

# *Annual Review of Resource Economics*

## Social Protection and Rural Transformation in Africa

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social protection, cash transfers, rural transformation, impact evaluation, income, production, agriculture

### Abstract

This article develops a conceptual framework on pathways through which noncontributory social protection can support resilient and inclusive agricultural growth in rural Africa. It draws insights from a review of rigorous empirical evidence on the impacts of cash transfers and multifaceted cash plus programs on a range of relevant productive outcomes, including accumulation of productive assets, inputs and farm management practices, off-farm labor and nonfarm enterprises, and farm production and income. This review demonstrates an emerging consensus in the literature: that access to social protection programs contributes positively to increasing the productive asset holdings of rural people, increasing the use of improved inputs and farm practices, and shifting away from casual wage labor arrangements. Moreover, there is limited evidence on heterogeneous effects across different baseline characteristics (income, sex, and labor-constrained households, among others). Finally, the article highlights how social protection programs should be considered an integral part of broader rural and agricultural development strategies in order to achieve a more productive, resilient, and equitable rural transformation in Africa.

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## 1. INTRODUCTION

Recent evidence on rural transformation processes in sub-Saharan Africa (SSA) highlights a persistent contradiction. In SSA, the value of agricultural production has increased more than in any other region of the world in the last two decades, and its inhabitants have increased their well-being as measured by improvements in per capita GDP and educational attainment and life expectancy, among others (Jayne & Sanchez 2021). However, this has occurred in the absence of significant improvements in labor, land, and total factor productivity. Instead, gains in agricultural output have come primarily through area expansion, with associated repercussions for the environment (Goyal & Nash 2017, Jayne & Sanchez 2021). Where dynamism is occurring in rural areas, it is primarily concentrated among medium-scale or emergent farmers, with limited evidence of productivity growth and consolidation in the small-scale sector (Jayne et al. 2016, Sitko & Jayne 2014). Thus, despite aggregate agricultural growth, poverty and food insecurity remain pressing challenges in rural SSA, where the absolute number of people living in poverty is still increasing and the vast majority of the extreme poor live (Beegle & Christiaensen 2019).

In the early 2000s, the dominant discourse on the challenges of persistent rural poverty and low productivity in the region framed the issue as a symptom of limited adoption of green revolution technologies, including improved seeds, synthetic fertilizers, and irrigation (Diao et al. 2010). To remedy this, governments and donors invested heavily in reviving input subsidy programs, supporting stagnated research and extension systems and fostering private sector engagement in agricultural markets. These investments were seen as necessary to kick-start a process of agricultural-led structural transformation similar to those experienced by Asian countries (Jayne & Rashid 2013, Toenniessen et al. 2008). As a consequence, by 2013, 10 African countries were spending approximately \$US1 billion per year, or 28.6% of their annual agricultural budgets, on inputs subsidy programs alone (Jayne & Rashid 2013).

However, the stylized vision of a technology- and market-led structural transformation underestimated the severe material and ecological resource constraints faced by many rural people in SSA and the livelihood risks and uncertainties associated with changing resource allocations or livelihood orientation. Rural SSA is plagued by issues of missing and incomplete markets for insurance and credit, which could help to offset some of the risk and liquidity constraints to making and sustaining new investments in agricultural intensification. Moreover, climate change is increasing the frequency of severe weather events and the distribution of agricultural pests, which further magnify the risks and uncertainty of rural livelihoods in the region. Thus, despite substantial investments to increase the uptake of improved inputs and markets engagement, livelihoods decisions by many small-scale producers in SSA remain inseparable from pressing concerns about meeting immediate food security needs. As a result, millions of farm households in the region continue to prioritize production choices that minimize short-term consumption risks, but they are often low productivity and oriented toward subsistence (Barrett et al. 2017).

At the same time, the nonfarm sector in SSA is still weak<sup>1</sup> and unable to absorb marginal farm households out of agriculture (Sumberg et al. 2021, Yeboah & Jayne 2018). The lack of economic dynamism in the nonfarm sectors in SSA is closely linked to the challenges facing the farm sector. A large literature, mostly based on experiences from Asia, suggests that the development of the agricultural sector is required to foster growth linkages in the nonfarm economy and to pull marginal farmers into more remunerative wage employment (Collier & Dercon 2014, Diao et al. 2010).

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<sup>1</sup>A total of 76.8% of people are informally employed in the nonagricultural sector, which is the highest rate of any region in the world (ILO 2018).

The persistent multidimensional challenges facing the agricultural sector in SSA, and the limited progress achieved by the technology- and market-led development approach pursued over the last two decades, suggest the need for novel approaches. In this article, we lay out a conceptual framework and summarize the empirical evidence for integrating social protection (SP) support with agricultural interventions in order to foster sustained and equitable economic opportunities in rural SSA. Although SP, and particularly noncontributory social assistance, is typically considered as a tool for addressing acute deprivation and supporting the extremely poor to maintain sufficient consumption levels, there is emerging evidence demonstrating its productive and transformative power in the context of rural areas. Moreover, a small but growing strand of literature demonstrates the existence of synergistic relationships between SP and standard rural development interventions, which have the potential to reduce poverty and better the economic outcomes of smallholder farmers (Veras Soares et al. 2017). By exploring this literature, we seek to identify key leverage points where program integration may have the most impact to achieve an inclusive, resilient, and sustainable food systems transformation in SSA.

## 2. SOCIAL PROTECTION IN AFRICA

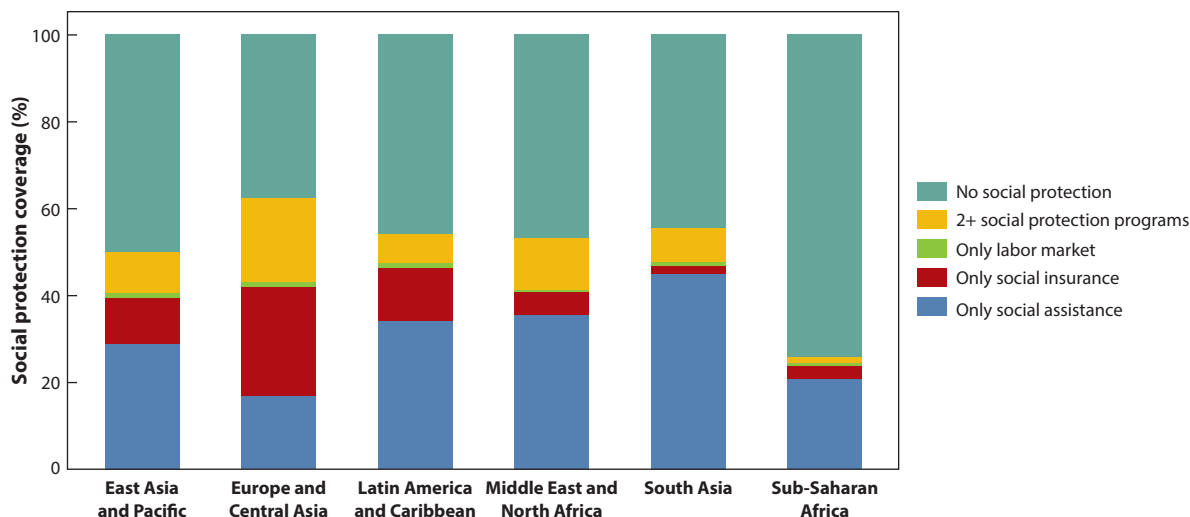
SP is broadly defined as the set of initiatives, public or private, which seek to minimize vulnerability and risk and reduce poverty. The most common types of SP are:

- Social assistance/social safety nets: these noncontributory programs transfer resources to individuals or households. Cash and in-kind transfers may have conditionalities, but increasingly these are unconditional.
- Social insurance: comprises contributory programs such as health insurance and pensions, which protect against risks and situations that lead to financial instability.
- Labor market interventions: these programs include, but are not limited to, job training and services to promote employment. They also include unemployment insurance.

