Targeting in Social Cash Transfer and Farm Input Subsidy programmes in Malawi: should they be harmonized?

Mirriam Matita* and **Ephraim W. Chirwa****

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*Wadonda Consult Ltd & Lilongwe University of Agriculture and Natural Resources (LUANAR)
**Wadonda Consult Ltd and Chancellor College, University of Malawi

Executive Summary

Targeting of beneficiaries in social cash transfers and subsidies in Malawi have resulted in high errors of inclusion and exclusion. Studies show that some of the households in Malawi are recipients of more than one form of social assistance from the government. This is due to the fact that social support programmes are implemented by different institutions using different targeting criterion without proper coordination. This leads to inefficient ways of assisting the poor and vulnerable groups. The paper argues for harmonisation of the targeting of Social Cash Transfer Programme (SCTP) and Farm Input Subsidy Programme (FISP) within the context of the National Social Support Policy in which these programmes target different poverty groups. We propose that FISP should be targeting households that are moderately poor while the SCTP should continue focusing on the poorest of the poor. Using Integrated Household Survey 3 and population figures, three specific target groups are identified:

- Ultra-poor and moderate poor households with labour constraints (23.7%) should be targeted for SCTP.
- Ultra-poor with available productive labour (17.3%) should be targeted with public works programmes and FISP to facilitate coupon redemption.
- Moderate poor with available productive labour (40%) should be targeted for FISP without participation in other social protection programmes.

Simulation results show that at current benefit levels in SCTP and FISP it is possible with the same budget to target 50% of rural households by targeting all ultra-poor with SCTP (22%) and the rest (28%) with FISP. Similarly, given the increasing willingness to pay among farmers, it is possible to target all ultra-poor with FISP and all moderate poor (76% of rural households) while subsidizing 160,000 metric tons of fertilizers such that at 50% farmer contribution the total benefit transfers for the two programmes would be equivalent to the current level of benefit transfers in the FISP. As the Malawi Government is considering scaling-up of SCTP, it may be important to consider implementing harmonized social support to rural households. Such harmonisation will also facilitate the creation of a social register for social support programmes whose use can be greatly enhanced by the establishment of a national identification system.

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1. Introduction

Targeting in social cash transfers and subsidy programmes is one of the concepts that have generated considerable debate in social protection programmes. In Malawi, this debate has arisen in the context of the piloting and scaling-up of the Social Cash Transfer Programme (SCTP) since 2006 and the implementation of the Farm Input Subsidy Programme (FISP) since the 2005/06 agricultural season. On one hand, the SCTP is implemented by the Ministry of Gender, Children, Disability and Social Welfare (MoGCDSW) under the coordination of the Ministry of Finance, Economic Planning and Development (MoFEPD) within the context of the National Social Support Policy. On the other hand, FISP is implemented by the Ministry of Agriculture and Irrigation (MoAI). Although, input subsidies are one of the strategic instruments in the National Social Support Policy, the FISP is not coordinated by MoFEPD.

According to the MoGCSW (2013), the SCTP is expected to be scaled up from six districts to all districts by 2014/15 while the FISP already covers all the 28 districts in Malawi. These two programmes, although both are classified as instrument for social protection in the Social Protection Policy have nonetheless not been coordinated in implementation. This has implied that in the districts with SCTP some of the beneficiaries have also accessed subsidized farm inputs under the FISP. This raises the issue whether multiple dipping in social protection programmes is complementary or an inefficient use of resources compared to targeting different households for different programmes. Nonetheless, targeting of vulnerable groups or resource poor households is not easy in an environment with high levels of poverty and where there is absence of a national identification system. Houssou and Zeller (2011) show that most targeted programmes in Malawi have high proportion of under-coverage and high leakage estimated at 73% and 23%, respectively.

Targeting in FISP has been one of the strategic issues requiring some modifications in order to maximize the gains from input subsidies. This paper considers the possibility of harmonizing targeting FISP with other social support programmes within the context of the National Social Support Policy. It focuses on the relative benefits of SCTP and FISP and how a unified system of targeting can be beneficial to national development. Chirwa amd Mvula (2013) find that 64% of SCTP beneficiaries had access to FISP in the 2012/13 season, suggesting that these programmes were essentially targeting the same households. The paper is structured as follows. The next section reviews the targeting approaches and targeting criteria for CTP and FISP in Malawi. Section 3 reviews targeting outcomes and impacts of SCTP and FISP. Section 4 explores the use of proxy means tests for ranking households. Section 5 simulates the harmonisation of SCTP and FISP and targeting them at different households by scaling up SCTP for the ultra-poor households and FISP for moderate poor households. It also reviews the data and institutional arrangements that can facilitate harmonization of the systems for targeting SCTP and FISP. Section 6 provides concluding remarks.

2. Targeting Approaches in SCTP and FISP

2.1   Review of Targeting Approaches

Literature suggests several approaches of targeting beneficiaries in targeted development programmes. Ellis et al (2009) identify six ways in which social protection programmes have identified and selected beneficiaries in Africa. These include geographic targeting, categorical targeting, means tests, proxy means tests, community selection, self-selection and self-assessment. Table 1 describes the main principles, advantages and disadvantages of the targeting approaches. These targeting mechanisms have different implications for costs and targeting errors be it errors of inclusion and exclusion and they do affect the effectiveness and efficiency of the interventions. Houssou and Zeller (2011) show that administrative and political costs tend to fall with increase in coverage while fiscal costs and political support tend to increase with more coverage.

