Received: 28 October 2023 | Revised: 8 July 2024 | Accepted: 12 October 2024

DOI: 10.1111/apce.12489

SPECIAL ISSUE

Annals of Public and Cooperative Economics
Annales de l'économie publique, sociale et coopérative

WILEY

# Possible welfare benefits of basic income support: Evidence from a benefit incidence analysis in South Africa

**Carolyn Chisadza**[1] | **Margaret Chitiga-Mabugu**[1] | **Ramos Emmanuel Mabugu**[2] | **Nicky Nicholls**[1] | **Kehinde Oluwaseun Omotoso**[3,4] | **Eleni Yitbarek**[1]

[1]Department of Economics, University of Pretoria, Hatfield, South Africa

[2]Department of Accounting and Economics, Sol Plaatje University, Kimberley, South Africa

[3]Teesside University International Business School, Middlesbrough, UK

[4]DST/NRF SARChI Chair in Social Policy, College of Graduate Studies, University of South Africa, Pretoria, South Africa

**Correspondence**
Carolyn Chisadza, Department of Economics, University of Pretoria, Private Bag X20, Hatfield 0028, South Africa.
Email: carolyn.chisadza@up.ac.za

**Abstract**

The study investigates the potential welfare effect of basic income support (BIS) in reducing poverty and inequality in South Africa. Using the 2017 labour force survey and a benefit incidence analysis, we consider three BIS scenarios: (i) universal income support for those aged between 18 and 59; (ii) only those who are unemployed receive the benefit; and (iii) only unemployed individuals in extremely poor households defined by the food poverty line receive the benefit. Results show that BIS can reduce poverty and inequality. However, the specific effects of the BIS will depend on the targeting scenario considered. The universal BIS is more costly and has higher leakage, with more benefits going to the non-poor. However, this universal support has the biggest overall impact on poverty and inequality reduction because more South Africans receive income support under this scenario. Meanwhile, targeting only the unemployed and the impoverished makes the BIS more pro-poor and progressive, as well as mitigating the leakage of the benefit to the non-poor. This would,

however, require that an appropriate targeting mechanism be in place.

**KEYWORDS**
basic income support, benefit incidence analysis, inequality, poverty

**JEL CLASSIFICATION**
E62, H31, H22, H20

## 1 | INTRODUCTION

The debate on the distributional impacts of social transfers continues to be contentious, especially in developing economies with limited resources available. One school of thought advocates for social transfers to assist impoverished households in improving consumption (Fabrizio et al., 2020), whereas others argue that these transfers create undesirable welfare dependency or adverse effects on the economy through increased taxes (Cury et al., 2016). We contribute to this debate by investigating whether the benefits of social transfers, through the implementation of a basic income support (BIS), achieve their primary purpose of improving social welfare in South Africa.

South Africa has made some progress towards addressing the social and economic inequalities left behind by the Apartheid regime. Interventions include, but are not limited to, improved access to education, improved infrastructure (such as electrification, sanitation and water) and improved access to job market opportunities for the disadvantaged population. To address the high inequality and poverty rates, the post-Apartheid government introduced or expanded several social welfare programmes as a means to establish a more equitable society. These include the Child Support Grant (CSG), the Disability Grant, the Old Age Pension, the War Veteran's Grant and the Foster Care Grant. These welfare programmes are distributed outside the labour market to assist the elderly, children and the disabled. According to the General Household Survey (GHS, 2021: 27), the percentage of households that have benefitted from at least one social grant has increased from 30.8% in 2003 to 50.6% in 2021. However, despite government efforts, inequality in South Africa remains persistently high, with only slight improvements from 1993 levels. South Africa remains one of the most unequal countries in the world, with a persistent per capita expenditure Gini coefficient of over 0.60 (Statistics SA, 2019). South Africa also features relatively higher poverty and unemployment rates[1] than other middle-income countries with similar per capita incomes (Inchauste et al., 2015). For example, South Africa had the highest unemployment rate, not only in Africa but globally in 2021 at 34% (Quarterly Labour Force Survey [QLFS], 2022). To compound the inequality and unemployment crisis, South Africa continues to struggle with high poverty rates. Nearly 18.2 million people out of a population of 60.4 million were living in extreme poverty in 2023, using the international poverty threshold of US$1.90 a day per person (2011 PPP) (Cowling, 2024). These alarming statistics lead to a call to expand existing social grant schemes as a means to address poverty and inequality in the country.

Social grants have been associated with multiple positive outcomes, including income, savings, assets, food spending, school attendance and cognitive development (Bastagli et al., 2016).

[1] Unemployment refers to the percentage of the labour force that is actively seeking employment (QLFS, 2022).

Specifically, social grants have been found to support consumption and to improve the welfare of grant recipients and their households in South Africa (Neves et al., 2009). Investments in nutrition, schooling, productive assets and informal economic activity have also been associated with child support and old age grants in South Africa (Neves et al., 2009). In fact, Neves et al. (2009) and Banerjee et al. (2017) found no evidence of the adverse effects that literature has sometimes suggested might be associated with grants, such as disincentivizing work. Instead, evidence by Satumba et al. (2017) notes significant poverty reduction, particularly in poorer provinces such as Eastern Cape and Limpopo, with the most significant impact on poverty coming from the CSG. Though the monetary value of the CSG is lower than the old age pension grant, the CSG is South Africa's largest social cash transfer programme, targeting a larger share of the population, followed by the old age pension. At the time of the study in 2016, 71% of the grant holders were beneficiaries of the CSG in relation to the 18.8% who received the old age pension (Satumba et al., 2017). Smaller effects on poverty were noted for the disability grant, although the authors note that this grant had fewer beneficiaries. More recently, Bhorat and Kohler (2020) found that the increase in grant spending, particularly on the CSG, during the COVID-19 pandemic significantly increased the incomes of poor households. In addition, they found that this spending has been pro-poor, helping with income redistribution.

Unemployment, persistent inequality and economic stagnation reinforced more recently by COVID-19 are some of the challenges that South Africa faces. Hunger is also a significant challenge. According to the South African GHS (2021: 51), the percentage of households that had limited access to food decreased from 23.6% in 2010 to 17.8% in 2019 before increasing to 20.9% in 2021 due to the COVID-19 pandemic. The COVID-19 pandemic exacerbated existing inequalities through job losses and necessitated the introduction of the Social Relief of Distress (SRD) Grant in 2020 to support those who were left unemployed or impoverished. Prior to the COVID-19 pandemic, BIS had been on the policy agenda in South Africa for at least two decades—since the Taylor Committee in 2001. The introduction of the special COVID-19 SRD Grant renewed interest in BIS in South Africa. The COVID-19 SRD grant in South Africa can be seen as a pilot for permanent BIS for several reasons. First, the SRD grant was introduced as an emergency measure in response to the COVID-19 pandemic to provide temporary relief to individuals who lost income due to lockdown measures. Despite being temporary, the grant's structure and the response it generated highlighted the potential for a more permanent BIS system. A report by Van den Heever et al. (2021), conducting a review on the feasibility of a BIS in South Africa, recommended that the existing COVID-19 SRD grant be used as a platform for an expanded system of BIS, given that the grant involved limited trade-offs and risks with regards to raising additional revenue. Second, unlike more established social grants in South Africa, COVID-19 SRD targeted a broader demographic affected by sudden income loss, including unemployed working-age individuals who typically did not qualify for other grants. This has sparked interest in the concept of universal basic income or a more comprehensive form of income support. Lastly, despite challenges like payment delays, the COVID-19 SRD grant's implementation has shown the ability of the public infrastructure to rapidly disburse funds to a large number of recipients, demonstrating the potential for a more permanent basic income programme.

BIS would be a form of social assistance intended to provide financial assistance to people between the ages of 18 and 59 who cannot access employment or earn a decent income. To date, very few cases of Universal Basic Income trials exist in developing countries. Those that do exist point to the vital benefits a basic income grant system might provide. For example, a basic income pilot in Otjivero, Namibia, saw reductions in poverty and child malnutrition, as well as improvements in small-scale local economic activity (Haarmann et al., 2023). A randomized controlled

trial of basic income tested across nine villages in India similarly found positive impacts: better nutrition, better health care and better agricultural productivity among those receiving the grant (Davala, 2023). A recent large-scale experiment evaluating a universal basic income in rural Kenya found significant reductions in hunger, sickness and depression (Banerjee et al., 2020). This evaluation took place against the backdrop of the COVID-19 pandemic, and the authors note that these benefits were received despite the pandemic context.

This study lends some insights to the scant basic income grant literature in developing countries by investigating the hypothetical distributional impacts of the BIS in South Africa using Labour Force Survey (LFS) data collected in 2017. We compare the social welfare effects of a universal BIS to a targeted, mean-tested BIS. A universal BIS is a grant that all people (usually within a certain age group, e.g., all working-age adults) qualify for, regardless of their employment status and income. A targeted BIS is only given to the population that meets certain qualifying criteria (e.g., they are unemployed and/or have income below a certain level, usually the national poverty line).

Given that the BIS has not yet been implemented, the study simulates the possible effect of the grant under three scenarios. As some form of support exists for children under 18 (child grant) and adults that are 60 years and above (old age pension), we allocate the grant only for adults from 18 to 59. We exclude those under the age of 18 because the CSG in South Africa covers all children under the age of 18 that are eligible for the grant. We also exclude those above the age of 59 because the old age pension grant covers beneficiaries from 60 years and above, who are also expected not to be receiving any other type of social grant. In addition, some poor households may benefit from a combination of social grants if the members include pensioners, young children and/or disabled persons. However, no income support currently exists for adults in South Africa between the ages of 18 and 59, unless they have a disability (Van den Heever et al., 2021). In the first scenario, we consider universal income support for those aged 18–59. In the second scenario, we allocate the benefit only to those aged between 18–59 and unemployed. Lastly, we allocate BIS only for extremely poor individuals (defined by the food poverty line of the country in 2021) who are unemployed and between the ages of 18 and 59. Under all the scenarios, we employ an income incidence analysis approach based on the Commitment to Equity (CEQ) methodology to determine whether implementing BIS redistributes resources to the poor. We ask two main questions. First, what are the possible welfare benefits of a BIS programme on poverty and inequality in South Africa? Second, how would the BIS's welfare benefits be distributed across the population if all those who meet the criteria under each scenario get access to the BIS?

Our results suggest that BIS has the potential to reduce poverty and inequality in the country. However, the effect varies based on the targeting mechanism used to identify beneficiaries. We note that targeting the unemployed and the impoverished makes BIS more pro-poor and progressive and reduces the leakage of benefits to the non-poor. On the other hand, universal BIS has the highest potential to reduce poverty and overall inequality in the country but is also significantly more expensive.

## 2 | RELATED LITERATURE

The theoretical framework on which the empirical evidence on social transfers is based proposes that, in general, cash transfers, such as the proposed BIS, can have both micro and macro level impacts on the economy. At a micro level, grants influence how households allocate labour between work and leisure and can therefore change labour force participation rates (Ferro & Kas-

souf, 2010). According to Tiberti et al. (2018), although social grants, such as the old age pension, can be a source of income to young adults in the household, they can also work as a disincentive for young adults to search for employment and may prolong their stay in the household. In addition, cash transfers, such as the CSG, may end up benefiting the adult instead of improving children's welfare (Duflo, 2003). On the other hand, households that receive social grants can improve and diversify their consumption patterns, particularly when the beneficiaries are women. Evidence suggests that larger improvements in child and household welfare are associated with income given to women (Duflo, 2000). At a macro level, grants impact the fiscal balances through redistributing tax revenue to finance the cash transfers. Furthermore, labour reallocations and household consumption changes can affect economic production (Tiberti et al., 2018).

