TANZANIA'S PRODUCTIVE SOCIAL SAFETY NET:

Findings from the Impact Evaluation Baseline Survey

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WORLD BANK GROUP

NBS — TANZANIA — STATISTICS FOR DEVELOPMENT — NATIONAL BUREAU OF STATISTICS

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Acknowledgements

I.   Executive Summary

This report presents the findings of the impact evaluation baseline survey of Tanzania's Productive Social Safety Net (PSSN). PSSN aims to reduce and break the intergenerational transmission of poverty and is based on two integrated interventions, a labor intensive public works (PW) program and targeted conditional cash transfers (CCTs). The objective of the PSSN, which is implemented by the Tanzania Social Action Fund (TASAF), is to increase income and consumption and improve the ability to cope with shocks among vulnerable populations, while enhancing and protecting the human capital of their children.
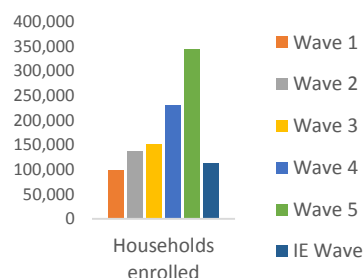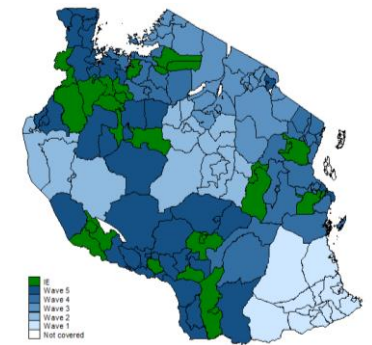
In March 2013, the Government of Tanzania decided to massively scale up the PSSN. The scale up aimed to reach the poorest one million households across the country. By August 2015, the target was exceeded with 1,113,137 households enrolled. The operational set up for the rollout was conducted in five waves, with PAAs were grouped into clusters based on proximity, and preference given to the clusters with poorer PAAs. PAAs were classified in four groups based on a poverty index, and beneficiary quotas defined for each of the groups.

To demonstrate that the PSSN is generating the intended impact, a randomized impact evaluation (IE) was built in to the scale up. The IE contributes to the body of evidence on the effectiveness of CCTs, particularly in sub-Saharan Africa. It will also seek to contribute to the evidence around the impacts of PW, which is more limited despite their popularity as an instrument to protect against shocks. The IE design is unique in that it evaluates a large-scale Government program using an experimental design.

Key questions for the baseline analysis:
1. Is there balance between treatment and control groups at baseline?
2. What is the profile of PSSN beneficiaries?
3. How did PSSN's targeting perform?

The IE relies on a stratified two-staged cluster randomization methodology and the baseline data show the randomization was successful. The IE covers 330 villages in 16 PAAs randomly selected from the largest scale up waves plus all PAAs in Zanzibar. A total of 7,319 households were interviewed (98 percent response rate) in June-July 2015 using computer assisted personal interviewing after the targeting process and prior to being notified of their eligibility. Balance tests show balance between the treatment and control groups.

Stratification
by PAA size

1st stage of randomization
Randomly assign communities

● Treatment A: CCT only (110)
● Treatment B: CCT + PW (110)
● Control group: (110)

2nd stage of randomization
Randomly select 7,480 HHs

Selected Community

Prelist — Selected / Not

PMT — Pass / Fail

Randomly Select — 16 beneficiary / 5 failed PMT / 5 not targeted
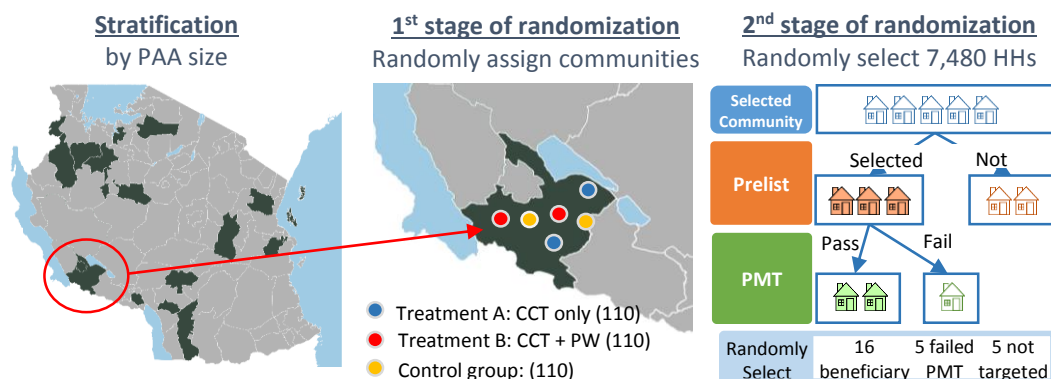
IS THE BENEFIT STRUCTURE WELL–ALIGNED WITH THE BENEFICIARY PROFILE?