Table 1 Poverty Targeting Approaches

Targeting Approach	Criteria	Advantages	Disadvantages
Geographic targeting	• Benefits certain parts of country that are vulnerable (drought or floodplains)	• Simple and easy • Suitable for emergency	• High leakage if not all require support
Categorical targeting	• Distinct groups of people that are poorer or vulnerable • Such as orphans, smallholder farmers	• Less costly and simple	• Prone to inclusion and exclusion errors • Depends on category definition
Means tests	• Complete assessment of incomes and assets • Means should fall below a minimum threshold	• Most accurate	• Most expensive to implement • Incomes & assets may be under-reported • Prone to seasonality
Proxy means tests	• Indicators of poverty that are robust and easier to observe are identified • Multiple indicators are used to generate scores with appropriate weighting	• Easy to collect indicators • Captures multidimensional poverty	• Prone to manipulation by households if indicators are few
Community-based	• Communities selecting beneficiaries themselves	• Local understanding of vulnerability	• Prone to elite or political capture • Time consuming if genuine participation is sought • Require neutral and good facilitation • Criteria subject to interpretation
Self-selection	• Self-selection by lowering benefits below reservation levels	• Reduces targeting costs and social tensions	• Problematic where poverty is severe and widespread • Prone to exclusion errors
Subjective Self-assessment	• Households self-assessment of poverty using a ladder or steps	• Easy to collect information • More practical to implement	• Tend to be confined to lower levels • Subjective • Prone to inclusion errors

Source: Based on Ellis et al (2011), Houssou and Zeller (2011), Dorward and Chirwa (2013)

Furthermore, Houssou and Zeller (2011) put the various targeting approaches ability to achieve good targeting outcomes and the practicability of the approaches, and argue that no approach is perfect in targeting poverty. For instance, on one hand, while means testing is more likely to yield better targeting outcomes, it is a highly impractical approach especially in a national programme. On the other hand, subjective self-assessment of poverty and community-based targeting are more practical, but they tend to have worst targeting outcomes.

2.2   *Programme Objectives and Targeting Criteria in SCTP and FISP*

Targeting of social protection or development programmes depend on the objectives of the intervention, leading to different targeting outcomes and targeting impacts (Chirwa and Dorward, 2013). It is, however, important that targeting objectives are consistent with the objectives of the programme. In the SCTP, the main objective is to "alleviate poverty, reduce malnutrition and improve school enrolment by delivering regular and reliable cash transfers to ultra-poor households that are also labour constrained" (MoGCSW, 2013). It is further noted that SCTP will contribute to economic growth and social development. The core stated objective of FISP is to "improve resource-poor smallholder farmers' access to improved agricultural inputs in order to achieve their and national food self-sufficiency and to raise these farmer's incomes through increased food and cash crop production" (Chirwa and Dorward, 2013).

Table 2 summarizes the main programme objectives, the targeting objectives and the targeting criteria for the SCTP and FISP. With respect to the objectives, the issue of household food security is of importance to both programmes. However, while the SCTP only aims only at achieving household food security implied in the reduction of malnutrition, the FISP objective on food security is broader encompassing both household and national food security. Increasing incomes is another common goal of both programmes, although in the case of the SCTP it is expressed more broadly as poverty alleviation. Differences also exist, with the SCTP also recognising their economic growth and social development roles while economic growth is not an explicit objective of the FISP.

With respect to targeting objectives, the SCTP tend to define the target groups more distinctively compared to the FISP. It is also evident in the SCTP that the focus is on the poorest of the poorest while the FISP can be argued to target resource poor households that include ultra-poor households. As SOAS et al (2008) note, the target group in FISP is so wide such that a large proportion of poor people in rural areas tend to meet the criteria. In terms of the targeting criteria, the SCTP has clear indicative parameters for defining the ultra-poor and labour constrained households (elements of objectivity) while it does not seem to be an easy task to identify resource poor households under FISP. Kilic et al (2013) note that the MoAI does not provide the definition of the resource-poor to officers to facilitate uniform application of the targeting criteria across the country. It is also noted that the inclusion of most vulnerable groups in the FISP criteria since 2008/09 (Chirwa and Dorward, 2013), has made FISP to shift towards the domain of SCTP. Nonetheless, although the SCTP targeting criteria in principle can identify the beneficiaries by the joint condition, in both programmes it is not possible to rank households from the poorest to the richest household; hence such ranking is highly subjective. This is an important aspect especially where resources for social support are limited. Chirwa and Mvula (2013) notes that although the SCTP targeting criterion is

unambiguous, it is still subject to different interpretation on what constitutes an ultra-poor household with a similar problem arising in the FISP definition of resource-poor household, particularly when several proxies of poverty are variedly applied in different contexts at community level.

