Future Agricultures

Policy Brief

Factors Influencing Access to Agricultural Input Subsidy Coupons in Malawi

One direct way in which agricultural input subsidies can provide social protection to the poor is by targeting the poor with very high subsidies to ensure that they are able to access inputs. Although the Malawi Agricultural Input Subsidy Programme (MAISP) generally targets resource-poor households, the targeting guidelines also accord special consideration to vulnerable groups such as child-headed, female-headed or orphan-headed households and households affected by HIV and AIDS. This Policy Brief considers how the Malawi Agricultural Input Subsidy Programme has contributed to providing social protection to these poor and vulnerable households.

Subsidy coupon allocation and targeting

Since the 2005/06 season, the Malawi Government has been implementing an agricultural input subsidy programme targeting smallholder farmers in order to improve productivity and food security. As a productivity enhancing programme, the input subsidy programme plays a social protection role among poor and vulnerable households by making food accessible and available, while also intervening directly by targeting vulnerable groups. The programme targets smallholder farmers who are resource-poor but own a piece of land. The targeting criteria also recognise special vulnerable groups, such as guardians looking after physically challenged persons; child-headed, female-headed and orphan-headed households; and households affected by HIV and AIDS. There are some contradictions in these targeting criteria in reaching out to vulnerable groups. Nonetheless, the criteria remain broad and there are variations in the use of the targeting guidelines in different communities, particularly since the number of needy households tends to be much larger than the available number of fertiliser coupons.

Table 1 shows some characteristics of rural households receiving different numbers of coupons for subsidised fertiliser. Despite explicit emphasis on the provision of coupons to more vulnerable households since 2006/07, the evidence points to the fact that the poor and vulnerable groups remained generally

Table 1: Mean attributes of households by number of fertiliser subsidy coupons received, 2008/09

Household Characteristics	Fertiliser coupons per household					
	Zero	0.5 to 1	1.5 to 2	> 2	All	Sig.
% Female-headed households	26%	31%	24%	17%	27%	*
Owned area in hectares	1.16	1.09	1.48	2.17	1.27	**
Value durable assets (MK)	19,621	15,630	20,340	28,111	18,702	
Value livestock assets (MK)	18,689	22,947	41,807	58,946	28,699	*
Subjective score of household food consumption over past 12 months (1=inadequate, …., 3=more than adequate)	1.5	1.5	1.6	1.7	1.5	*
Subjective score on welfare (1=very unsatisfied, …., 5=very satisfied)	2.3	2.2	2.5	2.8	2.3	**
Months after harvest that maize ran out	7.2	7.1	7.9	8.6	7.4	*

Notes: *= one or more differences significant at p=0.05, ** = one or more differences significant at 0.01. Source: Dorward et al. (2010)

marginalised. The number of coupons received per household increases with land size, wealth (represented by value of assets and livestock), welfare and food security. The proportion of female-headed households decreases with the number of coupons received per household.

The main focus of the subsidy is on fertilisers for maize production and improved maize seed varieties, although over the years there has also been inclusion of cash crops such as tobacco, tea, coffee and cotton. The fertiliser subsidy benefited 1.5m maize farmers and 200,000 tobacco farmers in the 2008/09 agricultural season, more than half of the estimated number of farming households in Malawi. The fertiliser coupons were allocated based on an updated register of farmers, and for most households the identification of beneficiary households and subsequent allocation of coupons were done in an open meeting (see Table 2 below). Previously, local politicians, traditional leaders and village committees were responsible for allocating coupons; a process which many farmers claimed was characterised by biases and favouritism (SOAS et al. 2008).

It is evident that the open meeting system was used widely in both the allocation (81 percent) and distribution (96 percent) of fertiliser subsidy coupons. However, Dorward et al. (2010) note that due to the large number of eligible households relative to the number of coupons allocated to the villages, there was an informal system of redistribution of coupons within the villages after the open meeting, with 43 percent of the sample confirming that such informal redistribution took place.