Empirical evidence in the literature evaluating social assistance programmes finds largely positive effects on social well-being. For example, Debowicz and Golan (2014) find that the poverty rates in Mexico have reduced due to the *Oportunidades* programme, and Cury et al. (2016) find that two Brazilian social protection programmes have positive effects on poverty, but the positive effects are largely offset by the higher taxes needed to finance the two programmes. Other studies find that direct cash transfers provided to poor women improve female labour force participation, with immediate positive impacts on poverty and inequality (Salehi-Isfahani & Mostafavi, 2018). Moreover, cash transfers have had meaningful impacts on poverty: For example, the Productive Safety Net Program (PSNP) in Ethiopia has reduced poverty by 0.5 percentage points each year since its implementation in 2005 (Hill & Tsehaye, 2018). Hirvonen et al. (2018) also find poverty-reducing effects from the PSNP but note that this does not achieve a sizable inequality-reducing effect. However, Fabrizio et al. (2020) conclude that such fiscal interventions can reduce the income gap between the top 10% of the income distribution and the bottom 10%.

The expansion of grants in South Africa, particularly the CSG, which was first introduced in 1998, has had an impact on overall household poverty levels, as well as children's health and welfare. The CSG was set at R460 in 2021, whereas the food poverty line in 2021 prices was R595 per individual. As of 2022, 13 million children were receiving this grant (Dikoko & Patel, 2023), an increase from 10.7 million in 2011/12 (Tiberti et al., 2018). According to an impact assessment conducted by UNICEF in 2012,[2] early receipt of the CSG (in the first 2 years of life) in South Africa was found to improve children's health, cognitive skills and completion of more grades of schooling. Qualitative interviews with grant recipients suggest that the CSG is incorporated into the household income, where the recipients of the grant mainly spend it on food and on paying school fees for their children (Granlund & Hochfeld, 2019; Khosa & Kaseke, 2017). CSGs are found to have transformative effects at (i) an individual level through reduced worry and stress due to improved financial security and planning, (ii) an intra-household level through increased decision-making power and bargaining power for women and (iii) at a community level through spillover effects into church donations or informal savings associations (Granlund & Hochfeld, 2019). Similarly, Tiberti et al. (2018) assess the impacts of a possible increase in the CSG in South Africa and find that the CSG decreases poverty in the population, specifically for children, as well as increases labour supply among grant recipients.

Old age pension grants have also been highlighted in the literature for their poverty reduction effects. Early work on the South African old age pension notes the pro-poor nature of these transfers, highlighting also the benefit to children (Case & Deaton, 1998). The authors note that children living with pensioners is common in South Africa and that this is particularly true for

[2] https://www.unicef.org/southafrica/media/1116/file/ZAF-South-African-child-support-grant-impact-assessment-2012.pdf

poorer children, making the pension pro-poor both in supporting older people and children. Furthermore, findings by Duflo (2003) indicate that the expansion of the old age pension programme in South Africa led to an improvement in the health and nutrition of girls, especially when the beneficiaries were women. More evidence suggests that not only children benefit from the old age pension grants in terms of improved level of school attendance, but other members of the households also receive positive spillovers (e.g., the unemployed young adults can use income to search for employment further from home), particularly in female-headed households (Goodur, 2008; Samson et al., 2004). As of 2021, the old age pension grant was set at R1890, whereas the food poverty line in 2021 prices was R595 per individual, with 3.7 million people receiving the old age pension grant by 2022.

Currently, in South Africa, the BIS is being considered by policymakers to alleviate poverty among unemployed citizens. However, the government faces resource scarcity and therefore needs to create fiscal space to set up such a reform. As of 2021, 51% of households benefitted from social grants nationally, with 20% of households depending on grants as their primary source of income (GHS, 2021).

Business organizations have cautioned against BIS, stating that the grant would be unaffordable (depending on its structure and level, it could cost anything between R20 billion and R2 trillion a year),[3] particularly with the burden of other social grants already in existence. Furthermore, the business organizations argued that the grant might cause adverse effects on the economy through higher taxes. Research undertaken by Business Unity South Africa (BUSA) and Business Leadership South Africa (BLSA) found that raising taxes would be the most viable way to raise the required funds for the BIS. This would involve significant increases in personal income tax. VAT would also need to be increased by between 14% and 29%, effectively an increase of two percentage points from the current VAT level of 15%, whereas the corporate tax level would have to be increased by between 24% and 47%.[4]

Given the debate surrounding the BIS in South Africa, it is not surprising that policymakers have become increasingly interested in inquiry-based evidence that examines the affordability and potential positive impact of basic income grants on welfare and on income redistribution while also considering trade-offs (e.g., increased taxation).

## 3 | DATA

Incidence analysis studies combine information from national accounts and household survey data, or they rely on incidence indicators from secondary sources, usually micro-datasets that collect information from households and their members. Multiple generations of household surveys have been produced since the end of the apartheid in South Africa by Statistics South Africa (Stats SA). These household surveys provide nationally representative micro-level information on the labour market. Although the data landscape of South Africa are better than that of many African countries, the labour survey data are not designed to conduct dynamic analysis and do not allow for straightforward comparability. To tackle challenges related to comparability, the University of Cape Town, under its 'DataFirst' initiative, stacked cross-sectional survey data called the

[3] https://www.news24.com/fin24/economy/basic-income-grant-could-drive-south-africans-to-emigrate-study-says-20220725

[4] https://www.timeslive.co.za/news/south-africa/2022-07-28-we-must-choose-which-hardship-we-can-bear-thuli-madonsela-on-basic-income-grant-dilemma/

Post-Apartheid Labour Market Series (PALMS). These data consist of a harmonized compilation of four household surveys conducted after 1993 (Kerr & Wittenberg, 2019). Notably, for the purpose of this study, the latest release (PALMS version 3.3) captures labour income at the individual level that is consistent over time. PALMS data from 2008 to 2018 come from the QLFSs collected from nationally representative data by Stats SA.

This study uses 2017 QLFS data, which are a part of PALMS, as a primary micro dataset to allocate BIS transfers and income tax for each individual within a household. The income variable in the dataset captures the monthly labour earnings income of each individual before taxes and at constant prices as of December 2015 (Kerr & Wittenberg, 2019). The QLFS uses a rotational sampling method where dwellings are assigned to one of four rotation groups, and each group has dwellings rotated into the sample every quarter throughout the year. Given that the unit of observation is households within these dwellings, maintaining consistency and accuracy is crucial. To achieve this, we adopted the approach of retaining only the last observation per dwelling in 2017. The main benefit of this approach lies in providing a clear and current snapshot of individual labour characteristics, including their recent income, based on the most up-to-date information. Our analysis focuses on individuals, but we aggregate post-income tax, and BIS transfers income at a household level to assess the potential impact of BIS on poverty and inequality.

The LFS was chosen for our analysis because it focuses on employment and unemployment, and it represents the working-age population nationwide. As previously discussed, the SRD grant aimed to assist individuals who typically did not qualify for other grants. The eligibility criteria for the SRD grant were strict, and there are ongoing discussions in policy circles about the feasibility of a basic income as a more sustainable social safety net for those not covered by existing grants. Thus, our analysis is based on LFS data, which represents the individuals we are interested in. However, it is important to note that the LFS does not collect data on other social grants, which limits our analysis in that regard.

Income tax is allocated to individual labour income based on SARS income tax rates.[5] QLFS contains data on individual labour income, area of residence and other socio-economic characteristics of individuals, such as educational attainment, race and gender. Per capita values are obtained by dividing the total labour income of household members net of income taxes and transfers (specifically, the BIS is for those who meet the criteria under the different scenarios we considered) by the total number of household members, defined as individuals who spent at least four nights in a week together during the reference period.[6] Table 1 shows the population demographics across income quantiles, poverty status using the lower bound poverty line (LBPL) and population group. From the table, we can see that 20% of the population belongs to each quintile. About 60% of the total population live in poverty, under the LBPL of ZAR 860. The majority (76%) of individuals residing in rural areas live in rural poverty. The corresponding number of individuals living in urban areas is 51.3%, suggesting that poverty is higher in rural areas. Similarly, the preponderance of the poor (about 85%) are black South Africans.

We build three scenarios to determine who receives the BIS transfer and to calculate the different income concepts discussed in Figure 1. Given that some form of support exists for children under 18 (child grant) and for adults aged 60 and over (pension), we allocate the grant only for adults from 18 to 59. In the first scenario, we consider universal income support for all individuals aged 18–59. In the second scenario, we allocate the benefit to those aged between 18 and 59 who were unemployed. Lastly, we allocate BIS for individuals between the ages of 18 and 59 who live

[5] https://www.sars.gov.za/tax-rates/income-tax/average-income-tax-rates-comparisons/

[6] It is important to note that due to data constraints, we are only considering BIS as the only social transfer.

**TABLE 1** Population demographics.

| | Quintiles of per capita income | | | | | Poverty status | | Population group | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q5 | Poor | Non-poor | Black | Coloured | Indian/Asian | White |
| Share of total population | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 59.8 | 40.2 | 80.8 | 7.7 | 2.3 | 9.2 |
| Share of poor population | 33.4 | 33.5 | 33.1 | 0.0 | 0.0 | 100.0 | 0.0 | 84.8 | 7.5 | 1.5 | 6.2 |
| Share of urban population | 16.1 | 20.1 | 15.3 | 22.9 | 25.6 | 51.3 | 48.7 | 72.4 | 10.9 | 3.5 | 13.2 |
| Share of rural population | 27.4 | 19.8 | 28.9 | 14.5 | 9.4 | 75.9 | 24.1 | 96.8 | 1.5 | 0.1 | 1.6 |

*Note*: Data are (number of individuals in the group)/(number of individuals in the population), using household size-weighted expansion factors to estimate numbers.
*Source*: Own calculation using LFS (2017).

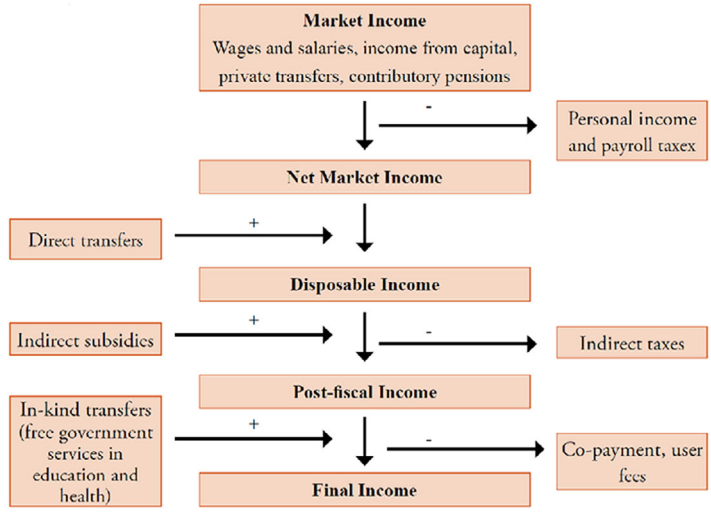



**FIGURE 1** Definitions of income used in the Commitment to Equity (CEQ) fiscal incidence analysis.
*Source*: Adapted from Lustig and Higgins (2012). [Colour figure can be viewed at wileyonlinelibrary.com]

in extremely poor households (defined by the food poverty line, ZAR 595 per capita) and were unemployed in 2017. In all the scenarios, the BIS transfer is assumed to be equivalent to the country's food poverty line, ZAR 595 per individual per month in 2021.[7] We use R595 as it closely aligns with the COVID-19 SRD grant extension and reflects the grant amount for the 2021/22 financial year. Following the argument of Ravallion (2005) and Van de Walle and Mu (2007), we used the income net of all social protection transfers to rank the welfare of individuals and households in all the scenarios. This approach is based on the argument that a reasonable measure of pre-transfer income should take out at least half of social insurance benefits and 100% of any social assistance benefits. Finally, we used the LBPL, equivalent to a monthly value of ZAR 860, to assess the possible effect of BIS under all three scenarios.