Table 2 Programme Objectives, Targeting Objectives and Criteria

Parameter	SCTP	FISP
Programme Objectives	- Poverty alleviation - Reduce malnutrition (household food security) - Improve school enrolment - Economic growth - Social development	- Household food security - National food security - Agricultural productivity - Increase incomes
Targeting Objectives	- Ultra-poor - Labour constrained	Resource poor who cannot afford commercial farm inputs
Targeting Criteria	**Proxy means with 2 indicators** - Ultra-poor - One meal a day - Survives on begging - Undernourished - No valuable assets - No assistance - Labour constrained - No 19-64 years fit for work 19-25 years attending school - A dependency ratio > 3 - Both conditions must hold	**Categorical targeting** - Initially unclear 2005/6 - Resource poor farmers resident with land since 2006/7 - Other considerations - Guardians looking after physically challenged - Vulnerable households – child- or female- headed, people living and affected by HIV/AIDS

Source: GOM (2012); Chirwa and Dorward (2013)

3. Targeting Outcomes and Impacts of SCTP and FISP

3.1 Targeting Outcomes

There are several studies that have focused on the targeting outcomes of SCTP and FISP in Malawi. In both programmes, the process of identification of beneficiaries involves the communities and officials from the respective implementing ministries, MoGCDSW with respect to the SCTP and the MoAI with respect to the FISP. It is also worth noting that the implementation of SCTP is more decentralized with the District Social Welfare Committee with the responsibility of overseeing the implementation of the programme. Both of these programmes collect separately massive data about households and their characteristics as a basis for selection of beneficiaries. The evidence on targeting in both programmes suggests that the targeting outcomes are far from being perfect.

The targeting studies in the SCTP reveal that targeting is not perfect. Chirwa and Mvula (2013) find that a high proportion of beneficiaries did not meet the criteria prior to the programme, with only 33.3% with a dependency ratio of greater than 3 and 61% with the dependency ratio greater than 3 after the implementation of the programme. The recall information from households on their labour supply significantly differed from the official targeting records, suggesting strategic restructuring of households to suit the criteria as the two indicators are easy to manipulate. Miller et al (2010) using various indicators of ultra-poverty also find that the exclusion errors in SCTP range from 37% to 68%, hence the 10% cut-off leaves many eligible households out of the scheme.

Furthermore, if those not eligible were removed from participation, then the cut-off point of about 15% to 19% based on one meal per day and using the poverty line would eliminate exclusion errors, respectively. Miller et al (2008 and 2010) also found that 24% of the households that were receiving cash transfers were not eligible and attribute the inclusion errors to the lack of clarity of the targeting concepts and the use of poor proxies, favouritism and the influence of village level politics. IPRSE (2011) also find that there is political interference at the local level in which members of the CSPC and extension workers are under pressure to include relatives of traditional leaders even though they do not qualify under the criteria. Although the sample size was small, Seaman et al (2008) find that the targeted households were equally represented in quintile of incomes and 44% of the beneficiary households did not meet the labour constraint criteria.

Similarly, studies on FISP reveal that targeting is inefficient. Kilic et al (2013) using IHS3 data find that during 2009/10 agricultural season, 57.9% of the poor and 52.2% of the non-poor received subsidized fertilizer coupons. Holden and Lunduka (2012) also find evidence of poor targeting efficiency in 2000/01 and 2001/02 agricultural seasons. Furthermore, regression based analyses show that the non-poor households are more likely to receive farm input subsidies than poor households (Kilic et al, 2013; Chirwa et al, 2011, SOAS et al, 2008). SOAS et al (2008) also find that where the poor receive subsidized farm input coupons, they tend on average to receive fewer coupons than the non-poor households that receive coupons. Chirwa and Doward (2013) argue that the bias against the poor on average number of coupons received is a result of redistribution in the community where the poor are likely to share one of their coupons while the non-poor tend to hold to the two coupons received.

These studies show that targeting in both programmes has been problematic, more so in the FISP, suggesting scope for improvements in targeting efficiency. While the SCTP focuses on the poorest 20% of households, the resource poor in FISP may include the bottom 20% raising questions about the possibility of multiple dipping by some households. Chirwa and Mvula (2013) in a survey of 800 beneficiaries in 4 districts find that 64% of the SCTP beneficiaries also received subsidized farm inputs. This suggests that harmonizing the targeting criteria of SCTP and FISP may be beneficial in resource allocation such that under a unified criterion the former could focus on the ultra-poor while the later could focus on the poor (excluding the ultra-poor).

3.2   Impacts of SCTP and FISP

Although the targeting outcomes in both programmes are not encouraging, studies point to the beneficial impacts of both SCTP and FISP on beneficiary households as well as economy-wide benefits. The available evidence on social cash transfers in Malawi show that they have positive impacts on many household welfare outcomes including food security, production, health and schooling. Miller et al (2011) using a randomized community control, find substantial differences between treatment and comparison groups in favour of the SCTP in terms of food expenditures, food consumption and dietary diversity. Covarrubias et al (2012) also find increase in ownership of agricultural assets and livestock (mainly goats and chicken) among beneficiary households compared to comparison households in Malawi SCTP. In a special cash transfer programme, the Dowa Emergency Cash Transfer, Davies and Davey (2008) find income multiplier effects ranging from 2.02 to 2.45 for each dollar transferred to beneficiaries.

Chirwa and Dorward (2013) summarize the evidence on the direct and indirect effects of the FISP and conclude that the economy-wide effects tend to be stronger than the direct beneficiary effects. Thome et al (2014) explore the synergies of SCTP and FISP using a local economy-wide impact evaluation model. Their results show that the SCTP has higher overall income multiplier effects (1.92) than the FISP (1.41) but FISP tend to have higher production multipliers than the SCTP, for example 0.81 in FISP compared to 0.13 in SCTP for households with larger land holdings. Thome et al (2014) also show that combining FISP with SCTP improves the income multipliers of FISP to 1.62.