Monthly benefit	TSh.	USD	Condition
	37,500	22.9	Public Works
	6,000	3.7	Upper secondary
	4,000	2.4	Lower secondary
	2,000	1.2	Primary education
	4,000	2.4	Health visits under 5s
	4,000	2.4	HH with children
	10,000	6.1	Extreme Poverty
	38,000	23.2	CCT max

(Variable: Upper secondary, Lower secondary, Primary education, Health visits under 5s)
(Fixed: HH with children, Extreme Poverty)

The average CCT transfer is about TSh. 21,000 (roughly US$13), representing 21% of monthly consumption among PSSN households.

The PSSN CCT transfer as a percentage of household consumption is in line with international benchmarks for similar programs.

PSSN design matches the needs of its beneficiaries

Literacy and school attainment are low. 42% ages 15+ are illiterate and 48% ages 15+ completed primary.

Enrollment is nearly universal before age 10 (above 94%) but drops to 55% at 16. The main barriers to enrollment are financial constraints (39%) and distance (11%).

School attendance is high, but so is repetition. 92% of the enrolled regularly attend. 18% of those 5 to 19 enrolled in school repeat at least one grade.

Routine checks for under-fives are rare. Only 23% of under-fives visit a health provider and 90% visiting one are sick. The main barrier to health visits is cost. Sick under-fives don't attend health visits due to costs (58%). Social norms also play a role (32%). Most (79%) use public health facilities, so supply sides issues could emerge.

ENROLLMENT RATES BY AGE

% of children enrolled — 98%, 75%
Age: 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Households rely on agricultural activities and have unstable income sources. Most households engage in agricultural activities (69%). The labor force participation rate is low (49%), most jobs are unstable. Less than 2% of PSSN beneficiaries with a job are in wage employment and only 13% of workers have a contract.

PSSN households have low food security and are vulnerable to shocks. One in four households consume food items from two or less food groups and 73% have low diet diversity. About one-third of households suffered a shock, most of which caused income or asset losses (60%).

COPING STRATEGIES

Strategy	%
Any strategy	72%
Less preferred foods	59%
Reduce # of meals	41%
Limit portion size	38%
Borrow food / help	28%
Restrict adult consumption	19%
Whole day without eating	14%

Women lack bargaining power. More than 38% with a partner do not participate in key household decisions including children's healthcare and schooling, and 19% ages 15 to 49 report facing domestic violence.

Mobile money potential still limited. Only 18% have a mobile money account. However, 87% of those saving use mobile money.
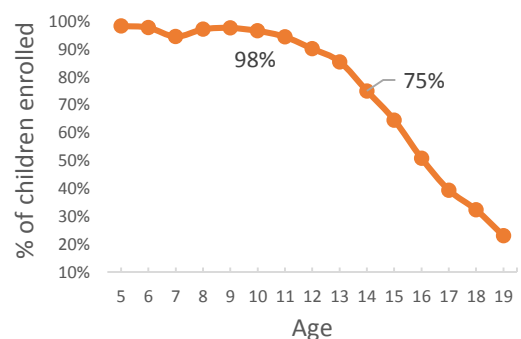
WHAT IS PSSN'S TARGETING SYSTEM AND HOW DOES IT PERFORM?