SP programs have a long history in other parts of the world, but in Africa their appearance is recent and rapidly evolving. At the beginning of the century, South Africa was the only country in SSA with a national social policy program. By 2019, 35 countries in Africa had rolled out at least one social policy program (Devereux 2020). This policy trend correlates with the relevance SP has gained in the United Nations' Development Goals. In the year 2000, SP was not featured in the Millennium Development Goals, but 15 years later it is mentioned in four of the 17 Sustainable Development Goals.

**Figure 1** shows that the coverage of SP provided by governments in SSA lags compared to other developing regions. Coverage is expressed as the percentage of the population receiving a given type of SP program, including direct and indirect beneficiaries. SP covers around 45% of the total population in all regions except SSA, where almost three quarters of the population is not covered, and around 20% of the population benefits from social assistance programs only. Social assistance programs typically target the poorest and most vulnerable populations. With more than 38% of the population in SSA living on less than \$US1.90 a day in 2019 (<https://databank.worldbank.org/source/world-development-indicators>), this implies that half of the poorest and most vulnerable population does not have access to any safety net.

Nevertheless, this masks substantial differences in terms of resources spent and population covered by SP programs across countries. As shown in **Figure 2**, in Eswatini and South Africa, SP programs reach 80% of the total population, mostly due to widespread school feeding programs in Eswatini and a robust child grant program in South Africa. In several countries, the share of the population benefiting from a SP program is below 20%.



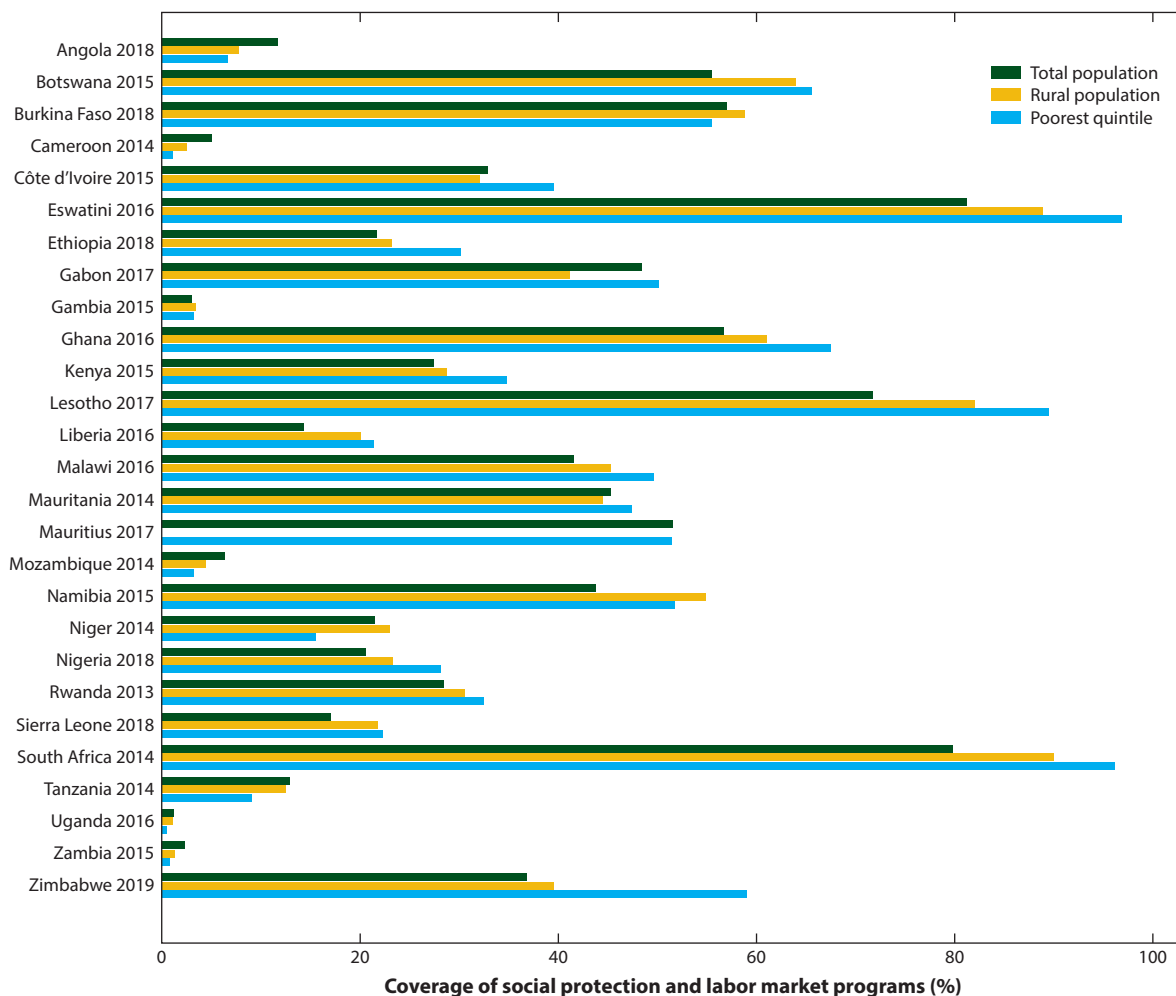
**Figure 1**

Coverage of social protection programs (%), as captured in household surveys, by region. Figure is the authors' elaboration from the Atlas of Social Protection: Indicators of Resilience and Equity (ASPIRE) (<http://www.worldbank.org/aspire>). Coverage is determined as follows: number of individuals in the population who live in a household where at least one member receives the benefit divided by the number of individuals in the total population. Regional average calculated from the latest available figure for each country in the period 2010–2019. This figure underestimates coverage because household surveys do not include all programs that exist in each country.

Most SSA countries implement noncontributory social assistance targeting the rural population, which is often the segment with the highest levels of poverty and malnutrition. While the COVID-19 pandemic led to an increase in SP coverage on the continent, many of the programs put in place were temporary and relatively small in size (Bennamour et al. 2021, Gentilini et al. 2022). The introduction or expansion of SP programs usually depends on the dynamics of domestic politics. In most countries, development partners provide initial resources and technical capacity to start SP programs with the expectation that public resources will eventually take over. However, support by key political figures for SP scale-up is a challenge (Hickey et al. 2019), and donors still finance on average 55% of program spending in SSA (Beegle et al. 2018).

The rapid, albeit insufficient, expansion of SP programs in SSA has led to a proliferation of scholarship on the impacts these programs have on beneficiaries. Most of this research assesses the impacts of SP programs against their own objectives, which typically include consumption outcomes, educational attainment, and health, and generally points to positive results (Baird et al. 2013, Bastagli et al. 2019, Handa et al. 2018a, Manley et al. 2022, Millán et al. 2019). However, an emerging literature explores the ways in which these programs influence productive investments and economic decision making, with a focus on rural areas.

This review focuses on the evidence of productive economic outcomes associated with non-contributory SP programs, which are the dominant form of SP in SSA. Most of the available evidence relates to cash transfers, conditional or unconditional, and public works programs. The objectives of the programs and the targeted populations vary from country to country, but they tend to share the overarching goal of supporting consumption of vulnerable populations by providing a steady income flow. We additionally consider lump-sum grants, which transfer sizable amounts of money with the objective of promoting the productive inclusion of the beneficiaries. Without the predictability of transfers associated to regular cash transfers programs, these types of



**Figure 2**

Coverage of all social protection and labor market programs (%), as captured in household surveys, by country and targeted population. Figure is the authors' elaboration from the Atlas of Social Protection: Indicators of Resilience and Equity (ASPIRE) (<http://www.worldbank.org/aspire>). Coverage is determined as follows: number of individuals in the total population or rural population or poorest quintile who live in a household where at least one member receives the benefit divided by the number of individuals in the total population. This figure underestimates coverage because household surveys do not include all programs that exist in each country. The poorest quintile is calculated using per capita pretransfer welfare (income or consumption).

interventions may still alleviate immediate liquidity constraints but may affect beneficiaries differently than traditional cash transfer programs. These nuances will be addressed in the next section.