4. Exploring Use of Proxy Means Tests for Targeting

4.1 Using Multidimensional Poverty Indicators

It seems the main challenges in targeting in SCTP and FISP are the identification of households that are ultra-poor and poor and finding criteria that can be used objectively across the country. Chirwa and Dorward (2013) suggest proxy means tests and community targeting as approaches that can be used to improve the targeting of FISP, while addressing the challenges that exist. The SCTP already uses the proxy means tests although the initial criteria was limited to two indicators with value judgements about who is ultra-poor given the many indicators of ultra-poverty provided in the guidelines. The new proposed guidelines of the SCTP maintain the two main criteria, ultra-poverty and labour constraint, with ultra-poverty being proxied by the asset index (GOM, 2012).

Houssou and Zeller (2011) propose proxy means targeting system for FISP based on 10 indicators derived from household integrated survey including household size, ownership of radio, cement floor of house, ownership of bicycle, use of electricity for lighting, ownership of *panga* knife, education qualification in household (JCE beyond), use of bed net, rubbish disposal facility being a heap, and households heads literacy. Chirwa and Dorward (2013) note several problems with deriving indicators from expenditure data due to various challenges with such data and seasonality of expenditures. Nonetheless, a good proxy means test is likely to be superior to the targeting systems currently used in SCTP and FISP.

One concept of poverty that may be useful in construction of indicators for proxy means test is the multidimensional poverty index which recognizes vulnerability in several dimensions (Alkire and Foster, 2007). Mazunda et al (2012) uses the multidimensional poverty index and derive poverty rates in Malawi that were consistent with the expenditure based poverty rates in 2005 and 2011. The main features of the multidimensional poverty index is the identification of the dimensions of vulnerability and indicators in each dimension with equal weights for each dimension and equal weights foe each indicator in each dimension. The sum of the weights for all the indicators should sum up to one. Table 3 presents our construction of multidimensional poverty indicators. In the health dimension, the deprivation in nutrition is assessed by household's own assessment of food adequacy in the past year instead of any child or adult who is malnourished in the household as in Alkire and Foster (2007).[1] In this case food adequacy, although it does not take account the quality of the food and dietary

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[1] Determining whether a member is malnourished requires taking anthropometric measurements which require more effort and expertise.

diversity, is used as an indicator for food or nutrition security. This food adequacy indicator is also less affected by seasonality as it captures food consumption over the whole season. In addition, since in both the SCTP and FISP food security is the main objective, inclusion of this simple indicator is plausible. It can also be argued that all the indicators included in the poverty index are not seasonal.

Table 3 Multidimensional Poverty Index for Poverty Targeting

Dimension	Indicator	Deprived of …	Index 1 Weight	Index 2 Weight
Education	1) Years of schooling	No member with 5 years	1/6	1/8
	2) Children school attendance	Any school age child not in primary school	1/6	1/8
Health	3) Child mortality	Any child death in the family	1/6	1/8
	4) Nutrition	Food consumption less than adequate in past year	1/6	1/8
Standard of living	5) Electricity	Household has no electricity	1/18	1/24
	6) Sanitation	Household's sanitation facility is not improved	1/18	1/24
	7) Safe drinking water	Household does not have access to safe drinking water	1/18	1/24
	8) Floor of house	Household has a mud or sand floor	1/18	1/24
	9) Cooking fuel	Household cooks with wood or charcoal	1/18	1/24
	10) Assets	Household does not own more than one asset (radio, TV, telephone, bike, motorbike, refrigerator) , and does not own car	1/18	1/24
Labour Availability	11) Dependency ratio	Households with dependency ratio >3	-	1/4

Source: Adapted from Alkire and Foster (2007)

Multidimensional poverty Index 1 (MDP1) uses three dimensions (education, health and standard of living) and 10 indicators of deprivation similar to Alkire and Foster (2007). In multidimensional poverty index 2 (MDP2), one dimension of labour availability is included to reflect the relative importance of labour constraints in the targeting of the SCTP. In this case, the household is deprived in labour supply if the dependency ratio is more than 3. We adopt the GOM (2012) definition of dependency ratio as the number of people in the households divide by the number of adults between 19 and 64 years able to work net of 19 to 25 years currently in school. According to Alkire et al (2013) households are classified as poor if they are deprived in 33% of weighted indicators and classified as ultra-poor if they are deprived in at least 50% of the indicators.

4.2   Methodology and Assumptions

The main is being addressed is to get a sense of the cost and implementation implications if SCTP and FISP were coordinated under a unified targeting criterion such that the two programmes targeted different groups of the poor. We use IHS3 data to derive the incidence of multidimensional poverty and compare the results with the expenditure based incidence of poverty. The population will be divided into three groups: ultra-poor, moderate poor and non-poor with proportions of each of these groups estimated using IHS3 using national sample weights. The other step will involve obtaining the national projected population of rural households in 2013 and estimating the total number of households that falls under each group. Using the categories of the ultra-poor and

moderate poor, we simulate the cost implications of targeting SCTP and FISP subject to the resource constraints. The following assumptions are made:

a) The base scenario is providing the equivalent of FISP benefits (fertilizers at commercial price less farmer contribution) to 50% of rural households either 2 50-kg bags per household or 100% of rural households with 2 25-kg bags per household.

b) Gradual increase of the proportion covered under cash transfer up to the proportion that covers all ultra-poor households based on alternative definitions of poverty.

c) The average benefit transfers of MK2,400 per month per household for SCTP. Mangani and White (2012) derive several benefit levels for the SCTP in addition to the average actual benefits of MK2,000 per month (MK24,000 per year) per household and proposed GOM increase to MK2,400 per month per household. The proposed average transfer levels range from MK2,500 to MK3,700 per month per household.

d) Gradual increase in farmer contribution in the FISP when all ultra-poor are covered by SCTP.

e) Ultra-poor households are only targeted for SCTP and moderate poor households are targeted for FISP.

f) Some of the SCTP beneficiaries spend their transfers on farm inputs. We assume that 13% of the transfers will be used to purchase fertilizers (Chirwa and Mvula, 2013). Chirwa et al (2012b) find that participants in public works programmes spend 15% of their wages on purchase of commercial fertilizers.

