Towards greater poverty reduction in Zambia

Simulating potential Cash Plus reforms using MicroZAMOD

Katrin Gasior,[1] David McLennan,[1] Mbewe Kalikeka,[2] Miselo Bwalya,[2] and Maria Jouste[3]

November 2021

United Nations University World Institute for Development Economics Research

wider.unu.edu

Abstract: A large share of the population in Zambia is living below the national poverty line. To reduce poverty, in 2019, the government initiated the Cash Plus reform, which aims to build on the existing Social Cash Transfer as a floor benefit with additional benefits to take account of the multidimensionality of poverty. We use the tax–benefit microsimulation model MicroZAMOD to analyse the coverage and poverty impact of the current social protection system and to assess the extent to which potential Cash Plus reform scenarios can improve the status quo. The results highlight the need for reform to achieve greater poverty reduction. Overall, coverage of the extremely poor is high but coverage by the Social Cash Transfer as the envisaged floor benefit in the Cash Plus reform is low, and the benefit amount is often too little as it does not take account of household composition. In theory, the Cash Plus reform offers the potential to achieve a greater poverty impact through multiple support. However, the simulations of the potential reform scenarios show that this requires more than the proposed Cash Plus design.

Key words: poverty, Zambia, social protection, tax–benefit system

JEL classification: C15, H55, I3, N37

---

[1] Southern African Social Policy Research Insights (SASPRI), Hove, UK, corresponding author: Katrin.Gasior@saspri.org; [2] Zambia Institute for Policy Analysis and Research (ZIPAR), Lusaka, Zambia; [3] UNU-WIDER, Helsinki, Finland.

Information and requests: publications@wider.unu.edu

Typescript prepared by Lesley Ellen.

1   Introduction

1.1   Background

Over the past decade, Zambia has experienced a marginal decline in poverty levels. However, the poverty rates remain high due to the limited participation of working-age people in growth sectors which have the potential for job creation (Kampamba et al. 2019). In addition, developmental challenges such as the lack of diversification of the economy, dampened economic growth, and the negative impacts of climate change have had a negative bearing on poverty. According to the Living Conditions Monitoring Survey (LCMS) of 2015, 54.4 per cent of the population live below the national poverty line (76.6 per cent in rural areas, 23.4 per cent in urban areas) and 40.8 per cent of the population are extremely poor (60.8 per cent in rural areas, 12.8 per cent in urban areas).[1] The survey further showed that income inequality was high, measured by the Gini coefficient to be 0.69 (CSO 2016).

In a bid to strengthen the implementation of social protection programmes, the government began to introduce reforms through the National Social Protection Policy (NSPP 2015–19). This was to be achieved through the promotion and provision of sustainable mitigation of deprivation and extreme vulnerability. Further, Zambia's Seventh National Development Plan (7NDP 2017–21) reaffirms the inherent potential of social protection in reducing poverty and vulnerability and emphasizes a commitment to the extension of social protection, including the expansion of Social Cash Transfer (SCT) coverage. In addition, the 7NDP aimed to expand and integrate social protection programmes to achieve a 20 per cent reduction in national poverty before 2021, but this target was not achieved. An integrated approach to social protection as espoused in the Integrated Framework of Basic Social Protection Programmes 2018 (IFBSPP) will be used to increase effectiveness and ensure that a comprehensive and complementary package of social protection programmes is delivered.

Zambia has several social protection programmes targeted at ultra-poor and vulnerable individuals. The SCT Programme is Zambia's flagship social protection programme, reaching over 700,000 households as of 2020 (MOF 2020). Evaluations of the SCT programme reveal the programme's positive impact on poverty reduction and decreasing inequality (AIR 2016). These evaluations report improved food security, a reduction in the number of households living below the poverty line, dietary diversity, and increased school attendance among children of school-going age.

Despite evidence of the positive impact of SCT on certain indicators, other research suggests that provision of cash transfers alone is insufficient to achieve longer-term, sustainable impacts on poverty (The Tanzania Cash Plus Evaluation Team 2018). This has led to the exploration of an approach referred to as Cash Plus, whereby households receive other social protection programmes in addition to a cash transfer.

1.2   Cash Plus

As stated earlier, cash transfers alone are not always sufficient to reduce the social and economic hardship that vulnerable populations face as the sizes of transfers are small with the main objective

---

[1] The 2014 NSPP defines the national poverty line as the inability of an individual, family, or community to attain a minimum standard of living. This is evidenced by inadequate access to basic needs and services such as food, clothing, shelter, basic health care facilities, and education. It further defines individuals or households that are extremely poor as those that are incapable of meeting basic needs and have little immediate prospect of doing so.

of smoothing consumption. Poverty is the result of multiple factors, and multiple approaches are required to effectively tackle it. Hence, Cash Plus is a social protection approach which provides regular cash transfers 'plus' additional complementary benefits to cash transfer beneficiaries (i.e. complementary support) which seek to amplify the effects of cash.

The vision is that cash transfers will provide a basic floor on top of which other benefits will be provided. The types of complementary support can consist of components that are provided as integral elements of the cash transfer intervention, such as the provision of additional benefits or in-kind transfers, supportive services such as information or behaviour change communication, or psycho-social support, nutrition education and promotion, and school feeding programmes, as well as components that are independent of the cash transfer but offer alternative services or facilitate linkages to services.

Cash Plus is based on the Single Window Services (SWSs) approach, which provides a 'one stop shop' for the decentralized delivery of social protection programmes and employment services. The SWSs provide for linkages between social protection programmes and make social protection services more accessible and easier to navigate for the beneficiary (e.g. instead of beneficiaries going to multiple offices for information, assessment, and referral, the beneficiaries access all these services from one office).

The SWSs aim to locate social protection and employment services close to the beneficiaries and empower local community and sub-national structures with an integrated service delivery model. They further increase access to information and traceability through efficient, transparent management information systems. They also facilitate better coordination between local-level service delivery and national-level policy development, planning, monitoring, and evaluation.

The IFBSPP—approved and launched by the government on 5 February 2019—provides a framework by which Cash Plus can be effectively implemented in Zambia. It aims to provide an integrated approach to delivering social protection interventions while strengthening the movement from silo interventions to harmonized interventions on planning, budgeting, targeting, and delivery of social protection programmes. The IFBSPP makes recommendations for which protection programmes (i.e. the floor) can be layered with different promotion programmes (i.e. the ladder). The layering of these programmes enhances poverty reduction and graduation pathways for extremely poor Zambians.

1.3   Objectives of the analysis

In view of the above, the Cash Plus analysis is based on two sections. First, an empirical analysis of the current social protection system assesses the coverage and poverty impact of social support in general and of specific programmes. It furthermore seeks to identify gaps in the coverage and focuses on specific population sub-groups. Second, an empirical analysis of a potential Cash Plus policy reform is conducted based on three reform scenarios. In the first scenario, we simulate how the coverage and poverty impact would change if the likelihood of households receiving more than one benefit is increased. Currently, administrators often refrain from giving more than one programme to the same household and instead choose to support a larger number of households. This paradigm is sought to be changed through the Cash Plus reform. In the second scenario, we align the eligibility rules of other programmes with the SCT rules to show the impact of SCT as a floor benefit plus complementary support. In the third scenario, we increase the number of beneficiaries to the budgeted number of programmes to test whether the increased coverage leads to greater poverty impact.

2   Methodology and data

The analysis uses MicroZAMOD—the tax and benefit microsimulation model for Zambia (Nakamba-Kabaso et al. 2020). MicroZAMOD is underpinned by the 2015 LCMS, which covers 12,251 households (CSO 2016).

The analysis focuses on the 2020 policy system but excludes measures implemented during the Corona pandemic such as the COVID emergency cash transfer. This allows us to focus on the latest tax–benefit rules (as of 30 June 2020) while abstracting from the additional pressure caused by the health, social, and labour market consequences of the virus. Thus, the analysis shows the effectiveness of the social protection system in 'normal' times without the extenuating circumstances of a worldwide pandemic.

The analysis furthermore focuses on the first-order effect of the tax–benefit system, assessing how consumption levels change with additional financial support without taking mid- and long-term behavioural changes caused by this support into account.

2.1   Modelled social protection programmes and scenarios

The analysis focuses on seven social protection programmes, which are summarized in

Table 1 and explained in more detail below.[2]

Table 1: Overview of main characteristics of programmes

Programme	Main target group	Amount (per year)	Geographic coverage
Social Cash Transfer (SCT)	Vulnerable households in urban and rural areas	1,080	National
Electronic Farmer Input Support Programme (E-FISP)	Small-scale farming households (after FSP)	1,700	National*
Food Security Pack (FSP)	Vulnerable but viable small-scale farming households	5,100	National
Supporting Women's Livelihood (SWL)	Women living in SCT households	2,900	64 districts
Keeping Girls in School (KGS)	Girls of second grade school age in SCT households	School fee	29 districts
Home-grown School Feeding (HGSF)	Public and community school children	264	25 districts
Community Skills Development and Training (CST)	Vulnerable youth	3,000	11 districts

Note: * we assume E-FISP is a national programme because we are not able to confidently simulate the direct support FISP programme.

Source: authors' own representation.

Social Cash Transfer (SCT)

The SCT started in 2003 as a response by the government to the persistently high levels of poverty. The SCT was intended to target the extremely poor, who were estimated at 40.8 per cent in 2015, the equivalent of nearly 6 million people in that year. Since its inception, the SCT has expanded from 3,500 beneficiary households, when it was piloted in Kalomo District in 2003, to 700,000

---

[2] Assumptions and treatment in Cash Plus are summarized in Table A1 in the Appendix.

nationwide as of 2020 (MOF 2020). The SCT uses the harmonized approach, a criterion which includes disability, gender, elderly-headed households, destitution, incapacitation, and presence of children under the age of five to identify beneficiaries. Importantly, the SCT is given per household independent of household size and even if one household has several people who meet the criteria for inclusion (ZIPAR 2020).

Supporting Women's Livelihoods (SWL)

The SWL is a programme under the Girls Education and Women Empowerment and Livelihoods (GEWEL) project which builds on existing government structures to support women's livelihood productivity and economic empowerment. Under this project, the government provides support in the form of a comprehensive package of activities for beneficiaries, including context-specific training in business and life skills, productivity grants, mentoring and peer support, and facilitation of saving groups.

Home-grown School Feeding Programme (HGSF)

This is a district-based programme administered by Zambia's Ministry of General Education covering 22 districts selected using a food security measure and education test scores of a particular district. All public schools in the eligible district provide learners with daily free school meals which are prepared using maize meal, pulses, and oil. The main objective of this programme is to improve attendance, especially for learners from vulnerable and food-insecure households. The HGSF took over from an earlier supported feeding programme in which food commodities for school feeding were procured from outside the country. The HGSF is required to use only locally produced food—hence, the name of the programme (GRZ 2019).

Food Security Pack (FSP)

The FSP is a social safety net programme targeting vulnerable and small-scale farming households. The aim of the programme is to ensure the food security of vulnerable but viable farmers through an input grant. The programme is administered by the Ministry for Community Development and Social Services (MCDSS) as well as by the Ministry of Fisheries and Livestock in respect of the alternative livelihood component and is available in all districts. It was implemented in November 2000 and designed to target about 20 per cent of those living in extreme poverty. The current (2020) case load is 36,300 households.

Electronic Farmer Input Support Programme (E-FISP)

The E-FISP is administered by the Ministry of Agriculture and Livestock and is intended to benefit smallholder farmers in order to promote household and national food security by providing access to agricultural inputs. It is paid to farmers in the form of an e-voucher. The Farmer Input Support Programme (FISP) consists of the E-FISP and direct distribution channels where the e-voucher is too difficult to be organized. Our analysis assumes that E-FISP was rolled out nationwide and it simulated E-FISP rather than the direct distribution support in all districts. E-FISP and FISP are used synonymously in this paper.

Keeping Girls in School (KGS)

The KGS programme is a component under the GEWEL project which aims to increase access to secondary education for disadvantaged adolescent girls between the ages of 14 and 21 in extremely poor households in 27 selected districts. All beneficiaries under the KGS are drawn from SCT households. There are currently 13,514 beneficiaries of the KGS programme, through

which the government has paid schools fees for girls, and this is being administered by the Ministry of General Education (GRZ 2019).

Community Skills Development and Training (CST)

The CST programme provides an opportunity for beneficiaries to acquire the certified trade test level 3. This enables them to acquire trade-tested skills for them to be engaged in an income-generating activity such as bricklaying, tailoring, and others. The programme is administered by the MCDSS and the training is provided by the 11 skills training centres of the ministry (provincial centres). It is a six-month programme that is currently implemented in the Mansa, Mungwi, Kabwe, Masaiti, Mongu (Namushekende), Lundazi, Katete, Solwezi, Monze, Gwembe, and Livingstone districts. The programme benefitted over 900 individuals in 2020. The overall target is 1,000 beneficiaries per year (GRZ 2019).

The simulation of the programmes includes the cash or quasi-cash component only as other forms of support (such as training and capacity building) cannot be considered in the model. Thus, other envisaged impacts of the programmes, such as improving education, health, and food, are not part of this analysis

The simulations were guided by official documentation and supplemental advice from experts within the MCDSS, other government ministries, and UN organizations. Detailed descriptions of the programmes and MicroZAMOD-specific assumptions are documented in the Appendix. The results on the total impact of programmes also include pensions. The information on pensions is not simulated but is included as provided in the LCMS data.

The results are presented for the baseline, i.e. the current social protection system, and three Cash Plus reform scenarios (Scenarios 1–3).

Table 2 provides detailed information about the changes in each scenario.

The starting point of the analysis is the baseline scenario which is the current tax–benefit system before Cash Plus reforms are considered.

We adjust (downscale) the simulation of programmes to the number of recipients from official statistics in order to not over-simulate the policy impact. Many programmes are not available to everyone who fulfils the eligibility criteria, but they include a community decision element to distribute the limited resources to those most in need of support. The model randomly assigns the programmes to households with equivalized consumption levels below the moderate poverty risk until it reaches the official number of recipients to simulate the community assessment. This assumes that the community decision process leads to a reliable selection of extremely poor households, allowing for some level of error by also including moderately poor individuals.

In addition, the baseline restricts the possibility of households receiving SCT, FSP, and CST at the same time. Even though receiving more than one programme is officially allowed, administrators often refrain from providing multiple support (often referred to as double-dipping in policy documents) to the same individuals/households and instead choose to target a larger number of individuals and households. Still, some form of multiple support already exists in the current system as SWL and KGS specifically target SCT recipients, and this is also simulated as such in the baseline.