The PSSN uses a hybrid targeting system consisting of three stages. First, a geographical mechanism is used to identify and select the poorest districts, wards, and communities (i.e. villages, mitaa or shehia). Second, within the selected communities, a community based targeting approach is used to prepare a preliminary list of extremely poor and vulnerable households. Third, a proxy means test (PMT) is applied to households in the preliminary list to verify their eligibility.
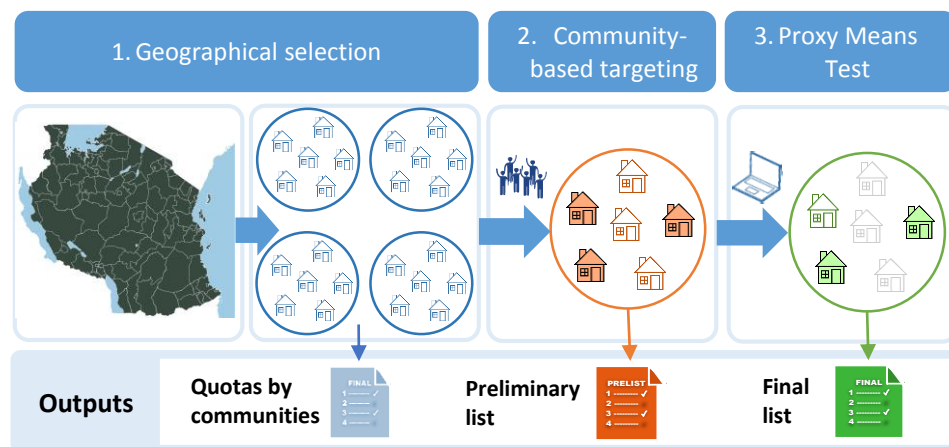
PSSN households are poorer than non-selected households

PSSN households consume less and spend more on food. PSSN households consume 70 cents for every $1 consumed by non-selected households. PSSN households spend 89% of consumption on food items compared to 82% among non-selected.

PSSN's targeting outperforms other CCTs. Most households (83%) are in the bottom four deciles and 64% are under PSSN's food poverty line. This is higher than CCTs with similar coverage.

PSSN COVERAGE BY CONSUMPTION DECILES

48% | 15% | 11% | 9% | 6% | 6% | 3% | 2% | 1% | 0%

■ Lowest decile ■ 2nd ■ 3rd ■ 4th ■ 5th ■ 6th ■ 7th ■ 8th ■ 9th ■ Highest decile

The community effectively identifies poor households. Communities select poorer households and incorporate information on shocks not typically captured well by a PMT. But they apply a different concept of poverty focused more on the elderly and disabled.

The PMT is cost-effective in reducing leakage, but the targeting tools can improve further. The PMT should be updated regularly as new data becomes available and the other stages of targeting can also be improved. New poverty maps have already been developed to inform future retargeting efforts.

Communities are satisfied with PSSN's targeting process but program knowledge is limited. The targeting process is seen as fair and transparent by 86% of prelisted households and 66% of the non-targeted. But 34% of prelisted households don't know beneficiaries will have a co-responsibility. Stronger efforts are needed to communicate the program objectives to communities.
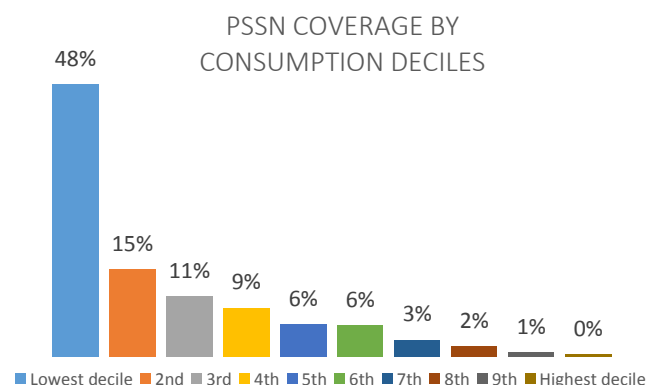
II. Introduction

To reduce extreme poverty and break the intergenerational transmission of poverty, the Government of Tanzania created the Productive Social Safety Net (PSSN). The PSSN is based on integrated interventions, a labor intensive public works (PW) program and targeted conditional cash transfers (CCTs). The objective of the PSSN, which is implemented by the Tanzania Social Action Fund (TASAF), is to increase income and consumption and improve the ability to cope with shocks among vulnerable populations, while enhancing and protecting the human capital of their children. In 2013, the Government of Tanzania decided to scale up the PSSN to cover all households in extreme poverty[1] and by 2015 the program was delivering cash transfers to over 1 million households across the country. To demonstrate that the PSSN is generating the intended impacts, a randomized impact evaluation (IE) was built in to the scale up design.

This IE is expected to contribute to the body of evidence on the effectiveness of CCTs, particularly in the sub-Saharan Africa context. Conditional cash transfers, which are at the core of PSSN, have been among the most evaluated social programs. The majority of these studies show that well designed and implemented cash transfer programs have proven to be effective in terms of: (i) reaching the poorest and most vulnerable; (ii) increasing household consumption, particularly of food and proteins; (iii) increasing enrollment, attendance and completion rates in primary and secondary schools while reducing dropping out and repetition; and (iv) improving health outcomes (e.g., morbidity, chronic malnutrition) through increased usage of health services. Existing evidence from sub-Saharan Africa validates these results; however, although it is rapidly expanding, empirical evidence based on a credible counterfactual is still relatively limited in this context (Garcia and Moore, 2010).