5. Simulating Scaling-Up SCTP and Harmonizing with FISP

5.1 Estimating Target Rural Populations for SCTP and FISP

Table 4 presents the proportions for different categories of welfare using different indicators of poverty and the estimated number of rural households. Applying the various poverty measures using IHS3 data we derive the proportions of various welfare groups and estimate the number of rural households that can be covered by SCTP. Four approaches are used in identifying welfare groups in Malawi.

The first is targeting using household expenditure data to categorise the poor and non-poor. This entails a means test targeting approach that is data demanding and the many problems associated with income and expenditure data collected on households based on recall for different recall periods and highly affected by seasonality. Hence, from a programming point of view this is the least practical method as noted above. The first row uses household expenditures to determine households that are poor or non-poor, the official poverty rates in Malawi (NSO, 2012). The analysis of IHS3 data reveals rural poverty at 49.2% with 22.9% of rural households being classified as ultra-poor. This is in contrast to the published rural poverty rate of 56.6% and 29.1% of rural households in ultra-poverty (NSO, 2012). Complete coverage of ultra-poor with SCTP under this scenario entails targeting 23% of rural households while 26% would be covered by the FISP.

The second row of Table 4 identifies welfare groups using proxy means tests based on multidimensional poverty with three dimensions (health, education and standard of

living) with 10 indicators that are less affected by seasonality (MDP1) as defined in Table 3 above. MDP1 identifies 21.5% of rural households as ultra-poor for SCTP targeting and 59.4% as moderate poor households for FISP targeting. This indicator gives an overall multidimensional poverty headcount ratio of 80.9%. Alkire and Santos (2010) also find such high levels, 78.5% of rural households being poor using Demographic and Health Survey data.

Table 4 Estimated Target Groups and Rural Households

Poverty indicator	Welfare Group	Weighted % of IHS3 sample	Estimated number of rural households	% FISP in IHS3
Head Count Ratio	Ultra-poor	22.9	652,064	45.0
(expenditure-based)	Moderate poor	26.3	750,791	54.7
	Non-poor	50.8	1,446,949	51.3
	All	*100.0*	*2,849,804*	50.7
Multidimensional poverty	Ultra-poor	21.5	613,563	39.5
index 1 (MDP1)	Moderate poor	59.4	1,693,069	53.4
	Non-poor	19.1	543,173	55.1
	All	*100.0*	*2,849,804*	50.7
Multidimensional poverty	Ultra-poor	20.3	579,650	52.5
index 2 (MDP2)	Moderate poor	56.3	1,605,010	49.0
	Non-poor	23.3	665,144	53.3
	All	*100.0*	*2,849,804*	50.7
Multidimensional poverty	Ultra-poor & LC	4.2	119,977	41.9
index 1 (MDP1) and labour	Ultra-poor & NLC	17.3	493,711	39.0
constrained (LC) or Non-	Moderate poor & LC	19.5	554,572	55.9
labour constrained (NLC)	Moderate poor &	40.0	1,138,501	52.1
	NLC	6.0	171,843	59.4
	Non-poor & LC	13.0	371,329	53.1
	Non-poor & NLC	*100.0*	*2,849,804*	50.7
	All			

Source: Computed by authors based on IHS3 data

The third row of Table 4 used MDP2 with 11 indicators and includes an additional dimension of productive labour availability in the household. The addition of a labour constraint reduces vulnerability marginally to overall multidimensional poverty headcount rate of 76.6% with 20.3% of rural households being classified as ultra-poor.

The fourth row combines MDP1 and labour constraint as joint conditions that must be satisfied for a household to qualify for SCTP under the current targeting criteria. We classify each welfare group by productive labour resource availability in the household. Similar to the findings in Chirwa and Mvula (2013), the proportion of households that meet the joint criteria of ultra-poor and labour constrained in rural areas is small and is estimated at 4.2% of rural households. Given that the SCTP currently reaches 10% of households in a community, it is likely to target households that do not meet the joint targeting criteria. However, there is a high proportion, 17.3% of rural households that are ultra-poor but have productive labour. Similarly, 19.5% of rural households are moderately poor and labour constrained and 40% of rural households are moderate poor with available productive labour. Using MDP1 and labour constraint implies that 80.9% of rural households need social assistance of some form. This has implication for the type of interventions. First, the SCTP would be an appropriate intervention for the ultra-poor and moderate poor with labour constraints, hence targeting 23.7% of rural households. Secondly, the ultra-poor with available productive labour (17.3%) could appropriately be targeted with public works programmes and FISP on condition that the

public works programmes are implemented closer to the period of coupon redemption. This may be particularly important under increased farmer contributions to the FISP. Thirdly, the moderate poor with available productive labour (40%) could be targeted for FISP without participation in other social protection programmes. Combining the MDP1 and labour constraints can enable authorities to determine which households should be targeted for SCTP, public works programmes and FISP.

