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Proposal for the extension, redesign, and repurposing of the SRD for the goal of poverty reduction

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Proposal for the extension, redesign, and repurposing of the SRD for the goal of poverty reduction

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Abstract
The study examines the special COVID-19 Social Relief of Distress grant (hereafter 'SRD') and provides recommendations to maximise its impact on poverty reduction. The SRD showed itself to be an excellent investment of government spending because it reduces poverty and can increase job search. The SRD in its current form has led to major reductions in food poverty. Without it, just over a quarter (26 percent) of the South African population (15.5 million individuals) live below the 2024 food poverty line of R760 per month (a measure of extreme poverty), without enough income to buy a basic basket of food items necessary for survival. We estimate that the current SRD value of R370 per month reduces this number by at least 3.8 million. This is a roughly 24% reduction in the incidence of extreme poverty. Further, we estimate that the current SRD could lead to a 48% reduction (from 10.45%) in the depth of extreme poverty. We argue that it is important to implement a more permanent version of the SRD that will continue to support the policy goal of reducing the number of people in poverty. We model the effects of different targeting rules, income eligibility thresholds, and grant amounts for the new grant on the number of beneficiaries, coverage of the poor, incidence of poverty, and cost of the grant. On the basis of these estimated outcomes, we recommend that the budget allocation to the grant be increased. We go on to propose four immediate methods to increase the potential impacts of the grant while a) keeping the cost within a fiscally feasible range and b) ensuring that the number of beneficiaries can be varied if needed depending on the fiscal situation.

Keywords
Social protection, national government expenditures and related policies, microeconomic policy, welfare, well-being, poverty

JEL classification
H53, I38

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Résumé
L'étude examine la subvention spéciale COVID-19 d'aide sociale à la détresse (ci-après « SRD ») et fournit des recommandations pour maximiser son impact sur la réduction de la pauvreté. Le SRD s'est avéré être un excellent investissement des dépenses publiques car il réduit la pauvreté et peut augmenter la recherche d'emploi. Dans sa forme actuelle, le SRD a permis de réduire considérablement la pauvreté alimentaire. Sans elle, un peu plus d'un quart (26 %) de la population sud-africaine (15,5 millions de personnes) vit sous le seuil de pauvreté alimentaire de R760 par mois (une mesure de l'extrême pauvreté), sans revenu suffisant pour acheter un panier de base d'aliments nécessaires à sa survie. Nous estimons que la valeur SRD actuelle de R370 par mois réduit ce nombre d'au moins 3,8 millions. Il s'agit d'une réduction d'environ 24 % de l'incidence de l'extrême pauvreté. De plus, nous estimons que le SRD actuel pourrait conduire à une réduction de 48% (contre 10,45%) dans la profondeur de l'extrême pauvreté. Nous soutenons qu'il est important de mettre en œuvre une version plus permanente du SRD qui continuera à soutenir l'objectif politique de réduire le nombre de personnes vivant dans la pauvreté. Nous modélisons les effets des différentes règles de ciblage, des seuils d'admissibilité au revenu et des montants de la nouvelle subvention sur le nombre de bénéficiaires, la couverture des pauvres, l'incidence de la pauvreté et le coût de la subvention. Compte tenu de ces résultats estimatifs, nous recommandons d'augmenter l'affectation budgétaire à la subvention. Nous proposons ensuite quatre méthodes immédiates pour augmenter les impacts potentiels de la subvention, tout en a) gardant le coût dans une fourchette financièrement faisable et b) en veillant à ce que le nombre de bénéficiaires puisse varier si nécessaire en fonction de la situation fiscale.

Mots-clés
Protection sociale, dépenses publiques nationales et politiques connexes, politique microéconomique, bien-être, bien-être, pauvreté

Introduction

South Africa has one of the largest cash transfer programmes in Africa (Patel et. al 2023). In 2020, the Social Relief of Distress (SRD) grant was introduced in response to the Covid-19 pandemic, initially targeting those with zero income and unemployed status. Unemployment rate had sky-rocketed and resulted in a substantial increase in poverty. In March 2022, close to 11 million people were receiving the grant (SASSA, 2022). Under half of the population now receives social assistance in the form of an unconditional cash transfer (Patel *et al*. 2023).

Empirical studies highlight that social grants are associated with positive effects on poverty and inequality (Köhler & Bhorat, 2021; The World Bank, 2018). They can also promote job search efforts and increase labour market activity. The SRD has led to major reductions in food poverty. Without it, just over a quarter of the South African population (15.5 million individuals) live below the 2023 food poverty line (FPL) of R760 per month, without enough income to buy a basic basket of food items necessary for survival.

This study aims to contribute to the body of knowledge on cash grants. We examine the SRD grant and provide recommendations to maximise its impact on poverty reduction. We argue that a more permanent version of the SRD will support the goal of reducing the number of people in poverty. We project the impact of different targeting rules, income eligibility thresholds and grant amounts on the number of beneficiaries, coverage of the poor, incidence of poverty and cost of the grant. The results highlight the need that the budget allocation to the grant be increased. We propose four methods to increase the potential impacts of the grant if more money were to be allocated in future budgets.

The paper is presented in four sections. Section 1 presents the background and context of the study, and the proposed improvements to enhance the grant's ability to reduce poverty. Projections of the coverage, cost and poverty impacts of the proposals are provided in section 2. Section 3 discusses the recommendations, issues and gaps in the current proposal, and avenues for possible solutions. The final section summarises central aspects of our analysis in the paper as a motivation for our key recommendations.

1. Background and context

This section will examine the existing empirical evidence on cash grants as a vehicle for poverty alleviation before outlining the evolution of the SRD grant and proposing modifications that can build on the existing successes to enhance the grant's ability to reduce poverty. We will argue that although targeting rules can support grant sustainability by ensuring the policy is flexible and affordable, the specific rules and methods of measurement chosen will have large impacts on the number and characteristics of beneficiaries. We will highlight some serious issues with the current SRD grant targeting and means testing. The section will conclude with our proposed improvements to this system, such as using a different income ceiling and using the bank data in different ways.

1.1. Literature review and empirical evidence: cash grants as a vehicle for poverty alleviation

This section is a summary of a previous literature review (Orkin *et al*., 2021). Specifically, we summarize the evidence on how cash grants can facilitate economic activity (subsection 1.1) in the context of South Africa. In addition, we briefly highlight that the benefits of cash grants can extend beyond the immediate support they bring to meeting an individual's basic needs. Empirical studies show that cash grants can promote job search efforts and increase labour market activity. Therefore, we argue that it is important to implement a more permanent version of the Special COVID-19 SRD grant. The grant will have a large impact on poverty reduction. Detailed citations to individual studies can be found in Appendix 1.

There is strong evidence from multiple developing countries that cash grant programmes do not discourage working, hours of work or job search (Banerjee *et al*., 2017). These findings apply for small conditional and unconditional grants and for basic income interventions, although there is only one study of basic income in a developing country. In studies where there were conditions on grant programmes, these conditions did not require job search or employment: they were applied to how grants were spent (e.g., on children's education).

Facilitating economic activity

Cash grants may enable people to start businesses. There is some evidence that cash transfers increase revenues or profits from existing enterprises. Households often start working more in such businesses. Grants may also help some households to start new non-farm enterprises, although such increases do not occur in all studies. There is stronger evidence that lump-sum transfers or basic income increase enterprise formation, revenue, profits and productive assets than for small government transfers. Receiving transfers prevented people from closing existing businesses during recent lockdowns.

Cash grants can lead to higher yields for agricultural households. Cash grant recipients produce more agricultural output, partly because they are more likely to purchase agricultural inputs like seed and fertiliser and agricultural tools. They also own more livestock and sometimes purchase livestock for the first time. Livestock likely offers greater food security and acts as a store of value. These effects may be less prevalent in the South African context, where fewer households engage in small-scale agriculture. However, they may still apply to the small portion of households who do subsistence agriculture.

Broader benefits of cash grants

Empirical evidence from developing countries strongly refutes the concerns that cash grant programmes discourage working, hours of work or job search. In fact, cash transfers have been found to finance an increase in job search or labour force participation, even if they go to another adult in the household. Increases in job search sometimes, but not always, lead to increases in employment. Cash grants also enable households to take riskier economic decisions with potentially high returns (e.g., migration (Ardington *et al*. 2009; Posel *et al*. 2006).

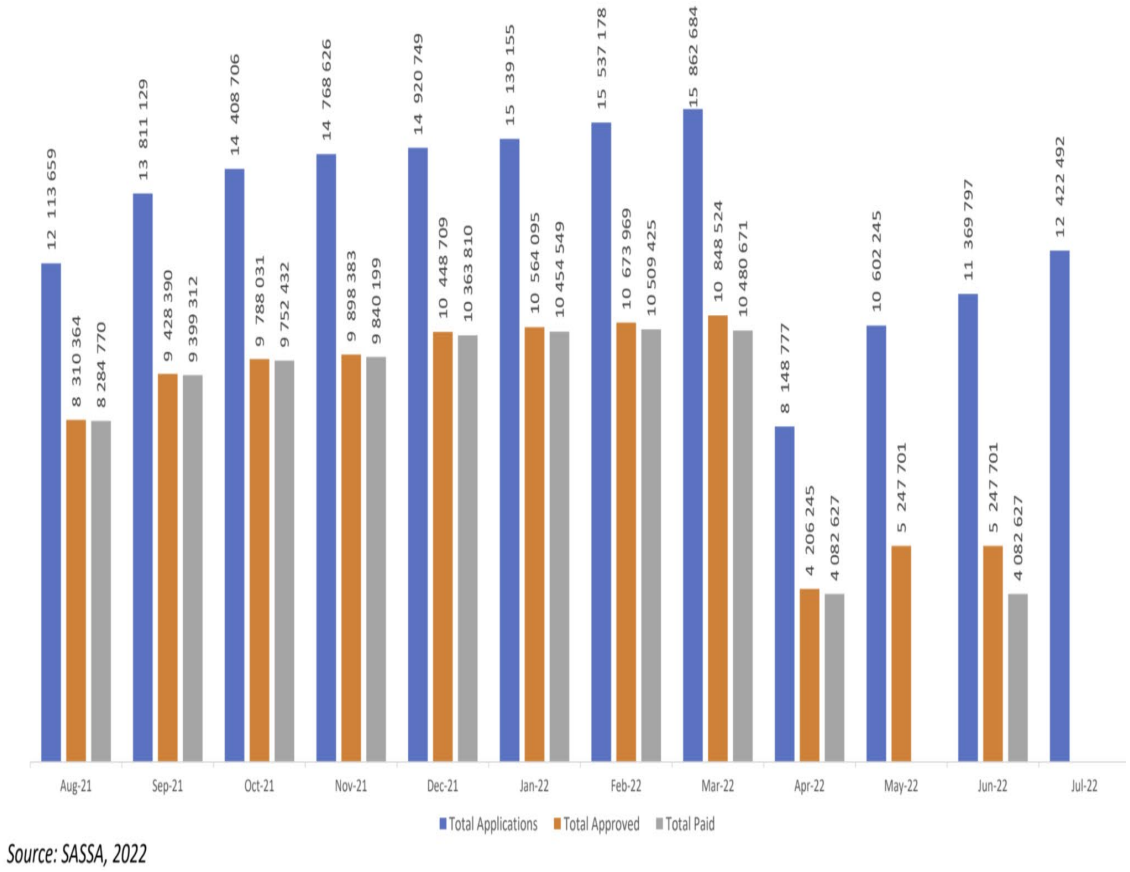
Job search costs are high in South Africa and not having any income prevents some individuals who might otherwise search for work. High search costs reflect the high transport costs from low-income neighbourhoods to business centres, the high cost of data in South Africa, and the sheer amount of search required when unemployment rates are high and there are many applicants for jobs. Empirical evidence from South Africa shows that existing cash grants promote job search, possibly by financing search costs. However, not all studies find that grant receipt increases employment. Further, there is some evidence to suggest that social transfers may encourage labour market activity, particularly for young, unmarried women and women who live in poorer households (see Table A2.2).

1.2 Background on the evolution of the Social Relief of Distress (SRD) grant

The South African Department of Social Development introduced the Special COVID-19 SRD of R350 per month in May 2020 to counter the negative effect of the pandemic. The shock to the South African economy had caused the unemployment rate to skyrocket and resulted in a substantial increase in the depth and breadth of poverty.

The SRD grant initially explicitly targeted those with zero income and unemployed status. In reality, the grant has largely targeted informally- and un-employed individuals. Individuals were required to make a declaration of unemployment which was then cross-checked with other databases including the Unemployment Insurance Fund.[1] A means test of R585 per month (the 2020 FPL) was only applied to individuals who appealed their grant denial (Goldman *et al.*, 2021). Initially the grant excluded individuals receiving caregiver grants (the foster care grant, child support grant, or care dependency grant), but this criterion was challenged and removed from August 202. In March 2022, close to 11 million people were receiving the grant (See Figure 1). The means test was rarely applied.

Figure 1. SRD applications, approvals and payments, April 2021 to July 2022



Source: Authors' construction based on South African Social Security Agency (SASSA) data.

[1] Many of the problems with these initial checks are written up in Goldman *et al.* (2021)

The application of a strict means test using banking data, which cannot discern between different sources of income, saw the number of approved individuals drop from 11 million to around 4.2 million. In April 2022, the grant means testing process changed, moving to a protocol in which every grant applicant's self-reported monthly income is verified against the total monthly inflows into their bank account. SASSA sends identity numbers to the banks and receives back a simple yes/no answer for whether income is above the threshold. SASSA also asks individuals to declare their income, and this could also be used to exclude their application, but the majority of applications are rejected because they fail the bank means test, not because of self-declared income.[2] All those with total bank account inflows of money larger than a ceiling of R350 per month are rejected.

New regulations were promulgated in August 2022 and the ceiling was raised back up to the level of the food poverty line (R624 per month in 2021 prices). The number of recipients readjusted to roughly 5 million people (just under half of the 12.5 million people living under the food poverty line) by July 2022. The strict nature of the bank test has resulted in the large majority of exclusions: as the total inflows into an individual's bank account may include both their own income and household transfers and loans—this often leads to those who actually fall below the FPL threshold, appearing as though they have income above the FPL and thus being rejected. Roughly 6 million applications were declined in May and June (2023), when the bank test was applied.

Benefits of using administrative data to enforce an eligibility ceiling

The use of grant applicant banking data to facilitate means testing of incomes has proven to be a valuable lever of control over grant expenditure. But, as detailed above, in South Africa this testing has excluded many eligible beneficiaries. Before we go on to propose improvements to this system, we describe the possibilities and limitations of this means test in ensuring the grant programme is affordable and flexible to economic circumstances.

Affordability

An untargeted grant is equivalent to a Basic Income Grant (BIG). We have modelled such a grant elsewhere. It is clear that in the short to medium term, for a plausible value of the grant, funding a BIG would require the introduction of new tax instruments or increases in debt. The annual cost of a working-age UBIG of R510 per month is R211.7 billion for 34.6 million direct beneficiaries of working-age (Goldman and Hlela, 2024). It may be possible to claw back R46.7 billion (roughly 22% of the cost) from taxpayers by increasing the Personal Income Tax threshold. The clawback alone is not sufficient to cover the funding gap. This leaves a cost of just under R100 billion.

[2] For example, in June 2022, 65% of rejections occurred due to the bank means test, 25% due to an individual's response, 8% because individuals were registered on UIF and the remainder for all other reasons (NSFAS registered 0.1%, failed ID verification 0.4%, on government payroll or pension 0.23%, in a government facility 0.01%, receiving SASSA grant 0.45%, debtor 0.55%, age outside range 0.28%). 11369797 individuals applied and 5247701 were approved. Source: SASSA 2022

It is unlikely to be possible to fund this in the short to medium term or to take on this amount in debt given Treasury's debt reduction commitments. Introducing new tax revenue instruments would take time and is risky. Possibilities for increasing tax revenue in the medium term include increases to the Personal Income Tax (PIT) and value-added tax (VAT) rates, removal of medical tax credits, or the implementation of a wealth tax. The VAT increase is the easiest to implement, but is regressive. Little is known at this stage about the behavioural response to these policy changes and there is no guarantee that the expected revenues would materialise in reality to the extent that is required.

Thus, in South Africa's contemporary fiscal realities, it is useful to explore effective and efficient ways of applying an income ceiling to the grant in order to target it at those most in need. Or, put slightly differently, for any given budget allocation, to maximise the possible value of the grant for the target group.

Flexibility

Banking data can be used to change eligibility thresholds in response to fiscal or other conditions. Certainly, implementing the strict bank account means testing rule in April 2022 resulted in a sharp decrease in the number of grants paid. In our view, this targeting excluded a number of very poor beneficiaries who would have been assessed as below the food poverty line on many metrics, even if they did not meet the precise threshold. However, it demonstrates that SASSA is able to reduce the number of beneficiaries through changing these thresholds for fiscal reasons.

In contrast, if there is increased economic prosperity, or there is an economic crisis where more support is required, the threshold can be raised to increase the number of individuals included in the transfer scheme. Other countries have successfully controlled the number of grant recipients using data from applicants to adjust the eligibility thresholds while monitoring the cost implications of these changes. During the COVID-19 pandemic, Brazil, Argentina, Indonesia and Jordan (see Appendix 2: Table A2.1) temporarily expanded the eligibility conditions for social transfers and adjusted the conditions of the transfers over time (Gentilini, 2022). For example, in Brazil, the government used income data from those who were means tested for Bolsa Familia but outside of pandemic circumstances were defined as too rich to get the grant. Brazil gave them an emergency transfer, the *Auxilio Emergencial* transfer. In other words, the government raised the income ceiling required to get an emergency grant.

Concerns with the current banking means test

Theoretically, the current means test is likely to exclude many poor individuals. The combination of the type of means test being used and the very low-income ceiling of R760 per month (above which an individual is excluded from the SRD) mean that a large number of people with income below the food poverty line are likely to be excluded from the SRD.

This is an unintended consequence of heavily prioritising the exclusion of wealthier individuals who do not have regular income but are not in need of social assistance. This subsection explains in more detail how the banking means test may exclude a large number of eligible individuals.

The banking means test simply confirms an individual's eligibility by verifying their self-reported income against their bank account data. Any inflow into an individual's account is counted as income; and those with inflows above a ceiling of R760 per month are deemed ineligible. However, this method cannot differentiate between different sources of income. As such, the inflows into an individual's account may include their individual earnings and/or household transfers and loans (e.g., coming from a spouse or other household member). Further, an individual themselves may transfer part of their earnings to a household member.

Not being able to differentiate between sources of income incorrectly excludes many eligible individuals. For example, SASSA may measure the earnings of one household member's bank account and then, if some of those earnings are transferred to a household member's account, they are measured again. This is in some senses, a double counting of intrahousehold transfers, because it will often be measuring individual and per capita household income simultaneously. (In the rest of the paper we refer to this as the 'current scenario'.) Importantly, economists typically measure an individual's income as their per capita household income, which is the total income earned by all members within a household divided by the number of household members. Further, a household with per capita income below the food poverty line[3] is considered in food poverty. In other words, a household is classified as living in extreme poverty if, when the household pools its different sources of income, the household cannot buy enough food and basic goods for all members to meet basic survival needs. The implication of double counting intrahousehold transfers is that many individuals who receive money from other household members into their bank account (as well as those who transfer money to other household members) may be excluded by the banking means test, even if they and their household have per capita household income below the food poverty line.

[3] The food poverty line is the cost of all goods and services considered essential to meet a person as survival and consumption needs.

Box 1. Example of differences in eligibility for the SRD depending on the data used

Imagine Thabo receives R900 in monthly income, and Nosizwe, his spouse, earns R400 in monthly income. They have a total household income of R1300 and household per capita income of R650. The food poverty line, the threshold used for the SRD, is R760 per month in 2023 prices, so their per capita household income falls below this line. They are in food poverty.

Under a per capita income measure, both Thabo and Nosizwe would receive the SRD. Under a pure individual income measure, only Nosizwe would receive the SRD. In reality, however, we do observe per capita household income, as banks cannot currently link individuals who are married to each other.

There are situations where neither of them would qualify for the SRD grant in the bank means test, depending on whether they transfer money between their bank accounts. For example: if Thabo receives R900 in income, and transfers R400 to Nosizwe, his spouse, who earns R400, Thabo will be rejected from the SRD because R900 > R760. Nosizwe will also be rejected from the SRD because her bank account will show inflows of R400 (her income) + the transfer from Thabo (R400) = R800. This makes the test particularly exclusionary. Implementing a similar double-means-test to the best of our abilities dramatically reduces the number of eligible individuals from 16.4 million to 7 million (Figure 2).

The use of banking data to measure income implies a difficult trade-off. While monthly bank account inflows are a less accurate measure of an individual's per capita household income, individuals cannot misreport income as it is captured in their banking data and so government can be confident that ineligible wealthy individuals are not misreporting their income in order to be included among the SRD grant beneficiaries.

In contrast to the current SRD's method of determining eligibility (*i.e.*, the banking means test), the methods used for other SASSA grants rely primarily on self-reported income. For example, for the Child Support Grant (CSG), the grant application form contains a section describing the type of income that the applicant, their spouse and their dependent child receive, any income they've donated, and any permissible deductions incurred. Proof of income or an affidavit is required; however, income cannot be verified by SASSA. This method is likely to provide a much more accurate measure of an individual's per capita household income relative to the banking means test. Although, it does allow for individuals to misreport income—which is not possible when banking data is directly monitored.

Table 1. Types of means tests applied by SASSA

Description	CSG	SRD
Measure of income	Household income, adjusted to the number of people in the household.	Inflows into an individual's bank account
Threshold or cut-off, above which individuals are not eligible for the grant	R4400 / month for single caregivers R8800 / month (R4400 per spouse) for married caregivers	R760 / month

Source: Authors' construction.

Another notable concern of the banking means test is that people who have a low average monthly income over a long period but have a once off spike in income in the month when the bank means test is done, will be excluded from the SRD. This problem was picked up in Brazil's Bolsa Familia. Analysis showed that the poorest families may go over a low-income threshold in certain months but are rarely able to sustain this level of income over multiple months (Brazil Learning Initiative, 2017; Centre for Public Impact, 2019).

Box 2. Example of differences in eligibility for the SRD due to short term spikes in income

For example, Dale earns R200 per month from June to September, but in October when the bank means test is done, he earns R700. Over this period, he earns R1500, way below the food poverty line of R624 x 5 = R3120. Using an average measure of his income, he should be eligible for the SRD. Using the bank means test in October, he is not eligible for the SRD.

Concerns with the R760 (food poverty line) eligibility ceiling

We believe that the current income threshold, where anyone receiving inflows over R760 in a month is deemed ineligible, is unnecessarily strict. Those living below the lower bound (R1,058) and upper bound (R1,558) poverty lines are currently excluded from the grant. The lower and upper bound poverty lines refer to the food poverty line plus the aggregate amount derived from non-food items of households whose food expenditure is equal to the food poverty line. While these individuals may be marginally 'better-off' than those living below the FPL, they are still incredibly poor and would also most likely benefit from income support to be able to search for work. Further, increasing the threshold to the upper bound poverty line will also likely capture those who are actually in a state of extreme poverty, but have been excluded as a result of the banking means test.

The Department of Social Development (DSD) intentionally designed the means test to exclude individuals that might be receiving support from a family member that brought them above the ceiling (Paton, 2022). This process aims to ensure individuals at the upper end of the distribution, living in wealthy households, are excluded. It likely does this quite successfully. However, because the income eligibility ceiling is extremely low, at R760 per month, this process is also unfairly excluding poor individuals.

Concerns with the R370 grant

The current grant amount of R370 is R60 less than what the grant would be if it had kept up with inflation since its introduction in 2020. As of 1 April 2023, the SRD grant increased from R350 to R370, which is the first increase in the grant amount since its inception. However, this is only a partial adjustment for inflation and thus, in real terms, the value of the grant remains less than the amount received in 2020. In addition, R370 is well below the food poverty line of R760 (49% of the 2023 food poverty line). In 2020, the SRD grant amount of R350 was 60% of the 2020 food poverty line (R585). Therefore, the degree to which the SRD grant can support individuals (in terms of meeting their basic needs and assisting with job search) has deteriorated since its inception. Further, as noted, all other social assistance grants are adjusted on a bi-annual basis.

Concerns with the UIF exclusion criterion

The Unemployment Insurance Fund (UIF) exclusion criteria may exclude many eligible beneficiaries as UIF data is updated infrequently and often inaccurately. There is rapid 'churn' in the South African labour market, so people move in and out of employment often and we know that this is not well captured in current data, that firms often do not accurately report on changes, and there is a lag in IRP5 self-employment tax records as these are only available for the preceding tax year. In turn, this suggests that many individuals may be excluded from the SRD even though they are not receiving UIF.

This exclusion criterion may also discourage individuals to register for the UIF and rewards informalisation of the labour market. UIF provides short-term financial relief to workers if they become unemployed or cannot work because of maternity, adoption leave or illness.

As such, it serves as a critical safety net while individuals either search for new work or are unable to work for a short period.

1.3 Proposals for changes to the current SRD

We are unclear how the current means test and ceiling for the SRD were decided. They may have been intended to make any individuals who were receiving income above the food poverty line ineligible for the SRD, on the grounds that they were not in food poverty. It is likely that the means test is achieving this goal. However, it is also likely that this means test, combined with the eligibility ceiling, is excluding many individuals who are in food poverty, but who happen to fail the means test.

We propose five design improvements to improve the existing grant in the immediate future and in the medium term:

Table 2. Problems and solutions for the existing SRD

Immediate proposals

Problem	Proposal
1. Poor recipients are unfairly excluded because of double-counting of income that is transferred between family members.	Increase the eligibility ceiling to R1,558 per month (the level of the upper bound poverty line, the UBPL). This will reduce the possibility of excluding individuals with income near the food poverty line because fewer people will be excluded with income between R760 and R1,558.
2. Currently individuals receiving UIF payments are excluded from the SRD. This can discourage registration for UIF.[4] In addition, UIF data is updated infrequently and often inaccurately, so people can be excluded from the SRD even though they aren't receiving UIF.[5]	Remove the UIF criterion.
3. Lumpy inflows of income into bank accounts will result in poor recipients being excluded from the grant.	Measure income in the banking data as an average over a 3- to 6-month period.
4. The size of the grant is relatively small and has been decreasing in real terms.	Increase the size of the grant to the extent that it is fiscally feasible.

[4] In simple terms, the UIF criterion incentivizes people to stay off the government database.

[5] For example, a former UIF beneficiary might be excluded because of the lag it takes to update the data.

Longer-term proposals

Problem	Proposal
1. Being unable to identify formally employed individuals due to the lack of reliable data means that some individuals who are formally employed are currently receiving the grant.	Use a combination of self-reported and firm data to identify those who are formally employed.
2. Continuing to use banking data to measure income will discourage people from the banking system.	Use self-reported income in the place of banking data, at a higher eligibility ceiling, combined with incentives to accurately report income (e.g., audits), and clear information about the grant to encourage individuals with higher income (which includes those who have higher individual income and/or per capita household income) to self-exclude.

Source: Authors' construction.

2. Projections of the impacts of our proposals

This section provides projections of the coverage, cost and poverty impacts of the proposals outlined in subsection 1.3. To achieve this, we develop a model of South Africa's current economic environment to simulate scenarios that correspond to our proposals for modifying the grant (as well as our best approximation of the 'current' scenario). We model each scenario for a number of eligibility ceilings based on relevant national reference points for poverty-reduction and wage income. Further, we also examine varying the grant size from R370 to R430, R530 and R760 per month.

Due to data constraints, we are unable to identify those who do or do not receive UIF – and thus, our depiction of the 'current' scenario may slightly overestimate the number of currently eligible beneficiaries, as well as the poverty impacts of the current grant. However, as discussed above, the UIF exclusion criterion is unfairly excluding many eligible individuals given that UIF data is updated infrequently and often inaccurately. Thus, removing this criterion is likely to capture more accurately those who should be eligible for the grant.

Our projections find that increasing the income ceiling would not result in an explosion in the number of eligible grant beneficiaries. Rather, the number of beneficiaries, and the corresponding cost of the grant remain fiscally reasonable, with reduced exclusions of people in poverty.

Our model projects that by raising the eligibility ceiling to R1,558 per month in the short-term, we would almost double our coverage of the UBPL poor, to roughly 42%. We estimate the cost of this option at R58.6 billion. By raising the size of the grant to R430 per month in the short-term, we would reduce extreme poverty by 1.3 additional percentage points relative to the current grant amount (this is equivalent to 0.79 million people protected from extreme poverty). This would increase the cost from R58.6 to R68.1 billion depending on the precise scenario.

2.1 The scenarios

To evaluate the poverty impacts and costs associated with our proposals (and how they compare to the current SRD grant), we model five possible scenarios which reflect these proposals (and the current SRD grant). We provide estimates of the number of beneficiaries, coverage of the UBPL poor, cost, and impact on poverty incidence/depth of these various scenarios.

The scenarios are as follows:

1. The first scenario simulates an individual means-test mechanism ('indv' scenario) which is designed to correspond to the means-testing mechanism of the pre-April 2022 version of the SRD but without taking exclusion errors and self-exclusion into account i.e., assuming everyone who is eligible applies and receives the grant.

2. The second scenario we believe fairly accurately simulates the existing 'double counting' scenario ('current' scenario) described in 'The evolution of the Social Relief of Distress (SRD) grant', by simultaneously implementing both an individual and a household ceiling at the same level and disqualifying people who receive short term spikes in income. However, due to data limitations, we are unable to account for the current UIF exclusion criterion and thus, we are likely to slightly overestimate the number of beneficiaries and poverty impacts of the current grant. Nonetheless, this scenario likely gives us a good approximation of the likely effects of the grant if the UIF criterion were to be removed.

3. The third scenario simulates the 'double-means-test' scenario and extends this scenario by measuring consumption expenditure instead of income to proxy a smooth measure of income ('income avg 6 months' scenario).[6]

4. The fourth scenario is the same as the double-counting ('current') scenario except that we drop those who are formally employed. This scenario removes individuals who would be considered ineligible for the grant (given current criteria) if the government had access to employment data.

5. The fifth scenario simulates a self-exclusion scenario (which reflects the 'long-term proposal' scenario) in which the grant is designed with an individual means-testing mechanism, combined with a number of elements designed so as to discourage those in the upper deciles from applying. These design mechanisms are discussed in greater detail in sections on flexibility and control and improving targeting in the long term. Mechanisms include self-targeting methods and labelling the grant to communicate its purpose. For modelling purposes, in this scenario, we assume that the incentives result in 100% take-up in deciles 1-3, 80% take-up in deciles 4-5, 60% take-up in deciles 6-7, and zero take-up in deciles 8-10.

We model each scenario for a number of eligibility ceilings based on relevant national reference points for poverty-reduction and wage income. These ceilings are the 2023 food poverty line (FPL) at R760 per month, the 2023 Lower-bound Poverty Line (LBPL) of R1,058 per month, the 2023 Upper-Bound Poverty Line (UBPL) of R1,558 per month and the 2024 National Minimum Wage (NMW) of R4,744 per month. While it is less relevant as a point of reference

[6] The idea is that households or individuals who receive irregular income shocks know that income is irregular and 'smooth' expenditure over time. For example, Dale earns R200 per month from June to September, but in October, he earns R700, and then he earns R200 per month again. He will likely not spend all R700 in October as he knows he is unlikely to receive such large income again. See Deaton, A. 1992. Understanding Consumption. Oxford UK: Oxford University Press.

for a grant aimed at poverty and unemployment reduction, we also show the Child Support Grant (CSG) ceiling in the table, to demonstrate how much larger it is in comparison to the existing SRD ceiling at R4,600 per month.

