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The Impacts of Safety Nets in Africa

What Are We Learning?

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Abstract

Safety nets in Africa are a popular policy instrument to address the widespread chronic poverty and encourage human capital investments in the education and health of children. Although there have been considerable analyses on the impacts of safety nets globally, particularly in Latin America, less been done on synthesizing results across Sub-Saharan African programs. This study fills this gap by systematically extracting and standardizing the results across impact evaluations for better understanding of what has been achieved using this policy instrument in the continent. The study finds that these programs on average have significant positive impacts on total and food consumption. The programs show promising results on asset accumulation, such as livestock ownership. However, there is substantial heterogeneity in the impacts achieved across programs for some development outcomes. Through exploring this heterogeneity in impacts, the study puts forward several suggestions for better targeting various development outcomes through modifications in the design and implementation of safety net programs.

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The Impacts of Safety Nets in Africa: What Are We Learning?

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1. Introduction

Over the course of the last decade there has been a surge of national safety net programs across Africa. The growth of major safety net programs raises many questions: what has been the impact of such programs? What is the potential for safety net programs at a national scale? To what degree have lingering controversies been addressed, for example do safety nets create dependency, distort labor markets, or encourage anti-social behavior? The recent surge of impact evaluations on safety nets now helps to address these issues and forms this basis of this paper.

This paper considers the impacts of safety net programs and the potential outcomes that can be realized in scaling up effective interventions. It applies a rigorous meta-analysis on recent impact evaluations and develops partial equilibrium simulation models to consider the potential effects of scaling up safety nets in the African context. The meta-analysis is the first known to the authors to systematically extract and standardize results across impact evaluation studies on key outcomes of African safety net programs. This standardization allows for a more detailed understanding of the heterogeneity in impact sizes of different programs and in different African countries. These findings are complemented by the latest international and regional evidence, broader systematic reviews, and considerable know-how among practitioners engaged in the day-to-day implementation of such programs. To assess what impacts could be expected if programs are scaled up, partial-equilibrium simulation models are deployed that draw on the findings of the meta-analysis and integrate country-specific household survey data.

The meta-analysis highlights the value – and certain limitations – of impact evaluations in the sector. Safety nets are among the best-evaluated interventions in social policy. The results generated by impact evaluations are often key to providing reliable data for informing decision-making and adjusting programs to enhance their efficacy. Armed with better evidence on the factors that explain program outcomes, policy makers can decide whether to expand, modify, or eliminate a particular program. More generally, they can foster a culture for evidence-based dialogue among the various actors involved in building and improving a safety net program. However, there is substantial heterogeneity in the impacts of different programs, suggesting that implementation and design factors, as well as local contexts, play important roles in determining the outcomes of programs. The meta-analysis is useful for identifying implementation and design factors that may contribute to this variation in program outcomes and highlights the external validity limitations of focusing on only a few studies. In short, the impact evaluation evidence allows learning by doing in any one program context but can also inform the broader debate on safety nets through pooling results as in the meta-analysis that this paper presents. This is important given the infancy of many programs and the need to improve program implementation.

Existing work has aggregated evaluation findings of social protection programs, including systematic reviews of specific interventions such as employment schemes and cash transfers (Bastagli et al. 2016; Hagen-Zanker, McCord, and Holmes 2011; Kabeer, Piza, and Taylor 2012); systematic reviews of specific outcomes such as education (Baird et al. 2013; Saavedra and Garcia 2012); and, lastly, comparative country studies (Davis et al. 2016). However, this literature does not focus on programs in Africa and findings specific to this region can be difficult to glean within global studies. Furthermore, there are no studies that combine comparable cross-country evidence to develop average effect sizes for a range of

program impacts. For example, while several systematic reviews cover multiple program impacts, they tend to stop short of reporting average effect sizes and include only count measures of the number of significant positive or negative results. At the same time, the more empirically detailed meta-analyses focus on only a limited number of program impacts, such as education, rather than covering multiple dimensions of program impacts. Our meta-analysis aims to address these shortcomings by (i) focusing only on safety programs in Africa, and (ii) generating average effect sizes for a range of program impacts.

The results from our meta-analysis point to several key findings. First, the evidence from safety net program evaluations across Africa shows that programs significantly increase consumption among beneficiaries. Per dollar transferred to beneficiary households, we estimate that on average 74 cents goes towards consumption. We interpret this result as strong evidence that well-targeted programs can be effective at reducing inequity and alleviating extreme poverty. Furthermore, an average of 36 cents per dollar transferred goes specifically towards food, indicating that safety nets are used to raise standards of living and improve household welfare.

Second, we find promising results on asset accumulation by beneficiaries. For example, on average livestock ownership increases by 34% and ownership of other household and business durables increases by 10%. When examining impacts on incomes, the meta-analysis finds an average increase in earnings of 50% and an average increase in business ownership of 70%. One interpretation is that beneficiaries may use accumulated assets to improve their labor productivity and earnings, although the causal link between these results is not clarified in any of the studies included in the meta-analysis.

Third, across Africa the results on human development findings are less robust, at least for those recorded in a comparable way. For example, while well studied in impact evaluations, the pooled results on school enrollment and attendance are not significant. Several explanations are put forward in the various individual studies, including measurement error, problems with teacher absence and school access, and high initial enrollment rates, at least at primary levels. A more detailed analysis of design and implementation factors indicates that programs with strong messaging around education and a focus on children as beneficiaries tend to be more effective at improving educational outcomes. Yet, it is worth noting that many safety net programs in Africa do not achieve impacts on education as strong as those of conditional cash programs in Latin America, including Bolsa Família in Brazil and Prospera in Mexico, that are often used to argue for such programs.

Fourth, like the findings for human development, the results from our meta-analysis on resilience improvement mechanisms are also less robust. For example, the impacts of safety net programs on the use of child labor or wage work are insignificant, and the impacts on monetary saving are only weakly significant. Again, several explanations are put forward in the individual studies, such as low empirical power to detect results on these outcomes, the size of transfers being insufficient to eliminate negative coping behaviors, and other implementation factors like payment regularity. As improved resilience is becoming an important goal for safety net programs, this is an area where stronger evidence would be valuable.

Outcome	Outcome Name	No. of Studies	Significance
Equity	Consumption	7	***
	Food consumption	9	**
Resilience - assets	Livestock	8	***
	Land	4	
	Durables	4	***
	Fertilizer/seed use	5	*
Resilience - negative coping strategies	Child labor	11	
	Wage employment	11	
Resilience - savings and transfers	Savings	7	*
	Private transfers	9	
Opportunity - education	School attendance	15	
	School enrollment	13	
Opportunity – education (child-focused programs only)	School attendance	7	*
	School enrollment	6	*
Opportunity - healthcare	Healthcare usage	9	
Opportunity - labor productivity	Self-employment	6	
	Earnings	6	***
	Business	10	*
	Income multiplier	6	***

*** - 1% significance level; ** - 5% significance level; * - 10% significance level

Based on these findings, we conclude that safety net programs can improve several key measures of welfare among beneficiaries, including consumption levels. This is often the most fundamental requirement of programs, and it is reassuring that programs across Africa are on average achieving this objective. Safety net programs can also have additional impacts, such as reducing vulnerability through asset accumulation and increasing opportunity among children through access to education. However, these outcomes are not guaranteed, and specific choices and trade-offs may need to be made in the design of programs if these outcomes are to be achieved. Some examples include whether to implement more streamlined programs with small, regular payments that may be more fiscally sustainable versus more comprehensive programs sequenced with complementary development interventions. If additional impacts are desired, programs should think carefully around their prioritization to inform a clearer communication strategy to beneficiaries and better integration of supporting measures. For example, to enhance the possibility of realizing these outcomes, additional messaging, a nudge toward new behavior, or relevant conditionality can be effective, but work best when consistently implemented across the program or alongside a supporting supply side intervention. The final section of this paper puts forward various policy recommendations for implementation and design based on findings of what seems to have worked well across different programs.

The remainder of this paper is divided into a framework for assessing the core objectives of safety nets and the methodology for the meta-analysis; an assessment and discussion of the evidence generated from

the safety net meta-analysis and what it means for scaling up programs; and lessons and policy take-aways.

2. Framework and Methodology

Our methodology for assessing the impacts of safety net programs builds on a framework that considers their three core objectives of promoting equity, resilience, and opportunity within a country. [2] We use this framework to categorize the outcomes of safety net programs and use it for grouping the results we extract in the meta-analysis.

- **Equity:** Safety nets and transfers can have an immediate impact on inequality and extreme poverty and may help governments make beneficial reforms to support more inclusive growth in the long run.
- **Resilience:** Safety nets can help households to manage risk.
- **Opportunity:** Safety nets can enable households to make better investments in their future.

The equity objective of safety nets is often the most important as it seeks to directly ensure even the most vulnerable and extremely poor households reach a minimum level of consumption and cover their basic needs. Given this, typical outcomes of interest include measures of consumption, food security, and poverty among beneficiary households. In some cases, strong social assistance programs can also play a part in removing incumbent redistributive programs that are inefficient and costly, or help to push through macroeconomic reforms that will boost long-run economic growth by compensating immediate losers.

The resilience objective is underpinned by the insurance function that well-implemented safety nets can play. For example, when poor households can rely on regular payments that may even scale up in situations of extreme need, they avoid needing to resort to costly and often irreversible coping strategies, such as selling their most productive assets at fire-sale prices or sending children to work rather than to school. Households can also use safety nets to reduce their vulnerability to shocks by increasing their personal level of savings. From an ex-ante perspective, households may even be willing to diversify into higher-return but higher-risk livelihood activities that can help them to move out of poverty.

The opportunity objective of safety nets aims to allow households to make investments that they would otherwise miss. Typical outcomes of interest for this objective are investments in education, nutrition, and healthcare for children, and in increased earnings of income-providers within the household.

Beyond these three objectives, recent discussions have considered the extent to which safety nets can contribute to economic growth.[3] Channels for growth principally focus on the extent to which safety nets enable investments and better risk management among beneficiary households and their communities, and so are aligned to the resilience and opportunity objectives. To a lesser extent, safety nets may relax

[2] For further discussion of such frameworks for studying safety nets, see Bastagli (2016), Devereux and Sebastes-Wheeler (2004), Grosh et al. (2008), Tirivayi, Knowles, and Davis (2013) and World Bank (2012).
[3] Monchuk (2014), Alderman and Yemtsov (2014), Barrientos (2012).

political constraints and bring about pro-growth reforms that align with the second aspect of the equity objective. While the meta-analysis gathered evidence on the resilience and opportunity objectives, no counter-factual based evidence was found on impacts on political constraints. Furthermore, no direct evidence was found on impacts of economic growth, most likely due to the problems of attribution; the unit of analysis for most studies is individuals or households, while economic growth is typically measured at a village, region, or country level. As such, we do not report on the impact of safety nets on aggregate economic growth in Africa.

Figure 1: Conceptual framework to consider the impacts of Safety Net Programs in Africa

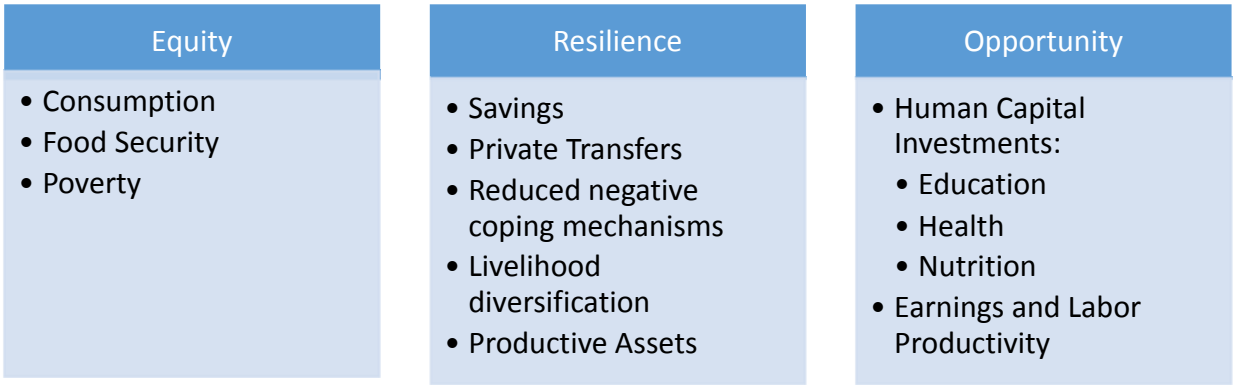

Figure 1- Conceptual Framework to consider the impacts of Safety Net Programs in Africa

Using this framework of the core objectives of safety nets – equity, resilience, and opportunity – we report on a meta-analysis that compiles evidence on outcomes from impact evaluations of safety net programs in Sub-Saharan Africa. The meta-analysis systematically searched publicly available impact evaluation studies published between 2005 and 2016 using pre-specified inclusion and exclusion criteria. The search built on the methodology of the IEG (2011), in which a series of evaluations on social safety net topics were surveyed from the World Bank's impact evaluation databases, academic journals, and institutions involved directly in impact evaluations. Specifically, the World Bank databases included the Africa Impact Evaluation Initiative (AIM), Development Impact Evaluation (DIME), Spanish Impact Evaluation Fund (SIEF), and Social Protection Publication Database. Institutions surveyed were the Abdul Latif Jameel Poverty Action Lab (JPAL), Innovations for Poverty Action (IPA), and International Initiative for Impact Evaluation (3ie). Cross checks were also undertaken with more recent literature, including Bastagli et al (2016) and Davis et al (2016). The criteria to include an evaluation in our sample were: (i) the construction of a counterfactual and use of objective measures to estimate impact[4]; (ii) robustness of findings, meaning studies that address plausible sources of bias and results that are convincingly robust to a variety of confounding factors; and (iii) relevancy of study to evaluating the impacts of social safety net programs (rather than other social policies or development programs). A final inspection and double checking ensures that only the studies that demonstrate relevance, technical rigor, and robust findings, are included in the sample. We utilize only the most recent version of results for any program and avoid

[4] Included studies were RCTs, or deployed difference-in-difference or regression discontinuity methods.

duplication. This search yielded 55 impact evaluation studies covering 27 safety net programs in 14 different African countries.

These studies were used to generate a dataset that captured the evidence from each evaluation on the impacts of safety programs.[5] Evidence was grouped according to outcomes that aligned with the core objectives of safety net programs as outlined in Figure 1. Impact estimates on household expenditures were standardized using measures of the value of transfers or in-kind benefits provided through the safety net program per month. For example, for consumption we report program impacts as a percentage of the level of benefits.[6] Many studies report outcomes as binary measures or proportions, such as the percentage of children enrolled in school, the proportion of households owning agricultural land, the proportion of households with savings, and for these outcomes impacts are standardized relative to the baseline levels for each outcome. To the extent possible, this analysis reports and discusses baseline levels of outcomes, transfer sizes and frequency, and other program characteristics to assist in the interpretation of results.