5.2 *Correlations and Seasonality of Poverty Indices*

Table 5 explores the pairwise correction between the expenditure based incidence of poverty and the multidimensional poverty indices. The correlation coefficient ranges from 13.7% for MDP2 to 15% for MDP1 with the expenditure based poverty headcount. Both these correlations are statistically significant at the 1% level. The correlation coefficient for the association between MDP1 and MDP2 is 52.8% and statistically significant at the 1% level.

Table 5 Pairwise Correlations of Poverty Indices

Variable	Head Count Ratio (expenditure-based)	Multidimensional poverty index 1 (MDP1)
Multidimensional poverty index 1 (MDP1)	0.1501 (0.0000)	-
Multidimensional poverty index 2 (MDP2)	0.1371 (0.0000)	0.5281 (0.0000)

Note: Significance levels in parenthesis

The other issue that we explored is the seasonality of the poverty measures. Chirwa et al (2012a) note that since data in the integrated household surveys is collected over a whole year, poverty measures are prone to seasonality. Figure 1 shows poverty incidence using different indicators – expenditure based poverty (HCR) and multidimensional poverty indices (MDP1 and MDP2). All indicators show variations in poverty by month of interview, although the variation in poverty using the expenditure based measure are more pronounced than those in multidimensional poverty measures.

Figure 1 Seasonal Trend in Poverty Indices
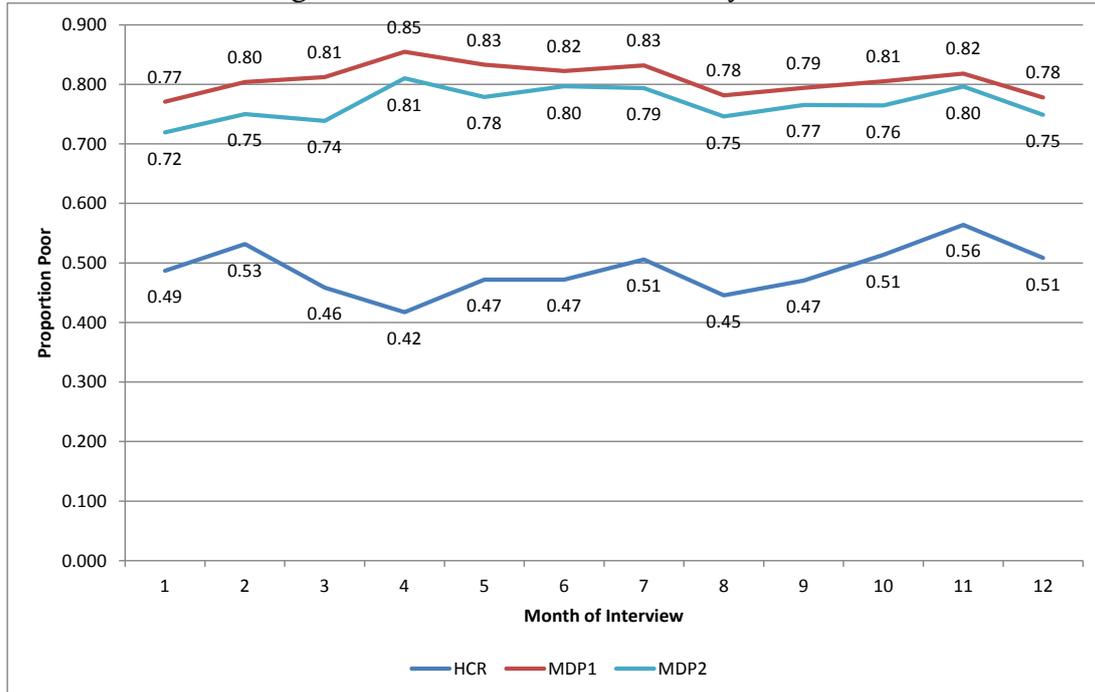
Source: Computed by authors

5.3 *Cost Implications of Coverage and FISP Farmer Contributions*

Table 6 presents three scenarios of targeting SCTP and FISP among rural households. In scenario (a) we assume that only 50% of rural households are targeted but change the proportions of households under SCTP and FISP. The first situation is the base case where none of the household is under the SCTP and 50% of rural households receive 2 bags of subsidized fertilizers with MK500 as farmer contribution per bag of 50 kg of fertilizer. This is the current practice and involves 142,290 metric tons of subsidized fertilizers and costing MK41.9 billion (net of farmer contribution). This equivalent to universal subsidy of 2 bags of 25 kg per bag as proposed in Chirwa and Dorward (2013). Shifting some resources from FISP to SCTP, given the same transfer benefits, there are marginal savings on total costs. The current target for SCTP is 10% of the population – this requires MK8.2 billion to fund SCTP. This figure is similar to the MK9.1 billion for the same transfer levels proposed by Mangani and White (2012). Targeting the remaining 40% of rural households with FISP will cost MK33.5 billion for 113,992 metric tons of subsidized fertilizers. Beneficiaries of SCTP are likely to create a commercial market for fertilizers amounting to 4,050 metric tons. If all ultra-poor household (21.5%) are correctly targeted for SCT and 28.5% for FISP, the costs in terms of transfer benefits would be MK17.7 billion and MK23.9 billion, respectively. This will involve subsidizing only 81,134 metric tons of fertilizers and commercial purchases of 8,719 metric tons by SCTP beneficiaries. Under this scenario, the cost of FISP is higher than SCTP, as long as the benefit levels in SCTP do not exceed FISP direct benefits.