We also examine varying the grant size from R370 to R430, R530 and R760 per month. The current SRD grant amount is relatively small. R370 is well below the food poverty line and has only been partially adjusted for inflation since the SRD grant was first implemented in May 2020. The grant amount has thus decreased in value in real terms (reduced from 60 to 49% of the food poverty line).

Grant size is a policy lever available to the government. However, it is common for the monetary amount of a grant to be determined through a process of compromise between policy priorities and what budgetary allocation is available. This appears to have been the case with the R350 grant. There aren't compelling moral or ethical justifications for preserving the grant amount in real value. On the contrary, if there were available funds in the treasury, it could be advantageous to raise the grant by an amount exceeding inflation.

There is substantial scope for improved poverty reduction effects by increasing the grant amount. In the following section, we examine how grant size and grant eligibility ceiling affect total cost of the grant and poverty outcomes for recipients. We examine the impact of an increase of 16% (R430 per month), 43% (R530 per month) and of 105% (which would take the amount up to the size of the food poverty line of R760 per month). We find that increasing the grant size typically has a greater impact on poverty reduction than raising the ceiling does. While the R760 grant has more conceptual logic (as it is based on the cost of consuming enough calories to survive), it might be too large a jump in magnitude in terms of the budget. Table 3 summarises the ceiling and grant sizes that we show here.

Table 3. Modelled SRD ceilings and their values

<table>
<tr><th>Ceiling</th><th>Monthly ceiling</th><th colspan="4">Size of monthly grant</th></tr>
<tr><td>Food poverty line</td><td>R760</td><td rowspan="4">R370</td><td rowspan="4">R430</td><td rowspan="4">R530</td><td rowspan="4">R663</td></tr>
<tr><td>Lower-bound
poverty line</td><td>R1,058</td></tr>
<tr><td>Upper-bound
poverty line</td><td>R1,558</td></tr>
<tr><td>National
minimum wage</td><td>R4,744</td></tr>
<tr><td>Reference point</td><td>Monthly ceiling</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Child support grant</td><td>R4,400 for single caregivers
R8,800 for married caregivers</td><td></td><td></td><td></td><td></td></tr>
</table>

Source: Authors' construction.

The estimates generated here are based on nationally representative income and expenditure household survey data. We update the Living Conditions Survey 2014/15 to 2021 using a combination of population and demographic reweighting, income and consumption nowcasting, and we introduce unemployment shocks based on the changes in the Quarterly Labour Force Survey from 2015 to 2021 (Bassier *et al.*, 2022).[7]

2.2 Summary of estimated costs and poverty impacts of different changes

In Table 4 we summarise the estimated cost and poverty impacts of implementing our proposed modifications. The detailed projections of every scenario we model are presented in the section on cost and poverty impacts that follows. All of the figures represent our best estimates of the likely impact of the grant; however, they assume we have accurately modelled the South African economy and that the implementation of each of the scenarios follows our assumptions of behaviour.

Table 4. Estimated effects of our proposals

Immediate proposals	
Proposal	**Projected cost and poverty impact**
Increase the eligibility ceiling to R1,558 per month (the level of the upper bound poverty line, the UBPL). This will reduce the possibility of excluding individuals with income near the food poverty line because fewer people will be excluded with income between R760 and R1,558.	Assuming the grant size remains at R370 per month, this proposal would: Increase the number of beneficiaries from 7 million to 12.5 million. Increase coverage of the upper bound poverty line poor from 22.8% to 41.7%. Increase cost from R32 billion to R58.6 billion. Reduce food poverty by 7 percentage points (current grant reduces food poverty by 6.2 percentage points). Reduce upper bound poverty by 3 percentage points (current grant has zero impact on reducing upper bound poverty). Reduce the poverty gap (in relation to the FPL) by 5.2 percentage points (current grant reduces the poverty gap by 5 percentage points). Reduce the poverty gap (in relation to the UBPL) by 5 percentage points (current grant reduces the poverty gap by 2.8 percentage points).

[7] See 'Data Appendix 1: Updating LCS 2014/15 to 2021' for more information on the process of updating the dataset.

Measure income in the banking data as an average over a 3- to 6-month period.	Depends on the eligibility ceiling. All projections here assume eligibility is increased to R1,558 per month, the grant size is R370 and compares single month to six-month income measure. See the cost and poverty impacts section for details. Number of beneficiaries increases from 13.2 to 13.3 million. Coverage of upper bound poverty line poor increases from 41.7% to 42%. Cost increases from R58.5 to R59.0 billion. Reduce food poverty by 6.7 percentage points (current at R1,558 ceiling reduces food poverty by 7 percentage points). Reduce upper bound poverty by 3.4 percentage points (current at R1,558 reduces upper bound poverty by 3 percentage points). Reduce the poverty gap (in relation to the FPL) by 5 percentage points (current at R1,558 ceiling reduces the food poverty gap by 5.2 percentage points). Reduction in the poverty gap (in relation to the UBPL) remains the same at 5 percentage points.
Increase the size of the grant	Depends on the eligibility ceiling. All projections here assume eligibility is increased to R1,558 per month and the six-month income measure is adopted. The R370 size grant is compared to R430, R530 and R760 size grants. See the cost and poverty impacts for details. R370 to R430: Increase cost from R59.0 billion to R68.5 billion. The reduction in food poverty increases from 6.7 to 7.9 percentage points. The reduction in upper bound poverty increases from 3.4 to 4.2 percentage points. The reduction in the poverty gap (in relation to the FPL) increases from 5 to 5.7 percentage points. The reduction in the poverty gap (in relation to the UBPL) increases from 5 to 5.7 percentage points. R430 to R530: Increase cost from R68.5 billion to R84.5 billion. The reduction in food poverty increases from 7.9 to 10.1 percentage points. The reduction in upper bound poverty increases from 4.2 to 5.3 percentage points.

	The reduction in the poverty gap (in relation to the FPL) increases from 5.7 to 6.7 percentage points. The reduction in the poverty gap (in relation to the UBPL) increases from 5.7 to 7 percentage points. R530 to R760: Increase cost from R84.5 billion to R121.2 billion. The reduction in food poverty increases from 10.1 to 15.7 percentage points. The reduction in upper bound poverty increases from 5.3 to 8.2 percentage points. The reduction in the poverty gap (in relation to the FPL) increases from 6.7 to 8.3 percentage points. The reduction in the poverty gap (in relation to the UBPL) increases from 7 to 9.7 percentage points.
Longer-term proposals	
Proposal	**Cost and poverty impact**
Use firm and self-reported data to identify and subsequently exclude individuals who are formally employed.	Assuming the grant size remains at R370 per month, eligibility is increased to R1,558 per month and is compared to 'current scenario'. See the cost and poverty impacts section for details. Decrease in cost from R58.6 to R55.5 billion. Decreases in number of beneficiaries from 13.2 million to 12.5 million. Decrease coverage of the upper bound poverty line poor from 41.7% to 39.6%. Reduce food poverty by 6.6 percentage points (current grant reduces food poverty by 7 percentage points). Reduce upper bound poverty by 2.9 percentage points (current grant reduces upper bound poverty by 3 percentage points). Reduce the poverty gap (in relation to the FPL) by 5 percentage points (current grant reduces the poverty gap by 5.2 percentage points). Reduce the poverty gap (in relation to the UBPL) by 4.7 percentage points (current grant reduces the poverty gap by 5 percentage points).

Use self-reported income in the place of banking data, at a higher eligibility ceiling, combined with incentives to accurately report income (e.g., audits), and clear information about the grant to encourage individuals with higher income to self-exclude.	Depends on the eligibility ceiling. All projections here assume eligibility is increased to R1,558 per month and the grant size is R370. The self-targeting policy is adopted and the comparison scenario is the current scenario. See the cost and poverty impacts section for details. Number of beneficiaries increases from 13.2 million to 13.9 Reduce coverage of the upper poverty line poor from 41.7% to 38.7% Cost increases from R58.6 billion to R61.7 billion. Reduction in food poverty remains the same (7 percentage points). Reduce upper bound poverty by 2 percentage points (current at R1,558 ceiling reduces upper bound poverty by 3 percentage points). Reduction in the poverty gap (in relation to the FPL) remains the same at 5.2 percentage points. Reduce the poverty gap (in relation to the UBPL) by 4.7 percentage points (current at R1,558 ceiling reduces poverty gap by 5 percentage points).

Source: Authors' construction.

In the long-term, the strict bank test risks discouraging the use of the banking system for those not in the formal sector. The means test is likely, therefore, to become gradually less effective for targeting the grant. We propose moving away from the banking means test in the longer-term towards a grant design in which individuals self-report their income. This increases the number of beneficiaries to 12.6 or 13.9 million at the R760 or R1,558 ceilings respectively. The estimated cost would be R55.9 billion or R61.7 billion.

An alternative option would be to raise the threshold to the level of the national minimum wage. At this level, most individuals would be receiving salaries through their bank accounts, and choosing not to use the banking system is no longer an option. This is probably the most effective option from a targeting point of view; however, this would increase the cost of the grant substantially from R58.6 to R93.4 billion.

In the following sections we describe each of the scenarios in detail. We estimate the numbers of beneficiaries and coverage at each of the grant ceilings (Section 2.3), the cost of each of the grant ceilings at the different grant sizes (Section 2.4).

2.3 Direct beneficiaries and coverage at the upper bound poverty line

In this section we report the details of the modelling and the projected number of beneficiaries receiving the grant for each of the modelled scenarios discussed above, as well as the projected proportion of the UBPL poor population covered by the grant.

2.3.1 Individual means-testing

We simulate the Special COVID-19 SRD as closely as possible based on existing criteria according to the SRD programme rules. We find that 16.9 million people are theoretically eligible for the grant at an individual income threshold of R760 per month (See 'Indv' bar in Figure 2), not on the government payroll or public works, not receiving an existing grant (unless a caregiver grant), and not a formal-sector worker (Table 1).

These beneficiary numbers are very close to the numbers of applications that we were seeing prior to the lowering of the threshold and the new implementation process applied in April 2022. In March 2022 we saw close to 16 million applicants, with nearly 11 million of those approved. Goldman *et al*. document that we could expect to see around 33% exclusion errors given the previous verification process, and so it is unsurprising that roughly 33% of applicants are not approved (Goldman *et al*., 2021). Furthermore, it is currently unclear whether the grant is reaching some in the most vulnerable groups, such as people living in rural areas, without smartphone access or without basic English literacy, who may not be applying.

At the R760 ceiling, coverage is highest in this scenario with an estimated 37.9% of the poor population measured at the UBPL (Figure 2b). Coverage increases by only 3.8 percentage points with the increase from the R760 ceiling to the R1,558 ceiling (1.2 million individuals), and by a further 5.2 percentage points with the increase to the R4,744 ceiling (1.6 million individuals).

The problem that is faced by the DSD in this scenario is that in applying the individual income criteria, a fairly large number of non-poor individuals (who have per capita household income above the UBPL threshold—see The evolution of the Social Relief of Distress (SRD) grant for an explanation) with individual income below the threshold technically qualify for the grant—although we do not know whether they would have applied for it.[8] Table 5 shows that only 42.5% of those eligible for the SRD at the food poverty line (FPL) of R760 per month were actually the extreme poor (measured by per capita household income below the FPL), 71% were poor, and 8.1% of those in the richest 20% of the country were technically eligible for the grant. It seems fairly likely, however, that the majority of those in the richest 20% would have chosen to self-exclude.

Table 5. Proportion eligible for SRD which are poor, or in the upper deciles

Population group	Proportion eligible for SRD
FPL poor	42.5
UBPL poor	71.1
Decile 9 & 10	8.1

2.3.2 Current scenario

Applying a combination of the individual and per capita means test 'double-means-test' in the survey data reduces the number of beneficiaries from 16.9 to 7.2 million at an eligibility ceiling of R760 per month ('Current' scenario, Figure 2a, R760 ceiling). We expect this scenario to best approximate the existing situation; however, as noted, we are unable to identify those who are UIF recipients and thus we may be slightly overestimating the current number of eligible beneficiaries.

If we are to continue to implement the grant using the existing bank account test, raising the threshold to at least the UBPL of R1,558 per month will make a substantial difference to the number of poor recipients excluded from the grant. Increasing the threshold to the UBPL in the double-means-test scenario raises the number of beneficiaries to roughly 13.2 million, while increasing it to the National Minimum Wage (NMW) reaches 21 million beneficiaries.

[8] Recall: per capita household income is the most common measure of poverty. It captures household income divided by the number of people in the household. This accounts for households sharing income within the household. Individual income in this data is income that would likely flow into their bank account. In the data we are able to pick up income from wages and salaries net of taxes and contributions, rental income, pensions and retirement annuities, non-caregiver grant income, alimony, shares and dividends, loans from friends or family, moneylenders, or student and educational loans.

At the R760 ceiling, coverage of the poor is low in this scenario, with 22.8% of the UBPL poor covered. However, this increases substantially (by 18.9 percentage points, or 6 million poor individuals) when we increase the threshold to R1,558 and increases by a further 5.2 percentage points (1.6 million individuals) when the ceiling is raised to R4,744. While it is clear that we need to make the SRD affordable at the national level, double-means-testing, at a low threshold such as the FPL threshold, is problematic, excluding almost 80% of the poor population. The question is: how can we retain the ability to exclude those who apply even if they are not poor, while simultaneously reducing the numbers of poor that are being unfairly excluded?

2.3.3 Measuring income over a (3- to) 6-month period

We recommend measuring an average of monthly income over a 3–6-month period. Monthly income in any one month is a poor proxy for underlying income. Low-income households see major fluctuations in income, and analysis has shown that while the poorest families may go over the self-reported income ceiling in certain months, they are rarely able to sustain this level of income.

Bolsa Familia is an example of a case where the adjustment from measuring income in any one month to measuring income over a period of 2 years has been implemented. Implementation was adjusted to evaluate eligibility less regularly and to continue to include households who usually fell below the ceiling even if they went above it in some months (Centre for Public Impact, 2019). In 2010 the administration began targeting households based on their average income over the preceding two-year period. Every two years household status is re-evaluated, and eligibility is also regularly assessed against administrative data on employment from firms (similar to the UIF data used in the South African context, see Appendix 2). Households are only removed from the grant if a spike in income occurs which exceeds half of one minimum wage per capita.

The South African survey data suggests that working with a smoother measure of income results in a fairly small variation on the number of beneficiaries ('Income 6 mnths' scenario, Figure 2a). Given that consumption tends to vary less than income, we use consumption as a proxy for a measure of income averaged over several months—given that consumption tends to vary less than income. The smoother measure reduces the number of beneficiaries slightly at the R760 ceiling and the R1,058 ceiling from 7.2 to 7 million and from 9.8 million to 9.6. In contrast, the number of beneficiaries increases slightly at the R1,558 ceiling from 13.2 to 13.3 million and at the R4,744 ceiling from 21 to 21.8 million.

At the R760 and R1,058 ceilings, coverage of the poor reduces from 22.8 to 22% and from 30.9% to 30.5%. In contrast, at the R1,558 ceiling, coverage of the poor increases from 41.7 to 42%. At the NMW ceiling, coverage of the poor, once again, reduces slightly from 46.9 to 46.7% (Figure 2b).

While the difference to the number of beneficiaries is small, it is a fairer way of determining eligibility, and the impact on those individuals who would otherwise be unfairly excluded by a lumpy payment is large. Less frequent evaluations and changes to grant recipient status will support individuals to plan given the certainty of receiving the grant for the duration of the period and may reduce the administrative burden for SASSA employees through reducing the frequency of checks and of appeals.

2.3.4 Drop formally employed

We recommend, in the longer-term, utilising both firm and self-reported data to identify and subsequently exclude those who are formally employed from receiving the grant

Dropping formally employed individuals decreases the number of beneficiaries from 7.2 million (in the current scenario) to 7 million at the R760 per month ceiling. At the R1,558 and the NMW ceilings, the number of beneficiaries decreases from 13.2 to 12.5 million and from 21 to 18.2 million, respectively.

It also reduces coverage of the UBPL poor slightly. Coverage decreases from 22.8 to 22% at the R760 ceiling, from 41.7 to 39.6% at the R1,558 ceiling and from 46.9 to 42.4% at the R4,744 ceiling.

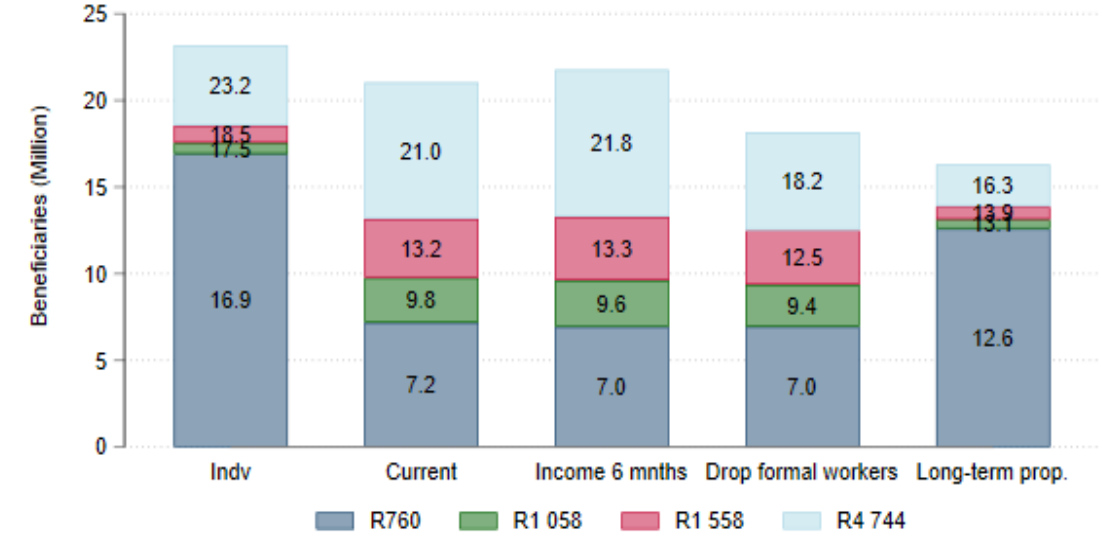
2.3.5 Longer-term proposal

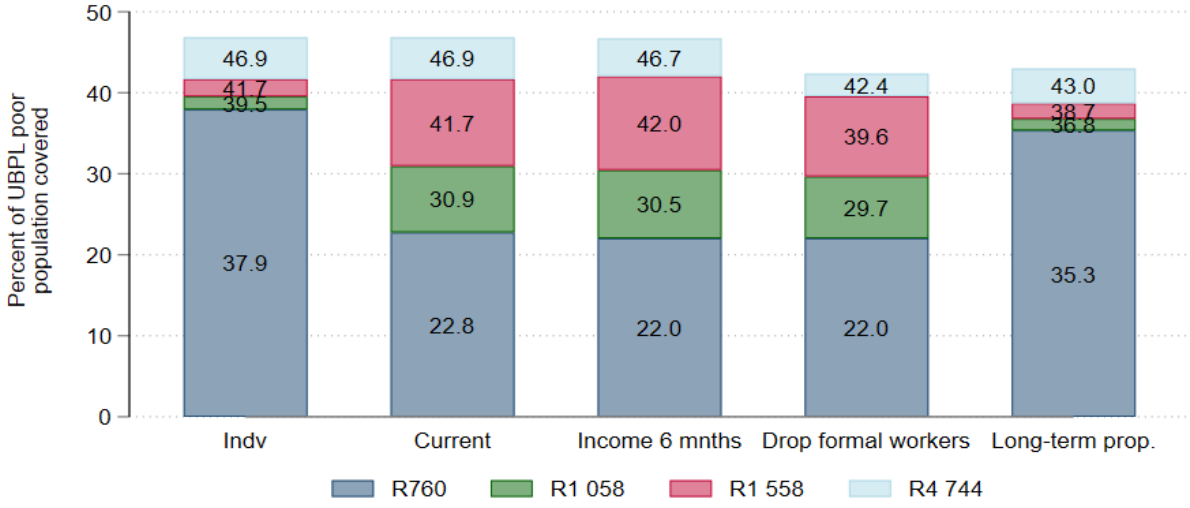
In the longer-term we propose modifications to incentivize self-exclusion of individuals in the upper deciles. The long-term proposal has a much higher number of beneficiaries at the R760 ceiling than the current scenario (12.5 million) because it does not apply a test based on banking data. It instead relies on incentives to accurately self-report income, and self-exclude if above the threshold, combined with cross-checks with other databases. It assumes that the grant includes greater numbers of non-extreme-poor individuals, as compliance is enforced less strictly, and instead incentivized. As a result, some individuals above the poverty line receive the grant, according to our assumptions. The benefit of this is that coverage of the poor is much greater.

In this scenario, however, the number of beneficiaries grows more slowly, as the ceiling is raised, given the assumptions of tapering take-up in the upper deciles. At a ceiling of R1,558 per month there are only 13.8 million beneficiaries (compared to 13.2 in the current scenario, and 18.5 in the individual-means-test scenario). At the threshold of R4,744 per month, the number of beneficiaries is only 16.2 million, substantially lower than in the current scenario of 21 million. Increasing the threshold to the R1,558 or R4,744 ceilings in the long-term proposal, then, makes little difference to the numbers of beneficiaries, and should we attempt to implement this scenario, we would favour implementing one of these higher ceilings.

Coverage of the poor is higher in this scenario than in the current scenario at a R760 ceiling (Figure 2b). At a R1,558 or R4,744 ceilings, however, the current scenario has higher coverage (38.5 vs 41.7% at the R1,558 ceiling, and 42.8 vs. 46.9% using the R4,744 ceiling).

Figure 2. Number of beneficiaries and coverage of the UBPL poor





Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015, 2021.
Based on the 2023 Upper-Bound Poverty Line of R1 058 per month.

Assumptions
1. Individual income ceiling: income includes salaries and wages, moveable capital, pensions and annuities (net of taxes & UIF contributior and non-caregiver social grant income.
2. Current: applies both an individual and per capita means test.
3.Income 6 mnths: Applies an average income over 6 months (proxied by consumption in the survey).
4. Drop formal workers criterion: current scenario without the formally employed criterion
5. Long-term proposal: takeup 100% (dec 1-3); 80% (dec 4-5); 60% (dec 6-7); 0% (dec 8-10).

Source: Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015-2021.

Note: All poverty lines are in 2023 prices.

2.4 Cost projections

The number of beneficiaries and the size of the grant directly determines the cost of the programme. The costs of each scenario, with a grant size of R370, R430, R530 and R760, and at each ceiling, are shown in Table 6 below.

At a grant size of R370 per month, the annual cost of the grant varies between R31 billion and R103 billion. Increasing the grant to R530 per month or R760 per month increases the size of each scenario by 43% and 105% respectively.[9] The budget for the grant varies between R36 to R120 billion at R430 per month, between R44 and R148 billion at R530 per month, and between R64 and R212 billion at R760 per month.

The individual income scenario is the most expensive at all ceilings. The long-term proposal is the second most expensive at the lower income ceilings, because we don't use a strict bank test to enforce compliance, so some people above the threshold receive the grant. As the ceiling increases it gradually becomes relatively less expensive, given the assumption that those in the upper deciles self-exclude even though they are below the ceiling. The cost of this proposal is between R56 and R72 billion with a grant of R370 per month.

The current scenario, the smoothed income scenario and the drop formally employed scenario remain amongst the cheapest scenarios at all ceilings, except at the ceiling of R4,744 per month. At this highest ceiling the long-term proposal drops in ranking to the cheapest and the individual income scenario becomes the most expensive. The current, smoothed income and drop formally employed scenarios range from R31 to R97 billion with a grant size of R370 depending on the ceiling (a wide range of R66 billion).

Some scenarios allow for much greater flexibility than others in varying the size of the grant by changing the ceiling. The individual income and long-term proposal are relatively inflexible. In contrast the costs of the current scenario, the average income scenario, and the scenario in which we drop formally employed individuals vary widely depending on the ceiling used.

This shows that there are multiple pathways to achieving a more just, and less exclusionary, SRD grant. One way would be to increase the ceiling of the current grant to R1,558, and another way would be to adjust the design of the grant to our long-term proposal (preferably also with an adjustment upwards of the grant ceiling).

In order to decide which pathway makes the most sense we can examine the impact on poverty of the various scenarios. In particular, we want to understand whether increasing the ceiling or the size of the grant has a greater impact given the cost.

[9] If we were to rank each scenario from least cost to highest cost at the R370 grant size, then with an increase in the grant size we would see no change in ranking because all the scenarios change by the same percentage.

Table 6. Annual cost in R, billion (all ceilings)

Scenario	R370 per month				R430 per month				R530 per month				R760 per month			
	R760	R1,058	R1,558	R4,744	R760	R1,058	R1,558	R4,744	R760	R1,058	R1,558	R4,744	R760	R1,058	R1,558	R4,744
Individual income	75	77.9	82.3	103	87.2	90.5	95.5	119.6	107.6	111.6	117.9	147.5	154.3	160.2	169.2	211.6
Current	31.4	43.4	58.5	93.4	37.1	50.4	67.9	108.5	45.7	62.2	83.8	133.8	65.6	89.2	120.2	192.0
Income avg 6-mnths	31.1	42.7	59.0	97.0	35.9	49.6	68.5	112.3	44.3	61.2	84.5	138.5	63.5	87.8	121.2	198.7
Drop formally employed	30.9	41.6	55.5	80.7	35.9	48.3	64.5	93.7	44.3	59.8	79.5	115.6	63.6	85.5	114.1	165.8
Long-term prop.	56.0	58.3	61.7	72.4	65.0	67.7	71.6	84.2	80.2	83.5	88.3	103.8	115.1	119.8	126.7	148.9

Source: Authors' estimates based on LCS 2014/15, updated using the QLFS 2015 & 2021

2.5 Poverty impacts

In this section we focus on the poverty impacts with respect to the Food and Upper-bound poverty lines of R760 and R1,558 per month. We focus on two measures of poverty, the poverty headcount and the poverty gap.

The poverty headcount at the FPL indicates the proportion of the population without enough money to purchase the calories needed to survive (extreme poverty), and the poverty headcount at the UBPL indicates the proportion of the population without enough money to purchase a basic basket of consumption items necessary for survival.

The poverty headcount impacts show that increasing the grant threshold promotes reductions in the poverty headcount for all thresholds and all scenarios at the food poverty line. At the upper bound poverty line, grants that target exclusively individuals below the lower bound poverty line have no effect on the poverty headcount, except for the long-term scenario, because of the self-reported income design of this scenario. To better understand the poverty impact at the upper bound poverty line, we will turn to a measure that captures the degree of poverty individuals experience, rather than just a binary count of whether they fall below the poverty line or not.

The poverty gap is a concept that measures the depth of poverty. In contrast to the poverty headcount, the poverty gap captures how far poor individuals are from the relevant poverty line rather than just whether or not a person is below the poverty line. Thus, people who have income that is much less than the poverty line will increase the size of the poverty gap. We consider the poverty gap impacts at the food poverty line and at the upper bound poverty line and focus on how the poverty gap changes across the targeting scenarios and eligibility ceilings when the grant size is increased from R370, to R430, R530 and to R760.

Overall, the grant reduces the poverty gap in all forms, and so the results presented in figures 5 and 6 compare the projected reductions in the poverty gap (in relation to the FPL and the UBPL) of the various scenarios. Increasing the grant amount typically has the largest impacts on reducing the poverty gap. Additionally, raising the eligibility threshold above R760 generally leads to further improvements in poverty gap reductions. For each increase in the threshold, the resulting poverty gap reduction is smaller than for the previous threshold increase. For all grant amounts and thresholds, the current and long-term scenarios achieve the largest extreme poverty gap reductions. In terms of the upper bound poverty line poverty gap, the long-term scenario leads to the greatest reductions at lower thresholds, while the current scenario (and sometimes the average income measure scenario) generates the greatest reductions.

As has been shown for other grant impacts, the long-term scenario includes more people above the eligibility threshold because the targeting relies on self-reported income and consequently compliance is enforced less strictly. This will result in increases in the eligibility threshold having smaller effects on the poverty gap relative to other scenarios, because more people above the threshold were already receiving the grant.

When the poverty gap is calculated with respect to the food poverty line, increases in the eligibility threshold for all scenarios have very little effect on the food poverty line gap because the expansion is to people who are primarily above the line by definition (those who earn more than R760 a month). By contrast, expanding eligibility thresholds has a much larger marginal effect for the poverty gap at the upper bound poverty line, where raising the eligibility threshold leads to more people who are in poverty being able to access the grant.

We do not show the individual income scenario as it is not a serious candidate. It is feasible and desirable to encourage some self-exclusion in the upper deciles of the income distribution. We expect that there is already some self-exclusion happening already. Ignoring dynamics of self-exclusions would make the required budget projected by the model much larger than the expected actual budget.

2.5.1 Extreme poverty headcount (at the food poverty line)

All projections are depicted in Figure 3. The percentage of individuals who fall below the food poverty line is 25.52% (as of 2023).

a) R370 size grant

The grant ensures that between 24 to 29% of the previously extreme poor have enough to eat. All the programmes have fairly similar impacts on extreme poverty (there is much more variation in their impact on total poverty, discussed in the next section).

At a ceiling of R760 per month the impact ranges between 6 (drop formal workers) and 6.2 (all other scenarios) percentage points of poverty reduction (23.5–24.3% of the baseline, or 3.7-3.8 million people) (Figure 3a).

At the R1,558 per month ceiling, the results are still similar but there is slightly more variation. The impact on poverty ranges between 6.6 and 7 percentage points (25.9–27.4% of the baseline, or 4–4.3 million people). The impact is lowest in the scenario where we drop formal workers, and highest for the current scenario and long term proposal (Figure 3a).

At the ceiling of R4,744 per month extreme poverty is reduced by between 6.9 to 7.4 percentage points. Once again, the impact is the smallest when we drop formal workers, and greatest for the current scenario and long-term proposal. This results in a range of 27–29% reduction of the baseline extreme poverty headcount (4.2–4.5 million individuals) (Figure 3a).

b) R430 size grant

Increasing the grant to R430 ensures that at least 29 to 34% of the previously extreme poor have enough to eat. Increasing the grant to R430 results in further reductions in extreme poverty.

At the R760 ceiling per month, the poverty reductions ranges between 7 (dropping formal workers scenario) to 7.3 (current and long-term proposal scenarios) percentage points (27.4 to 28.6% of the baseline, or between 4.3 to 4.4 million people).

Raising the threshold to R1,558 reduces poverty by 7.7 to 8.3 percentage points. This results in a range of 30.2-32.5% of the baseline extreme poverty headcount (4.7-5.1 million people). Once again, the impact is the smallest for the dropping formal workers scenario and greatest for the current and long-term proposal scenarios.

c) R530 size grant

Increasing the grant to R530 shields at least 38 to 42% of people who were previously in extreme state of poverty. The R530 grant leads to even greater reductions in extreme poverty.

At the ceiling of R760 per month, the effect of the grant on poverty ranges from 9.2 to 9.6 percentage points of poverty reduction (36.1–37.6% of the baseline, or 5.6–5.8 million people) (Figure 3b).

Increasing the ceiling from R760 to R1,558 does not lead to a pronounced increase in poverty reduction. The impact of the grant in this ceiling has a minimum of 9.9 percentage points poverty reduction for the scenario where we drop formal workers and a 10.5 percentage points poverty reduction for the current scenario and long term proposal. This means, at the baseline, the range of extreme poverty reduction is between 38.8 and 41.1% (5.8–6.4 million individuals).