Through standardizing impact estimates across the different studies for each outcome, the meta-analysis pools the evidence available to date for this outcome and provide an average effect size.[7] This can be thought of as a more objective way of measuring the potential for safety nets as it is not based on a single study but combines the evidence generated from multiple studies, all in the sub-Saharan African context. The meta-analysis is, thus, unique in two dimensions: (i) it focuses only on safety programs in Africa, and (ii) it generates average effect sizes for a range of program impacts, which to date has not been included in any previous systematic reviews of safety net programs.[8] There is a recent array of literature that aggregates evaluation findings, including the systematic reviews of specific interventions such as employment schemes and cash transfers (Bastagli et al. 2016; Hagen-Zanker, McCord, and Holmes 2011; Kabeer, Piza, and Taylor 2012), systematic reviews of specific outcomes, for example, in education (Baird et al. 2013; Saavedra and Garcia 2012), and, lastly, comparative country studies (Davis et al. 2016). However, one caveat to the recent literature is that Africa specific findings can be difficult to glean within global studies, and there are no studies that combine comparable cross-country evidence from Africa to develop average effect sizes. Our meta-analysis aims to address these shortcomings.

The exclusive focus on the Africa region recognizes the pattern of safety nets development in Africa contrasts sharply with many other countries, for example, through the dominance of unconditional cash transfers, strong influence of development partners, high poverty context, lower capacity context and specific target groups such as elderly, orphans. Focusing on program results in African adds significant value when trying to understand their potential in the region and is informed by experiences of flagship

[5] The meta-data includes point estimates for the effect sizes of impacts reported in the studies as well as standard errors, baseline means and standard deviations, transfer sizes and the number of observations per study. Efforts were made to obtain this data from study authors when not directly available in the papers.
[6] This enables more meaningful interpretation across programs where the value of transfers, frequency of disbursements, baseline levels of expenditure and currency units may all differ.
[7] Individual study results are weighted per their sample size.
[8] While Baird et al. 2013 report synthesized effect sizes, their focus in only for education outcomes (enrollment, attendance and test scores) and on global conditional and unconditional cash transfer programs, rather than Africa specific programs.

national safety net programs in Ethiopia, Kenya, Ghana, Malawi, South Africa, and Tanzania. Beyond these major contributions, the approach also allows for a more direct comparison of outcomes across programs, shining a light in the substantial heterogeneity in program impacts, even within just Africa. This is brought to the forefront in the discussion and reflections made on what might drive this variation in program impacts. Possible explanations include program design and implementation details. At the same time the discussion is enriched by the with evidence form other regions, ensuring that our Africa-specific findings are compared with international benchmarks.[9]

While unique in its focus on Africa and coverage of multiple program impacts, our meta-analysis encountered a few challenges and limitations. First, the meta-analysis requires having multiple estimates of an outcome across different programs. Several well-known results in the impact evaluation literature are omitted from the meta-analysis because of this requirement. For example, there are important results on HIV/AIDS interventions in Malawi that are omitted because there are no other evaluations in Africa testing the same outcomes. Relatedly, there are still some outcomes for which there exists no impact evaluation to assess, usually on outcomes that are inherently difficult to measure, such as incidence of gender-based violence, social cohesion and political economy outcomes like trust in government and willingness to accept reforms. Second, the meta-analysis requires that study estimates be comparable enough to aggregate. Specifically, the meta-analysis requires consistency in how outcome variables are defined across estimates. It is not appropriate to combine estimates that test fundamentally different outcomes. For example, for food consumption the meta-analysis focuses on food expenditures and omits estimates of food security indices (which tend to be constructed differently across studies). Third, many outcomes are based on early phases of programs, reflecting an inherent challenge in applying rigorous and comparable impact evaluations as programs go to scale. This challenge is highlighted, for example, in the context of Ethiopia's PSNP in the later discussion.

3. Results

3.1 Equity

In examining equity, the meta-analysis focuses primarily on consumption outcomes for individuals or households receiving assistance from safety nets. Total consumption expenditure is one of the main transmission channels of a safety net intervention as most of resources transferred to poor households are expected to be used to increase the quantity and variety of goods and services purchased for basic household needs. Food consumption is also included as it is a useful measure of wellbeing because it often constitutes the largest expenditure category for households, especially for poorer households. Measures of redistribution have not been included in the meta-analysis given their absence from impact evaluations that tend to focus on impacts among direct beneficiaries. However, spillover effects of safety nets on

[9] For this we use Bastagli et al, 2016; Baird et al, 2013; Hagen-Zanker et al, 2011; Kabeer et al, 2012; Saavedra and Garcia, 2012 and IEG, 2011 and IEG, 2014, among others.

consumption among non-beneficiaries within local communities are discussed, using the research generated through the Protection to Production Project.[10]

From a total of 27 programs covered in our review, 12 discuss findings on total or food consumption, of which 6 are positive and statistically significant.[11] Of the other programs, a further 8 have evaluations considering alternative food security measures to track either overall household welfare or nutrition measures for children, and most of these find at least one measure showing positive significant program impact.[12] The remaining program evaluations are focused on other outcomes of interest such as human development outcomes and local economy effects. Of the programs reporting consumption outcomes, the majority are currently operating at a national level, although at the time of the evaluation many were operating at a smaller scale and the evaluation results cover samples ranging between about 1,500-5,000 households. The length of evaluated exposure ranges from 4 months to 3 years: 8 evaluations cover an exposure period of two or more years, 2 evaluations cover 1 year and 3 cover shorter seasonal interventions (Sierra Leone CFW, Malawi MASAF, Kenya GIVE). The underlying design and implementation factors that drive the presented results are discussed in the subsequent section.

Our analysis suggests considerable effect sizes of safety net programs on total consumption. Figure 2 highlights a general pattern of positive consumption impacts, with a statistically significant mean effect of 74% [95% CI: 9 to 139%], implying that for every dollar transferred 74 cents are spent on consumption.[13,14] Households benefit from the fungible nature of cash transfers, which dominate this sample. Transfers are used as an opportunity to improve quality of life with a focus on purchasing food as well as non-food items, especially clothing and footwear (especially for children), as well as education. For example, out of all programs considered the Zambia CGP finds one of the strongest positive effects on total consumption with 76% of benefits going towards food, followed by health and hygiene (7%), clothing (6%) and communication/transportation (6%).[15] This program also highlights an increase in consumption which exceeds the total transfer received, suggesting evidence for the multiplier potential for safety nets.[16]

When examining the impacts on food consumption directly, the results across programs are also generally strong, with a statistically significant mean effect of 36% [95% CI: 0 to 71%] of the transfer size (see also

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[10] Consortium of FAO, UNICEF, UNC-Chapel Hill, Save the Children researchers and practitioners: http://www.fao.org/economic/ptop/home/en/. Also see related consortium on the Transfer Project: https://transfer.cpc.unc.edu/ .

[11] CFW*, CTOVC*, GIVE*, HSNP*, LCGP, LEAP, NSNP, MASAF, PSNP, SCTP*, TASAF, ZCGP* report on either total or food consumption. * indicates program found significant impacts.

[12] Some caution is needed to avoid misinterpreting these results. Studies often report multiple measures for food security and nutrition improvements among children and not all measures show significant improvements.

[13] The Ethiopia EGS/FFD program also finds robust higher consumption growth among beneficiaries, equivalent to approximately 4-5% higher growth per year. Due to the methodology of measuring consumption growth rather than levels impacts, it has not been included in the meta-analysis as it is not directly comparable.

[14] Sources: Gilligan et al. 2008 (Ethiopia PSNP), Ward et al. 2010 (Kenya CTOVC), Handa and Park 2013 (Ghana LEAP), Pellerano et al. 2014 (Lesotho LCGP), Seidenfeld et al. 2013 (Zambia ZCGP), Merttens et al. (2013), Haushofer and Shapiro 2016 (Kenya GIVE), Abdoulayi et al. 2015 (Malawi SCTP). Omitted estimates include the following extreme outliers: Malawi SCTP (148% [80%, 216%]) and Ghana LEAP (-36% [-186%, 114%].

[15] Seidenfeld et al. 2013 (Zambia CGP).

[16] This theme will be revisited later questioning how and why such transformative impacts come about.

Figure 2).[17] Across the programs, food consumption increases by between 0 and 34% relative to the baseline levels of consumption. While there is considerable heterogeneity within this sample, the evidence reinforces a theory of change across most programs, suggesting that the poorest households will prioritize basic food needs and will switch towards a more diversified diet. Furthermore, the majority of the evidence on individual consumption items suggests that households do not see transfers for increased temptation goods such as alcohol or tobacco,[18] and even where findings may be positive there are on a very small scale e.g. Sierra Leone CFW.[19] This is consistent with the global evidence that cash transfers have significant negative impact on expenditures on temptation goods.[20] Rather there is stronger evidence to suggest that households are improving their standards of living through home improvement expenditures, such as purchasing metal or plastic sheeting for roofs and walls (e.g., Sierra Leone CFW, Kenya GIVE, Lesotho CGP).[21]

Programs targeting the poorest households tend to see the greatest consumption impacts. Panel B of Figure 2 shows that programs that do particularly well in terms of consumption gain per dollar transferred are those that target very poor households, again such as the Zambia ZCGP and the Malawi SCTP, where households consume about 170 USD 2011 PPP per month or less. The transfer size to these households is modest both in relative (11-23% baseline total consumption or 14-30% baseline food consumption) and absolute terms (21-27 USD 2011 PPP per month). This finding is quite logical - the poorest live under the most stringent household budgets, where the extra dollar is likely to have its greatest impact on standard of living. The GIVE program in Kenya also targets very poor households and realizes robustly positive consumption gains, although at a slightly lower range – about 45% of transfer size. One explanation is that because the GIVE program made transfers ranging from 45 to 160 (mean of 79) USD 2012 PPP per month this encouraged greater spending on durable assets over consumption expenditures. This program also explored delivering transfers lump sum rather than every month and found this increased investment over consumption. A notable outlier in the data is the negative findings from the Ghana LEAP program, with a confidence interval of 12 to -185%.[22] The impact of LEAP on household consumption is essentially zero, likely due to low transfer levels and poor payment logistics– two themes that are discussed shortly. However, the LEAP program is not alone in failing to find significant impacts on consumption – the Ethiopia PSNP, the Lesotho LCGP, the Niger NSNP and the Tanzania TASAF, also fail to find statistically significant

[17] Sources: Ward et al. 2010 (Kenya CTOVC), Handa and Park 2013 (Ghana LEAP), Evans et al. 2014 (Tanzania TASAF), Pellerano et al. 2014 (Lesotho LCGP), Seidenfeld et al. 2013 (Zambia ZCGP), Merttens et al. 2013 (Kenya HSNP), Rosas and Sabarwal 2016 (Sierra Leone CFW), Beegle et al. 2015 (Malawi MASAF), Haushofer and Shapiro 2016 (Kenya GIVE), Premand and Del Ninno 2016 (Niger NSNP), Abdoulayi et al. 2015 (Malawi SCTP). Omitted estimates include the following extreme outliers: Malawi SCTP (180% [95%, 265%]) and Ghana LEAP (-86% [-282%, 102%].

[18] For example, see Handa et al 2016 (Malawi SCTP), Evans et al 2014 (Tanzania TASAF), Hamoudi and Thomas, 2005 (South Africa OAP) and Haushofer and Shapiro 2016 (Kenya GIVE).

[19] Rosas and Sabarwal 2016 (Sierra Leone CFW).

[20] Evans and Popova 2017 report that spending on temptation goods decreases on average by 0.19 standard deviations across a study on 19 programs in 10 countries.

[21] Rosas and Sabarwal 2016 (Sierra Leone CFW), Haushofer and Shapiro 2016 (Kenya GIVE) and Pellerano et al 2014 (Lesotho LCGP).

[22] Confidence interval for LEAP omitted from figure given difference in scale for this result.

impacts on consumption indicating that even this first-order outcome is not obtained, at least in the impact evaluations, for several programs.

Our review notes the relevance of food security measures to capture household welfare and equity improvements. Food security objectives are a central part of safety net program design. Indeed, many programs – especially where the transfer unit is in-kind – opt to track food security either as a complement or in place of consumption measures e.g. Kenya CSG, Burkina Faso SC/THR, Niger NSNP, Uganda FUU, TASO and SF/THR and over time Ethiopia's PSNP and SCTPP. While the variety and structure of food security measures limit comparability within our meta-analysis, the food security findings are important highlights. In some cases, evaluations highlight food security increases (Ethiopia PSNP and SCTPP, Niger NSNP, and Uganda FUU and TASO[23]), but no total consumption impacts. Generally, these food security measures are captured through increased dietary diversity, higher food scores, improved anthropometric measures among children and lower self-reports of periods of food insecurity within the household. Most notably, Ethiopia provides a striking example on the long-term evolution of food security outcomes under the PSNP: between 2006 and 2014, there has been a fall in the mean food gap (number of months a household reports food shortages) by 1.87 months (Berhane et al, 2015). The significance of these results is reflected in Ethiopia's most recent poverty assessment, which concluded that the immediate direct effect of transfers provided to rural households through PSNP[24] has reduced the national poverty rate by 2 percentage points in 2011 (World Bank, 2015).

The impact of safety nets on total consumption, food consumption and food security is also captured in the wider international literature (Bastagli et al 2016, Davis et al 2016). Bastagli et al (2016) look at 31 global studies reporting impacts on household food expenditure and find 25 with at least one statistically significant effect, with 23 being a positive increase. The remainder show a decrease owing to a reduction in labor supply and possible prioritization of savings over consumption. They also find variability in the impacts of programs, which ranges from increases of 4.9% for Nicaragua's Attention a Crisis (Macours et al, 2012) to 26% for Nicaragua's Red de Protection Social (Maluccio, 2005), both relative to beneficiaries' baseline food consumption. However, this review does not standardize effect sizes relative to baseline consumption levels or transfer sizes, unless already reported in individual studies, which may mean that the heterogeneity in results is not fully captured. For example, these percentage changes may shadow important differences in the absolute and relative magnitude of transfers to beneficiaries and beneficiaries' initial levels of poverty, which we find in our meta-analysis does play a part program impacts. Corroborating findings on the positive effects on consumption come mainly from Latin America and are included in the reviews of Hagen-Zanker et al (2011), Yoong et al (2012) and Kabeer et al (2012).