Table 6 Rationalizing SCTP and FISP for at least 50% of Rural Households

Proportion Targeted (%)			Average Benefits (MK/hh/year)		Cost of Benefits (MK billions)			Fertilizer Subsidized (MT)	Commercial Purchase SCTP (MT)	Farmer Contribution FISP (MK)
SCTP	FISP	Total	SCTP	FISP	SCTP	FISP	Total			
a) Varying % targeted for SCTP and FISP until all ultra-poor are targeted under current benefit levels (MDP1)										
0.00	50.00	50.00	28,800	29,400	0.0	41.9	41.9	142,490	-	500
10.00	40.00	50.00	28,800	29,400	8.2	33.5	41.7	113,992	4,050	500
15.00	35.00	50.00	28,800	29,400	12.3	29.3	41.6	99,743	6,075	500
21.53	28.47	50.00	28,800	29,400	17.7	23.9	41.5	81,134	8,719	500
b) Targeting all ultra-poor with SCTP + moderate poor with FISP with increased farmer contribution (MDP1)										
21.53	28.47	50.00	28,800	27,360	17.7	22.2	39.9	81,134	8,719	1,520
21.53	28.47	50.00	28,800	24,320	17.7	19.7	37.4	81,134	8,719	3,040
21.53	28.47	50.00	28,800	21,280	17.7	17.3	34.9	81,134	8,719	4,560
21.53	28.47	50.00	28,800	18,240	17.7	14.8	32.5	81,134	8,719	6,080
c) Targeting all ultra-poor with SCTP + all moderate poor with FISP with increased farmer contribution (MDP2)										
20.34	56.32	76.66	28,800	27,360	16.7	43.9	60.6	160,501	8,237	1,520
20.34	56.32	76.66	28,800	24,320	16.7	39.0	55.7	160,501	8,237	3,040
20.34	56.32	76.66	28,800	21,280	16.7	34.2	50.8	160,501	8,237	4,560
20.34	56.32	76.66	28,800	18,240	16.7	29.3	46.0	160,501	8,237	6,080
20.34	56.32	76.66	28,800	15,200	16.7	24.4	41.1	160,501	8,237	7,600
20.34	56.32	76.66	28,800	12,160	16.7	19.5	36.2	160,501	8,237	9,120

Note: Scenario (a) and (b) assumes that only half of the rural population is targeted in total for SCTP and FISIP while scenario (c) assumes that all the poor (ultra-poor and poor are targeted in total for SCTP and FISP.

Source: Computed by authors

Scenario (b) also assumes that 21.5% are targeted for SCTP and 28.5% of rural households for FISP and simulate the cost implications of adjusting the farmer contribution from 90% of subsidy to 60% of subsidy. The proxy means test is based on MDP1. This reduces the cost of the two programmes from MK41.5 billion with MK500 farmer contribution to MK32.5 billion with MK6,080 per bag of farmer contribution while maintaining 81,134 metric tons of subsidized fertilizers. A subsidy of 70% (as was the case when the FISP was starting in 2005/06) combined with SCTP to the ultra-poor would also reduce the total cost of the two programmes to MK34.9 billion, representing a 22.5% decline from the base case.

Scenario (c) uses MDP2 which incorporates labour constraints at the household and simulates cases of targeting all ultra-poor with SCTP and all moderate poor with FISP under different subsidy levels. This implies coverage of 76.6% of rural households. The subsidy per bag falls from 90% to 40%, hence farmer contributions from MK1,520 per bag to MK9,120 per bag. This scenario entails subsidizing 160,501 metric tons of fertilizers. If the subsidy is 70% (MK4,560 per bag), targeting all ultra-poor with SCTP and all moderate poor with FISP will jointly cost MK50.8 billion. This would represent an increase of 21.4% in transfer benefits from the base case while benefiting more people.

Household surveys show high willingness to pay higher redemption price for fertilizer coupons, presenting opportunities for progressive adjustment in the subsidy levels. Using data for 2012/13 and 2009/10 surveys, there is overall increase in willingness by farmers to contribute more towards the fertilizer redemption price. Table 7 shows that about 87% of the households in 2012/13 were willing to redeem at least 2 bags of fertilizer at MK1,000 compared to 76% in 2009/10 season. The proportion willing to redeem at least 2 bags falls with increase in redemption price to 44% at MK5,000 in 2012/13 season.

Table 7 Survey on Willingness to Pay (%)

Price (MK)	All Households 2009/10					All Households 2012/13				
	Zero	One Bag	Two Bags	More than 2 bags	At least 2 bags	Zero	One Bag	Two Bags	More than 2 bags	At least 2 bags
1,000	6.0	18.0	22.0	54.0	76.0	4.0	8.6	22.2	65.2	87.4
3,000	29.5	25.5	17.7	27.3	45.0	16.0	21.1	21.2	41.7	62.9
5,000	50.4	22.4	12.2	15	27.2	34.1	21.8	16.3	27.8	44.1
7,000	67.8	16.8	7.0	8.6	15.6	47.9	20.2	14.1	17.8	32.0
9,000	73.2	14.8	5.7	6.4	12.0	55.5	20.8	12.6	11.1	23.7

Source: Computed by authors based on FISP Surveys

5.4 Institutional Arrangements for Harmonization

The harmonisation also implies that the national coordination for social support in terms of policy guidance and targeting criteria has to be under Ministry of Finance, Economic Planning and Development as articulated in the National Social Support Policy. This will allow greater coordination of social support interventions and target different groups of households with different instruments. It will also avoid multiple access to social support programmes by the same households. In the SCTP this coordination is already taking place at district level. The national level coordination can facilitate the development of social support programmes that contribute to the overall goal of growth and development in a holistic and sustainable manner by introducing complementary services that can facilitate graduation of some households from various programmes. While the SCTP will continue focusing on addressing the problem of food insecurity from affordability of food purchases, the FISP need to orient its objective to addressing the problem of food security through land and labour productivity improvements in smallholder food production (Chirwa, 2014). The implementation of the SCTP and FISP will continue to be the responsibility of specialized ministries. Harmonization of social support programmes can enhance the efficient use of scarce resources.

