Are social safety nets and input subsidies reaching the poor in Malawi?

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Social safety nets are designed to protect vulnerable households and individuals from the impact of economic shocks, natural disasters, and other crises. However, targeting of vulnerable households is difficult and therefore often ineffective. Using data from two rounds of the Integrated Household Survey, this paper provides an overview of the overall coverage of various types of social safety nets and input subsidies in Malawi, and presents an analysis of their coverage of specific types of households with a special focus on poverty, shedding more light on the accuracy of the targeting of these programs. It finds that both the depth and the breadth of coverage of social safety nets increased between 2010/11 and 2016/17, while the coverage of agricultural input subsidies decreased drastically. Transfer programs targeted the poor more heavily than the rich, but still failed to exclusively target only the poorest segments of the population. Input and employment subsidies reached mainly the middle segments of the population. The ineffectiveness of targeting is likely the result of the complexity of targeting criteria and procedures.

ABBREVIATIONS

FIRP – Food Insecurity Response Plan

FISP – Farm Input Subsidy Program

IHS – Integrated Household Survey

JEFAP – Joint Emergency Food Aid Program

LSMS-ISA – Living Standards Measurement Survey – Integrated Surveys on Agriculture

MASAF – Malawi Social Action Fund

MNSSP – Malawi National Social Support Program

MVAC – Malawi Vulnerability Assessment Committee

NSO – National Statistical Office

SSN – Social safety net

SCTP – Social Cash Transfer Program

1. INTRODUCTION

Social safety nets (SSNs) are mechanisms which protect families from the impact of economic shocks, natural disasters, and other crises. In the context of this paper, formal SSNs are understood to be institutionally organized programs provided by the government or civil society. They include centrally-distributed transfers of food and cash, employment subsidies, scholarships, etc. In Malawi, major SSNs include the Food Insecurity Response Plan (FIRP), which provides in-kind food assistance and direct cash transfers to vulnerable households during the lean season, the Social Cash Transfer Program (SCTP), which provides unconditional cash transfers to ultra-poor and labor constrained households, and the Malawi Social Action Fund (MASAF), a public works program which subsidizes employment through various cash-for-work, food-for-work, and input-for-work projects. School feeding and other nutrition supplementation programs are also common. Although input subsidies would typically not be considered a social safety net, the targeting of the Farm Input Subsidy Program (FISP), especially during its earlier years, was very similar to the targeting of more conventional social safety nets. Information on agricultural input subsidies under FISP is therefore included here for comparative purposes. Informal SSNs such as credit and remittances are not subject to explicit targeting and are therefore not considered here.[1]

Different types of SSNs are designed to help different types of households or groups of individuals. In-kind and direct cash transfers typically target ultra-poor households that suffer both from low income and labor constraints. Public works programs target poor households with available labor. Various nutritional programs often aim to support poor households with children or individual children, while input subsidies typically target productive households. In a country like Malawi with a flat expenditure distribution, where the differences between ultra-poor households, poor households, and households just above the poverty line are minimal, targeting of SSN programs tends to be inaccurate (Pellerano and Juergens 2016).

Besides providing an overview of the overall coverage of various types of social safety nets and input subsidies in Malawi, this paper presents an analysis of their coverage of specific types of households with a special focus on poverty, shedding more light on the accuracy of the targeting of these programs. It pays particular attention to in-kind food assistance provided mostly under FIRP, direct cash transfers provided mostly under FIRP and SCTP, and agricultural input subsidies under FISP.

2. DATA AND METHODS

This analysis draws from the third and fourth Integrated Household Surveys (IHS3 and IHS4), conducted by the Government of Malawi's National Statistical Office (NSO) as part of the World Bank Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) initiative. The IHS3 was conducted between March 2010 and March 2011, covering a total of 12,271 households, while the IHS4 was conducted between April 2016 and April 2017, covering 12,447 households. Both surveys used four questionnaire instruments: (1) household, (2) agriculture, (3) fisheries and (4) community questionnaires. This paper makes use of data from the household and agriculture questionnaires. Once appropriately weighted, the IHS surveys are representative at national, district and urban/rural levels. All values presented in this paper have been adjusted using the sampling weights provided by the NSO (NSO 2012, 2017). All prices have been adjusted for inflation using NSO's Consumer Price Index, and are reported in January 2017 values.

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[1] More on informal social safety nets can be found in IFPRI Malawi's "Key Facts Sheet: Social Safety Nets" available online at massp.ifpri.info.

The IHS did not gather information on specific programs except for FISP. Instead, it asked questions about several types of social safety net programs households have benefited from. These include free food (maize and other), food-, cash- and inputs-for-work programs, school feeding programs, targeted nutrition and supplementary feeding programs, direct cash transfers, and scholarships. Relying mostly on benefit incidence analysis, this paper investigates the extent to which these types of programs (some of which were grouped together for the sake of simplicity) reach various types of households. It considers Malawian households in general, but also categorizes them by poverty status (non-poor, poor, and ultra-poor) as well as by consumption quintile – from the poorest fifth of households to the richest fifth of households. Additionally, insights into the determinants of the completeness of coverage of FISP, which did not deliver full benefits to all recipient households, were obtained using ordered logistic regression.