In addition to these “pure” SP interventions, we expand the analysis to consider programs that bundle cash transfers or public works programs with additional interventions. These cash plus programs seek to enhance the productive impacts of SP interventions by integrating cash with asset and skills transfers (Roelen et al. (2017). Although not traditionally viewed as fitting the standard SP definition, these interventions share many attributes with SP programs and have a growing evidence base suggesting beneficial impacts on the productive capacity of recipients. One of the most popular cash plus–type programs is the graduation approach, which consists of a combination

of cash transfers, productive asset transfers, financial literacy, and livelihood trainings for a period of time, usually spanning between 2 and 3 years. Graduation programs are delivered sequentially, with the intention to foster asset accumulation and transition out from extreme poverty.

Social pensions represent another important form of noncontributory SP. However, we did not include them in the analysis, because of the relative low coverage and the paucity of evidence on their effects. Indeed, despite the relative low proportion of elderly people in Africa, which in the last 50 years has remained constant at around 3%, the absolute number of people aged 65 and above has increased from 9 million to 35 million (<https://databank.worldbank.org/source/world-development-indicators>). Owing to the prevalence of informal employment in the region, only a minority of the labor force contributes to pension insurance (ILO 2021).

### 3. CONCEPTUALIZING SOCIAL PROTECTION AS A TOOL FOR RURAL TRANSFORMATION

In this section we present a conceptual framework to understand the pathways through which SP may lead to a more productive, resilient, and equitable rural transformation in Africa. Substantial improvements in labor and land productivity, investment in soil quality, conservation of natural resources, and dynamism in the rural nonfarm economy are all key elements of a system transformation that are required to foster agricultural growth, reduce poverty, improve food security, build resilience, and adapt to climate change. Importantly, these dynamics must be inclusive of the rural poor. In rural SSA, the vast majority of rural people derive some portion of their livelihood from agricultural production, and this production underpins much of the rural nonfarm economy. Enabling investments in sustainable agricultural intensification that improves agricultural labor and land productivity and restores and conserves natural resources is critical (Jayne et al. 2019). At the same time, for many rural households with limited land and other necessary resources, agriculture is not a likely pathway out of poverty (Davis et al. 2017, Haggblade et al. 2010). For these households, a transition out of agriculture and into the nonfarm economy is a more likely path to greater prosperity.

Improving agricultural labor productivity and enabling marginal farm households to beneficially exit agriculture require that households have the ability to bear the risks and costs of new investments and reallocate labor to new activities. The classic agricultural household model suggests how SP can influence agricultural production and livelihoods more generally (Singh et al. 1986). In this model, when markets function perfectly and households are price-takers, production and consumption decisions are separable, so that households first maximize income from production decisions and then maximize utility from consumption. However, rural markets in developing countries are either missing or do not function perfectly. In light of these constraints, production and consumption decisions of agricultural households are jointly determined or nonseparable. For this reason, even though SP programs are rarely designed to explicitly influence the economic activities of their recipients, they may, nonetheless, contribute to changes in economic behavior through three interrelated channels: relaxation of credit and liquidity constraints of poor and vulnerable households, reduction of consumption risks, and relaxation of psychological constraints.

#### 3.1. Relaxation of Credit and Liquidity Constraints

Rural households in poor countries typically have limited access to formal credit due to the underdevelopment of credit markets, a lack of collateral, and steep borrowing rates (Feder et al. 1990). Asymmetric information further exacerbates the functioning of markets, leading to adverse selection and moral hazard risks. SP, and cash transfers in particular, provide a steady and predictable stream of cash that changes the current and future economic prospects of beneficiary households.

Under market imperfections and nonseparability of production and consumption decisions, improvements in economic conditions through SP transfers can enable rural households to invest in productivity-enhancing technologies that previously were beyond their economic means. This occurs directly by increasing liquidity and indirectly via better credit scoring (Bazzi et al. 2015, Phimister 1995). The frequency and security of government-backed cash transfers provide a kind of surety, allowing beneficiaries to more easily meet collateral requirements to borrow (Torkelson 2020). Prifti et al. (2019) show that the prospect of receiving future SP transfers increases the credit rating of beneficiaries, which in turn relaxes present credit constraints and enables them to make economic decisions with longer time horizons. Moreover, for rural households with limited agricultural potential, regular transfers provided through social assistance programs offer an important source of investment capital to diversify into nonfarm activities (Pace et al. 2022).

Providing liquidity to households may also help break the cycle of piecework labor during the farming season that many poor farm households are trapped in (Covarrubias et al. 2012). In this way, farmers are able to dedicate more of their labor to their own production (Asfaw et al. 2014, Margolies & Hoddinott 2012, Prifti et al. 2017, Sitko et al. 2021). This is particularly important for time-sensitive activities such as planting and weeding. Being able to perform these tasks in a timely manner is critical for improving agricultural productivity. Transfers can also contribute to a decrease in family labor dedicated to on-farm activities and increase the use of hired labor, depending on whether family and hired labor are complements or substitutes (Prifti et al. 2019). For rural households with limited agricultural potential, this frees up labor to dedicate to nonfarm businesses and diversify out of agricultural production into potentially more remunerative non-farm activities. Finally, farmers are often undernourished during the farming seasons in SSA, and food and cash transfers help these individuals have access to more and better food, with benefits for labor productivity and income (Baird et al. 2018).

### 3.2. Consumption Risk Management

Risk and uncertainty are pervasive features of rural life. Variability in prices and weather conditions leads to large fluctuations in farm output, with consequences for both farm and nonfarm income. These risks are compounded in many parts of rural SSA by the absence of markets for insurance and credit (de Janvry et al. 1991), which severely limits people's capacity and willingness to take economic risks, and can contribute to locking households into low-equilibrium poverty traps (Carter & Barrett 2006). Addressing high levels of risk aversion in economic decision making is critical for fostering transformative and resilient changes in livelihoods.

By providing beneficiaries with a regular source of income or food, SP programs help to reduce the consumption risks associated with new investments on-farm and off-farm. In this way, SP can alter households' risk preferences, enabling preferences for longer-term and potentially more profitable investments (Daidone et al. 2019, Schwab 2019, Sitko et al. 2021). Assuming decreasing absolute risk aversion preferences, SP can reduce beneficiary households' degree of risk aversion, which can lead to increased adoption of modern inputs and agricultural tools (Hennessy 1998, Serra et al. 2006), as well as long-term investments in improving soil health and ecosystem functionality such as conservation agriculture practices (Scognamillo & Sitko 2021). Moreover, regular SP transfers can enable farmers and nonfarm enterprise owners to better withstand income volatility, without relying on the liquidation of productive assets.

### 3.3. Relaxation of Psychological Constraints

A growing literature from behavioral economics demonstrates the negative effects of poverty on psychological well-being and preferences. This includes studies on the negative impacts of poverty



on aspirations and wants (Dalton et al. 2016, Genicot & Ray 2017) or on risk preferences and time discounting (Haushofer & Fehr 2014). Another strand of the literature focuses on the impacts of poverty and other negative events on subjective capacities and abilities, showing how such situations may instill hopelessness about the future and how this translates into decisions that may perpetuate poverty (de Quidt & Haushofer 2016, Lybbert & Wydick 2018, Moya & Carter 2019, Wuepper & Lybbert 2017). Misperceptions about one's own capacities and abilities, having low or no aspirations, and assigning little utility to future well-being distorts the returns to investments, which translates into suboptimal input assignment, including labor allocation, and asset accumulation. If such effects are caused and reinforced by poverty and adverse situations, improvements in economic prospects associated with SP programs have the potential to help break this negative cycle (Molotsky & Handa 2021, Ohrnberger et al. 2020). The relaxation of psychological constraints presents an additional channel through which SP may influence economic decision making. Positive changes in hope, aspirations, sense of self-efficacy,<sup>2</sup> and expanded time horizons can foster investments and other forward-looking behaviors (Carter 2016).