The harmonizing of the targeting criteria for SCTP and FISP will require data on household socio-economic characteristics in order to compute multidimensional poverty indices. The implementing ministries of SCTP and FISP already collect massive targeting data separately. The targeting data in SCTP is overseen by the District Social Support Committee which is a sub-committee of the District Executive Committee of the District Council. This ensures the involvement of multiple stakeholders in the implementation of the SCTP. The representation in the District Social Support Committee includes departments of Social Welfare, Community Development, Health, Education, Information, Agriculture and Finance, District Aids Coordinating office and two civil society organizations and is headed by the Director of Planning and Development. In SCTP targeting is done once in every 5 years and data collected include household composition and a few yes/no questions on housing conditions, food situation and asset ownership.

Similarly, the MoAI collects data on farm families in each district with only gender of household head as the socio-economic indicator. In contrast to SCTP, the farm families' data is overseen by the District Agriculture Development Office and it is not clear whether there is multi-sectoral district level coordination. The farm families registers are updated every year, which implies that targeting is done every year. Since the MoAI is

part of the District Social Support Committee, and the SCTP data form is more comprehensive in terms of data to enable ranking of households' vulnerability for different types of social support, there are merits for harmonisation of targeting information for SCTP and FISP, and indeed with other social support programmes such as public works.

There are several advantages for harmonisation and multi-sectoral data collection. First, the SCTP data details on the household form capture variables that can inform vulnerability of households but will requires little improvement to make sure that the food security questions are insensitive to seasonality. Secondly, the multi-sectoral approach to data collection implies that one database can serve different purposes and can be used by different stakeholders to target their programmes. This can form a basis for a more structured and informed way of supporting different areas with development programmes. Thirdly, there are potential cost savings and reduction in biases, such as minimization of ghost villages, if the data collection is multi-sectoral in nature. Fourthly, the harmonisation will ensure that data for each District Council in Malawi will build a national social register for social support that can be updated periodically, say every 5 years.

Harmonisation can be facilitated by the implementation of the National Identification System that can serve many functions in Malawi. The Malawi Government is planning to experiment targeting using biometrics in FISP, but a case can be made that it will be better national investment if the resources are used to invest in a national identification system that can cater for other sectors in the economy.

Such harmonisation can also help to design a more structured way of providing benefits to same households for a number of years, for example every 5 years, and re-targeting after five years. This will ensure that households that have potentially graduated are excluded from social support. There is therefore need to have a coordinated programme that assists the smallholder farmers to diversify within agriculture or outside agriculture through sustainable approaches to cooperatives or farmer organisations. Asset accumulation is critical to achieve the aspirations of graduating out of social support programmes.

6. Conclusions

This paper set out to explore the harmonization of the targeting system for SCTP and FISP that currently tend to focus on the same households. Impact evaluation studies show that both SCTP and FISP deliver economy-wide benefits in addition to the direct benefits, and such economy-wide impacts can drive economic growth that is pro-poor. Some studies show that the SCTP have higher overall income multipliers than FISP. Both programmes contribute to food security which is one of the objectives stated in the programmes. Nonetheless, targeting outcomes in these programmes have been less than satisfactory, particularly in the FISP. Although SCTP uses proxy means test for targeting using two indicators, there is still some value judgement in defining poverty. In the FISP it is not clear on how resource poor smallholder farmers are identified in the communities. In districts with SCTP, there is evidence that a high proportion of households are also targeted for FISP.

The paper argues for harmonisation of the targeting of SCTP and FISP within the context of the National Social Support Policy in which these programmes target different poverty groups. The FISP should be targeting households that are moderately poor while the SCTP should continue focusing on the ultra-poor or the poor of the poorest. The gains from harmonisation and targeting different households may be greater than delivering these two transfers to the same households. In fact the cash transfer can broaden markets for maize produced through FISP among the moderate poor who produce more than what they need. It has been shown that at current benefit levels in SCTP and FISP it is possible with the same budget to target 50% of rural households by targeting all ultra-poor with SCTP (22%) and the rest (28%) with FISP. Similarly, given the increasing willingness to pay among farmers, it is possible to target all ultra-poor with FISP and all moderate poor (76% of rural households) while subsidizing 160,000 metric tons of fertilizers such that at 50% farmer contribution the total benefit transfers for the two programmes would be equivalent to the current level of benefit transfers in the FISP.

As the Malawi Government is considering scaling-up of SCTP, it may be important to consider implementing harmonized social support to rural households. The institutional framework for such harmonisation already exist at the district level in which local government structures are already being used in SCTP but not fully in the implementation of the FISP. Such harmonisation will also facilitate the creation of a social register for social support programmes whose use can be greatly enhanced by the establishment of a national identification system.

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