Table 2: Overview of baseline and reform scenarios

Programme	Baseline: current system	Cash Plus reform scenarios		
		Scenario 1: multiple support	Scenario 2: SCT eligibility	Scenario 3: Upscaling number of recipients
	- Restricted multiple support - Adjusts to official number of recipients	- Improved multiple support - Keeps number of recipients constant	- Improved multiple support - Keeps number of recipients constant - Applies SCT eligibility criteria to other benefits	- Improved multiple support - Adjusts to budgeted number of recipients - Applies SCT eligibility criteria to other benefits
SCT	Not together with FSP*	Possible to receive together with FSP		Adjusts to budgeted number of recipients
SWL	Targets SCT households			No adjustment as already reached
KGS	Targets SCT households			Adjusts to budgeted number of recipients
CST	Targets SCT and other poor households, not together with SCT and FSP*	Possible to receive together with SCT and FSP	Eligibility aligned to SCT households only	No adjustment as already reached
FSP	Targets SCT and other poor households, not together with SCT*	Possible to receive together with SCT	Eligibility aligned to SCT households only	Adjusts to budgeted number of recipients
FISP	Not linked to SCT			
HGSF	Not linked to SCT			

Note: * although it is technically possible to receive SCT, CST, and FSP at the same time, this is avoided in practice on the ground. See more information on the identification strategy in the text.

Source: authors' own representation.

The identification strategy of programme recipients is modelled as follows. For each programme, all eligible individuals/households based on official eligibility criteria are identified. Among the identified FSP recipients, only some are randomly selected until the official number of recipients is reached. The same procedure is carried out for SWL recipients but excluding the selected FSP recipients, and it is repeated for CST recipients but excluding the selected FSP and SWL recipients. Those not receiving FSP and CST but who are eligible for SCT receive the SCT (including those receiving SWL) up to the official number of recipients. Among those receiving SCT, households eligible for KGS are selected, again up to the official number of recipients.

This identification strategy controls for over-simulation and restricts multiple support at the same time. Table 3 shows the number of recipients by official statistics, budgeted number, and the simulated number of recipients before and after the adjustments (restricted multiple support and downscaling).

Table 3: Overview of official vs. simulated number of recipients in 2020

Programme	Official statistics	Official budgeted number	Simulated before adjustment	Simulated after adjustment (baseline)
Social Cash Transfer (SCT)	632,377	700,000	677,805	629,192
Supporting Women's Livelihood (SWL)	39,829	129,400 by 2024*	80,713	39,842
Home-grown School Feeding (HGSF)	not available	not available	617,594	617,594
Keeping Girls in School (KGS)	13,514	2,000/district**	64,754	13,761
Community Skills Development and Training (CST)	900	1,000	98,112	547
Farmer Input Support (FISP)	1,024,434	1,000,000	1,005,021	1,005,021
Food Security Pack (FSP)	48,600	120,000	114,409	48,354

Note: * reached 111,650 women by 2020; we assume that the budgeted number has been reached. ** we simulate the programme in 22 districts and assume 44,000 recipients as the budgeted target. Adjustment refers to both downscaling of number of recipients and restricting multiple support. See Table A2 in the Appendix for the number of simulated recipients by reform scenario.

Source: authors' own calculation using MicroZAMOD for simulated results. Official and budgeted numbers provided by the MCDSS.

Restrictions on multiple support are lifted from Scenario 1 onwards, as providing multiple benefits is an inherent characteristic of the Cash Plus reform. In addition, Scenario 2 aligns the eligibility conditions of FSP and CST with the eligibility conditions of the SCT. In both scenarios, the number of recipients within each programme is the same as in the current system. This is changed in Scenario 3 where the number of recipients is increased to the budgeted number of recipients for SCT, KGS, and FSP.

2.2 Disaggregation of results

The analysis presents results for the overall population as well as selected population sub-groups. The selection is based on groups discussed in Kampamba et al. (2019), groups defined to be eligible for the SCT, and recommendations on vulnerable groups by the Cash Plus working group. Table 4 presents the selected groups and their underlying definitions applied in this study.

Table 4: Overview of population sub-groups and their population share

Based on individual characteristics		Share
Aged 0–17	Children aged 0 to 17	50.8
Aged 18–24	Individuals aged 18 to 24	14.3
Aged 25–64	Individuals aged 25 to 64	32.0
Aged 65+	Individuals aged 65 and older	2.9
Person with disability	Individuals who are permanently disabled and/or unfit to work	2.4
Rural	Individuals living in rural areas as defined in LCMS	58.2
Urban	Individuals living in urban areas as defined in LCMS	41.8
Based on household characteristics		Share
Female-headed	Individuals living in a female-headed household as defined in LCMS	19.6
Male-headed	Individuals living in a male-headed household as defined in LCMS	80.4
High dependency ratio	Individuals living in households with more than 50 per cent of the household members being younger than 15 or aged 65 plus	37.7

Source: authors' own representation based on LCMS 2015 (CSO 2016) and own calculation using MicroZAMOD.

We furthermore provide analysis by level of support. For this, districts are grouped based on the number of programmes available within the district. Figure 1 provides a map showing the geographical coverage of each group. **Low support districts** are classified as districts that only provide nationwide programmes (SCT, FSP, and FISP) and no other additional programme (SWL, KGS, HGSF, and CST). **Medium support districts** comprise one of the additional programmes (SWL, KGS, HGSF, or CST). **High support districts** include districts that have at least two additional programmes (SWL, KGS, HGSF, or CST).

Thus, grouping districts by level of support offers more reliable results while allowing us to focus on districts where more programmes are piloted or rolled out.

Figure 1: Groups of districts by level of support
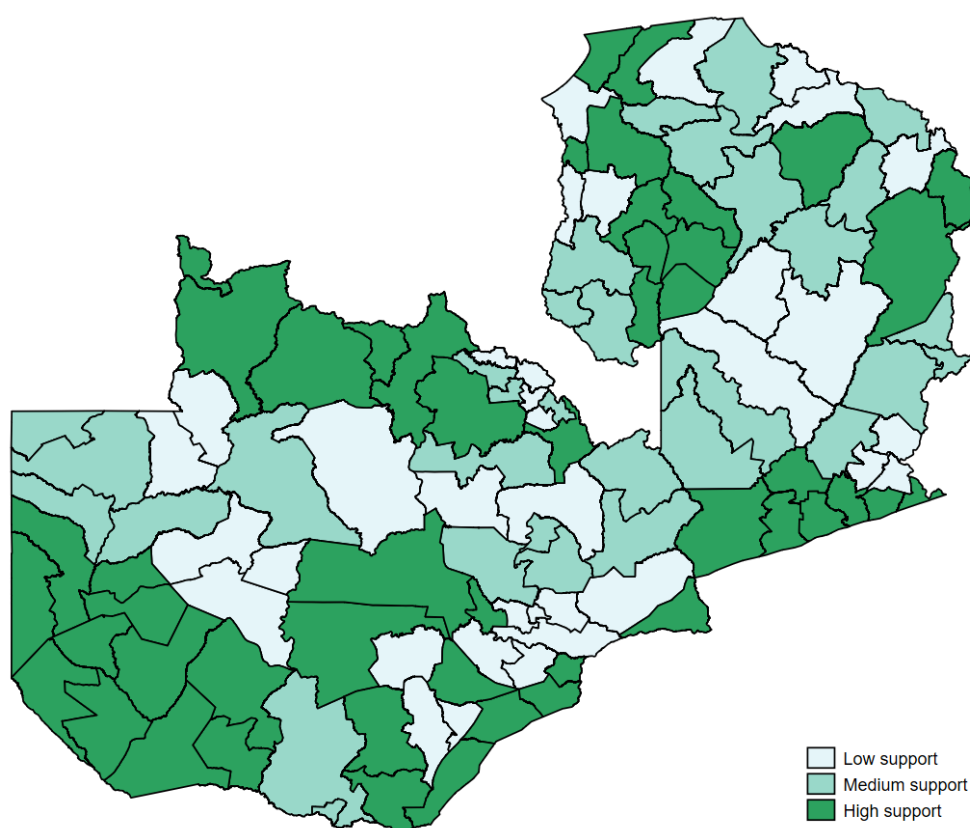
Source: authors' own representation.

2.3 Social protection gap measures

The analysis of gaps in social protection for the overall population as well as for each of the sub-population groups is based on two sets of indicators (see Table 5).

The first set focuses on targeting effectiveness, measured as the coverage rate. It provides an overview of the extent to which poor people are reached by the programmes in focus, i.e. the proportion of poor who receive the benefit. The underlying assumption is that the limited financial means should be spent on those most in need.

However, effective targeting does not provide any information on the extent to which programmes improve the living situation of the poor. The coverage rate shows whether poor households receive social support but does not assess whether the available support is large enough to lift households out of poverty or, more generally, large enough to improve their living situation.

Thus, the second set of indicators focuses on the poverty and inequality impact of programmes. This part of the analysis focuses on three indicators: the change in poverty headcount, the change in the poverty gap (i.e. the minimum cost of eliminating poverty relative to the poverty line), and the Gini. The impact is measured by subtracting the pre-benefit indicator from the post-benefit indicator. The change is expressed in percentage points for the two poverty measures and absolute change for the Gini. While changes in poverty headcount show the extent to which individuals move out of poverty, changes in the poverty gap measure the extent to which individuals move closer to the poverty line. The Gini is the most common inequality measure and ranges from 0 (total equality) to 100 (maximum inequality). It is only presented for selected results as the focus of the analysis is on poverty reduction.

Table 5: Overview of social protection gap measures

Category	Measure	Definition	Formula
Targeting effectiveness	Coverage rate	Proportion of extreme poor who receive the benefit	$\dfrac{\text{N poor before benefit, receiving benefit}}{\text{N poor before benefit}}$
Poverty and inequality impact	Reduction in poverty headcount	Change in the share of population living below the extreme poverty line (in percentage points)	Indicator before benefit −Indicator after benefit
	Reduction in poverty gap	Change in the extent to which individuals fall below the poverty line as a proportion of the poverty line (in percentage points)	
	Reduction in Gini	Change in income inequality of the total population	

Source: authors' own representation based on Avram (2016), Brown et al. (2018), Ravallion (2009) and Tasseva (2016).

The analysis is based on the extreme poverty definition as most programmes are targeted at the extremely poor. In the 2015 LCMS report (CSO 2016), poverty levels are assessed using two poverty lines: a lower-bound poverty line (or extreme poverty as defined by CSO) and an upper-bound poverty line (or total poverty as defined by CSO, which includes those in moderate poverty as well as those in extreme poverty). Both measures are based on consumption expenditure and adjusted for the household composition using an adult equivalent approach. The lower-bound poverty line in 2015 was ZMW 152 per adult equivalent per month, whereas the upper-bound poverty line in 2015 was ZMW 214 per adult equivalent per month. The CSO has not published poverty lines for more recent years so, for the purpose of this analysis, the 2015 poverty lines have been uprated in line with the overall Consumer Price Index. All presented results apply the adult equivalent scale and are based on household consumption levels.

3   The baseline: current system

3.1   Poverty and inequality before benefits

The first set of results presents the poverty and inequality situation in Zambia before benefits are considered. It is a hypothetical situation but provides a first understanding of the need for social protection in Zambia and is the starting point for the impact analysis.

The baseline system shows that if there were no benefits, 44 per cent of the population would be living in extreme poverty. The poverty gap would be 21 per cent and the Gini would be 57 in the total population (see Table 6). Poverty and inequality levels vary by groups of districts. Districts

which receive very little support through additional benefits are those which have a comparably low poverty headcount and gap to start with. While 29 per cent of the population living in low support districts face extreme poverty, it is about 60 per cent in the high support districts. Similarly, the poverty gap is 14 per cent in low support districts but 29 per cent in high support districts. This suggests that additional benefits—often not rolled out nationwide—are mostly targeted at districts with higher support needs.

At the same time, inequality levels (in terms of Gini) are comparable across regions. The lower inequality levels within each of the groups suggests higher inequality between the three different areas than within the population living in each of the three district groups.

Table 6: Poverty and inequality before benefits by support level in district

|	Low support districts	Medium support districts	High support districts	Total
Poverty headcount	29.4	51.0	59.9	43.9
Poverty gap	13.5	24.3	29.1	20.9
Gini	54.9	54.6	53.1	56.6

Source: authors' own calculation using MicroZAMOD.

Poverty levels also vary across population sub-groups (see Figure 2):

- Younger and older age cohorts are faced with a substantially higher poverty headcount than the working-age population. While close to 50 per cent or more of the youngest and oldest live in extreme poverty, the poverty headcount is below 40 per cent for the working-age cohort;
- Individuals who are permanently disabled and/or unfit to work have a very high risk of living in extreme poverty, at close to 60 per cent;
- Poverty levels also vary between rural and urban areas of Zambia. The poverty headcount is above 60 per cent in rural areas compared to 15 per cent in urban areas;
- Although the poverty headcount differs between female- and male-headed households, the difference is smaller than between other population sub-groups, ranging between 43 for women and 46 per cent for men;
- Differences in poverty levels by age are again highlighted in the results for households with higher dependency ratios. Their poverty headcount is 58 per cent.

The level of the poverty gap correlates with the poverty headcount across population sub-groups.

Figure 2: Poverty levels before benefits by population sub-groups
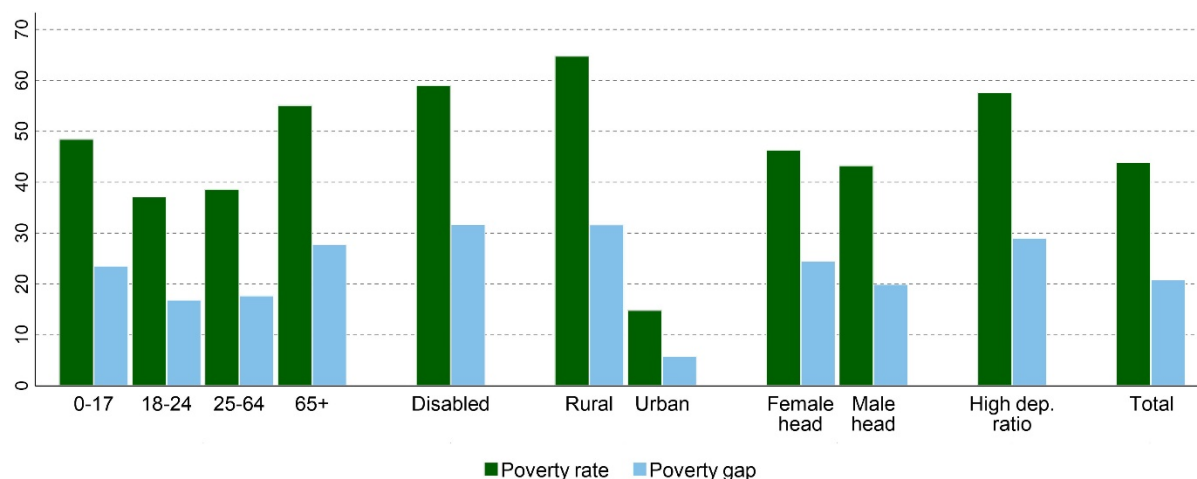
Source: authors' own calculation using MicroZAMOD.