In contrast to CCTs, the evidence base on public works (PW) programs is more limited despite their emergence as a popular instrument to protect against shocks. These programs are designed to provide income support to the poor in critical times by offering short-term employment at low wages for unskilled and semi-skilled workers on labor-intensive projects such as feeder road construction and maintenance, small irrigation infrastructure, among others. Recent evaluations of PW programs in Africa in particular,[2] have shown these programs can have positive impacts on household consumption, livelihoods, asset accumulation, and usage of basic services. This evaluation will seek to contribute to the evidence around the impacts of PW programs.

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[1] PSSN targets the 9.7% of the population below the food poverty line plus an additional 5% who are transient poor.
[2] See Rosas and Sabarwal (2016) and Berhane et al (2011) for evidence from Sierra Leone and Ethiopia.

The IE design is unique in that it examines the impacts of a large-scale Government program using an experimental design and tests the relative effectiveness of different cash transfer packages. The PSSN is now the second largest Government-run CCT program in Africa, following Ethiopia's Productive Safety Net Programme. Due to the Government's strong emphasis on rigorous evaluation, the PSSN impact evaluation follows a randomized control trial (RCT) design. This provides a unique opportunity to evaluate a large-scale program through an experimental design, which is typically difficult given the technical and operational challenges associated with implementing an RCT at scale. In addition, the IE design allows for a comparison of the relative impacts of receiving only cash transfers versus a package of cash transfers plus public works. While both cash transfers and public works are widely implemented and there is substantial discussion about the tradeoffs between these interventions, the evidence around their relative effectiveness is limited.

Another key contribution of this study is to provide a greater understanding of how well communities perform in terms of targeting beneficiaries relative to the proxy means test (PMT). The use of proxy means testing has been proliferating in the sub-Saharan African context in recent years, in part due to the perception that heavy reliance on community-based targeting or self-targeting has resulted in weak performance (WB, 2015b). Yet there is still limited empirical evidence of its adequacy in terms of identifying the poorest households, including when complemented by other targeting approaches, and particularly in contexts where the consumption distribution is flat.

This report presents the main findings of the IE baseline survey. The report is divided into six sections. Section III describes the context in which the evaluation is conducted. Section IV presents the evaluation's objectives, study design, and methodological issues related to the design at the time of the baseline. Section V provides an in-depth profile of PSSN beneficiaries using the baseline data. Section VI examines the program's targeting performance and community knowledge and perceptions of the program. Section VII concludes.

III. Context and Project Overview[3]

Despite solid economic growth over the last decade, about a third of Tanzania's population remains poor and highly vulnerable. While economic growth in the country averaged 7 percent per year in the ten years leading up to 2014, progress in reducing poverty has been substantially slower. Poverty incidence is still very high with about 38 percent of the population living with less than US$1.25 per day, close to 30 percent are under the national poverty line and about 10 percent live under the food poverty line (extreme poverty). Poverty reduction over the last years has been modest as currently there are at least 12 million poor people Tanzania, roughly the same number than in 2001. Most of the reduction in poverty has occurred in urban areas (particularly Dar es Salaam), while in rural areas, where most of the poor live, poverty has remained stubbornly high, thus exacerbating geographic inequalities.

Poor households, particularly in rural areas where there is high dependence on agricultural income, are also vulnerable to seasonal shocks. Each year Tanzanian households reduce consumption during a period of four to five months on average (Kaminski et al, 2014). According to WB (2015a), more than half of the rural poor depend on subsistence agriculture to generate income, confirming that their incomes are highly cyclical and sensitive to climate shocks. Available data also suggests poorer households tend to take longer to recover from shocks and to take mitigating measures which may have negative long-term impacts (e.g., reducing food intake, withdrawing children from the school, depleting assets) (WB, 2007).

Poor and vulnerable households also exhibit inadequate levels of human capital investment and development. Key social indicators that are closely correlated with sustained poverty reduction lag behind neighboring countries and in some cases are below the average in sub-Saharan Africa. More than 42 percent of children younger than 5 are stunted (60 percent among the poor), which means that close to half of children (i.e., future adults) will likely have lower capacity to learn and therefore higher probability of early drop-out of school. This is likely to result in lower productivity as adults and higher probability of being poor, perpetuating the intergenerational transmission of poverty. Furthermore, despite relatively higher levels of primary completion, less than half of children enter secondary education and about one of every four youths is illiterate.