## 4 | METHODOLOGY

We employ traditional benefit-incidence techniques to explore how the welfare benefits of BIS would be distributed across the population if all those who meet the criteria under each scenario get access to it. This would allow us to understand the effect of the grant on poverty and inequality. To this end, this study utilizes the CEQ methodology (Lustig & Higgins, 2012, Lustig, 2018), which stipulates various methods of assigning transfers or benefits to individuals to analyse their distributional impacts.

The CEQ method follows standard practice and uses market income or pre-transfer income as the benchmark against which changes in welfare (poverty or income inequality in this case) due to the public expenditure instruments are compared. At the core of the CEQ method is the calculation of different income concepts. Our analysis will use two income concepts: market income and disposable income. Market income refers to income from wages and salaries in the labour

[7] We also considered BIS transfer equivalent to the country's LBPL, ZAR 860 per individual per month in 2021 price, and assessed the possible effects using the upper bound poverty line, ZAR 1300 per individual per month in 2021 price. Our results are consistent. The universal basic income support has the biggest overall impact on poverty and inequality reduction. However, targeting only the unemployed and the poorest makes the basic income support more pro-poor and progressive. Results are available from the authors.

market.[8] This income is viewed as 'pre-fiscal' because it refers to individual earnings before the government influences the income distribution through its tax and spending policies. Disposable income is cash income available after the government has taken away direct taxes (such as personal income tax) and has distributed direct transfers (such as BIS and 'near cash' transfers).[9] Figure 1 summarizes the different definitions of income used in the CEQ fiscal incidence analysis.

The two income concepts are computed using the following formula:

$$Y_i = I_i - \sum_j T_j S_{ji} + \sum_k B_k S_{ki} \quad (1)$$

where $Y_i$ is individual $i$'s income after taxes and transfers (disposable income); $I_i$ is individual $i$'s labour market income (income before taxes and transfers); $S_{ji}$ is the share of tax $(T)$ $j$ paid by the individual $i$. $S_{ki}$ is the share of transfer $(B)k$ received by individual $i$.[10] Market income is computed from an individual's income from employment. Disposable income, in our case, is labour income minus income tax plus BIS transfer. The value of the transfer is the hypothetical BIS for those individuals who meet specific criteria. We used the food poverty line of ZAR 595 (in 2021 prices) as the transfer amount and investigated the redistribution effect of the transfer under three scenarios. The three scenarios are universal income support for those from the ages of 18 to 59; universal income support for those from the ages 18 to 59 and unemployed; mean tested income support for the unemployed from the ages of 18 to 59 that live in extremely poor households (defined by the extreme poverty line of the country in 2021, ZAR 595).

In a nutshell, the following steps[11] in the analysis are followed:

1. Identify all individuals that qualify for the BIS and allocate different income levels;
2. Obtain unitary benefits by dividing total benefits to individual beneficiaries and their families (from step (1));
3. Rank the identified individuals according to socio-economic status (such as quintiles of household per capita income, poverty status, gender or education); and
4. Assign the unitary benefit (obtained in step (2)) across the distribution of beneficiaries and compute the shares of the income allocated to different portions of the population.

In summary, the method identifies which socio-economic groups would benefit the most from the grant and sheds light on how BIS impacts the welfare and livelihoods of individuals and their households.

[8] Market income also includes income from investments and other taxable income earned by private means. However, the study only considers wages from employment and salaries from self-employment due to data constraints.

[9] Governments also affect the income distribution of individuals through the provision of free or subsidized public services such as health and education. Final income can be calculated as disposable income plus the value of these in-kind benefits minus any co-payments and participation costs for those services. However, due to data constraints, the study does not consider other cash transfers such as child grants and pensions and in-kind government provisions such as education and health.

[10] The different taxes and income tax need to be included along with transfers in calculating the different income concepts. Considering all taxes gives a more precise measure of the different income concepts and enables estimation of the effect of the transfers to mitigate the negative (if any) effect of government taxes on poverty and inequality. However, because the study's objective is to simulate the potential effect of new transfer (BIS) and data limitation, it only considers income tax on labour income (wages of employees and part of the income of the self-employed).

[11] See van de Walle (1998) for detailed discussion.

We acknowledge some limitations of the CEQ methodology, such as not incorporating behavioural or general equilibrium effects. The CEQ methodology is also a point-in-time rather than a lifecycle measure, which may limit the ability to capture the long-term effects of the policy on the welfare indicators (Lustig & Higgins, 2012).

It is important to note that CEQ analyses and its findings are subject to several caveats. First, fiscal incidence analysis within CEQ does not incorporate behavioural or general equilibrium effects, focusing on average incidence. Second, assumptions regarding tax shifting and labour supply responses assume perfect elasticity, which may not reflect real-world conditions accurately. Third, the analysis lacks consideration of within-household inequality, thereby overlooking how income is distributed among household members. Lastly, due to data constraints, our analysis excludes other taxes such as corporate income and property taxes, as well as in-kind government spending like infrastructure investments, education, health services and existing cash transfers such as child grants and pensions. These exclusions limit the comprehensive assessment of the full distributional effects of BIS across different socio-economic groups. Despite these limitations, our method remains comprehensive for tax-benefit incidence analyses available for middle- and low-income countries to date, and the findings shed light on the implications of the introduction of BIS on poverty and inequality in the country.

## 4.1 | Poverty and inequality measures

After computing market income and disposable income, inequality indices are calculated for each income concept to assess the redistributive effect of BIS. Inequality is measured using the Gini index, a widely used measure of income inequality. Using the Gini index, we can trace how inequality evolves after BIS transfers are added and income taxes are deducted. We do this by computing the index using before and after tax income. For instance, comparing inequality at the market and disposable incomes shows how much redistribution is achieved by direct transfers (Enami et al., 2019; Higgins & Lustig, 2016). Similarly, the impact of BIS on poverty is assessed by tracing the changes in the popular Foster–Greer–Thorbecke (FGT) class of poverty measures across the different income concepts (Foster et al., 1984). For poverty, we use three indicators: headcount index (a measure of the proportion of the population that is poor), the poverty gap ratio (a measure of the depth of poverty—the aggregate poverty deficit of the poor relative to the poverty line) and poverty severity (a measure of the (squared) proportional shortfall from the poverty line). When assessing the effect of government redistribution programmes through transfers and taxes on poverty and inequality under this approach, the impact of any fiscal component depends on its magnitude and progressivity (Lustig & Higgins, 2012).

## 4.2 | Measures of pro-poorness and progressivity

For any measure of household income, this study measures the progressivity of fiscal policy components (income taxes and the BIS transfer) by comparing the cumulative distribution and cumulative concentration before and after the income has been received. This approach compares the cumulative distribution (cumulative concentration shares represented as a concentration curve) of BIS with the cumulative distribution of market income (represented by a market income Lorenz curve) and the cumulative share of the total population ranked by market income (Duclos & Araar, 2006). Lorenz curves are used to make unambiguous comparisons about whether

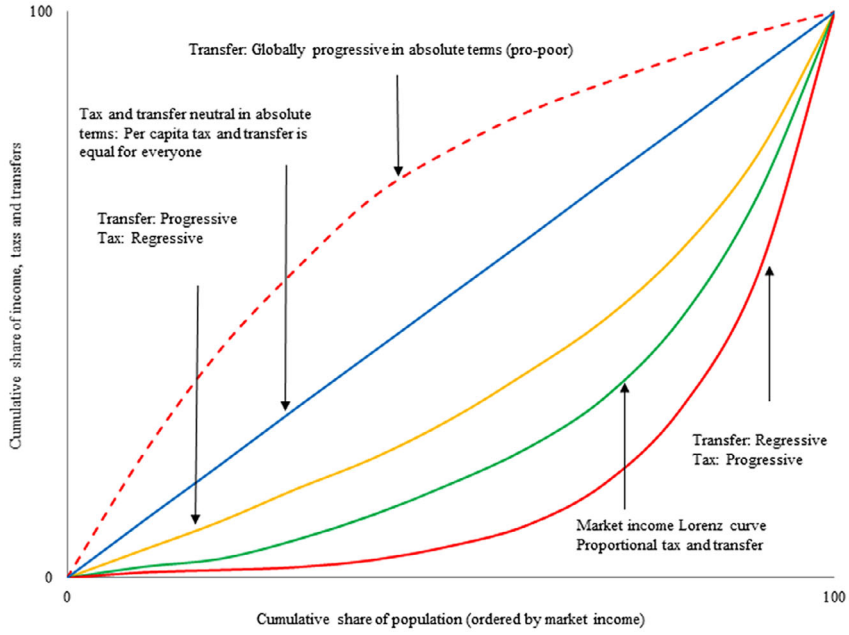



**FIGURE 2** Graphic representation of progressivity of taxes and social transfers.
*Source*: Lustig and Higgins (2012). [Colour figure can be viewed at wileyonlinelibrary.com]

BIS reduces inequality.[12] Similarly, concentration curves map the cumulative share of benefits received from a particular category of transfers on the vertical axis against the cumulative share of the population, ordered by pre-fiscal income, on the horizontal axis (Duclos & Araar, 2006). One can also obtain aggregate progressivity indices by computing concentration indices (Duclos & Araar, 2006). The concentration index is twice the area between the concentration curve and the diagonal line. It is defined using a covariance formula as $C_i^x = \text{cov}(i,\ F(x))\frac{2}{\mu_i}$, where $C_i^x$ is the concentration coefficient of fiscal component $i$ with respect to market income $x$, $F(x)$ is the cumulative distribution of the market income and $\mu_i$ is the average value of component $i$. Figure 2 illustrates the concepts of general progressivity, regressivity or neutrality of transfers and taxes.

Figure 2 depicts three important points in terms of assessing the progressivity or pro-poorness of government redistribution programmes. A transfer is globally progressive if the proportion of the transfer received in relation to market income declines as income increases or when its concentration curve lies above the market income Lorenz curve everywhere (Higgins & Lustig, 2016; Lustig, 2018). A necessary but not sufficient condition for this is for the transfer's concentration coefficient to be negative. A transfer will be progressive in relative terms if the proportion received in relation to market income decreases as income rises, or equivalently, when its concentration curve lies everywhere between the market income Lorenz curve and the 45-degree line (Lustig, 2018). On the other hand, a transfer is globally regressive if the proportion of transfer received in relation to market income increases with income or when its concentration curve lies everywhere below the market income Lorenz curve (Higgins & Lustig, 2016; Lustig, 2018). A necessary but not sufficient condition for this is that the concentration coefficient of the transfer should be positive.

[12] Lorenz curves map the cumulative share of market income and disposable income on the vertical axis against the cumulative share of the population, ordered by market or the 'reference' income on the horizontal axis (Enami et al., 2019; Lustig & Higgins, 2012).

**TABLE 2** Sample and population sizes—Scenario 1.

| | Sample size[a] | | | Population[b] | | |
|---|---|---|---|---|---|---|
| | Households | Individuals | Recipients | Households | Individuals | Recipients |
| All observations | 17,783 | 47,376 | | 14,630,764 | 39,479,946 | |
| Universal BIS to individuals aged 18–59 | 15,060 | 43,297 | 25,699 | 12,750,913 | 36,793,782 | 23,090,879 |

Abbreviation: BIS, basic income support.

[a]The sample size columns show the number of households, individuals and recipients of BIS in the survey.

[b]The population columns show the number of households, individuals and recipients of BIS expanded to the population using expansion factors.

*Source*: Own calculation using LFS (2017).