The R4,744 per month ceiling has the biggest impact on poverty when compared to all the ceilings in Figure 3b. In this ceiling, the effect of the grant is in the range of 10.1 and 10.7 percentage points reduction in poverty. All scenarios reduce poverty by 10.1 percentage points except the scenario that omits the UIF condition with a 10.7 percentage points decrease in poverty. This is a 39.6-41.9% reduction of the baseline extreme poverty headcount (6.2–6.5 million individuals) (Figure 3b).

d) R760 size grant

When the grant size is increased to the same amount as the food poverty line, R760 per month, 60 to 65% of people are lifted out of extreme poverty. The R760 grant has the highest impact on poverty when compared to the previous two grant sizes.

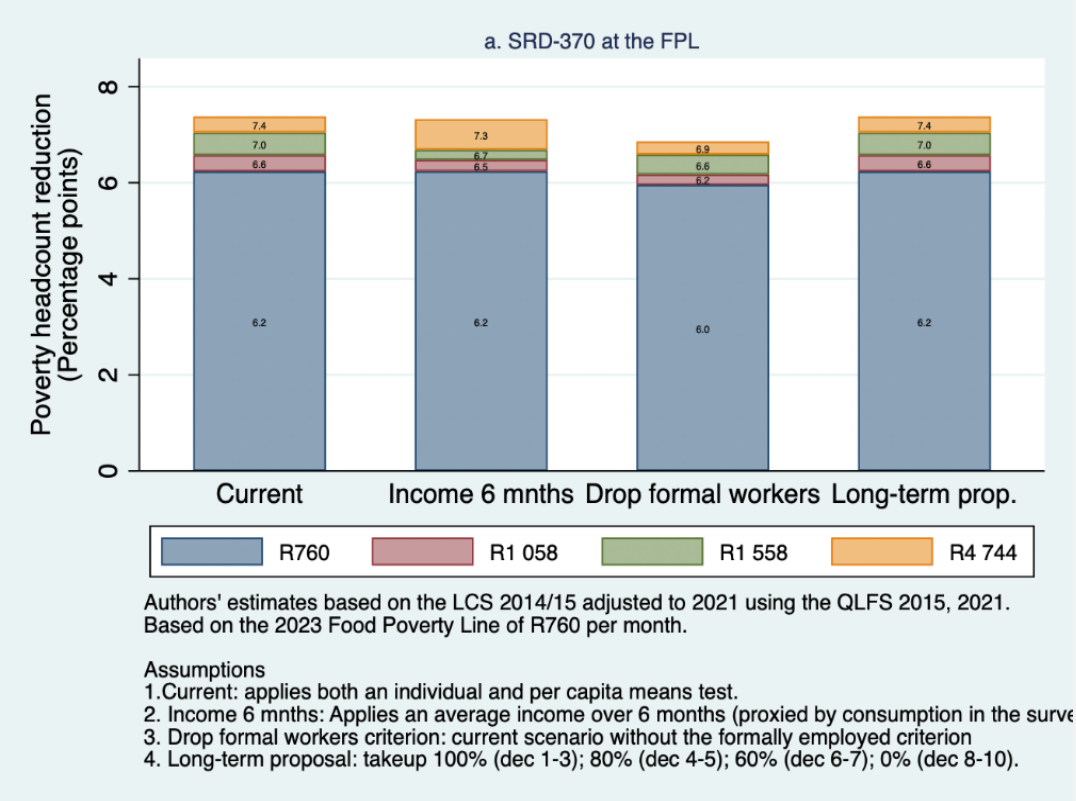
At the R760 per month ceiling, the impact of the grant ranges from 14.8 and 15.4 percentage points of poverty reduction (58–60.3% of the baseline, or 9–9.4 million people), with the scenario where we drop formal workers having the least impact and the current and long-term scenarios having the greatest impact on reducing the poverty headcount (Figure 3c).

The grant is slightly more impactful at the R1,558 ceiling, poverty reduction at this ceiling ranges from 15.7 to 16.2 percentage points. This is equivalent to 61.5–63.5% of the baseline or 9.6 to 9.9 million people. Similar to the R760 ceiling, the scenario where we drop formal workers is also the least impactful scenario in this ceiling. On the opposite end, the current and long-term scenarios have the highest impact at this ceiling, with a 16.2 percentage point reduction in poverty (Figure 3c).

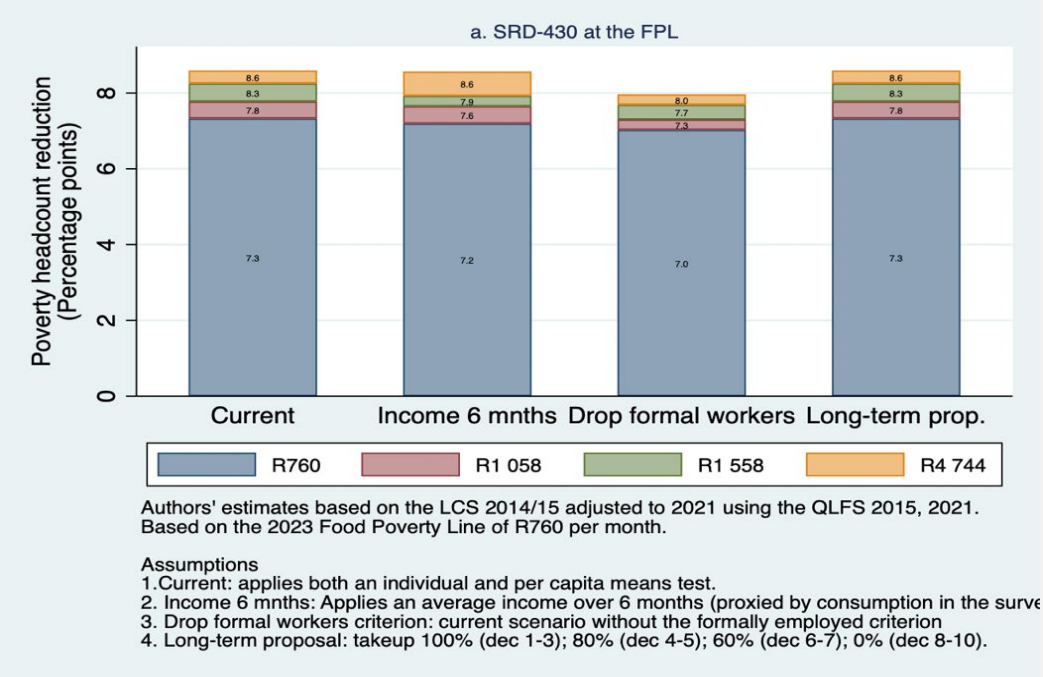
At the ceiling of R4,744 per month, extreme poverty reduction ranges from 15.9 to 16.5 percentage points. This translates to a range of 62.3 to 64.7% reduction of the baseline extreme poverty headcount or 9.7 to 10.1 million individuals (Figure 3c).

Figure 3. Poverty headcount reduction (all ceilings, FPL poverty line, a. R370, b. R530, c. R760)

a. SRD-370 at the FPL



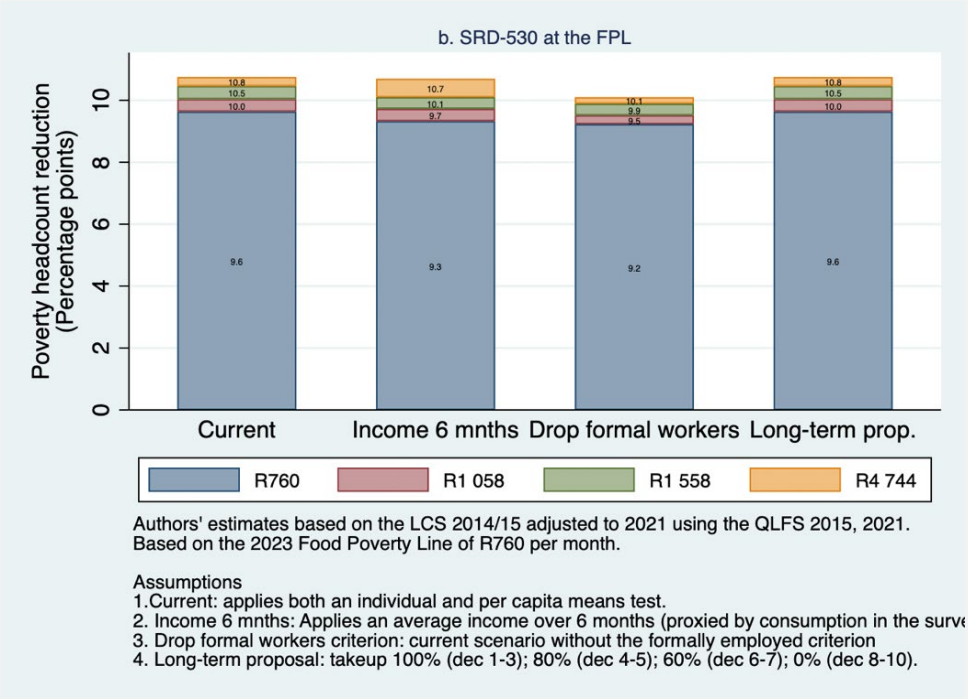
b. SRD-430 at the FPL



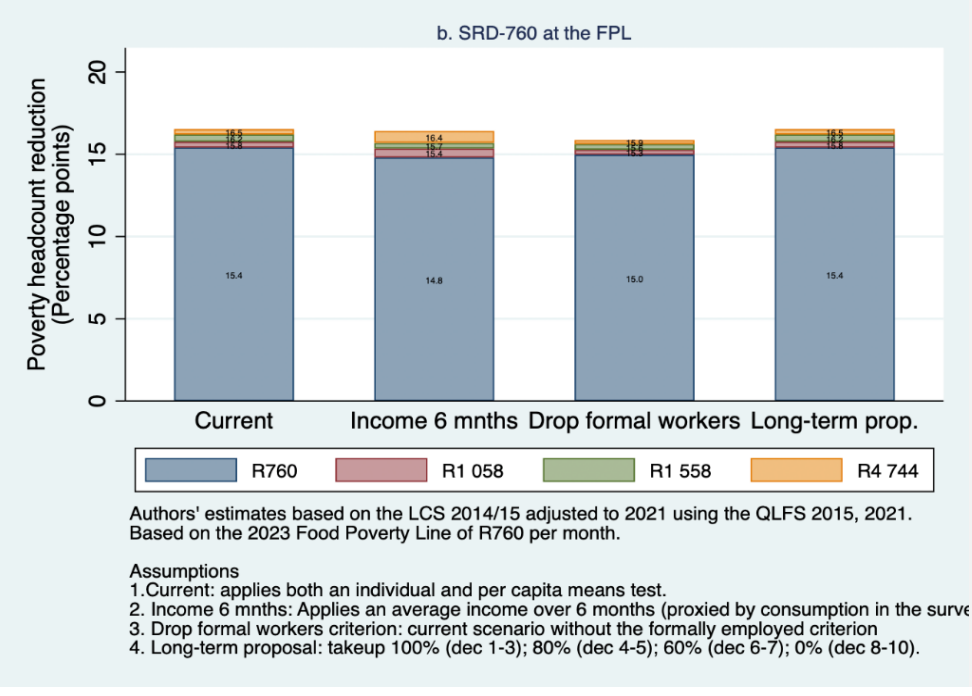
Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015, 2021.
Based on the 2023 Food Poverty Line of R760 per month.

Assumptions
1.Current: applies both an individual and per capita means test.
2. Income 6 mnths: Applies an average income over 6 months (proxied by consumption in the surve
3. Drop formal workers criterion: current scenario without the formally employed criterion
4. Long-term proposal: takeup 100% (dec 1-3); 80% (dec 4-5); 60% (dec 6-7); 0% (dec 8-10).

c. SRD-530 at the FPL



d. SRD-760 at the FPL



Source: Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015-2021.

Note: All poverty lines are in 2023 prices.

2.5.2 Total poverty headcount (at the Upper-bound Poverty Line)

All projections are depicted in Figure 4. The percentage of individuals who fall below the upper bound poverty line is 51.88% (as of 2023).

a) R370 size grant

Only the long-term proposal has a non-zero impact on the poverty headcount at a ceiling of R760 per month (1.7 percentage points, 3.3% of the UBPL baseline of 51.88%, or 1 million individuals). This is because the size of the grant is small relative to the UBPL. The R370 grant value constitutes 49% of the FPL threshold and only 24% of the UBPL. Only those that have income within 24% of the UBPL then will have their income raised above the threshold, but everyone receiving the grant should have income below R760, and so in the scenarios without any leakage this is impossible.

At a ceiling of R1,558 per month, however, the impact of the long-term proposal is substantially lower than the other three scenarios at only 2 percentage points of poverty reduction (3.9%, or 1.2 million individuals). In contrast the other scenarios range between a reduction of 2.9 and 3.4 percentage points (5.6–6.6%, 1.8–2.1 million individuals). The scenario with the most impact is the average income measure scenario.

At a ceiling of R4,744 per month, the order of impact remains the same. The long-term proposal reduces poverty by 2.8 percentage points, the dropping formal workers scenario and current scenario reduce poverty by 3.4 and 4.3 percentage points respectively, and the average income measure increases the impact to 4.5 percentage points of poverty reduction. This is a reduction of between 5.4 and 8.7% of the baseline (or between 1.7 and 2.7 million individuals).

b) R430 size grant

At the R760 ceiling and with a R430 size grant, all scenarios except the long-term proposal have a zero impact on reducing the poverty headcount. The long-term scenario reduces the poverty headcount by 2.2 percentage points, which is 4.2% of the UBPL baseline or 1.3 million people. The muted effect of the grant at this ceiling is explained by the fact that R430 is only 28% of the upper bound poverty line (R1,558 per month). Put differently, providing R430 to individuals at the R760 ceiling is unlikely to increase their income above the upper bound poverty line.

At the R1,558 ceiling, poverty reduction ranges between 2.5 (long-term proposal scenario) to 4.2 (average income measure scenario) percentage points. This is 4.8-8.1% of the UBPL baseline, or 1.5-2.6 million people.

At the R4,744 ceiling, the R430 size grant reduces poverty by between 3.6 to 4.4 percentage points (6.9-10.4% of UBPL baseline, or 2.2-3.3 million individuals. Once again, the long-term scenario leads to the smallest reductions, while the average income measure scenario results in the greatest poverty reductions.

c) R530 size grant

At the R760 ceiling, with a grant of R530 per month, all scenarios have zero impact on poverty headcount reduction except the long-term proposal scenario which reduces poverty by only 2.7 percentage points. This is 5.2% of the UBPL baseline, or 1.6 million individuals. The muted effect of the grant in this ceiling can be explained by the fact that R570 is only 37% of the upper bound poverty line (R1,558 per month). In other words, the grant given to people at the R760 ceiling is unlikely to increase income above the threshold of R1,558 per month for the extreme poor.

At the R1,558 ceiling per month, the impact of the grant on poverty reduction ranges from 3.2 percentage points at the long-term proposal scenario to 5.3 percentage points at the average income measure scenario. This translates to 6.2 to 10.2% of the baseline or 2 to 3.2 million individuals respectively.

Lastly, the grant has the highest impact at the R4,744 per month ceiling. Poverty reduction in this ceiling ranges from 4.7 percentage points at the long-term proposal scenario to 6.6 percentage points at the scenario that omits the UIF criterion. This is equivalent to a poverty reduction of 9.1 and 12.7% of the baseline (or between 2.9 and 4 million individuals).

d) R760 size grant

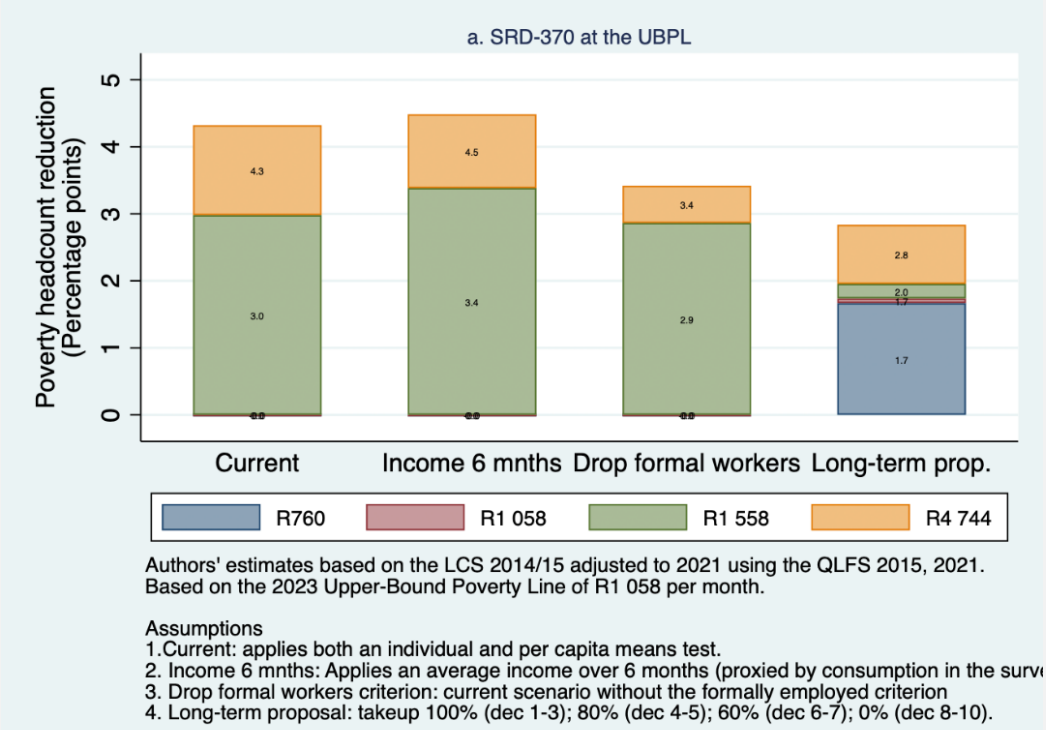
The R760 size grant at the R760 ceiling shows the same pattern observed in the previous two grant sizes—all scenarios at this ceiling (except the long-term proposal scenario) have zero impact on poverty. As explained in the previous paragraphs, this is because of the size of the grant in relation to the UBPL (R760 is only 49% of R1,558). For individuals earning strictly below R760 per month, then, the grant will not bring them above the R1,558 threshold.

The impact of the grant, however, increases with the ceiling. At the R1,558 ceiling per month, the R760 grant results in a poverty reduction that ranges between 5.1 percentage points at the long-term proposal scenario and 8.2 percentage points at the average income measure scenario. This translates to between 9.8 to 15.8% of the baseline or 3.1 to 5 million individuals.

At the R4,744 per month ceiling, the impact on poverty reduction ranges from 7.3 percentage points at the long-term proposal scenario to 9.8 percentage points at the average income measure scenario. This translates to a poverty reduction of 14.1 to 18.9% of the baseline or 4.5 to 6 million individuals.

Figure 4. Poverty headcount reduction (all ceilings, UBPL poverty line, a. R370, b. R530 and c. R760)

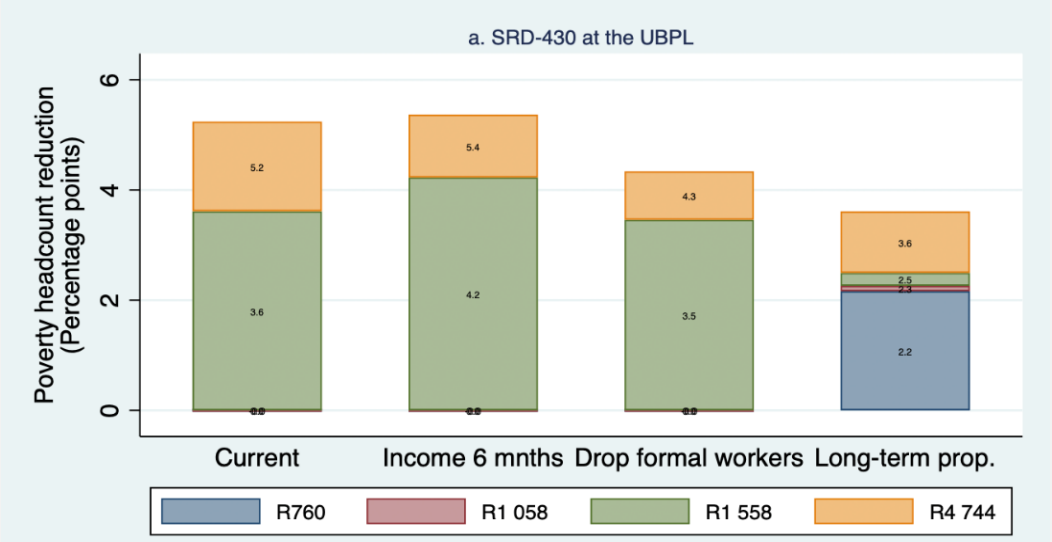
a. SRD-370 at the UBPL



Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015, 2021.
Based on the 2023 Upper-Bound Poverty Line of R1 058 per month.

Assumptions
1.Current: applies both an individual and per capita means test.
2. Income 6 mnths: Applies an average income over 6 months (proxied by consumption in the surv
3. Drop formal workers criterion: current scenario without the formally employed criterion
4. Long-term proposal: takeup 100% (dec 1-3); 80% (dec 4-5); 60% (dec 6-7); 0% (dec 8-10).

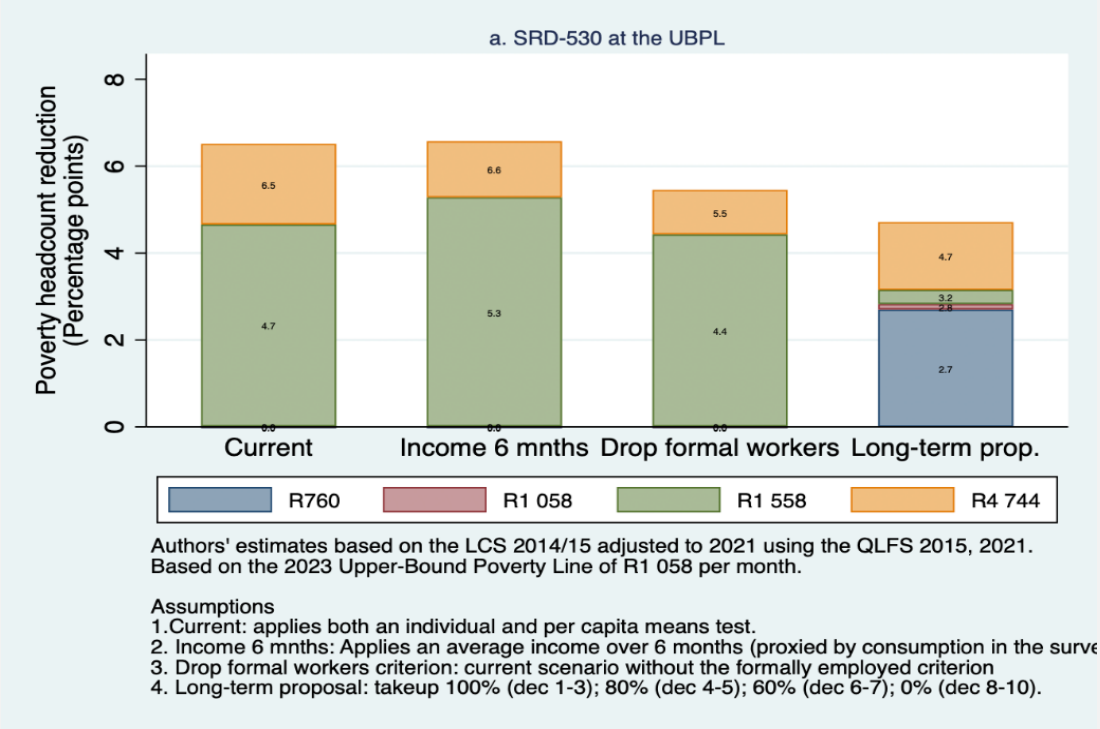
b. SRD-430 at the UBPL



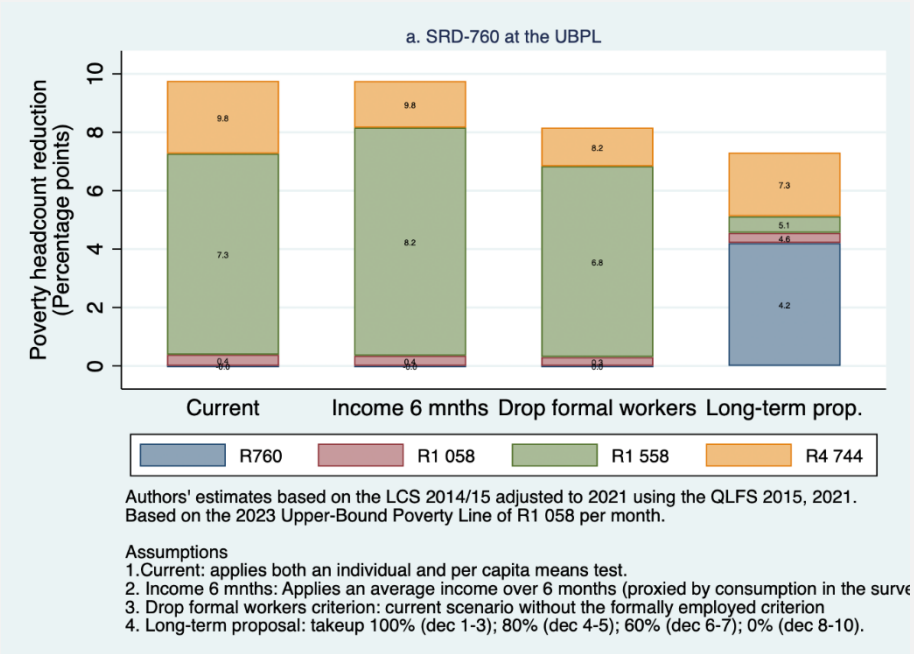
Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015, 2021.
Based on the 2023 Upper-Bound Poverty Line of R1 058 per month.

Assumptions
1.Current: applies both an individual and per capita means test.
2. Income 6 mnths: Applies an average income over 6 months (proxied by consumption in the surve
3. Drop formal workers criterion: current scenario without the formally employed criterion
4. Long-term proposal: takeup 100% (dec 1-3); 80% (dec 4-5); 60% (dec 6-7); 0% (dec 8-10).

c. SRD-530 at the UBPL



d. SRD-760 at the UBPL



Source: Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015-2021.

Note: All poverty lines are in 2023 prices.

2.5.3 Extreme poverty gap reduction (food poverty line)

All projections are depicted in Figure 5. In relation to the food poverty line (FPL), the poverty gap (in 2023 prices) is 10.45%.

When measuring poverty gap reductions with respect to the food poverty line, impacts are primarily driven by grants targeted at individuals with income below the food poverty line and increases in grant amount increase the size of reductions in the poverty gap.

a) R370 size grant

At an eligibility ceiling of R760, the poverty gap declines by between 4.8 and 5 percentage points for all scenarios. This is between 45.9% and 47.8% of the baseline. The averaging income over 6 months scenario is the least effective at decreasing the poverty gap (4.8 percentage points), with the current and long-term scenarios being the most effective at reducing the poverty gap (4.9 percentage points).

At the R1,558 eligibility ceiling, the grant reduces the poverty gap by between 5 and 5.2 percentage points. This is between 47.8% and 49.8% of current levels. The averaging income over 6 months and dropping formal workers scenarios produce the lowest reductions in the poverty gap (5 percentage points) and the current and long-term scenarios are the most effective at reducing the poverty gap (5.2 percentage points).

By increasing the eligibility ceiling to R4,744, the extent of deep poverty is decreased by between 5.1 to 5.3 percentage points (48.8% to 50.7% of the baseline). The current and long-term scenarios generate the largest projected reductions in the poverty gap.

b) R430 size grant

Increasing the grant amount to R430 leads to further reductions in the extreme poverty gap. The effects observed are very similar to the R370 size grant, except that the effect sizes are increased due to the higher grant value.

At the R760 ceiling, the extent of extreme poverty is reduced by between 5.5 (average income measure and dropping formal workers scenarios) to 5.7 (current and long-term scenarios) percentage points. This represents 52.6 to 54.5% of the current amount.

At the R1,558 ceiling, the R430 size grant reduces extreme poverty by between 5.7 to 5.9 percentage points (54.5-56.5% of the baseline). Once again, the average income measure and dropping formal workers scenarios lead to the smallest reductions, while the current and long-term scenarios result in the greatest decreases in the extreme poverty gap.

Raising the ceiling to R4,744 does not lead to further reductions in the extreme poverty gap for all scenarios, except for the averaging income over six months scenario, which increases from 5.7 to 5.9 percentage points (56.5% of the current amount).

c) R530 size grant

Raising the grant amount to R530 is much more powerful lifting people out of deep poverty relative to the R370 and R430 size grants. The poverty gap reduction patterns observed comparing the different scenarios are fairly similar to the SRD-R370 because the targeting rules remain the same; however, the effects will be magnified by the increased grant amount.

At a ceiling of R760 per month, the degree of deep poverty is reduced by 6.4 (the averaging income over 6 months scenario) to 6.6 percentage points (current and long-term proposal scenarios)—which is 61.2% and 62.3% of the current amount.

When the ceiling is raised to R1,558 per month the poverty gap declines by between 6.6 to 6.8 percentage points (62.3% to 65.1% of the baseline). The averaging income over 6 months scenario is the least effective at reducing the poverty gap, while the current and long-term scenario are the most effective.

At a R4,744 eligibility ceiling, the poverty gap reductions range between 6.7 to 6.9 percentage points. This represents 64.2% to 66.1% of the baseline. For this ceiling, the current and long-term scenario produces the greatest declines in the poverty gap.

d) R760 size grant

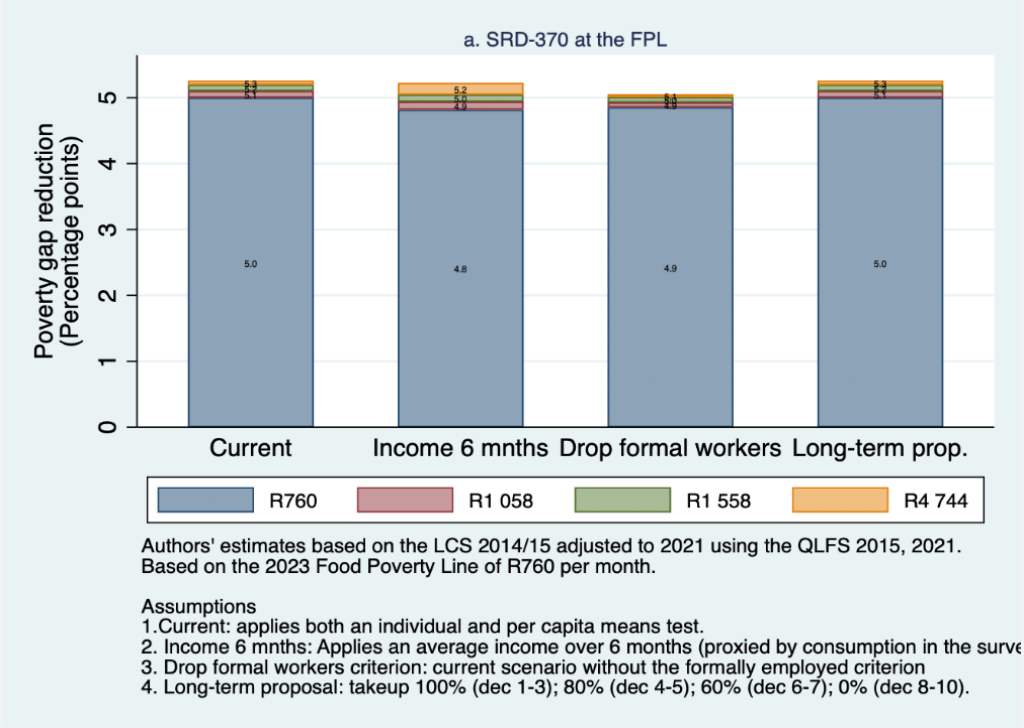
Raising the size of the grant from R530 to R760 leads to further declines in the poverty gap. However, these gains are smaller (in terms of the additional percentage point reductions achieved) relative to increasing the grant from R370 to R530. At an eligibility ceiling of R760, the poverty gap declines by between 8.1 to 8.3 percentage points (77.5% to 79.4% of the current amount). The averaging income over 6 months and dropping formal workers scenarios attains the smallest reductions in the poverty gap (8.1 percentage points), while the current and long-term scenarios achieve the greatest reductions in the poverty gap (8.3 percentage points).