A range of evaluations under the African Protection to Production Project find sizeable income effects on non-beneficiaries, as well as direct program beneficiaries (Davis et al 2016).[25] Using a combination of

[23] Berhane et al 2011 (Ethiopia PSNP), Berhane et al 2015 (Ethiopia SCTPP), Premand and Del Ninno 2016 (Niger NSNP), Gilligan and Roy 2016 (Uganda FUU), Rawat et al 2014 (Uganda TASO/WFP).

[24] PSNP alone contributed to 1.6 percentage points reduction in poverty (lifting about 1.4 million people out of poverty) based on a calculation using 1.25 2011 USD PPP as poverty line.

[25] See work also background papers by collaborators at the FAO and UCDavis, including: Ed Taylor, Justin Kagin, Mateusz Filipski, Karen Thome, Ben Davis, Federica Alvani.

survey data collected for both households and businesses within local communities covered by safety nets, as well as comparison non-covered communities, and empirically-founded local economy simulations researchers have made predictions on the impact safety net programs have not only on beneficiaries but also non-beneficiaries. These findings indicate that for each dollar transferred to beneficiaries, non-beneficiaries also see real income increases:[26] 3 to 16 cents in Kenya CTOVC, 30 cents in Zambia ZCGP, 33 cents in Lesotho LCGP, 36 cents in Zimbabwe HSCTP, 39 cents in Ghana LEAP, 26 to 83 cents in Ethiopia SCTPP.[27] These additional income increases are mainly mediated through increased demand for goods and services from the retail and agriculture sectors of local economies, in which other households are involved.

Together with the impacts on beneficiaries, these additional income effects lead to local economy multipliers estimated at 1.08 to 1.84 in real terms, indicating that each dollar transferred to a poor household is predicted to add more than a dollar to total income in the local economy. These set of findings are especially relevant in a low-income setting highlighting linkages between social protection and the rural economy. Spillover effects are not typically addressed in impact evaluations, and have received comparatively less attention in more established literature on cash transfers. Going forward, an area of policy debate concerns how and whether these outcomes can be sustained as an intervention is scaled up nationally. Given the model assumptions used in the local economy CGE models, for example, fixed input prices for goods produced outside communities, we may expect much more moderated multiplier effects when programs are scaled up nationally and prices adjust.

An alternative approach to local economy CGE models is to run simple partial equilibrium simulation models. These models do not attempt to model any equilibrium effects that might occur when programs are scaled up and it is common to interpret them as the immediate impact of programs prior to household and producer responses that help translate program findings into aggregate policy outcomes (Coady, 2006). We run these models for three countries: Ghana, Liberia, and Niger, that have recent household survey data and provide contrasting starting points in terms of safety net coverage. At the time of surveys, fewer than 4,000 households were covered in Liberia in 2014 (less than 5% of poor); the coverage was 37,000 households in Niger in 2014 (about 10% of poor households); coverage was 70,000 households in Ghana in 2012 (about 30% of poor households). These countries also show diversity in size, the sources of fragility, livelihood vulnerability, sectoral composition, and level of economic development. To ensure comparability, all simulations are made assuming monthly transfers to households of $50 (2011 PPP), equivalent to the median amount transferred in programs included in the meta-analysis. Table 1 summarizes information on the value of this transfer in each country.

Table 1: The Value of Transfers, Ghana, Liberia, and Niger

[26] The local economy CGE models consider some inflationary price effects of increased demands as land and capital are fixed limiting immediate increased local supply, but labor is assumed perfectly elastic. The retail sector which sees greatest income spillover effects assumes input prices are set outside the local economy, which helps to moderate inflationary pressures. For a nationwide scale-up of a program this assumption may not be appropriate.
[27] Thome et al. 2014a (Zambia's CGP), Taylor et al. 2014a (Zimbabwe's HSCT), Taylor et al. 2014b (Lesotho's CGP), Thome et al. 2014b (Ghana's LEAP), Kagin et al. 2014 (Ethiopia's SCTPP), Taylor et al. 2013 (Kenya's CTOVC).

	Liberia	*Niger*	*Ghana*
Monthly transfer (2011 PPP U.S. dollars)	50	50	50
Value of transfer per household per year (2016 U.S. dollars)	360	307	332
Value of transfer, % of national extreme poverty line	8.0	7.6	6.2
Value of transfer, % of mean consumption of the extreme poor	18.3	14.9	14.2
Number of households covered at baseline	4,000	37,000	70,000
Number of extreme poor households	87,000	322,000	215,000
Total cost of transfers per year (2016 U.S. dollars, millions)	31.3	98.8	71.4
Notes: Baseline is the survey year (Ghana 2012/2013, Liberia 2014, and Niger 2014)			

Our partial equilibrium simulations use the meta-analysis estimate of an average increase in consumption equivalent to 74% of the transfer value (or $0.74 for every dollar transferred) and assumes that programs are scaled up to the number of households equal to the number of extreme poor households. Recognizing that perfect targeting is not feasible in practice, simulations are included under the assumptions of perfect targeting, imperfect targeting (60% inclusion accuracy) and no targeting at all.

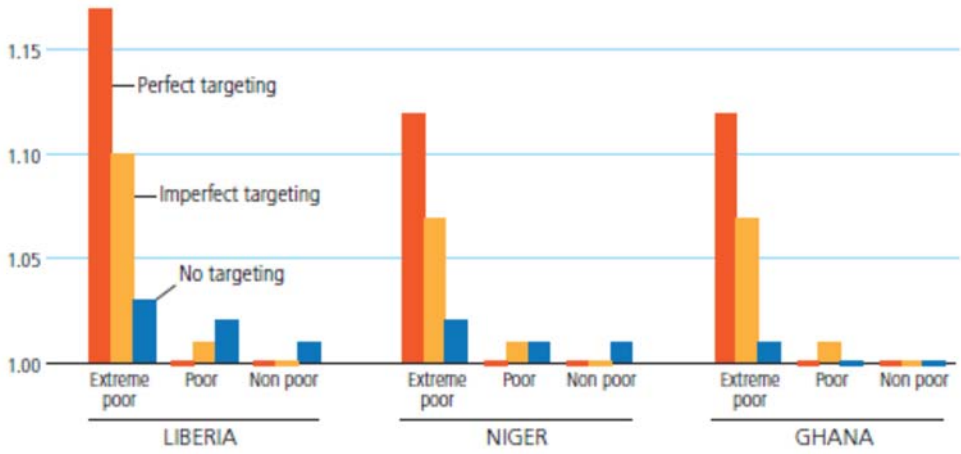

Figure 2: Consumption Impact of 50 USD 2011 PPP per month (baseline=1)

If transfers were perfectly targeted, consumption among the extreme poor would increase in the range of 12-17%. Even relatively modest transfers would have a sizable impact on consumption among beneficiaries. Assuming imperfect targeting, with 60% inclusion accuracy, the consumption gains will be 7% to 10% among the extreme poor. With no targeting, but randomly allocating the safety net would result in, on average, between 0 and 2.7% increase in consumption.

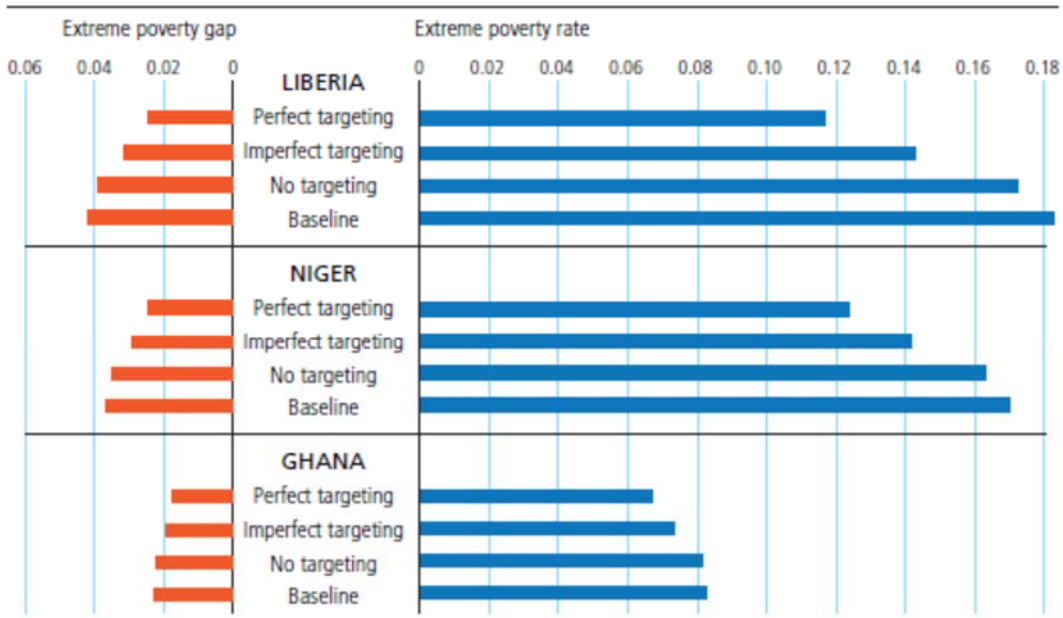

Figure 3: Extreme poverty impact of 50 USD 2011 PPP per month

These consumption gains would generate a decline in extreme poverty rates by as much as 40%. Under perfect targeting, simulated transfers would substantially lower extreme poverty rates, from 8.2% to 6.7% in Ghana, from 18.2 to 11.6% in Liberia, and from 17.0% to 12.3% in Niger.[28] The extreme poverty gap—the mean relative distance of extremely poor households to the extreme poverty line—would fall from 2.2% to 1.7% in Ghana, from 4.2% to 2.4% in Liberia, and from 3.6% to 2.5% in Niger, highlighting the extent of the reduction in extreme poverty achieved through well-designed, successfully implemented safety nets. With imperfect targeting, declines in extreme poverty would be less by about a third. The simulations suggest more modest impacts on the overall poverty rate, since they are based on scaling up to cover the extreme poor, rather than the poor in general.

Maximizing safety net interventions for improved outcomes

The value of the transfer matters. To ensure sizeable impacts on consumption levels, transfer sizes cannot be too small. For example, the low value of the LEAP transfer (24 USD per month or 4% baseline consumption) was identified as an important constraint to the project's success, and was tripled after the evaluation in 2012. The Transfer Project propose the transfer should deliver at least 20 percent of pre-program consumption to generate widespread benefits based on their experiences in Africa.[29] Both the Zambia ZGP and Kenya OVC are in this range at 23% and 21% respectively, and find significant positive program impacts on consumption. The effective value of a transfer is also critical, and this depends on the household size. Multiple evaluations highlight how consumption impacts decrease with household size,

[28] With imperfect targeting, extreme poverty rates would drop to a range of 6.7 percent to 8.1 percent in Ghana, 12.2 percent to 17.9 percent in Liberia, and 12.1 percent to 16.4 percent in Niger.
[29] See Davis and Handa 2015.

especially where benefits are flat e.g. Zambia CG, and Kenya OVC.[30] An option in program design is often to vary benefits according to household size. This is the approach under the Malawi SCT, which also finds significant program impacts, even though on average the transfer size is 11% of pre-program consumption.[31] Finally, a further theme across several evaluations is the rigidity of transfer sizes in high inflation environments. The value of the Kenya OVC, Lesotho CGP and Kenya HSNP transfers were eroded substantially over the two years of the evaluated exposure period. In these different scenarios, programs may look towards indexing the value of a transfer, both to household size and price inflation.[32]

Programs with strongest impacts have clear target groups and strong targeting protocols. For example, the Kenya CTOVC, Lesotho CGP and Malawi SCTP invoked clear eligibility criteria focused on the inclusion of children under 5 or households facing high dependency rations.[33] However, it is noted that even with clear target groups, programs may suffer to achieve desired outcomes owing to weak targeting arrangements. Malawi's SCTP program encountered an uneven application of community targeting arrangements which were seen to dampen results. Under the MASAF program the characteristics of participants differed from eligibility criteria because of differences in how local officials' selected beneficiaries and the opportunity cost of participation.[34] In practice the program was rationed and not targeted towards the food-insecure and this may help explain its insignificant impacts.

The predictability and timing of benefits can strongly determine whether outcomes are positive or negative.[35] In Zambia, 98% of households received payments on time, and this – combined with short walks to payment sites and low transaction costs – helps to explain the program's high success rate, even though transfer sizes were very modest. Similarly, in Kenya's OVC regular payments, the use of post offices and the proximity to pay points were noted as factors leading to strong program impacts. Results in Kenya's HSNP program appear to be heavily driven by the mobile payment logistics used within the program.[36] By contrast, the weak impacts experienced in Ghana LEAP and Lesotho CGP have been largely attributed to irregular payments, with beneficiaries reporting unclear expectations on transfer arrangements.[37]

A growing evidence base suggests that unconditional cash transfers are an effective mechanism for boosting consumption. The programs covered in the meta-analysis are largely based on cash transfers, with just 3 programs imposing a conditionality of work for certain beneficiaries (PSNP, MASAF and SL CFW).[38] From a policy perspective, the findings on unconditional cash transfers are important: they confirm that benefits from this type of programs are overwhelmingly used by beneficiaries to improve the quality of their lives and not on temptation goods (Evans and Popova 2014; Handa et al 2017). Moreover,

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[30] Ward et al. 2010 (Kenya CTOVC), Seidenfeld et al. 2013 (Zambia ZCGP).
[31] Abdoulayi et al. 2015 (Malawi SCTP).
[32] Ward et al. 2010 (Kenya CTOVC), Pellerano et al. 2014 (Lesotho LCGP), Merttens et al. 2013 (Kenya HSNP).
[33] Ward et al. 2010 (Kenya CTOVC), Pellerano et al. 2014 (Lesotho LCGP), Abdoulayi et al. 2015 (Malawi SCTP).
[34] Beegle et al. 2015 (Malawi MASAF).
[35] Seidenfeld et al. 2013 (Zambia ZCGP), Ward et al. 2010 (Kenya CTOVC), Handa and Park 2013 (Ghana LEAP), Pellerano et al. 2014 (Lesotho LCGP).
[36] Merttens et al. 2013 (Kenya HSNP).
[37] Handa and Park 2013 (Ghana LEAP), Pellerano et al. 2014 (Lesotho LCGP).
[38] Hoddinott et al. 2012 (Ethiopia PSNP), Beegle et al. 2015 (Malawi MASAF), Rosas and Sabarwal 2016 (Sierra Leone CFW).

they are sufficiently modest to avoid creating dependency and have been associated with wider local economy benefits (Taylor, Thome, and Filipski 2014; Taylor et al. 2013, 2014a, 2014b; Thome et al. 2014a, 2014b). Cash transfers have also represented an effective response to transient food crises, as evidenced for example by Sierra Leone's Cash for Work Program, Kenya's Cash Transfer for Orphans and Vulnerable Children and Hunger Safety Net Program, and Ethiopia's Productive Safety Net Program.[39] One important caveat in this policy debate is that, while these unconditional cash transfers programs have no enforceable conditions, many feature strong messaging and communication to the extent that beneficiaries often understand that payments are intended for specific purposes, for example, in the Malawi Social Cash Transfer Program, the Lesotho Child Grant Program and the Zambia Child Grant Program.[40] In Lesotho, beneficiaries received messages that the transfers should be spent on children, often at payout points and reinforced within communities (Pellerano et al, 2014).