Sections 3 and 4, which deal with the coverage social safety nets and input subsidies at large. Section 5 takes advantage of geographical targeting and differences in the modality of FIRP to tease out details on the targeting of FIRP, while Section 6 uses information that was collected explicitly about FISP. Sections 3 through 6 rely mostly on benefit-incidence analysis, with additional insights in Section 6 obtained through regression methods. Section 7 summarizes the results and their policy implications.

3. SOCIAL SAFETY NET COVERAGE

In 2010/11, the most commonly accessed SSNs were agricultural input subsidies under FISP, with over 45 percent of household benefiting from them (Figure 1). After FISP, school feeding programs were the most common SSN, with 12 percent of households benefiting from one. In 2016/17, following two consecutive bad harvests and a large scale down of FISP, both programs were surpassed by the percentage of households receiving in-kind food assistance (maize or other food), which increased from 2.5 percent to 21.5 percent, with the value of the median benefit increasing from MWK 7,263 (USD 10) to MWK 35,959 (USD 51) adjusted for inflation to January 2017 prices (Table 1).[2] Much of this increase was due to that year's FIRP, which supported a population of 6.7 million in 2016/17, up from just over 0.5 million in 2010/11. Similarly large increases (though from lower initial levels) were also seen in the numbers of households receiving direct cash transfers (another modality of lean season support under FIRP),[3] and in participation in cash-for work programs (predominantly through MASAF). Unfortunately, the IHS does not allow for more precise mapping of specific programs.

The large drop in FISP coverage caused a decline in the percentage of households directly benefiting from at least one SSN from 64 percent in 2010/11 to 45 percent in 2016/17. However, both the breadth and the depth of coverage of SSNs other than FISP increased in the same time period, with 17 percent of households directly benefiting from at least one in 2010/11 compared to 36 percent in

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[2] The IHS differentiates between in-kind food assistance in the form of maize and other food. In 2016/17, 19.9 percent of households received free maize and 15.2 percent of households received other free food (the corresponding numbers in 2010/11 were 2.0 percent and 0.7 percent respectively). There is, however, a considerable overlap between the two groups, as 90 percent of households who received free food other than maize also received free maize. For the purposes of this paper, the two categories are therefore combined into one. This accounts for some of the differences between Figures 2 and 3 in this paper and similar ones in a recent IFPRI Key Facts Sheet on Social Safety Nets (IFPRI 2018).

[3] The IHS differentiates between direct cash transfers from the government and direct cash transfers from private organizations. While there is very little overlap between these two categories (only 2 percent of households who report having received a direct cash transfer from the government in 2016/17 also report having received one from a private organization), it is not very clear which instances fall into which category. For example, a direct cash transfer administered by an NGO as part of FIRP, which is often referred to as MVAC (for the government-run Malawi Vulnerability Assessment Committee) by its beneficiaries, could conceivable be recorded as either a transfer from the government or from a private organization. To avoid such confusion, the two categories are combined into one in this paper.

2016/17. The share of households benefiting from more than one program increased in the same time period regardless of whether FISP is included or not (Figure 2).

**Figure 1. Coverage of formal social safety nets by type**

share of households reached by this program in the previous 12 months
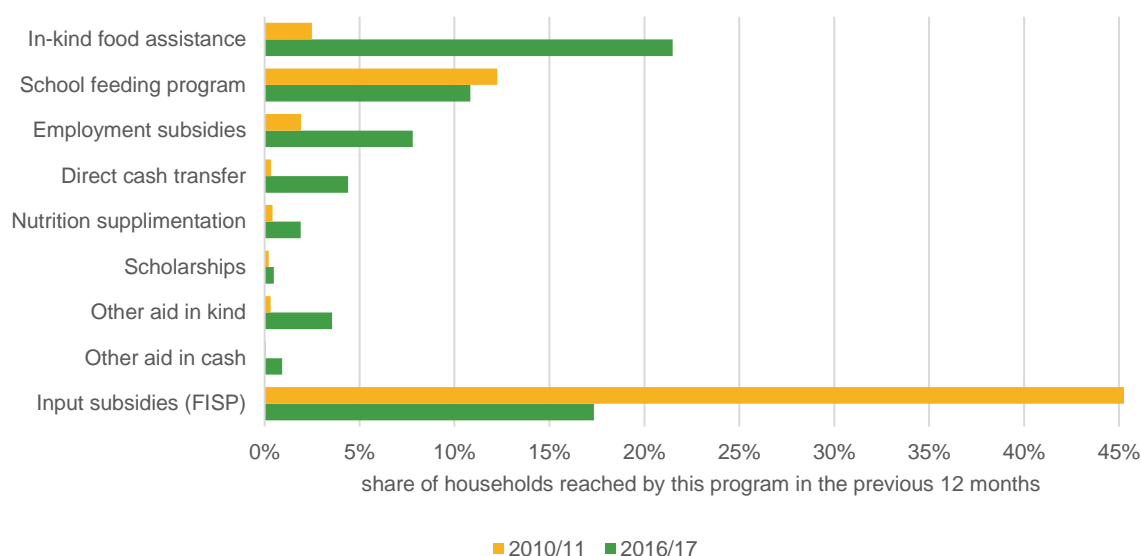
■ 2010/11 ■ 2016/17