Table 2: Extent of use of open meetings in allocation and distribution of fertiliser subsidy 2008/09

Region	Allocation (% of sample)	Distribution (% of sample)
North	88	99
Central	71	97
South	88	95
Total	81	96

Source: Dorward et al. (2010)

Targeting is one critical element for the effectiveness of the subsidy and for achieving efficiency in resource use. The subsidised fertilisers should be targeted at households that could not have bought fertilisers at the prevailing market prices, hence not displacing commercial sales of fertilisers.

The research uses data from the 2007/08 and 2008/09 evaluations of the MAISP collected from rural households drawn from all livelihood zones in the country, covering 14 of the 29 districts. The data contains information from 1,982 households. Although the agricultural input subsidy programme also covers maize and legume seeds and cotton chemicals, the analysis focuses on the fertiliser subsidy, which is the largest component of the programme.

Household and farming characteristics

About 70 percent of the sample households received a subsidised fertiliser coupon in the 2008/09 agricultural season. On average, households procured 53.6 kilograms of subsidised fertilisers using the voucher. Male-headed households account for 74 percent of the sample, while 16 percent of households are headed by older persons. Households on average had 1 hectare of land under cultivation in the 2008/09 agricultural season. Only 16 percent of households cultivated tobacco and only 33 percent were engaged in crop marketing following the 2008/09 harvest. Only 10 percent of households engaged in sales of maize, reflecting the subsistence nature of the crop. In the 2007/08 season only 28 percent of households purchased fertilisers at prevailing market prices, but this increased to 40 percent in the 2008/09 season. The prices of fertilisers on the international market increased substantially in early 2007, driving domestic prices up in the 2007/08 agricultural season. Prices fell again prior to the 2008/09 agricultural season, and it is therefore unsurprising that there was a 12 percent increase in the proportion of rural farmers that acquired commercial fertilisers. On average, households purchased 43kg of commercial fertilisers in 2007/08, and this increased slightly to 48kg in 2008/09.

Most of the households ranked themselves as poor (87 percent) in 2007/08, and the proportion decreased only slightly to 83 percent in the 2008/09 season. About 46 percent of households had adequate or more than adequate food consumption following the 2007/08 harvest, which implies that food poverty was about 54 percent. Only 15 percent

of the households had access to social safety nets in 2007/08 (this increased slightly to 17 percent in 2008/09). In 2007/08, 59 percent of the households had access to fertiliser coupons. We also note that a significant proportion of households participated in the labour market, operated a business enterprise and/or had received remittances in 2007/08, a season prior to receiving the fertiliser coupons for the 2008/09 season.

Factors determining access to subsidised fertiliser

Using multivariate analysis, the likelihood of access to subsidised fertilisers was hypothesised to depend on several factors, including household characteristics such as age and sex of household head, household size, assets and poverty status; farming characteristics such as land size, receipt of subsidy in previous season and types of crops cultivated; and other control variables such as participation in the labour market, process of coupon distribution (through open forum or not), remittances and access to other safety nets. Several findings emerge from the study with implications for targeting of the input subsidy programme. First, although the poor and vulnerable households are allocated subsidised fertiliser coupons, they are less likely to receive these and receive fewer than the better-off smallholder farmers with larger parcels of land and more wealth. Elderly-headed households are also less likely to access subsidised fertiliser coupons.

Secondly, farm characteristics are important correlates of the likelihood of accessing subsidised input coupons. Land size is an important variable in targeting the subsidy coupons, and the findings suggest that a unit increase in land increases the probability of receiving a coupon by 6 percent. The findings also suggest that the cultivation of tobacco, maize marketing and general produce marketing all increase the probability of receiving fertiliser coupons, with the probability of receiving coupons increasing by 11–17 percent in each case. Thus, the subsidy tends to reach farmers that have greater commercial orientation in their farming activities.