3.2 Resilience

For the purposes of this analysis, we interpret resilience as the ability of households to manage change, by maintaining initial levels of welfare in the face of shocks or stress. In recent years, resilience has become a key focus in social protection, as by providing a steady source of income, it is anticipated that household's ability to respond to and cope with shocks is strengthened. In turn, households gain the potential to diversity and strengthen their own livelihood options, which can lead to further savings, buffering against future shocks. Impact evaluations have typically not been devised to capture this concept directly, given the unexpected time-varying nature of shocks. In this context, our analysis explores the concept of resilience through a lens of risk management, improved coping strategies and livelihood diversification. We consider outcomes around savings and private transfers for risk management, decreased informal wage work and child labor for improving coping strategies and ownership of productive assets including livestock, land, durables and agricultural inputs for livelihood diversification. It is noted that our classification overlaps with the agenda on productive inclusion, which is returned to in the next section on opportunity.

On risk management, our meta-analysis finds a no significant impact on savings and on private transfers (see figure 4). The mean effect on the incidence of savings is to increase it by 92% relative to baseline level [95% CI: -8 to 193%][41] and the mean effect on the incidence of private transfers is to decrease it by 12% relative to baseline levels [95% CI: -47 to 23%].[42] While these findings may not seem remarkable it is worth noting two points. One, typically savings rates are very low to begin with among populations targeted by safety net programs, since these populations are struggling to cover their day-to-day necessities let-alone save for adverse conditions. The studies included in the meta-analysis, for example, find that only between 5 to 35% beneficiaries save pre-program but are 4 and 20% more likely to be saving than

[39] Rosas and Sabarwal 2016 (Sierra Leone CFW), Ward et al. 2010 (Kenya CTOVC), Merttens et al. (2013), Hoddinott et al. 2012 (Ethiopia PSNP).
[40] Abdoulayi et al. 2015 (Malawi SCTP), Pellerano et al. 2014 (Lesotho LCGP), Seidenfeld et al. 2013 (Zambia ZCGP).
[41] Sources: Ward et al. 2010 (Kenya CTOVC), Evans et al. 2014 (Tanzania TASAF), Daidone et al, 2014 (Lesotho LCGP), Seidenfeld et al. 2013 (Zambia ZCGP), Merttens et al. (2013), Rosas and Sabarwal 2016 (Sierra Leone CFW).
[42] Sources: Gilligan et al. 2008 (Ethiopia PSNP), Ward et al. 2010 (Kenya CTOVC), Handa and Park 2013 (Ghana LEAP), Evans et al. 2014 (Tanzania TASAF), Daidone et al, 2014 (Lesotho LCGP), Merttens et al. (2013), Beegle et al. 2015 (Malawi MASAF), Berhane et al., 2015 (Ethiopia SCTPP), Abdoulayi et al. 2015 (Malawi SCTP).

comparable non-beneficiary households once included in a program. Two, most economic models predict that means-tested social assistance programs lead to lower precautionary savings, for example, if beneficiaries expect that safety nets will respond to unanticipated shocks with greater benefits, reducing the need to self-insure (see Aiyagari 1994) or even the incentive (see Hubbard et al. 1995). However, where studies report the level of savings, such as in the Kenya GIVE program, the IDRC and the Sierra Leone CFW, the value of savings is seen to increase between 9% (CFW) to 92% (GIVE).[43] Furthermore, where heterogeneity analysis is carried out in the TASAF evaluation, the authors indicate that it is the poorest households that are most likely to start saving under the program.[44] This may be taken as evidence that safety-nets are not perceived by individuals as sufficient to reduce their need to self-insure, rather through consistent support they are better able to build their own buffer stock savings.

In crises situations, however, these new savings may be quickly exhausted, as was the situation among drought-affected households under the TASAF program between the midline and endline surveys.[45] Evaluations suggest that households are also using transfers to reduce borrowing and indebtedness, as evidenced under Ghana's LEAP and the IDRC programs when one off additional or lump sum cash payments are transferred, and under the Malawi SCTS where beneficiaries report less need to make purchases on credit.[46] The evidence on credit access is less clear: evaluations reflect on the increased credit-worthiness of transfer recipient households (e.g. Ghana LEAP and Kenya HSNP[47]), but there is little evidence that credit extended has increased. Overall the policy implication is that safety nets can boost savings for improved risk management, but they are not sufficient for households to completely buffer against shocks independently. At the same time, safety net programs are not significantly crowding out private transfers and should not adversely impact other risk management strategies**.**

An important sign of resilience is the reduced reliance on temporary low wage work and the use of child labor for household income. Poor, rural households will often sell more than the optimal amount of labor off their farms to obtain an immediate income source. In Malawi, this type of work is known as *ganyu* and is generally low-wage and casual, and can lead to poverty traps (Devereaux, 1997). From a household production perspective, selling family labor off-farm can be optimal as long as the marginal product of labor off-farm is higher than the marginal product of labor on the farm. However, a growing literature suggests that off-farm labor reflects a coping strategy rather than income maximization (Kerr 2005; Bryceson 2006; Orr et al. 2009; Michaelowa et al. 2010; Cole and Hoon 2013; Fink et al. 2014). Relatedly, the dependence of income from child labor is suboptimal, particularly when it prevents school attendance and can negatively impact their future earnings potential.

Figure 5 highlights the impacts of safety nets on these two outcomes. The mean effect on the wage labor is a decrease of 16% relative to baseline levels [95% CI: -41 to 10%][48] and the mean effect on child labor

[43] Aker, 2013 (DRC IDRC), Rosas and Sabarwal 2016 (Sierra Leone CFW), Haushofer and Shapiro 2016 (Kenya GIVE).
[44] Evans et al. 2014 (Tanzania TASAF).
[45] Evans et al. 2014 (Tanzania TASAF).
[46] Aker, 2013 (DRC IDRC), Handa and Park 2013 (Ghana LEAP), Abdoulayi et al. 2015 (Malawi SCTP).
[47] Handa and Park 2013 (Ghana LEAP), Merttens et al. 2013 (Kenya HSNP).
[48] Sources: Gilligan et al. 2008 (Ethiopia PSNP), Ardington et al., 2009 (South Africa OAP), Handa and Park 2013 (Ghana LEAP), Boone et al., 2013 (Malawi SCTP), Pellerano et al. 2014 (Lesotho LCGP), Seidenfeld et al. 2013

is a decrease of 1% relative to baseline levels [95% CI: -22 to 19%][49]. While neither mean effect is significant, it is important that the evidence is not showing any unintended consequences on these negative coping strategies. Not surprisingly, the programs specifically targeted towards children generally show the strongest effects on reducing child labor including Burkina Faso THR for girls, Lesotho CGP, Ethiopia SCT and the Kenya CTOVC.[50] All these programs have a strong communication strategy advocating for the rights and well-being children, which may be helping to generate these results. Interestingly many of these same programs are also effective at reducing the off-farm wage work in agricultural dependent households. There is also overlap between the programs that show strongest impacts on improved consumption and food security as those that impact these dimensions of resilience, indicating that complementarity in promoting these outcomes with safety nets.

Our review also picked up some important findings on coping strategies that are important in terms of understanding how safety nets protect vulnerable households, but could not be included in the meta-analysis due to lack of a standard way of measuring these strategies. The Ethiopia PSNP, Kenya HSNP, IDRC, Lesotho CGP, and Malawi SCTS and ZCTP programs address issues on coping strategies most directly. The Lesotho evaluation suggests that CGP beneficiaries were better equipped to deal with unanticipated shocks and less likely to engage in disruptive coping strategies around childcare, such as taking them out of school and foregoing health expenditures.[51] The Kenya HSNP and Ethiopia PSNP provide some evidence, though not conclusive, that cash transfers provide partial protection against shocks by enabling some households to avoid distress sales of livestock and other household assets.[52] Similarly, in the IDRC and PSNP, beneficiaries receiving cash transfers reported lower distress sales of household goods.[53] Where it has been measured, such as in the Malawi SCTP and ZCTP evaluations, programs have found reduced risky sexual health behaviors and delayed marriage and pregnancy rates among adolescent girls who were either direct beneficiaries of cash transfers (in the ZCTP) or part of beneficiary households (in the SCTP).[54]

Early work on the topic indicates some tentative evidence for improved psychological well-being among safety net beneficiaries. Our review revealed four studies that measured self-reported state of well-being, often by asking survey participants about their outlook for the current and future life and level of happiness. These studies include evaluations on the Kenya GIVE, Ghana LEAP, Ethiopia PSNP, and Malawi SCTS. In all cases beneficiaries reported a significantly improved level of well-being. While this finding should not be overemphasized, given that beneficiaries on the programs may feel obligated to respond

(Zambia ZCGP), Rosas and Sabarwal 2016 (Sierra Leone CFW), Beegle et al. 2015 (Malawi MASAF), Haushofer and Shapiro 2016 (Kenya GIVE), Asfaw et al., 2014 (Kenya CTOVC), Berhane et al., 2015 (Ethiopia SCTPP).

[49] Sources: Edmonds, 2006 (South Africa OAP), Kazianga et al., 2009 (Burkina Faso SC/THR), Rodrigo, 2012 (Ethiopia PSNP), Handa and Park 2013 (Ghana LEAP), Daidone et al, 2014 (Lesotho LCGP), Merttens et al. (2013), Rosas and Sabarwal 2016 (Sierra Leone CFW), Asfaw et al., 2014 (Kenya CTOVC), Berhane et al., 2015 (Ethiopia SCTPP), Abdoulayi et al. 2015 (Malawi SCTP).

[50] Kazianga et al., 2009 (Burkina Faso SC/THR), Daidone et al, 2014 (Lesotho LCGP), Berhane et al., 2015 (Ethiopia SCTPP), Asfaw et al., 2014 (Kenya CTOVC).

[51] Pellerano et al. 2014 (Lesotho LCGP).

[52] Merttens et al. (2013), Gilligan et al., 2009 (Ethiopia PSNP).

[53] Aker, 2013 (DRC IDRC), Gilligan et al., 2009 (Ethiopia PSNP).

[54] Abdoulayi et al. 2015 (Malawi SCTP), Baird et al., 2012 (Malawi ZCTP).

positively to this question, it is a potentially important finding as recent work has linked stress to weaker cognitive ability, perpetuating levels of poverty (Mani, Mullainathan, Shafir, Zhao 2013).

Whether productive assets indicate a form of livelihood diversification or additional income source is hard to determine as most impact evaluations do not directly show the link in these outcomes. However, for most of the poor livestock holdings, agricultural tools and other household assets are a store of value and a form of savings in themselves. Our meta-analysis finds encouraging evidence to suggest that safety net transfers can successfully boost investment in these productive assets (see Figure 6). The mean effect on the livestock ownership is an increase of 34% relative to baseline levels [95% CI: 17 to 51%][55] and the mean effect on ownership of durables is 10% relative to baseline levels [95% CI: 3 to 18%][56], both statistically significant. Evidence of increased fertilizer or seed use may also indicate a shift into higher risk, higher return agricultural practices, although our findings for this and land ownership are not statistically significant: 24% increase [95% CI: -3 to 51%][57] for fertilizer or seed use and 8% increase [95% CI: -12 to 28%][58] for land ownership.

The studies reporting on livestock ownership typically find investments in small livestock like chickens, ducks and goats. Cattle ownership tends to show smaller increases, if significant at all, and is often attributed to the large expense of buying cattle, the relative rarity of this activity among smallholders, or the perception by beneficiaries that investing in larger livestock may compromise their eligibility for the transfer (for example, in the Malawi SCTS program).[59] Durables include investments in agricultural tools as in Ethiopia's SCTPP, Malawi's SCTP and Zambia's CGP,[60] while in other programs it is more specific to inputs for their household enterprise. There is also evidence of home improvement expenditures, such as purchasing metal or plastic sheeting for roofs and walls (e.g., Sierra Leone CFW, Kenya GIVE, IDRC, Lesotho CGP).[61] Only the Zambia CGP reports a significant positive impact on land operation, which finds that beneficiaries increase operated land by 18% (34 percentage points relative to baseline levels).[62] It may be that the size of transfers and length of participation in programs has not been sufficient to enable substantial investments in land ownership or at least at a level that would be detectable by an impact evaluation. To promote the use of fertilizer and seed use, additional complementary measures may be

[55] Sources: Daidone et al, 2014 (Lesotho LCGP), Seidenfeld et al. 2013 (Zambia ZCGP), Merttens et al. (2013), Rosas and Sabarwal 2016 (Sierra Leone CFW), Asfaw et al., 2014 (Kenya CTOVC), Berhane et al., 2015 (Ethiopia SCTPP), Abdoulayi et al. 2015 (Malawi SCTP).
[56] Sources: Abdoulayi et al. 2015 (Malawi SCTP), Pellerano et al. 2014 (Lesotho LCGP), Rosas and Sabarwal 2016 (Sierra Leone CFW), Beegle et al. 2015 (Malawi MASAF).
[57] Sources: Hoddinott et al. 2012 (Ethiopia PSNP), Abdoulayi et al. 2015 (Malawi SCTP), Daidone et al, 2014 (Lesotho LCGP), Beegle et al. 2015 (Malawi MASAF), Handa and Park 2013 (Ghana LEAP).
[58] Sources: Seidenfeld et al. 2013 (Zambia ZCGP), Ward et al. 2010 (Kenya CTOVC), Pellerano et al. 2014 (Lesotho LCGP), Merttens et al. 2013 (Kenya HSNP).
[59] Abdoulayi et al. 2015 (Malawi SCTP).
[60] Berhane et al., 2015 (Ethiopia SCTPP), Boone et al., 2013 (Malawi SCTP), Seidenfeld et al. 2013 (Zambia ZCGP).
[61] Rosas and Sabarwal 2016 (Sierra Leone CFW), Haushofer and Shapiro 2016 (Kenya GIVE), Aker, 2013 (DRC IDRC), Pellerano et al. 2014 (Lesotho LCGP).
[62] Seidenfeld et al. 2013 (Zambia ZCGP).

required. For example, Ethiopia's PSNP was combined with the Household Asset Building Program, which may have led to the observed strong improvements in the use of fertilizer.[63]

We again use partial equilibrium simulations to consider aggregate impacts of increased investments in productive assets by households, based on results from the meta-analysis. Our simulations assume 10-40% increase in the incidence of livestock ownership and 5-10% increase in the incidence of land ownership (the meta-evaluation revealed average increases of 34% and 8% respectively). Prior to interventions, agriculture was very prevalent in the livelihoods of the extreme poor, and many owned agricultural assets: 20% of the extreme poor in Liberia owned medium to large quantities of livestock, versus 8% among the non-poor (respectively 47% and 17% in Ghana); 85% of the extreme poor in Ghana (97% in Niger) reported ownership of agricultural land.