Table 1. Benefits from formal social safety nets

Program	2010/11		2016/17	
	Coverage	Benefit	Coverage	Benefit
In-kind food assistance	2.5%	7,263	21.5%	35,959
Employment subsidies	1.9%	8,027	7.8%	15,686
Direct cash transfer	0.3%	13,514	4.4%	46,847
Scholarships	0.2%	34,014	0.5%	59,890
Other aid in kind	0.3%	9,868	3.6%	6,674
Other aid in cash	0.1%	9,709	0.9%	16,796
FISP	45.3%	16,213	17.4%	11,500

Notes: Coverage is the percentage of households who benefited from the type of program in the 12 months preceding the interview. Benefit is the median value (in MWK adjusted for inflation to January 2017 values) that households participating in the program received over the 12 months preceding the interview. The IHS surveys do not specify benefit size for school feeding programs or for nutritional supplementation programs. The median benefit from FISP in 2016/17 takes into account the value of subsidies for all inputs covered by the program. The number for 2010/11 only takes into account the value of fertilizer. It is therefore an underestimate. The true value (inclusive of the value of subsidies for seeds) was higher, but precise data are unavailable.

Figure 2. Coverage of formal social safety nets by number

■ 2010/11 ■ 2016/17   ■ 2010/11 ■ 2016/17
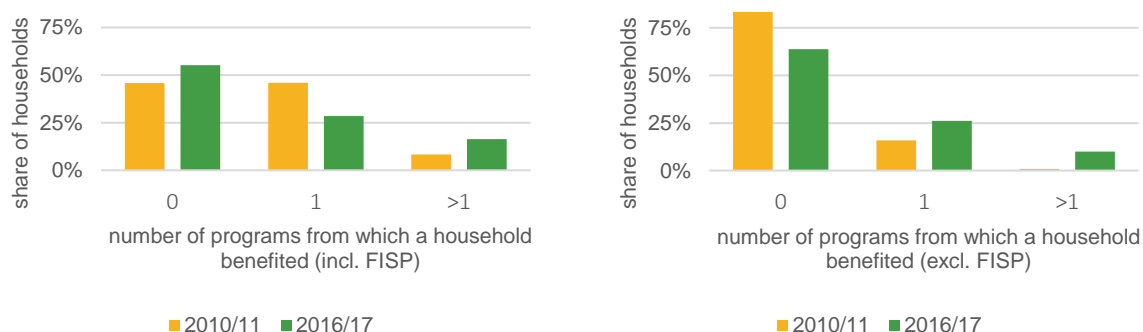
4. SOCIAL SAFETY NETS AND POVERTY IN 2016/17

Acting as safety nets of last resort, the distribution of in-kind food assistance and direct cash transfers under FIRP and should target the poorest segments of the population. Cash transfers under SCTP are generally intended for similar recipients. Indeed, when Malawian households are ranked by the value of their per capita consumption, a household from the first quintile (i.e. among the poorest fifth of households) is three times as likely to receive an in-kind food transfer and twice as likely to receive a direct cash transfer in 2016/17 than a household from the fifth (i.e. richest) quintile. However, 73 percent of households in the poorest quintile did not benefit from in-kind food assistance while 9 percent of households in the richest quintile did. Similarly, other transfers, comprised of various school feeding and nutrition supplementation programs, were skewed towards the poorer segments of the population, but did not reach all the poor nor exclude the better off. Other types of programs were less pro-poor or, in the case of scholarships, even skewed towards the richer parts of the population (Figure 3).

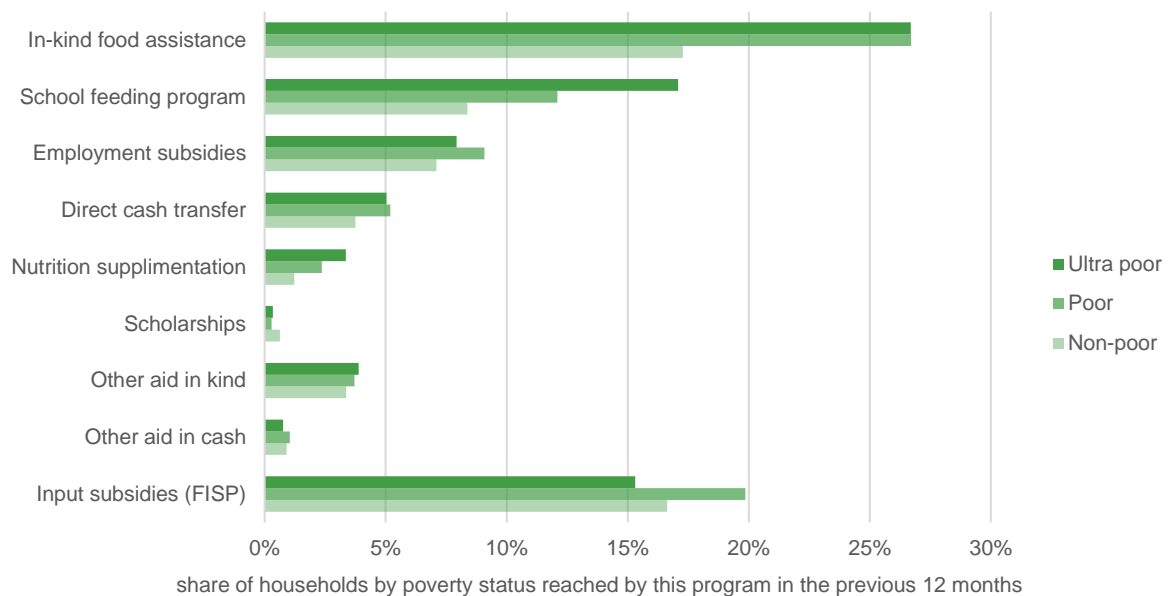**Figure 3. Targeting of social safety nets in 2016/17 by consumption quintiles**