When the eligibility ceiling is raised to R1,558, the extent of deep poverty decreases by 8.3 percentage points (averaging income over 6 months and dropping formal workers scenarios) to 8.5 percentage points for the current and long-term scenarios. This reflects 79.4% to 81.3% of the baseline.

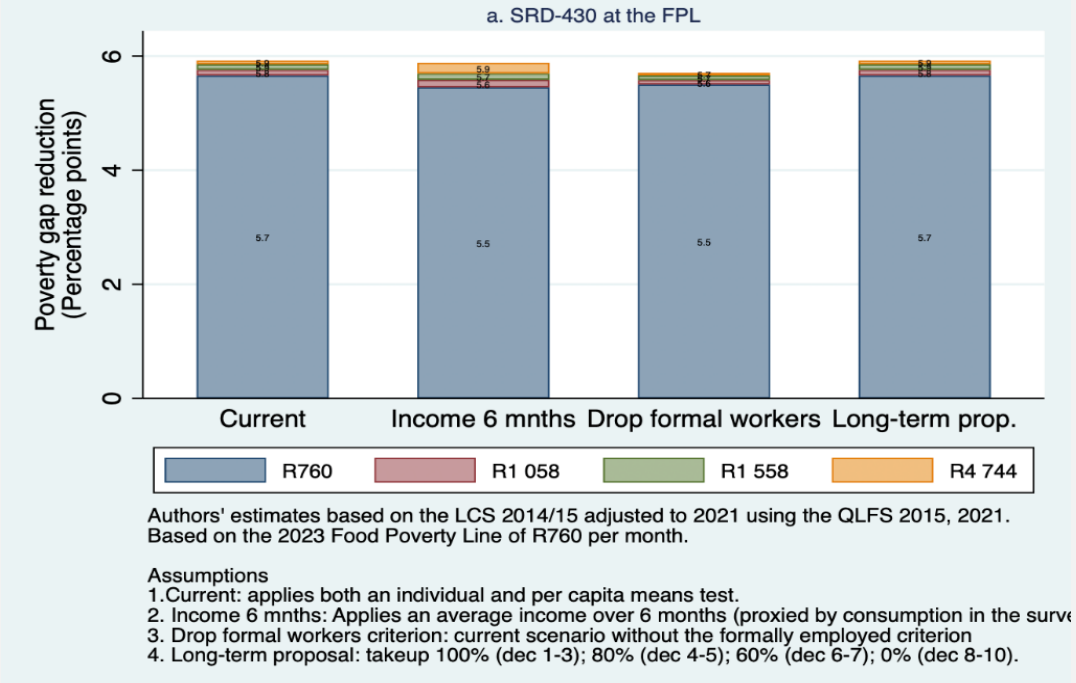
At the R4,744 eligibility ceiling, the poverty gap is reduced by between 8.3 to 8.6 percentage points—which is 79.5% to 81.4% of the baseline. The current and long-term scenarios achieve the greatest projected declines in the poverty at this ceiling.

Figure 5. Extreme poverty gap (measured at the food poverty line)

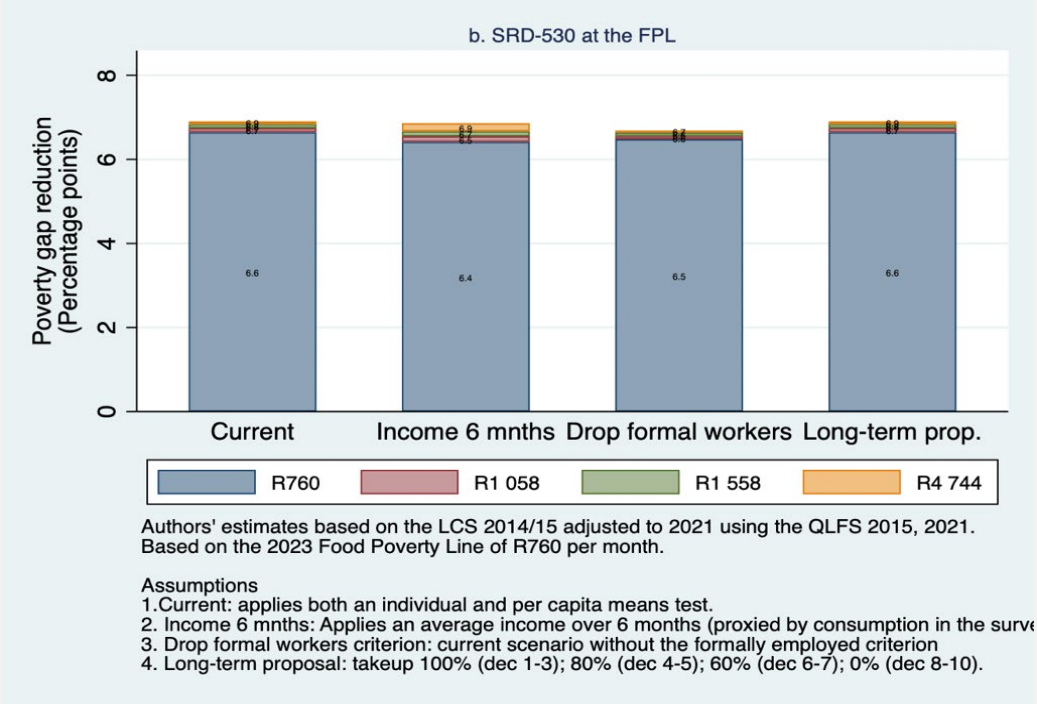
a. SRD-370 at the FPL



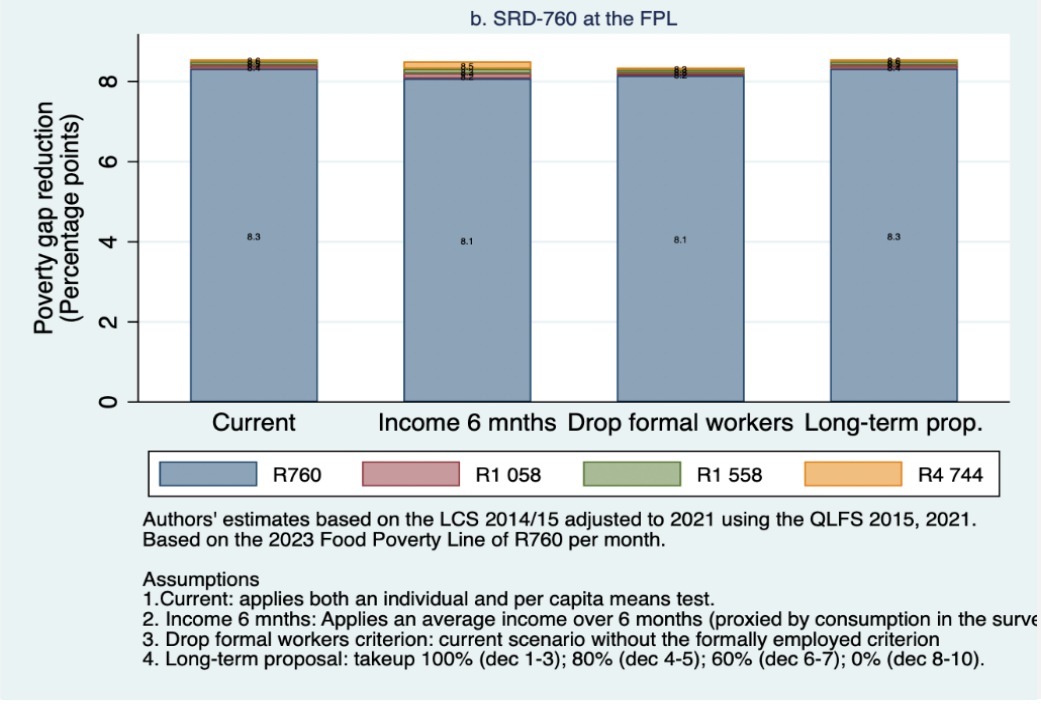
b. SRD-430 at the FPL



c. SRD-530 at the FPL



d. SRD-760 at the FPL



Source: Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015-2021.

Note: All poverty lines are in 2021 prices.

2.5.4 Total poverty (upper bound poverty line)

All projections are depicted in Figure 6. In relation to the upper bound poverty line (UBPL), the poverty gap (in 2023 prices) is 25.53%

At the UBPL, there are large poverty gap-reduction impacts to raising the eligibility threshold up to the UBPL, as well as large impacts from increasing the grant size.

a) R370 size grant

At the R760 eligibility ceiling, the poverty gap falls by between 2.7 to 4.3 percentage points—which is 10.6% to 16.8% of the current amount. The long-term scenario clearly brings about the greatest reductions in the poverty gap at this eligibility ceiling.

When the eligibility ceiling is raised to R1,558, the poverty gap reduces by between 4.6 to 5.0 percentage points. This represents 18% to 19.6% of the baseline. At this eligibility ceiling, the long-term scenario is the least effective at reducing the poverty gap, while the current and average income measure scenarios are the most effective.

At an eligibility ceiling of R4,744, the extent of poverty decreases by 5 (dropping formal workers scenario) to 5.5 percentage points (current and average income measure scenarios). This represents 19.6% to 21.5% of the baseline.

b) R430 size grant

The patterns observed for the R370 size grant are also shown for the R430 size grant. At the R760 ceiling, the long-term proposal scenario leads to the greatest reductions in the poverty gap (4.9 percentage points, 19.2% of the current amount).

At the R1,558 ceiling, the current and average income measure scenarios result in the greatest poverty gap reductions (5.7 percentage points, 22.3% of the baseline), while the dropping formal workers and long-term proposal lead to the smallest reductions (5.4 percentage points, 21.2% of the baseline).

When the eligibility ceiling is raised to R4,744, the reduction in the poverty gap ranges between 5.8 to 6.3 percentage points (22.7-24.7% of the current amount).

c) R530 size grant

The poverty gap patterns observed for R370 and R430 are reflected for the R530 size grant (as well as the R760 size grant). However, as illustrated in the previous section, the size of the effects are greater as result of the increased grant size.

For the R760 eligibility ceiling, the poverty gap decreases by between 3.9 to 6 percentage points (15.3% to 23.5% of the baseline). As with the R370 size grant, the long-term scenario attains the greatest projected reductions in the poverty gap at this ceiling.

At an eligibility ceiling of R1,558, the poverty gap declines by between 6.6 to 7 percentage points, which is 25.9% to 27.4% of the baseline. The current and average income measure scenarios are the most effective at reducing the poverty gap, while the long-term scenario is the least effective.

When the eligibility ceiling increases to R4,744, the poverty gap falls by 7 (dropping formal workers scenario) to 7.7 (current scenario) percentage points. This represents 27.4% to 30.2% of the current amount. The above findings clearly illustrate that raising the size of the grant from R370 to R530 results in significant improvements in reducing the depth of poverty across all scenarios and eligibility ceilings.

d) R760 size grant

Increasing the size of the grant from R530 to R760 leads to even greater reductions in the poverty gap, indicating that the R760 is much more powerful (compared to the R370 and R530 size grants) at decreasing the depth of poverty.

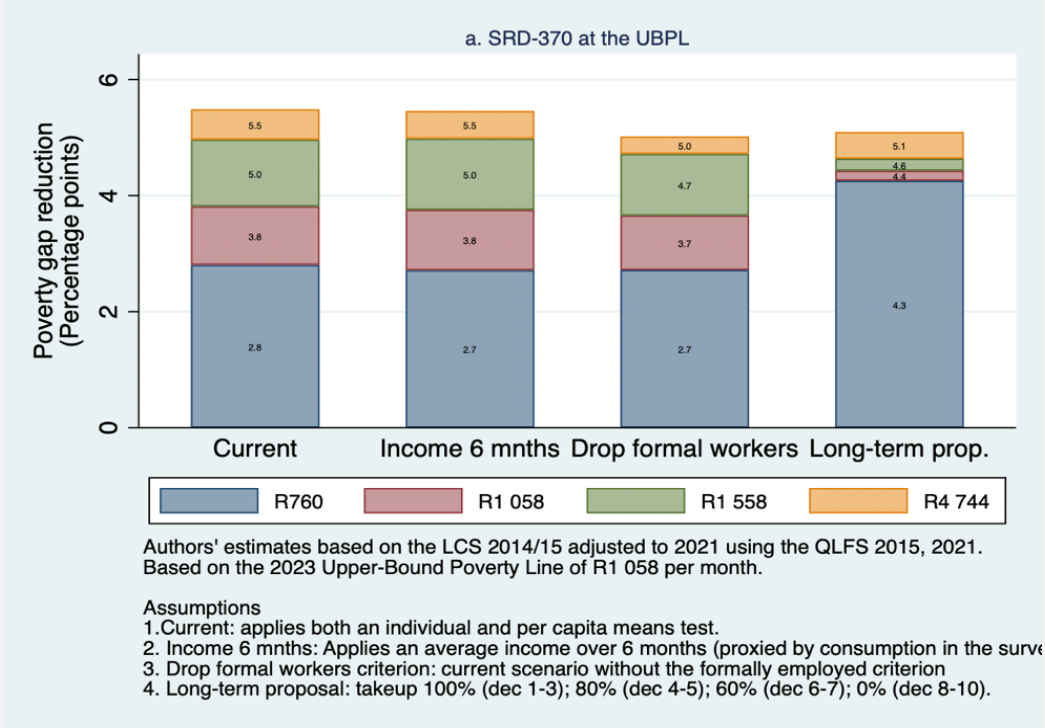
When the eligibility ceiling is at R760, the degree of poverty decreases by between 5.6 to 8.5 percentage points. This represents 21.9% to 33.3% of the baseline. As with the first two grant sizes, the long-term scenario achieves the greatest reductions in the poverty gap at this eligibility ceiling.

At the R1,558 eligibility ceiling, the poverty gap declines by 9.2 (long-term scenario) to 9.8 percentage points (current scenario)—which is 36% to 38.4% of the current amount.

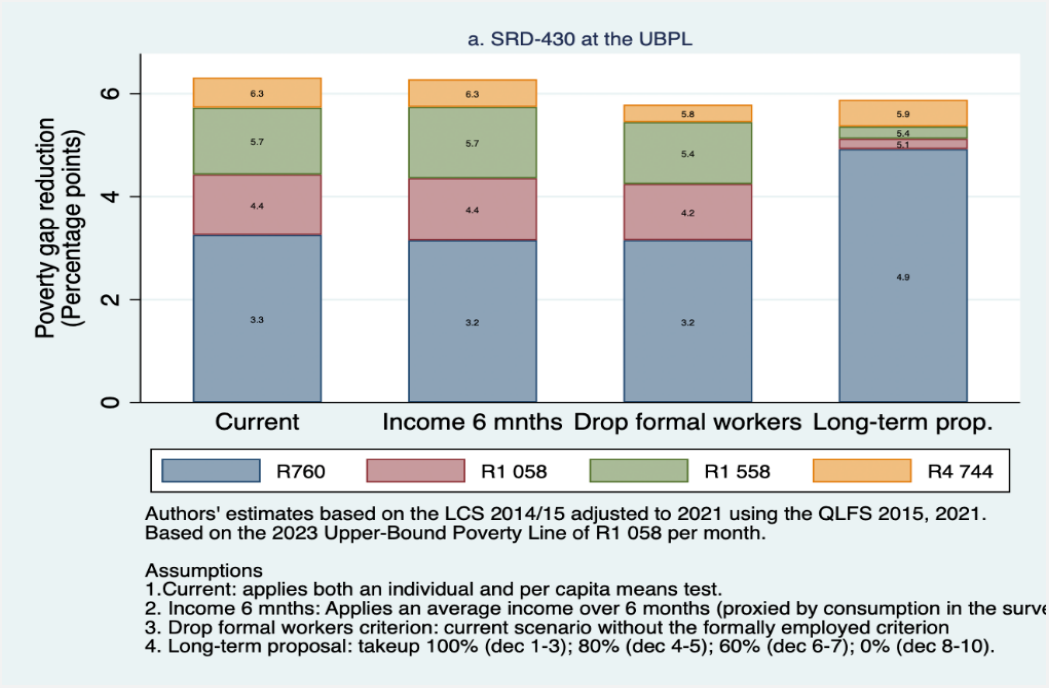
When the eligibility ceiling is raised to R4,744, the poverty gap falls by between 9.8 to 10.6 percentage points. This represents 38.4% to 41.5% of the baseline. The current scenario achieves the greatest declines, while the average income measure scenario is the least effective at reducing the poverty gap.

Figure 6. Total poverty gap (measured at the upper-bound poverty line)

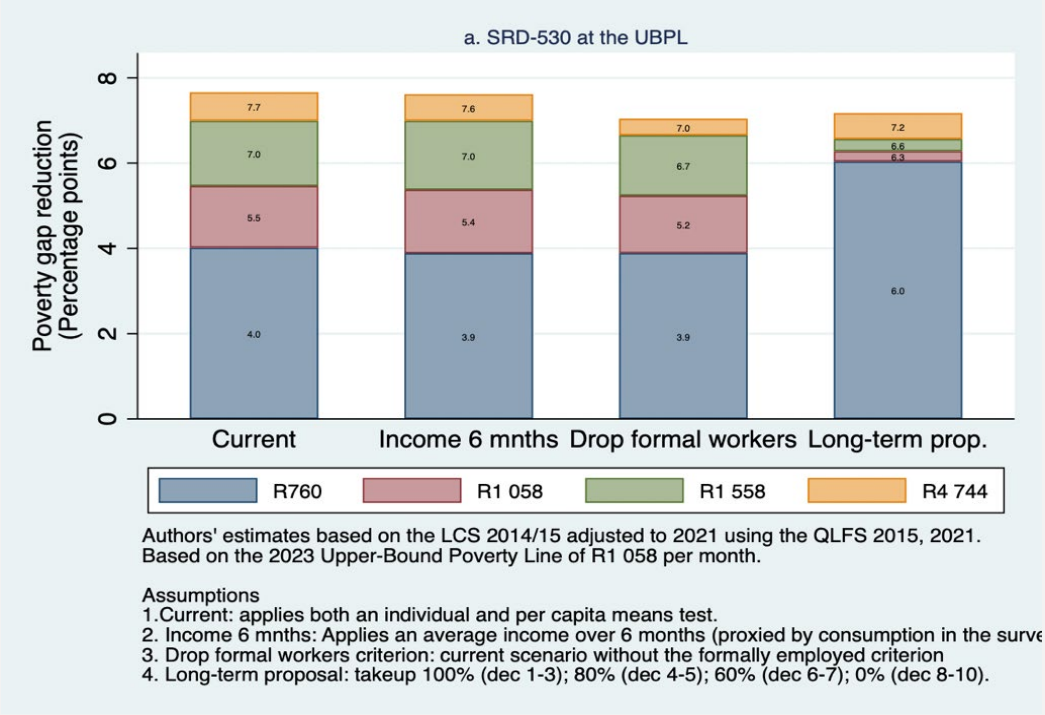
a. SRD-370 at the UBPL



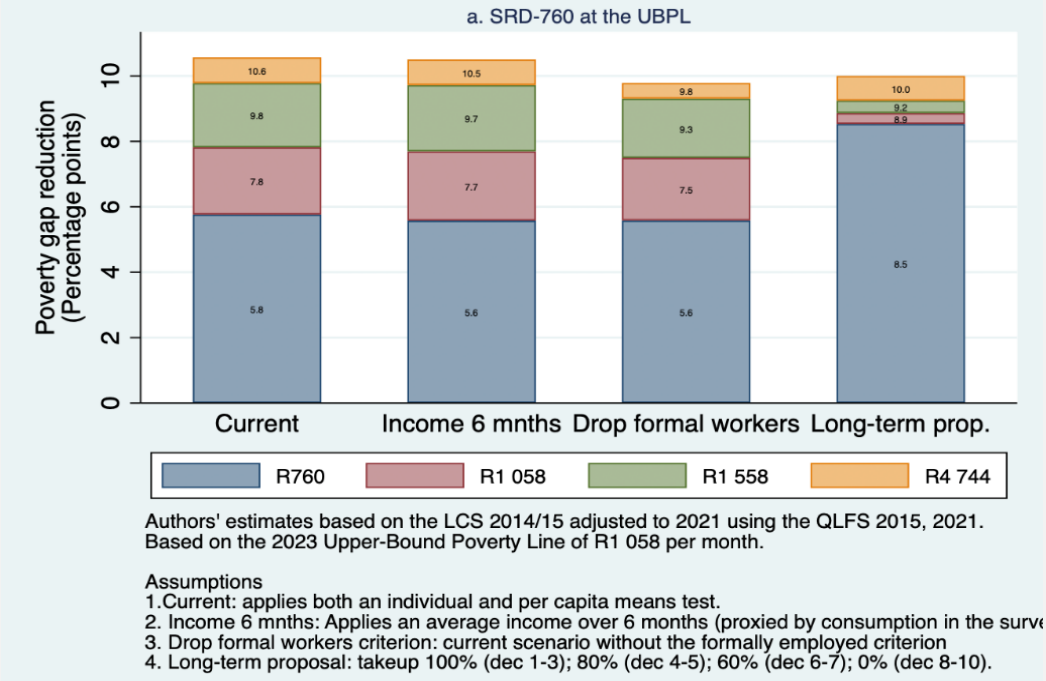
b. SRD-430 at the UBPL



c. SRD-530 at the UBPL



d. SRD-760 at the UBPL



Source: Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015-2021.

Note: All poverty lines are in 2023 prices.

2.5.5 Incidence

A substantial portion of the grant money in all scenarios is going to be directly reducing poverty among the poorest people and to reducing the depth of poverty. Incidence is a measure of the size and distribution of a transfer relative to income. It tells us by how much each decile's income is increased by grant expenditures, as a share of their baseline total income. This information offers a more fine-grained picture of how beneficiaries' incomes are changed as a result of receiving the grant. Incidence is shown in the Figure 7 below for two income ceilings: R760 and R1,558 per month, and at all four grant sizes, namely R370, R430, R530 and R760.

The deciles in Figure 7 below are calculated based on per capita income (household income divided by household size or average income per household member).[10] Given this, when a per capita ceiling is applied (such as in the current scenario) it perfectly prevents anyone above the per capita ceiling from receiving the grant. Due to the individual income ceiling, however, coverage of all poor individuals is not assured (the way it would be in a household grant, in theory)—because a recipient may have per capita income below the threshold but individual income above the threshold.

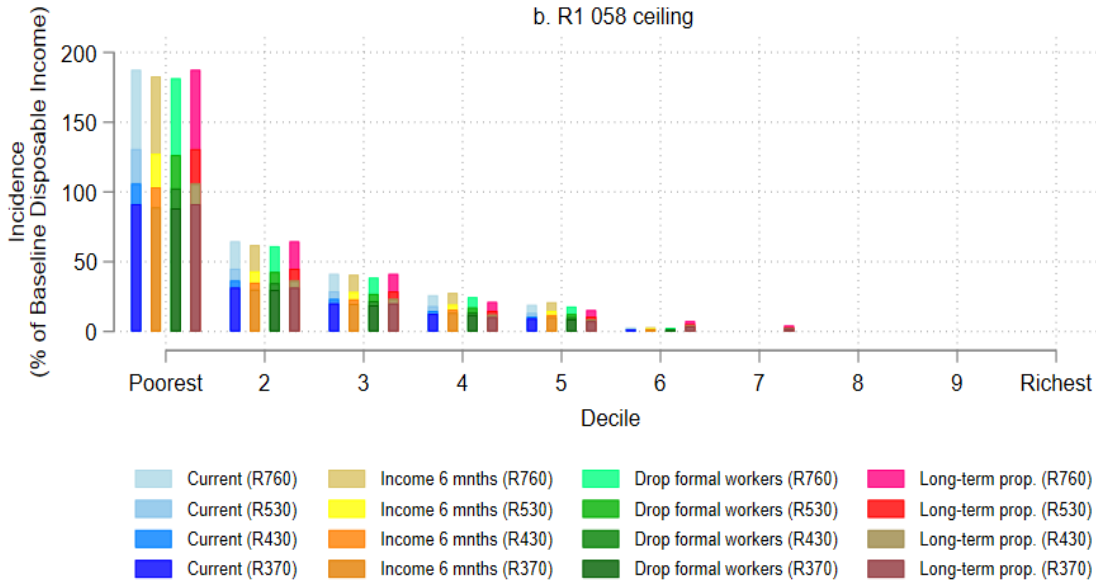
It is also worth pointing out that increasing the size of the grant from R370 to R430, R530 or R760 per month does not change the distribution, however, as expected, the amount received in each decile increases by 16%, 43% and 105% respectively. This is clearly seen in figure 7 where the effect of the R370 per month grant is represented by the darkest coloured bars, the additional benefit from the R430 grant (on top of the R370 grant) is represented by the medium coloured bars, the R530 grant is represented by the second lightest coloured bars, and the effect of the R760 per month grant is depicted by lightest coloured bars.

In the scenarios which use the strict bank test, no-one above Decile 3 receives the grant (blue, yellow, green bars, Figure 7a). At a ceiling of R760 (which falls within decile 3 of the x-axis in Figure 7a) the incidence of the long-term proposal is much higher in deciles 3-7 than in the other scenarios (red column, Figure 7a).

The ceiling of R1,558 per month falls within the 6th decile, and so for the scenarios using the bank means test the number of eligible income deciles increases substantially (blue, yellow, green bars, Figure 7b). The height of the bars in the long-term proposal is lower than the other scenarios in deciles 4 and 5 due to the assumption that only 60% of recipients take-up the grant (red bars, Figure 7b).

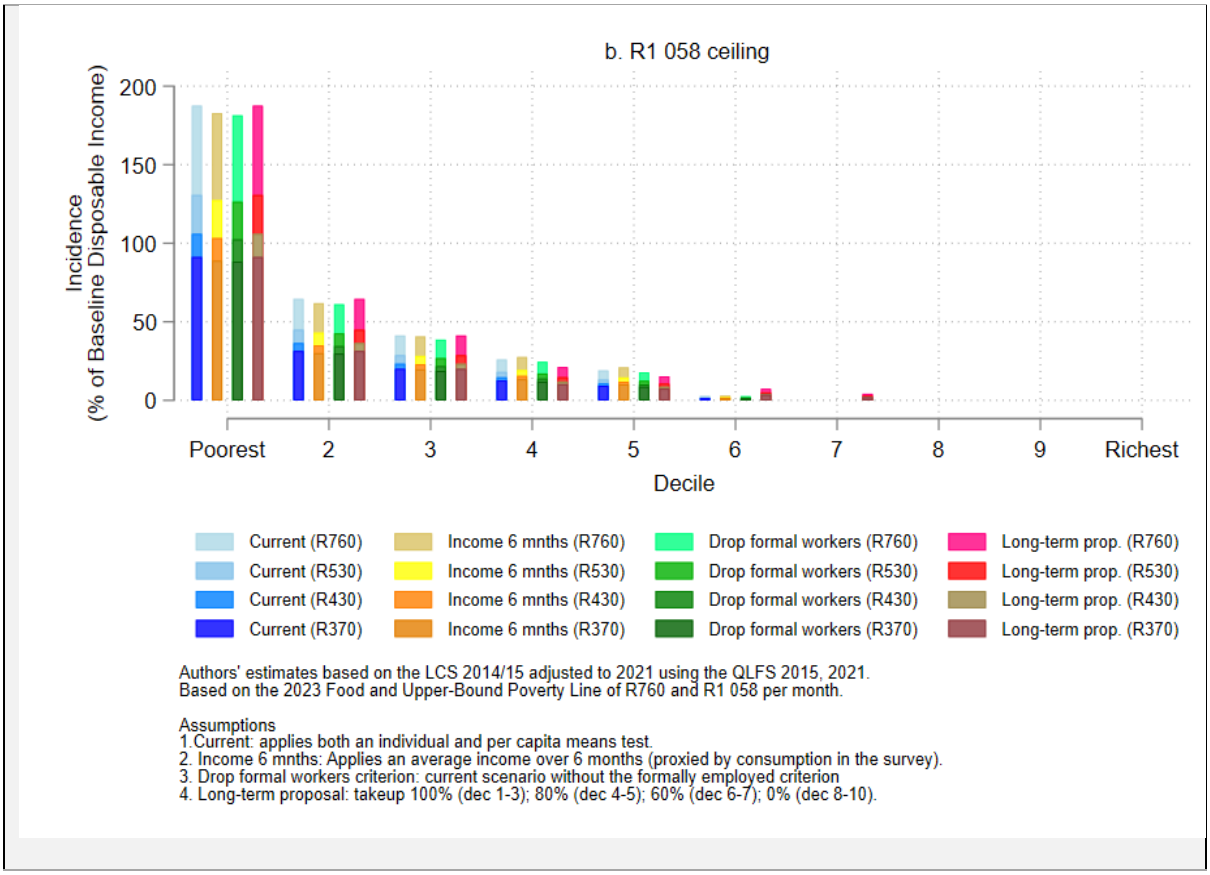
[10] This corresponds to the way the poverty headcount is measured.

Figure 7. Incidence of the grants



Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015, 2021.
Based on the 2023 Food and Upper-Bound Poverty Line of R760 and R1 058 per month.

Assumptions
1.Current: applies both an individual and per capita means test.
2. Income 6 mnths: Applies an average income over 6 months (proxied by consumption in the survey).
3. Drop formal workers criterion: current scenario without the formally employed criterion
4. Long-term proposal: takeup 100% (dec 1-3); 80% (dec 4-5); 60% (dec 6-7); 0% (dec 8-10).



Source: Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015-2021.

Note: All poverty lines are in 2021 prices.

2.6 Choosing a grant

When choosing between scenarios, many of the changes that would reduce poverty and increase coverage also require corresponding increases in the budget allocation. In this section, we provide a measure of 'cost-effectiveness' by plotting the impact of each grant option on the poverty gap relative to the required budgetary allocation for that option. Essentially, the figures illustrated below can be used to examine the trade-off of the grant's impact on poverty relative to cost. This will, in turn, allow policymakers to determine which levers would result in the largest impacts relative to cost.

We plot the relationship between the budgetary cost and the impact of the grant option on the FPL poverty gap (Figure 8) and UBPL poverty gap (Figure 9). In these figures, the further to the left a scenario is on the axes, the cheaper it is. The further north a scenario is on the axes, the more impactful at reducing the poverty gap. Thus, the most cost-effective options are those that are the highest and furthest left in each figure.

Figures 8 and 9 reveal that there are benefits (in terms of enhancing the grant's capacity to reduce poverty) to both raising the eligibility ceiling to at least the UBPL and increasing the grant size as much as possible given fiscal constraints. Nevertheless, in most cases, increasing the grant size is typically more powerful at improving reductions in the poverty gap than raising the eligibility ceiling.

Further, it is typically cheaper to increase the grant size at a given eligibility ceiling compared to raising the eligibility ceiling at a given grant size. However, the opposite holds true for the long-term scenario whereby it is significantly more expensive to increase the grant size.

Another point worth noting is that, on average, the gains (in terms of poverty gap reductions) achieved by increasing the eligibility threshold from the FPL to the UBPL appear to be much greater than the gains achieved from increasing the ceiling from the UBPL to the NMW. This is particularly true for the UBPL poverty gap. In addition, the costs associated with raising the threshold to the NMW are exceptionally high.