Finally, a transfer will be ambiguous (i.e., neither progressive nor regressive) if the concentration curve of a transfer crosses the market income Lorenz curve. We use the following criteria to describe how BIS redistributes income:

1. **Progressive**: BIS concentration curve lies above the Lorenz curve of the reference income (labour income) but below the line of perfect equality (the 45-degree diagonal line). BIS is progressive only in relative terms.
2. **Absolute progressive or 'pro-poor'**: BIS concentration curve is above the line of perfect equality (the 45-degree diagonal line), and the monetary amount received falls as income rises.
3. **Neutral**: BIS concentration curve coincides with the Lorenz curve for the reference (labour) income.
4. **Regressive**: BIS concentration curve lies below the Lorenz curve for the reference income.

## 5 | RESULTS

### 5.1 | Scenario 1—Universal benefit for all individuals between the ages of 18 and 59

As discussed in Section 4, in the first scenario, we allocated BIS amounting to ZAR 595 per month per individual for all South Africans aged between 18 and 59. A universal basic income programme such as BIS under this scenario is comparatively straightforward to implement; individuals receive a fixed transfer regardless of income. From an implementation point of view, the main challenge is to ensure that each person receives the transfer only once. Even though universal BIS distributes the same value of the transfer to everyone, regardless of income, if it is financed through progressive taxation, it can still result in a substantial redistribution of income to the poor (Hanna & Olken, 2018).

Table 2 provides basic descriptive statistics such as the number of households, individuals and recipients of BIS under this scenario, expressed as simple (un-weighted) survey counts and population (extrapolated counts) estimates. The table suggests that BIS will have 23 million beneficiaries under the first scenario, considering both direct and indirect beneficiaries.[13]

[13] Direct beneficiaries are individuals who directly access BIS, whereas indirect beneficiaries are family members of the direct beneficiaries.

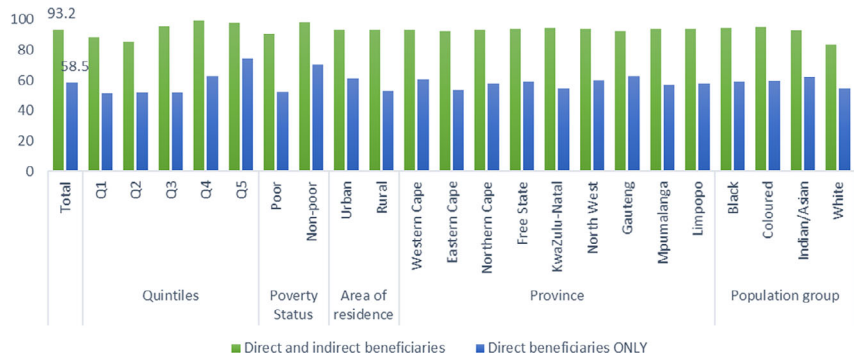



**FIGURE 3** Outreach—Scenario 1.

*Note*: Outreach is the portion of the population in each group that has access to basic income support (BIS) under the scenario. Specifically, outreach is (number of individuals in the specific group [African] who live in a household where at least one member has access to BIS)/(number of individuals in the group) using household size weighted expansion factor.

*Source*: Own calculation using LFS (Q1 2017). [Colour figure can be viewed at wileyonlinelibrary.com]

### 5.1.1 | Outreach (coverage)

Under the first scenario, BIS will have about 59% direct and 93% direct and indirect beneficiaries, respectively (Figure 3). Outreach is the proportion of direct and indirect beneficiaries of BIS in each group (per capita labour income quantiles, area of residence, province, poverty status of the households and population group). Given the nature of BIS under this scenario, universal benefit to those aged between 18 and 59, the outreach of BIS under this assumption is not higher among the poorest quintile of per capita income distribution. This is confirmed by looking at the outreach (coverage) by the poverty status of households; non-poor households have higher access to BIS than poor households. Outreach is highest in Limpopo and among black and coloured South Africans.

### 5.1.2 | Distribution of beneficiaries

Figure 4 presents beneficiaries' incidence, the proportion of direct and indirect beneficiaries in each group. Beneficiaries' incidence is calculated for each per capita quintile, area of residence, province, poverty status and race. The figure shows that 59%, 68%, 29% and 81% of BIS direct beneficiaries would be poor, live in rural areas and Gauteng and would be black South Africans, respectively. Regarding per capita income, 53% of direct beneficiaries belong to the bottom 60% quintiles. Looking at the quintile of income, the majority of beneficiaries belong to the lower quantile of income, the bottom 60, compared to the richest decile. Again, this finding confirms the vulnerability of the unemployed individuals and their households in the country.

Table 3 presents another indicator of targeting accuracy, the Coady–Grosh–Hoddinott (CGH) indicator for the bottom 10%, 20%, 30% and 40% of the per capita labour income distribution for both direct and indirect beneficiaries. The CGH indicator is the share of direct and indirect beneficiaries in the poorest $x$% of the population divided by that share. This indicator is a linear transformation of the results in Figure 4. As expected, BIS under this scenario has even targeted, with a CGH indicator of close to 1.

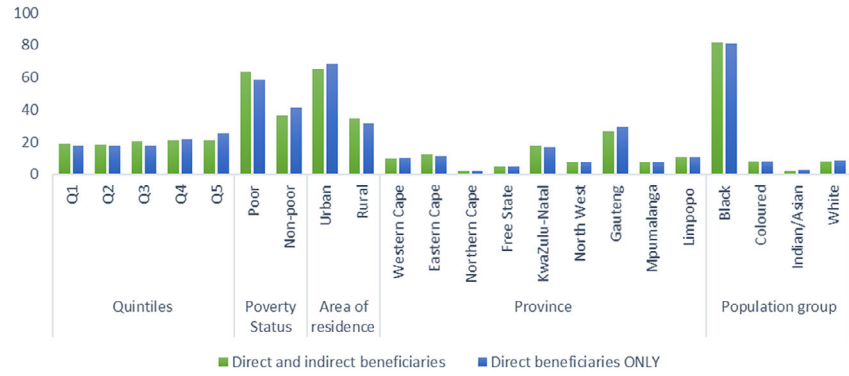



**FIGURE 4** Distribution of beneficiaries—Scenario 1.

*Note*: Beneficiaries' incidence shows the proportion of beneficiaries in each group, that is, beneficiaries' incidence is (number of individuals in the group who live in a household where at least one member receives BIS)/(total number of direct and indirect beneficiaries).

*Source*: Own calculation using LFS (2017). [Colour figure can be viewed at wileyonlinelibrary.com]

**TABLE 3** Coady–Grosh–Hoddinott indicator—Scenario 1.

| | Direct and indirect beneficiaries | | | | Direct beneficiaries ONLY | | | |
|---|---|---|---|---|---|---|---|---|
| | 10% | 20% | 30% | 40% | 10% | 20% | 30% | 40% |
| Universal BIS transfer | 0.95 | 0.95 | 0.95 | 0.93 | 0.91 | 0.88 | 0.88 | 0.88 |

*Note*: CGH indicator is the share of direct and indirect beneficiaries in a population group divided by the share of the population in that group. A programme with even targeting (where every individual received the same transfer) would have CGH indicators of 1.0. The indicator is calculated at the household level, setting as an expansion factor the household expansion factor multiplied by the household size.

Abbreviation: BIS, basic income support.

*Source*: Own calculation using LFS (2017).

### 5.1.3 | Average transfer value

Figure 5 presents the average per capita BIS value for direct and indirect beneficiaries by per capita income quintile, population group, poverty status, province and area of residence. The average transfer is estimated by dividing the sum of BIS transfers received by a group by the number of direct and indirect beneficiaries in that group; for instance, dividing the sum of BIS transfers received by the poor by the number of poor individuals that are benefiting from BIS directly or indirectly.[14] Hence, this indicates the monetary 'importance' of the BIS to direct beneficiaries and to their families. If the per capita benefit level falls with income, it indicates whether BIS has an element of benefit targeting (in addition to beneficiary targeting). This progressivity of the benefit is not observed under this scenario; the average BIS transfer does not decline from the poorer quintiles to the richer ones.

In parallel with the previous observation, the average value of BIS benefit for the whole population is ZAR 373 per capita. However, the average value considering both direct and indirect beneficiaries is higher for non-poor households and households that belong to the top income

[14] Note that the BIS amount is the same for all direct beneficiaries (ZAR 595), the food poverty line in 2021 price.

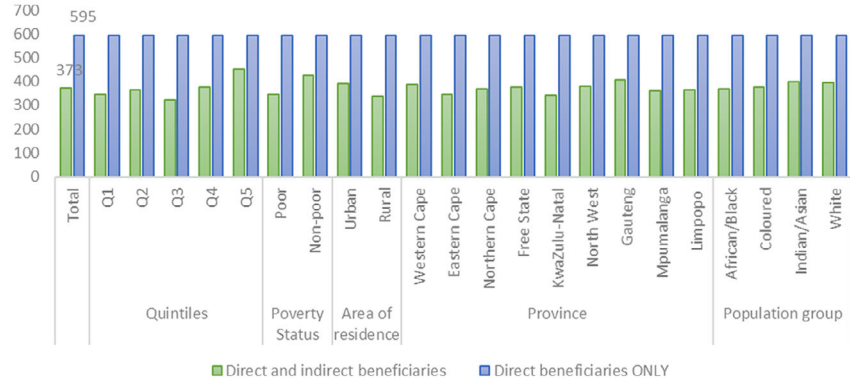



**FIGURE 5** Average transfer value, per capita, beneficiary households of basic income support (BIS)—Scenario 1.

*Note*: Entries are the average per capita BIS transfer received. Calculation excludes households that did not receive the transfer. Sample of households with positive per capita transfer: averages are calculated across this sample, setting as an expansion factor the household expansion factor multiplied by the household size. All household members, recipients or not, are counted as beneficiaries. For each household, per capita average transfer is estimated as (total transfers received)/(household size). Averages in monetary values in ZAR.

*Source*: Own calculation using LFS (2017). [Colour figure can be viewed at wileyonlinelibrary.com]

**TABLE 4** Under-coverage and leakage—Scenario 1.

| | Total poor | | | | |
|---|---|---|---|---|---|
| | Coverage of the poor (1) | Under-coverage (2) | Leakage (% of beneficiaries) (3) | Leakage (benefits) (4) | Targeting differential (5) = (1)–(3) |
| **Direct and indirect beneficiaries** | 90.4 | 9.6 | 36.4 | 41.4 | 54.1 |
| **Direct beneficiaries ONLY** | 52.3 | 47.7 | 41.4 | 41.4 | 10.9 |

*Note*: Under-coverage is the per cent of poor individuals that do not receive BIS. Leakage is the per cent of individuals that receive the transfer and are not poor. Sample of all households: under-coverage and leakage are calculated across this sample, setting as expansion factor the household expansion factor multiplied by the household size. The targeting differential is the difference between the coverage rate and the participation rate for non-poor.

*Source*: Own calculation using LFS (2017).

distribution. This could be because poor households in South Africa tend to include more people than their non-poor counterparts. For instance, in 2015, the poverty headcount ratio among one-person households was about 5% compared to 68% for households with at least seven members (World Bank Group, 2018).