Assuming programs are well targeted to the poor, simulations indicate that ownership of medium and large quantities of livestock among the extreme poor could rise from 47% to 51–62% in Ghana and from 20% to 22–28% in Liberia. Similarly, poultry ownership, often the first type of livestock acquired by the extreme poor, would increase from 53% to 57–69% in Ghana and from 48% to 53–67% in Liberia. Likewise, well-targeted programs may raise land ownership from 85% to 89–92% in Ghana and from 97% to 100% in Niger.

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It is critical to build safety net programs and delivery capacity during 'good times' to ensure that transfers can be used to promote resilience and respond to shocks. Many of the outcome noted above, were achieved against a backdrop of widespread drought or food price inflation, some of which was unforeseen during program design. For example, in 2012 Tanzania's TASAF program was scaled up from the original plan of 275,000 to 1.1 million households reaching 15% of the total population (9.7% those below extreme poverty line and 5% those expected to experience a period of transient extreme poverty).[64] Similarly, the PSNP successfully scaled up during the Horn of Africa drought in 2011, supporting an additional 3.1 million beneficiaries for 3 months, and extending the duration of transfers for 6.5 million of the existing 7.6 million beneficiaries.[65] The PSNP's response to the drought occurred within two months, contrasting with an average response time through the humanitarian system of eight months. The PSNP's response to the 2011 drought was widely credited with preventing the worst impacts of the drought, leading to comparatively less severe drought impacts within Ethiopia relative to its neighboring countries. The policy implication suggests that a pre-existing safety net will enable a quick and effective scale up of safety nets in times of greatest need.

A reduction in the frequency of transfers and a corresponding increase in their value may secure improved resilience outcomes for productive assets. As previously noted the value and structure of a transfer is critical and policy makers typically advocate for frequent transfers to smooth consumption. The

[63] Hoddinott et al. 2012 (Ethiopia PSNP).
[64] World Bank project documents – TASAF program.
[65] World Bank project documents – PSNP program.

Kenya GIVE evaluation is atypical in testing preferences for "lump-sum" payments.[66] While the GIVE evaluation finds no significant different in consumption among lump-sum vs monthly transfer households, the endline asset holdings of monthly recipient households are significantly lower than those of lump-sum beneficiaries. Monthly recipients, for example, are 12% less likely to acquire a metal roof. Similar results were also seen in other programs when, due to regular payment delays, beneficiaries received larger one-off payments. This finding suggests that monthly recipient households face credit and savings constraints. These constraints may be further compounded by the likelihood that monthly recipients face more frequent requests to share a monthly transfer. As noted in the evaluation, the finding that lump-sum recipient households are more likely to make large investments mirrors that of Barrera-Osorio et al. (2008), who find that bundling the payments of a conditional cash transfer program at the time when children should re-enroll in school increases enrollment rates. Similarly, programs promoting improved agricultural productivity will maximize their impact if benefits are synchronized in a timely seasonal manner. Note, however, that less is known on whether the lumpy transfers are as effective at reducing negative coping strategies in response to unexpected income shocks that households frequently incur. Future research on the choice of lumpy vs regular transfer might usefully focus on this question.

Coordination with complementary programs is important for maximizing resilience, as well as for improving their overall efficiency and effectiveness. In Ethiopia, the increased use of productive assets by beneficiaries of the Productive Safety Net Program occurred in combination with the Household Asset Building Program. The program evaluation concluded that a cash transfer alone may have been inadequate to generate the desired outcomes. This outcome is reflected also in the Lesotho Child Grant Program, which was combined with a Food Emergency Grant, which provided an additional top up benefit to households facing a poor harvest.[67] Although the program evaluation points to the increased use of production inputs and a rise in the value of production, it was unclear if beneficiary households were employing the most efficient approaches.

Strong communication efforts advocating for the rights and well-being of children show large effects in reducing child labor. This outcome leads to additional future impacts on children, particularly if it supports their school attendance, and represents an important rationale for implementing design innovations to support positive educational outcomes among children. Such educational outcomes are shaped by household decisions on child labor and time use, and safety net transfers can play a crucial role in this process.

3.3 Opportunity

In the examination of the evidence on the influence of safety net programs in fostering opportunity, we consider two dimensions: human capital development and productive inclusion. The first dimension, human capital development, involves the recognition that safety nets have long been viewed as a tool for promoting investments in education and health. Well-established conditional cash transfer programs in Latin America, such as Bolsa Família in Brazil and Prospera in Mexico, have the core objective of enabling poor families in rural and urban communities to invest in the human capital of their children by improving outcomes in the education, health, and nutrition of the children (Fiszbein and Schady, 2009). There is a

[66] Haushofer and Shapiro 2016 (Kenya GIVE).
[67] Pellerano et al. 2014 (Lesotho LCGP).

strong evidence base documenting the positive impacts of these programs, including their longer-term effects which vary from positive to more mixed (Baez et al, 2001; Gertler et al, 2012; Behrman et al, 2011). The second dimension, productive inclusion, revolves around the effectiveness of safety nets in promoting a sustained exit out of poverty. Such an exit is fostered by engaging households in more productive activities that lead to higher income trajectories. The previous section touched on this by considering the degree to which safety nets encourage investments in productive assets. This section investigates whether safety net programs have led to higher incomes and earning opportunities among beneficiaries.

Impact evaluations of safety net program have a considerable focus on education, concentrated mainly on short term enrollment and attendance outcomes. Out of the 27 programs covered by the meta-analysis, 13 were found to report on school enrollment rates and 15 on school attendance rates. The mean effect programs have on enrollment is a 7% [95% CI: -2 to 16%][68] increase relative to baseline enrollment rates, and a 6% [95% CI: -6 to 18%][69] improvement in attendance, again relative to baseline (see Figure 7). Neither of these mean effects is statistically significant. However, programs that focus on children as the key beneficiaries, for example, in child grant programs, find stronger results: the mean improvement on attendance is 15% [95%: 0, 29%] and mean improvement on enrollment is 9% [95%: -2, 20%]. One of the most striking result comes from Burkina Faso's Nahouri Cash Transfers Pilot Project, which increased enrollment from 49% to 57% and attendance from 46% to 56%, 17% and 22% increases respectively relative to baseline levels.[70] Improvements in enrollment and school attendance are consistent with other positive impacts detected on educational expenditure for shoes, uniforms and blankets, a key barrier to enrollment and attendance especially at secondary age. For example, educational related expenditures are reported to increase by 16% in Malawi SCTP, 23% in Kenya GIVE, and 16% in Lesotho CGP.[71] Similarly, in Kenya's CSP program, finds that giving a uniform reduced school absenteeism by 6.4 percentage points (43%) from a base of 15% school absenteeism.[72] It is notable that programs targeting poor and vulnerable households more generally, appear to have stronger enrollment rather than attendance outcomes (e.g. Malawi SCT, Tanzania TASAF and Ghana LEAP).[73] This may also be related to the importance of messaging and communications to beneficiaries on what is the intended purpose of a transfer.

A closer look at individual evaluations shows that education gains are especially pronounced at the upper primary school and secondary level, where drop-out rates start to increase. For example, alongside the

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[68] Sources: Abdoulayi et al. 2015 (Malawi SCTP), Evans et al. 2014 (Tanzania TASAF), Merttens et al. (2013), Seidenfeld et al. 2013 (Zambia ZCGP), Akresh et al., 2013 (Burkina Faso NCTPP), Alderman et al., 2008 (Uganda SF/THR), Robertson et al., 2013 (Zimbabwe MHIV), Evans et al., 2009 (Kenya CSP), Ward et al. 2010 (Kenya CTOVC), Kazianga et al., 2009 (Burkina Faso SC/THR), Rosas and Sabarwal 2016 (Sierra Leone CFW), Baird et al., 2011 (Malawi ZCTP), Premand and Del Ninno 2016 (Niger NSNP), Edmonds, 2006 (South Africa OAP).

[69] Sources: Abdoulayi et al. 2015 (Malawi SCTP), Evans et al. 2014 (Tanzania TASAF), Berhane et al., 2015 (Ethiopia SCTPP), Handa and Park 2013 (Ghana LEAP), Akresh et al., 2013 (Burkina Faso NCTPP), Kazianga et al., 2009 (Burkina Faso SC/THR), Pellerano et al. 2014 (Lesotho LCGP), Seidenfeld et al. 2013 (Zambia ZCGP), Ward et al. 2010 (Kenya CTOVC), Alderman et al., 2008 (Uganda SF/THR), Rosas and Sabarwal 2016 (Sierra Leone CFW), Baird et al., 2011 (Malawi ZCTP), Premand and Del Ninno 2016 (Niger NSNP).

[70] Akresh et al., 2013 (Burkina Faso NCTPP).

[71] Haushofer and Shapiro 2016 (Kenya GIVE), Pellerano et al. 2014 (Lesotho LCGP), Abdoulayi et al. 2015 (Malawi SCTP).

[72] Evans et al., 2009 (Kenya CSP).

[73] Abdoulayi et al. 2015 (Malawi SCTP), Evans et al. 2014 (Tanzania TASAF), Handa and Park 2013 (Ghana LEAP).

impacts reported above children aged 15-19 were 15% more likely to complete higher education in Tanzania and enrollment rates for children aged 13-17 were 10% higher in Lesotho's CGP.[74] Many evaluations reporting no impacts for younger children, identified strong outcomes for older age children. For example, secondary school enrollment increases by 7% in Kenya OVC.[75] In South Africa's CSG, adolescents in households currently receiving the grants for other younger children in the household were absent 2.2 fewer days than adolescents in households with no grants.[76] Having said this, supply-side constraints and higher financial barriers remain considerable constraints in secondary school progression – an issue noted especially in the Lesotho CGP experience.[77]

Two widely cited evaluations look at the specific role of school feeding, comparing different modalities of at-school meals versus take-home rations, but do not find consistent effects (Alderman et al, 2008, Katzianga et al, 2009). In the Uganda Food for Education Program, neither intervention has a significant impact on primary enrollment, but both programs had large impacts on attendance and at upper primary level (grades 6 and 7), take-home rations had significantly larger impacts than school-feeding. On the other hand, the Burkina Faso program, both interventions increase female enrollment by 5%, but have variable impacts on attendance, dependent on the labor constraints within families: absenteeism only decreased in families with relatively large child labor supply. In addition, take-home rations increased anthropometric measures for younger siblings of beneficiaries aged between 12 and 60 months, i.e., they increased weight-for-age by 0.38 standard deviations and weight-for-height by 0.33 standard deviations. More recently, Gilligan and Roy (2016) conclude that food has no significant role to boost school attendance among different age cohorts but may elicit cognitive gains among preschool children.

The existing evidence, both globally and within Africa, suggests that conditions can strengthen the educational impacts of safety net programs, but that programs without conditions are also effective at improving school attendance and enrollment. The most thorough prior analysis on this is the earlier mentioned systematic review by Baird et al, 2013. This covered 35 programs, 8 in Africa, of which 26 were conditional cash transfer programs, 5 were unconditional cash transfer programs and 4 included both conditional and unconditional arms of the program. As noted earlier, they find that conditional and unconditional cash transfer programs both improve school enrollment and attendance. Programs in which the conditionality is explicitly monitored and enforced show about a 35 percent improvement in the odds of enrollment relative to programs without any schooling conditions. However, in programs where conditions are not enforced, there is no difference in impacts – both on average achieve positive significant impacts. Within our analysis, we find that 4 programs have conditions associated with schooling, 8 have no conditions and 3 programs had both conditional and unconditional components.[78] Of the programs with explicit conditions for schooling, 5 out of 7 report significant impacts on attendance and 3 out of 6 report significant impacts on enrollment. On the other hand, of the programs without

[74] Evans et al. 2014 (Tanzania TASAF), Pellerano et al. 2014 (Lesotho LCGP).
[75] Ward et al (2010).
[76] DSD et al., 2012 (South Africa CSG).
[77] Pellerano et al. 2014 (Lesotho LCGP).
[78] **With conditions**: Burkina Faso (SC/THR), Kenya (CTOVC), Uganda (SC/THR), Tanzania (TASAF); **without conditions**: South Africa (OAP), Kenya (CSP, HSNP), Ghana (LEAP), Lesotho (LCGP), Zambia (ZGCP), Sierra Leone (CFW), Niger (NSNP), Malawi (SCTP); **both with conditions and without**: Burkina Faso (NCTPP), Malawi (ZCTP), Zimbabwe (MHIV).

explicit schooling conditions, 7 out of 11 report significant impacts on attendance and 3 out of 9 report significant impacts on enrollment.[79] This suggests that, like the results of by Baird et al, conditions may help to strengthen educational impacts of safety programs. This result is reinforced by two studies on programs with both conditional and unconditional components: the Malawi's Zomba Cash Transfer Program Pilot found the strongly enforced conditional cash transfer (CCT) arm obtained a large gain in enrollment and a modest yet significant advantage in learning, and the Burkina Faso Nahouri Cash Transfers Pilot Project found that CCTs had a greater impacts than unconditional cash transfers (UCTs) for targeting marginal children not enrolled already in school or less likely to enroll, and an greater impact attendance for all children.[80] The other study, Zimbabwe's HIV Prevention Project, found similar positive significant impacts for both UCTs and CCTs on school attendance.