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[3] Data on poverty estimated from the Tanzania Household Budget Survey (HBS) 2006/2007 and 2011/2012 covering mainland Tanzania. Data on shocks is from WFP (2010); and other data is from World Bank (2011), unless otherwise indicated.

Even though supply side barriers affect access to basic social services, demand-related issues also prevent poor households from sending children to school. The latest household survey shows that more than 20 percent of children ages 7 to 17 out of school failed to attend because the family was not interested and another 10 percent failed to attend because the household could not afford school. In contrast less than 2 percent reported failure to attend school because the school was too distant (about 75 percent of children live within 30 minutes from the school). A similar situation is found in the health sector. Excluding individuals who did not need healthcare, only 4 percent reported distance to the facility as the reason for not visiting a healthcare provider. In contrast, more than half (61 percent) reported not visiting a healthcare provider because it was too expensive.

To address these issues, the Government first introduced a pilot CCT program, and then building on lessons learned, designed and introduced the PSSN. As part of its broader measures to implement a coherent social protection strategy to address these issues, in 2010 the Government launched the implementation of a pilot conditional cash transfer program. The pilot was the first strictly conditional cash transfer in Africa, complemented by a comprehensive set of evaluations and assessments, which eventually showed its effectiveness (Evans et al, 2014). Building on the experience of the pilot CCT and following international best practices, the PSSN was designed and began implementation in 2012.

The PSSN is implemented by TASAF, in close collaboration with subnational authorities. The TASAF Management Unit is the main implementing agency for the program. To implement the program, TASAF works in close collaboration with the Local Government Authorities and Zanzibar District Authorities, which for program purposes are jointly referred to as Project Area Authorities (PAA). There is a PSSN Coordinator at each PAA to manage program activities, support by regular technical assistance provided by TASAF at the PAA level. Communities, led by Community Management Committees, are responsible for conducting prelisting of potential beneficiaries during the targeting process, collecting data on compliance with co-responsibilities, and delivering bimonthly transfers to beneficiaries. The PAAs hold primary responsibility for coordinating all activities within their respective areas, particularly delivery of payments by community management committees and entry of compliance data.

PSSN is currently financed from multiple sources including Government and development partners. The PSSN is mainly financed by the Government of Tanzania, the World Bank Group through the International Development Association, and more recently, the United Kingdom Department for International Development. Other Development Partners such USAID, the Swedish International Development Cooperation Agency- SIDA, and UNICEF have also provided financing.

A. PSSN Design Elements

The PSSN's objective is to increase income and consumption and improve household's ability to cope with shocks, while enhancing and protecting the human capital of their children. To achieve this objective, the PSSN is based on the integrated interventions of conditional cash transfers and labor intensive public works, complemented by technical assistance and savings promotion. The conditional cash transfer program is expected to increase the incomes of extremely poor households on a regular basis while the public works program will provide a predictable transfer to maintain (i.e., smooth) consumption during the lean season. Both elements also seek to have long-term impacts. The cash transfer introduces co-responsibilities to encourage beneficiaries to invest in the education and health of their children. The PW provides households with a source of income to enable planning and avoiding negative coping decisions that might prevent them from leaving extreme poverty.

Eligibility of poor and vulnerable households for both the CCT and PW components is determined through a three-stage targeting system. First, a geographical mechanism is used to identify and select the poorest districts, wards, and communities (i.e., villages, mitaa, or shehia). Second, within the selected communities, a community based targeting approach is used to prepare a preliminary list of extremely poor and vulnerable households. Third, a proxy means test (PMT) is applied to households on the preliminary list to verify their eligibility. This combination of targeting tools aims to ensure the PSSN reaches only the poorest communities, uses community knowledge to reach the poorest households within the selected communities to minimize exclusion errors, and verify selection of beneficiaries at the household level using a PMT to minimize inclusion errors.