Overall, this first set of results highlights that the aim of reducing poverty by 20 per cent is quite ambitious but also critical for almost all population sub-groups. Except for individuals living in urban areas, a large share of the population is living in extreme poverty. It also highlights that some of the eligibility criteria, such as giving SCT to female-headed households but not to male-headed households, are sometimes arbitrary as the difference in pre-benefit poverty levels is comparably small between the two groups, while it seems to be more important to consider not just older and disabled household members but also younger children independent of the gender of the household head (see poverty levels of high dependency ratio households).

3.2   Characteristics of benefit recipients

This section analyses the benefit receipt of the total population, not focusing on the poor specifically. It shows the extent to which benefits are available and highlights the type of benefits that are received by each sub-population group. It provides a first assessment of the support received, while the extent to which this support reaches the poor and reduces poverty is analysed in the next section. Benefit receipt is measured as individuals living in a household in receipt of a benefit and is not based on individuals receiving the benefit in their own right.

The analysis revealed that 55 per cent of the population receive at least one benefit, and the most widespread benefit is FISP, at 37 per cent, followed by the SCT, at 21 per cent. Apart from the HGSF, at 15 per cent, the share receiving other benefits is substantially smaller (ranging between 1 and 2 per cent of the population).

The level of support and the importance of specific benefits varies across population sub-groups:

- The old-age population is far more likely to receive benefits (87 per cent) than younger age cohorts (between 50 and 59 per cent). This is particularly because the SCT targets older individuals;
- Like the elderly population, individuals with a disability are also very likely to receive at least one type of support, particularly the SCT;
- The extent of support varies substantially between urban and rural areas. Seventy-eight per cent of individuals living in rural areas receive a benefit, compared to around one-quarter in urban regions. While agricultural benefits are, by definition, more important in rural areas, the same is also true for the HGSF and the SCT;

- Focusing on female- versus male-headed households, we find that female-headed households are more likely to receive a benefit than male-headed households due to the targeting of the SCT and female-specific programmes like the SWL. Male-headed households are more likely to receive support through the FISP;
- The share of the sub-population group receiving at least one benefit mostly correlates with the pre-benefit poverty level, but two groups stand out as receiving more support than others: individuals aged 65 plus and individuals with a disability. Both sub-groups are individually targeted by the SCT, while other age groups only receive the benefit if they are living with an elderly/disabled household member or in a female-headed household with at least four children.

Table 7: Benefit receipt by population sub-group

	SCT	SWL	HGSF	KGS	CST	FISP	FSP	All benefits
Aged 0–17	21.8	1.8	17.2	0.5	0.0	39.5	1.1	58.6
Aged 18–24	19.8	1.3	9.9	0.3	0.0	33	1.8	50.2
Aged 25–64	16.7	1.5	12.6	0.4	0.0	34.2	1.2	49.9
Aged 65+	75.8	1.2	9.7	1.1	0.0	42.4	1.0	86.6
Person with disability	76.5	6.8	18.3	1.8	0.1	41.9	0.2	85.1
Rural	27.7	2.4	21.9	0.7	0.0	56.5	1.8	77.5
Urban	12.7	0.6	4.1	0.2	0.0	9.8	0.4	24.8
Female-headed	56.3	3.3	13.9	0.9	0.0	26.3	1.5	69.3
Male-headed	13.0	1.2	14.6	0.4	0.0	39.5	1.1	52.1
High dependency ratio	26.7	2.4	20.8	0.4	0.0	45.1	1.2	66.9
Total	21.4	1.6	14.5	0.5	0.0	36.9	1.2	55.4

Note: the total also includes pensions. Benefit receipt is defined based on household levels; thus, every individual living in a household with at least one member receiving the benefit is defined as a benefit recipient.

Source: authors' own calculation using MicroZAMOD.

3.3 Coverage of the extreme poor

This section focuses on the extent to which benefits are targeted at the poor. The coverage rate of the poor indicates the proportion of extremely poor people that receive the benefit. Thus, different from the previous section, the focus is now specifically on the extremely poor and the extent to which they are covered by social support. Eligibility for benefits in Zambia is usually not specified based only on individual and household characteristics; it also includes an assessment at the community level. Our analysis assumes that this community assessment enables identification of the most vulnerable households in the community and needs to be interpreted with this assumption in mind.

Table 8: Coverage rate of the poor by benefits

	Total
SCT	34.1
SWL	3.0
HGSF	21.8
KGS	0.8
CST	0.1
FISP	49.5
FSP	1.6
All benefits	76.3

Note: 'All benefits' also includes pensions.

Source: authors' own calculation using MicroZAMOD.

Table 8 presents the coverage rate for benefits as a whole and each benefit individually. Seventy-six per cent of extremely poor people are covered by at least one benefit; this is substantially higher than the 55 per cent of the total population receiving a benefit, as presented in the previous section. The most widespread programme is FISP, at 50 per cent, followed by the SCT, at 34 per cent, and the HGSF, at 22 per cent. The coverage rate is smaller for other programmes, ranging from only a little over 0 per cent for the CST and up to 3 per cent for the SWL.

Figure 3 presents the coverage rate of the poor by population sub-groups. The focus is on the coverage of all benefits rather than single benefits. In addition to results for all districts of Zambia, we show results for high support districts specifically. This provides a better picture of the coverage of the poor in districts with additional availability of benefits.

- The coverage rate of extremely poor people aged 65 or older is close to 100 per cent, compared to between 74 and 77 per cent for other age groups. While the coverage rate increases by more than 5 percentage points for younger age groups living in high support districts, this is not the case for the elderly. The elderly living in extreme poverty are already well targeted by the SCT, while additional benefits focus on children, the youth, or women below the age of 65;
- Again, like previous results, individuals with a disability are well targeted by the SCT, leading to a coverage rate of close to 100 per cent;
- Rural versus urban differences are quite pronounced, with extremely poor individuals living in rural areas being 24 percentage points more likely to be covered by social protection than individuals in urban areas. The situation is quite different in high support urban districts, where the extremely poor are supported to the same extent as individuals in rural areas;
- More than 90 per cent of individuals living in extremely poor female-headed households are covered by at least one benefit, compared to 72 per cent of individuals in male-headed households. The difference is less pronounced in high support districts, where the coverage rate of male-headed households increases to 81 per cent;
- The coverage rate is close to 80 per cent in high dependency ratio households in total and 87 per cent if focusing on high support districts only.

Figure 3: Coverage rate of the poor by population sub-groups
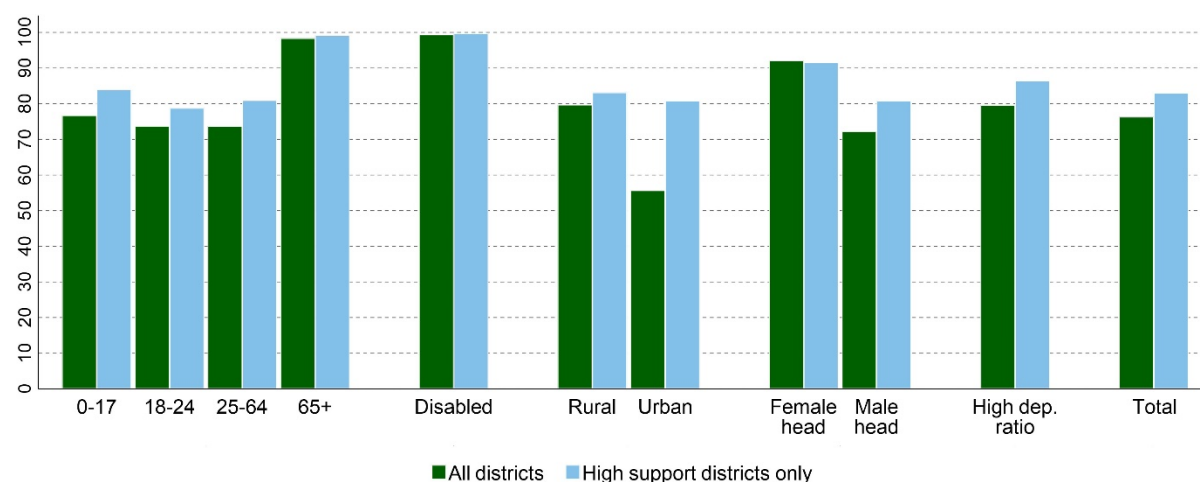
Note: see Table A3 in the Appendix for an overview table.

Source: authors' own calculation using MicroZAMOD.

In conclusion, the coverage rate of extremely poor people is relatively high across population sub-groups except for urban households. Still, a coverage rate of 76 per cent also means that 24 per cent of the extremely poor in Zambia are not receiving any of the underlying programmes and the level of non-supported individuals is even higher for extremely poor people living in urban areas.

The focus on high support districts highlights the importance of additional support for certain population sub-groups, such as younger age cohorts, urban areas, and male-headed households, as the nationwide benefits target specific households (elderly, disabled, female-headed with three or more children, and households with land).

Focusing on the coverage rate of the SCT (34 per cent) highlights that using the benefit in its current form and size as a floor benefit for Cash Plus would increase gaps in social protection and exclude an even larger share of extremely poor individuals in Zambia from receiving benefits.

3.4 Poverty impact

Although the coverage rate of extremely poor is relatively high, it does not provide any information on the extent to which social support manages to lift extremely poor people out of poverty. The coverage rate focuses on the availability but not on the level of support. This section moves to the latter and focuses on the poverty impact of benefits. Starting from poverty levels before support (as discussed in Section 0), we analyse the extent to which benefits reduce poverty levels in terms of the poverty headcount and poverty gap.

Figure 4 focuses on the reduction in poverty headcount by population sub-group comparing the situation in all districts versus high support districts only. All benefits together reduce the poverty headcount in Zambia by 4 percentage points and by 6 percentage points in high support districts. The poverty impact of social support varies widely across population sub-groups:

- The poverty impact is by far more pronounced within the oldest age group, at over 10 percentage points compared to around 4 percentage points across younger age groups. The poverty headcount decreases by around 6 percentage points for younger age groups and by 14 percentage points for the elderly;

- Poverty reduction is also very high for persons with a disability in Zambia in total as well as in high support districts;
- The poverty impact is very low in urban areas of Zambia. Although coverage rates are the same for rural and urban households in high support districts, the reduction in poverty headcount is not. This highlights that the kind of support available in rural versus urban areas leads to different outcomes in poverty reduction, an issue discussed in more detail at the end of this section;
- Poverty reduction is higher for female-headed than for male-headed households, but the difference is small;
- The poverty headcount is reduced by 5 percentage points for high dependency ratio households in Zambia as a whole and by 6 percentage points in high support districts.

Figure 4: Reduction in poverty headcount by population sub-groups
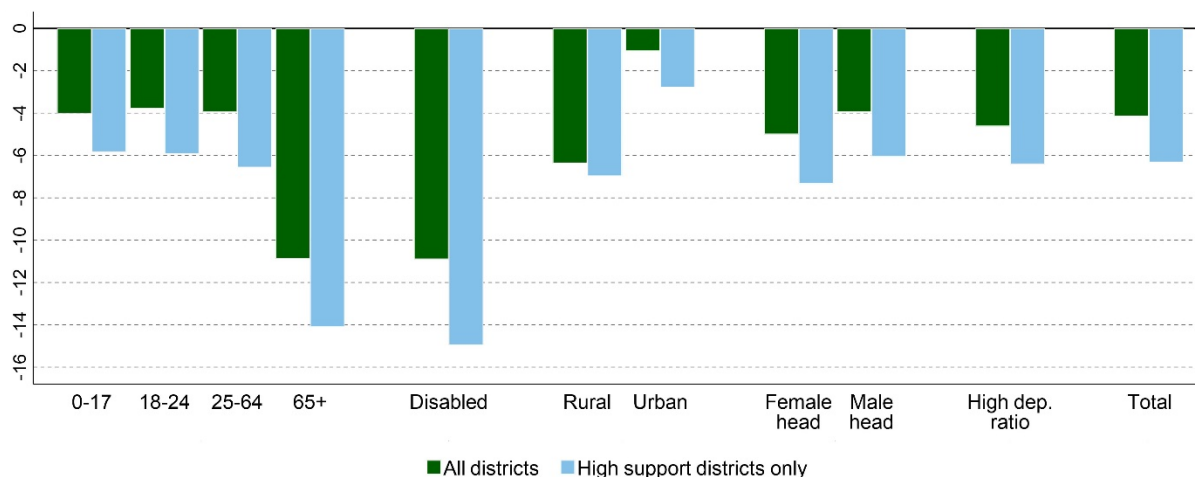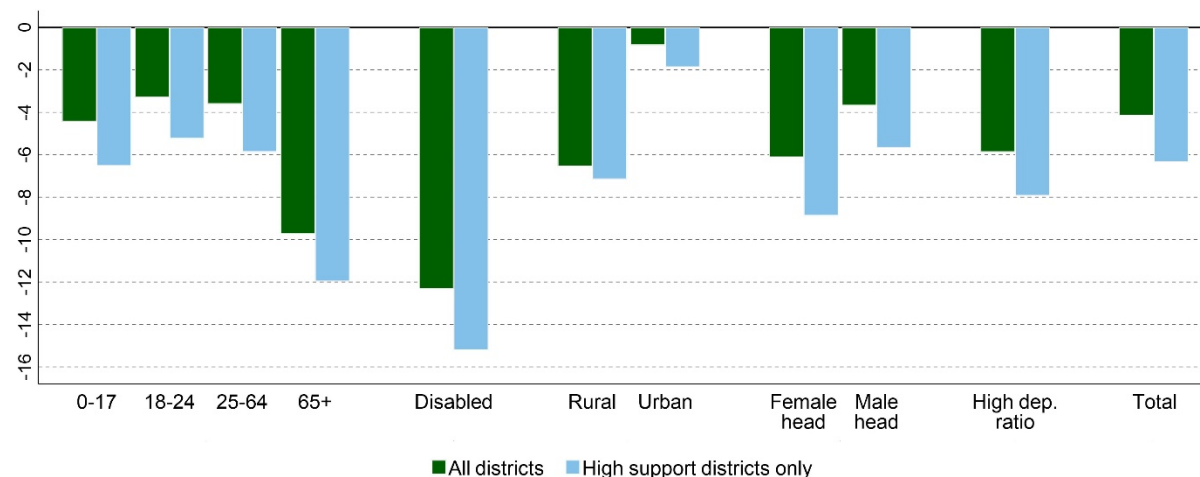

Note: reduction refers to change in percentage points. See Table A3 in the Appendix for an overview table.

