, and average income. This ensures maximal representation of the population geographically, in terms of livelihoods, local government, and in terms of community income. Each stratum was divided into primary sampling units (PSUs, or "communities", as we will refer to them), each of which is comprised of either one Barangay of 500 households or more, or multiple smaller Barangays put together to reach that figure. The Barangay is the smallest unit of governance in the Philippines. Between two and seven PSUs were sampled at random within each stratum, implying randomization with respect to local governance. We have approximately ten sampled households from each PSU. All of the above is important because our key independent variables are local market conditions and community-level proxies for "voice" and vulnerability to food price shocks. These community-level proxies are estimated from average values of household variables at the PSU level. The stratification scheme implies that the distribution in the data of these conditions and their underlying political influences will be nationally representative. Regression estimates account for probability weights, stratification, and clustering at the PSU level.

The FIES sampling scheme excludes some extremely remote areas that account for 0.4% of the population. Some figures for the National Capital Region (NCR) were imputed after a fire destroyed a large share of one round of the completed surveys, so we drop all observations from the NCR. Our dataset is representative of the rest of the country.