Thirdly, there have been arguments that a subsidy programme may result in displacement of commercial fertiliser sales. The findings suggest that there is a weak relationship between access to coupons and quantity of fertilisers purchased from commercial suppliers. Households that bought commercial fertilisers in the previous season were only slightly less likely to be allocated subsidised fertiliser coupons, with purchase of commercial fertilisers leading to a marginal (0.02 percent) reduction in the probability of accessing coupons. The marginal effect shows that the targeting is not good at excluding those who can afford commercial purchases, implying that problems of targeting result in some displacement of commercial sales of fertilisers.

Fourthly, the programme succeeds in excluding households that earn income from the labour market, particularly those that earn income from non-ganyu (casual off-farm) labour. Labour market participation in the previous season reduces the probability of receiving fertiliser coupons by about 5 percent. This implies that those in salaried employment are excluded, as they are capable of purchasing fertilisers at commercial prices, while those in ganyu employment may be those households that do not have adequate land and use their labour resources in ganyu labour. Nonetheless, ganyu labour is also an important source of cash for redeeming the coupons.

Fifthly, beneficiaries of other social safety nets are more likely to access subsidised fertiliser coupons, revealing complementarities among social protection programmes in Malawi. Access to other social safety nets in the previous season is positively associated with receipt of fertiliser coupons in the 2008/09 season. Participation in other safety nets increases the probability of receipt of coupons by about 8 percent. This implies that participants in other social safety nets are not excluded from the fertiliser vouchers, and if these safety nets are well targeted then they provide additional information about the vulnerable households in the communities.

Finally, the distribution of coupons varies across communities, with some using public forums for allocation of coupons while others allocate coupons to individual registered households. This study tested the hypothesis that a more transparent system of allocating coupons to households should be beneficial to the target groups. The findings show that the introduction of the open forums in the allocation of subsidised fertiliser coupons tends to raise the likelihood of the poor, who are generally marginalised, to access subsidised fertiliser coupons and to acquire more subsidised fertilisers than when the process is not transparent. Open forums for allocating coupons increase the chance of targeting those that ranked themselves in the poor category by about 10 percent. This suggests that community-based targeting, used by some communities in the 2008/09 season, may be superior to allocations that involve traditional leaders and committees allocating coupons to individual households, as was previously the case in the 2005/06 to 2007/08 seasons.

Conclusion

This study set out to investigate factors that are associated with the likelihood of accessing subsidised fertiliser coupons in the Malawi Agricultural Input Subsidy Programme. The results show that vulnerable households such as the poor and elderly-headed are less likely to receive fertiliser coupons and receive less of the subsidised fertilisers. Households with larger parcels of land and those who sell part of their produce (i.e. semi-commercialised farmers) are more likely to receive coupons and also tend to acquire more subsidised fertilisers. However, the use of open meetings in the allocation of coupons tends to favour the poor, and the poor receive more fertiliser through these meetings than in alternative ways of allocating coupons. There is also a positive relation between participation in other social safety nets and access to subsidised fertiliser coupons, suggesting that households with access to different types of social protection programmes are not excluded from the input subsidy programme by virtue of benefiting from these other programmes.

For the subsidy programme to perform its direct social protection role effectively, there is a need to review the targeting criteria to recognise the vulnerable groups as the main target group, provided such households have cultivable land. A point system using the existing criteria can be introduced to potentially increase access to subsidised fertilisers to the vulnerable groups. While possession of land should be the basic condition for access to fertiliser coupons, households should gain additional targeting points if they also qualify as vulnerable households as defined by the existing criteria. For instance, an elderly female-headed household

would get two additional targeting points while an elderly male-headed household would only get one additional targeting point. Households with land and high targeting points should be prioritised in the allocation of coupons using an open forum held in the community.

There is also a need to enhance the complementarity of the input subsidy programme and cash-for-work programmes through increased coordination, particularly to enable vulnerable groups to access cash for the redemption of subsidised fertiliser coupons. In addition, if other social safety nets are well targeted at vulnerable groups, it implies that participation in such programmes can provide additional information on vulnerability in targeting the input subsidy programme.

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