Source: authors' own calculation using MicroZAMOD.

Reductions in the poverty gap (see Figure 5) correlate with reductions in the poverty headcount by around 4 percentage points across Zambia and 6 percentage points in high support districts. Sub-group-specific results are comparable to those of the poverty headcount for most groups. Keeping in mind that the poverty headcount is higher than the poverty gap, this leads to a higher relative reduction in the poverty gap (minus 20 per cent) than in the poverty headcount (minus 9 per cent).

Figure 5: Reduction in poverty gap by population sub-groups

Note: reduction refers to change in percentage points. See Table A3 in the Appendix for an overview table.

Source: authors' own calculation using MicroZAMOD.

In general, the correlation between the coverage rate and poverty impact is very high, showing that higher coverage also leads to a more substantial impact of benefits. Still, although poor female-headed households are largely covered by benefits, the poverty impact of benefits is lower than expected, suggesting that the monetary amount of the support is too low to lift them out of poverty. In addition, the largest poverty impacts are found for rather small population sub-groups (elderly and disabled), while most of the population lack support that manages to lift a large share out of extreme poverty.

3.5 The poverty impact of single benefits

While the previous sub-section focused on the poverty impact of all benefits together, the focus of this sub-section is on the poverty-reducing effects of single benefits. The analysis is restricted to benefit recipients within each benefit as the number of recipients differs by benefits and effects can be relatively small for the total population while being quite substantial for those who receive the support. Benefits are grouped by social assistance benefits, child- and education-related benefits, and agricultural benefits. The share of benefit recipients is defined for each benefit separately (see Table 7) and the size of each group varies. Please also note that benefits target different population sub-groups, leading to differences in starting points (pre-benefit poverty headcount).

Figure 6 compares the poverty headcount of benefit recipients before and after receiving a specific benefit. Poverty levels before benefit receipt are relatively high across recipients, at 60 per cent for the total group of benefit recipients. Pre-benefit levels are highest among participants of SWL, at close to 80 per cent, and lowest among recipients of agricultural support.

The poverty-reducing effect of each programme depends not only on the poverty level before benefits but also on the level of support. Benefits with very little financial impact are the HGSF and the CST programme. Still, in both cases, the impact might be quite substantial in other dimensions such as healthy nutrition as well as improved educational outcomes and chances in the labour market in the future. Benefits with higher poverty impacts are the SWL (10 percentage points) and, most importantly, the FSP (26 percentage points) due to their high monetary or quasi-monetary level of support. Unfortunately, only 3 per cent of the population in Zambia receive one of the two benefits. The impact of the two benefits with the highest share of benefit recipients—FISP and SCT—is comparably low at 5 and 6 percentage points.

Figure 6: Poverty headcount of benefit recipients before and after benefit receipt
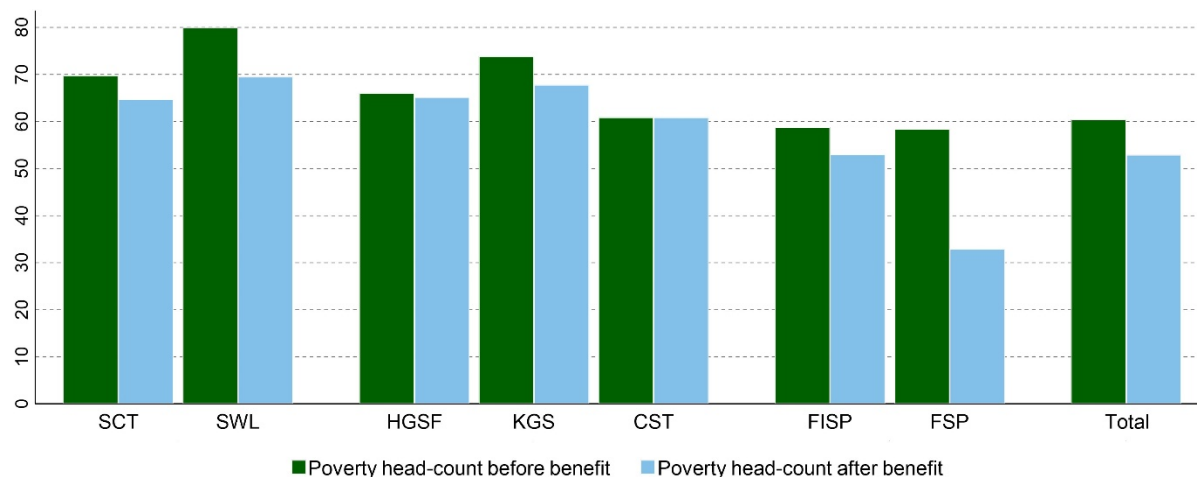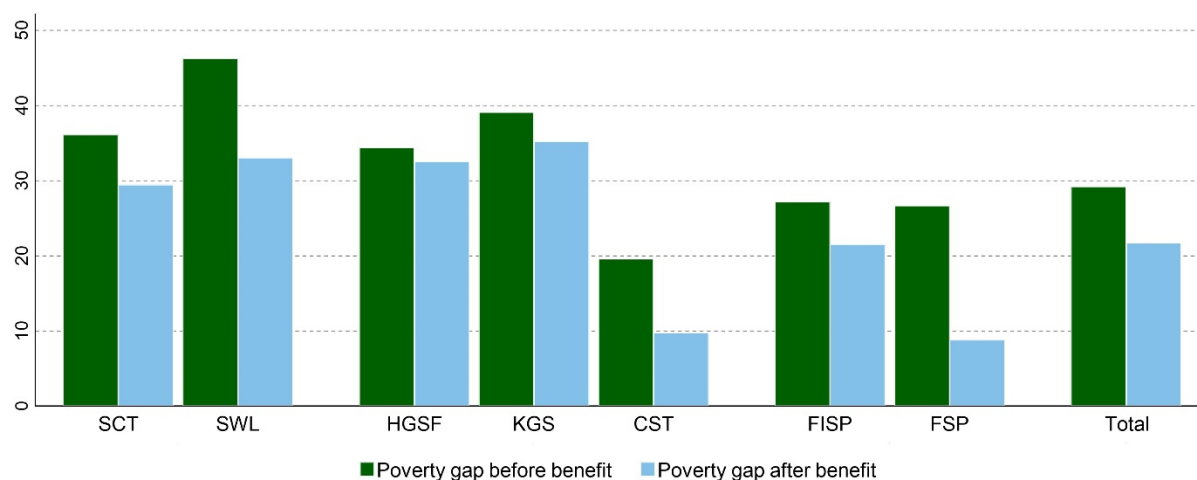

Note: poverty headcount after benefit focuses on the single benefit only and does not account for potential receipt of other benefits. Benefits are grouped by target group. Benefit recipients are defined for each benefit separately.

Source: authors' own calculation using MicroZAMOD.

Reductions in the poverty gap are higher than reductions in the poverty headcount for the SCT, SWL, HGSF, and especially the CST (see Figure 7). In these cases, although benefits may not always manage to lift individuals out of poverty, they still manage to bring them closer to the extreme poverty threshold. Even with a lower poverty impact compared to reductions in poverty headcount, FSP is very effective in reducing the poverty gap from 27 to 9 per cent.

Figure 7: Poverty gap of benefit recipients before and after benefit receipt

Note: the poverty gap after benefit focuses on the single benefit only and does not account for potential receipt of other benefits. Benefits grouped by target group.

Source: authors' own calculation using MicroZAMOD.

In summary, this sub-section shows that the level of support in terms of monetary amount is not always sufficient to reduce the poverty headcount of recipients significantly except for the SWL and FSP. On the other hand, various benefits show higher poverty impacts in terms of the poverty gap, leading to substantial reductions.

3.6 The role of multiple support

While the previous sub-section provides a good overview of the effectiveness of each benefit covered in the analysis, this sub-section focuses on the role of multiple support. It looks at the efficiency of the SCT by itself versus the effects of receiving additional support. The focus in this sub-section is on high support districts only, as multiple support is more likely in these highly targeted districts. The SCT is singled out here because it is characterized as the Cash Plus floor on which other benefits are planned to build.

Figure 8 shows the reduction in poverty headcount of SCT only versus taking all other benefits into account. The overall poverty-reducing impact of the SCT floor is very small, at less than 2 percentage points. More substantial poverty reduction is only achieved after taking other benefits into account.

Selected population sub-groups are better supported by the SCT floor than others:

- The SCT reduces the poverty headcount of individuals aged 65 by 7 percentage points compared to around 1 percentage point in other age groups. Across age groups, substantially higher poverty reductions are achieved if all benefits are considered;
- Individuals with a disability are already well covered by the SCT, which reduces their level of poverty by 7 percentage points. The poverty impact is doubled after taking other benefits into account;
- Rural households rely to a large extent on other benefits, while the poverty impact on urban households is small even after considering all benefits;
- The SCT provides a comparably good level of support to female-headed households, reducing their poverty headcount by almost 4 percentage points. The poverty impact increases by another 4 percentage points when all benefits are accounted for. The poverty impact of the SCT only is very small for male-headed households but adding other benefits achieves almost the same total poverty-reducing effect as for female-headed households;
- High dependency ratio households depend to a large extent on other benefits to achieve a poverty reduction of more than 6 percentage points.

Figure 8: Reduction in poverty headcount for SCT only vs. all benefits by population sub-groups
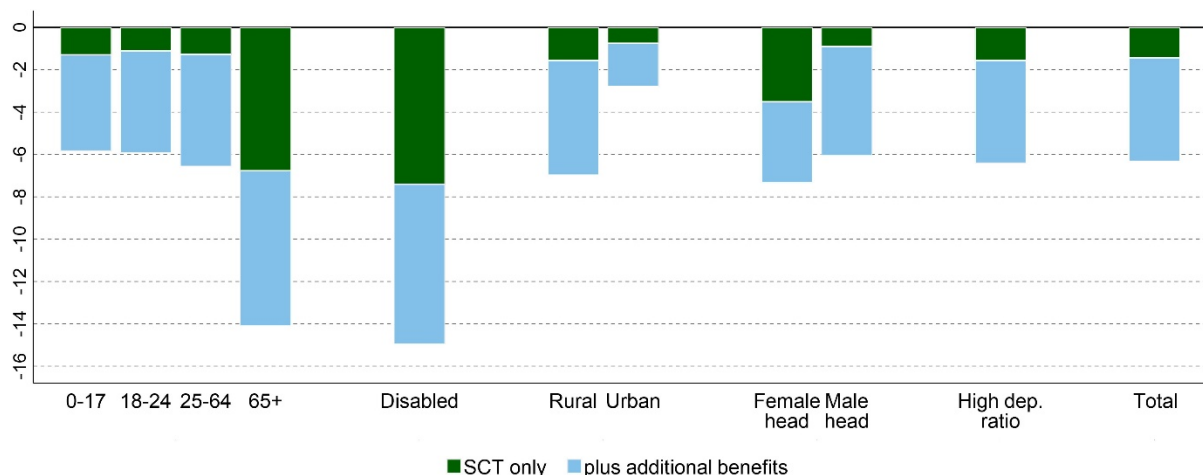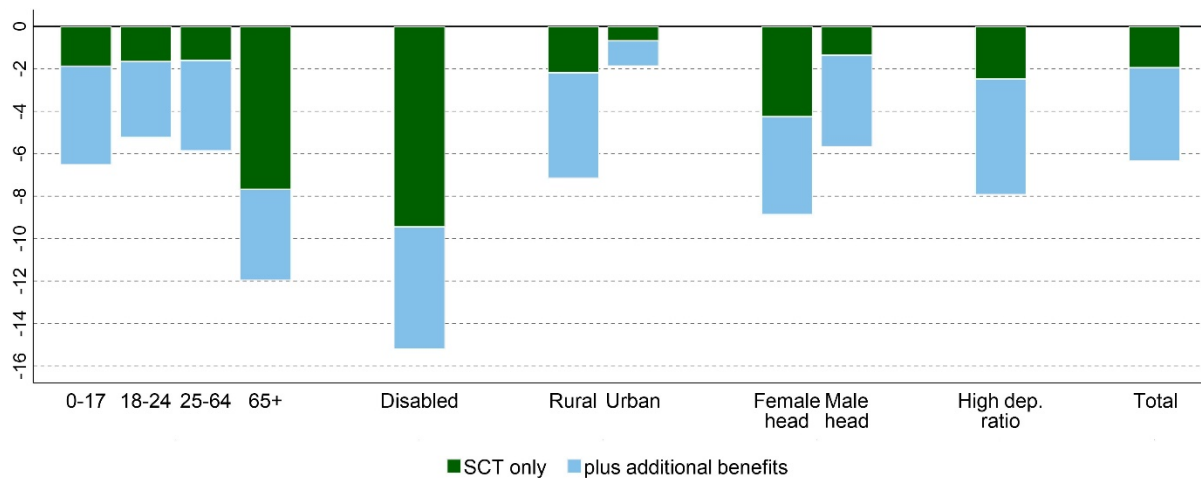

Note: the results focus on high support districts only. Reduction refers to change in percentage points.

Source: authors' own calculation using MicroZAMOD.

The results for reductions in the poverty gap are relatively similar to reductions in the poverty headcount (see Figure 9). Older age groups, disabled, and female-headed households are better supported by the SCT floor than other population sub-groups.

Figure 9: Reduction in poverty gap for SCT only vs. all benefits by population sub-groups

Note: the results focus on high support districts only. Reduction refers to change in percentage points.

Source: authors' own calculation using MicroZAMOD.

The question is: what type of other benefits lead to a higher poverty impact than SCT alone?

Figure 10 provides information on the share of individuals receiving a single benefit and combinations of different benefits in the high support districts. It focuses on the extremely poor before benefit receipt to provide a better idea of the role of multiple support.