### 3.4. Contextual and Programmatic Heterogeneities

We focus primarily on cash, cash plus, and public works programs, which vary substantially in their targeting and the periodicity and size of transfers provided. Therefore, they are likely to affect productivity impact pathways in different ways and to different extents. For instance, the frequency of cash transfer disbursements may affect beneficiaries' behavior toward spending for consumption rather than investing (see sidebar titled NGO-Led Cash Transfer in Kenya).

One further obvious difference in programmatic approaches is the additional components provided by cash plus programs versus cash transfers or cash-based public works programs. Cash transfers alone are good at relieving liquidity constraints and addressing risks but do not provide skills, alleviate nonfinancial constraints, or relax barriers such as labor market segmentation that limit people's capacity to gain employment. As shown below, evidence suggests that cash plus programs amplify the effects of cash transfers on productive outcomes.

Although less documented, outcomes are also affected by differences in the local and household context. For example, Asfaw et al. (2014) find that in Kenya, more geographically isolated beneficiaries of a cash transfer program increased their probability of engaging in wage labor. They posit that the transfer likely helped to reduce financial barriers to using transportation. The articles considered in this review focus on programs targeting ultrapoor households, reducing the likelihood of sizable differences in physical and psychological assets among beneficiaries. Nevertheless, there are other characteristics of the beneficiaries where there tends to be more variation, such as sex and age, and these have the potential to generate heterogeneity in the results. Asfaw et al. (2014)

#### NGO-LED CASH TRANSFER IN KENYA

In the Kenya GiveDirectly randomized controlled trial, Haushofer & Shapiro (2016) analyzed the differential effect of monthly installments over nine months versus a one-time lump-sum transfer. The program provided cash transfers valued at roughly two years of per-capita expenditure for poor households in Rarieda Constituency. In total, 503 households in 60 villages received either one-off or monthly transfers. The authors found that monthly transfers have better food security outcomes than one-off transfers, while one-off transfers were more effective at boosting asset holdings.

<sup>2</sup>Self-efficacy is the belief of the capacity to achieve specific goals by an individual.



find no evidence of changes in productive asset holdings for the sample of their study. However, once the authors break up the analysis to look at differences between male- and female-headed households, they find a positive increase for female-headed households.

A final important household characteristic, which also is a targeting criterion for many cash transfer programs, is whether a household is labor-constrained. Labor-constrained households, measured in terms of household dependency ratios, face substantial barriers to engaging in labor-intensive activities such as agriculture. Access to SP may, therefore, have different productive impacts for labor-constrained versus labor-endowed households.

## 4. IMPACTS

In this section, we present a review of impact evaluations of the effects of SP programs on productive and economic outcomes in SSA, focusing particularly on cash and in-kind transfers and related multifaceted interventions (cash plus or graduation programs), which include SP as part of a bundle of interventions. This review is restricted to empirical evidence published in peer-reviewed journals and technical reports that rely on rigorous econometric techniques.

The productive outcomes we consider are grouped into four categories: (a) productive assets, (b) inputs<sup>3</sup> and farm management practices, (c) off-farm labor and participation in nonfarm businesses, and (d) income. The first three variables indicate shifts toward forward-looking behaviors and are proxies of economic opportunities. The last one, income, reflects changes in well-being and is an indicator of whether the changes in the first three lead to better material conditions for beneficiaries of SP schemes. Failure to measure increased incomes does not imply that changes in assets, input use, farm management practices, and off-farm participation were ineffective, because the response may be lagged and surveys are not able to account for this, or beneficiaries shifted activities with no net change in incomes.

Identification of appropriate articles relied on two approaches. First, we focused our search on three primary repositories: Elsevier Scopus, Web of Science, and the International Initiative for Impact Evaluation (3ie). Each database search engine can filter by topic and region. Further, we used combinations of strings referring to both the type of program and the outcomes of interest such as “cash transfers,” “social protection,” “assets,” or “livestock,” among others. We removed wrong or duplicate entries, including working papers or reports superseded by more recent and peer-reviewed journal articles, and screened studies by title and abstract. With this step, we identified 44 articles out of 95 records originally identified by the three combined search engines. In a second screening phase, the retrieved studies underwent a quality assessment concerning the impact evaluation methodology (e.g., lack of or weakness in the control group, poor description of baseline balance). We complemented this review and identified additional records through other sources with a snowball approach, involving consultation with experts in the field and hand searches of other academic search engines (e.g., Google Scholar). In total, 40 papers met our selection criteria, with evidence coming from programs in 13 different countries. Ethiopia’s Productive Safety Net Program (PSNP) is the most evaluated program in this list, with 10 articles and reports, thanks to the availability of several panel data sets, which allow a wide range of quasi-experimental evaluation approaches. **Supplemental Table 1** summarizes the reviewed papers, showing the type of programs analyzed and their targeting criteria, among other characteristics.

**Supplemental Material** >

### 4.1. Productive Assets

The prevalence of productive assets as outcome variables in the analysis of SP programs has been increasing in the past years. The majority of articles considered measure two types of assets:

<sup>3</sup>We focus on improved seeds and the use of synthetic fertilizers.

agricultural tool and livestock ownership. Of the articles that focus on cash transfers, most find positive impacts on these outcomes. Indeed, only the evaluation of the Cash Transfer for Orphans and Vulnerable Children in Kenya finds no effect on either of these two outcomes when looking at the whole sample (Asfaw et al. 2014).

Similar to the cash transfer studies, the cash plus and graduation style programs tend to find positive effects on agricultural tool and livestock ownership or value. Of the studies included here, only one did not measure either of these two outputs (Daidone et al. 2021) and another found no effect on either of the two variables (Gilligan et al. 2009). Nevertheless, an increase in livestock ownership may not reflect positive changes in productive assets. In places with restricted access to financial markets, it may also reflect a savings strategy (Daidone et al. 2019, de Hoop et al. 2020).

The magnitudes of the impacts of transfers on productive assets vary substantially across the analyzed papers. For example, estimates suggest that the number of households that own agricultural tools increases by 16% for the Social Cash Transfer Programme beneficiaries in Malawi and 12.7% for beneficiaries of a one-time transfer in Kenya (Covarrubias et al. 2012, Egger et al. 2022). Banerjee et al. (2015) find a 0.60 and 0.34 increase also in the z-score of a productive index for Ethiopia and Ghana, respectively, for beneficiaries of a graduation program, the effect size being larger in the graduation group than in the cash transfer only group. Additionally, Haushofer & Shapiro (2018) find a 30% increase in the value of agricultural tools for beneficiaries of a cash transfer pilot in Kenya, and Ambler et al. (2020b) find a 43% increase in the value of agricultural equipment for a cash plus pilot in Senegal. In Burkina Faso, Akresh et al. (2016) compare conditional and unconditional cash transfers randomly allocated to mothers and fathers, finding short-term increases in the value of agricultural assets, which disappear at the endline after two years of implementation. Conversely, in Malawi, Ambler et al. (2020a) find that both cash and input transfers increased investments as measured by the value of agriculture-specific assets, which were sustained two and three years after the cessation of the transfers. The largest reported value of productive assets is reported in the graduation program evaluated in Banerjee et al. (2015) with an increase of 72.4% in Ethiopia. Similarly, Gobin et al. (2017) find a sizeable impact on a durable asset index of a graduation-style intervention in Kenya one year after the program started. In contrast, the effect on agricultural asset value reported for the government-led graduation program in Niger is only 10% (Bossuroy et al. 2022), while no impacts are found on durable assets from the Village Enterprise graduation program in Uganda (Sedlmayr et al. 2020). The latter result derives from comparing beneficiaries of the graduation-style intervention with recipients of regular cash transfers from the national program, which may explain the relatively muted results. Finally, impact evaluations of the Ethiopia PSNP show a diverse range of results, due to the different set of outcomes, geographic coverage, and program phases analyzed. An earlier evaluation of PSNP finds substantially muted effects of public works alone and in combination with the Other Food Security Programme (Gilligan et al. 2009). Instead, later evaluations of PSNP show a significant 2-percentage-point increase in the share of households owning agricultural tools (Bahru & Zeller 2022) and larger effects on ownership of several agricultural tools, when public works are combined with direct cash transfers (Prifti et al. 2021).