At the UBPL eligibility ceiling, the current and long-term scenarios are typically the most effective at reducing the FPL poverty gap. However, the current scenario is slightly less expensive than the long-term scenario.

In relation to the UBPL poverty gap, the long-term scenario achieves the greatest reductions at the two lower eligibility ceilings. However, this scenario is significantly more expensive than the other three scenarios at the lower eligibility ceilings. In contrast, at the two higher eligibility ceilings, the current scenario (and sometimes the average income measure scenario) achieve slightly greater reductions in the UBPL poverty gap relative to the other scenarios. Further, the current scenario is slightly cheaper than the average income measure scenario at these ceilings.

We provide another measure of cost effectiveness in Data Appendix 2—which captures the share of total grant expenditure that has been allocated to households below either the extreme or total poverty lines.[11] This measure gives a sense of where the bulk of the grant allocation is going. However, there are two important caveats with this cost-effectiveness measure to keep in mind: first, even if money is 'spilling over,' this does not necessarily mean that the money is wasted, particularly in the case of the FPL. Second, in addition to spending effectiveness, an adequate grant size is just as important for maximising the impact on poverty reduction—and therefore, we need to take both dimensions into account.[12]

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[11] Any money that is spent on households above the extreme and total poverty lines respectively is not counted, and any money that is spent on poor households but that 'spills-over' the poverty line, i.e., brings their consumption levels above the poverty line, is also not counted. The maximum effectiveness is 100 percent (if all the grant money was going to poor households, and the grant size perfectly allocated such that their consumption remained below, or exactly matched, the poverty line) and the minimum is 0 percent (if all money was going to non-poor households). Effectiveness will always look higher at the UBPL, because more of the grant money is likely to 'spillover' at a lower poverty line.

[12] Spending effectiveness tends to be higher when grant sizes and eligibility ceilings are smaller. Essentially, the smaller the size of the grant and the lower the eligibility ceiling, the more likely most (or all) of the grant expenditure will go to extremely poor households, and none will 'spill over' the extreme poverty line. As such, this

A key finding of this cost-effectiveness metric is no matter the grant size, the most cost-effective grant design-ceiling combinations are the current and smooth income scenarios at the R1,558 ceiling, or the long-term proposal at any ceiling. One way to interpret this is that these options are the most well-targeted, with the majority of the grant budget going to people who are in poverty. Increasing the size of the ceiling for all scenarios (except the long-term scenario) from R1,558 (UBPL) to R4,744 (NMW) is not very cost effective for reducing poverty. While, increasing the size of the grant is typically more effective at reducing poverty than raising the ceiling to R4,744. This finding is reflective of the results of our chosen cost-effectiveness metric.

2.6.1 The food poverty line

a) R370 size grant

It is clear that raising the eligibility ceiling (and thus increasing the cost of the grant) typically corresponds with an improvement in the reduction of the extreme poverty gap.

At the FPL and LBPL eligibility ceilings, the more expensive scenarios (current and long-term) tend to achieve slightly greater reductions in the extreme poverty gap. However, at these two lower eligibility ceilings, the long-term scenario is significantly more expensive (R55.5 and R58.2 billion) than the current scenario (R32 and R43.5 billion) but achieves the same decreases in the extreme poverty gap (5 and 5.1 percentage points). As such, at the FPL and LBPL eligibility ceilings, the current scenario performs favourably in terms of its impact on the extreme poverty gap and its associated cost.

At the UBPL ceiling, the current and long-term scenarios achieve the greatest reductions in the poverty gap (5.2 percentage points). While the costs associated with these scenarios are fairly similar, the current scenario is slightly cheaper (R58.6 billion compared to R61.3 billion for the long-term scenario).

When the eligibility ceiling is raised to the NMW (thus increasing the cost), the impact on the poverty gap of the current and long-term scenarios increases to 5.3 percentage points. Once again, these two scenarios achieve the greatest declines in the extreme poverty gap. However, the cost associated with the current scenario is significantly greater than the long-term scenario (R93.2 billion compared to R71.9 billion).

While the cost of the long-term scenario is much higher than the other scenarios at the lower eligibility ceilings, raising the eligibility ceiling doesn't appear to increase the cost of this scenario as much as the increases observed for the other scenarios. In fact, at the NMW eligibility ceiling, the long-term scenario is substantially cheaper than all other scenarios; and it achieves the same decreases in the poverty gap as the current and averaging income over 6 months scenarios.

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will result in a high spending effectiveness score. However, if the grant size is too small, and the eligibility ceiling is too low, the grant is unlikely to make a significant difference to the goal of poverty reduction.

b) R430 size grant

The patterns depicted for the R430 size grant are quite similar to those of the R370 size grant. However, given the increase in the size of the grant, the poverty gap reductions and costs associated with the scenarios at the different eligibility ceilings are greater. Further, the gains achieved (in terms of improvements in reducing the poverty gap) by increasing the size of the grant are greater than the gains reaped by raising the eligibility ceiling at a given grant size.

At the FPL and LBPL eligibility ceilings, the more expensive scenarios (current and long-term) tend to achieve slightly greater reductions in the extreme poverty gap. However, at these two lower eligibility ceilings, the long-term scenario is significantly more expensive (R64.5 and R67.6 billion) than the current scenario (R37.2 and R50.6 billion) but achieves the same decreases in the extreme poverty gap (5.7 and 5.8 percentage points). As such, at the FPL and LBPL eligibility ceilings, the current scenario performs favourably in terms of its impact on the extreme poverty gap and its associated cost.

At the UBPL ceiling, the current and long-term scenarios achieve the greatest reductions in the poverty gap (5.9 percentage points). While the costs associated with these scenarios are fairly similar, the current scenario is slightly cheaper (R68.1 billion compared to R71.2 billion for the long-term scenario).

When the eligibility ceiling is raised to the NMW (thus increasing the cost), the impact on the poverty gap of the current and long-term scenarios remains at 5.9 percentage points. These two scenarios, along with the average income measure, achieve the greatest declines in the extreme poverty gap. However, the costs associated with the current and average income measure scenarios are significantly greater than the long-term scenario (R108.4 billion and R112.5 billion compared to R83.6 billion).

c) R530 size grant

The patterns illustrated for the R530 size grant are similar to those of the R370 and R430 size grants; although, the size of the poverty gap reductions and budgets are much greater due to the higher grant size.

At the FPL and LBPL eligibility ceilings, the current and long-term scenarios achieve the highest reductions in the poverty gap (6.6 and 6.7 percentage points). However, the current scenario is significantly cheaper (R45.8 and R62.3 billion) than the long-term scenario (R79.5 and R83.1 billion).

At the UBPL ceiling, the current and long-term scenarios lead to the greatest declines in the poverty gap (6.8 percentage points). The costs associated with the current and long-term scenarios are fairly similar at this eligibility ceiling, with the current scenario being slightly cheaper (R84 and R87.8 billion respectively).

When the eligibility ceiling is raised to the NMW, the current, average income measure and long-term scenarios are the most effective at reducing the extent of deep poverty (6.9 percentage points). However, the current and average income measure scenarios are much more expensive than the long-term scenario (R133.6 and R138.6 billion compared to R103 billion).

d) R760 size grant

Once again, the patterns illustrated for the R760 size grant are almost identical to those of the three smaller size grants; although, the size of the poverty gap reductions and budgets are much greater due to the higher grant size.

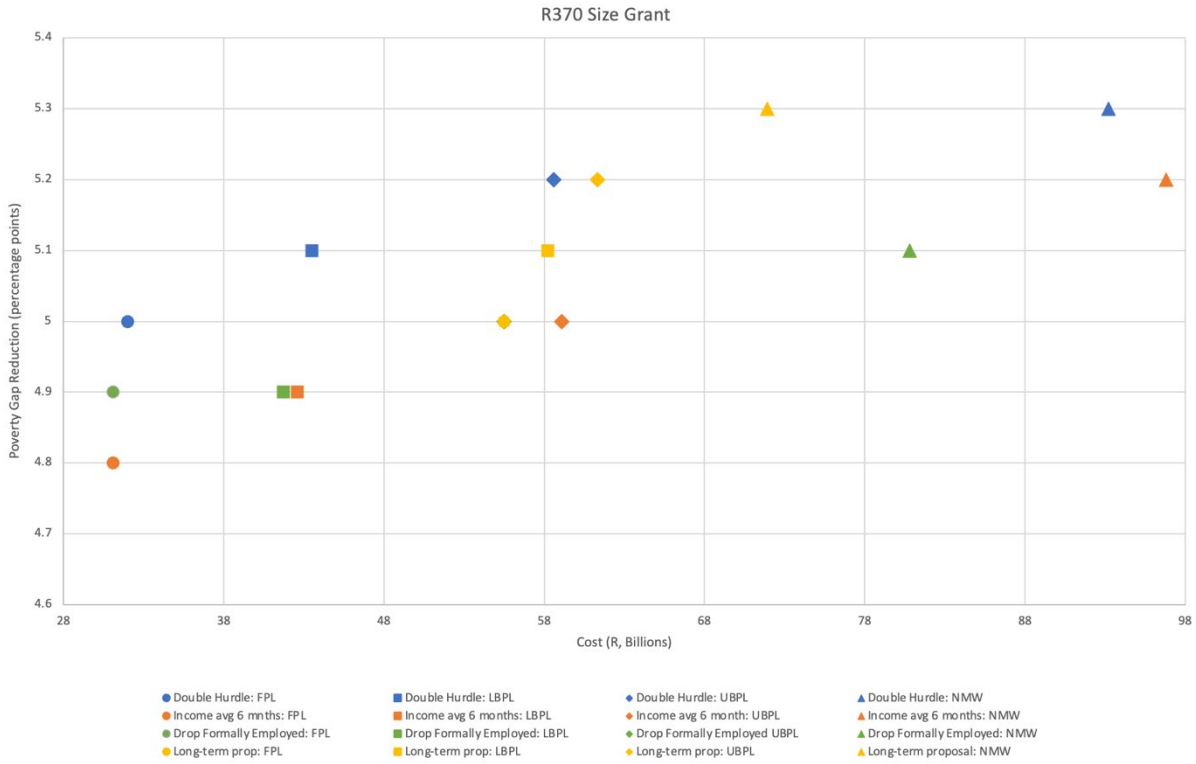
At the FPL and LBPL eligibility ceilings, the current and long-term scenarios achieve the highest reductions in the degree of deep poverty (8.3 percentage points). However, the current scenario is substantially cheaper (R65.7 billion versus R114 billion for the long-term scenario).

At the UBPL ceiling, the above two scenarios reduce the extreme poverty gap by the greatest amount (8.5 percentage points). The current scenario is slightly cheaper than the long-term scenario (R114 billion compared to R120.4 and R125.9 billion).

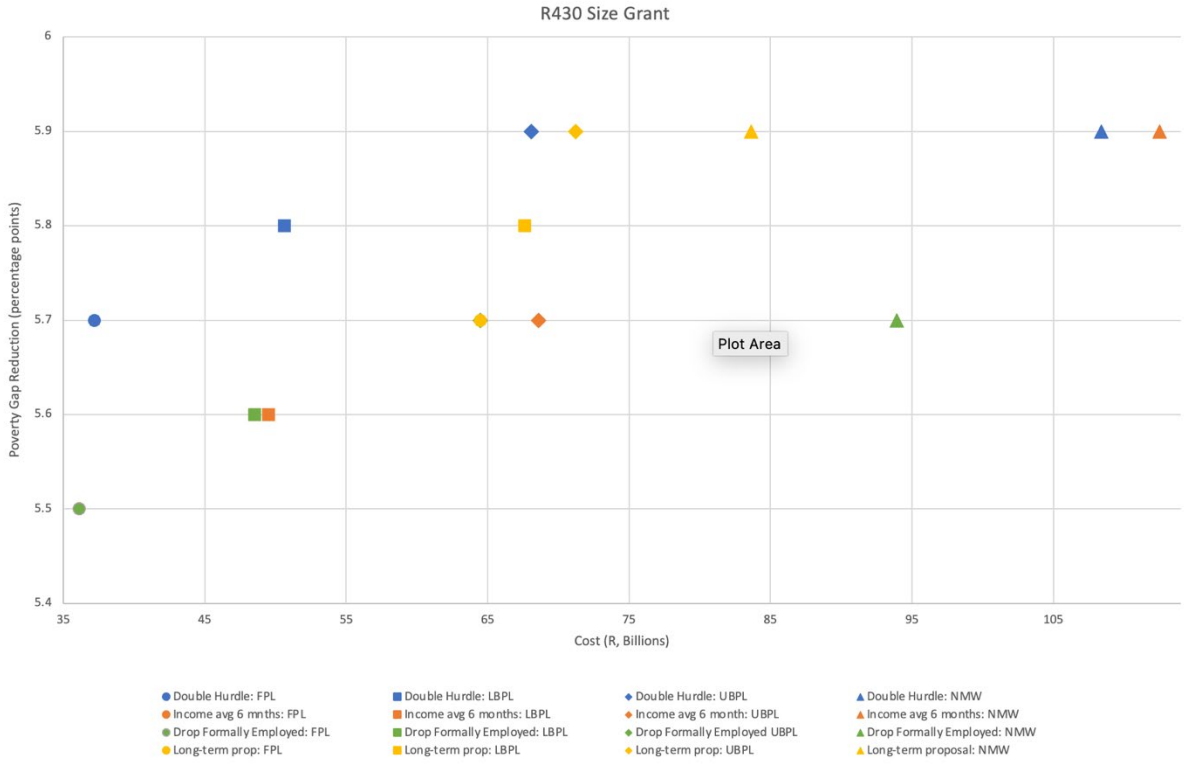
When the ceiling is raised to the NMW, the current and long-term scenarios once again lead to the greatest reductions in the poverty gap (8.6 percentage points). However, the increase in costs associated with raising the eligibility ceiling are substantially higher for the current scenario (R191.5 billion)—making it significantly more expensive than the long-term scenario (R147.7 billion).

Figure 8. FPL poverty gap reduction against budget increments

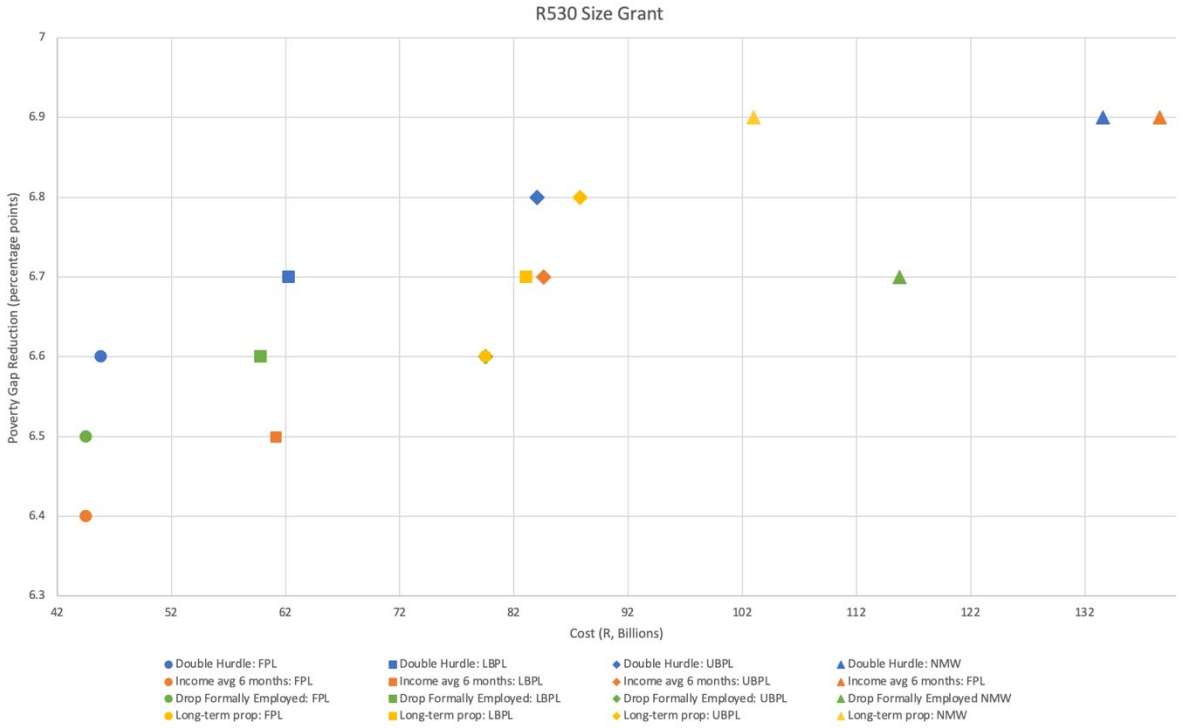
a. SRD-370 at the FPL



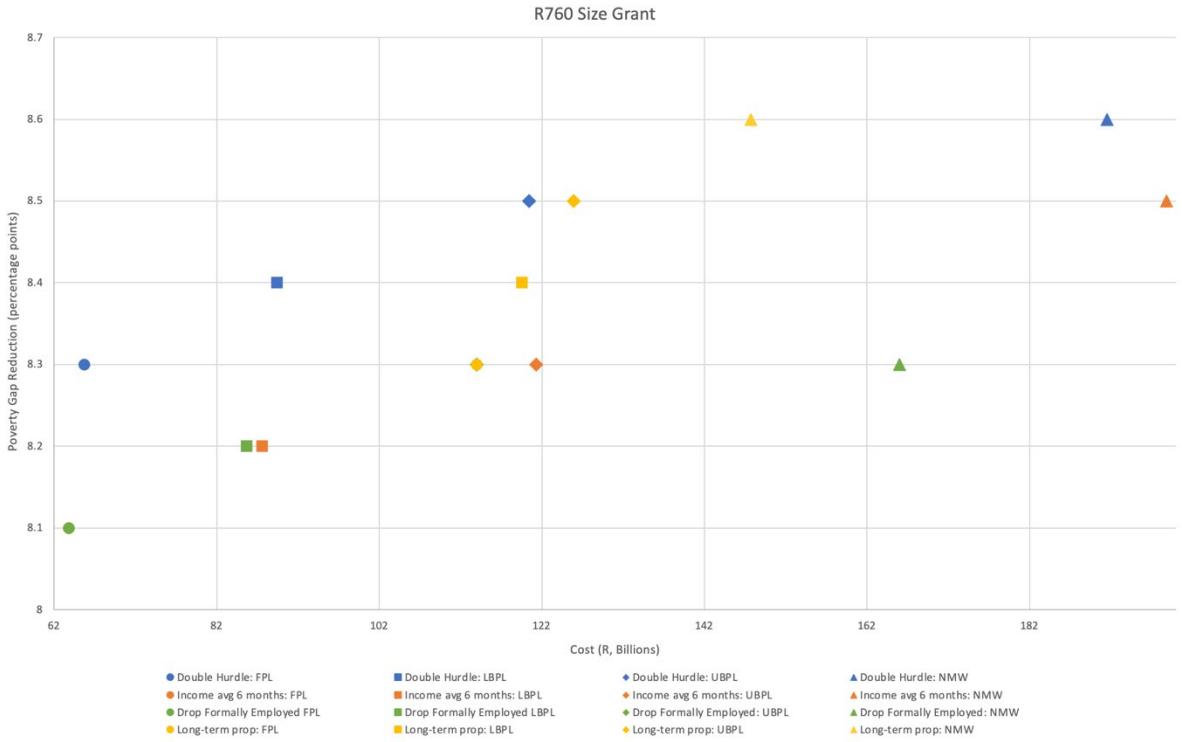
b. SRD-430 at the FPL



c. SRD-530 at the FPL



d. SRD-760 at the FPL



Source: Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015-2021.

Note: All poverty lines are in 2021 prices.

2.6.2 The upper bound poverty line

a) R370 size grant

At the FPL and the LBPL eligibility ceilings, the long-term scenario achieves the greatest reduction in poverty gap by a significant margin (4.3 and 4.4 percentages points). However, this scenario is substantially more expensive (R55.5 and R58.2 billion) than the other three scenarios—all of which produce fairly similar declines in the poverty gap (between 2.7 to 2.8 percentage points at the FPL threshold and 3.7 to 3.8 percentage points at the LBPL threshold) and have fairly similar costs (between R31.1 to R32 billion at the FPL threshold and R41.7 to R43.5 billion at the LBPL threshold).

At the UBPL ceiling, the current and average income measure scenarios are the most effective at reducing the poverty gap (5 percentage points). Further, these two scenarios are slightly cheaper than the long-term scenario (R58.6 and R59.1 billion compared to R61.3 billion).

At the NMW ceiling, the current and average income measure scenarios are the most successful at decreasing the poverty gap (5.5 percentage points), although the current scenario is slightly cheaper than the average income measure scenario (R93.2 billion compared to R96.8 billion).

b) R430 size grant

The patterns observed for the R430 size grant are very similar to those of the R370 size grant. However, the size of the reductions in the poverty gap and budgets are higher given the increased grant size.

At the FPL and the LBPL eligibility ceilings, the long-term scenario achieves the greatest reduction in poverty gap by a significant margin (4.9 and 5.4 percentages points). However, this scenario is substantially more expensive (R64.5 and R67.6 billion) than the other three scenarios—all of which produce fairly similar declines in the poverty gap (between 3.2 to 3.3 percentage points at the FPL threshold and 4.2 to 4.4 percentage points at the LBPL threshold) and have fairly similar costs (between R36.1 to R37.2 billion at the FPL threshold and R48.5 to R50.6 billion at the LBPL threshold).

At the UBPL ceiling, the current and average income measure scenarios are the most effective at reducing the poverty gap (5.7 percentage points). Further, these two scenarios are slightly cheaper than the long-term scenario (R68.1 and R68.6 billion compared to R71.2 billion).

At the NMW ceiling, the current and average income measure scenarios are the most successful at decreasing the poverty gap (6.3 percentage points), although the current scenario is slightly cheaper than the average income measure scenario (R108.4 billion compared to R112.5 billion).

c) R530 size grant

The patterns observed for the R530 size grant are very similar to those of the R370 and R430 size grants. However, the size of the reductions in the poverty gap and budgets are higher given the increased grant size.

At the FPL and the LBPL eligibility ceilings, the long-term scenario is once again by far the most effective at reducing the poverty gap (6 and 6.3 percentage points). Nevertheless, it requires the greatest costs out of all four scenarios (R79.5 versus between R44.5 to R45.8 billion at the FPL ceiling and R83.1 billion versus between R59.8 to R62.3 billion at the LBPL ceiling).

When the eligibility ceiling is raised to the UBPL, current and average income measure achieve the highest reductions in the poverty gap (7 percentage points). Further, these two scenarios are cheaper than the long-term scenario (R84 and R84.6 billion compared to R87.8 billion).

At the NMW ceiling, the current scenario is the most effective at reducing the poverty gap (7.7 percentage points); however, this scenario is slightly cheaper than the average income scenario (R133.6 billion relative to R138.6 billion).

d) R760 size grant

Once again, the patterns depicted for the R760 size grant are largely similar to those of the three smaller size grants, except the size of the poverty gap reductions and the budgets are greater due to the higher grant size.

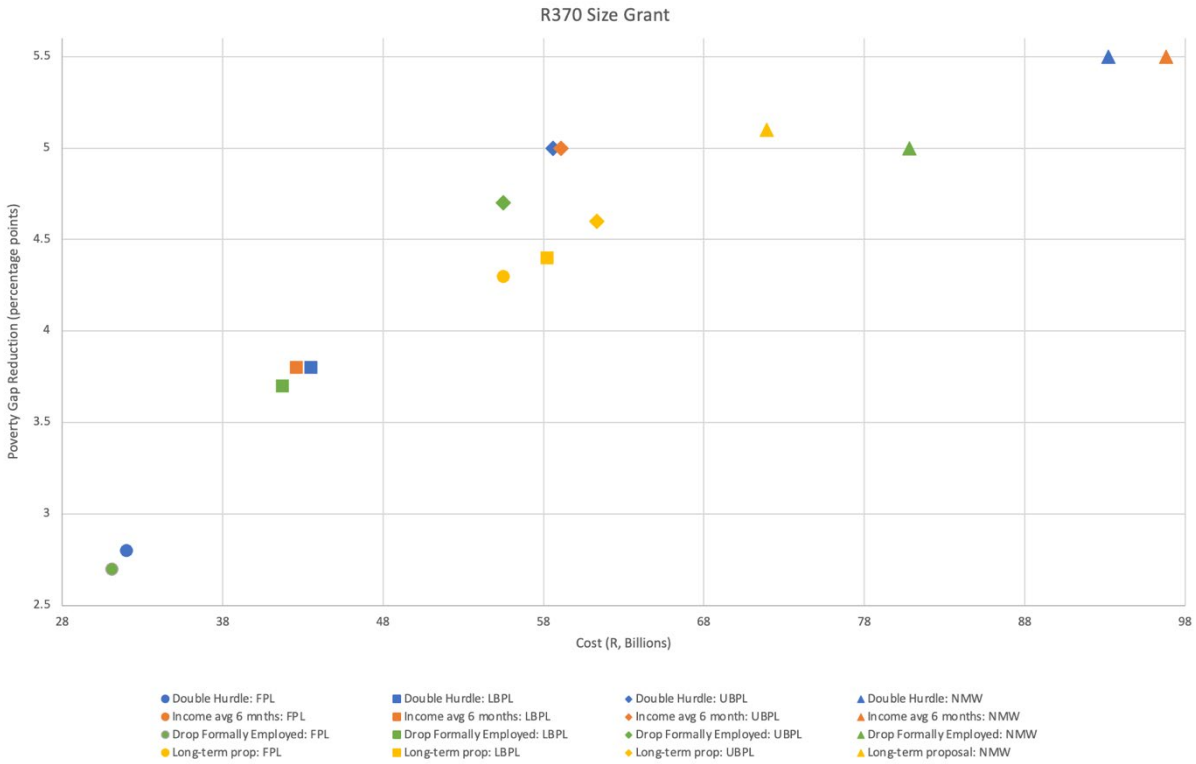
At the FPL and the LBPL eligibility ceilings, the long-term scenario achieves the highest decreases in the poverty gap (8.5 and 8.9 percentage points). It is also the most expensive scenario (by a substantial margin) to implement at these eligibility thresholds (R114 billion versus between R63.8 to R65.7 billion at the FPL ceiling and R119.5 billion versus between R63.8 to R65.7 billion).

At the UBPL ceiling, the current scenario is the most effective at reducing the extent of poverty (9.8 percentage points); and is slightly cheaper than the average income measure and long-term scenarios (R120.4 billion compared to between R121.3 to R125.9 billion).

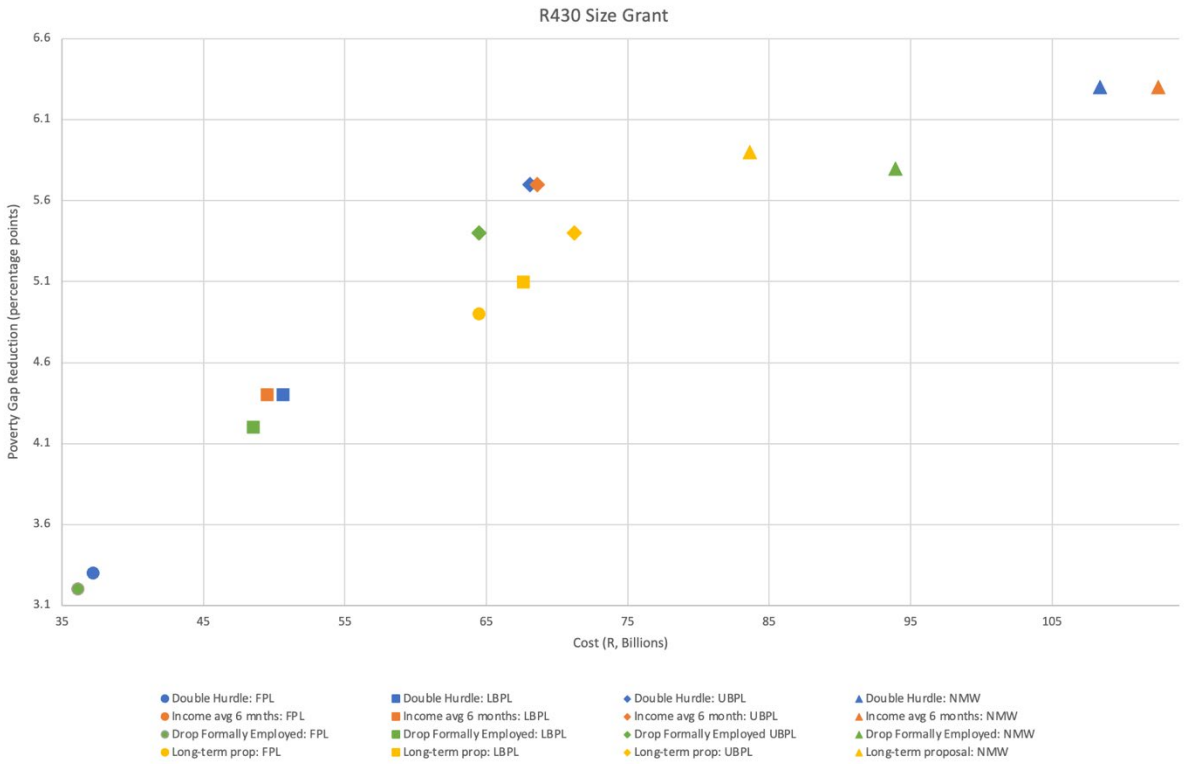
When the eligibility ceiling is increased to the NMW, the most successful scenario at reducing the poverty gap is the current scenario (10.6 percentage points). In addition, this scenario is cheaper than the most expensive scenario, the average income measure scenario (R191.5 billion compared to R198.8 billion).