The green bars highlight SCT benefit recipients who receive either SCT only or a combination of SCT with other benefits. One-third of the Zambian population living in high support districts receive SCT, most of them in combination with another benefit (SWL, KGS, HGSF, FISP, or a mix of various benefits). Another 20 per cent do not receive SCT but receive a mix of several other benefits. This leaves 17 per cent that do not receive any benefits and 30 per cent that receive only one of the remaining benefits (HGSF, CST, FISP, or FSP).

Patterns of multiple support are quite interesting when focusing on specific population sub-groups:

- The success of poverty reduction for the elderly is based on a large share of SCT recipients but in combination with other benefits. Ninety-five per cent of extremely poor aged 65 plus receive SCT, 66 per cent of them in combination with additional support. This is quite different in other age groups with lower shares of SCT (plus other benefits) and a larger share of individuals receiving a mix of other benefits as well as agricultural benefits only;
- Like the elderly population, disabled individuals can count on support through SCT paired with additional support from other benefits;
- Rural and urban households differ in their role of agricultural benefits. Urban households are more likely to receive HGSF only, a benefit that has been shown to have limited poverty impact. Rural households count on agricultural benefits and a mix of other benefits;
- Differences between male- and female-headed households highlight the targeting of female-headed households by the SCT, while male-headed households are not targeted specifically. This leads to a very high share of female-headed households receiving SCT and SCT in

combination with other benefits. Male-headed households, on the other hand, are more likely to receive no support at all or to receive agricultural benefits and a mix of benefits other than SCT-related benefits.

Figure 10: Share of poor receiving different types of benefits
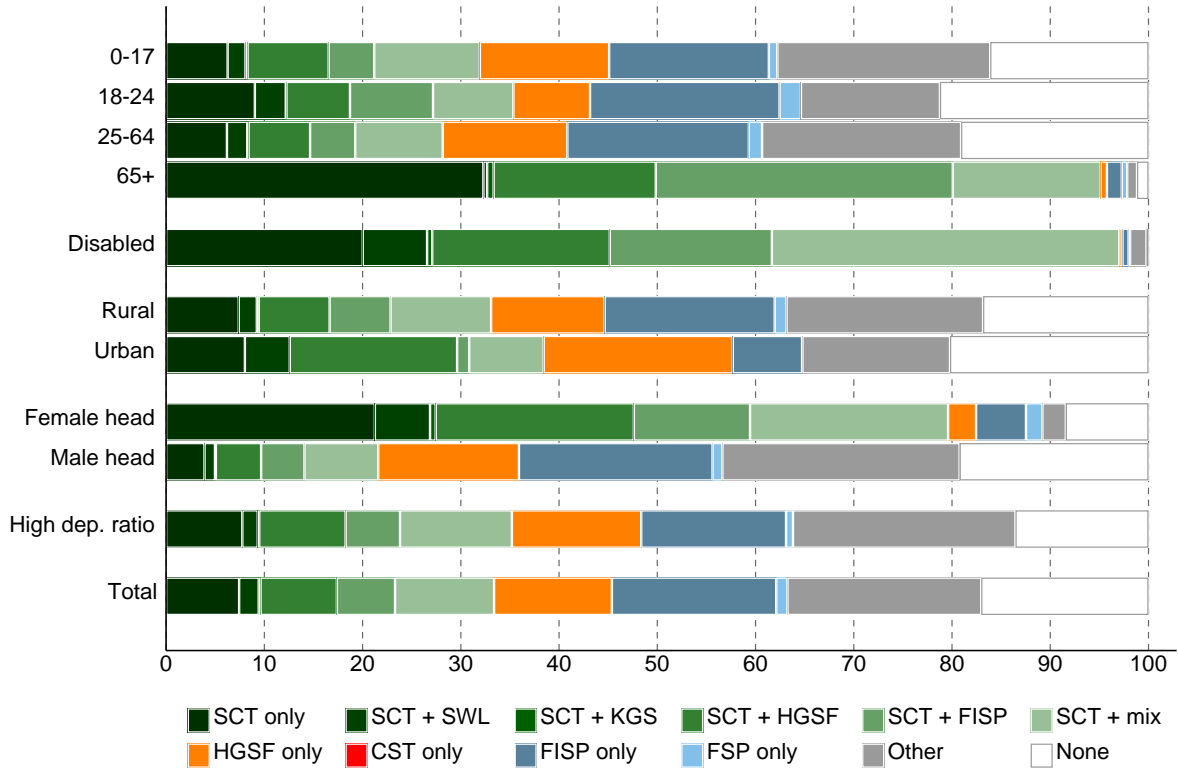
Note: the results focus on high support districts only. Poor refers to the poverty situation before benefits are considered.

Source: authors' own calculation using MicroZAMOD.

The results suggest that, while the level of the SCT floor is generally too low to have a significant poverty-reducing effect, multiple support increase the chances of moving out of poverty. As shown before, the SCT does not cover a large share of the extremely poor population, except for 65 plus, disabled individuals, and female-headed households. Individuals living in these households often receive more than one benefit, leading to an overall higher poverty impact of the social protection system.

4   Cash Plus reform scenarios

This section presents the Cash Plus reform scenarios. The results of each scenario are compared to the coverage and poverty impact of the current system (baseline).

Figure 11 provides a schematic visualization of the three Cash Plus reform scenarios and their envisaged impact on the number of recipients (see Table 2 for detailed overview of the scenarios). Benefit recipients in the baseline receive either SCT or FSP, while this changes in Scenario 1 where recipients can also receive both benefits. This decreases the number of overall benefit recipients but leads to higher support levels for some benefit recipients. In Scenario 2, adjusting FSP eligibility criteria to those of SCT leads to some recipients losing the benefit, while new households

are now benefit recipients. Scenario 3 leads to an overall increase in benefit recipients as well as an increase in households with multiple support.

Figure 11: Schematic visualization of Cash Plus reform scenarios
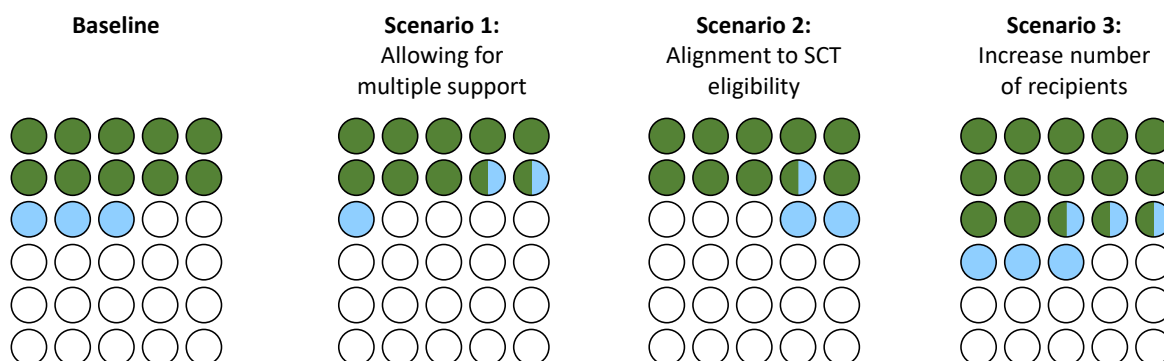
Note: green circles represent SCT, blue circles represent FSP, and white circles represent no benefit receipt.

Source: authors' own representation.

4.1   Benefit receipt and coverage of the poor

This sub-section shows how the share of benefit recipients changes compared to the baseline and the extent to which this leads to changes in the coverage rate of the poor. The first set of results focuses on the total population and does not differentiate between poor and non-poor individuals. The aim is to provide a first assessment of the overall situation of benefit receipt before providing more details on coverage of the poor. This is followed by a focus on changes in coverage rates of the poor, specifically. The question is whether changes in benefit receipt lead to a reduction or increase in coverage of the poor.

Table 9 shows that the share of recipients slightly decreases across scenarios ('Total' column). Lifting restrictions of multiple support (Scenario 1) decreases the share of benefit recipients by close to 1 percentage point. This is mostly due to former FSP recipients losing the benefit while former SCT recipients now also receive FSP on top of other benefits. The results remain constant after changing FSP eligibility criteria to SCT eligibility criteria (Scenario 2). The loss in benefit receipt is compensated for by increasing the number of recipients to the budgeted number for SCT, FSP, and KGS (Scenario 3) but does not lead to a higher share of benefit recipients compared to the baseline.

The columns on winners and losers show whether this absolute change in number of recipients is based on some losing the benefit while others now receive the benefit. Scenario 1 and Scenario 2 lead to losing the benefit only due to the number of recipients within each benefit being held constant while allowing for more programmes to be received simultaneously (e.g. SCT and FSP). This, by definition, decreases the overall number of benefit recipients, while some lose the benefit and others receive higher support. Also the adjustments of the FSP eligibility criteria lead to losers only which is, however, mostly driven by lifting restrictions of multiple support from Scenario 1 rather than additionally revising the revised eligibility criteria in Scenario 2. Already, in the baseline scenario, the FSP eligibility criteria are very similar to SCT, leading to only small changes in benefit receipt. Scenario 3 compensates for losing the benefit to some extent, although not fully, and results in a group of new benefit recipients.

The results are also quite similar across population sub-groups, but some still stand out:

- 18- to 24-year-olds as well as those aged 65 plus are more likely to lose out from lifting the conditions for multiple support. This is, however, partly compensated for in Scenario 2, and the elderly even gain in Scenario 3;
- Individuals with disabilities do not show significant changes in Scenarios 1 and 2 but are the main gainers from Scenario 3, with an increase in benefit receipt of 2 percentage points;
- Rural areas are more likely to lose across scenarios, while Scenario 3 leads to a slight increase in benefit receipt for urban areas;
- Female-headed households are also among the main losers of Scenarios 1 and 2 as well as being among the main beneficiaries of Scenario 3, with an increase in benefit receipt of 2 percentage points.

Table 9: Change in share receiving benefit by winners and losers and scenario

|	Scenario 1			Scenario 2			Scenario 3		
	Win	Lose	Total	Win	Lose	Total	Win	Lose	Total
Aged 0–17	0.0	0.7	-0.7	0.0	0.8	-0.8	0.6	0.6	-0.1
Aged 18–24	0.0	1.4	-1.4	0.0	1.0	-1	0.5	0.8	-0.3
Aged 25–64	0.0	0.8	-0.8	0.0	0.9	-0.9	0.5	0.7	-0.2
Aged 65+	0.0	1.1	-1.1	0.0	0.8	-0.8	1.8	0.4	1.4
Person with disability	0.0	0.1	-0.1	0.0	0.2	-0.2	1.9	0.0	1.9
Rural	0.0	1.0	-0.9	0.0	1.1	-1.1	0.3	1.0	-0.8
Urban	0.0	0.6	-0.6	0.0	0.6	-0.6	1.0	0.2	0.8
Female-headed	0.0	1.7	-1.7	0.0	1.2	-1.2	2.1	0.5	1.6
Male-headed	0.0	0.6	-0.6	0.0	0.8	-0.8	0.2	0.7	-0.5
High dependency ratio	0.0	0.8	-0.8	0.0	0.9	-0.9	0.7	0.7	0
Total	0.0	0.8	-0.8	0.0	0.9	-0.9	0.6	0.7	-0.1

Note: percentage point change compared to baseline.

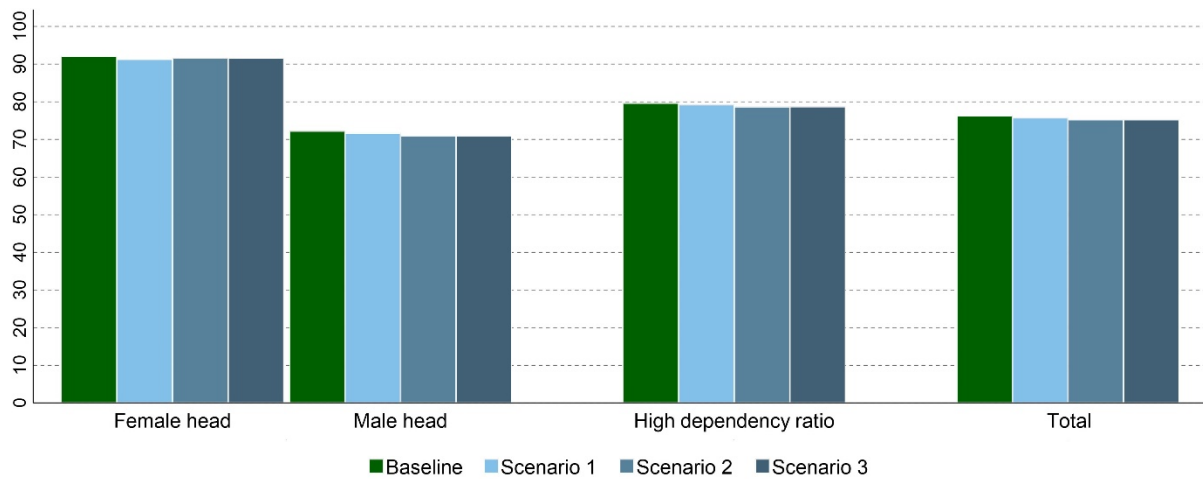Source: authors' own calculation using MicroZAMOD.

Figure 12 shows that changes in the overall benefit receipt in the three Cash Plus reform scenarios lead to very small changes in coverage of the poor. This is independent of the population sub-group in focus or whether individuals are living in a low, medium, or high support district. Even the extremely poor population of sub-groups likely to benefit from Scenario 3 (elderly, disabled, female-headed households) in terms of higher share of benefit recipients do not benefit from the reform. To some extent, this is due to an already very high coverage rate in the baseline (elderly and disabled) or because non-covered individuals do not fulfil all the criteria for receiving a benefit (female-headed households).