In terms of livestock, we observe that cash transfer programs often have significant impacts. In Zambia, Handa et al. (2018b) report a significant increase in a z-score livestock index of 0.16 and 0.28 standard deviations for the social cash transfer beneficiaries (see the sidebar titled Long-Term Effects of Cash Transfers in Zambia). Handa et al. (2022) show large effect size of about 0.62 standard deviations at 30-months follow-up for the Malawi Social Cash Transfer Programme, and a smaller but still significant increase of about 0.15 standard deviations for both Ghana LEAP1000 (Livelihood Empowerment Against Poverty Program first 1,000 days model) and the Zimbabwe Harmonized Social Cash Transfer program. In contrast to these results, Daidone et al. (2019) find

## LONG-TERM EFFECTS OF CASH TRANSFERS IN ZAMBIA

In 2010, the Zambian government began trials for two distinct cash transfer models to gain insights that could aid in potential expansion decisions of the Social Cash Transfer Programme. The Child Grant model targeted households with a child under age five, while the Multiple Category Targeting model focused on vulnerable households with female or elderly heads keeping orphans or households with disabled members. Handa et al. (2018b) evaluate the long-term effects on the living standard of a subsample of the beneficiaries of both models. The authors find positive effects not only on consumption, the primary goal of the transfers, but also on productive activities. Beneficiary households were found to convert each transferred Kwacha into an additional 0.67 Kwacha worth of income, implying that the programs had a significant effect on the investment in productive activities.

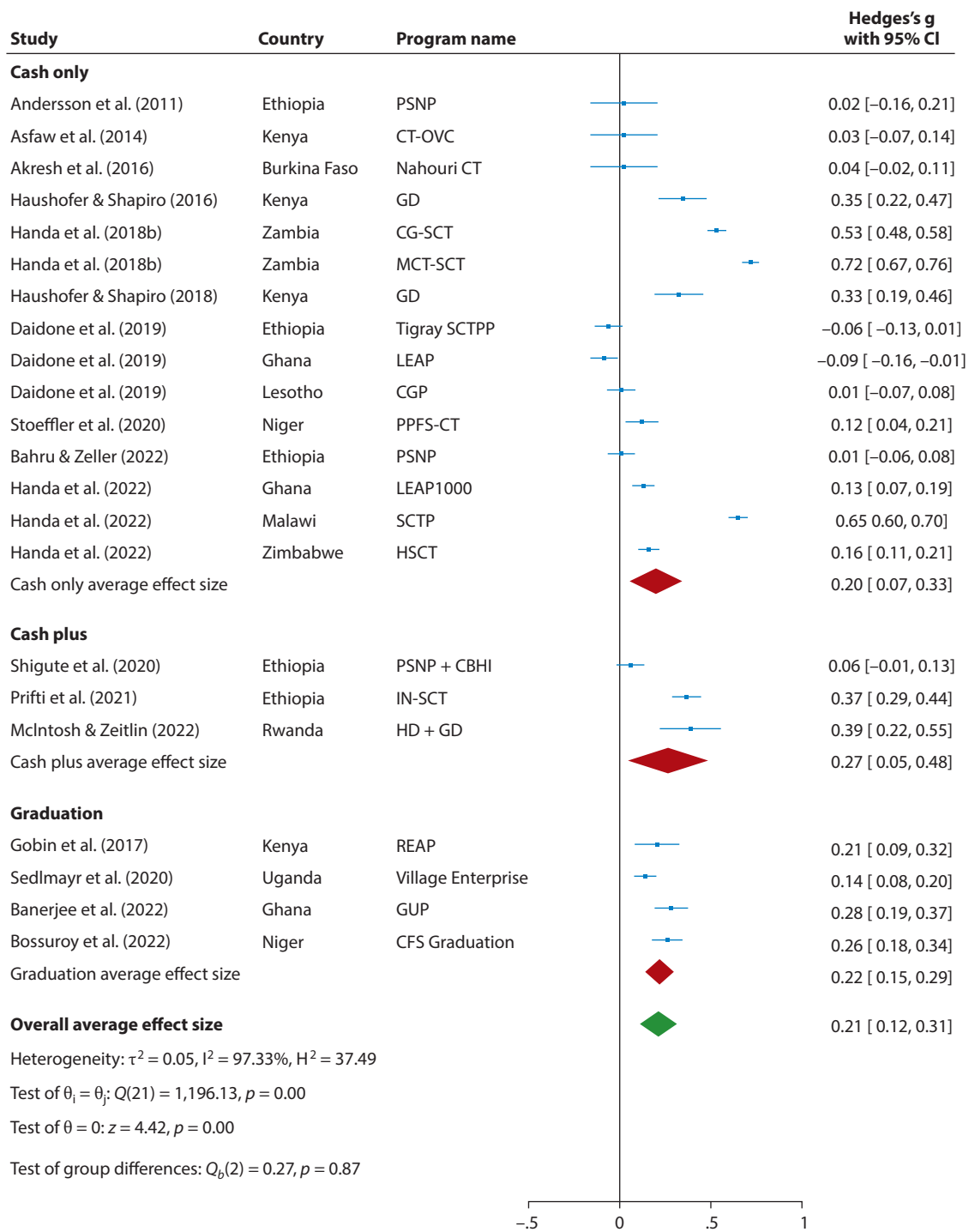
no positive effects in terms of Tropical Livestock Unit (TLU) for LEAP beneficiaries (LEAP1000 is an extension of LEAP, targeting exclusively pregnant women and households with a child under 15 months of age), beneficiaries of the Lesotho Child Grants Programme, or beneficiaries of the Tigray Social Cash Transfer Pilot Programme in Ethiopia. The midline impact evaluation of the Tanzania Productive Social Safety Net shows a 19-percentage-point increase in the share of households owning livestock, which is driven by the higher probability of owning poultry and small ruminants (Rosas et al. 2019). In Niger, Stoeffler et al. (2020) find that the *Projet Pilote des Filets Sociaux par le Cash Transfert* contributes to an almost 60% increase in the value of livestock assets relative to the baseline mean. Impacts on livestock ownership/herding are also significant for cash plus and graduation interventions. The TLU measure increases by 32% in Senegal for beneficiaries of a pilot cash plus program, 56% for beneficiaries of the government-led graduation program in Niger, and 79% for beneficiaries of the Integrated Nutrition and Social Cash Transfer pilot in Ethiopia (Ambler et al. 2020b, Bossuroy et al. 2022, Prifti et al. 2021). Shigute et al. (2020) report a 4% increase in the value of livestock assets for participants of both the PSNP and the Community Based Insurance Scheme in Ethiopia. Out of the multifaceted evaluations, the one in Kenya by Gobin et al. (2017) is the only example not reporting positive effects for livestock holdings. Lastly, while evaluating the impacts of the Social Cash Transfer Programme and Farmer-Input Subsidy Program in Malawi, Pace et al. (2018) highlight the complementarity of the two programs, whose combination generated greater ownership of small animals than the sum of the two in isolation.

**Figure 3** presents the meta-effect of livestock ownership and value of the programs from standardized mean differences. This figure helps visualize the consistency and size of the effects across the different studies considered in this article. It includes all the papers for which the necessary data to construct it were available. Overall, the meta-effect on livestock ownership is of 0.2 standard deviations and it is slightly larger for cash plus and graduation programs relative to stand-alone SP interventions. We provide more details on the meta-analysis in the **Supplemental Materials**.