Figure 9. UBPL poverty gap reduction against budget increments

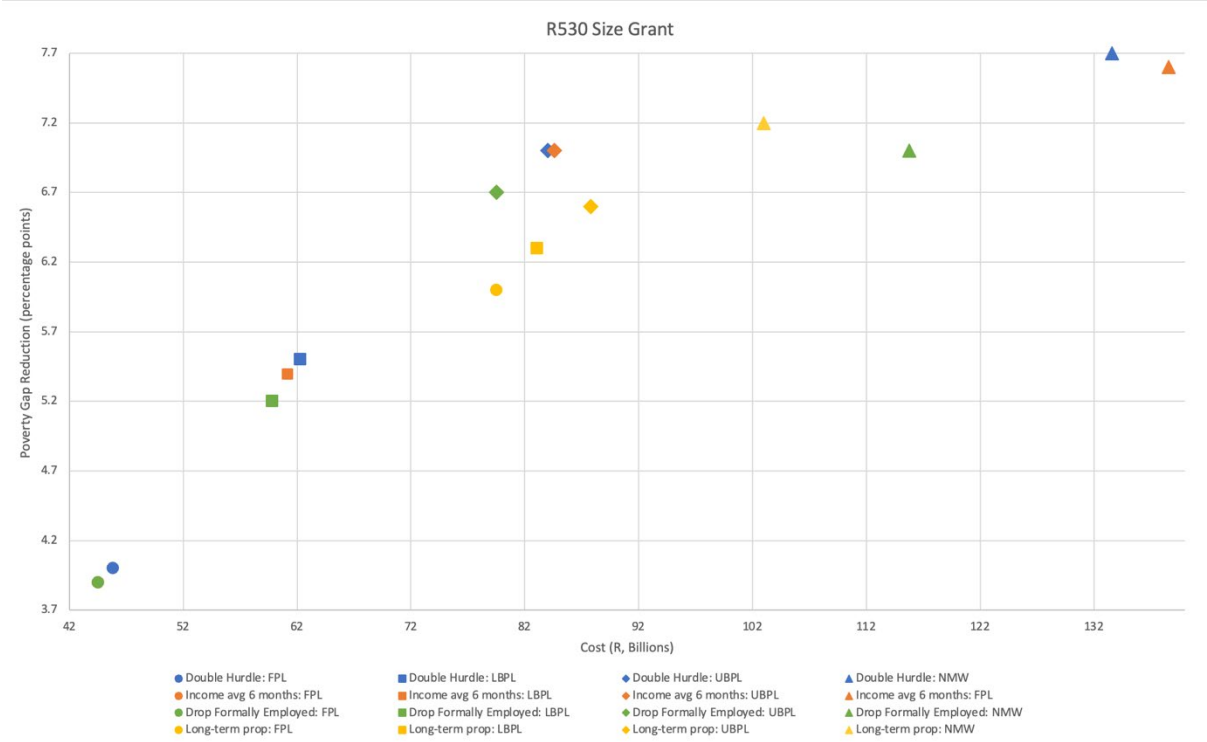
a. SRD-370 at the UBPL



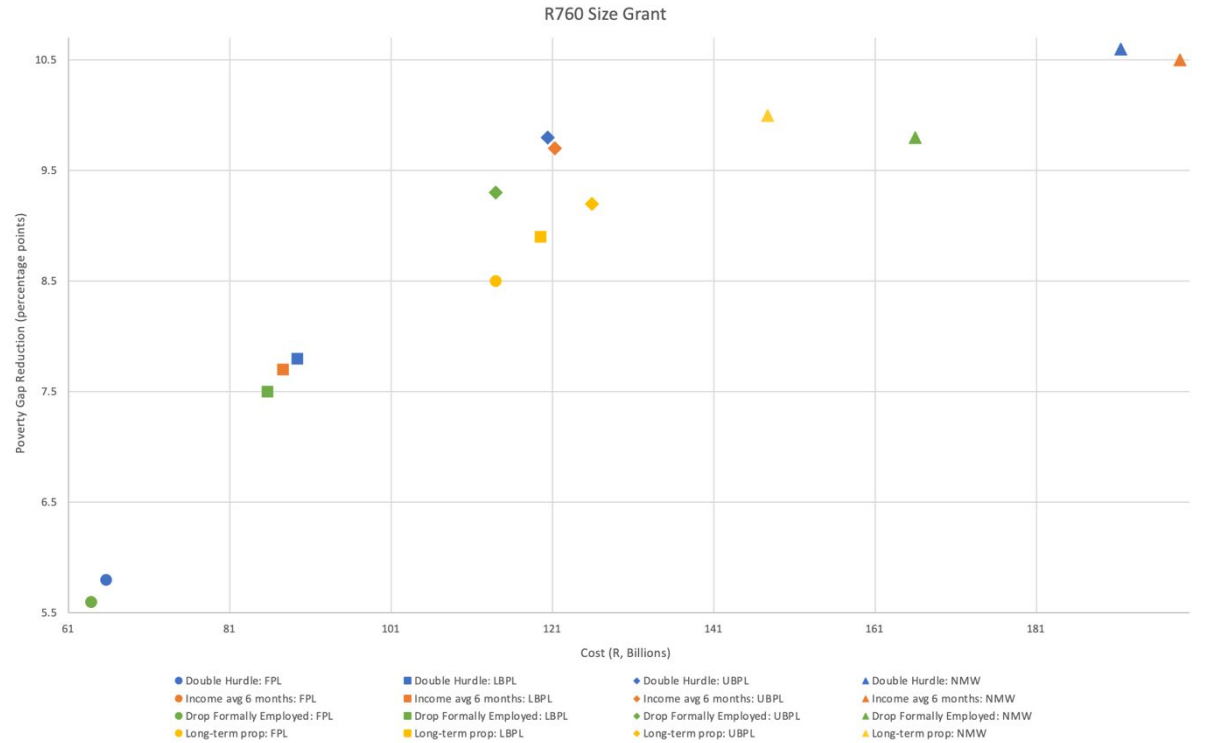
b. SRD-430 at the UBPL



c. SRD-530 at the UBPL



d. SRD-760 at the UBPL



Source: Authors' estimates based on the LCS 2014/15 adjusted to 2024 using the QLFS 2015-2024.

Note: All poverty lines are in 2023 prices.

3. Discussion and recommendations

For improving targeting, we recommend that in the longer term, the grant should be designed so that the targeting does not rely on bank account data. We argue that the three most promising design options are targeting methods that use self-reported income, encouraging self-targeting through messaging and grant application design and raising the eligibility ceiling to the national minimum wage. All three of these options would require changes to the design or administration of the grant that would take time to set up. We suggest retaining the current means-testing approach in the short term and only implementing long term recommendations after completing further research.

In this section, we highlight issues with the current proposal that present serious risks for both effective grant targeting and how the grant will affect potential beneficiaries in the medium term. We then discuss the merits and disadvantages of grant options that would only be possible in the longer term. We argue that implementing a household grant would be costly, risky undertaking, poorly suited to the household dynamics observed in South Africa.

3.1 Issues identified with the current proposal and possible solutions

3.1.1 Disincentives to use the banking system

The existing approach may discourage potential recipients from using the banking system to receive income in favour of reverting to use of cash that cannot be observed by SASSA, with serious negative consequences. In the long term, low-income individuals are likely to be aware of the methods used to screen grant applicants and respond to those screening methods in an attempt to secure the grant. This is consistent with behaviour observed for other means-testing conditions where there is evidence that households try to hide assets in order to be eligible for means-tested social assistance (discussed in detail below, see section 4.3.1: Asset-based proxy means test). Discouraging low-income individuals from using digital methods for saving and transacting will increase the challenges they face in saving (Dupas & Robinson, 2013; Suri, 2017) and retaining control of their own income (Riley, 2022), increase their vulnerability to some kinds of crimes (Dupas & Robinson, 2013) and reduce their ability to access finances to make costly investments (Suri, 2017). The policy of auditing bank accounts may also not effectively capture income from people with multiple accounts, undermining its effectiveness. For example, individuals who were self-employed might operate a business account that was not linked to their personal account.

The lower the threshold of the means test is set for the grant, the worse the effect of discouraging the use of formal bank accounts is likely to be. Individuals who earn at or above the national minimum wage are highly unlikely to be paid in cash and therefore will struggle to remove themselves from the banking system. Moreover, the relative benefit for the SRD grant relative to the cost of leaving a national minimum wage job is likely too small to be worthwhile. By contrast, someone earning just above the lower-bound poverty level is

more likely to be paid cash and so can more easily exit formal banking systems. Moreover, the SRD would represent a substantially larger share of income for this person. The incentive to deformalize and revert to cash will therefore be strongest for the most economically vulnerable. It is for this reason that we recommend setting the means testing threshold high enough that affected individuals at the threshold are unlikely to be motived by the amount they would gain from receiving the grant to move out of the formal banking system.

Our existing proposal already goes some way toward dealing with these issues. Having a higher income threshold (e.g., at the national minimum wage) would not exclude people who are earning low amounts from informal or casual or short-term work and hence would not generate an incentive to hide income from this work.

3.1.2 Disincentive to enter the formal sector or start a business

There are concerns that grants may discourage people working in the formal sector (where income is paid into their bank account) or deter them from starting businesses. This could happen:

- If UIF or tax records were used to exclude people from the SRD
- If people do not want to get a formal job because employers insist on paying money into a bank account or
- If losing the SRD could discourage people from taking on short term formal work because they risk losing their grant. There are a lot of zero-hours or commission-pay-only jobs which may give valuable work experience and should be encouraged but might not be sufficiently secure to risk giving up the grant.

Our view is that the grant is too small to discourage alternative economic activity. As discussed in_Facilitating economic activity, the size of the grants under discussion remains small compared to wages from formal sector work, such that it is likely it is still rational for most people to take up formal sector employment if they find it.

3.1.3 Possible means testing methods that help to mitigate these concerns

- Having a higher income threshold (e.g., at the minimum wage) would not exclude people earning low amounts from informal or casual or short-term work and hence would not discourage this work.
- To more accurately measure total income, banking checks should be extended to merge records by ID number over people with multiple accounts.
- To reduce reliance on bank data, it might be possible to introduce random audits of a very small, randomly selected subset of recipients. This could involve a more detailed consideration of their data across the banking system, tax records and UIF records. The threat of being audited might encourage compliance, but without the costs of auditing everyone. In Indonesia, self-targeting (encouraging people to

apply) to a grant programme plus an audit was found to improve accuracy rates relative to automatically enrolling candidates who pass an asset test. It also reduced costs (Alatas *et al*., 2016). However, the capacity of SASSA may be a constraint.

- To reduce reliance on bank data, it might also be possible to revert to using checks on the UIF data and/or IRP5 tax data (specifically to identify non-eligible individuals) in addition to the individual means tests based on banking data (Alatas *et al*., 2016). However, ideally, in the longer term it would be useful to use these records as a complement to self-reported income data, to be able to capture individuals whose income was not captured by bank data checks.
    - We suggest measures to encourage employers to improve the UIF data. Government could introduce random audits of the UIF data and fine employers if the data is not correct (or give small bonuses, potentially tax credits, for correct data). Government could also make it possible for workers to check their status online and follow up with employers.
    - We also suggest investment in SARS consolidating the IRP5 tax records regularly to be able to provide them to SASSA with less of a lag.
    - Note that the Brazilian equivalent of UIF is used in Bolsa Familia to target that grant (see 'Appendix 3: More information on Bolsa Familia household grants').
- If the grant is targeted using income measured in banking data averaged over a longer period, recipients would only be removed from the SRD after they had managed to earn income for some time. If UIF or tax data were used, the same principles could be applied: someone could be removed from SRD only when they have had UIF payments made for six consecutive months and they have wage payments over a certain threshold in some consecutive months, or if they have earned income above the threshold from self–employment for six months.
- It might be possible to use data on municipal valuation roll to remove any wealthier beneficiaries without relying on banking data. This will require linking address variables in the grant application form to municipal valuation rolls. The applicant would need to state their primary residence in the application. This would be used as a mechanism to exclude individuals who meet the eligibility criteria, but whose household resources lie above a defined threshold. A downside, however, is that requiring proof of address could lead to the false exclusion of individuals in the lower deciles.
- SASSA could supplement these methods with the same means-testing procedures applied to the Child Support Grant, requiring individuals to submit documents that prove financial status themselves or obtain an affidavit when they do not possess the required documents. Although this method could be cheated by fraudulent documentation, the administrative burden of obtaining multiple affidavits or fraudulent documents is unlikely to be worthwhile for individuals to whom the grant is a relatively small amount of money, particularly if coupled with auditing.

Our existing proposal already goes some way toward dealing with these issues.

- Having a higher income threshold (e.g., at the minimum wage) would not exclude people earning low amounts from informal or casual or short-term work and hence would not discourage this work.

- If the grant is targeted using income measured in banking data averaged over a longer period, recipients would only be removed from the SRD after they had managed to earn income for some time. If UIF or tax data were used, the same principles could be applied: someone could be removed from SRD only when they have had UIF payments made for six consecutive months and they have wage payments over a certain threshold in some consecutive months, or if they have earned income above the threshold from self–employment for six months.

3.2 Concerns with an alternative approach: targeting households

We do not recommend a grant targeted at households in the medium term. Targeting the grant to households in this way is a major undertaking that will be costly and time-consuming to set up and maintain and may not transfer well to the South African context given our history of migrant labour and 'stretched' households.

3.2.1 A household grant would raise a number of practical issues in implementation

There has been extensive consideration of a grant to households based on the Bolsa Familia in Brazil, where either each adult in a poor household receives a benefit, household income per capita is topped up to R760 per capita, or the two are combined. The efficiency gains of the Family Grant assume that grant eligibility and grant amounts are set based on the household's most recent monthly income, as observed in survey data. However, it is close to impossible to measure income so regularly. The further away in time one gets from the original measurement of income done face-to-face with households, the more inaccurate the income data becomes.

In Brazil, households are registered by social workers managed by the municipality (National Treasury, 2021). Household heads visit social security offices to register. Social workers visit households to measure their income and household composition. This is updated every two years. The data households report is compared to administrative records, including the equivalents of the UIF and SASSA data on beneficiaries of other grants. They are targeted with different levels of benefit. This requires the following ingredients:

- It requires a register of households with household members, which needs to be set up and maintained. This requires that the household head and household is agreed and defined. Brazil does not have the same levels of households split across rural and urban locations as South Africa.

- There needs to be capacity to conduct home visits and means-testing through asset surveys.

- The household and its income need to be tracked over time to allocate the right amount of grant funding. The fluidity of South African households may render the country a particularly difficult context for such a grant. People move extensively based on work and family obligations. There would be administrative work in moving individuals between households and adjusting amounts of grants based on this. It would also be difficult to monitor where individuals received their grant allocation if they moved regularly between more than one household. Individual grants do not need to be altered when an individual moves.

It is likely to take time, extensive funding, and very strong local capacity to set up a household targeting system. It seems unfeasible to set this system up in less than a couple of years. Bolsa Familia took ten years to set up, including the establishment of offices in each municipality to regularly survey and assess households and their assets. It relies on very strong municipal infrastructure. Brazil also faced major issues during the first years of its implementation, in particular with collection of data. See 'Appendix 3: More information on Bolsa Familia household grants' for details on the Brazilian system.

Removing SRD grants without an alternative system in place would remove beneficial impacts from individuals currently receiving them. Our previous work outlines the extremely strong international evidence that cash transfers have benefits in reducing hunger, improving dietary diversity and preventing households using detrimental coping strategies. It also outlines that cash transfers can encourage job search and enable self-employment (Orkin *et al.*, 2021).

3.2.2 Household grant data collection cost and difficulty

In addition, household grants face the following issues:

1. The additional data collection required may induce considerable costs. In Indonesia the census of the poor costs $42 million every three years, with additional annual costs of $1.1 million (Bah *et al.*, 2015). In Peru, it costs $10.8 million, with annual costs of $1.1 million (Ministerio de Economia y Finanzas, 2008). Per year, this is an additional 0.8 and 1.7 percent of the overall transfer budget in Indonesia and Peru, respectively (Hanna & Olken, 2018). The 2009 targeting survey in Pakistan cost $60 million. Kenya's Hunger Safety Net Program spent approximately $10 million to survey only 380,000 households (4% of the population) (Kidd *et al.*, 2017).

2. To achieve good targeting while using self-reported income, it is very likely the programme would also need to verify self-reported data against bank data, like the SRD. Thus, the household grant would face the same issues with income data that the SRD faces. Indeed, in Brazil, since 2005, the CadÚnico is verified against other federal data (See 'Appendix 3: More information on Bolsa Familia household grants').

3. There is a strong possibility of corruption in the process of determining if a household is eligible during the process of surveying. The SRD would use administrative data relying on multiple reports (individual's reports, banks, possibly employers) which does not rely on an assessment being made by one municipal worker. There is still possibility of fraud, but it is likely to be diminished.

4. The efficiency gains of the Family Grant, as modelled by SALDRU, rely on grant eligibility and grant amounts being based on household's most recent monthly income, which is measured in the surveys used for modelling (Goldman *et al*., 2021). However, it is close to impossible to measure income so regularly. Even Bolsa Familia doesn't manage to regularly visit households to measure income: they measure income by visiting households only every two years and in between, use checks against administrative data. This means that there is likely to be considerable error in measuring income, leading to errors of inclusion and exclusion. The further away in time one gets from the original measurement of income done face-to-face with households, the more inaccurate the income data becomes. As was clear in subsequent media discussion of the SALDRU report (Bassier & Budlender, 2021), the more measurement error there is in income, the smaller the difference between the SRD and the Family Grant in terms of efficiency. It is very difficult to estimate the extent to which the system could overcome these issues.

Collectively, these challenges point to a considerable risk of substantial targeting error. Given likely extensive delays, it is unclear why there is benefit to setting up a new system for potentially little improvement in targeting accuracy over the SRD.

3.2.3 Intrahousehold issues

In addition, household grants may face difficulties in households where there are difficult intra-household dynamics.

1. Allocating grants to the household may prevent household members leaving if they would lose grant income. This would be a particular concern if household members faced domestic violence. It would be an even worse concern if the Child Support Grant and Family Grant were rolled into one and controlled by an abusive household head, making it difficult for people leaving the household to take children with them.

2. Households may not share resources efficiently internally. With an individual grant, individuals receiving grants can still pool resources if they want to, but if they receive their own grant, they can choose not to if they deem this optimal for them. For example, there is strong evidence that households do not spend optimally to improve nutrition of all members. A very large number of undernourished individuals live in non-poor households, suggesting that those who control income in households may not distribute it to ensure all household members benefit.

In 30 countries in sub-Saharan Africa, around half of underweight women are found in households in the top three wealth deciles (Brown *et al*., 2017). Studies in Bangladesh (D'Souza & Tandon., 2019) and China (Santaeulàlia-Llopis & Zheng, 2016) find male household heads have much smaller caloric and micronutrient shortfalls than other household members.

3.3 Concerns with using other proxies for income or other targeting methods

One of the primary arguments against income-based targeting is that it falsely rejects a large number of eligible beneficiaries. Additionally, accurately determining income is difficult given the data constraints. We examined other potential methods of targeting used internationally or suggested in South Africa and believe their disadvantages are worse than this proposal. We discuss demographic proxy indicators of poverty, age-based, geographic-based and community targeting in a previous paper and show these have considerable downsides (Orkin *et al*., 2021).

3.3.1 Asset-based proxy means tests

In proxy means testing, government measures an-easy-to measure proxy for income known to correlate with income (usually asset ownership) and uses this to target the poorest. The government conducts large, periodic quasi-censuses of the population, focusing on those most likely to be poor (e.g., using geographic targeting). Surveys typically ask about assets, such as televisions and refrigerators or housing quality. Proxy means tests are usually collected in household surveys done at individuals' households. In survey data, the government can map the relationship between these assets and people's incomes and use this mapping to estimate people's income (Hanna & Olken, 2018).[13] Families that are below a certain level of assets are offered the benefit. It is implemented in Indonesia, Pakistan, Nigeria, Mexico, and the Philippines.

In recent variations on this approach, households sign up for grants instead of being enrolled automatically on the basis of the census of the poor. Government can then screen all households who sign up using a proxy-means test. To further reduce costs, government can audit only a random subset.

[13] Specifically, the government takes a data set with information on 'the same asset variables as in the proxy-means census and also [...] a measure of poverty, such as a household's monthly income or per-capita expenditure. The government then estimates a regression with the measure of poverty as the dependent variable and the assets as explanatory variables. The proxy-means score is the predicted income or expenditure, which the government can calculate for any household using the coefficients from that regression. The government then can set a threshold for eligibility and distribute benefits to all households with predicted incomes below the threshold' [p. 207 in Hanna, R., & Olken, B. (2018). Universal Basic Incomes versus Targeted Transfers: Anti-Poverty Programmes in Developing Countries. *Journal of Economic Perspectives, 32*(4), 201-26].

We do not recommend using this approach immediately, although it is the most viable alternative to using an income-based measure. The approach has the following disadvantages:

- We are not aware of examples where proxy means tests have been used for individuals rather than households, so this approach would need to be designed and tested. For example, it is not clear if unemployed individuals living in households above the asset threshold should be excluded from an unemployment grant if a) the grant will help them find work and b) if they get no benefits from the ownership of the asset. This is the most important difficulty. One approach suggested in South Africa is to disqualify individuals who have registered vehicles; however, this would only remove 600 000 people from the eligibility pool.

- Targeting may require collecting more data from households at their household, to avoid reporting errors. This would be much more expensive than the current SRD approach. In Indonesia the census of the poor costs $42 million every three years, with additional annual costs of $1.1 million (Bah *et al.*, 2015). In Peru, it costs $10.8 million, with annual costs of $1.1 million (Ministerio de Economia y Finanzas, 2008). Per year, this is an additional 0.8 and 1.7 percent of the overall transfer budget in Indonesia and Peru, respectively (Hanna & Olken, 2018). The 2009 PMT survey in Pakistan cost $60 million. Kenya's Hunger Safety Net Program spent approximately $10 million to survey only 380,000 households (4% of the population) (Kidd *et al.*, 2017).

- Data collection may be a significant organizational effort, which can undermine the efficacy of targeting.[14]

- If criteria do become known, households may strategically misreport or hide assets to make sure they fall under the cut-off (Banerjee *et al.*, 2018). For example, many programmes use asset measurement as a proxy means test (PMT) to target cash transfers.[15] Five studies, in a range of different settings find evidence of households strategically misreporting assets to remain below the cut-off for social assistance (Kidd *et al.*, 2011; Banerjee *et al.*, 2018; Camacho & Conover, 2011; Martinelli *et al.*, 2009). The National Treasury also finds that this occurs with Child Support Grant recipients (Goldman *et al.*, 2021).

[14] In many countries, there have been long gaps between surveys: Pakistan last did a PMT in 2009; Indonesia had a four-year gap between PMTs in 2011 and 2015; and in Mexico, in some areas, registration for their CCT program (Oportunidades) was not repeated for ten years. Kidd S., Gelders B., & Bailey-Athias D. (2017). Exclusion by design: an assessment of the effectiveness of the proxy means test poverty targeting mechanism. Working Paper 56, International Labour Office, Geneva.

[15] Data from large, periodic censuses of the population, focusing on those most likely to be poor, can be used to measure people's assets. The government then maps the relationship between these assets and people's incomes and then estimates people's income. People with or without certain assets can be classified as being poor and eligible for grant payments.

- Criteria which are not publicly known may make it difficult for recipients to report administrative errors or corruption, and more broadly make it harder for beneficiaries to understand the programme. Programmes that inform recipients what they should expect from programmes seem to reduce leakages in the programme significantly. In a trial in Indonesian villages, in some villages central government told beneficiaries directly that they were eligible for a rice subsidy. Those villages received 26 percent more rice than villages where only the village head learned who was eligible (Banerjee *et al.*, 2019).

However, proxy-means testing may be viable to implement in the longer term if there are worries with the income-based approach. Advantages of this approach are:

- It is potentially more difficult for households to distort behaviour in response to the cut-off because the exact cut-off used is not public. Censuses of the poor can also be linked to bank accounts, which can further facilitate quick payments (Rutkowski *et al.*, 2020).[16]

- Limited discretion for officials, which might reduce corruption in assessing eligibility (Niehaus *et al.*, 2013).

- Censuses of the poor can be used to means test other programmes. This reduces the administrative burden of means-targeting any one programme, enabling the government to target free or subsidized programming at the poorest.[17]

- Censuses of the poor can be used to easily roll out new programmes without needing to collect new data. These could be used to deliver stimulus during economic downturns or quickly adapt eligibility criteria for programmes (Gerard *et al.* 2020).[18]

[16] "Chile has a national ID-linked basic account for most poor people, which they used to pay more than 2 million low-income individuals a once-off grant during COVID19. India has sent money to Jan Dhan basic bank accounts for the poor, linked to the Aadhaar ID system." (Gerard *et al.*, 2020).

[17] For example, the Indonesian government uses the census to target scholarships for poor students and subsidized health insurance for the poor. It has also administered temporary and periodic unconditional cash transfers to households to help offset shocks in fuel prices. Peru uses the census to target nutritional subsidies and subsidized health insurance.

[18] E.g., Peru and Brazil used 'censuses of the poor' to target COVID19 cash transfer programmes to quickly identify beneficiaries who were not normally poor enough for transfers but did need them during an emergency.

- The modified versions of proxy means tests can reduce costs and administrative work by reducing complexity of the process. E.g., if people self-enrol, government can skip home visits for those who didn't apply. Indonesia tested both adaptations: households had to apply for cash transfers, were screened using the proxy-means test, and then a fraction who passed the in-person eligibility test had their eligibility verified via a home visit. This improved screening; the beneficiaries selected by the new method were about 20 percent poorer than those selected through automatic enrolment based on a proxy means test (Alatas *et al*., 2012).

- Proxy means tests can be fairly accurate: exclusion error in Peru was roughly 6 percent (Robles *et al*., 2015). However, exclusion error can also be high: households move in and out of poverty year on year, which worsens the exclusion and inclusion errors of targeting. The size of errors will depend on how frequently the government collects data from households and how much mobility in and out of poverty occurs over time (Hanna & Olken, 2018). In an Indonesian study, exclusion errors ranged from 50 to 93 percent. Amongst inclusion errors, the 'near poor' are more likely to be included than the rich. In Indonesia, it was found that 14 percent of the rich were wrongly included, whilst 59 percent of the near poor were (Alatas *et al*., 2012).

3.3.2 Airtime or utility expenses

We do not support alternative means-testing proposals in South Africa to use proxies such as airtime or utility bills.

- Using airtime, utility and rates expenses as proxies could also result in adverse behaviour such as opting out of electricity and water payments.

- Using airtime as a proxy for income penalizes jobseekers who need to be applying online and discourages individuals to participate in online courses to improve their skills. From a sample of 243 unemployed individuals, the average job seeker in Johannesburg spent R82.50 per week (R354.75 per month) on airtime and data for activities related to the job search alone (Garlick *et al*., 2022). Given the non-linear nature of airtime payments, even when imposing a high threshold using airtime payments would result in lower decile beneficiaries being falsely excluded from receiving the grant.

3.3.3 Ordeal mechanisms

Ordeal mechanisms are where benefits are made conditional on actions that will be unattractive to applicants who do not need the income support. E.g., work requirements or onerous conditions. This is argued to target grants effectively.

We do not recommend instituting self-targeting programmes with ordeal mechanisms, such as those often used in public works, for the purpose of targeting poverty relief most effectively. These are costly relative to other methods of targeting so should not be used unless they have other benefits (e.g., skills development).

- For each dollar spent, an average of 42 cents reaches beneficiaries for cash programmes, while it is 31 cents for public works programmes (Litvinova *et al*., 2017).
- Such programmes be susceptible to fraud and corruption as there is discretion in monitoring whether households have complied.[19]
- It requires alternative systems for e.g., those unable to work.
- A system to assess applicants and to implement conditions is required.
- There is considerable administrative burden and cost—e.g., needing to set up jobs on public works.
- A study on imposing small administrative costs to improve self-targeting from Indonesia found that additionally increasing the costs of travelling to registration sites did not improve targeting (Alatas *et al*., 2016). This evidence suggests that adding ordeals in addition to the administrative burden of applying to the grant may not improve targeting.

3.4 Comparative experience

A recent meta-review on different targeting methods suggested that, internationally, all programmes face considerable difficulties in targeting (Alderman, 2001; Tesliuc, 2004; Nazim & Lida, 2006; Ravallion, 2007; Devereux *et al*., 2017). South Africa's targeting issues are not unique. There are many lessons to be drawn from this international experience. More information on how South African means testing compares globally is provided in Appendix 2 in the subsection titled 'Comparative Experience on Means Testing'. Examination of the Brazilian experience with Bolsa Familia suggests the importance of continuing to refine the targeting methods of programmes over time, based on evidence on their performance.[20]

[19] Transparency International reports on global corruption state that public works is one of the sectors displaying the highest corruption vulnerability in developing markets. Fukuyama, F. (2005). Global corruption report: Corruption in construction and post-conflict reconstruction, transparency international. For potential interventions to reduce corruption in public works, see the review in Subbarao, K., Del Ninno, C., Andrews, C., & Rodríguez-Alas, C. (2012). Public works as a safety net: design, evidence, and implementation. The World Bank.

[20] For more information, see the detailed case study of the Bolsa Familia in 'Appendix 3: More information on Bolsa Familia household grants'.

4. Conclusion

In response to the COVID-19 pandemic, in May 2020, the South African government implemented the Social Relief of Distress grant, a cash transfer grant that aimed at providing some financial support to those who were most vulnerable to the pandemic-induced economic downturn. This grant was very limited (R350 per month). Yet research showed that it provided crucial support to its targeted beneficiaries. This, together with South Africa's very high unemployment rates, made a case for the continuation of this support beyond the pandemic. In response it has been extended a number of times, but not yet mainstreamed into policy. The purpose of this study was to examine the SRD grant as currently implemented and targeted and to provide recommendations to maximise its impact on poverty reduction. More specifically, the paper aimed to address four concerns pertaining to the current version of the grant: Firstly, the current banking means test. Initially, the SRD grant targeted people who had zero income and unemployed status. In reality, everyone who was informally employed or unemployed qualified for the grant. In April 2022, a new and stricter grant means testing was introduced, which used banking data that can not discern between different sources of income. On the eve of the implementation of the strict means test, March 2022, the number of approved individuals was 11 million. This dropped to 4.2 million in April 2022 after the introduction of the strict means test. We argue that the strict nature of the bank test has resulted in a large number of poor people being excluded. Secondly, we argue that the monthly income ceiling, R760 (2023 food poverty line), above which people are deemed ineligible for the grant, is unnecessarily strict. Thirdly, at R370 per month, the current size of the grant is only 49% of the food poverty line and it has also not kept up with inflation. Given this, we argue that the degree to which the grant can support individuals has deteriorated since its inception. Lastly, people who receive income from the UIF are deemed ineligible for the grant and we argue that this criterion is likely to exclude a significant number of people. Our concern stems from the fact that people move in and out of employment and this is not well captured by the UIF.

To examine the impact of the grant and address the aforementioned concerns, we modelled five scenarios: Individual means testing scenario; current scenario; income over a 3 to 6 month period scenario; drop formally employed scenario; and long term proposal scenario. Moreover, we used four income eligibility thresholds to test the impact of the grant in different scenarios: R760 (food poverty line); R1 058 (lower-bound poverty line); R1 558 (upper-bound poverty line) and R4 4744 (national minimum wage). To test the effectiveness of the grant at reducing poverty, we used three grant sizes: R370; (current grant size); R430 (grant size if it kept up with inflation), R530 (child support grant) and R760 (food poverty line).

Our simulations revealed that 16.9 million people are theoretically eligible for the grant at the threshold of R760 per month. This increases to 17.5 million at the lower bound poverty line and the 18.5 million at the upper bound poverty line. We further found that 25.52% of the South African population is living below the food poverty line. All the grant sizes reduce the poverty headcount at the food poverty line regardless of the scenario and/or income threshold.

Unsurprisingly, the R760 grant reduces poverty more than the other smaller grants. In terms of the scenarios, the current and long-term scenarios were more effective at reducing poverty when compared to the other scenarios. When it comes to the depth of poverty, the model estimated that the poverty gap at the FPL is 10.45%. Further, all the grants proved to be effective at reducing the poverty gap at the FPL, at all ceilings and in all scenarios. The main finding from measuring different scenarios, grants and ceilings at the FPL is that increasing the grant decreases the poverty headcount and gap more than increasing the eligibility threshold. At the upper-bound poverty line (R1 558), our model found that 51.88% of South Africans live below the poverty line. We found that no grant was effective at reducing the poverty headcount at the R760 ceiling in all scenarios except the long-term scenario. This is simply because the size of the grants (R370, R430, R530 and R760) are only 24%, 28%, 34% and 49% of the upper-bound poverty line, respectively. The effect of the R370, R430 and R530 grants in the other three scenarios only started to be effective at the R1 558 ceiling, while the R760 became effective at the R1 058 ceiling. As for the poverty gap, the model estimated that it is 25.33% at the UBPL. We also found that all grants are effective at reducing the poverty gap at all ceilings and scenarios at the UBPL.

The cost of these grants is a function of the grant size and number of beneficiaries (see table 6). We found that the individual income scenario is the most expensive scenario at all ceilings, it ranges from R75 billion to R211.6 billion. The long term scenario is the second most expensive at the lower income ceilings. The current, smoothed income and drop formally employed scenarios were the cheapest scenarios at all ceilings.