Conditions, however, may not always be appropriate for programs in Africa. For example, if access to education is not guaranteed or if monitoring and enforcing conditions would be inefficiently expensive. In these situations, programs may wish to consider 'implicit conditoinality' (Pellerano et al., 2014; Schuring, 2010), as there is evidence that perceptions of conditions (Schady and Araujo, 2006) and encouragement of certain behaviors and service use (Benhassine et al., 2013) can influence program outcomes. Evidence from the programs covered in this review appear to strongly support this conclusion. Four of 17 programs covered in the meta-analysis are designed in such a way that beneficiaries perceive that the transfer is conditional on a certain behavior.[81] Three of these programs reported statistically significant results in increasing enrollment or attendance.[82] This was achieved through strong messaging and social marketing. Notably, unlike the programs with strongly enforced conditions, each of these programs have advanced towards cash transfers scaled up at the national level. Thus, there may be institutional characteristics to consider when using CCTs in a low-income setting like Africa. Pellerano et al. (2014) elaborate on this point, suggesting that the feasibility of conditioning will depend on the adequacy of public services, scale-up capacity, cost-effectiveness of 'explicit' conditionalities, and political feasibility.

The meta-analysis is more limited concerning health outcomes, reflecting both the demand and supply side constraints and the speed at which program impacts can be realized. Our meta-analysis found 9 studies reporting on healthcare expenditures, with a mean effect of 13% increase in monthly spending but this result was not significant [95% CI: -23% to 48%].[83] Studies finding positive impacts include Kenya's HSNP and Zambia's CGP. In Kenya's HSNP, the evaluation notes that households spend more on health per capita without negative impacts on food consumption or asset retention.[84] In Zambia, approximately 5% of transfers are related to health and hygiene, and there is some evidence of impact on young children

[79] Here we report significance at 10%-level as significant.
[80] Baird et al (2011), Akresh et al (2013).
[81] Lesotho's Child Grant Program, Malawi's Social Cash Transfer, Niger's Safety Net Project, Zambia's Child Grant Program.
[82] Not surprisingly, Niger's Safety Net Project did not result in significant primary educational outcomes, because it focused on early childhood development, and children under the age of 5.
[83] Sources: Ward et al. 2010 (Kenya CTOVC), Evans et al. 2014 (Tanzania TASAF), Pellerano et al. 2014 (Lesotho LCGP), Seidenfeld et al. 2013 (Zambia ZCGP), Merttens et al. (2013), Rosas and Sabarwal 2016 (Sierra Leone CFW), Haushofer and Shapiro 2016 (Kenya GIVE), Premand and Del Ninno 2016 (Niger NSNP), Abdoulayi et al. 2015 (Malawi SCTP).
[84] Merttens et al. 2013 (Kenya HSNP).

through improved feeding and reductions in wasting.[85] This evidence suggests that transfers can have the potential to enable some immediate health outcomes and this finding is also supported by some indicators around food security and dietary diversity. Yet our meta-analysis shows that the results so far for health expenditures are not on average significant and where positive impacts are obtained, it is hard to determine why.

The impact on safety nets and early childhood development is an emergent area of focus of programs and their accompanying evaluations. To date the literature has placed considerable interest on nutrition status, as measured by different anthropometric measures. Again, however, this is an outcome where the impact evaluation literature shows mixed results. Under Kenya's HSNP and CTOVC programs there is little evidence on child nutritional status, although in both cases the results are presented with considerable caution.[86] Ward et al (2010) conclude that anthropometric status, will reflect complex and multiple influences, and take time; whereas other outcomes occur more quickly. Merttens et al (2013) highlight: (i) reservations on quality of anthropometric data gathered, which is widely acknowledged as a challenge, (ii) time-varying external factors, and (iii) sample size is relatively small making it hard to detect significant effects. Notably, there are several impact evaluations where anthropometric information has not been collected, for example, in Tanzania's TASAF.[87] Over time, programs have evolved with a more deliberate focus on early childhood aspects with programs such as Niger's NSPP showing how behavioral accompanying measures lead to changes in nutrition practices related to exclusive breastfeeding and complementary feeding, which contribute to improve food security among children.[88]

There is no evidence for safety net programs dis-incentivizing own farm work and other forms of self-employment (see Figure 8). Our meta-analysis considered whether safety net programs had impacts on own-farm self-employment and business ownership. For own-farm self-employment, 6 programs reported findings with a mean increase of 2%, relative to baseline levels, but this finding was not significant [95% CI: -8 to 13%].[89] For business ownership, multiple studies (10) reported on this and there was a high degree of heterogeneity in impacts. Although, the mean effect was insignificant - 69% increase [95% CI: -12 to 149%][90], several studies find sizeable positive impacts, such as Sierra Leone's CFW and Zambia's CGP.[91] It is Malawi's SCTP that finds the strongest impacts on own-farm work, which increases by 15 percentage points, from a baseline level of 64% self-employed.[92] Reflecting back on the discussion on resilience, we observe that there are some correlations between programs that see decreased

[85] Seidenfeld et al. 2013 (Zambia ZCGP).
[86] Merttens et al. (2013), Ward et al (2010).
[87] Evans et al. 2014 (Tanzania TASAF).
[88] Premand and Del Ninno 2016 (Niger NSNP).
[89] Sources: Boone et al., 2013 (Malawi SCTP), Daidone et al, 2014 (Lesotho LCGP), Seidenfeld et al. 2013 (Zambia ZCGP), Merttens et al. (2013), Haushofer and Shapiro 2016 (Kenya GIVE), Asfaw et al., 2014 (Kenya CTOVC).
[90] Sources: Rosas and Sabarwal 2016 (Sierra Leone CFW), Merttens et al. (2013), Gilligan et al., 2009 (Ethiopia PSNP), Seidenfeld et al. 2013 (Zambia ZCGP), Abdoulayi et al. 2015 (Malawi SCTP), Asfaw et al., 2014 (Kenya CTOVC), Haushofer and Shapiro 2016 (Kenya GIVE), Handa and Park 2013 (Ghana LEAP), Daidone et al, 2014 (Lesotho LCGP), Berhane et al., 2015 (Ethiopia SCTPP).
[91] Rosas and Sabarwal 2016 (Sierra Leone CFW), Seidenfeld et al. 2013 (Zambia ZCGP).
[92] Boone et al., 2013 (Malawi SCTP).

dependence on off-farm wage work and an increased allocation of time to their self-employment activities. For example, while the ZCGP decreases the share of households with an adult engaged in wage labor by 9 percentage points - an impact that is stronger for females of working age – and the share of beneficiary households operating a non-agricultural enterprise increases by 17 percentage points compared with control households.[93] Another resilience related finding is that under the OAP pension-recipient households are found to be more likely to have a prime-age adult who has migrated from the household and is working.[94] The opportunity for households to send a household member to live and work elsewhere was also observed under the Sierra Leone CFW and IDRC programs and may generate an important new, higher source of income to support the rest of the household.[95]

In households where all types of work decrease, program assistance may be relaxing important labor constraints and enabling a reallocation of time to caregiving or recuperation. For example, in the Kenya CTOVC and for females in the PSNP, where studies find significant negative impacts, these impacts seem to be for specific beneficiary groups, such as particularly labor-constrained households.[96] For these beneficiaries, the reduction in their provision of time to work may be optimal within the household if it allows more time to be allocated to other beneficial household tasks like childcare. Furthermore, in the CTOVC program there were many instances of elderly caregivers as the sole providers for young OVCs. For these households, over the long term a small reduction in self-employment may even be cost-efficient if it enables for them to remain in better health and continue to care for children. In summary, there is sparse evidence to suggest any detrimental impacts of programs on the willingness of beneficiaries to work. Rather the limited evidence that exists on this outcome indicates the opposite - beneficiaries are more likely to be working on their own farms or businesses.

Evidence for expansion into business activities reconciles with programs that also see increases in productive assets. 10 programs across 7 countries report impacts on business ownership or initiation among beneficiary households. Of these programs 6 find significant positive impacts: Zambia's CGP, Malawi's SCTP, Kenya's HSNP and CTOVC (for female-headed households), Sierra Leone's CFW program and Ethiopia's PSNP (during the months when no public works activities being carried out).[97] A further 4 programs (Ethiopia's SCTPP, Lesotho's CGP, Kenya's GIVE and Ghana's LEAP) look at this outcome but fail to detect a significant impact.[98] Many of the programs finding evidence of expansion of business activities, such as Zambia's CGP, Malawi's SCTS, Kenya's HSNP and CTOVC (for female-headed households) and Sierra Leone's CFW program, are those that also find evidence of household investments in productive assets. Of some concern are the lack of prominent impacts across the more established Public Works programs in the sample, which include Malawi's MASAF which found no impact on wage employment and did not report on self-employment. To some extent the lack of significant impact may be explained by the

[93] Seidenfeld et al. 2013 (Zambia ZCGP).
[94] Ardington et al., 2009 (South Africa OAP).
[95] Rosas and Sabarwal 2016 (Sierra Leone CFW), Aker, 2013 (DRC IDRC).
[96] Gilligan et al. 2008 (Ethiopia PSNP), Asfaw et al., 2014 (Kenya CTOVC).
[97] Seidenfeld et al. 2013 (Zambia ZCGP), Abdoulayi et al. 2015 (Malawi SCTP), Merttens et al. (2013), Asfaw et al., 2014 (Kenya CTOVC), Rosas and Sabarwal 2016 (Sierra Leone CFW), Gilligan et al., 2009 (Ethiopia PSNP).
[98] Berhane et al., 2015 (Ethiopia SCTPP), Daidone et al, 2014 (Lesotho LCGP), Haushofer and Shapiro 2016 (Kenya GIVE), Handa and Park 2013 (Ghana LEAP).

short-term nature of these programs, and the lack of labor market opportunities in low income rural settings. The findings in Malawi appear to blend poor design (low transfer value, limited employment days), with weak implementation (irregular project delivery, low asset creation).

For earnings, our meta-analysis finds a significant positive impact of increasing monthly earnings by 51% [95% CI: 15 to 87%][99], based on the results of 6 studies (see Figure 8). Increased incomes and higher agricultural yields also correlate with increases in productive assets. Increases in the yield of agricultural harvests and the value of sales were found in the Ethiopia SCTPP, the Malawi SCTP and the Zambia ZCGP, where beneficiaries also reported increased ownership of agricultural tools.[100] Higher earnings were also reported in the Lesotho GCP, where beneficiaries had purchased both seeds and fertilizers, and in the Kenya GIVE and Sierra Leone's CFW, where there were increases in household asset ownership.[101] However, out of the 27 programs covered by this meta-analysis, of which 20 reported some outcomes on productive assets, only 6 report significant earnings or productivity increases. This does call into question the ability for all safety net programs to obtain the desired productive impacts they may hope for.

Maximizing safety net interventions for improved outcomes

Explicit design modifications to motivate positive changes in behavior are critical. To enhance the possibility of realizing program impacts on the emergence of new opportunities for improved human development and productive inclusion, additional messaging, a positive nudge to promote behavior change, or more fine-tuned conditionality may be needed. The findings on school attendance and enrollment are illustrative. Several countries incorporated strong messaging so that beneficiaries would perceive the development intent of the programs, especially the cash transfers. This was so, for example, in the Lesotho Child Grants Program, the Malawi Social Cash Transfer Program, and the Niger Safety Net Project.[102] It seems the safety net transfers alone will not be sufficient to shift household decisions on education investments, for instance. The nature and enforcement of conditionality can be quite soft in many cases, especially considering capacity constraints on adequately monitoring and enforcing the conditionality, as well as on ensuring reliable service delivery.

Reducing supply-side constraints is central to the identification of new pathways to longer-term opportunities. A recurrent lesson from the program evaluations and ongoing operations is that momentum is important within programs to shift from the provision of small, discrete cash transfers to large-scale programs with complementary activities, primarily centered on human development and productive inclusion. To achieve such a shift, the access to and quality of local services become central as

[99] Sources: Pellerano et al. 2014 (Lesotho LCGP), Seidenfeld et al. 2013 (Zambia ZCGP), Abdoulayi et al. 2015 (Malawi SCTP), Rosas and Sabarwal 2016 (Sierra Leone CFW), Haushofer and Shapiro 2016 (Kenya GIVE), Asfaw et al., 2014 (Kenya CTOVC).
[100] Berhane et al., 2015 (Ethiopia SCTPP), Abdoulayi et al. 2015 (Malawi SCTP), Seidenfeld et al. 2013 (Zambia ZCGP).
[101] Pellerano et al. 2014 (Lesotho LCGP), Haushofer and Shapiro 2016 (Kenya GIVE), Rosas and Sabarwal 2016 (Sierra Leone CFW).
[102] Pellerano et al. 2014 (Lesotho LCGP), Abdoulayi et al. 2015 (Malawi SCTP), Premand and Del Ninno 2016 (Niger NSNP).

instruments of improvement in outreach and program take-up. This requires clarity across all institutional arrangements and a clear assessment of the supply of services from the launch of a project. This implies coordination with sectoral ministries, but also greater coordination in public financial management and governance to ensure the integrity and transparency of delivery in multi-sectoral systems.

A multidimensional poverty reduction approach may be better suited than a traditional safety net approach to supporting productive inclusion. The meta-analysis suggests that, for the sample of African countries, safety nets are not distorting labor market outcomes, but they are also not equipping beneficiaries adequately to participate fully in productive activities. While some results are promising, simple participation in a safety net program does not guarantee beneficiaries a pathway out of poverty. Meanwhile, several approaches are emerging that may better foster the productive characteristics of low-income households in the African context. First, there is considerable focus on—as well as confusion about—the graduation of beneficiaries out of safety net programs. The findings of impact evaluations are limited on this issue. An important recent study on the BRAC Targeting the Ultra Poor Program provides encouraging evidence on a multifaceted graduation approach evaluated across six countries, including Ethiopia and Ghana in the African region (Banerjee et al. 2015). Although outcomes varied by country, the overall outcomes were both promising and persistent. The study concludes that beneficiaries spent an average of 17.5 more minutes a day working, mostly tending to livestock, 10 percent more than their peers. Most strikingly, the study argues that, despite the heavy unit cost of the program, the program would have benefits of between 1.3 and 4.3 times the expenditure. If such programs can truly graduate beneficiaries from poverty, then the cost may be justifiable vis-à-vis more permanent safety net transfers. However, important work needs to be done to evaluate whether this type of intervention can be taken to scale and still obtain as strong results as with pilot populations.