**Supplemental Material** >

## 4.2. Inputs and Farm Management Practices

Studies focused on cash transfers that measure the use of inputs and input expenditure (including labor) as an outcome are not as common as those measuring asset ownership, but they generally find positive results. Handa et al. (2018b) find that the Multiple Category Targeting model of the Social Cash Transfer Programme in Zambia increases spending on agricultural inputs by 242%. They find strong impacts for the Child Grant model at the midline too, though these impacts vanished at the endline. de Hoop et al. (2020) report that recipients of the Social Cash Transfer Programme in Malawi and the Multiple Category Targeting model in Zambia were 5 and



(Caption appears on following page)

**Figure 3** (Figure appears on preceding page)

Standardized effects on livestock ownership and value of social protection only, cash plus, and graduation programs in Africa and meta-effect by type of program and across all programs. Abbreviations: CFS Graduation, Cellule Filets Sociaux graduation program; CGP, Child Grants Programme; CG-SCT, Child Grant model of the Social Cash Transfer; CT-OVC, Cash Transfer for Orphans and Vulnerable Children; GD, GiveDirectly; GUP, Graduating from Ultra Poverty program; HD + GD, Huguka Dukore training program + GiveDirectly cash transfer project; HSCT, Harmonized Social Cash Transfer; IN-SCT, Improved Nutrition through Integrated Basic Social Services with Social Cash Transfer Pilot Programme; LEAP, Livelihood Empowerment Against Poverty Program; LEAP1000, Livelihood Empowerment Against Poverty Program first 1,000 days model; MCT-SCT, Multiple Category Targeting model of the Social Cash Transfer; Nahouri CT, Nahouri Cash Transfers Pilot Project; PPFS-CT, Projet Pilote des Filets Sociaux par le Cash Transfert; PSNP, Productive Safety Net Program; PSNP + CBHI, Productive Safety Net Program + Community Based Health Insurance; REAP, Rural Entrepreneur Access Project; SCTP, Social Cash Transfer Programme; Tigray SCTPP, Tigray Social Cash Transfer Pilot Programme; Village Enterprise, Village Enterprise graduation program.

18 percentage points more likely to hire help for farm activities, respectively, while Daidone et al. (2019) observe an impact of the LEAP program in Ghana on seed expenditures. Finally, Rosas et al. (2019) report small but significant impacts on the share of households purchasing seeds and chemical fertilizers for the Productive Social Safety Net in Tanzania (6.3 and 3.7 percentage points respectively).

Looking at cash plus and graduation interventions, Ambler et al. (2020a) find a 23% increase in expenditure for informal farm labor (*ganyu*) among beneficiaries of a nongovernmental organization (NGO) pilot cash plus program in Malawi, while recipients of both the Child Grants Programme and the Sustainable Poverty Reduction through Income, Nutrition and Access to Government Service (SPRINGS) project in Lesotho increase seed and chemical fertilizer expenses by 70% and 86% respectively (Daidone et al. 2021). The graduation program in Niger leads beneficiaries to increase the use of chemical fertilizer by 60% but does not incentivize the purchasing of more seeds (Bossuoy et al. 2022). Also in Niger, Premand & Stoeffler (2020) find no effect in the number of fields in which fertilizers are used by beneficiaries of the *Projet Pilote des Filets Sociaux par le Cash Transfert*. Nevertheless, households that have been affected by drought report a 42% increase in the number of fields in which fertilizer is applied, suggesting that beneficiaries are better able to recover productive activities following a shock. In Ethiopia, Gilligan et al. (2009) report a 160% and 145% increase in fertilizer and improved seed use, respectively. Finally, Karlan et al. (2014) observe a significant increase in the value of chemical fertilizers used when cash is combined with an index insurance in the Ghana *Takayua* rainfall insurance project.

Few papers consider the effects of these programs on farm management practices. Andersson et al. (2011) look at agroforestry outcomes and find that public works participants of the PSNP in Ethiopia have significantly increased the number of trees they grow on their land. Ambler et al. (2020a) find no change in an agricultural practices index, which considers the adoption of practices or technologies such as intercropping with legumes and crop rotation, for participants in a cash plus pilot program in Malawi. Sitko et al. (2021) show that participation in a noncontributory in-kind food aid program increases the probability of investing in soil and water conservation in Ethiopia and Malawi by 2.1 and 1.7 percentage points, respectively, but it reduces the adoption of legume intercropping by 3.8 and 4 percentage points and the use of organic fertilizer by 2.4 (for Ethiopia). Participation in the Malawi Social Action Fund public works program is associated with increased adoption of soil and water conservation and organic fertilizer during the year households participated in the program, during the subsequent year, and for two consecutive years (Scognamiglio & Sitko 2021).

### 4.3. Off-Farm Labor and Nonfarm Businesses

The evidence presented below indicates that SP programs have impacts on individuals' economic time allocation and investments decisions, with implications for both on-farm and off-farm

activities. In terms of labor allocations, Covarrubias et al. (2012) find that for recipients of the Social Cash Transfer Programme in Malawi, participation in low-skilled agricultural wage activities drops significantly (61%). For the same program, de Hoop et al. (2020) find that paid work outside the household decreased by 12 percentage points, while for the Multiple Category Targeting cash transfer beneficiaries in Zambia, there was a 5-percentage-point decrease. These findings indicate a shift away from low-value casual labor and toward more productive household activities. Indeed, Prifti et al. (2017) find that benefiting from the Child Grant model in Zambia decreases the days per week in any paid labor by 0.28 and increases the days per week in own-farm labor by 0.27. Similarly, in Lesotho, Daidone et al. (2017) find that beneficiaries of both the Child Grants Programme and the Linking Food Security to Social Protection Programme increase the probability of at least one member of a beneficiary household spending time on own-farm work by 25%. The authors link this effect to a substitution from wage labor, which drops by 10 percentage points, toward an increase in time spent on on-farm activities. The Productive Social Safety Net in Tanzania increased on-farm work for males and nonfarm work for females by 6.5 and 7.6 percentage points, respectively, relative to nonbeneficiaries. Moreover, casual wage work decreased by roughly the same magnitude, suggesting the substitution of wage work for own enterprises (Rosas et al. 2019).

The probability of engagement in nonfarm business is another important pathway by which SP programs influence economic outcomes of beneficiaries. In Zambia and Malawi, the Child Grant model and Social Cash Transfer Program beneficiaries increased participation in nonfarm business by 17 and 12 percentage points, respectively (de Hoop et al. 2020, Handa et al. 2018b). In Ethiopia, the PSNP and Other Food Security Programme beneficiaries are 6.7 percentage points more likely to operate these enterprises (Gilligan et al. 2009), while beneficiaries of the Integrated Nutrition Social Cash Transfer pilot of PSNP4 doubled their engagement (Prifti et al. 2021). For graduation program beneficiaries in Ghana, Banerjee et al. (2022) find that beneficiaries of the full program are 17% more likely to have a business relative to a group that received a reduced version of the program. Beneficiaries of the graduation program in Niger increase their probability of having a business by 14% and the number of household businesses increases by 31% (Bossuroy et al. 2022). Sedlmayr et al. (2020) find a 10% increase in total productive cash flows for beneficiaries of a multifaceted program comprising training transfers and mentorship in Uganda. The authors report that the majority of the effect can be attributed to cash inflows coming from off-farm self-employment. Also in Uganda, Blattman et al. (2016) find that beneficiaries of a cash plus pilot double their probability of engaging in any nonfarm self-employment. The intervention had a strong focus on business training, which may explain the sizable effects compared to those from other studies. Furthermore, program participants that received additional supervision and training 12 months after the initial transfer increased the probability of starting an enterprise by 6 percentage points. Because beneficiaries have limited experience in entrepreneurial activities, the continued support and training are central to the observed results. For the national cash transfer in Niger, Premand & Stoeffler (2020) find that beneficiaries have a 27% increase in the probability of having a household enterprise, a 40% increase in the number of household enterprises, and an 84% increase in the probability of having an enterprise related to the processing of agricultural products. These effects are all associated with beneficiaries exposed to droughts and almost perfectly offset the negative effects related to the shock, suggesting that transfers help to protect businesses when shocks hit.