share of households per expenditure quintile reached by this program in the previous 12 months
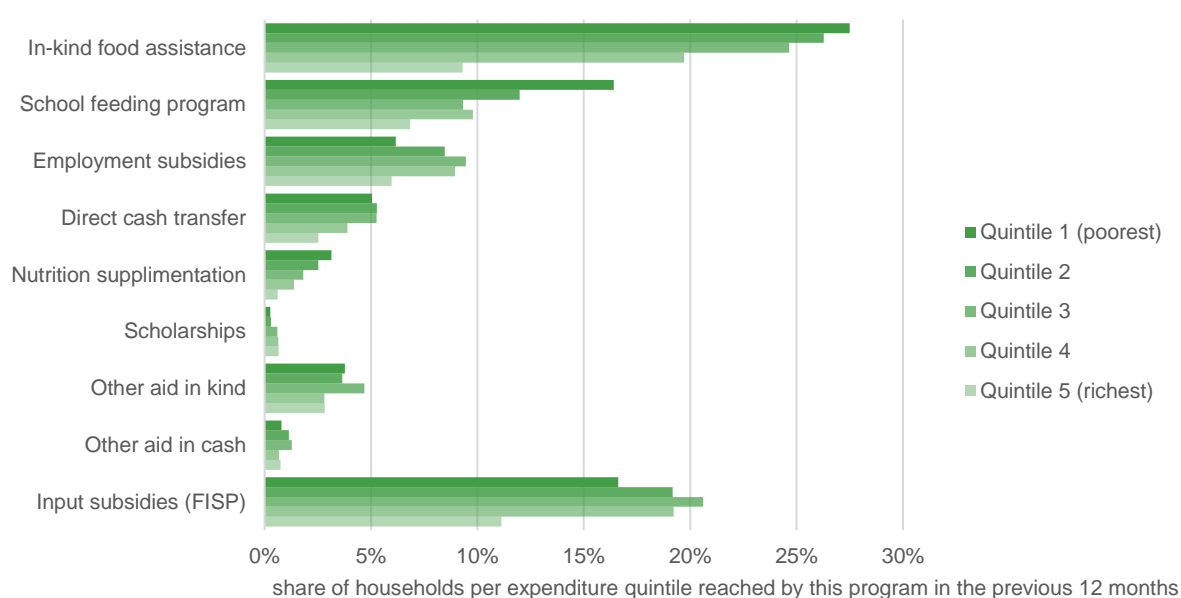
These trends are largely similar when households are categorized as non-poor, poor or ultra-poor using the NSO's updated poverty lines (Figure 4).[4] Ultra-poor and poor households are more likely to benefit from transfer programs than non-poor households, but each of the programs reaches only a minority of poor households, while still benefiting a sizeable share of non-poor households. Since the majority of Malawian households are not poor,[5] many SSNs benefit as many non-poor as poor

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[4] The poverty line is MWK 164,174 (USD 231) and the ultra-poverty line is MWK 103,048 (USD 146) per capita and year in January 2017 prices.

[5] The ultra-poor represent 16 percent of Malawian households and thus make up four fifths of consumption quintile 1. The poor represent 29 percent of Malawian households, and thus make up the upper fifth of quintile 1, all of quintile 2, and the lower quarter of quintile 3. The non-poor represent 55 percent of Malawian households, and make up three quarters of quintile 3, and all of quintiles 4 and 5. Note that the percentages of households which are ultra-poor, poor, or non-poor differ from the shares of ultra-poor, poor, and non-poor individuals in the Malawian population (20 percent, 28 percent, and 52 percent respectively) (NSO 2018). This is because poorer households tend to be larger. The average ultra-poor and poor households have 5.4 members and 5.0 members respectively, compared to only 3.8 members in an average non-poor household.

households in absolute numbers. Depending on the type of SSN, anywhere between 35 percent (in the case of nutrition supplementation programs) and 72 percent (in the case of scholarships) of benefiting households are non-poor. The typical share of non-poor households among the beneficiaries of any one type of SSN is 47 percent (Figure 5). In other words, the benefits of SSNs, most of which are designed to help primarily the poor and the ultra-poor, go instead to non-poor households in nearly half the cases. This suggests that SSN targeting remains highly ineffective. The next two sections look into this issue in more detail.