To improve the effectiveness of the grant and address the aforementioned concerns while staying within the country's fiscal constraints, we propose five grant design improvements. Firstly, the eligibility threshold should be increased to R1 558, the UBPL. This will reduce the number of individuals with income near the food poverty line who are excluded from the current version of the grant. Secondly, we propose that the UIF criterion should be removed since the employee churn rate in the South African labour market is high and not accurately captured. Thirdly, South African Social Security Agency (SASSA) should measure income in the banking data as an average over a (3 to) 6 month period as this will smoothen irregular lumpy inflows of income - which, when using the current means test, result in the exclusion of poor people. Fourthly, the size of the grant should be increased and the grant itself should be made permanent. This paper showed that the SRD is effective at reducing poverty, hence increasing the size of the grant and making it permanent should be one of the government's main priorities. Lastly, at least in the long term, we propose that SASSA should use self-reported and firm data to measure eligibility. The current grant design prioritises excluding wealthy individuals more, this is done by using over-exclusionary measures like the bank means test. This approach, as clearly showed in the paper, erroneously excludes a large number of poor individuals. Therefore, using self-reported and firm data combined with incentives to accurately report income will minimise the number of poor people who are excluded. In South Africa, a country where more than half of the population is living below the upper-bound poverty line, one third of the population is unemployed and income inequality is soaring to unprecedented heights, a flexible and far-reaching income safety net is not just necessary - it is vital to the survival and dignity of millions.

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Appendix 1.

Recommendations from OECD and World Bank

Two country-level analyses of the South African social protection system emphasize the important role that the SRD grant plays in providing resources to working-age adults. Both of these analyses are in favour of making the SRD grant permanent in some form. Both analyses point to the importance of providing financial support to jobseekers as a major motivation. Table A1.1 summarizes the modelling assumptions made in each report.

Table A1.1. Summary of jobseeker's grant models proposed by the World Bank and OECD

Report	Targeting criteria	Assumptions	Number targeted	Core outcomes prioritized	Financing method
World Bank[21]	Actively searching individuals	Making the grant conditional on search status would not shift the number of people searching Cost of monitoring search would be low Grant would be complemented by public works programmes and a package of job search support schemes	3.8 million	Promoting job search, reducing structural unemployment	Not stated. Improved delivery efficiency highlighted as an opportunity to reduce costs
OECD[22]	SRD recipients between Dec 2021–March 2022		10.5 million	Disposable income, poverty reduction	Spending savings and strengthened public procurement Increasing the VAT rate or broadening the basis of corporate and personal income taxes

Source: Authors' elaboration based on cited material.

[21] World Bank. (2021). South Africa Social Assistance Programs and Systems review.

[22] OECD. (2022). OECD Economic Surveys: South Africa 2022. https://doi.org/10.1787/d6a7301d-en

Both of these reports emphasize the complementary role of employment creation initiatives, arguing that policies which graduate beneficiaries of the grant into formal, paid employment will reduce the cost of the grant in the long term. However, both reports note that in the short term there is a clear need to provide social assistance to poor working age adults who are currently unemployed and not covered by any other social assistance scheme.

Appendix 2

Evidence

Detailed evidence on likely effects of cash grants on employment and earnings. Cash grants not tied to employment status have no effect on the total amount people work.

Cash transfers do not change the overall number of hours that people work. In many countries, there are widespread perceptions that cash transfers might discourage people from working, but there is little rigorous evidence this occurs in practice.[23]

Conditional and unconditional cash transfer programmes. Conditional cash transfer programmes in low- and middle-income countries have not been found to change the amount people work. A review and reanalysis of 7 evaluations of cash transfer programmes in 6 countries with 46,000 adults found no effects of cash transfer eligibility on employment rates or hours of work for either men or women, as presented in Table A1.1.[24] This is not because the grants have conditions attached to them. In half of the programmes, there were conditions, but these were related to taking particular actions in relation to recipients' children, such as ensuring that the recipient's children attended school and got vaccinated. There were no conditions requiring recipients to work. In addition, two programmes, PAL and Tayssir, were unconditional. These still have no effects on work.

Grants are not large enough to serve as a source of income on their own. The 'transfer consumption ratio' in Table 1 is the percentage of average household spending made up by the transfer, for households receiving the transfer. The transfers in this study made up only between 4 and 20 percent of household expenditure, so households would need to earn other income to cover their expenditure and thus the transfer would be unlikely to discourage work. This would likely hold for any grants offered to the unemployed in South Africa.

We view the studies in Table A1.1 as providing some guidance for the likely effects of small regular cash grants in the South African context. The Special SRD was of similar size to these other grants, at R350 per month ($25 USD in 2021 terms). This was 19% of the median income of an individual receiving this grant (the median SRD recipient earned R1883 monthly in Feb 2020). 97.5% of employed and self-employed workers (including part-time workers) earned more than the value of the COVID SRD grant in 2019. So, it is still likely that having a job will remain much more desirable than receiving the grant.[25]

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[23] Banerjee, A., Hanna, R., Kreindler, G., & Olken, B. (2017). Debunking the Stereotype of the Lazy Welfare Recipient: Evidence from Cash Transfer Programs. *World Bank Research Observer*. 32:155–84.

[24] Banerjee, A., Hanna, R., Kreindler, G., & Olken, B. (2017). Debunking the Stereotype of the Lazy Welfare Recipient: Evidence from Cash Transfer Programs. *World Bank Research Observer*. 32:155–84

[25] The child grant is R440 per child, 42% of the median income of a person receiving the grant (the median recipient earned R1050/month in Feb 2020.

Table A2.1. Summary of findings from 7 cash transfer programmes[26]

Country	Programme	Transfer amount per month (2017 terms)	Transfer consumption ratio*	Effect on whether worked last week, hours worked
Honduras	Programa de Asignación Familiar – Phase II (PRAF II)	from $4 to $23	4%	3 percentage point decrease in whether worked last week, no effect on hours worked
Morocco	Tayssir	from $8 to $13 per month per child	5%	no effect
Mexico	Progresa	$12.5/month + $8–$30.5/month per child (depends on child grade) +$11-$20.5 grant for school materials per child	20%	no effect
Mexico	Programa de Apoyo Alimentario (PAL)	$13 per month	11.50%	no effect
Philippines	Pantawid Pamilyang Pilipino Program (PPPP)	$11–$30 per month	11%	no effect
Indonesia	Program Keluarga Harapan (PKH)	$44–$161 per year	17.50%	no effect
Nicaragua	Red de Protección Social (RPS)	$224/year + $112/year (school attendance) + $21/child/year	20%	no effect

Source: Authors' elaboration.

*Note: The 'transfer consumption ratio' is the percentage of average household spending made up by the transfer, for households receiving the transfer.

In South Africa, cash grants appear to promote job search, particularly for young, unmarried and poorer women. Table A.2.2 presents evidence from a review of all good-quality studies of the labour market effects of the South African pension and child support grant. This review finds no good evidence that social transfers discourage labour market activity and some evidence that social transfers may encourage labour market activity,

[26] Banerjee, A., Hanna, R., Kreindler, G., & Olken, B. (2017). Debunking the Stereotype of the Lazy Welfare Recipient: Evidence from Cash Transfer Programs. *World Bank Research Observer*. 32:155–84

particularly for young, unmarried women and women who live in poorer households. Overall, five studies that find positive labour market impacts of cash grants, predict increases of between 5 and 10 percent in outcomes of interest. Two studies find that being in a household where a grandparent receives a pension increases employment among working age adults in that household, by financing rural-to-urban migration or increasing flex-time working. Cash grants may also enable households to take riskier economic decisions with potentially high returns such as migrate to more economically productive areas. We cannot draw firm conclusions without further studies on this dynamic in South Africa.

There is very limited evidence that cash grants worsen employment outcomes. Multiple studies have asked if South Africa's old age pension or child support grant change employment rates for working-age adults living with pension recipients, either by reducing the incentive to work or financing job search. We view the research on employment effects of the pension as inconclusive. Some studies find that receiving the pension can increase employment by financing rural-to-urban migration[27] or increasing flexible working.[28] Other studies find a drop in hours worked by working age adults [29] or no effect on labour supply and migration.[30] When people receive the pension, research finds that members of the extended family move into their household, and these adults have characteristics that make them less likely to find work (e.g., they have lower levels of education). We would thus not draw firm conclusions from this work.

[27] Ardington, C. Case, A., & Hosegood. V. (2009). Labour Supply Responses to Large Social Transfers: Longitudinal Evidence from South Africa. *American Economic Journal: Applied Economics, 1*(1), 22-4.

[28] Ranchhod, V. (2006). The Effect of the South African Old Age Pension on Labour Supply of the Elderly. *South African Journal of Economics; 74*(4): 725–44.

[29] Abel, M. (2019). Unintended Labour Supply Effects of Cash Transfer Programs: New Evidence from South Africa's Pension. *Journal of African Economies 28*(5): 558–581; Bertrand, M., Mullainathan, S., & Miller, D. (2003). Public Policy and Extended Families: Evidence from Pensions in South Africa*, The World Bank Economic Review, 17* (1): 27–50.

[30] Jensen R. T. (2004). Do Private Transfers 'Displace' the Benefits of Public Transfers? Evidence from South Africa, *Journal of Public Economics, 88* (1): 89–112.

Table A2.2. Summary of studies of South African cash transfers effects of labour market outcomes

Grant	Study year	Identification strategy	Subpopulation considered	Effect on labour force participation	Effect on employment
CSG	2011[31]	Modified difference-in-difference	Mothers in their 20's	9% increase	15% increase
			Mothers in their 30's	No significant change	10% increase
			Mothers in their 40's	No significant change	5% increase
			Pensioners	No significant change	9% increase
			Mothers' matric qualification	No significant change	9% increase regardless of whether recipient has a matric
			Mothers' marital status	No significant change	8-9% increase regardless of marital status
			Mothers' household income percentile	No significant change	11% increase for recipients in households with above 50th percentile of household income, 4% increase for recipients in households with below 50th percentile household income
CSG	2007[32]	Difference-in-differences Effect of being eligible is analysed—this will be a noisy estimate of the true effect of the grant	Mothers	7-14% increase	No significant effect

[31] Eyal, K. and Woolard, I., 2011, March. Female labour force participation and South Africa's child support grant. In CSAE 25th Anniversary Conference. Centre for the Study of African Economies Oxford.

[32] Williams, M.J., 2007. The social and economic impacts of South Africa's child support grant (Extended Version). *Economic Policy Research Institute Working Paper*, *39*

			Mothers in informal housing (proxy for poverty status)	Stronger effects for informal housing residents	No significant effect
			Mothers in urban/rural household location	Stronger effects for rural	Some positive effects on employment
			Fathers	Weaker effects than for mothers	No significant effect
CSG	2021[33]	Regression discontinuity	Single mothers	4% increase in labour market activity	No significant effect in long term Small reductions in agricultural work in favour of wage work
			Married mothers	No significant effects	No significant effects
Pension	2009[34]	Panel estimates	Working age men	NA	3.6% Increase for men (Primarily due to increase rural urban migration)
			Working age women	NA	2.9 % Increase for women (Primarily due to increase rural urban migration)
Pension	2006[35]	Regression	Working age African men who are members of three generations of rural households.	No significant effect on Men	NA
			Working age African women who are members of three generations of rural households.	Pension increases probability women migrate to find work.	NA

[33] Dutronc-Postel, P. and Tondini, A., 2021. Large Means-Tested Pensions with Informal Labor Markets: Evidence from South Africa.

[34] Ardington, C. A. Case, and V. Hosegood. 2009. 'Labour Supply Responses to Large Social Transfers: Longitudinal Evidence from South Africa.' *American Economic Journal: Applied Economics*, 1, no. 1: 22-4

[35] Posel, D., Fairburn, J., Lund, F. 2006. Labour Migration and Households: A Reconsideration of the Effects of the Social Pension on Labour Supply in South Africa. *Economic Modelling.* 23: 836–53.

Pension	2006[36]	Regression discontinuity	Elderly African men	8.4% decrease for men	7.6% decrease for men
			Elderly African women	12.6% decrease for women	5.7% decrease for women
Pension	2004[37]	Difference-in-differences	Retired men	No effect	No effect
			Retired women	No effect	No effect
Pension	2003[38]	Regression	Working age African men	Decrease in working hours. The presence of a single pensioner in the household is associated with a decrease of 5.55 work hours per week for working-age men in the household.	9.8% decrease in probability of employment per R1000 increase in household pension income.
			Working age African women	Decrease in working hours. The presence of a single pensioner in the household is associated with a decrease of 3.7 work hours per week for working-age women in the household.	Insignificant decrease
Pension	2019[39]	Fixed effects, first differences	Working age adults		Decrease Each additional pensioner in the household reduces the probability of salaried employment by 15% for working age adults. (34% decrease in the probability of being self-employed.)

[36] Ranchhod, V. 2006. The Effect of the South African Old Age Pension on Labour Supply of the Elderly. *South African Journal of Economics*; 74(4):725–44.

[37] Jensen R. T. (2004) "Do Private Transfers 'Displace' the Benefits of Public Transfers? Evidence from South Africa', *Journal of Public Economics*, 88 (1): 89–112.

[38] Bertrand M., Mullainathan S., Miller D. (2003) 'Public Policy and Extended Families: Evidence from Pensions in South Africa', *The World Bank Economic Review*, 17 (1): 27–50.

[39] Abel, M. 2019. 'Unintended Labour Supply Effects of Cash Transfer Programs: New Evidence from South Africa's Pension.' *Journal of African Economies* 28, no. 5: 558–581; Bertrand M., Mullainathan S., Miller D.

Pension	2014[40]	Instrumental variable	Working age adults	Increase likelihood that unemployed, inactive family members move into the household.	

Source: Authors' elaboration based on cited material.

Basic income study in Kenya

Rigorous evidence on effects of a long-term basic income is limited in developing countries.[41] One ongoing randomized controlled trial in rural Western Kenya is testing the effects of different types of basic income.[42] This involves a long-term universal basic income for 12 years. Each adult in villages receiving this programme receives US $0.75 per day for 12 years (R399 per month), an amount that is sufficient to cover most basic needs and is similar to the current amount of the SRD grant in South Africa.

The study finds that people receiving long-term or short-term UBI do not decrease the total hours they work in any group, compared to the control group. This is true even in the group who still have 9 years and 3 months remaining where they receive a basic income every day. This may be because the grants only provide for basic needs. This is consistent with evidence on other cash transfers.

Cash grants may enable people to start businesses.

Economic theory suggests that when poor people lack access to credit, they will struggle to borrow to start new economic activities, even if these may yield higher earnings than their current work. Alternatively, they may not feel able to take the risks of starting new activities. Cash grants may provide a source of capital to make investments or provide insurance for poorer individuals to take risks such as purchasing assets or inputs to production, investment in new businesses or education and training. These may allow recipients to shift into economic activities that are more profitable or that have characteristics they prefer (e.g., allowing them greater flexibility or requiring less travel). The evidence on the effect of cash grants on household enterprises is in line with theoretical predictions.

[40] Hamoudi, A. and D. Thomas. 2014. 'Endogenous Co-residence and Program Incidence: South Africa's Old Age Pension.' *Journal of Development Economics*, 109, 30-37.

[41] Banerjee, A., Niehaus, P., & Suri, T. (2019). Universal Basic Income in the Developing World. *Annual Review of Economics, 11*, 959-983.

[42] Banerjee, A., Faye, M., Krueger, A., Niehaus, P., & Suri, T. (2020). Effects of a Universal Basic Income During the Pandemic. Working Paper, University of California San Diego.

Conditional and unconditional cash transfer programmes

There are some instances where cash transfers lead households to start new non-farm enterprises, but this does not occur in all studies.

A review of seven studies of government unconditional cash grant programmes focused on rural areas in sub-Saharan African countries finds that receiving cash transfers leads to increases in whether households run non-farm enterprises in only two countries.[43] It had no effects in three countries and decreased enterprise ownership in two countries.

In four further studies of government programmes in Kenya, Zambia, Mexico and Nicaragua, transfers increased whether households operated a non-farm enterprise in two (half of) studies.[44]

Basic income study in Kenya

The study of different types of basic income discussed in Basic income study in Kenya finds that all groups receiving different types of basic income show a substantial shift towards self-employment.[45,46]

People receiving grants are able to earn higher wages per hour (for the long-term group, about 1 USD PPP per day higher in agricultural work, compared to a control group mean of 5.7 USD PPP, and 4 USD PPP higher in non-agricultural work, compared to a control group mean of 9.92 USD PPP). This could reflect economic growth in the area, which may have increased the profitability of certain activities, or that they are doing more profitable activities. UBI also prevented people from closing existing businesses during an economic downturn.

Cash grants can lead to higher yields for agricultural households.

Cash grant recipients produce more agricultural produce, partly because they are more likely to purchase agricultural inputs like seed and fertilizer and agricultural tools.

We focus on a review of seven studies of government unconditional cash grant programmes focused on rural areas in sub-Saharan African countries, Zambia, Malawi, Lesotho, Zimbabwe, Kenya, Ghana and Ethiopia.[47]

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[43] Daidone, S., Davis, B, Handa, S., & Winters, P. (2019). Household and Individual-Level Impacts of Cash Transfer Programmes in Sub-Saharan Africa. *American Journal of Agricultural Economics, 101*(5), 1401-1431.

[44] Bastagli, F., Hagen-Zanker, J., Harman, L., Barca, V., Sturge, G., Schmidt, T., & Pellerano, L. (2016). Cash transfers: what does the evidence say. *A rigorous review of programme impact and the role of design and implementation features. London: ODI*, *1*(7).

[45] Our thanks to Paul Niehaus, Tavneet Suri and Abhijeet Banerjee for sharing early findings with us.

[46] Banerjee, Abhijit, Michael Faye, Alan Krueger, Paul Niehaus, and Tavneet Suri. 'Effects of a Universal Basic Income during the Pandemic.' Working paper, September 2020.

[47] Daidone, S., Davis, B, Handa, S., & Winters, P. (2019). Household and Individual-Level Impacts of Cash Transfer Programmes in Sub-Saharan Africa. *American Journal of Agricultural Economics, 101*(5), 1401-1431

- The Zambian grant was the most generous transfer for the eligible population, at around 28% of median household consumption expenditure at baseline. Most of the other programmes were providing between 20% and 25% of household consumption. Ghana provided 10%.

- In six of seven countries, cash grant recipients increased the amount of total agricultural production. In three, the value of total production also increased.

- In five of seven countries, cash grant recipients are more likely to purchase seed, fertilizer and other inputs for planting. In six of seven countries, cash grant recipients are more likely to have agricultural tools.

- In four of six countries where this was measured, households are able to do less wage labour for others. These are often a 'refuge' sector, where poor households work to survive, hedge against agricultural risk, or obtain needed liquidity.

Cash recipients own more livestock, which likely offers greater food security and acts as a store of value.

- In five of seven countries, cash grant recipients own a larger quantity of livestock. This may measure that households have purchased more livestock, or that they have not needed to sell them when facing shocks. This is not measured, but more cash income may also enable households to purchase ongoing inputs (e.g., feed, medicine) to keep livestock healthy.

- In three of seven studies, the percentage of households owning any livestock increased. This means households were able to enter livestock rearing. Purchasing livestock requires a large capital outlay, for which non-recipient households may struggle to save.

- Livestock produce food directly and can assist with dietary diversity through milk and eggs. They also can act as a store of value enhancing risk-bearing capacity and can aid production by providing draught animal power, transport and/or manure for cropping and fuel.

These effects may be less prevalent in the South African context, where fewer households engage in subsistence agriculture.

- Fewer households in South Africa are engaged in subsistence agriculture. Only 15.3% of households (2.7 million households) in South Africa engaged in agriculture in 2019,[48] while roughly 50% across Sub-Saharan Africa do.[49] This may mean fewer grant recipients use grants for agricultural purposes.

- However, of those engaged in agriculture, a large majority (85%, or 2.2 million) engaged in subsistence-based farming for most or some of their food.[50] These households may see similar benefits from cash grant receipt to other households.

- However, small-scale agriculture is particularly unproductive, and households have been consistently shifting away from these activities. If encouraging small-scale farming is a priority, the government may also need to implement other policy interventions to make the sector more productive, such as providing rural infrastructure, financing options, and building agricultural expertise.[51] Factors such as land degradation and water availability may lower impact for South African farmers.

On the other hand, effects may be larger in South Africa:

- Many of these transfers target very vulnerable households. Ethiopia, Ghana, and Kenya explicitly target households with orphans or vulnerable children, and most programmes target households that are likely not to be very productive (e.g., elderly, single parents, OVCs being supported by grandparents, or single parents). The Zambian programme was an exception in that it targeted all households with children aged 0-5. Grants which mostly target working age adults might have higher effects.

Transfers were intended to be paid regularly but in Ghana and Lesotho, delivery was poor. In South Africa, grants are paid regularly.

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[48] Statistics South Africa. (2020). General Household Survey (GHS), 2019. http://www.statssa.gov.za/publications/P0318/P03182019.pdf

[49] OECD. (2016). OECD-FAO Agricultural Outlook 2016-2025. https://www.oecd-ilibrary.org/docserver/agr_outlook-2016-5-en.pdf?expires=1619536651&id=id&accname=ocid57003439&checksum=68503E2586DCA36F27C2A013434D5310

[50] For households engaged in agriculture, both growing food and rearing livestock are common activities: 50% engage in livestock rearing and an additional 37.3% rear poultry; 50.3% produce grains and food crops, while 53.3% produce fruit and vegetable crops.

[51] South Africa Country Profile, New Agriculturalist. Available at: http://www.new-ag.info/en/country/profile.php?a=3071

Comparative experience on means-testing

Comparative experience suggests South African targeting is a considerable improvement on some other programmes. Other programmes also face considerable difficulties in targeting:

- A cash transfer programme in Albania that supports about 20 percent of the population, targeted urban households with no other source of income, and rural households with small landholdings. These tests accurately identified the poor, with low leakages to the non- poor – only 10.1 per cent of the richest 80 per cent of households received NE assistance. However, exclusion errors in implementation were high, with 62.6 percent of households in the poorest quintile not receiving NE benefits. This was due to a 25 per cent cut in the government's budget allocation to NE, which imposed a hard budget constraint on local communes that administered the programme and resulted in substantial exclusion of eligible households.[52]

- In China, the Minimum Livelihood Guarantee Scheme fails to reach 71 percent of poor households, while 40 percent of recipients have incomes above the income threshold for eligibility.[53]

- In the Krygyz Republic, two-thirds (69%) of households in the poorest quintile do not receive the Unified Monthly Benefit, and more than half the programme beneficiaries are from wealthier quintiles.[54]

- In Azerbaijan, 88.5 percent of households in the poorest quintile do not receive Children Benefits – none at all in the poorest decile (many of these households have no resident children) – while 86.3 percent of beneficiaries come from wealthier quintiles.[55]

[52] Alderman, H. (2001). Multi-Tier Targeting of Social Assistance: The Role of Intergovernmental Transfers. *The World Bank Economic Review*, *15*(1), 33-53.

[53] Ravallion, M. 2007. How Relevant Is Targeting to the Success of an Antipoverty Program? Policy Research Working Paper 4385. Washington, DC: World Bank.

[54] Tesliuc, E. (2004). Mitigating Social Risks in Kyrgyz Republic. Washington, DC: Social Protection Unit, Human Development Network, World Bank.

[55] Habibov, N., & Fan, L. (2006). Social assistance and the challenges of poverty and inequality in Azerbaijan, a low-income country in transition. *J. Soc. & Soc. Welfare*, *33*, 203.

Table A2.3. Examples of cash transfer programmes in comparable countries, including extensions

Country[56]	Pre-pandemic programmes	Emergency programmes	Emergency programme target group	First payment dates	Total cash per new beneficiary (ZAR PPP)[57, 58]	Application process for existing beneficiaries	Application process for new households	Delivery	Total extensions	Latest extension announced	Latest payment dates	Monthly or one time, amount
Brazil	Bolsa Familia: conditional cash. 13 million households	A cash transfer paid over 3 months and expanding existing cash transfers.	30 million newly targeted households.	April–June	12432 per individual, up to two individuals per household.	Automatic top-up	Households could apply online through the state bank's website.	Cash deposited in any bank account.	2	August[59]	Sept–Dec	Monthly, half of original transfer[60]
Argentina	Cash for pregnant mothers and child allowance.	Increase existing cash transfer programmes. New emergency cash transfer programme.	9 million new households.	April	9531 per household.	Automatic top-up	Households applied through social security website.	Direct transfer or withdrawal from bank branches.	2	July[61]	Sept[62]	One-time, same as initial transfer

[56] World Bank. (2020). G2PX: Digitizing Government-To-Person Payments. https://www.worldbank.org/en/programs/g2px/knowledge

[57] These amounts are the total payments for the stipulated duration of the program, and are only for new beneficiaries.

[58] Based on 2019 PPP exchange rates from the World Bank. Purchasing power parity (PPP) exchange rates adjust market exchange rate to account for differences in prices across countries. At PPP exchange rates, the same basket of goods should have the same price across the world.

[59] Reuters. (2020). Brazil to extend coronavirus economic aid on Tuesday, official says. Brazil to extend coronavirus economic aid on Tuesday, official says | Reuters

[60] Sovereign Wealth Fund Institute. (2020). Bolsonaro Extends Brazilian Emergency Aid Program Until End of 2020, Boosting His Already Rising Popularity. Bolsonaro Extends Brazilian Emergency Aid Program Until End of 2020, Boosting His Already Rising Popularity - SWFI (swfinstitute.org)

[61] AS. (2020). ANSES IFE Bonus: what is the official amount of the third payment? ANSES IFE Bonus: what is the official amount of the third payment? - AS Argentina

[62] AS. 25/08/2020. IFE Bono ANSES: schedule of dates and payments of the third contribution of 10,000. IFE Bono ANSES: schedule of dates and payments of the third contribution of 10,000 - AS Argentina

Indonesia[63]	Program Keluarga Harapan (PKH): conditional cash. 9.2 million households.	Expand coverage for existing grants. Created new unconditional transfer for those not already covered. Expanded food vouchers	Expand existing coverage to 10 million households. 20 million new households.		2520 per household	Automatic top-up	Beneficiaries had to apply to receive funds. Rural funds distributed through local officials.	Direct transfer or withdrawal from bank branches.				
Jordan	Cash transfer programme ran by the National Aid Fund (NAF). 185,000 households (population of 10 million).	Emergency cash transfers	Informal workers, ~200,000 households.		677.95 to 1,314.82 per household per month (depending on household size)	Did not expand for existing beneficiaries	Online registration but using an existing system implemented for regular recipients	E-money accounts and e-wallets, which could be set up remotely.				Monthly

Source: Reused and adapted, under the Creative Commons licence CC BY 4.0 DEED, from Table 3 in Kate Orkin, Robert Garlick, Ignacio Rodriguez Hurtado, Marta Grabowska, Brynde Kreft & Alice Cahill (2022) International evidence to inform decision making on implementing urgent response social protection measures, Psychology, Health & Medicine, 27:sup1, 219-238.

[63] Gentilini, U., Almenfi, M.B.A. and Orton, I., 2020. Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures (April 3, 2020).

Appendix 3

More information on Bolsa Familia household grants

Bolsa Familia reached roughly 48 million beneficiaries and transfers over US$10 billion a year in 2020.[64] The programme is ending this year. It is widely recognized for high rates of targeting of poor households and low rates of inclusion of households who are ineligible. [65]

The Unified Registry (CadÚnico) is a key tool employed for targeting and implementing the programme. This is used by the government to determine which families and individuals are eligible for 30 different government- sponsored social service programmes.[66]

Eligibility

The main indicator for targeting the programme is families' self-declared per capita income. A household is considered poor if their disposable income is less than a given monetary value—the poverty line. Families receive benefits depending on if their income is below a poverty line.

In 2010, an adjustment was made whereby benefits would not be immediately cancelled for households who experience a temporary increase in household per capita income above the eligibility threshold within a period of two years. As such, households who are declared eligible upon initial assessments will remain eligible for two years (even if they temporarily have a household per capita income above the threshold within this period). This adjustment was implemented based on the observation that low-income individuals tend to have unstable incomes and may occasionally earn above the poverty line. However, these individuals are often unable to sustain this higher-level of income – suggesting that they have not effectively escaped poverty.[67, 68]

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[64] World Bank. (2020). Strengthening Conditional Cash Transfers and the Single Registry in Brazil: A Second-Generation Platform for Service Delivery for the Poor. https://www.worldbank.org/en/results/2020/04/22/strengthening-conditional-cash-transfers-and-the-single-registry-in-brazil

[65] Paiva, L. H., Souza, M., & Nunes, H. (2020). *Targeting in the Bolsa Família programme from 2012 to 2018 based on data from the Continuous National Household Sample Survey* (No. 436).

[66] Wong, J., Sim, A., Dos Santos, N., Waud, A., Garcia, N. D. N., & Ray, S. (2016). *Reaching the Hard to Reach: A Case Study of Brazil's Bolsa Família Program*. Munk School of Global Affairs, University of Toronto.

[67] Brazil Learning Initiative. (2017). How does the Bolsa Família Program Target and Identify People in a Situation of Poverty and Extreme Poverty? https://socialprotection.org/sites/default/files/publications_files/19.-BFP-Coverage-Targeting-and-Eligibility-Identification-of-Families.pdf

[68] Centre for Public Impact. (2019). Bolsa Familia in Brazil. https://www.centreforpublicimpact.org/case-study/bolsa-familia-in-brazil.

Process of registration and verification[69]

- There are surveys of households every two years to estimate the rough number of households in total and each municipality who should be eligible. Municipalities are allocated quotas of the number of eligible households they should register.

- Municipalities are instructed to register low-income households. These are households who fit the Unified Registry's 'broader profile' i.e., per capita income of up to 1/2 minimum salary or a total family income of up to 3 minimum salaries. The CadÚnico contains roughly double the number of households who actually receive a Bolsa Familia grant.[70]

- Households complete a lengthy questionnaire, the 'green book', a lengthy questionnaire (the 'green book'), including household income; information about each family member such as education levels and employment status; the number of children; housing characteristics and family expenses.[71]

- In addition, the head of the household (for the purposes of registering for social programmes) creates a file by visiting a Reference Center for Social Assistance (CRAS). Their ID and fingerprints are verified. To try to ensure access, CRAS centres often dispatch social workers to poorer or distant neighbourhoods to directly register families for the registry.[72] There is considerable variation in how each municipality implements and manages the programme, in particular how they manage social workers to enrol households and monitor conditionalities.

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69 Brazil Learning Initiative. (2017). How does the Bolsa Família Program Target and Identify People in a Situation of Poverty and Extreme Poverty? https://socialprotection.org/sites/default/files/publications_files/19.-BFP-Coverage-Targeting-and-Eligibility-Identification-of-Families.pdf

70 Brazil Learning Initiative. (2017). Definition of Benefits in Bolsa Familia. https://socialprotection.org/sites/default/files/publications_files/20.%20BFP%20Coverage%2C%20Targeting%20and%20Eligibility%20-%20Definition%20of%20Benefits.pdf

71 Wong, J., Sim, A., Dos Santos, N., Waud, A., Garcia, N. D. N., & Ray, S. (2016). *Reaching the Hard to Reach: A Case Study of Brazil's Bolsa Família Program*. Munk School of Global Affairs, University of Toronto.

72 Wong, J., Sim, A., Dos Santos, N., Waud, A., Garcia, N. D. N., & Ray, S. (2016). *Reaching the Hard to Reach: A Case Study of Brazil's Bolsa Família Program*. Munk School of Global Affairs, University of Toronto.

- The Federal Mortgage Bank (Caixa Econômica Federal – CAIXA) consolidates and manages the data and assigns identity numbers. Families are selected as beneficiaries of the grants by the ministry via the CAIXA computer system. Since 2005, this income is verified against verified against other federal administrative records.[73] This attempts to pick up signs of omission or under declaration of income. Databases include the Annual Report of Social Information (RAIS), an employer-informed database on formal-sector workers from the public and private sectors that includes individualized information on employee wages. This is similar to the UIF data; benefits data on other benefits; and death notification data.