### 5.1.4 | Under-coverage and leakage

Table 4 presents the under-coverage and leakage rate of BIS while the programme targets those between the age of 18 and 59 universally, for direct and indirect beneficiaries. Under-coverage is the percentage of poor individuals that do not receive BIS. Leakage is the percentage of non-poor individuals that receive the BIS transfers. It is important to note that coverage and under-coverage

**TABLE 5** Impact of basic income support (BIS) on poverty and inequality measures—Scenario 1.

| | All households | | | | |
|---|---|---|---|---|---|
| | FGT0 | FGT1 | FGT2 | Gini | Theil index (GE(0)) |
| **Post-BIS transfer indicators** | 0.419 | 0.411 | 0.409 | 0.744 | 9.228 |
| **Indicators without BIS transfer** | 0.468 | 0.430 | 0.419 | 0.813 | 10.253 |

*Note*: The simulated impact is the change in a poverty or inequality indicator due to BIS, assuming that household welfare will diminish by the full value of that transfer. FGT0—poverty headcount index; FGT1—poverty gap index; FGT2—squared poverty gap index.
*Source*: Own calculation using LFS (2017).

depend on the chosen poverty line. Given that we chose to use the lower bound poverty, which is well above the BIS transfer, equivalent to the food poverty line, there is a lower coverage of the poor by definition.

Column 1 of Table 4 presents how many poor people are covered by the programme. 100 minus the coverage rate gives the under-coverage rate (Column 2). Column 3 gives the share of non-poor beneficiaries of BIS under the first scenario. Column 5 indicates the targeting differential (TD) that measures how good or bad the targeting method under the scenario is. A good transfer has a TD close to 100, and a bad transfer has a TD close to −100. The BIS TD in this scenario is about 54%, suggesting a higher exclusion rate.

### 5.1.5 | Possible effects on poverty and inequality

Table 5 sheds light on the possible contribution of BIS to poverty and inequality if it targets all individuals between the age of 18 and 59. It presents the simulated impact of the programme on FGT measures of poverty, discussed in Section 4.1, namely, headcount, poverty gap and poverty severity indexes and inequality measured by the Gini coefficient. The estimations assume that in the absence of the BIS, a beneficiary household's per capita labour income falls by the transfer's value, ZAR 595. Table 3 suggests that BIS under this scenario reduces inequality and poverty. Moreover, BIS under this scenario decreases poverty rates after the BIS transfer, regardless of the poverty measure used. For example, the headcount rate suggests a decline of 5 percentage points. Similarly, the Gini coefficient would have been 7% higher without the BIS transfer.[15]

### 5.1.6 | Progressivity and pro-poorness

As discussed in the methodology section, the progressivity of BIS is assessed using concentration curves of the benefit distributions. Specifically, the concentration indices are compared with the market income Gini index to classify the expenditure items into (i) progressive and pro-poor, (ii) progressive but not pro-poor and (iii) regressive (neither progressive nor pro-poor). Figure 6 summarizes the progressivity and pro-poorness of the BIS under the first scenario. As explained in

[15] Our Gini coefficients are higher than the national estimates because we are using only labour income.

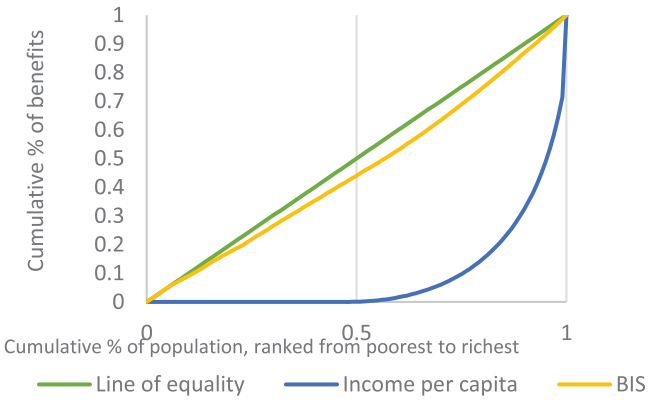



**FIGURE 6** Concentration curves—Scenario 1.
*Source*: Own calculation using LFS (2017). [Colour figure can be viewed at wileyonlinelibrary.com]

Figure 2, one can compare labour income and BIS transfer curves to assess the progressivity of a transfer. When the concentration curve for a transfer lies above the Lorenz curve for the population receiving the transfer, then the benefit has a more equal distribution than the country's income does. Hence, the benefit is progressive.

On the other hand, if the concentration curve lies below the Lorenz curve, then as a proportion of total income, rich people gain more from the transfer than poor people do, and hence the transfer is regressive. Figure 6 suggests that universal BIS transfer would be progressive. On the other hand, the concentration curve for BIS lies below the 45-degree line, suggesting the poorest per cent of the population gains less than the transfer's budget, so the benefit is not pro-poor.

## 5.2 | Scenario 2—BIS unemployment benefit: for all individuals between the ages of 18 and 59 and unemployed

In the second scenario, we allocated the BIS amounting to ZAR 595 per month per individual for all South Africans that are aged between 18 and 59 and who were unemployed in 2017. Most developed countries have unemployment benefit programmes to protect workers against major income losses during spells of unemployment. By providing income to unemployed workers to meet basic consumption needs, unemployment benefits aim to protect workers from depleting their assets or accepting jobs below their qualifications (Moffitt, 2014). However, if unemployment benefits are too generous both in terms of amount and duration, these can lengthen unemployment and raise the unemployment rate. Thus, the policy challenge is protecting workers while minimizing undesirable side effects in the short and long run. It is important to note that unemployment benefit programmes vary from country to country based on eligibility requirements, benefit levels, and benefit duration. These details can affect consumption, poverty, duration of unemployment and job-seeking differently. For simplicity, we consider this unemployment benefit for all individuals between the ages of 18 and 59.

Table 6 presents the basic descriptive statistics such as the number of households, individuals and recipients of BIS under this scenario, expressed as simple (un-weighted) survey counts and population (extrapolated counts) estimates. The table suggests that under this scenario, BIS will have 4.5 million beneficiaries, considering both direct and indirect beneficiaries.

**TABLE 6** Sample and population sizes—Scenario 2.

| | Sample size[a] | | | Population[b] | | |
|---|---|---|---|---|---|---|
| | Households | Individuals | Recipients | Households | Individuals | Recipients |
| All observations | 17,783 | 47,376 | | 14,630,764 | 39,479,946 | |
| BIS to individuals aged 18–59 and unemployed | 4109 | 14,405 | 5035 | 3553,499 | 12,531,979 | 4464,019 |

Abbreviation: BIS, basic income support.

[a]The sample size columns show the number of households, individuals and recipients of BIS in the survey.

[b]The population columns show the number of households, individuals and recipients of BIS, expanded to the population using expansion factors.

*Source*: Own calculation using LFS (2017).

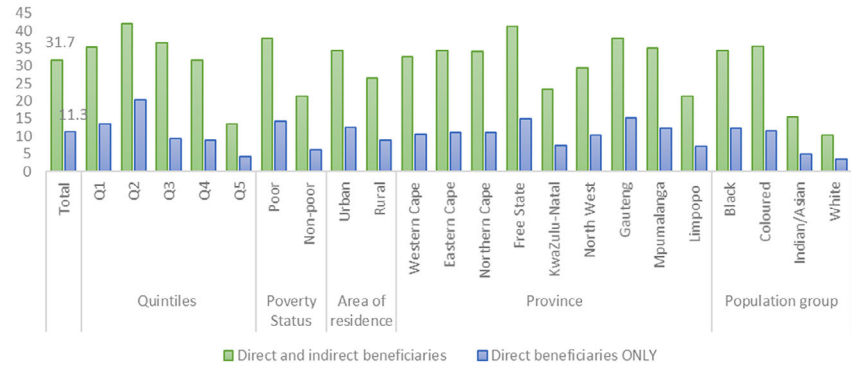



**FIGURE 7** Outreach—Scenario 2.

*Note*: Outreach is the portion of each group's population that has access to basic income support (BIS) under the scenario. Specifically, outreach is (number of individuals in the specific group [African] who live in a household where at least one member has access to BIS)/(number of individuals in the group) using household size weighted expansion factor.

*Source*: Own calculation using LFS (Q1 2017). [Colour figure can be viewed at wileyonlinelibrary.com]

### 5.2.1 | Coverage

Under this scenario in Figure 7, BIS will have about 11% direct and 32% direct and indirect beneficiaries, respectively.[16] The coverage of BIS under this assumption is relatively higher among the poorest quintile of per capita income distribution. We also note that the coverage is higher among poor households (38%) than non-poor households (21%), considering both direct and indirect beneficiaries. Coverage is also higher among coloured and black households. This is in line with the empirical evidence that suggests that poverty levels are highest among black South Africans and the unemployed (World Bank Group, 2018).

### 5.2.2 | Distribution of beneficiaries

Figure 8 shows the beneficiaries' incidence under the second scenario, where unemployed individuals between 18 and 59 years old are assumed to benefit from BIS. The figure suggests that 76% of the direct beneficiaries belong to poor households, 73% live in urban areas and the majority (87%) are from black households.

The CGH indicator for the bottom 10%, 20%, 30% and 40% of the per capita labour income distribution for both direct and indirect beneficiaries also confirms that BIS under this scenario is more pro-poor than universal BIS (see Table 7).

### 5.2.3 | Average transfer value

Figure 9 shows the average per capita BIS value for direct and indirect beneficiaries by per capita income quintile, population group, poverty status, province and area of residence under the sec-

[16] Please note that only the unemployed between the ages of 18 and 59 years would benefit.

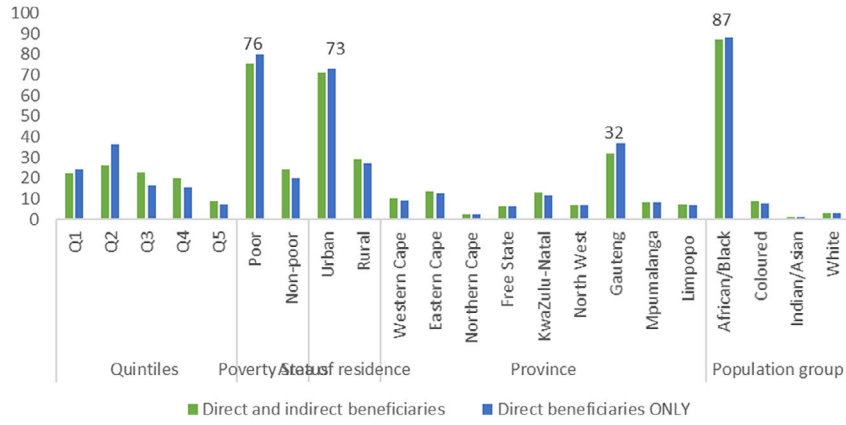



**FIGURE 8** Distribution of beneficiaries—Scenario 2.

*Note*: Beneficiaries' incidence shows the proportion of beneficiaries in each group, that is, beneficiaries' incidence is (number of individuals in the group who live in a household where at least one member receives basic income support [BIS])/(total number of direct and indirect beneficiaries).

*Source*: Own calculation using LFS (2017). [Colour figure can be viewed at wileyonlinelibrary.com]

**TABLE 7** Coady–Grosh–Hoddinott indicator—Scenario 2.

| | Direct and indirect beneficiaries | | | | Direct beneficiaries ONLY | | | |
|---|---|---|---|---|---|---|---|---|
| | 10% | 20% | 30% | 40% | 10% | 20% | 30% | 40% |
| BIS transfer for the unemployed | 1.26 | 1.11 | 1.16 | 1.22 | 1.30 | 1.21 | 1.38 | 1.51 |

*Note*: CGH indicator is the share of direct and indirect beneficiaries in a population group divided by the share of the population in that group. Larger numbers indicate that a programme is more progressive. A programme with even targeting (where every individual received the same transfer) would have CGH indicators of 1.0. The indicator is calculated at the household level, setting as expansion factor the household expansion factor multiplied by the household size.

Abbreviation: BIS, basic income support.

*Source*: Own calculation using LFS (2017).

ond scenario. The average transfer value indicates the monetary 'importance' of the BIS to direct beneficiaries and to their families. As discussed previously, if the per capita benefit level falls with income, it indicates whether BIS has an element of benefit targeting (in addition to beneficiary targeting). This progressivity of the benefit is clearly achieved under this scenario: Average BIS transfer declines from the poorer quintiles to the richer ones. Similarly, the average value for both direct and indirect beneficiaries is higher for poor households and households that are more vulnerable to poverty, black households and households that reside in poor provinces.