Figure 4. Targeting of social safety nets in 2016/17 by poverty status

share of households by poverty status reached by this program in the previous 12 months

Figure 5. Number of households benefiting from social safety nets in 2016/17 by poverty status

Number of households (000s) who benefited from this program
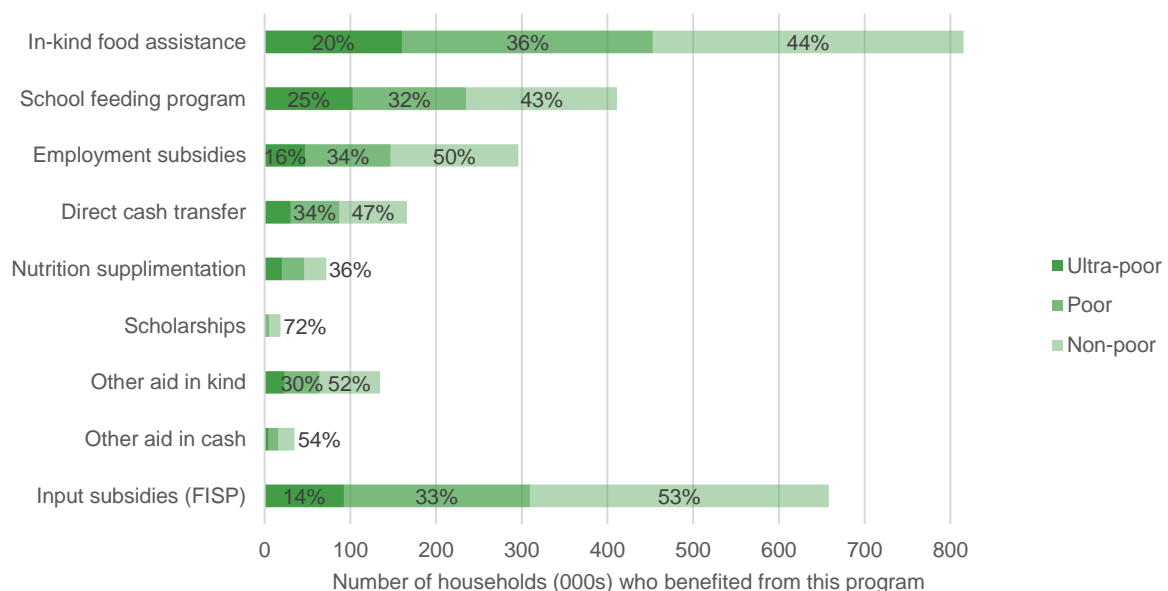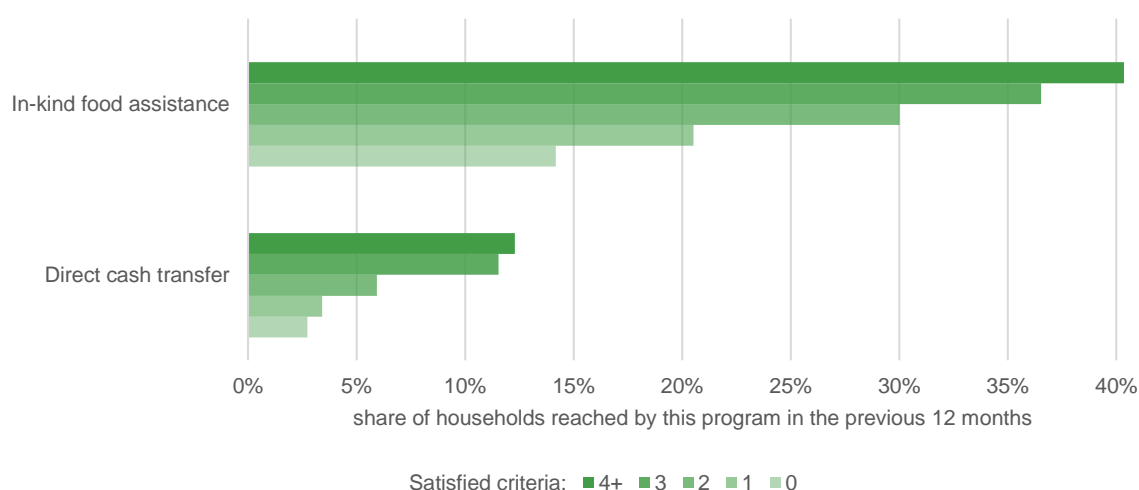
5. TARGETING OF TRANSFERS (FIRP AND SCTP)

Beneficiary households of the Food Insecurity Response Plan (FIRP) were selected according to guidelines specified by the Joint Emergency Food Aid Program (JEFAP). The targeting was community-based, with beneficiary households chosen by their peers in a public forum based on satisfying one or more of the following criteria:

1. Households caring for orphaned children less than 18 years old
2. Child-headed households
3. Elderly-headed households
4. Households with chronically ill/HIV-AIDS affected members
5. Female-headed households
6. Households with two or more years of successive crop failure
7. Households with children receiving supplementary or therapeutic feeding

Satisfaction of these criteria can be partially or fully observed in IHS data.[6]

During the 2016/17 lean season, the Food Insecurity Response Plan (FIRP) provided either in-kind food assistance or direct cash transfers (depending on geographical location) to vulnerable households. The Social Cash Transfer Program (SCTP) provided unconditional cash transfers to ultra-poor and labor constrained households throughout the year. The IHS does not contain information specific to these programs (it covers types of programs rather than specific ones). However, knowing the geographic targeting of FIRP, it is possible to estimate its contribution to the overall numbers of households benefiting from transfers. It is thus possible to say that at least 50 and at most 87 percent of households which benefited from in-kind food assistance in 2016/17 received it through FIRP. The numbers are less precise in the case of cash transfers, to which SCTP contributed significantly. Since both FIRP and SCTP are designed to target the most vulnerable households, they are treated similarly in this paper.

Figure 6. Targeting of social safety nets in 2016/17 by satisfied targeting criteria

share of households reached by this program in the previous 12 months

Satisfied criteria: ■ 4+ ■ 3 ■ 2 ■ 1 ■ 0

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[6] The only criterion which cannot be directly observed in IHS data is crop failure in 2 or more successive years, as the survey only records yields in the previous 12 months. Criterion 6 is therefore approximated by crop failure in the last 12 months.

The more JEFAP targeting criteria households met, the more likely they were to receive in-kind food assistance or a direct cash transfer. In 2016/17, a household which satisfied four or more targeting criteria was almost three times more likely to receive in-kind food assistance, and more than four times more likely to receive a direct cash transfer, than a household which did not satisfy any of the criteria (Figure 6). However, the share of Malawian households which do not satisfy any of the criteria was large at 37 percent. 35 percent of surveyed households met one criterion, 20 percent met two, 7 percent met three, and 1 percent met four or more criteria. Consequently, nearly a quarter of households who received in-kind food assistance or a direct cash transfer did not satisfy any of the targeting criteria (Figure 7). It is therefore likely that the targeting guidelines were not always closely adhered to.

Figure 7. Number of households benefiting from direct transfers in 2016/17 by satisfied targeting criteria

number of households (000s) reached by this program in the previous 12 months

Satisfied criteria: ■ 4+ ■ 3 ■ 2 ■ 1 ■ 0
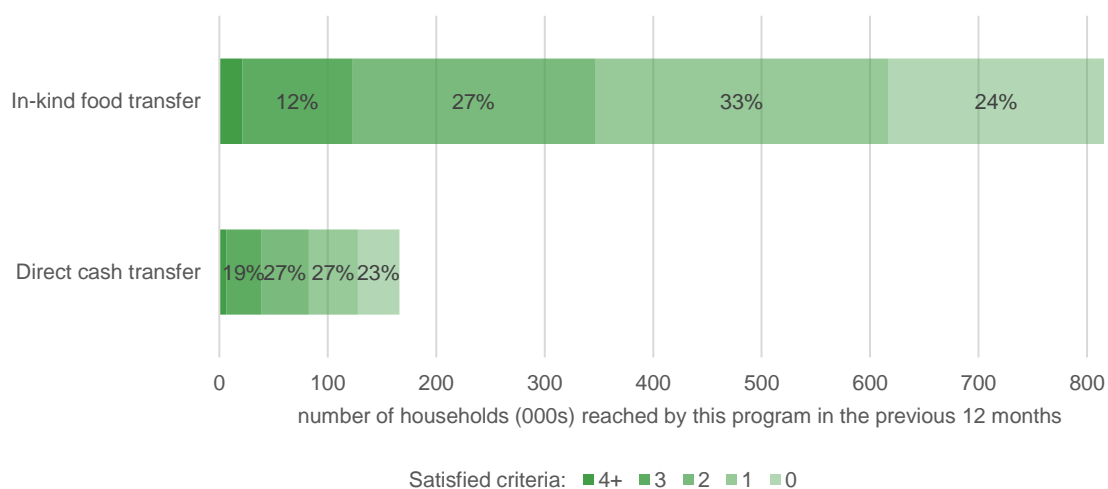
6. TARGETING OF INPUT SUBSIDIES (FISP)

The Farm Input Subsidy Program (FISP) is the only program about which the IHS questionnaires asked specifically. Its targeting can therefore be analyzed more precisely than that of other SSNs. FISP distributes coupons which can in turn be exchanged for subsidized fertilizer, maize seed, and legume seed. Until the 2015/16 farming season, the subsidies averaged roughly 90 percent of the commercial cost of the inputs. Starting in the 2016/17 season, they were reduced on average to 50 percent of commercial cost for fertilizer and maize seed.