In the future, both planned and ongoing safety net programs might consider how to integrate complementary interventions to boost productive and employment outcomes. It is important to note that the productive employment impacts analyzed in our meta-analysis relate to traditionally conceived safety net interventions. In recent years there has been growing focus on how large cash grants – typically blended with labor market activation, skills training – can lead to improved employment opportunities for select groups e.g. youth. Unlike traditional safety net interventions, the core objective surrounding such programs are employment creation. For example, the Youth Opportunities Program in Uganda provides a one-time grant to groups of youth, worth roughly $382 per member, sees increases in business assets by 57%, work hours by 17%, and earnings by 38% (Blattman et al., 2013). Many also formalize their enterprises and hire labor.

4. Discussion

The primary purpose of a safety net program is to provide for a minimum level of well-being and help extremely poor and vulnerable households meet their daily basic needs. As shown in the meta-analysis, consumption rises an average of $0.74 and food consumption expands an average of $0.36 per dollar transferred. These findings are complemented by improvements in food security indicators and increases

in dietary diversity. The findings highlight how transfers, especially in cash, represent an opportunity to improve the quality of life. The simulations show that the best results on reducing extreme poverty are achieved if programs are accurately targeted and if they can generate multiplier effects on the real incomes of beneficiaries. This review of 27 programs across Africa points out specific design and implementation considerations that may maximize desired outcomes:

- **Ensure that transfers are large enough and adjust based on inflation**. Based on global experience and the impact evaluations included in this analysis, a good 'rule of thumb' is that the transfer should deliver at least 20 percent of pre-program consumption in order to generate widespread benefits. Furthermore, in high-inflation environments, maintaining the real value of transfers is important.
- **Programs with the strongest impacts have clear target groups and targeting protocols**. Targeting often involves categorical and easily interpretable inclusion criteria, such as the inclusion of children under 5 or households facing high dependency rations, as in the Malawi SCTP.
- **The predictability and timing of benefits can strongly determine consumption outcomes.** In the Zambia CGP, 98% of households received payments on time. Combined with short walks to payment sites and low transaction costs, the consistent timing of payments helps to explain the program's high success rate, despite rather modest transfer sizes. By contrast, the weak impacts of the Ghana LEAP and Lesotho CGP programs have largely been attributed to irregular payments, with beneficiaries reporting unclear expectations on when transfers would arrive.

A further objective of safety nets is to promote resilience. Broadly, resilience can be understood as the ability of households to respond to and cope with shocks without resorting to negative coping strategies. Impact evaluations have typically not been devised to capture this concept well. In this context, our analysis explores the concept of resilience through the lens of risk management (including savings and private transfers), improved coping strategies (reductions in informal wage work and child labor), and livelihood diversification (ownership of productive assets). The meta-analysis evidence is strongest for livelihood diversification, and it is weaker for the impact of safety nets on risk management and improved coping strategies. Lessons from both our meta-analysis and simulations include:

- **Build safety net programs during 'good times' to ensure that transfers can be used to promote resilience and to respond to shocks.** Both the Tanzania TASAF and the Ethiopia PSNP have been able to successfully and speedily scale up their safety net programs during periods of widespread drought and food price inflation.
- **Productive assets are particularly valuable to extremely poor households – those most dependent on agriculture.** Our meta-analysis and partial equilibrium simulations indicate the potential of safety nets to boost the incidence of productive asset ownership among these households.
- **The size and frequency of transfers can have opposing impacts on different aspects of resilience.** Large, lump-sum payments have had greater impacts on durables and productive asset expenditures. On the other hand, programs most effective at reducing negative coping strategies have tended to deliver smaller, regular transfers to beneficiaries.

- **Coordination with complementary programs is particularly important.** The meta-analysis finds that multiple programs improved resilience while achieving other positive outcomes through complementary programs or accompanying measures. Examples include Ethiopia's Household Asset Building Program, which occurred alongside the PSNP, and Lesotho's Emergency Food Grant Program, which occurred alongside their CGP Child Grant Program.

It is also hoped that safety nets will have intergenerational impacts on labor productivity through boosting education and health outcomes of children in beneficiary households. Our findings indicate that safety net programs seem to have the most impact in enhancing access among extremely poor households rather than access overall, and that educational impacts can be strengthened through strong messaging to beneficiaries about program intentions. However, to realize these gains, careful planning is required to ensure the quality of basic services and to address barriers to entry. Beyond addressing supply-side constraints, explicit design modifications to motivate behavior change can be effective. To enhance the possibility of realizing opportunities for improved human development and productive inclusion, there should be additional messaging, a nudge toward new behavior, or relevant conditionality. The findings on school attendance and enrollment are illustrative. The nature and enforcement of conditionality can be quite soft in many instances, especially considering capacity constraints in monitoring and enforcement, as well as in ensuring reliable service delivery.

Another goal of safety nets is ultimately to engage households in more productive activities that lead to higher income trajectories. Beyond increased ownership of productive assets and livelihood diversification, safety nets hope to move households out of poverty, or at least to a less extreme level of vulnerability. The meta-analysis does not find detrimental impacts of programs on the willingness of beneficiaries to work, and the limited evidence on the topic suggests the opposite. Beneficiaries are more likely to launch or expand business activities or to work more on their own farms while avoiding labor that may be damaging to their health. While more research is still needed to understand the exact pathways to stronger outcomes, our findings suggest the following:

- **A multi-dimensional approach may be better suited to supporting productive inclusion than a traditional safety net approach.** For the sample of African countries at hand, safety nets are neither distorting labor market outcomes nor fully equipping beneficiaries to optimally participate in productive and income-earning activities. On the other hand, recent work focusing on the BRAC Graduation approach provides encouraging evidence on a multifaceted graduation program across six countries, including Ethiopia and Ghana. These programs integrate a combination of accompanying interventions with income support and have shown strong results in various pilots.
- **In the future, both planned and ongoing safety net programs might consider how to integrate complementary interventions to boost productive and employment outcomes.** In recent years, there has been growing focus on how large cash grants – typically blended with access to savings and credit, basic financial skills, and on-the-job or apprenticeship training – can lead to improved employment opportunities for select groups such as youth.

Summary of Meta-Analysis Results

Outcome	Outcome Name	Outcome Description	Mean Estimate	95% Confidence Interval	No. of Studies	Signi-ficance
Equity	Consumption	value: consumption, month	0.74	[0.09, 1.39]	7	***
	Food consumption	value: food, month	0.36	[0, 0.71]	9	**
Resilience - assets	Livestock	dummy: livestock	0.34	[0.17, 0.51]	8	***
	Land	dummy: land	0.08	[-0.12, 0.28]	4	
	Durables	dummy: durables	0.10	[0.03, 0.18]	4	***
	Fertilizer/seed use	dummy: use fertilizer	0.24	[-0.03, 0.51]	5	*
Resilience - negative coping strategies	Child labor	dummy: child labor	-0.01	[-0.22, 0.19]	10	
	Wage employment	dummy: wage labor	-0.16	[-0.41, 0.10]	11	
Resilience - savings and transfers	Savings	dummy: savings	0.92	[-0.08, 1.93]	7	*
	Private transfers	dummy: transfers received	-0.12	[-0.47, 0.23]	9	
Opportunity - education	School attendance	dummy: attendance	0.06	[-0.06, 0.18]	15	
	School enrollment	dummy: enrollment	0.07	[-0.02, 0.16]	13	
(child focused programs only)	School attendance	dummy: attendance	0.15	[0, 0.29]	7	*
	School enrollment	dummy: enrollment	0.09	[-0.02, 0.2]	6	*
Opportunity - healthcare	Healthcare usage	value: health spending, month	0.13	[-0.23, 0.48]	9	
Opportunity - labor productivity	Employment	dummy: self-employed agriculture	0.02	[-0.08, 0.13]	6	
	Earnings	value: income, month	0.51	[0.15, 0.87]	6	***
	Business	dummy: business	0.69	[-0.12, 1.49]	10	*
	Income multiplier		1.41	[1.21, 1.62]	6	***