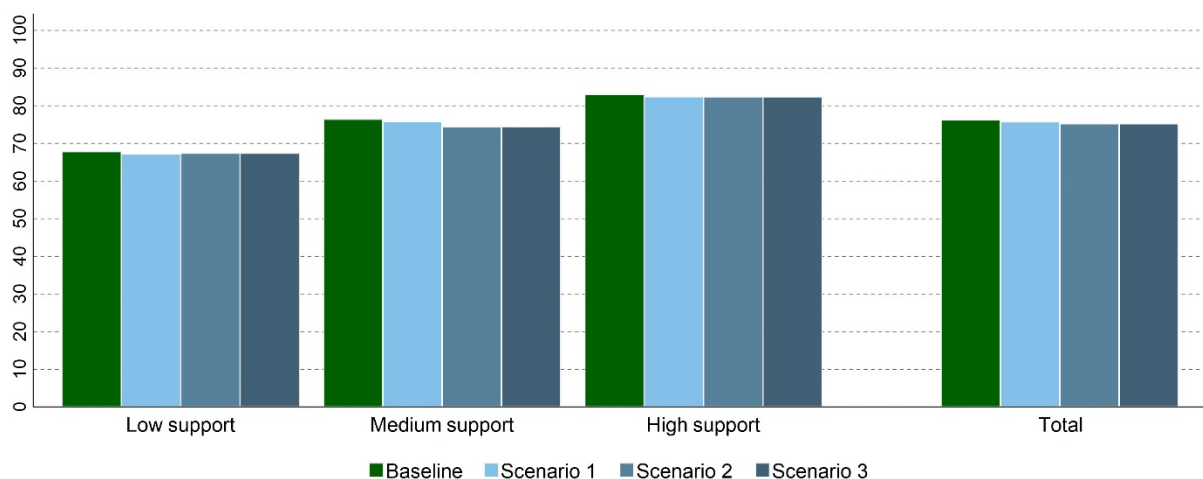Figure 12: Coverage rate of the poor by Cash Plus reform scenario

By individual characteristics
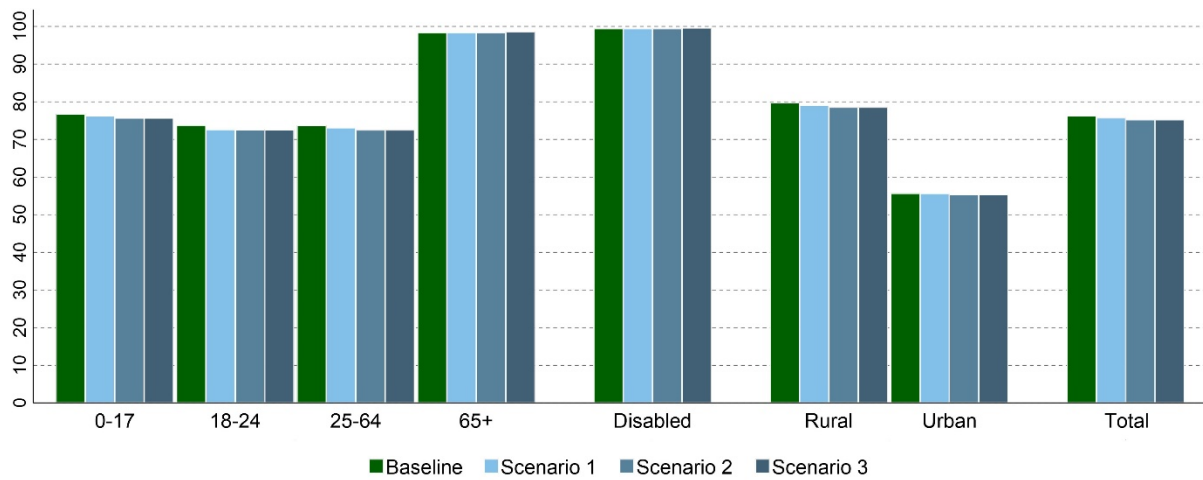
By household characteristics

By support level in district

Note: See Tables A3–A6 in the Appendix for overview tables.

Source: authors' own calculation using MicroZAMOD.

Overall, the share of benefit recipients is not affected by the Cash Plus reform scenarios. Allowing for multiple support (Scenario 1) and adjusting the eligibility criteria of FSP in Scenario 2 decreases

the share of benefit recipients by less than 1 percentage point. This decrease is compensated for in Scenario 3, which allows for a higher number of recipients.

However, this overall positive effect of increasing recipients to the budgeted number is driven by those population sub-groups that are already more likely to receive the benefit in the baseline, i.e. elderly, disabled, and female-headed households. At the same time, overall increases in benefit receipt are not reflected in higher coverage rates of the extremely poor. This highlights that increasing the number of benefit recipients does not automatically lead to better targeting of the extremely poor as this would require refining the eligibility criteria of certain benefits (e.g. SCT) in order to include additional poor households currently not eligible.

4.2 Poverty impact

This sub-section shows whether the rather stable coverage rates result in more significant poverty reductions than the baseline. Although the number of recipients is reduced slightly (especially in Scenarios 1 and 2), some recipients receive higher benefit amounts due to lifting multiple support restrictions, which might result in more significant reductions in the poverty headcount and poverty gap due to higher levels of support. Figure 13 shows the reduction in poverty headcount for the baseline as well as each for of the Cash Plus reform scenarios. It highlights that the overall poverty impact in terms of poverty headcount of the total population remains stable across scenarios. The poverty impacts of Scenarios 1 and 2 are negligible. Although more individuals receive more support in terms of higher benefit amounts, the number of additional cases receiving multiple support is comparably small, leading to non-significant changes. Scenario 3 shows slightly more poverty reduction due to a higher number of beneficiaries of various benefits, which also increases the chances of multiple support.

Figure 14 provides the same set of results but focusing on the poverty gap. Again, the changes from the baseline to each of the Cash Plus reform scenarios are very small and only show slightly higher changes for Scenario 3.

Although results for both the poverty headcount and poverty gap are mostly in line with the overall results, some population sub-groups stand out, with a more significant poverty impact of the Cash Plus reform scenarios:

- Younger age groups remain largely unaffected by the reform scenarios, while individuals aged 65 plus benefit from all scenarios. The impact is highest in Scenario 3, with an additional reduction in poverty headcount and poverty gap of 2 percentage points;
- Disabled individuals are also winners of the Cash Plus reform scenarios, with a further reduction in poverty headcount and a gap of 3 percentage points. Together with the elderly and rural population groups, disabled individuals are among the population sub-groups with the highest poverty headcount, and a high poverty impact of benefits is crucial for them;
- While rural households face high levels of poverty and already benefit from the current system more than other population sub-groups, the reform scenarios do not provide significant additional reductions in the poverty headcount or gap;
- Another group which benefits from the Cash Plus reform scenarios is individuals living in female-headed households. While the impact is below 1 percentage point for Scenarios 1 and 2, it is above 1 percentage point for both the poverty headcount and poverty gap in Scenario 3. Individuals living in male-headed households remain unaffected across scenarios.

The results in this sub-section emphasize the importance of multiple support but also show that the current number of recipients who can receive more benefits is rather small. Increasing the number of recipients (Scenario 3) also increases the chances of receiving SCT and FSP at the same time. However, this only shows poverty-reducing effects for groups that are already very well targeted by SCT.

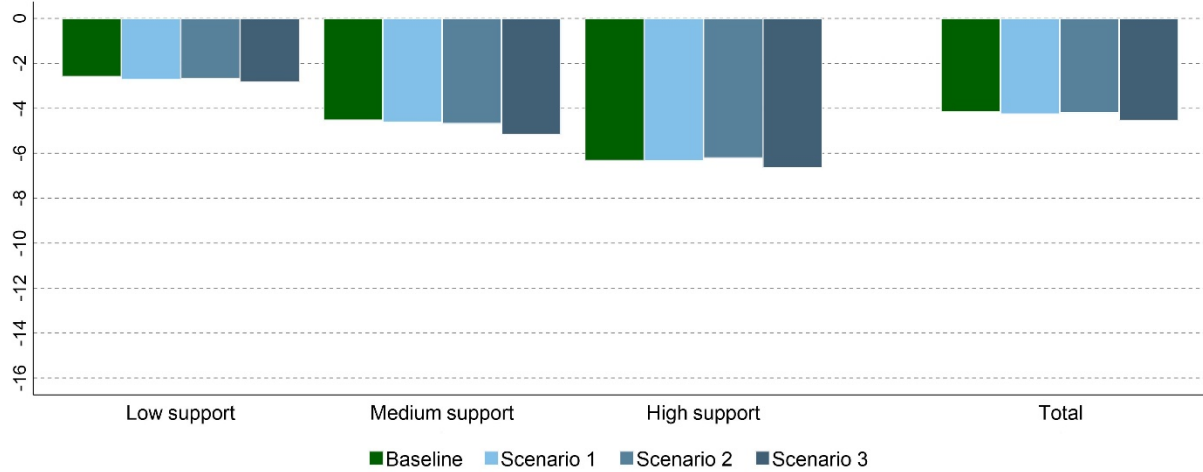Figure 13: Reduction in poverty headcount by Cash Plus reform scenario
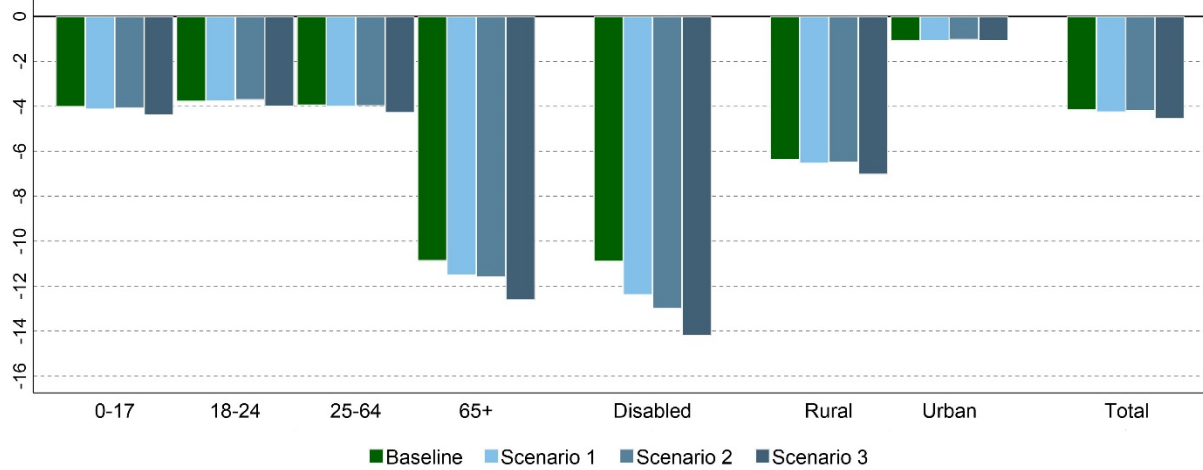
By individual characteristics

By household characteristics
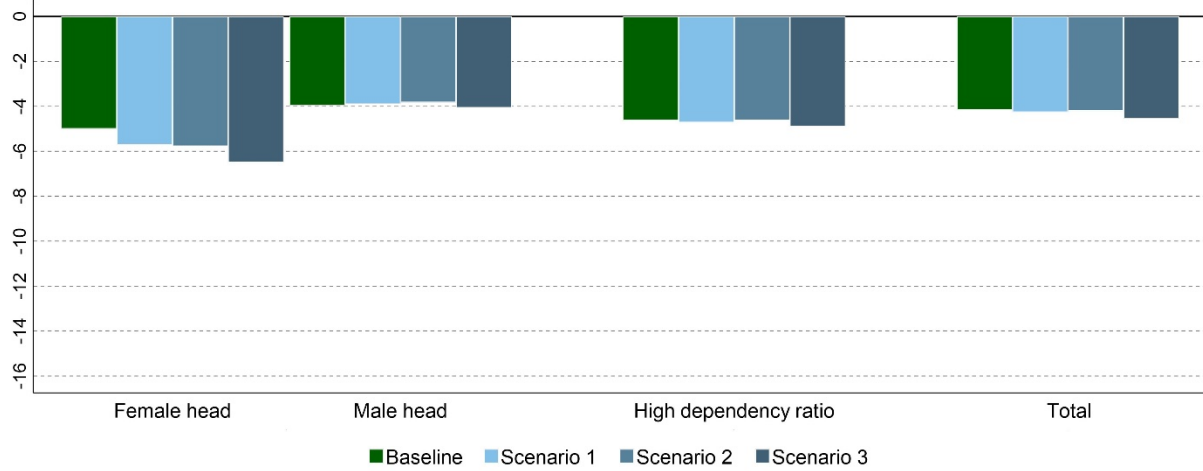
By support level in district

Note: reduction refers to change in percentage points.See Tables A3–A6 in the Appendix for overview tables.

Source: authors own calculation using MicroZAMOD.

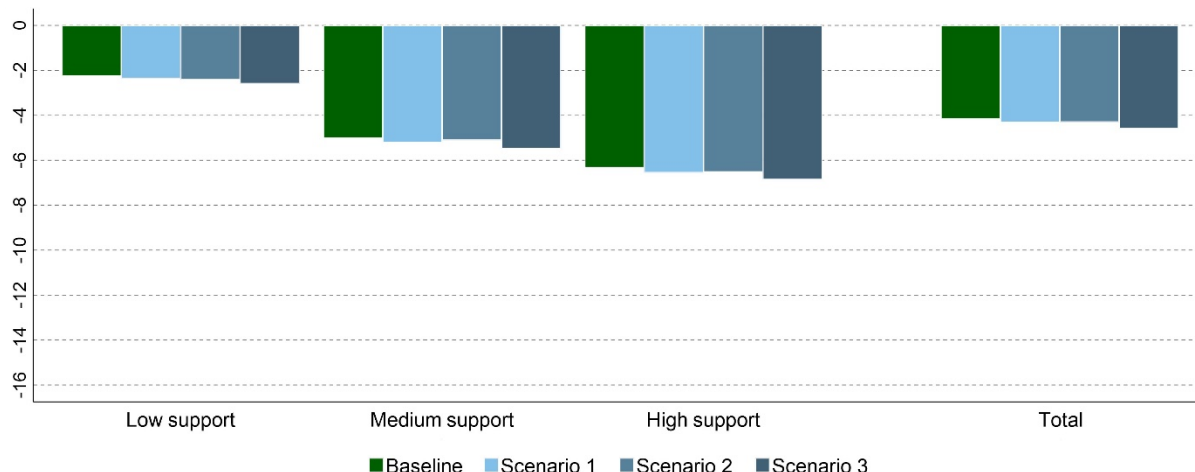Figure 14: Reduction in poverty gap by Cash Plus reform scenario
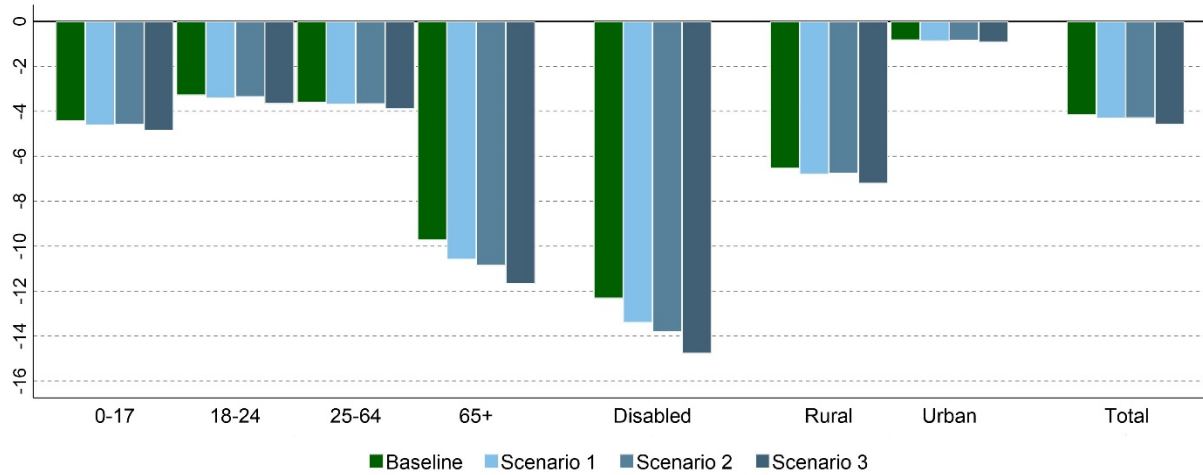
By individual characteristics