In 2016/17, targeted households were each supposed to receive three coupons from FISP: one for fertilizer, one for maize seed, and one for legume seed. Nearly all Malawian households that were reached by the program – 654,000 according to the IHS – received the fertilizer coupon. Note, however, that this is significantly less than the planned number of 900,000 households. In 2010/11, the planned number of FISP beneficiaries was 1.5 million households, but only 1,368,000 households reported receiving a FISP coupon according to IHS data. The actual number of coupon recipients may be even smaller considering that 16 percent of those interviewed in the IHS in 2016/17 reported that they sold the coupons or gave them away. These coupons could therefore have been double counted.

Moreover, only fewer than half (44 percent) of the households who received the fertilizer coupon also received the maize seed coupon, and less than a quarter (24 percent) received all three coupons.[7]

Larger households were more likely to receive more coupons, as were households with larger farms and older household heads. The gender of the household head made no difference in the number of coupons a household received. Interestingly, households headed by a person who completed at least primary education were less likely to receive the seed coupons than households with a less educated head, but poor and ultra-poor households were less likely to receive the seed coupons than non-poor households.[8] The structure of FISP benefits in 2010/11 was markedly more complex with 11 different kinds of coupons, precluding similar analysis.

Between its introduction in 2005/6 and the 2015/16 agricultural year, FISP beneficiary targeting was a bottom-up process during which communities actively participated in beneficiary selection in a manner similar to the selection of FIRP beneficiaries. Besides a requirement of local residence, two main criteria were used in the selection:

1. Household owns and cultivates land during the given season
2. Female- or child-headed household

Virtually all beneficiary households satisfied the first criterion. Female- and child-headed households were marginally more likely to benefit from FISP than households headed by adult males, but their majority was still not reached by the program (Figure 8).

Figure 8. Share and number of households reached by FISP
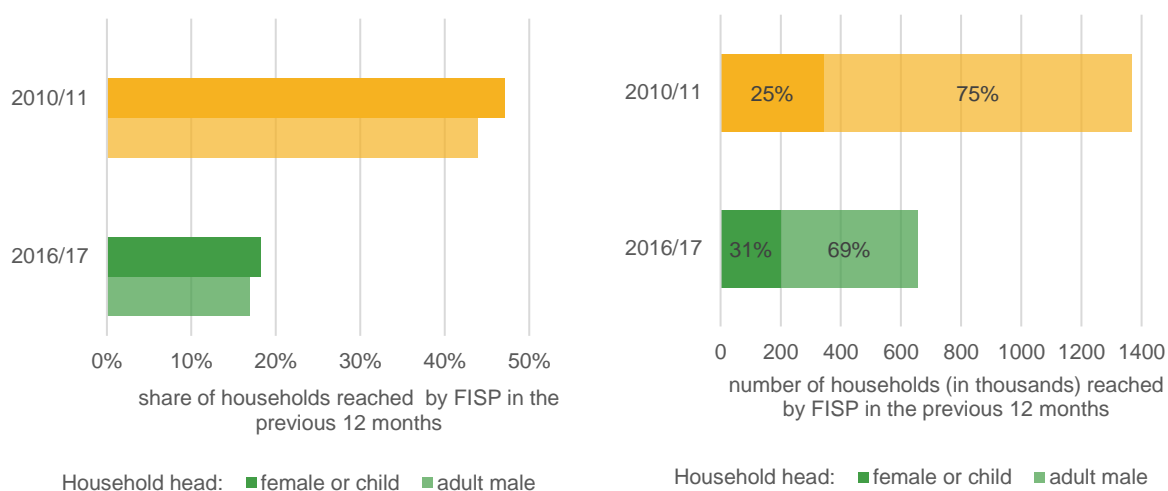
Following allegations of interference in beneficiary selection by traditional authorities, the process was changed in the 2016/17 farming season, when the Ministry of Agriculture, Irrigation and Water Development started to randomly select FISP beneficiaries from registers of farming households

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[7] Practically all households which received a maize seed coupon also received a fertilizer coupon, and nearly all households which received a legume seed coupon also received the maize seed and fertilizer coupons.

[8] The analysis of the characteristics of households which received one, two, or three FISP coupons is based on an ordered logistic regression model – a statistical process which allows to estimate the effects of individual household characteristics on the likelihood of receiving a certain number of FISP coupons while holding all other characteristics constant.

compiled by Agricultural Extension Development Officers across the country. [9] Following this adjustment the probability that a female- or child-headed household would benefit from FISP did not change much relative to the probability that a household headed by a male would (Figure 8). The share of female- and child-headed households among FISP beneficiaries dropped (Figure 8), but that was due to an increase of the share of these households from less than 24 percent in 2010/11 to over 29 percent in 2016/17 rather than to any changes in the probability of being targeted. In other words, the targeting of female- and child-headed households was no more effective at reaching them than random assignment of the benefit.