*** - 1% significance level; ** - 5% significance level; * - 10% significance level

Figures

Figure 2: Total and Food Consumption Meta-Analysis Results

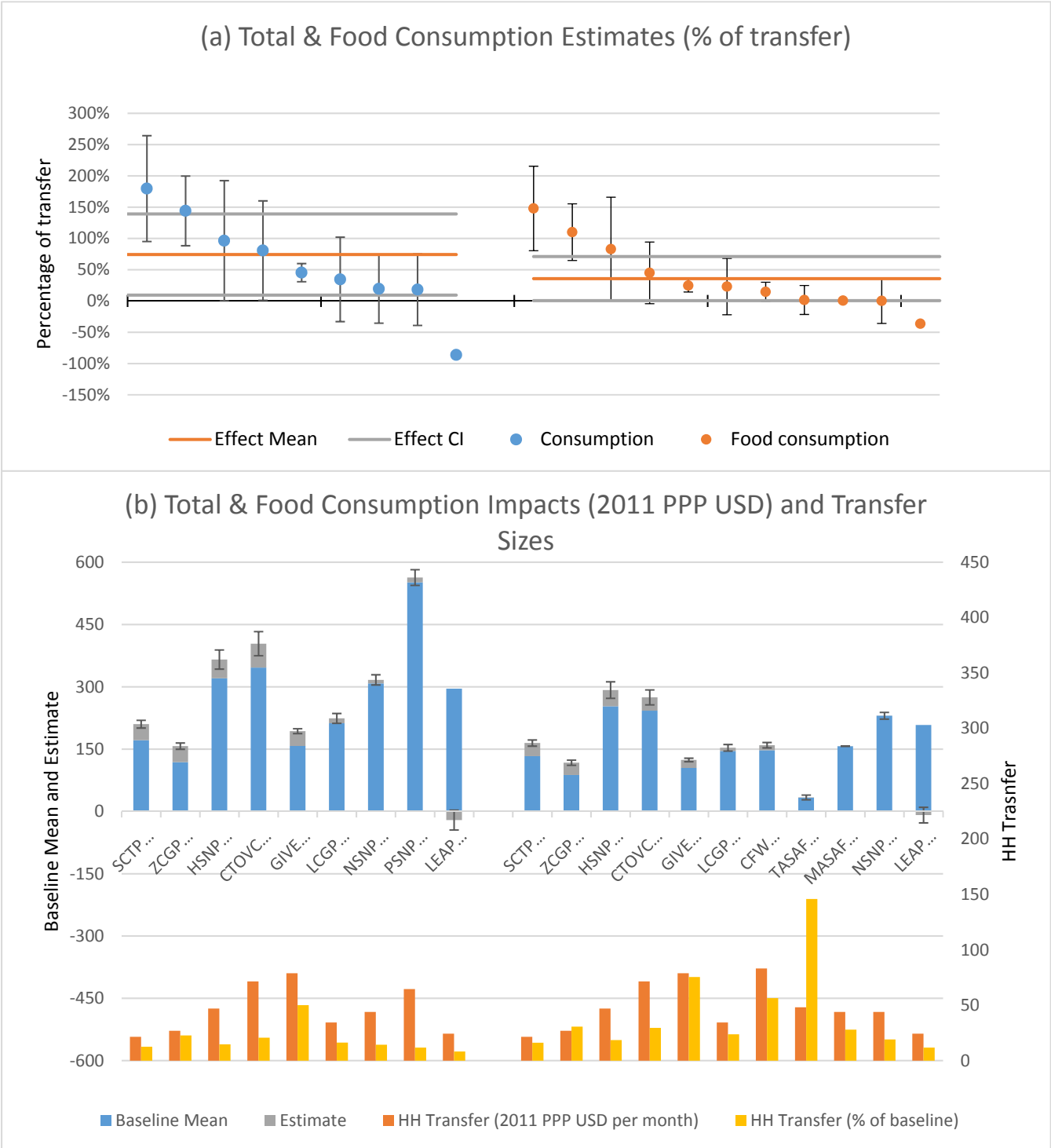


Figure 4: Savings and Private Transfers Meta-Analysis Results

Figure 5: Wage and Child Labor Meta-Analysis Results

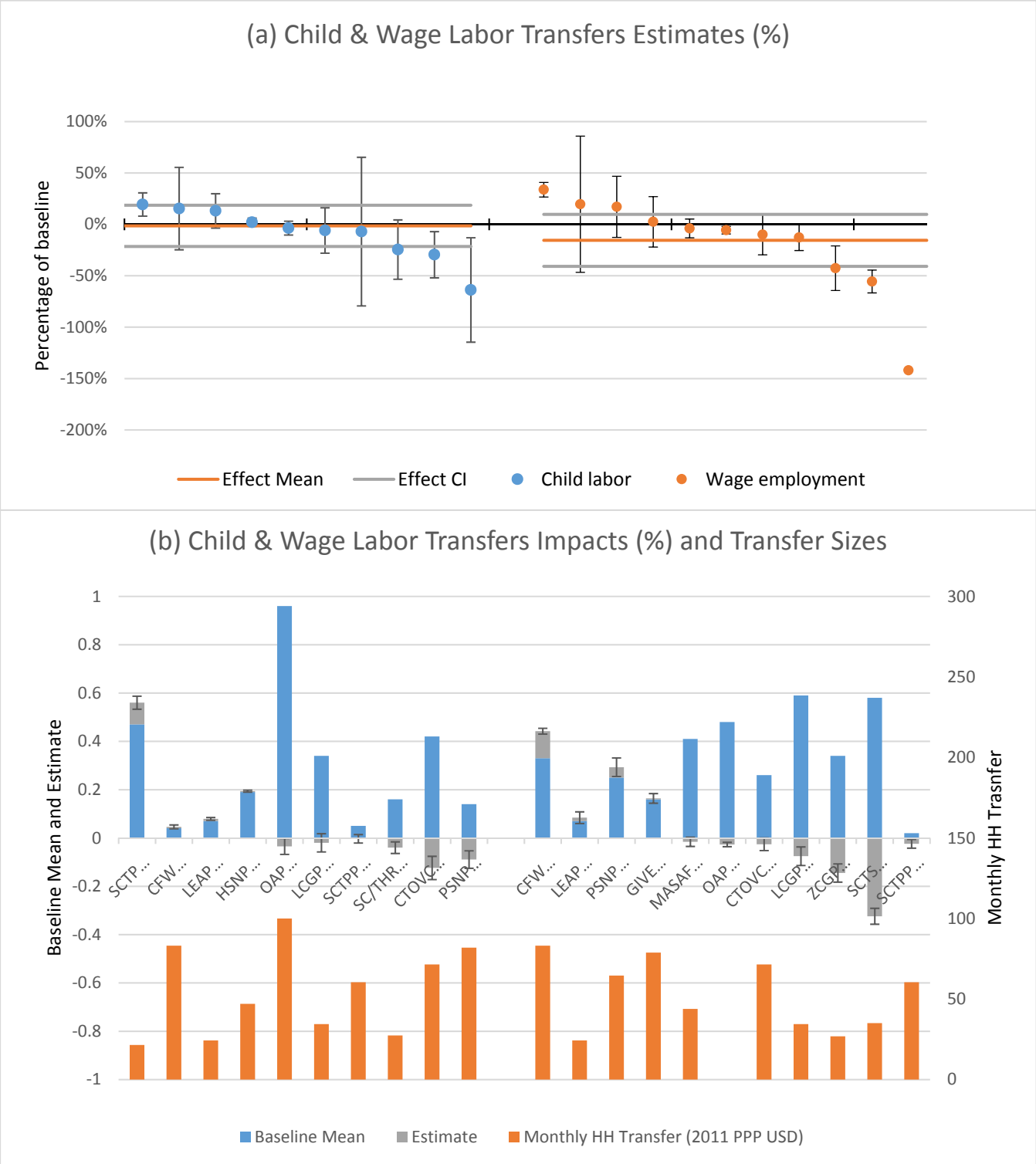
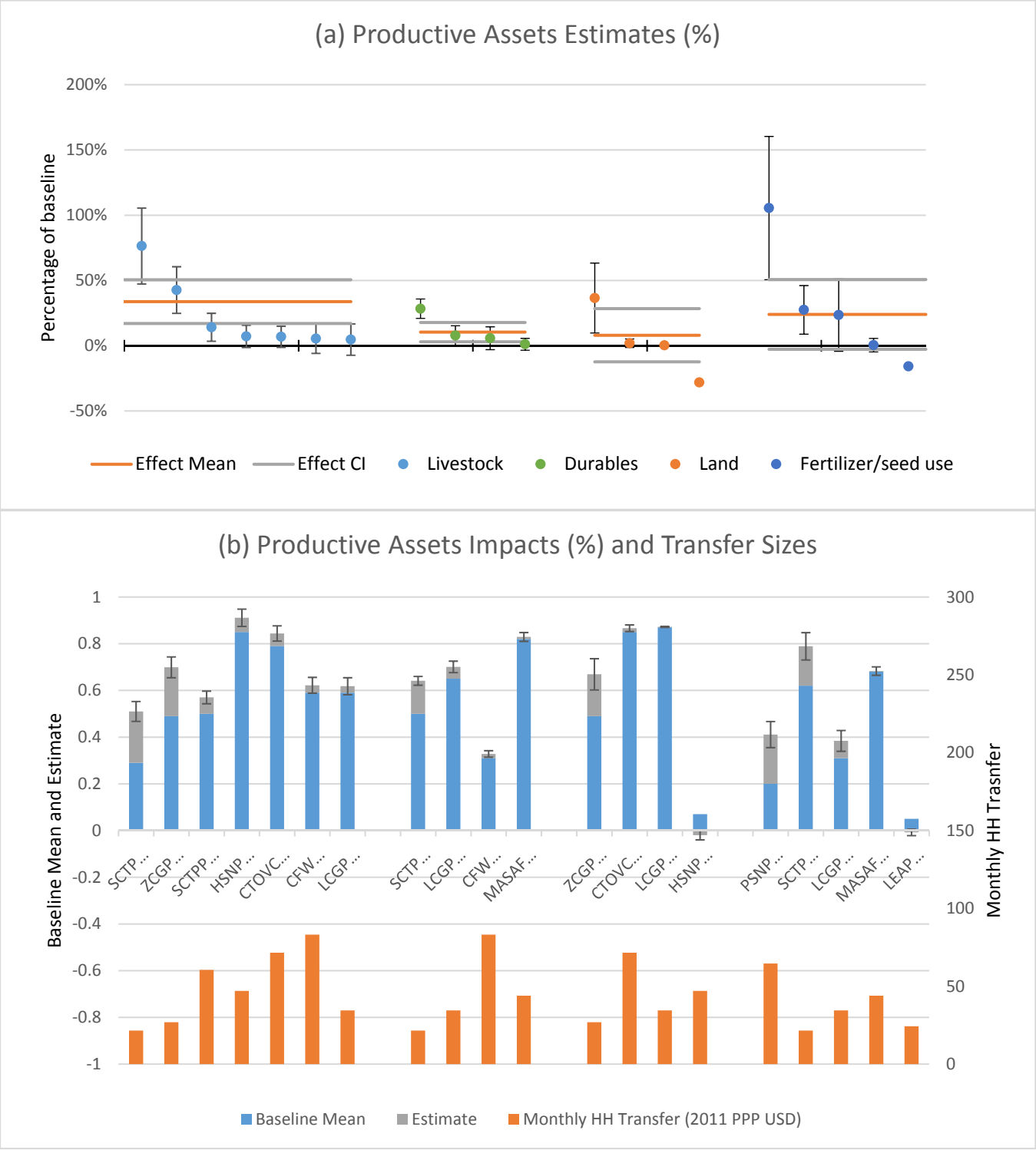


Figure 6 – Meta-estimates for Productive Assets



See Figure 7 – Meta-estimates for Education Outcomes

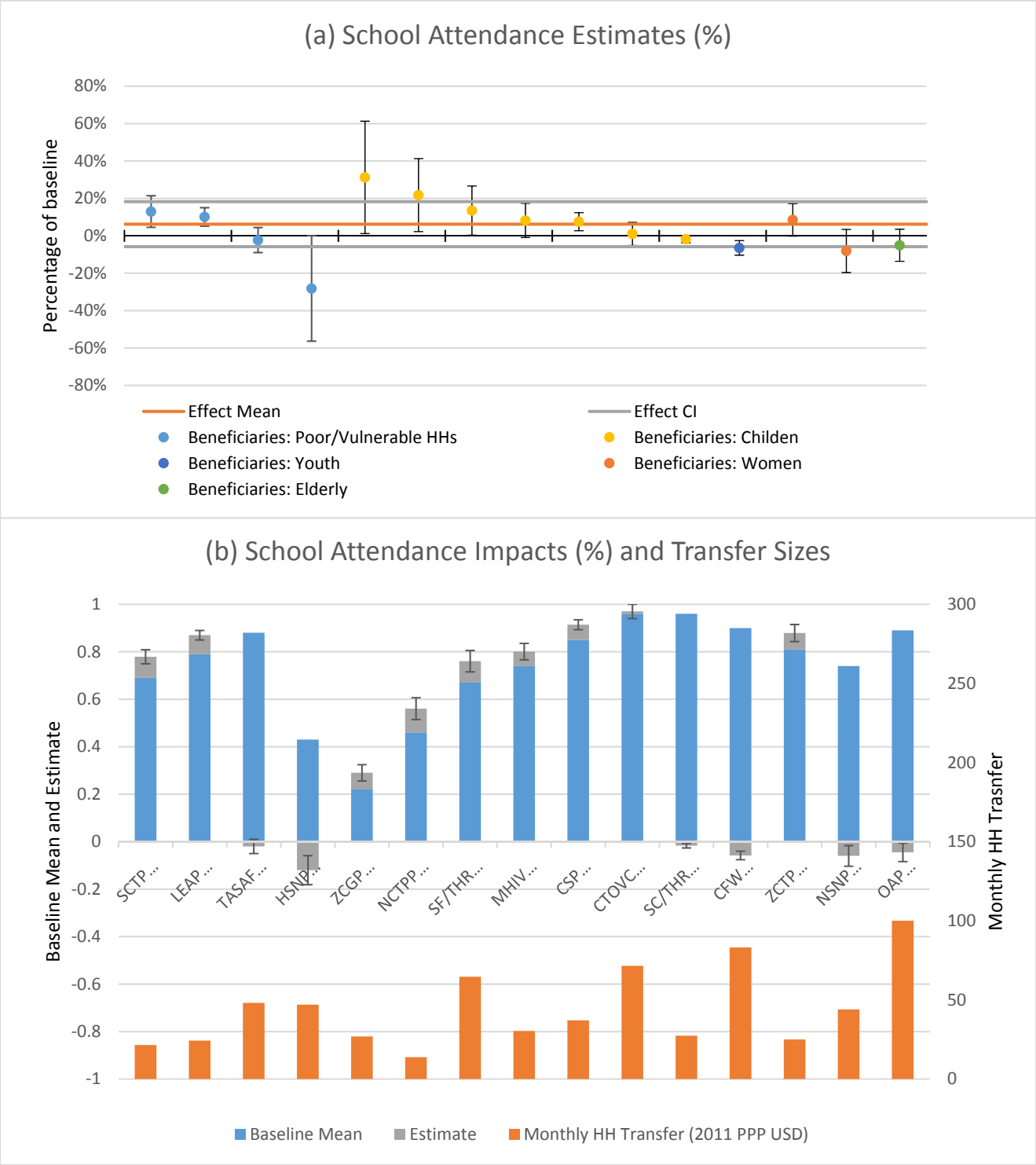
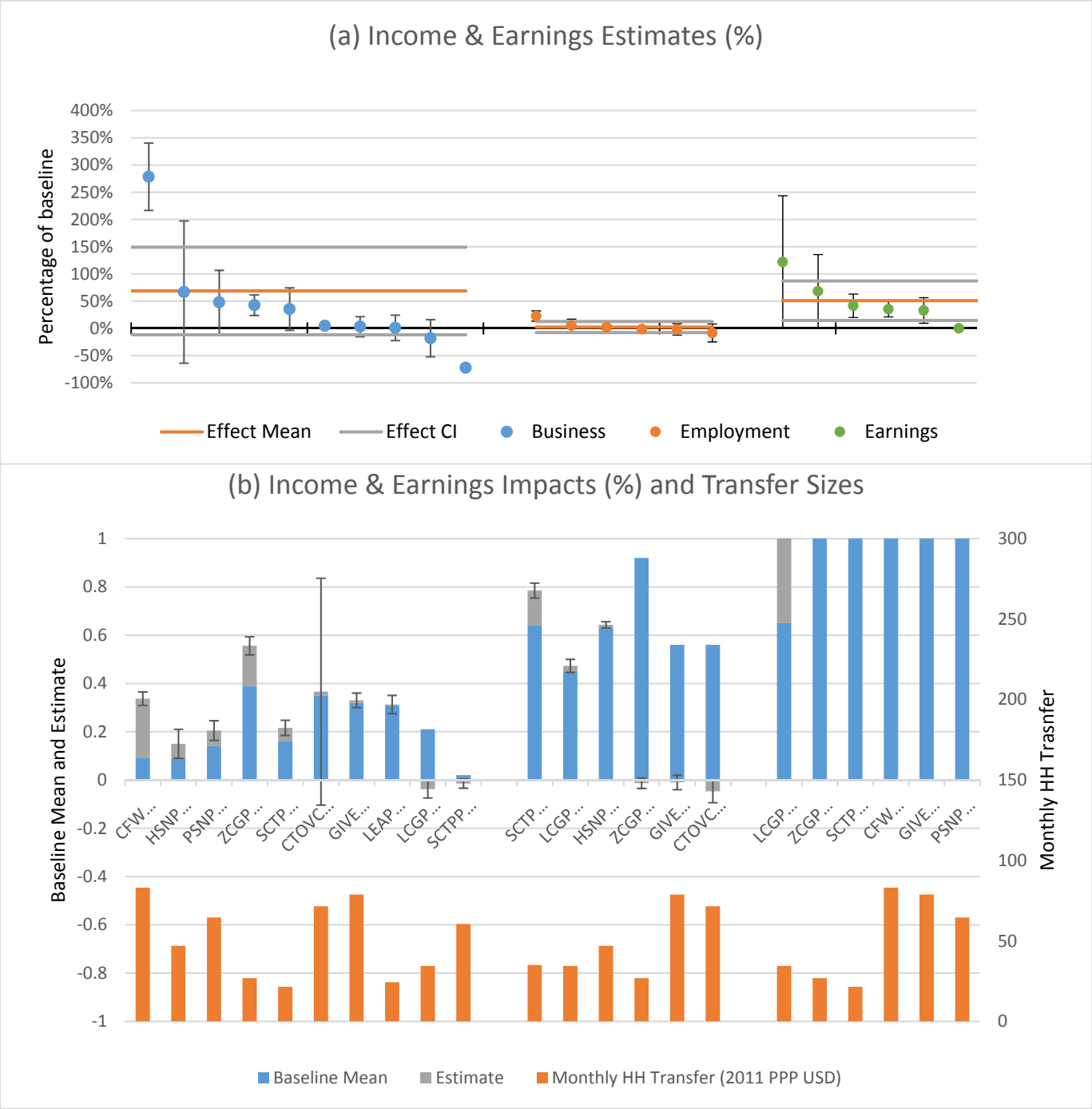


Figure 8 – Meta-Estimates for Work and Earnings



Program Acronyms

Country	Program	Full Program Name
Burkina Faso	NCTPP	Nahouri Cash Transfers Pilot Project (NCTPP)
Dem. Rep. of Congo	IDRC	Income support program in the DRC
Ethiopia	EGS/FFD	Employment Generation Schemes (EGS); "Gratuitous Relief" Free Food Distribution (FFD)
Ethiopia	PSNP	Productive Safety Net Program (PSNP)
Ethiopia	SCTPP	Social Cash Transfer Pilot Programme
Ghana	LEAP	Livelihood Empowerment Against Poverty Program (LEAP)
Kenya	CSP	Child Sponsorship Program (CSP)
Kenya	CTOVC	Cash Transfer program for Orphans and Vulnerable Children (CTOVC)
Kenya	HSNP	Hunger Safety Net Program (HSNP)
Kenya	GIVE	GiveDirectly
Lesotho	LCGP	Lesotho's Child Grants Programme (CGP)
Malawi	ZCTP	Zomba Cash Transfer Program
Malawi	MASAF	Malawi Social Action Fund (MASAF) public works program
Malawi	SCTP	Social Cash Transfer Program (SCTP)
Niger	NSNP	Niger Safety Nets Project
Sierra Leone	CFW	Cash for Work program (CfW) of the Youth Employment Support Project
South Africa	CSG	Child Social Grant
South Africa	OAP	Old Age Pension (OAP)
Tanzania	RESPECT	Rewarding STI Prevention and Control in Tanzania
Tanzania	TASAF	Tanzania Social Action Fund (TASAF)
Uganda	SF/THR	School Feeding Program (SFP) and Take Home Ration (THR)
Uganda	FUU	Food and UCT in Uganda
Uganda	YOP	Youth Opportunities Project

Uganda	TASO/WFP	TASO/WFP Food Assistance Program
Zambia	ZCGP	Child Grant Programme (CGP)
Zimbabwe	HSCTP	Harmonized Social Cash Transfer Programme
Zimbabwe	MHIV	Manicaland HIV Project

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