### 5.2.4 | Under-coverage and leakage

Table 8 shows BIS under-coverage and leakage rates for direct and indirect beneficiaries under the second scenario. Like in Table 4, Column 1 of Table 8 presents how many poor people are covered by the programme. 100 minus the coverage rate gives the under-coverage rate (Column 2). Column 3 gives the share of non-poor beneficiaries of BIS under this scenario. Column 5 indicates the TD that measures how good or bad the targeting method under the scenario is. The BIS TD

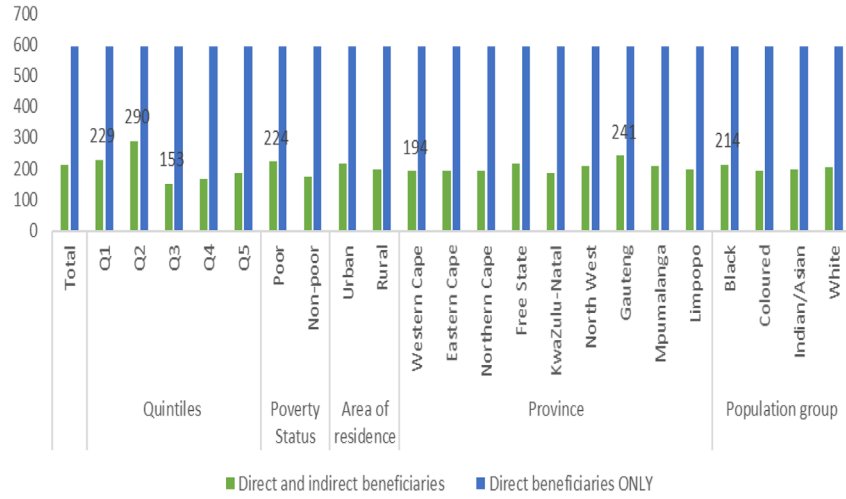



**FIGURE 9** Average transfer value, per capita, beneficiary households of basic income support (BIS)—Scenario 2. Entries are the average per capita BIS transfer received. Calculation excludes households that did not receive the transfer. Sample of households with positive per capita transfer. Averages are calculated across this sample, setting as an expansion factor the household expansion factor multiplied by the household size. All household members, recipients or not, are counted as beneficiaries. For each household, per capita average transfer is estimated as (total transfers received)/(household size). Averages in monetary values in ZAR.
*Source*: Own calculation using LFS (2017). [Colour figure can be viewed at wileyonlinelibrary.com]

**TABLE 8** Under-coverage and leakage—Scenario 2.

| | Total poor | | | | |
|---|---|---|---|---|---|
| | Coverage of the poor (1) | Under-coverage (2) | Leakage (% of beneficiaries) (3) | Leakage (benefits) (4) | Targeting differential (5) = (1)–(3) |
| **Direct and indirect beneficiaries** | 37.7 | 62.3 | 24.4 | 20.1 | 13.3 |
| **Direct beneficiaries ONLY** | 14.2 | 85.8 | 20.1 | 20.1 | −5.9 |

*Note*: Under-coverage is the per cent of poor individuals that do not receive BIS. Leakage is the per cent of individuals that receive transfer and are not poor. Sample of all households: under-coverage and leakage are calculated across this sample, setting as expansion factor the household expansion factor multiplied by the household size. The targeting differential is the difference between the coverage rate and the participation rate for non-poor.
*Source*: Own calculation using LFS (2017).

in this scenario is about 13%, suggesting a higher exclusion rate than in the first scenario (universal benefit to all ages between 18 and 59). The result suggests that using only age groups and unemployment status is insufficient to target poor South Africans for such transfer programmes.

### 5.2.5 | Possible effects on poverty and inequality

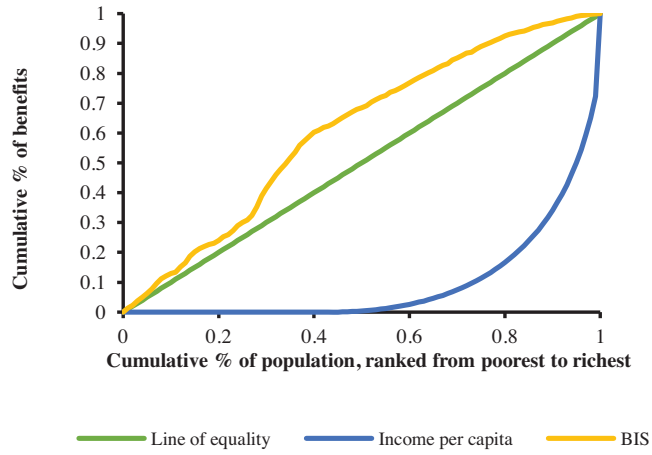
Table 9 presents BIS simulated contribution to reducing poverty and inequality if it targets all individuals between the ages of 18 and 59 who were unemployed in 2017. In line with our previous

**TABLE 9** Impact of basic income support (BIS) on poverty and inequality measures—Scenario 2.

| | All households | | | | |
|---|---|---|---|---|---|
| | FGT0 | FGT1 | FGT2 | Gini | Theil index (GE(0)) |
| Post-transfer indicators | 0.467 | 0.429 | 0.419 | 0.767 | 9.292 |
| **Indicators without BIS transfer** | 0.468 | 0.430 | 0.419 | 0.813 | 9.579 |

*Note*: The simulated impact is the change in a poverty or inequality indicator due to BIS, assuming that household welfare will diminish by the full value of that transfer. FGT0—poverty headcount index; FGT1—poverty gap index; FGT2—squared poverty gap index.
*Source*: Own calculation using LFS (2017).

**FIGURE 10** Concentration curves—Scenario 2.
*Source*: Own calculation using LFS (2017). [Colour figure can be viewed at wileyonlinelibrary.com]




observation, Table 9 suggests that BIS under this scenario reduces poverty slightly, regardless of the poverty measure used. The headcount rate declines by 0.1 percentage points compared to around 5 percentage points in Scenario 1. Similarly, the Gini coefficient would have been about 5 percentage points higher without BIS transfer under this scenario. For comparison, the decline in Gini coefficient under Scenario 1 is around 7 percentage points.

### 5.2.6 | Progressivity and pro-poorness

Figure 10 presents the progressivity and pro-poorness of the BIS under the second scenario. The concentration curve for BIS transfer lies above the Lorenz curve for the population receiving the transfer and above the line of equality (the 45-degree line), suggesting that BIS benefit under the assumption of Scenario 2 is both progressive and pro-poor.

## 5.3 | Scenario 3—Mean tested benefit for individuals between the ages of 18 and 59, unemployed and living in extremely poor households

In the last scenario, we allocated the BIS amounting to ZAR 595 per month per individual for South Africans between the ages of 18 and 59 who were unemployed and lived in extremely poor

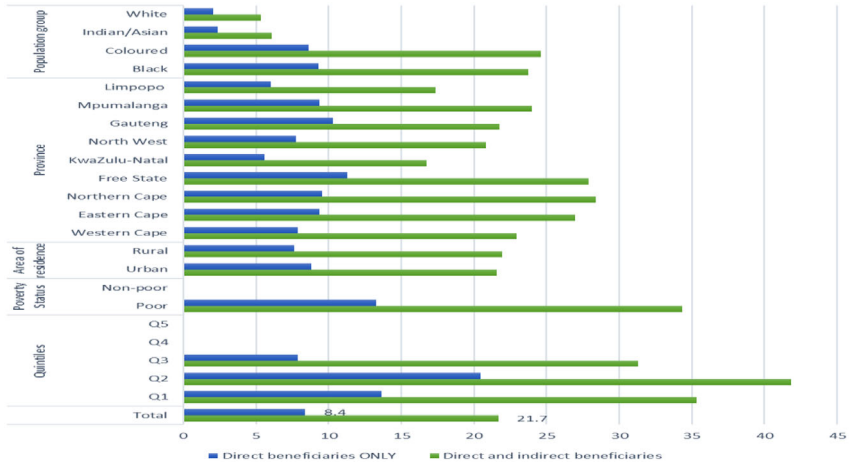



**FIGURE 11** Outreach—Scenario 3.

*Note*: Outreach is the portion of the population in each group that has access to basic income support (BIS) under the scenario. Specifically, outreach is (number of individuals in the specific group [African] who live in a household where at least one member has access to BIS)/(number of individuals in the group) using household size weighted expansion factor.

*Source*: Own calculation using LFS (Q1 2017). [Colour figure can be viewed at wileyonlinelibrary.com]

households (defined by the food poverty line of the country). The argument behind targeting in this scenario is to increase BIS efficiency by increasing the benefit that the extreme poor can get. In countries such as South Africa, where poverty and inequality are extensive and public resources are limited, the case for targeting is attractive. The motivation for targeting arises from three features of the policy environment, namely, the desire of public policy to maximize the reduction of poverty and inequality, budget constraints and the opportunity cost of the trade-off between the number of beneficiaries covered by the intervention and the level of transfers (Coady, Grosh & Hoddinott, 2004). However, distinguishing who is poor and who is non-poor is not an easy task. In fact, there are considerable costs to acquiring information about who is needy, and even then, such information is rarely perfect.

In this scenario, we used the food poverty line of the country and the unemployment status of individuals to identify those that are destitute. Table 10 provides basic descriptive statistics such as the number of households, individuals and recipients of BIS under this scenario, expressed as simple (un-weighted) survey counts and population (extrapolated counts) estimates. The table suggests that BIS, under this scenario, will have 3.3 million beneficiaries, considering both direct and indirect beneficiaries. The number of beneficiaries is the smallest of all the scenarios because of the targeting.

### 5.3.1 | Outreach (coverage)

Under this scenario in Figure 11, BIS will have the least coverage: 8.4% direct and 22% direct and indirect beneficiaries. The outreach of BIS is higher among the poorest quintile of per capita income distribution. Indeed, the BIS transfer under this scenario goes only to those whose per capita earnings belong to the bottom 60%. We also note that the outreach (coverage) for the non-

**TABLE 10** Sample and population sizes—Scenario 3.

| | Sample size[a] | | | Population[b] | | |
|---|---|---|---|---|---|---|
| | Households | Individuals | Recipients | Households | Individuals | Recipients |
| All observations | 17,783 | 47,376 | | 14,630,764 | 39,479,946 | |
| Mean tested BIS to individuals aged 18–59, unemployed and living in extreme poor households | 3082 | 10,293 | 3859 | 2569,829 | 8563,588 | 3309,555 |

Abbreviation: BIS, basic income support.

[a]The sample size columns show the number of households, individuals and recipients of BIS in the survey.

[b]The population columns show the number of households, individuals and recipients of BIS, expanded to the population using expansion factors.

*Source*: Own calculation using LFS (2017).

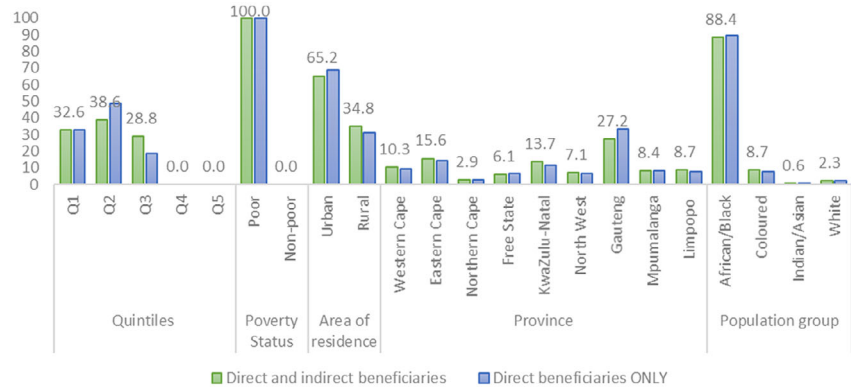



**FIGURE 12** Distribution of beneficiaries—Scenario 3.

*Note*: Beneficiaries' incidence shows the proportion of beneficiaries in each group, that is, beneficiaries' incidence is (number of individuals in the group who live in a household where at least one member receives BIS)/(total number of direct and indirect beneficiaries).