Both targeting approaches also reached households in the middle consumption quintiles with greater probability than those in the poorest and richest quintiles (Figure 9). Assuming that household consumption correlates to some extent with agricultural productivity, FISP is more likely to reach households which are rich enough to employ the subsidized inputs productively and poor enough not to be able to purchase them at market prices. This is generally the case under either targeting approach. The main difference between them is that the community-based approach is more likely to benefit households in the richest quintile than those in the poorest quintile, while random assignment benefits the richest households less often than the poorest ones. This is consistent with the frequent reports of elite capture of FISP under the community-based targeting system (Chirwa and Dorward 2013, Chisinga and Poulton 2014).

Figure 9. Share of households reached by FISP

share of households per expenditure quintile reached by FISP in the previous 12 months
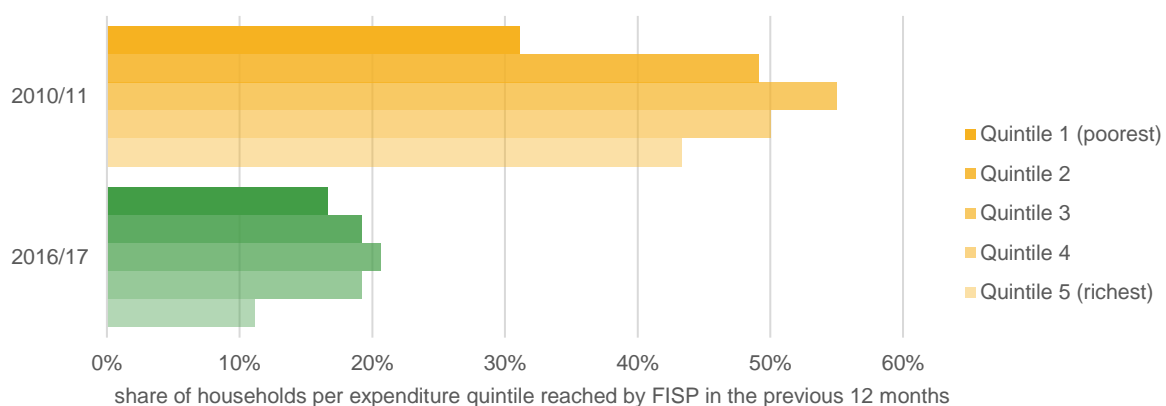
7. SUMMARY

The coverage of most social safety nets (SSNs) increased between 2010/11 and 2016/17, while that of the Farm Input Subsidy Program (FISP) – by far the largest input subsidy program in Malawi – declined. Much of the increase in SSN coverage likely resulted from responses to bad harvests in 2015 and 2016. The share of households benefiting from in-kind food assistance (the most common vehicle of response to bad harvest) increased from 2.5 to 21.5 percent, and the value of the median annual benefit from this type of SSN increased from MWK 7,263 (USD 10) to MWK 35,959 (USD 51) adjusted for inflation to January 2017 prices. The coverage of most other SSNs which are not necessarily related

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[9] This was the case in all districts except for Dowa and Rumphi, where, in a pilot, the most productive poor farmers were targeted based on a set of socioeconomic characteristics obtained from a census. The socioeconomic characteristics were compiled into an index, which was used to categorize households into quintile. The middle quintiles were targeted with FISP. The first quintile was considered too poor to be able to productively use the subsidized inputs, while the fifth quintile was deemed rich enough to be able to purchase inputs at commercial prices. Excluding Dowa and Rumphi from the analysis does not alter the results presented here.

to bad harvest increased as well. The only notable exceptions are school feeding programs. Given the wide reach of FISP in 2010/11, these trends led to an overall decrease in the percentage of households benefiting from at least one SSN or input subsidy program from 54 percent to 45 percent between 2010/11 and 2015/16. However, coverage of SSN programs themselves (excluding FISP) increased from 17 to 36 percent of households.

Transfer programs targeted the poor more heavily than the rich, but still failed to exclusively target only the poorest segments of the population. In fact, the benefits of SSNs reach non-poor households as often as they reach poor and ultra-poor households combined. Data related to the Food Insecurity Response Plan (FIRP) and the Social Cash Transfer Program (SCTP) suggest that this was at least partly due to poor adherence to targeting guidelines.

Input and employment subsidies, delivered primarily through FISP and the Malawi Social Action Fund (MASAF), reached mainly the middle segments of the population. It is likely that ultra-poor households were less likely to be reached by these programs due to their labor constraints, while the non-poor were less likely to benefit because of lesser need. This seems to be the case regardless of the targeting approach. However, data related to FISP suggest that elites are less likely to capture the programs when beneficiaries are selected at random rather than through community-based approaches.

The ineffectiveness with which programs like FIRP and SCTP reach the poor contrasts sharply with the specificity of the guidelines used in their targeting. Many households who receive the benefits of these programs do not satisfy the targeting criteria, while many who satisfy them do not benefit. Whether this is a consequence of misunderstanding of the criteria or one of deliberate non-adherence to the guidelines, a simplification of the criteria could remedy the situation by making them more comprehensible and easier to enforce. Considering that in the case of FISP, random assignment did not benefit the poor any less than deliberate targeting, it is unlikely that a simplification of targeting criteria would further impair the effectiveness of targeting compared to its current state.

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