By household characteristics

26
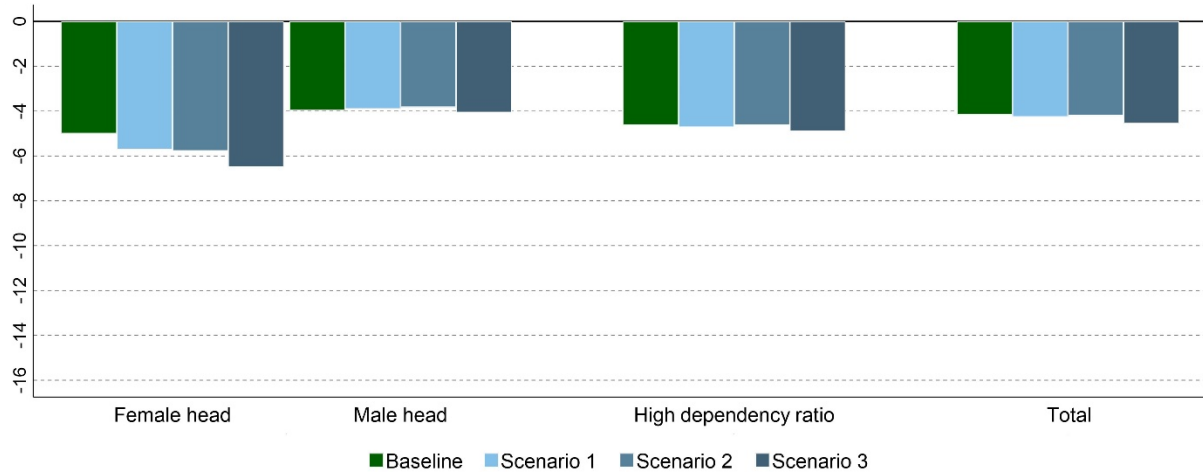
By support level in district

Note: reduction refers to change in percentage points. See Tables A3–A6 in the Appendix for overview tables.

Source: authors' own calculation using MicroZAMOD.

4.3   In-depth analysis of selected Cash Plus reform characteristics

This sub-section focuses on specific elements of the Cash Plus reform scenarios and analyses them in more details.

The role of multiple support of FSP and SCT

We first zoom in on the role of multiple support, which is extended in Scenario 1 (and all consecutive scenarios). The results presented in this section focus on Scenario 1 only. They furthermore focus on high support districts as these areas of Zambia are more likely to be affected by the reform.

Table 10 presents the characteristics of the reform in more detail. The baseline already allows for some form of multiple support (see column 2). In fact, both the KGS and SWL are specifically targeted at SCT-recipient households, and this is already considered in the baseline results. In addition, Scenario 1 introduces the possibility of receiving FSP and SCT at the same time (see column 3). This leads to a lower share of individuals receiving FSP or SCT (plus KGS and SWL) only and a share of about 2 percentage points of the population in high support districts receiving both forms of support (compare columns 2 and 4). This very small share of the population that is affected by the reform again explains why the overall poverty impact of Scenario 1 in the total population of Zambia is negligible. However, analysing those who are affected by the reform in more depth allows us to understand whether allowing for multiple support in principle has poverty-reducing effects for those reached by the reform.

Table 10: FSP and SCT recipients in the baseline vs. Scenario 1

	Baseline characteristics	Share of recipients*	Scenario 1 characteristics	Share of recipients*
FSP only	✓	1.5	✓	0.5
SCT only	✓	21.4	✓	19.7
SCT + KGS or SWL	✓	5.0	✓	4.9
FSP + SCT	-	-	✓	1.3
FSP + SCT + KGS or SWL	-	-	✓	0.5
Total		27.9		26.9

Note: the results include high support districts only. * Measured as the share of individuals living in a household receiving the benefit.

Source: authors' own representation.

Figure 15 presents the poverty headcount before and after benefits are accounted for, comparing the reduction in poverty headcount between the baseline and Scenario 1. We furthermore differentiate between the total population living in high support districts, those receiving SCT and/or FSP, and the small share of the population who benefit from lifting restrictions to receive FSP and SCT simultaneously.

The results show that those who benefit from multiple support have a 15-percentage point higher pre-benefit poverty headcount than SCT/FSP recipients in total and a 30-percentage point higher pre-benefit poverty headcount than the total population living in high support districts.

The baseline reduces the poverty headcount by 6 percentage points in total, 14 percentage points for SCT/FSP recipients, and only 6 percentage points for multiple support beneficiaries. Lifting restrictions for multiple support in Scenario 1 does not lead to a further decrease in the poverty headcount in the total population living in high support districts nor for recipients of SCT/FSP in general. The reason for this is that, as mentioned before, the share of multiple support beneficiaries is very small. However, the poverty headcount of those who receive both benefits after the reform is significantly reduced, by 29 percentage points, bringing it down to the level of SCT/FSP recipients.

Figure 15: Poverty headcount with and without restricting simultaneous receipt of FSP and SCT

This in-depth analysis re-emphasizes the role of multiple support. It highlights the significant positive poverty impact for those who receive both SCT and FSP. However, the current number of recipients, and even the budgeted number of recipients, is too low to lead to significant poverty-reducing effects after allowing for multiple support.

Cash Plus alignment of FSP

The second in-depth analysis focuses on the alignment of FSP eligibility rules with those of SCT, modelled in Scenario 2. Results are presented for Scenario 2 only, which also includes changes implemented in Scenario 1 (allowing for multiple receipt of FSP and SCT). The focus is on all areas in Zambia as FSP is available in all districts. Table 11 summarizes the Scenario 2-specific revisions to the FSP eligibility rules. The two main prerequisites of being eligible for FSP—having a viable household member and cultivating land—are kept in both scenarios, as receiving FSP does not make sense without these two characteristics. Other household composition-related criteria are adjusted to conform with SCT eligibility rules. This includes changes to the definition of elderly and disabled (from a household head-specific definition to an individual definition), stricter rules for female-headed households and dropping unemployed youth-headed households from the targeted groups. In addition, FSP recipients now also need to comply with the living condition criteria, which is, however, almost always the case anyway.

Table 11: Characteristics of Cash Plus alignments of FSP

	Baseline	Cash Plus alignment in Scenario 2
Viable household member	✓	✓
Cultivating land	✓	✓
Elderly-headed household	✓	-
Elderly person in the household	-	✓
Headed by disabled or chronically ill person	✓	-
Disabled or chronically ill person in the household	-	✓
Female-headed household	✓	✓ if 3+ children
Child-headed household	✓	✓
Unemployed-youth headed household	✓	-
Living condition criteria	-	✓

Note: the results for Scenario 2 also include changes from Scenario 1 (lifting restrictions of multiple support).

Source: authors' own representation.

Table 12 presents the effects of this reform for FSP specifically, focusing on changes in the coverage rate and poverty impact in terms of reductions in the poverty headcount. The results for the poverty gap are not presented as they are in line with changes in the poverty headcount.

Table 12: Effects of the FSP Cash Plus alignment

	Coverage rate of FSP			Poverty headcount reduction of FSP		
	Baseline	Scenario 1	Scenario 2	Baseline	Scenario 1	Scenario 2
Aged 0–17	1.5	3.2	3.5	-0.3	-0.4	-0.4
Aged 18–24	2.3	4.2	4.0	-0.5	-0.4	-0.3
Aged 25–64	1.7	3.1	3.4	-0.3	-0.3	-0.4
Aged 65+	0.3	6.5	9.1	-0.1	-0.7	-1.2
Person with disability	0.1	7.3	11.8	0.0	-0.7	-1.7
Rural	1.8	3.6	4.0	-0.5	-0.5	-0.6
Urban	0.6	2.6	2.2	-0.1	-0.1	-0.1
Female-headed	1.7	8.2	8.8	-0.2	-1.0	-1.1
Male-headed	1.6	2.2	2.4	-0.3	-0.2	-0.2
High dependency ratio	1.5	3.2	3.6	-0.3	-0.4	-0.5
Total	1.6	3.4	3.7	-0.3	-0.4	-0.4

Note: the reduction refers to change in percentage points. The results for reduction in the poverty gap are in line with reduction in the poverty headcount.

Source: authors' own calculation using MicroZAMOD.

The coverage rate of the extremely poor increases from 2 per cent to 4 per cent. This is quite a substantial increase in coverage given the relatively small size of the benefit and keeping in mind that the overall number of FSP recipients is kept constant to the baseline. Most of this increase already happens from the baseline to Scenario 1, suggesting that this is due to lifting restrictions of multiple support rather than changing eligibility rules. Nevertheless, changing eligibility rules impacts two specific groups—those aged 65 plus and individuals with a disability—as they no longer need to be the head of the household but are now assessed on an individual basis. Other changes, such as introducing a minimum number of children for female-headed households, does not have a negative impact on this population sub-group.

Unfortunately, the higher coverage of the extremely poor does not lead to additional significant poverty reduction. This is the case across population sub-groups and in many other cases, except for the elderly, disabled, and individuals living in female-headed households. For the last of these, this is mostly driven by lifting conditions of multiple support rather than adaptations of eligibility rules.

The FSP coverage rate for the extremely poor increases after allowing for multiple support and adjusting the eligibility criteria to those of SCT. Most of this increase is, however, driven by Scenario 1 rather than Scenario 2. Although SCT eligibility criteria seem to improve coverage of the elderly and disabled, this is not the case for the other groups. Groups with increased coverage are expected to also benefit from a higher poverty impact but the improvements are relatively small.

4.4 Fiscal impact

The final sub-section focuses on the fiscal impact of the Cash Plus reform scenarios. Table 13 shows the simulated total amount spent in the baseline versus the three reform scenarios. The simulated expenditures include the cash or quasi-cash benefit components only and do not take account of changes in administrative costs and other components of the programmes. The results for single programmes are aggregated into four groups: education and child-related benefits, social assistance, agricultural benefits, and pensions.

The results show that the fiscal impact of Scenarios 1 and 2 is comparably small and mostly driven by higher spending on agricultural benefits, partly compensated for by lower expenditure for social assistance benefits. Scenario 3, on the other hand, is more costly as it increases the number of recipients, leading to an additional social expenditure of ZMW 311 million.

Table 13: Fiscal impact on government's expenditure on benefits by Cash Plus reform scenario

	Total annual amount in ZMW million				Change in ZMW million (compared to baseline)		
	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 1	Scenario 2	Scenario 3
Education-related	179	178	179	208	-1	0	29
Social assistance	1,061	1,049	1,049	1,118	-12	-12	57
Agricultural	1,933	1,957	1,957	2,159	24	24	225
Pensions	187	187	187	187	0	0	0
Total	3,361	3,371	3,372	3,672	11	11	311

Source: authors' own calculation using MicroZAMOD.

5 Conclusions and recommendations

This analysis attempted to simulate Cash Plus reform scenarios using MicroZAMOD, the tax–benefit microsimulation model for Zambia. It provides an empirical analysis of the coverage and poverty impact of the current social protection system and shows how this would change through the simulated Cash Plus reform scenarios.

We explored three reform scenarios. In Scenario 1, we allowed for greater multiple support while holding the overall number of recipients constant. In Scenario 2, we aligned the SCT eligibility rules with other programmes. In Scenario 3, we adjusted the number of beneficiaries to the budgeted number. Scenarios 2 and 3 also include the adjustments from the previous reform scenarios.

One important finding of the study is that the SCT only reaches about one-third of the population living in extreme poverty. This is an important drawback of the current social protection system as well as the Cash Plus initiative, as the SCT is envisaged to be the floor benefit for vulnerable people under the Cash Plus reform on which other complementary benefits would build. The results of the Cash Plus reform scenarios show only a very small impact on the coverage rate of the extremely poor and that the impact on poverty remains stable across all Cash Plus scenarios.

In the 7th National Development Plan, the Zambian government set the objective of reducing poverty by 20 per cent, which equates to approximately 8 percentage points. Our results show that the total poverty-reducing effect of the benefits under the current social protection system reduce poverty by approximately 4 percentage points. Our results furthermore highlight that the additionally needed poverty impact to reach the target is not achieved through the Cash Plus reform (as modelled in our study). This means that the authorities need to invest more in SCT reforms which will have a greater impact on poverty. The empirical analysis therefore leads to the following recommendations:

1) **The government must expand the coverage and the level of support of the SCT:** The current SCT programme is not sufficient as a floor programme because it only covers about one-third of the extremely poor population. Thus, there is a need to consider additional target groups and to implement broader eligibility rules for the floor programme. Kampamba et al. (2019) provide an empirical assessment of how additional target groups would improve the poverty impact of the SCT.

2) **The government must commit to providing a higher level of support for SCT:** The study found that benefits with a higher monetary value had a greater impact on poverty. However, the SCT monetary amount had a small impact on poverty because of its lower value and its disregard of the household composition. Thus, as well as increasing the current monetary amount, SCT reforms need to take account of household composition.

3) **The government should employ the multiple support strategy:** The multiple support strategy is a meaningful strategy for achieving poverty reduction because it increases the total monetary amount for recipient households and takes account of the multidimensionality of poverty. However, the poverty impact is very small because the benefits are not available nationwide and the budgeted number of recipients is relatively small for some benefits. This means that the government should increase the coverage of certain programmes for the multiple support strategy to have a greater poverty impact.

4) All policy changes need to be linked to **raising awareness of the importance of multiple support** and to **improved administrative oversight through the 'single window approach'**.