*Source*: Own calculation using LFS (2017). [Colour figure can be viewed at wileyonlinelibrary.com]

poor is 0%. Looking at other characteristics, coverage is the highest among black and coloured individuals, those who reside in rural areas and in poor provinces such as Free State, Northern and Eastern Cape.

### 5.3.2 | Distribution of beneficiaries

Figure 12 shows beneficiaries' incidence, the proportion of direct and indirect beneficiaries in each group, for the mean tested scenario where we target the extremely poor and the unemployed. Again, beneficiaries' incidence is calculated for each per capita quintile, area of residence, province, poverty status and race. Considering both direct and indirect beneficiaries, 100%, 65%, 27% and 88% of BIS beneficiaries would be poor, live in urban areas and Gauteng and be black South Africans, respectively. Again, looking at the quintiles of per capita income, all beneficiaries belong to the bottom three quantiles. This finding suggests that combining unemployment and poverty status might be a practical criterion for identifying the country's most vulnerable individuals.

The CGH indicator for the bottom 10%, 20%, 30% and 40% of the per capita labour income distribution for both direct and indirect beneficiaries is also greater than 1, suggesting BIS under this scenario is more progressive (see Table 11).

### 5.3.3 | Average transfer value

Figure 13 shows the average per capita BIS value for direct and indirect beneficiaries by per capita income quintile, population group, poverty status, province and area of residence. The average transfer value indicates the monetary 'importance' of the BIS to direct beneficiaries and to their households. The average value of BIS benefits is ZAR 229 for direct and indirect beneficiaries and ZAR 595 for direct beneficiaries. The value of the average transfer value also declines with income;

**TABLE 11** Coady–Grosh–Hoddinott indicator—Scenario 3.

| | Direct and indirect beneficiaries | | | | Direct beneficiaries ONLY | | | |
|---|---|---|---|---|---|---|---|---|
| | 10% | 20% | 30% | 40% | 10% | 20% | 30% | 40% |
| Mean tested BIS to individuals aged 18–59, unemployed and live in extreme poor households | 1.84 | 1.63 | 1.69 | 1.78 | 1.76 | 1.63 | 1.86 | 2.03 |

*Note*: CGH indicator is the share of direct and indirect beneficiaries in a population group divided by the share of the population in that group. Larger numbers indicate that a programme is more progressive. Larger numbers indicate that a programme is more progressive. A programme with even targeting (where every individual received the same transfer) would have CGH indicators of 1.0. The indicator is calculated at the household level, setting as expansion factor the household expansion factor multiplied by the household size.
Abbreviation: BIS, basic income support.
*Source*: Own calculation using LFS (2017).

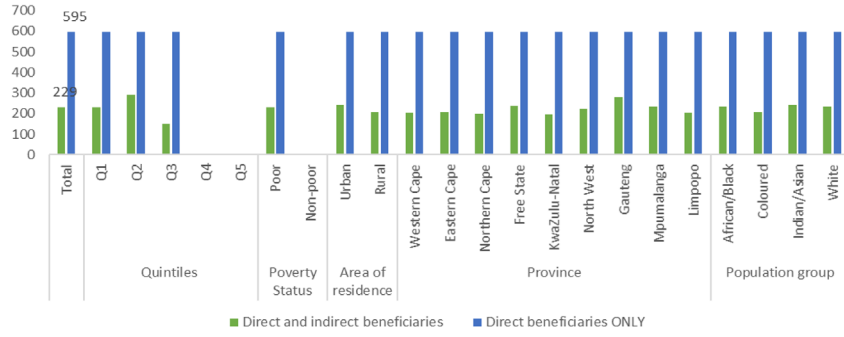



**FIGURE 13** Average transfer value, per capita, beneficiary households of basic income support (BIS)—Scenario 3.
*Note*: Entries are the average per capita BIS transfer received. Calculation excludes households that did not receive the transfer. Sample of households with positive per capita transfer: averages are calculated across this sample, setting as expansion factor the household expansion factor multiplied by the household size. All household members, recipients or not, are counted as beneficiaries. For each household, per capita average transfer is estimated as (total transfers received)/(household size). Averages in monetary values in ZAR.
*Source*: Own calculation using LFS (2017). [Colour figure can be viewed at wileyonlinelibrary.com]

the average BIS transfer is the highest for the two poorest quintiles compared to the third quantile, suggesting that the BIS transfer is more important to the poorest. As expected, the average value for both direct and indirect beneficiaries is higher for the country's vulnerable, black individuals and individuals that live in Free State, Gauteng, and the Eastern Cape.

### 5.3.4 | Under-coverage and leakage

Table 12 presents the under-coverage and leakage rate of BIS under the third scenario. Using unemployment and the extreme poverty line reduces the leakage to 0%. However, it is important to note that using these criteria still has a high exclusion error; the coverage of the poor using the upper bound poverty line is only 34%. This result suggests that a more refined targeting strategy, in addition to unemployment and extreme poverty, is required to improve coverage for the poor.

**TABLE 12** Under-coverage and leakage—Scenario 3.

| | Total poor | | | | |
|---|---|---|---|---|---|
| | Coverage of the poor (1) | Under-coverage (2) | Leakage (% of beneficiaries) (3) | Leakage (benefits) (4) | Targeting differential (5) = (1)–(3) |
| **Direct and indirect beneficiaries** | 34.4 | 65.6 | 0.0 | 0.0 | 34.4 |
| **Direct beneficiaries ONLY** | 13.3 | 86.7 | 0.0 | 0.0 | 13.3 |

*Note*: Under-coverage is the per cent of poor individuals that do not receive BIS. Leakage is the per cent of individuals that receive transfer and are not poor. Sample of all households: under-coverage and leakage are calculated across this sample, setting as expansion factor the household expansion factor multiplied by the household size. The targeting differential is the difference between the coverage rate and the participation rate for non-poor.
*Source*: Own calculation using LFS (2017).

**TABLE 13** Impact of basic income support (BIS) on poverty and inequality measures—Scenario 3.

| | All households | | | | |
|---|---|---|---|---|---|
| | FGT0 | FGT1 | FGT2 | Gini | Theil index (GE(0)) |
| **Post-BIS transfer indicators** | 0.420 | 0.410 | 0.409 | 0.748 | 9.292 |
| **Indicators without BIS transfer** | 0.468 | 0.430 | 0.419 | 0.813 | 9.574 |

*Note*: The simulated impact is the change in a poverty or inequality indicator due to BIS, assuming that household welfare will diminish by the full value of that transfer. FGT0—poverty headcount index; FGT1—poverty gap index; FGT2—squared poverty gap index.
Abbreviation: BIS, basic income support.
*Source*: Own calculation using LFS (2017).

### 5.3.5 | Possible effects on poverty and inequality

Table 13 presents the possible contribution of BIS to poverty and inequality if it targets the unemployed who are between the ages of 18 and 59 and live in extremely poor households. Results suggest that BIS under this scenario reduces inequality, poverty gap and poverty severity and poverty headcount. The headcount rate, poverty gap and poverty severity index declined by 4.8, 2 and 1 percentage points, respectively. Likewise, the Gini coefficient would have been 7 percentage points higher without BIS transfer. Compared with the previous scenarios, the reduction in poverty and inequality under this scenario is close to the universal BIS. However, the universal BIS shows the highest decline in poverty headcount, poverty severity index and Gini coefficient.

### 5.3.6 | Progressivity and pro-poorness

Figure 14 summarizes the progressivity and pro-poorness of the BIS under the third scenario. As discussed in Figure 2, we compare labour income and BIS transfer curves to assess the progressivity of BIS. The concentration curve for a BIS transfer lies above the Lorenz curve for the population receiving the transfer, suggesting the BIS benefit under this scenario has a more equal distribution than the country's income does. Hence, the benefit is progressive. In the same vein,

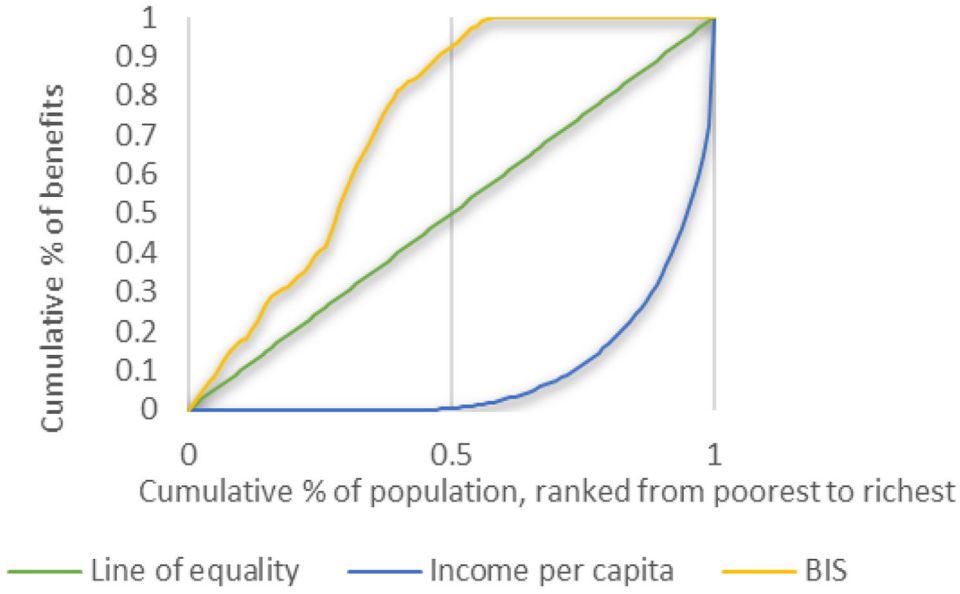



**FIGURE 14** Concentration curves—Scenario 3.
*Source*: Own calculation using LFS (2017). [Colour figure can be viewed at wileyonlinelibrary.com]

the concentration curve for BIS lies above the 45-degree line, suggesting the poorest per cent of the population gains more than the transfer's budget, so the benefit is pro-poor.

## 6 | CONCLUSION

The study investigates whether implementing BIS has a positive welfare effect on poverty and inequality reduction in South Africa using a benefit incidence analysis and the CEQ methodology. The analysis uses the 2017 LFS combined with income tax rate data from SARS. Given that the BIS has not yet been implemented, the study simulates the possible effect of the grant under three scenarios.

In the first scenario, we consider universal income support for those aged between 18 and 59. In the second scenario, we allocate the benefit to those aged between 18 and 59 who are unemployed. Lastly, in the third scenario, we allocate BIS for unemployed individuals that live in extremely poor households (defined by the food poverty line of the country in 2021) who are between the ages of 18 and 59. Results show that BIS clearly has the potential to reduce poverty and inequality in the country. However, the effect varies based on the targeting mechanism used to identify beneficiaries. Targeting the unemployed and the impoverished makes BIS more pro-poor and progressive and reduces the leakage of the benefit to the non-poor. However, although more costly, universal BIS has the highest potential to reduce poverty and overall inequality. From a policy perspective, the government can better target its resources to the poor and disadvantaged groups by focusing on the vulnerable population segment. However, the implementation mechanism to enforce this targeting needs to be in place. Finding the right criteria to identify the poor and proper implementation of the programmes largely determines the programme's success in improving the welfare of the poor.