#### **4.4. Farm Production and Income**

Not all of the studies considered for this review measure explicitly the effect of SP and cash plus programs on income and production outcome. Income is a difficult measure to construct, and

agricultural modules compound this difficulty. An arguably easier way to measure well-being is through consumption, and many more studies rely on it. However, increased consumption does not imply increased productive capacity or economic opportunities, unless the increase exceeds the value of the transfer. On the other hand, for income to increase, there must have been a process of changes in forward-looking behaviors and investments, which may take time to materialize. Nevertheless, there is indicative evidence of changes in income and profit through changes in other measures such as the value of production.

For beneficiaries of the graduation programs in Ethiopia and Ghana, Banerjee et al. (2015) find an increase in an income index of 0.29 and 0.33 standard deviations, respectively. Gobin et al. (2017) report an increase in monthly income per capita of 30% for beneficiaries of a graduation program in Kenya. The effect comes all from nonagricultural income, considering that beneficiaries cut time use from leisure and household activity and increased nonfarm enterprise activity. Graduation beneficiaries in Niger observe increased yearly revenue of 50% (Bossuroy et al. 2022). In Uganda, beneficiaries of a multifaceted microenterprise program increase their productive cash inflows by 10% (Sedlmayr et al. 2020) while an increase of 0.62 standard deviations is reported for participants of a cash plus pilot program (Blattman et al. 2016).

Beneficiaries of the cash transfer pilot program in Kenya increased monthly total revenue by 28%, farm revenue by 23%, and monthly farm profit by 18% (Haushofer & Shapiro 2018). In the article evaluating the short-term impact of the intervention, Haushofer & Shapiro (2018) report an increase of 33% in total revenues, implying a sustained effect over time of the program. For a similar intervention also in Kenya, Egger et al. (2022) find an effect on annualized household income between 7% and 13% relative to nonbeneficiaries, although the effect is not statistically significant. Handa et al. (2022) report an increment between 0.06 and 0.25 standard deviations in an income and revenues index for beneficiaries of LEAP1000 in Ghana, the Social Cash Transfer Programme in Malawi, and Harmonized Social Cash Transfer in Zimbabwe. Handa et al. (2018b) find a 0.35 and a 0.36 increase in an income index 3 years after the initial transfers for beneficiaries of the social cash transfer programs in Zambia.

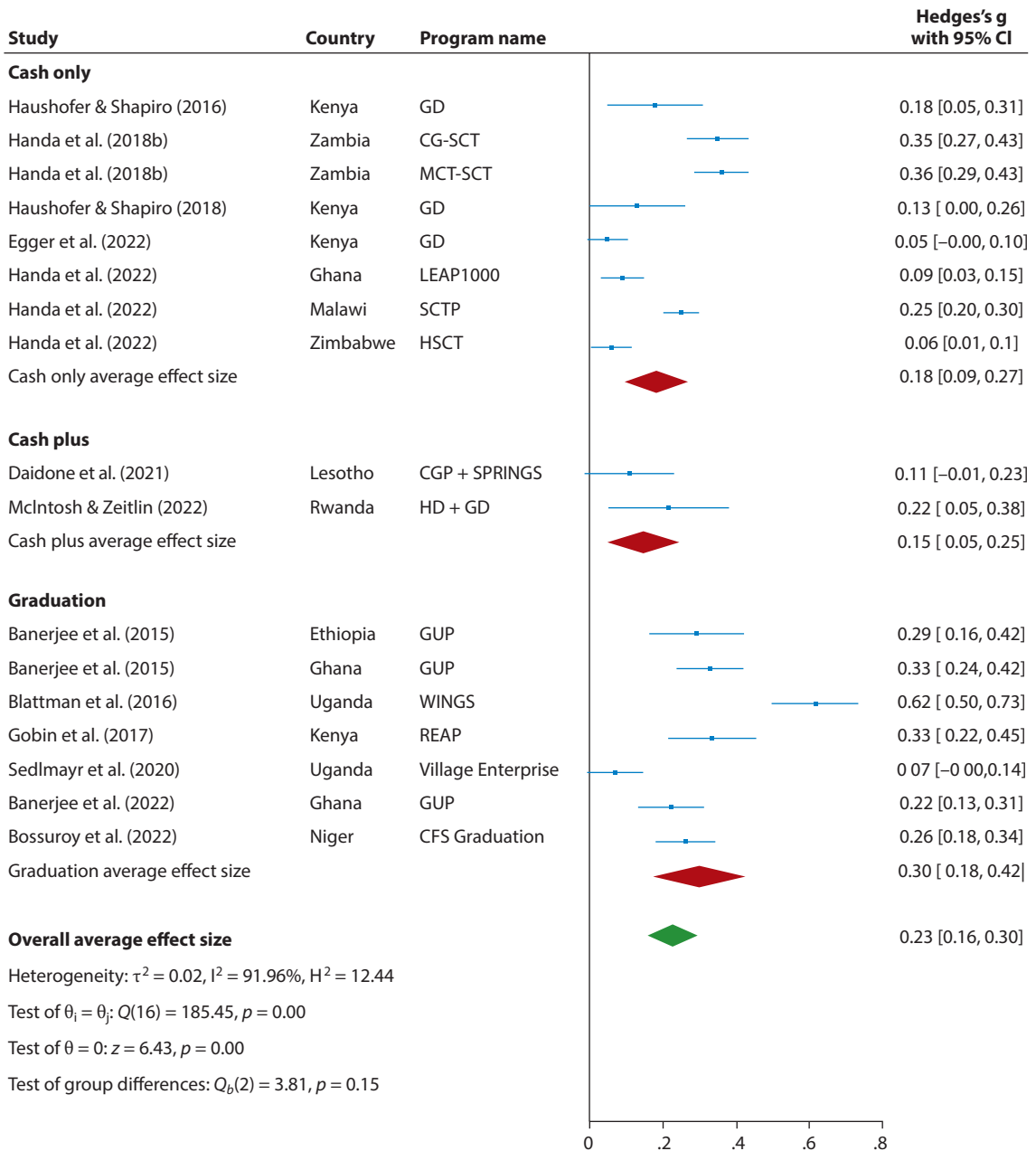
Ambler et al. (2020a,b) find no effect in gross value of agricultural output nor in the total value of crops for beneficiaries of a cash plus pilot in Senegal and Malawi, respectively. On the contrary, the harvest value for beneficiaries of Niger's graduation program increases by 71% (Bossuroy et al. 2022). While evaluating the Huguka Dukore entrepreneurship training program combined with household grants in Rwanda, McIntosh & Zeitlin (2022) find large impacts in the cash transfer arms on income. However, because the combined intervention with the employment and entrepreneurship readiness training reported similar effects, the authors suggest a lack of complementarity. Prifti et al. (2019) show that the Lesotho Child Grants Programme increased farm production by 33.5%, though these positive effects in crop value are found only for households with sufficient labor capacity (dependency ratio below 3) and with at least 2 hectares of land. Similarly, Daidone et al. (2021) consider baseline heterogeneities to study the impact of the Child Grants Programme plus SPRINGS in Lesotho, finding that households headed by women increase the value of their harvest by 60%.

Similar to **Figure 3**, **Figure 4** presents the meta-effect on income of the programs from standardized mean differences. This figure includes the papers in which income and revenues outcomes were available. Overall, the meta-effect on income is of 0.23 standard deviations, and it is larger for graduation programs relative to stand-alone SP interventions and the two cash plus programs reported. Nevertheless, the difference across intervention type is not statistically significant.