References

AIR (2016). *Zambia's Multiple Category Targeting Grant: 36-Month Impact Report*. Washington, DC: American Institutes for Research.

Avram, S. (2016). 'Social Assistance Performance in Central and Eastern Europe: A Pre-transfer Post-transfer Comparison'. *Journal of European Social Policy*, 26(5): 428–41. https://doi.org/10.1177/0958928716664296

Brown, C., M. Ravallion, and D. van de Walle (2018). 'A Poor Means Test? Econometric Targeting in Africa'. *Journal of Development Economics*, 134: 109–24. https://doi.org/10.1016/j.jdeveco.2018.05.004

CSO (2016). *2015 Living Conditions Monitoring Survey (LCMS) Report*. Lusaka: Zambia Central Statistical Office.

GRZ (2019). *Minsitry of Gender Annual Report*. Lusaka: Government Republic of Zambia.

The Tanzania Cash Plus Evaluation Team (2018). *Tanzania Youth Study of the Productive Social Safety Net (PSSN) Evaluation: Endline Report*. Florence: UNICEF Office of Research – Innocenti.

Kampamba, R., L. Pellerano, C. Banda, and O. Musama (2019). 'Financing the Zambia Social Cash Transfer Scale-up: a Tax Benefit Microsimulation Analysis Based on MicroZAMOD'. WIDER Working Paper, 2019/19. https://doi.org/10.35188/UNU-WIDER/2019/653-1

MOF (2020). *2021 Budget Address*. Lusaka: Government Republic of Zambia.

Nakamba-Kabaso, P., S. Nalishebo, F. Muleya, M., Kalikeka, C. Byaruhanga, J. Jele, D. McLennan, M. Noble, and G. Wright. (2020). *Southmod Country Report Zambia—Microzamod V2.4*. Helsinki: UNU-WIDER.

Ravallion, M. (2009). 'How Relevant is Targeting to the Success of an Antipoverty Program?'. *World Bank Research Observer*, 24(2): 205–31. https://doi.org/10.1093/wbro/lkp009

Tasseva, I.V. (2016). 'Evaluating the Performance of Means-tested Benefits in Bulgaria'. *Journal of Comparative Economics*, 44(4): 919–35. https://doi.org/10.1016/j.jce.2016.02.003

ZIPAR (2020). *Comments on the Findings and Recommendations of the Report by the Auditor General on the Social Cash Transfer in Zambia*. Lusaka: Zambia Institute for Policy Analysis & Research.

Appendix

Table A1: Additional information on simulated programmes

	Cash Plus	Assumptions
SCT	Floor benefit	The residency test was introduced in the pilot phase to ensure that people do not move because of the cash transfer. This condition is no longer necessary as the SCT has been rolled out to all districts of Zambia. The LCMS dataset only contains a question about where the person resided 12 months previously and so this criterion is not considered in the model. The model uses the education level of the household head to calculate the education score for the highest education level achieved by household members aged 15 and above. The LCMS dataset under-represents households with very young children, which is why we relaxed the condition of female households having at least 3 children to having 2 children due to under-simulation of the benefit with the stricter rule. It is not possible to confirm the certification of those who are extremely disabled or those who are chronically ill and on palliative care. We therefore assume these individuals are captured by our demographic variable for disability (*ddi).* The SCT also includes a community validation process in all Community Welfare Assistance Committees and the community validation of potential beneficiaries after the living conditions test. This is simulated by randomly assigning the benefit to extreme and moderately poor households only.
SWL	Already part of Cash Plus	The Zambian government introduced new districts in 2012 and 2018. These districts cannot be identified in the data as they use the classification applied in the 2010 Census. Thus, districts are only included in the programme if the programme is also rolled out to the district where it belonged prior to the splitting of districts. Information on 'same district for the last 12 months' is used as a proxy for the residence criteria. Information on consumption below the extreme poverty line (uprated by Consumer Price Index (CPI) to the respective year) and fewer than three meals a day is used to identify very poor households. Fit to work is measured as no disability and chronic illness, aged between 19 and 64, not in education Programme participation in the previous year cannot be taken into account in the model. The benefit is simulated for every eligible women in female-headed households but only for one women per male-headed households. Female-headed households are defined as headed by an unmarried woman aged 19 to 64. Male-headed households are defined as headed by a man aged 19 to 64 or headed by a married women aged 19 to 64.
HGSF	Not linked to Cash Plus	The correct monetary amounts for the value of the school meals in 2015, 2016, 2018, and 2019 were unknown, so these were estimated by adjusting the 2017 value by the food component of the CPI. This benefit was temporarily paused for approximately six months of 2020 due to school closures in light of the COVID-19 pandemic.
KGS	Already part of Cash Plus	Most girls attend day schools. Girls in boarding schools may not be included in the household survey. Thus, we simulated vouchers for day schools only. The benefit is simulated for girls in education only. This could lead to under-simulation as the programme was introduced in 2016 and the data refer to 2015. Although the benefit is only rolled out to several districts, a small number of girls from other districts are also funded. We exclude districts with very small numbers (<15) from modelling the benefit as it is not possible to identify these girls. We assume a benefit amount of ZMW 900 per year.
CST	Planned to complement the SCT to amplify the impact of the cash transfers on poverty reduction	Very poor households are defined as living below the extreme poverty line. School drop-outs or youths without or incomplete education are defined as either having no education or education below Grade 4. Benefit only simulated for individuals who are either unemployed or inactive.
FISP	Not linked to Cash Plus	It was not possible to model the eligibility criteria related to paying the farmers' contribution. All farmers that met the other eligibility criteria were therefore assumed to be able and willing to pay the ZMW 400 contribution to activate the voucher payment.

		It was not possible to model the eligibility criteria relating to the ownership of livestock due to unavailability of data. These data are, in fact, collected within the LCMS 2015, but it has not yet been possible to obtain them from the Zambian Central Statistical Office (CSO). It was also not possible to identify traditional leaders. Agricultural incomes are used as a proxy to assess whether a farmer is able to pay the contribution to register with the farmer organization or be captured in the farmer register. This information is furthermore used to differentiate between FSP and FISP recipients.
FSP	Planned to make it a Cash Plus programme to help beneficiary households to be food secure throughout the year especially during the lean months before the harvest	Only the rainfed cropping component is simulated as it is the only one that is currently financed. 10 per cent donations are not modelled as it is unclear who has a sufficient harvest to pay back and who is in the first year and who is in the second. Not modelled: households headed by terminally ill patients and institutions looking after orphans. Targeting of beneficiaries is facilitated at the community level by the Area Food Security Committees and cannot be modelled but is considered through the random assignment of the benefit to moderately poor households only. For farmers who, based on the simulated eligibility rules, are eligible for FSP and FISP, we only simulate the FSP for farmers with agricultural incomes below ZMW 400 per year, which is the registration fee for the farming organization necessary to receive FISP.

Note: detailed policy rules will be published in the MicroZAMOD Country Report 2.11 available here: https://www.wider.unu.edu/about/microzamod-%E2%80%93-simulating-tax-and-benefit-policies-development-zambia.

Table A2: Overview of official vs. simulated number of recipients by scenario

Programme	Official statistics	Official budgeted number	Simulated number after adjustments			
			Baseline	Scenario 1	Scenario 2	Scenario 3
SCT	632,377	700,000	635,311	629,192	629,192	677,805
SWL	39,829	129,400 by 2024*	41,233	39,922	39,922	39,922
HGSF	not available	not available	617,594	617,594	617,594	617,594
KGS	13,514	2,000/district**	14,431	14,395	14,395	46,914
CST	900	1,000	1,071	658	998	998
FISP	1,024,434	1,000,000	1,005,021	1,005,021	1,005,525	1,005,525
FSP	48,600	120,000	44,087	48,739	48,539	88,091

Note: * reached 111,650 women by 2020; we assume that the budgeted number has been reached. ** we simulate the programme in 22 districts and assume 44,000 recipients as the budgeted target. Adjustment refers to both downscaling of number of recipients and restricting multiple support.

Source: authors' own calculation using MicroZAMOD for simulated results. Official and budgeted numbers provided by the MCDSS.

Table A3: Social protection measures by population sub-groups and level of support—baseline

	Coverage rate	Poverty and inequality after benefits			Poverty and inequality reduction		
		Poverty headcount	Poverty gap	Gini	Poverty headcount	Poverty gap	Gini
Aged 0–17	76.7	44.5	19.1	51.9	-4.0	-4.4	-2.8
Aged 18–24	73.8	33.4	13.6	50.8	-3.8	-3.3	-2.1
Aged 25–64	73.7	34.7	14.1	56.7	-3.9	-3.6	-2.1
Aged 65+	98.4	44.3	18.0	52.2	-10.9	-9.7	-6.2
Person with disability	99.4	48.1	19.4	50.5	-10.9	-12.3	-8.1
Rural	79.7	58.4	25.1	42.4	-6.4	-6.5	-4.0
Urban	55.7	13.8	5.0	48.4	-1.1	-0.8	-0.6
Female-headed	92.1	41.4	18.4	53.5	-5.0	-6.1	-3.8
Male-headed	72.2	39.4	16.3	54.1	-4.0	-3.7	-2.3
High dependency ratio	79.6	53.0	23.2	49.1	-4.6	-5.9	-3.9
Low support districts	67.8	26.8	11.3	53.5	-2.6	-2.3	-1.4
Medium support districts	76.4	46.5	19.3	51.4	-4.5	-5.0	-3.2
High support districts	83.0	53.6	22.8	49.1	-6.3	-6.3	-4.0
Total	76.3	39.7	16.7	54.0	-4.2	-4.2	-2.6

Note: the reduction is presented in percentage points.

Source: authors' own calculation using MicroZAMOD.

Table A4: Social protection measures by population sub-groups and level of support—Scenario 1

	Coverage rate	Poverty and inequality after benefits			Poverty and inequality reduction		
		Poverty headcount	Poverty gap	Gini	Poverty headcount	Poverty gap	Gini
Aged 0–17	76.3	44.3	18.9	51.8	-4.1	-4.6	-2.9
Aged 18–24	72.6	33.4	13.5	50.7	-3.8	-3.4	-2.2
Aged 25–64	73.1	34.6	14.1	56.6	-4.0	-3.7	-2.1
Aged 65+	98.4	43.6	17.2	51.6	-11.5	-10.6	-6.8
Person with disability	99.4	46.7	18.3	49.8	-12.4	-13.4	-8.8
Rural	79.0	58.2	24.9	42.2	-6.5	-6.8	-4.2
Urban	55.7	13.8	5.0	48.4	-1.1	-0.9	-0.6
Female-headed	91.3	40.7	17.8	53.2	-5.7	-6.7	-4.2
Male-headed	71.7	39.4	16.2	54.1	-3.9	-3.7	-2.3
High dependency ratio	79.2	52.9	23.0	49.0	-4.7	-6.1	-4.0
Low support districts	67.3	26.7	11.2	53.5	-2.7	-2.4	-1.4
Medium support districts	75.9	46.4	19.1	51.3	-4.6	-5.2	-3.3
High support districts	82.4	53.5	22.6	49.0	-6.3	-6.6	-4.1
Total	75.7	39.6	16.5	54.0	-4.3	-4.3	-2.6

Note: the reduction is presented in percentage points.

Source: authors' own calculation using MicroZAMOD.

Table A5: Social protection measures by population sub-groups and level of support—Scenario 2

	Coverage rate	Poverty and inequality after benefits			Poverty and inequality reduction		
		Poverty headcount	Poverty gap	Gini	Poverty headcount	Poverty gap	Gini
Aged 0–17	75.7	44.4	19.0	51.8	-4.1	-4.6	-2.9
Aged 18–24	72.6	33.5	13.5	50.8	-3.7	-3.4	-2.1
Aged 25–64	72.5	34.7	14.1	56.6	-4.0	-3.7	-2.1
Aged 65+	98.4	43.5	16.9	51.4	-11.6	-10.8	-6.9
Person with disability	99.4	46.1	17.9	49.5	-13.0	-13.8	-9.1
Rural	78.5	58.3	24.9	42.2	-6.5	-6.8	-4.2
Urban	55.4	13.8	5.0	48.4	-1.0	-0.9	-0.6
Female-headed	91.6	40.6	17.8	53.1	-5.8	-6.7	-4.2
Male-headed	71.0	39.5	16.3	54.2	-3.8	-3.7	-2.2
High dependency ratio	78.7	53.0	23.0	49.0	-4.6	-6.0	-4.0
Low support districts	67.4	26.7	11.1	53.4	-2.7	-2.4	-1.4
Medium support districts	74.3	46.3	19.2	51.3	-4.7	-5.1	-3.2
High support districts	82.4	53.7	22.6	49.0	-6.2	-6.5	-4.1
Total	75.2	39.7	16.6	54.0	-4.2	-4.3	-2.6

Note: the reduction is presented in percentage points.

Source: authors' own calculation using MicroZAMOD.

Table A6: Social protection measures by population sub-groups and level of support—Scenario 3

	Coverage rate	Poverty and inequality after benefits			Poverty and inequality reduction		
		Poverty headcount	Poverty gap	Gini	Poverty headcount	Poverty gap	Gini
Aged 0–17	75.7	44.1	18.7	51.6	-4.4	-4.9	-3.1
Aged 18–24	72.6	33.2	13.2	50.6	-4.0	-3.7	-2.3
Aged 25–64	72.5	34.4	13.8	56.5	-4.3	-3.9	-2.3
Aged 65+	98.6	42.5	16.1	50.9	-12.6	-11.7	-7.5
Person with disability	99.6	44.8	16.9	49.0	-14.2	-14.8	-9.6
Rural	78.5	57.8	24.5	42.1	-7.0	-7.2	-4.3
Urban	55.4	13.8	4.9	48.4	-1.1	-0.9	-0.7
Female-headed	91.6	39.9	17.0	52.6	-6.5	-7.5	-4.7
Male-headed	71.0	39.2	16.1	54.0	-4.1	-3.9	-2.3
High dependency ratio	78.7	52.8	22.7	48.8	-4.9	-6.3	-4.2
Low support districts	67.4	26.6	10.9	53.3	-2.8	-2.6	-1.6
Medium support districts	74.4	45.8	18.8	51.1	-5.2	-5.5	-3.5
High support districts	82.4	53.2	22.3	48.8	-6.6	-6.9	-4.3
Total	75.2	39.4	16.3	53.8	-4.5	-4.6	-2.8

Note: the reduction is presented in percentage points.

Source: authors' own calculation using MicroZAMOD.