- There is then a review to update the registration data of beneficiary families that have not been updated for more than 24 months. Families with income above the poverty line may have their benefits interrupted.

Delivery

The Bolsa Família (BFP) cash transfer is delivered monthly through an electronic payment system operated by the Caixa bank. Beneficiaries receive a BFP bank card upon enrollment in the programme. The card is used to withdraw funds from Caixa ATMs, bank branches and lotteria houses throughout Brazil.[74]

Excerpts on historical difficulties in setting up Bolsa Familia in particularly the CadÚnico and targeting process.

'During the initial implementation of the CadÚnico in 2003, the quality of household data in the registry was very poor. The CadÚnico was not updated regularly, there was a lot of missing data, and the Ministry of Social Development (MDS) was unable to verify the accuracy of reported information. Thus in 2005, the MDS initiated a major push to improve the CadÚnico, to "clean" the existing database, and to put into place new mechanisms to ensure the continual updating of household information into the future. Municipalities were incentivized (with fiscal resources) to carry out this federal initiative. According to MDS officials, 85% of the current administrative work on the CadÚnico is spent on updating and verifying the database, while the remaining 15% is dedicated to enrolling new families.'[75]

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[73] Paiva, L. H., Souza, M., & Nunes, H. (2020). *Targeting in the Bolsa Família programme from 2012 to 2018 based on data from the Continuous National Household Sample Survey* (No. 436).

[74] In 2015, the MDS and Caixa introduced the BFP mobile app, a beneficiary-facing app which allows BFP beneficiaries access to their account, updates, conditionalities, and other important sources of information relating to their program status. Prior to the introduction of this app, BFP enrollees had to present themselves in-person at a government office to access their account. Wong *et al.* 2016.

[75] Wong, J., Sim, A., Dos Santos, N., Waud, A., Garcia, N. D. N., & Ray, S. (2016). *Reaching the Hard to Reach: A Case Study of Brazil's Bolsa Família Program*. Munk School of Global Affairs, University of Toronto.

'Monitoring BFP recipients to ensure that health and education conditionalities are being met is also a municipal responsibility. Prior to 2006, there was no comprehensive monitoring system in place. As a result, during the early days of the BFP, data reporting on health and education conditionalities was spare and inconsistent. Then, only 40% of BFP beneficiaries were monitored to ensure that health and education conditionalities were being met. This has improved since 2006, however, largely due to municipal efforts to increase their capacity to accurately monitor and report on whether individual households are meeting the BFP health and education conditionalities.' [76]

'Particularly, in its early years, the PBF faced criticism due to the relatively inefficient control of conditioning factors. Decentralized management meant that beneficiaries were not registered consistently and that data might vary across locations. This topic was a particular media concern, accounting for most of the sceptical coverage between 2004 and 2006, which focused on false inclusion and benefit fraud.'[77]

'From 2015-2018, the World Bank and ministry ran a second project, costing US$22.5 million, to (i) to train and provide technical assistance to state and municipalities to support the use of Cadastro Único as the main mechanism for selecting BFP's target population; (ii) to create municipal- and state-level delivery units to support BFP design and monitoring and to interact with social service providers, including transfer of dedicated resources to serve the BF population; and (iii) to configure Cadastro Único to allow multiple public agencies to select beneficiaries from its database of low-income families.'[78]

[76] Wong, J., Sim, A., Dos Santos, N., Waud, A., Garcia, N. D. N., & Ray, S. (2016). *Reaching the Hard to Reach: A Case Study of Brazil's Bolsa Família Program*. Munk School of Global Affairs, University of Toronto.

[77] Centre for Public Impact. (2019). Bolsa Familia in Brazil. https://www.centreforpublicimpact.org/case-study/bolsa-familia-in-brazil.

[78] World Bank. (2020). Strengthening Conditional Cash Transfers and the Single Registry in Brazil: A Second-Generation Platform for Service Delivery for the Poor. Strengthening Conditional Cash Transfers and the Single Registry in Brazil: A Second-Generation Platform for Service Delivery for the Poor (worldbank.org)

Data Appendix 1

Updating LCS 2014/15 to 2021

This appendix contains a brief description of the data method used in this memo and some robustness checks. It is taken almost verbatim from Goldman *et al.*[79]

The primary challenge we faced in doing this analysis is that the datasets available for household income analysis in 2021 are well out of date, and most relevantly are all pre-pandemic. In this paper, we use the Living Conditions Survey (LCS) collected in 2014/15 as it has the most detailed disaggregation of income and expenditure, is the official dataset used to calculate the poverty statistics, and it feeds into the model generated for the 2014/15 CEQ Assessment[80]. However, we compare against results in the National Income Dynamics Survey (NIDS) collected in 2017 to test for robustness.

We update demographic and employment variables to reflect the COVID-19 employment loss. We do this in three steps. Firstly, we forecast income to pre-pandemic levels using per capita growth in GDP. Secondly, we reweight the dataset to a) match 2020 demographics, disaggregated by race, age, gender and province, and b) match the administrative records on the taxable income distribution. Finally, we use the Quarterly Labour Force Survey (QLFS) to calculate the change in employment from 2015 Q1 to 2020 Q1, and from 2020 Q1 to 2021 Q1, and implement these changes in the LCS dataset by randomly shocking certain individuals from employment to unemployment, based on a set of demographic and employment characteristics.

There are many assumptions built into this updating process. We test for implausible deviations and alternative assumptions using other datasets, but there is unavoidably some uncertainty. Further details of the data construction, robustness tests and illustrations of their use will be available in a forthcoming working paper.

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[79] Goldman, M., Bassier, I., Budlender, J., Mzankomo, L., Woolard, I., & Leibbrandt, M. V. (2021). *Simulation of options to replace the special COVID-19 Social Relief of Distress grant and close the poverty gap at the food poverty line* (No. 2021/165). WIDER Working Paper. https://doi.org/10.35188/UNU-WIDER/2021/105-1

[80] Goldman, M., Woolard, I., & Jellema, J. (2020). *The Impact of Taxes and Transfers on Poverty and Income Distribution in South Africa 2014/2015* (No. 148aae17-521b-428b-85de-bb36d0303114).

Income and consumption update

Following Younger *et al.*,[81] we inflate the Statistics South Africa (Stats SA) consumption-based welfare aggregate from 2015 using per capita growth in GDP to pre-pandemic 2019 levels.[82] This results in an increase in 2019 consumption expenditures of 17%. We then calculate shares of reported income for each component of income (remittances, royalties, annuities, alimony, rent, farm, interest, dividends, shares, unit trusts and pension income) and multiply that by the Stats SA welfare aggregate. We use these new income components to recalculate gross taxable income and earnings in the dataset.

The result is a 2.3% decline in Disposable household income from pre- to mid-pandemic in the LCS, compared to a 2.0% decline in GDP in the administrative records, and a 4.9% decline in NIDS, compared to a 1.1% decline in GNI in the administrative records.[83]

Table DA1.1. Income update validation

Statistic / aggregate	2014/15 (R)	2019/20 (R)	Percentage change	2020/21 (R)	Percentage change
LCS					
GDP	73 690	86 375	17.2	84 606	-2.0
Disposable income (LCS)	41 175	47 763	16.0	46 675	-2.3
NIDS					
GNI	79 866	83 926	5.08	83 007	-1.1
Disposable income (NIDS)	49 646	52 679	6.1	50 094	-4.9

Source: Authors' calculations based on LCS 2014/15, NIDS 2017.

[81] Younger, S.D., Musisi, A., Asiimwe, W., Ntungire, N., Rauschendorfer, J., and Manwaring, P. (2020). 'Estimating income losses and consequences of the COVID-19 crisis in Uganda'. IGC Working Paper S-20074-UGA-1. London: International Growth Centre. Available at: https://www.theigc.org/wp-content/uploads/2020/11/Younger-et-al-2020-Final-report.pdf

[82] Our process differs in that we use nominal, rather than real growth, and we do not implement the 85% pass-through.

[83] Note that we use GDP in the LCS, because we begin by updating the welfare aggregate, based on household consumption, whereas we use GNI in NIDS, because we update the Disposable income aggregate, based on household income.

Demographic updating

We update the demographic characteristics of the LCS 2015 sample to match the Statistics South Africa[84] mid-year population estimates by age, gender, race and province totals. We also match the proportions of taxpayers by income bracket with the tax records (National Treasury[85]). The process consists of re-weighting the sample, as outlined in Wittenberg's article,[86] using Wittenberg's 'maxentropy' programme in Stata.

Employment updating

We use the Quarterly Labour Force Survey as the benchmark indicator of the state of the labour market. We calculate changes in QLFS employment between 2015q1 and 2020q1, and between 2020q1 and 2021q1, by demographic (age and education) and employment (informal vs. formal sector) cells. We then match these changes in the LCS by changing the employment status of a randomly selected proportion of individuals in each cell, until the percentage employment change in each cell matches the QLFS. For individuals whose employment status changes from not employed to employed, we assign the median earnings from the relevant employment cell.

Comparisons to other datasets

We use the LCS for this project for two reasons: i) it is the official dataset used to calculate poverty and inequality statistics, and ii) it is the dataset underlying the South African CEQ Assessment. However, the National Income Dynamics Survey of 2017 (NIDS) has the advantage over LCS of containing detail on sector and occupation data,[87] as well as broad informality (e.g., informal employment in the formal sector). It is also more recent. We therefore perform a similar updating process on the (NIDS) with these additional characteristics to create finer matches with the QLFS data and compare the results.

We also compare to the SA-MOD dataset created by Michael Noble and Gemma Wright. This dataset uses NIDS 2017 and updates by *reweighting* demographic and employment characteristics, in contrast to our employment updating process which adds and subtracts earnings income from individuals as we shift their employment status. We chose the latter approach because it has the benefit of not assuming that individuals who become

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[84] Statistics South Africa (2020). 'Mid-year Population Estimates 2020'. Statistical Release P0302. Pretoria, Statistics South Africa, Republic of South Africa.
Available at: http://www.statssa.gov.za/publications/P0302/P03022020.pdf.

[85] National Treasury (2020). 'Budget Review 2020'. Pretoria: National Treasury, Republic of South Africa. Available at: http://www.treasury.gov.za/documents/National%20Budget/2020/review/Prelims.pdf

[86] Wittenberg, M. (2010). 'An introduction to maximum entropy and minimum cross-entropy estimation using Stata'. The Stata Journal, 10(3): 315–30. https://doi.org/10.1177/1536867X1001000301

[87] The LCS has some information on sector and occupation, but it is sparse, and in an open-response format, which we were not able to make use of within the timeframes of this project. The matching process with the QLFS could be improved in the future, however, by classifying these variables using the additional detail provided in the QLFS.

unemployed during the pandemic live in households which resemble those of individuals who were unemployed before the pandemic. A similar method is used by the CEQ Institute to measure the impact of the lockdown on poverty and inequality in various countries (see, for example, Younger *et al.*[88]).

Summary statistics of employment proportions

We present statistics of employment, for totals and by category, for our main dataset (LCS), the reference dataset (QLFS), as well as the robustness datasets (NIDS and SAMOD). The population totals are very similar in all of these for the updated period, at about 34 million.

Employment in the household surveys is generally larger than employment as recorded in the QLFS. While QLFS suggests there were about 15 million employed in 2015 and 15.8 million employed in 2017, the LCS suggests this was closer to 16.3 million in 2015 and the NIDS suggests a figure of 17.5 million in 2017 (Table DA1.2).

Table DA1.2 Employed individuals, LCS, NIDS, QLFS

	Employed individuals (millions)	
Dataset	**Household survey**	**QLFS**
LCS (2015)	16.3	15.0
NIDS (2017)	17.5	15.8

Source: Authors' calculations based on LCS 2014/15, NIDS 2017, QLFS 2015 Q1, and QLFS 2017 Q1.

Employment in the SA-MOD dataset (based on the NIDS survey) is closest to employment in the QLFS. Given that SAMOD is adjusted to match the QLFS, rather than applies the change in employment in the QLFS to the change in the survey, this is unsurprising. In 2021 Q1, QLFS employment was 14.5 million, compared to 15.8 million in the LCS dataset post-adjustment, 15.3 million in NIDS, and 14.2 million in SAMOD (Table DA1.3).

[88] Younger, S.D., Musisi, A., Asiimwe, W., Ntungire, N., Rauschendorfer, J., and Manwaring, P. (2020). 'Estimating income losses and consequences of the COVID-19 crisis in Uganda'. IGC Working Paper S-20074-UGA-1. London: International Growth Centre.
Available at: https://www.theigc.org/wp-content/uploads/2020/11/Younger-et-al-2020-Final-report.pdf

Table DA1.3. Employed individuals post-adjustment, LCS, NIDS, QLFS, SA-MOD

Dataset		Employed (millions)
QLFS 2021 Q1		14.5
Post-adjustment	LCS	15.8
	NIDS	15.3
	SA-MOD	14.2

Source: Authors' calculations based on LCS 2014/15, NIDS 2017, QLFS 2015 Q1, QLFS 2017 Q1, SAMOD.

Correspondingly, the proportions employed by each category (sex, age, race, education, rural, informality status) in the adjusted LCS and NIDS are generally higher than in QLFS and SA-MOD. Note that the sparser matching of the LCS does over-estimate the employment drop for some categories, such as the White population group, which while likely not a problem for the analysis of poverty undertaken in this paper, does preclude more granular analysis by race.

Table DA1.4. Proportion employed by sex, age, race, education, geographical area, informal status

Year	2015	2020	2021	2015	2021	2017	2021	2020
Stats								
Total population (millions)	31.3	33.9	34.4	30.7	34.2	32.4	34.2	34.1
Total employment (millions)	15.0	15.9	14.6	16.3	15.8	17.5	15.6	14.2
Employment rate (per cent)	48.1	46.8	42.4	53.0	46.3	54.1	45.7	41.8
Sex								
Male	54.7	52.5	47.6	59.2	51.3	62.1	52.5	49.8
Female	41.7	41.2	37.2	47.0	41.5	46.3	39.0	34.0
Age								
18-24	19.3	15.8	11.0	28.1	20.5	27.4	18.1	14.2
25-34	51.2	46.7	41.0	54.5	41.8	60.5	50.2	45.1
35-49	62.9	61.9	57.6	67.2	61.6	65.3	56.6	53.2
50-59	54.5	56.1	52.5	60.1	55.5	53.5	47.0	43.9
Race								
White	69.7	70.0	68.7	77.4	67.0	65.6	63.4	53.1
Non-White	46.1	45.0	40.4	50.8	44.7	53.1	44.2	39.1
Education								
Less than matric	40.8	39.5	34.6	44.1	37.6	45.3	34.8	46.8
Matric	51.2	47.6	42.4	58.5	49.1	54.9	41.8	1.8
Tertiary	79.7	75.2	74.7	83.4	77.8	75.3	75.6	10.0
Geographical area								
Rural	36.1	35.7	32.7	37.4	33.4	43.0	37.6	n.a.
Urban	54.0	51.8	46.8	60.2	52.3	59.1	49.4	n.a.
Informal								
Sector	12.0	12.4	10.6	17.3	15.8	n.a.	n.a.	n.a.
Broad	13.8	13.5	10.4	n.a.	n.a.	17.2	11.8	3.6

Source: Authors' calculations based on LCS 2014/15, NIDS 2017, QLFS 2015 Q1, QLFS 2017 Q1, SAMOD.

Summary statistics of poverty and inequality

The increase in poverty due to COVID-19 employment loss is higher in NIDS than in LCS, at all poverty lines. At the FPL, poverty increases in the LCS by 3 percentage points, versus 4.5 percentage points in the NIDS. This is to be expected given the percentage reduction in income of 4.9 in NIDS versus 2.3 in LCS from 2019/20 to 2020/21. The SAMOD dataset's poverty increase is higher still, given that it is matched to QLFS with its lower employment rates. Finally, inequality as measured by the Gini increases slightly across both LCS and NIDS.

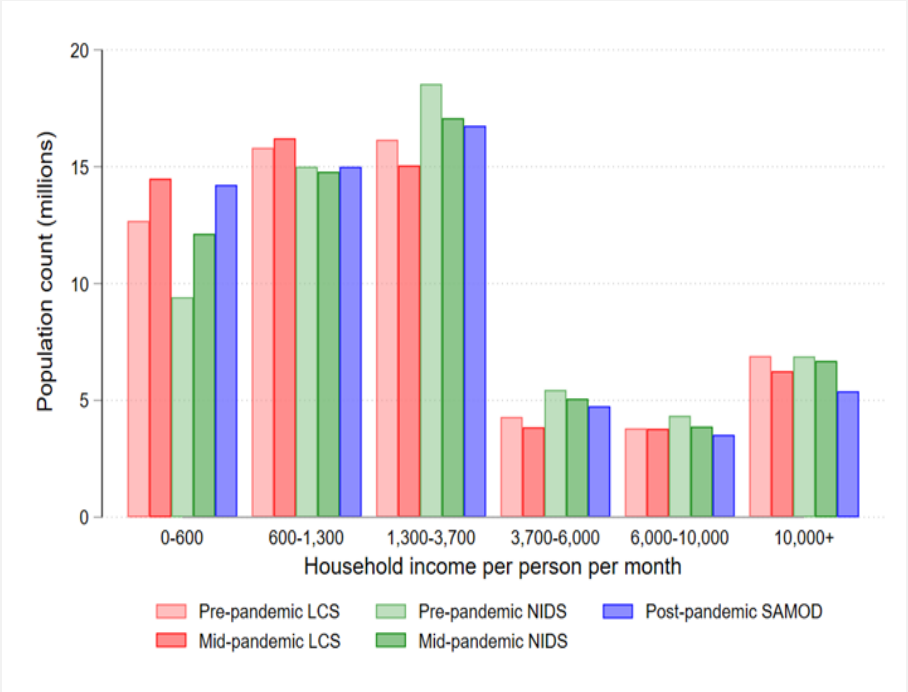
Table DA1.5. Poverty and inequality

	LCS		NIDS		SAMOD
	2015	2021	2017	2021	2020
FPL					
Headcount (%)	22.2	25.3	16.7	21.7	24.6
Gap (%)	9.2	10.2	5.3	8.9	11.8
LBPL					
Headcount (%)	33.7	37.44	28.4	33.3	36.7
Gap (%)	14.9	16.59	10.6	14.5	17.5
UBPL					
Headcount (%)	48.7	52.4	42	46.1	50.1
Gap (%)	23.8	26.24	18.9	23	26.2
Inequality					
Gini coefficient	68.7	68.34	66.2	65.9	68.3

Source: Authors' calculations based on LCS 2014/15, NIDS 2017, QLFS 2015 Q1, QLFS 2017 Q1, SAMOD.

Examining the distributions of per capita household income in the original and adjusted surveys for LCS and NIDS, and for SAMOD, we find that the adjusted datasets all have broadly similar distributions, and that the LCS and NIDS have more individuals in the poorer income categories after the employment adjustment. Figure DA1.1 shows the distribution of household income per person across various brackets, before and after the simulated employment changes for NIDS and LCS (and after for SAMOD). For example, the light-shaded red shows the number of household members in that income bracket in LCS before the employment change, and the darker red shows the number after the employment shock. As expected, there is a large increase in both LCS and NIDS in the lowest bracket, before versus after the employment shock, and there is a correspondingly large drop in the number of people earning between 1,300 and 3,700 for LCS and NIDS. This is due to large net employment losses shifting households down the income distribution.

Figure DA1.1. Household income

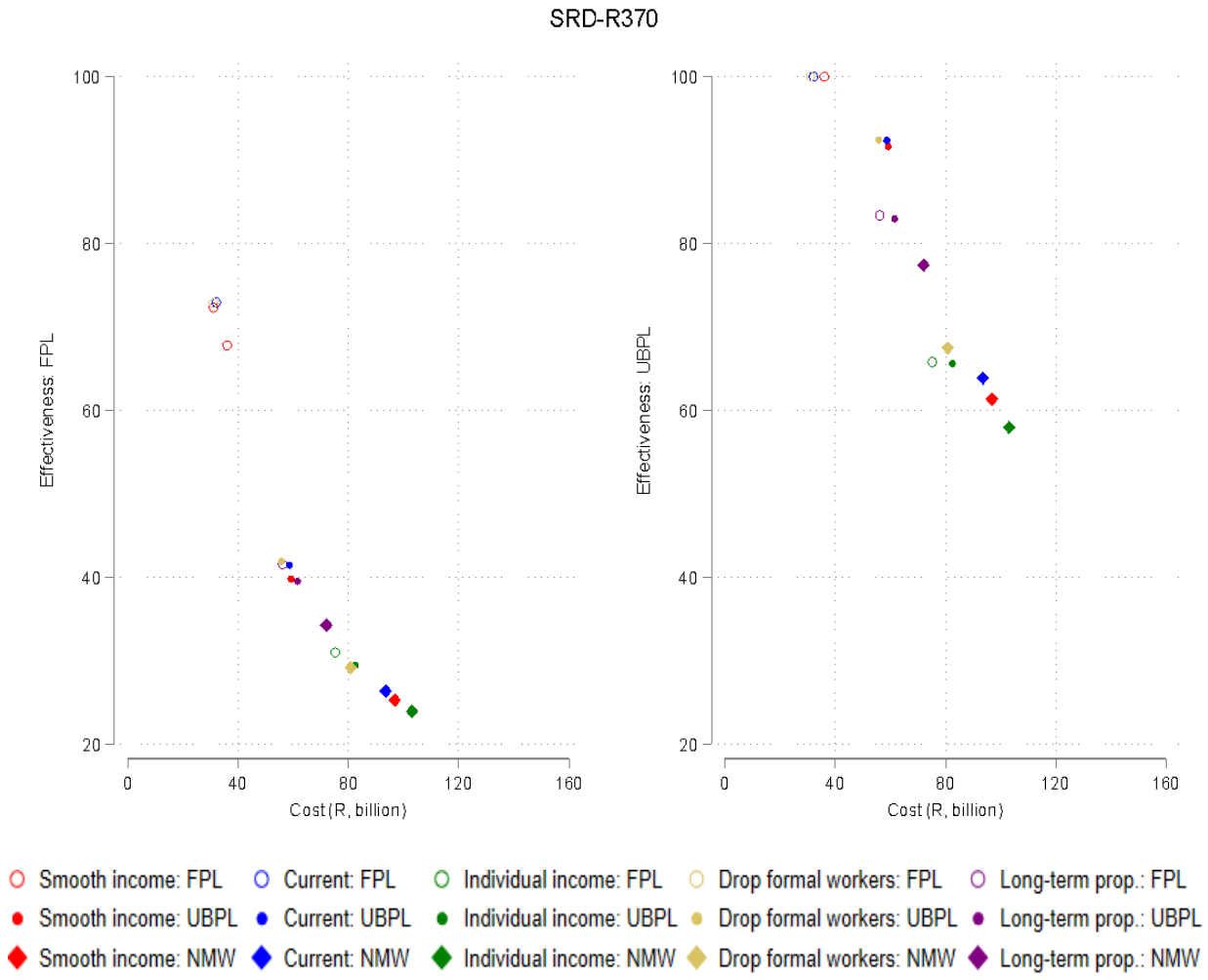


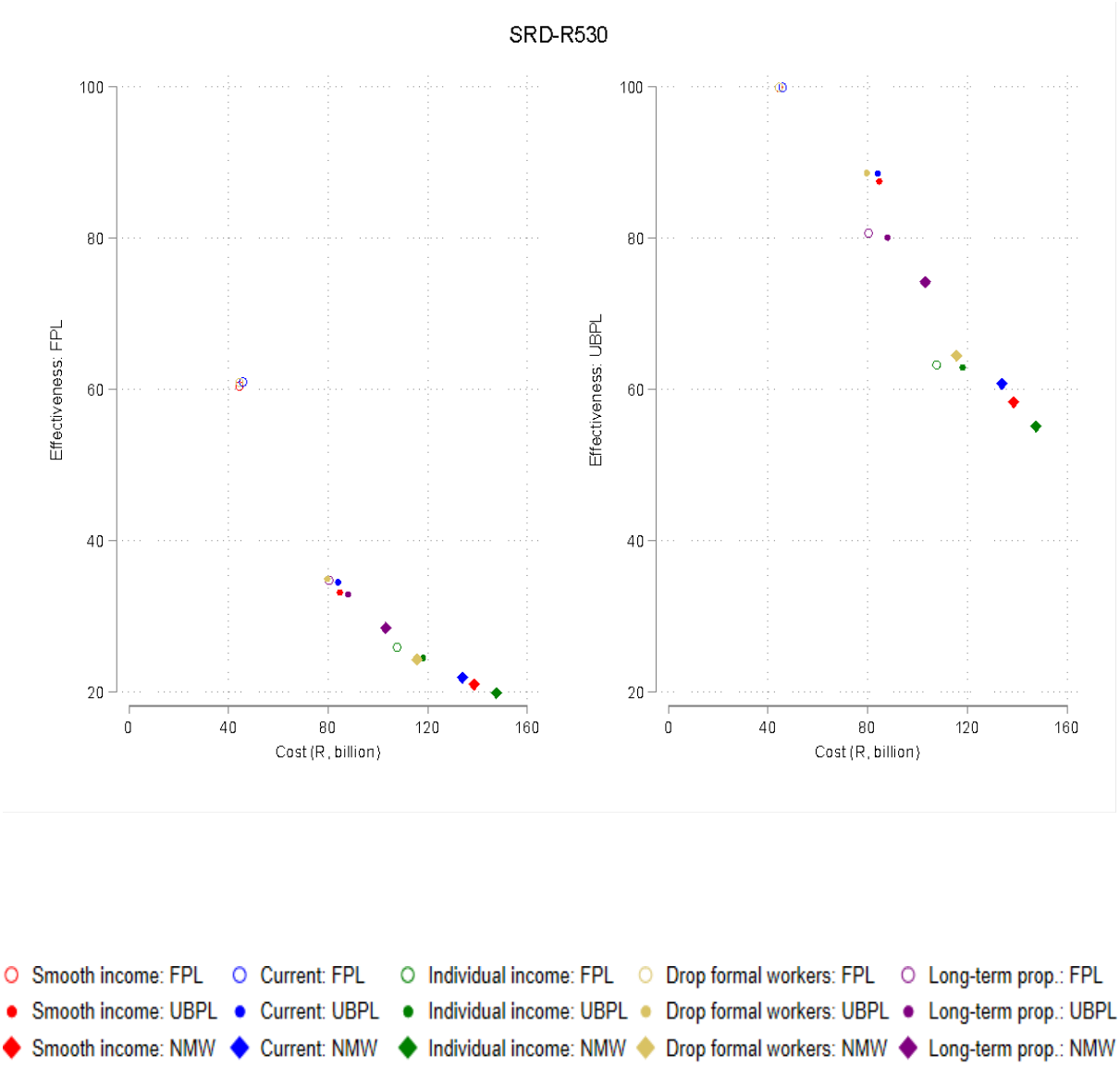
Source: Authors' calculations based on LCS 2014/15, NIDS 2017, SAMOD.

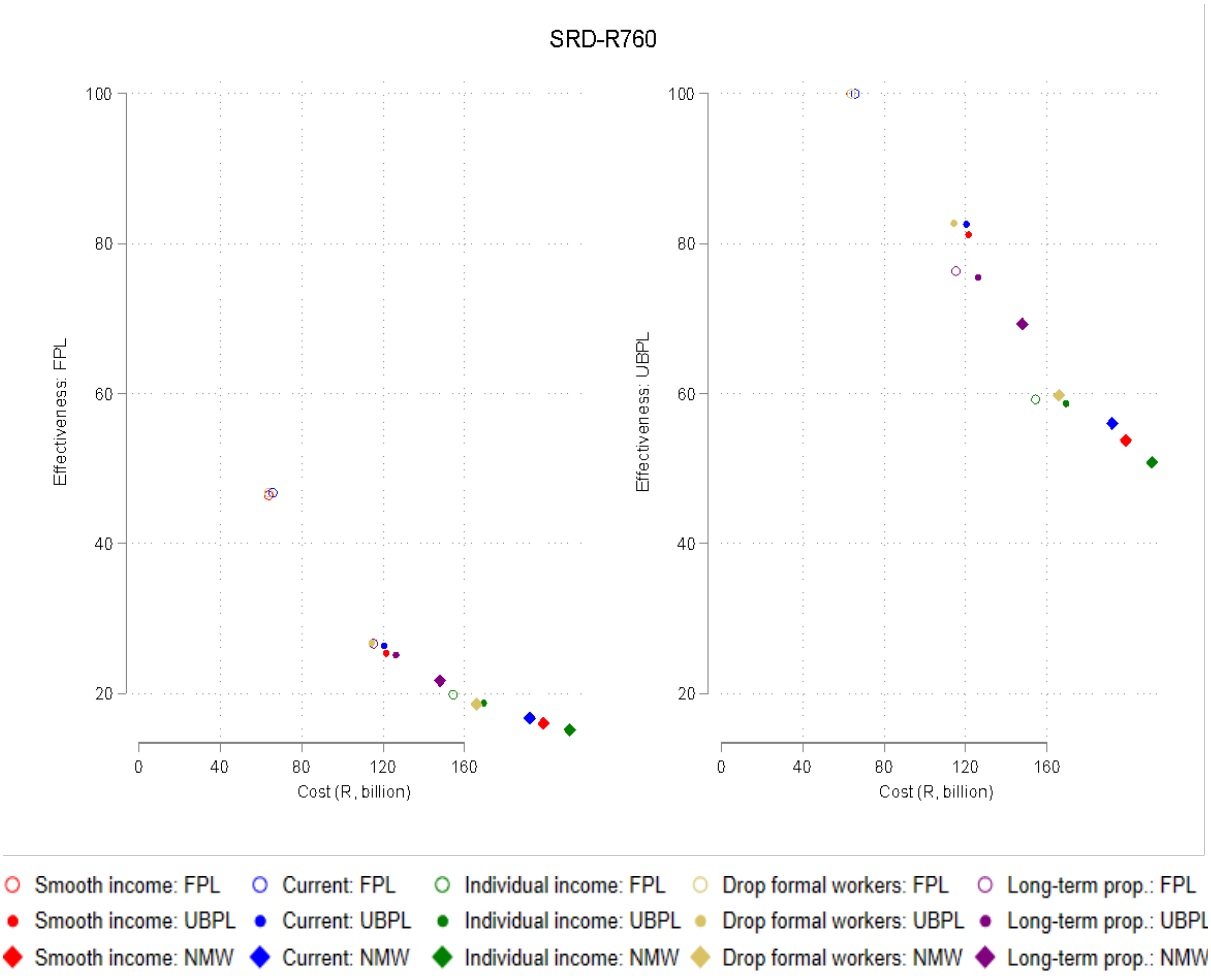
Data Appendix 2

Alternative cost-effectiveness metric

Figure DA2.1. Effectiveness and cost of each scenario, ceiling and size at the food and upper-bound poverty lines




SRD-R530
Effectiveness: FPL
Effectiveness: UBPL
100
80
60
40
20
0
40
80
120
160
Cost (R, billion)
Smooth income: FPL
Current: FPL
Individual income: FPL
Drop formal workers: FPL
Long-term prop.: FPL
Smooth income: UBPL
Current: UBPL
Individual income: UBPL
Drop formal workers: UBPL
Long-term prop.: UBPL
Smooth income: NMW
Current: NMW
Individual income: NMW
Drop formal workers: NMW
Long-term prop.: NMW



Source: Authors' estimates based on the LCS 2014/15 adjusted to 2021 using the QLFS 2015, 2021.

Note: All poverty lines are in 2021 prices.

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