#### 4.5. Cost-Effectiveness

While the development literature widely documented the benefits of SP, evidence on the cost side is limited. Different approaches have been used by researchers to assess the cost-benefit ratio of such interventions. For the national cash transfer programs in Zambia, Malawi, Ghana, and Zimbabwe, Handa et al. (2018b, 2022) calculate expenditure multipliers by relating the annual amount transferred to a household with what households spent based on estimated impacts on



(Caption appears on following page)

**Figure 4** (*Figure appears on preceding page*)

Standardized effects on income and revenues of social protection only, cash plus, and graduation programs in Africa and meta-effect by type of program and across all programs. Abbreviations: CFS Graduation, Cellule Filets Sociaux graduation program; CG-SCT, Child Grant model of the Social Cash Transfer; CGP + SPRINGS, Child Grants Programme combined with Sustainable Poverty Reduction through Income, Nutrition and Access to Government Services project; GD, GiveDirectly; GUP, Graduating from Ultra Poverty program; HD + GD, Huguka Dukore training program + GiveDirectly cash transfer project; HSCT, Harmonized Social Cash Transfer; LEAP1000, Livelihood Empowerment Against Poverty Program first 1,000 days model; MCT-SCT, Multiple Category Targeting model of the Social Cash Transfer; REAP, Rural Entrepreneur Access Project; SCTP, Social Cash Transfer Programme; Village Enterprise, Village Enterprise graduation program; WINGS, WINGS graduation pilot project.

consumption expenditure, savings, spending on agricultural inputs, and livestock purchases. These average multipliers are favorably above one in Zambia and Malawi, while the lower bounds for the LEAP1000 in Ghana and the Harmonized Social Cash Transfer in Zimbabwe are below one.

These estimations are not directly comparable with the cost-benefit analysis of the graduation models studied by Banerjee et al. (2015), where benefits are calculated as the present value of the future stream of consumption and revenue assuming that benefits one year after the program ended are maintained permanently. Costs are broken down by direct costs (transfers and supervision), start-up expenses, and indirect costs. Irrespective of the discount rate, the total benefit-cost ratios indicate that, with the exception of Honduras, the programs all have benefits greater than their costs. For Ethiopia and Ghana, they are 260% and 133%, respectively. Similar calculations have been carried out for the graduation model in Niger, which found higher cost-effectiveness especially for the treatment arm including psychosocial support. These positive results hold even assuming 75% annual dissipation of benefits at the end of the program (Bossuroy et al. 2022).

McIntosh & Zeitlin (2022) provide a twin-track approach to measure value for money for the Huguka Dukore training program and the GiveDirectly cash transfers in Rwanda. First, they look at the cost-equivalent comparison between the two components, suggesting that at the \$332 price tag of the training program, the cash transfers produce better outcomes. Then, they estimate the relative cost-effectiveness of all treatment arms for each primary and secondary outcome by dividing the intention-to-treat estimates by the cost of the treatment arms in hundreds of dollars. They find that the combined group receiving the middle GiveDirectly transfer amount and the Huguka Dukore training has the highest benefit-cost ratio across four of the five primary outcomes.

Finally, Daidone et al. (2023) use a local economy-wide impact evaluation model to simulate income and production spillovers from the Lesotho Child Grants Programme, alone and in combination with a multifaceted productive intervention known as SPRINGS. Their cost-benefit analysis focuses only on the economic benefits, taking into account the income spillovers that these programs create. These real-income benefit-cost ratios range from 1.49, when the Child Grants Programme is combined with a village savings scheme, to 2.31, when the cash transfer is coupled with outside markets integration.

Overall, the evidence around the cost-effectiveness of SP interventions is generally very favorable, irrespective of the methodology chosen and the varying assumptions made by the researchers. While the hypothesis of perpetuity of benefits beyond the time span of the projects suggested by a few scholars seems too optimistic, including impacts on other nonmonetary domains, such as food security, education, or health, is likely to strengthen the benefit-cost ratios of such programs. Finally, most studies fail to incorporate program spillovers to nonbeneficiaries. However, studies using experimental approaches found significant impacts on ineligibles' consumption and firms' profitability (Angelucci & De Giorgi 2009, Egger et al. 2022). In addition, microfunded computable general equilibrium models showed that social cash transfers have the potential to generate sizeable production and income multipliers in rural economies (Daidone et al. 2023, Taylor et al. 2016).

## 5. CONCLUSIONS

The evidence summarized in this article suggests that SP programs and related interventions generate positive impacts on a range of outcomes associated with rural transformation processes. These include improvements in asset ownership, input use, labor allocations, livelihood diversification, and incomes, with generally positive benefit-cost ratios. Importantly, because SP programs tend to target marginalized populations, the generally positive outcomes presented here are indicative of the benefits of these programs in supporting more inclusive developmental processes in rural areas. This is critical, given the high and persistent levels of poverty and food insecurity in rural SSA.

We argue that the benefits of SP on productive economic outcomes occur through three primary channels: improvements in liquidity, reductions in perceived risks, and enhancements in psychosocial outcomes. These pathways are interactive and self-reinforcing, and their relative importance within a given context is shaped by the targeting, periodicity, and integration with other interventions of the SP program.

Although the results presented in this article point to the benefits of SP programs in fostering economic opportunities and behavior changes, this does not mean that these programs are the silver bullet for resolving persistent challenges facing rural development in SSA. Investments in agricultural research and extension services, health and education, enabling markets, and opportunities in nonfarm sectors are essential. Therefore, we argue that SP programs should be considered an integral part of broader rural and agricultural development strategies.

However, efforts to achieve such integration face two key policy challenges. The first is related to costs. Given already constrained national budgets and generally low levels of spending on the agricultural sector, how can governments afford to expand SP coverage? One option is to reallocate portions of current agricultural budgets to support rural SP programs. Reducing expenditures on input subsidy programs, which absorb a large share of many agricultural budgets in many countries in SSA, may be an option. Input subsidies generate low returns due to misalignment between the inputs provided and the diverse agro-ecological conditions farmers operate in, crowding out of the private sector due to poor targeting, and belated delivery of inputs (Jayne & Rashid 2013). While evidence on the benefit-cost ratios of subsidy programs is scarce and limited to national programs in Malawi, Kenya, and Zambia (Chirwa & Dorward 2013, Dorward & Chirwa 2015, Jayne et al. 2013), the upper bound of these estimates (including indirect effects of subsidies on the local economy) is lower than the benefit-cost ratios of the cash transfer programs discussed in the previous section. However, input subsidies can be the most welfare-efficient transfer scheme when input and factor supplies are elastic but input demands are liquidity constrained. Subsidies reduce costs while stimulating output without increasing consumption costs for agricultural households, and this is crucial in rural economies where smallholder farmers are net buyers of staples (Filipski & Taylor 2012). A second option involves lowering the unit cost of SP. Scholars have made a theoretical case that reallocating some of the public budget to subsidize asset insurance can lower the cost of SP in the long term by progressively reducing the number of people in need of proxy means-tested transfers (Janzen et al. 2021). This approach suggests that by enabling farmers to be shock-resilient and further relaxing risk constraints, less money will be needed in the long run for SP.

The second challenge is more conceptual. SP, particularly social assistance, is typically conceptualized as a social policy tool for people who lack alternative economic opportunities. As a result, SP is rarely mentioned in national agricultural policies or investment plans. Moreover, targeting is often restricted to the most marginalized populations and thus leaves out many rural people who have productive assets (such as land and labor) but are trapped in low-productivity

and subsistence-oriented activities. Entrenched views of social assistance as a handout prevents the scaling up of these programs to populations who can make the most productive use of it. By expanding coverage to these populations, the economic multipliers of these investments are likely to improve, thereby generating greater overall benefits in terms of economic growth.

SSA has the lowest rate of SP coverage in the world and has lagged behind other regions in reducing rural poverty and fostering sustained productivity growth in the agriculture sector. It is our hope that this article contributes to evidence-based discussions around the importance of scaling up SP as a developmental tool to foster more inclusive, resilient, and sustainable rural transformations in the region.

## DISCLOSURE STATEMENT

While carrying out the research and writing the article, all authors were employed by the Food and Agriculture Organization of the United Nations (FAO). At the country level, FAO is a key development partner working with governments on social protection programs and policies.

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