It is important to acknowledge the limitations of this study. The results only illustrate how BIS would affect income distribution under various assumptions without establishing any causal relationships. Data limitations prevented us from assessing how the new programme would interact with existing programmes. Additionally, we did not account for government spending on in-kind services like education and health care or changes in tax rates to finance BIS. It is worth noting that public spending in social services goes beyond income redistribution, with a focus on improving individual capacity and social well-being and creating an inclusive society. In future studies, it would be beneficial to include other transfers, explore different welfare indicators and examine alternative tax structures.

## ACKNOWLEDGEMENTS

We acknowledge comments received from the Economic Research Southern Africa (ERSA) Working Paper Series. An earlier version of the paper is available on the ERSA Working Paper Series No. 887.

## ORCID

*Carolyn Chisadza* https://orcid.org/0000-0002-9340-210X
*Margaret Chitiga-Mabugu* https://orcid.org/0000-0001-9894-0452
*Ramos Emmanuel Mabugu* https://orcid.org/0000-0001-8405-3051
*Nicky Nicholls* https://orcid.org/0000-0003-2851-8824
*Kehinde Oluwaseun Omotoso* https://orcid.org/0000-0003-1826-5990
*Eleni Yitbarek* https://orcid.org/0000-0002-4549-4740

## REFERENCES

Banerjee, A., Faye, M., Krueger, A., Niehaus, P., & Suri, T. (2020). *Effects of a Universal basic income during the pandemic* (Innovations for poverty action working paper). University of California. https://poverty-action.org/publication/effects-universal-basic-income-during-pandemic

Banerjee, A., Hanna, R., Kreindler, G., & Olken, B. A. (2017). Debunking the stereotype of the lazy welfare recipient: Evidence from cash transfer programs. *The World Bank Research Observer*, *32*(2), 155–184. https://doi.org/10.1093/wbro/lkx002

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 of the role of design and implementation features* (Technical report). London: Overseas Development Institute.

Bhorat, H., & Kohler, T. (2020). *COVID-19, social protection, and the labour market in South Africa: Are social grants being targeted at the most vulnerable?* (Development policy research unit working paper 202008). University of Cape Town, Development Policy Research Unit.

Case, A., & Deaton, A. (1998). Large cash transfers to the elderly in South Africa. *The Economic Journal*, *108*(450), 1330–1361.

Coady, D., Grosh, M., & Hoddinott, J. (2004). *Targeting of Transfers in Developing Countries: Review of Lessons and Experience*. The World Bank. https://doi.org/10.1596/0-8213-5769-7

Cowling, N. (2024). *Number of people living in extreme poverty in South Africa 2016–2030*. Statista. https://www.statista.com/statistics/1263290/number-of-people-living-in-extreme-poverty-in-south-africa/

Cury, S., Pedrozo, E., & Coelho, A. M. (2016). Cash transfer policies, taxation and the fall in inequality in Brazil an integrated microsimulation-CGE analysis. *International Journal of Microsimulation*, *9*(1), 55–85.

Davala, S. (2023). Pilots, Evidence, and Politics: The Basic Income Debate in India In M., Torry (Eds.), *The Palgrave International Handbook of Basic Income. Exploring the Basic Income Guarantee*. (pp. 397–411. Cham. https://doi.org/10.1007/978-3-031-41001-7_20

Debowicz, D., & Golan, J. (2014). The impact of *Oportunidades* on human capital and income distribution in Mexico: A top-down/bottom-up approach. *Journal of Policy Modeling*, *36*(1), 24–42. https://doi.org/10.1016/j.jpolmod.2013.10.014

Dikoko, V., & Patel, L. (2023). *Social grants and livelihoods: An analysis of NIDS waves 1 and 5 (2008 and 2017) and NIDS-CRAM wave 1 and wave 5 (2020-2021)*. Centre for Social Development in Africa, University of Johannesburg. https://www.uj.ac.za/faculties/humanities/sarchi-welsocdev/

Duclos, J.-Y., & Araar, A. (2006). *Poverty and equity: Measurement, policy and estimation with DAD*. Springer Nature Link. 10.1007/0-387-33318-5

Duflo, E. (2000). Child health and household resources in South Africa: Evidence from the old age pension program. *American Economic Review*, *90*(2), 393–398.

Duflo, E. (2003). Grandmothers and granddaughters: Old-age pensions and intrahousehold allocation in South Africa. *The World Bank Economic Review*, *17*(1), 1–25.

Enami, A., Lustig, N., & Taqdiri, A. (2019). Fiscal policy, inequality, and poverty in Iran: Assessing the impact and effectiveness of taxes and transfers. *Middle East Development Journal*, *11*(1), 49–74.

Fabrizio, S., Fruttero, A., Gurara, D., Kolovich, L., Malta, V., Tavares, M. M., & Tchelishvili, N. (2020). *Women in the labor force: The role of fiscal policies*. Staff Discussion Notes 2020(003), IMF. https://doi.org/10.5089/9781513529134.006

Ferro, A., & Kassouf, A. L. (2010). The impact of conditional cash transfer programs on household work decisions in Brazil. *Research in Labour Economics*, *31*(2011), 193. 10.1108/S0147-9121(2010)0000031010

Foster, J., Greer, J., & Thorbecke, E. (1984). A class of decomposable poverty measures. *Econometrica*, *52*(3), 761–766.

GHS. (2021). *General household survey. Statistics South Africa statistical release P0318*. https://www.statssa.gov.za/publications/P0318/P03182021.pdf

Goodur, S. (2008). *Differing provincial patterns in access to welfare grants in South Africa: A household perspective using the 2006 general household survey*. University of the Western Cape.

Granlund, S., & Hochfeld, T. (2019). 'That Child Support Grant Gives Me Powers'—Exploring social and relational aspects of cash transfers in South Africa in times of livelihood change. *The Journal of Development Studies*, *56*(6), 1230–1244. 10.1080/00220388.2019.1650170

Haarmann, C., Haarmann, D., & Nattrass, N. (2023). The Namibian basic income grant pilot. In M. Torry (Eds.), *The Palgrave International Handbook of Basic Income. Exploring the Basic Income Guarantee* (pp. 381–395). Palgrave Macmillan Cham. https://doi.org/10.1007/978-3-031-41001-7_19

Hanna, R., & Olken, B. A. (2018). Universal basic incomes versus targeted transfers: Anti-poverty programs in developing countries. *Journal of Economic Perspectives*, *32*(4), 201–226.

Higgins, S., & Lustig, N. (2016). Can a poverty-reducing and progressive tax and transfer system hurt the poor? *Journal of Development Economics*, *122*, 63–75. https://doi.org/10.1016/j.jdeveco.2016.04.001

Hill, R. V., & Tsehaye, E. (2018). *Growth, safety nets and poverty assessing progress in Ethiopia from 1996 to 2011*. Policy Research Working Paper No. 8380. World Bank, Washington, DC. http://hdl.handle.net/10986/29560. License: CC BY 3.0 IGO.

Hirvonen, K., Mascagni, G., & Roelen, K. (2018). Linking taxation and social protection: Evidence on redistribution and poverty reduction in Ethiopia. *International Social Security Review*, *71*(1), 3–24. https://doi.org/10.1111/issr.12159

Inchauste, G., Lustig, N., Maboshe, M., Purfield, C., & Woolard, I. (2015). *The distributional impact of fiscal policy in South Africa*. Policy Research Working Paper No. WPS7194. World Bank, Washington, DC. https://documents1.worldbank.org/curated/en/502441468299632287/pdf/WPS7194.pdf

Kerr, A., & Wittenberg, M. (2019). *A guide to version 3.3 of the post-apartheid labour market series* (Working paper). DataFirst: University of Cape Town.

Khosa, P., & Kaseke, E. (2017). The utilisation of the child support grant by caregivers: The case of Ba-Phalaborwa municipality in Limpopo Province. *Social work*, *53*(3), 356–367.

Lustig, N. (2018). *Commitment to equity handbook—estimating the impact of fiscal policy on inequality and poverty*. Washington: iBrookings Institution Press. https://muse.jhu.edu/book/61437

Lustig, N., & Higgins, S. (2012). *Fiscal incidence, fiscal mobility and the poor: A new approach*. Working papers 1202. Tulane University, Department of Economics.

Moffitt, R. (2014). *Unemployment benefits and unemployment*. IZA World of Labor, Institute for the Study of Labor (IZA), Bonn. https://hdl.handle.net/10419/125238

Neves, D., Samson, M., Niekerk, I., Hlatshwayo, S., & Toit, A. (2009). The use and effectiveness of social grants in South Africa. Institute for Poverty, Land and Agrarian Studies (PLAAS) and Economic Policy Research Institute (EPRI). https://api.semanticscholar.org/CorpusID:182790372 https://www.wahenga.net/node/1868

QFLS. (2022). *Quarterly labour force survey: Quarter 1 2022. Statistics South Africa statistical release P0211.*. https://www.statssa.gov.za/publications/P0211/P02111stQuarter2022.pdf

Ravallion, M. (2005). A poverty-inequality trade-off? *The Journal of Economic Inequality*, *3*(2), 169–181.

Salehi-Isfahani, D., & Mostafavi, M H. (2018). Cash transfers and labor supply: Evidence from a large-scale program in Iran. *Journal of Development Economics*, *135*, 349–67. https://doi.org/10.2139/ssrn.2896702

Samson, M., Lee, U., Ndlebe, A., Mac Quene, K., van Niekerk, I., Gandhi, V., Harigaya, T., & Abrahams, C. (2004). *The social and economic impact of South Africa's social security system* (Final report executive summary). Economics and Financed Directorate, Department of Social Development, Economic Policy Research Unit. https://sarpn.org/documents/d0001041/P1154-sampsondsd_Sept2004.pdf

Satumba, T., Bayat, A., & Mohamed, S. (2017). The impact of social grants on poverty reduction in South Africa. *Journal of Economics*, *8*(1), 33–49.

Statistics S A. (2019). *Inequality trends in South Africa: A multidimensional diagnostic of inequality*. Statistics South Africa report no.03-10-19. University of Cape Town. https://www.statssa.gov.za/publications/Report-03-10-19/Report-03-10-192017.pdf

Tiberti, L., Maisonnave, H., Chitiga, M., & Mabugu, R. (2018). Reforming grants to tackle child poverty: An integrated macro-micro approach. *World Development*, *112*, 272–281.

Van den Heever, A., Chitiga-Mabugu, M., Devereux, S., Leibbrandt, M., Sachs, M., van Heerden, J. H., & Wright, G. C. (2021). Expert Panel on Basic Income Support FINAL REPORT: Report into the appropriateness and feasibility of a system of Basic Income Support for South Africa. International Labour Orgaanisation Technical Report for the Department of Social Development and the South African Government. 10.13140/RG.2.2.10281.36960

Van de Walle, D. (1998). Assessing the welfare impacts of public spending. *World Development*, *26*(3), 365–379.

Van de Walle, D., & Mu, R. (2007). Fungibility and the flypaper effect of project aid: Micro evidence for Vietnam. *Journal of Development Economics*, *84*(2), 667–685.

World Bank Group. (2018). *Overcoming poverty and inequality in South Africa: An assessment of drivers, constraints and opportunities*. World Bank, Washington DC. https://openknowledge.worldbank.org/handle/10986/29614. License: CC BY 3.0 IGO.

**How to cite this article:** Chisadza, C., Chitiga-Mabugu, M., Mabugu, R. E., Nicholls, N., Omotoso, K. O., & Yitbarek, E. (2024). Possible welfare benefits of basic income support: Evidence from a benefit incidence analysis in South Africa. *Annals of Public and Cooperative Economics*, 1–32. https://doi.org/10.1111/apce.12489