FIGURE 1. TARGETING MECHANISM
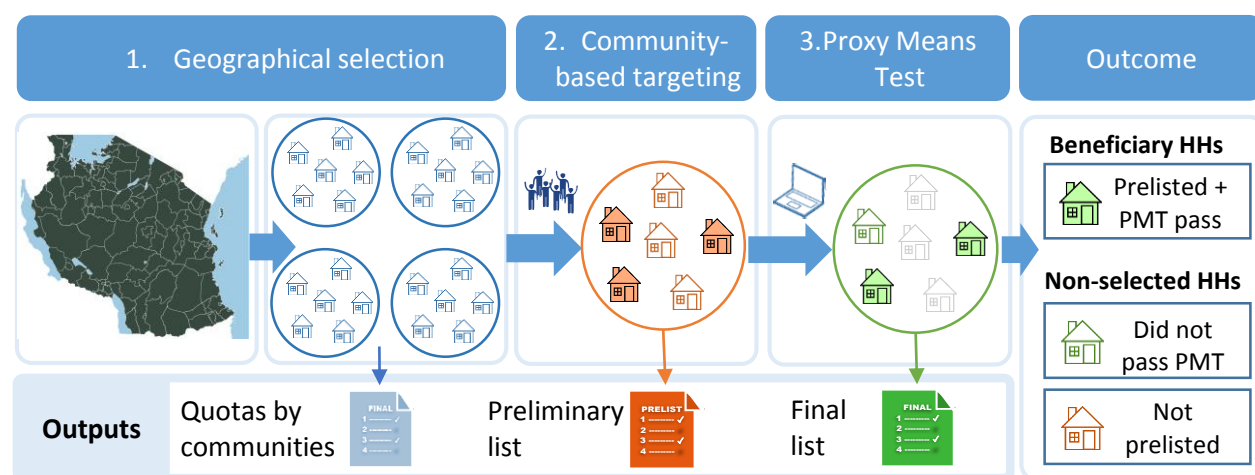
The PSSN provides up to three types of cash transfers depending on household composition (Table 1):

(i) A (fixed) basic monthly transfer to improve household consumption;

(ii) A variable conditional transfer for households with children to serve as an incentive for households to invest in the human capital of their children; and

(iii) A seasonal transfer linked to participation in labor-intensive public works to increase and sustain household assets, and smooth consumption during lean seasons.

The CCT benefit consists of a fixed and a variable component, with the variable portion tied to compliance with co-responsibilities. All selected households are entitled to a basic unconditional transfer equivalent to US$6 per month, to ensure extremely poor families are guaranteed some basic consumption support throughout the year. Household with children are provided a fixed child benefit of about US$2.5 plus an additional variable transfer up to a maximum of US$14.5 per month. The variable transfers are subject to meeting program co-responsibilities and are intended to help reduce demand-side barriers to accessing schooling and health services and making other investments in children's human capital such as improved nutrition. The education transfers also varies based on the schooling level, a structure designed in acknowledgement of the higher opportunity costs and dropout rates at higher schooling levels.

Households with able-bodied adults are eligible to receive an additional transfer by participating in the public works component. The public works program guarantees one person per household fifteen days of paid work per month at a daily rate of 2,500 TSh. (US$1.5), over a four-month period during the annual lean season. This access to seasonal income enables households to maintain consumption during the hungry season, and provides opportunities for households to make small livelihood investments. Taken as a package, the interventions can therefore provide households a maximum annual benefit of approximately US$370, with a maximum annual benefit of 456,000 TSh. (about US$278) and 150,000 TSh. (about US$91) for the CCT and public works interventions, respectively.[4]

TABLE 1. PSSN BENEFIT SCHEME

PSSN component	Transfer type	Transfer name	Co-responsibility	Benefit (TSh.)	Monthly cap (TSh.)	Annual max (TSh.)
CCT	Fixed	Basic transfer	Extreme poverty	10,000	10,000	120,000
	Fixed	Household child benefit	HH with children under 18	4,000	4,000	48,000
	Variable	Infant benefit	Infants 0-5 health compliance	4,000	4,000	48,000
	Variable	Individual primary benefit	Child in primary education compliance	2,000	8,000	96,000
	Variable	Individual lower secondary benefit	Child in lower secondary education compliance	4,000	12,000	144,000
	Variable	Individual upper secondary benefit	Child in upper secondary education compliance	6,000		
PW	Variable	Public works benefit	Extreme poverty + older than 18 able to work	2,500	37,500	150,000

The CCT benefits are delivered on a bi-monthly basis and compliance with co-responsibilities is closely linked to the transfers. Both education and health compliance are tracked at an individual level. Children ages five and older who are enrolled in school and attend at least 80 percent of school days are considered as having complied with education co-responsibilities. Health compliance is only required for children five and under. Following health protocols, children under 24 months living in areas where health services are available should visit a health facility at least once per month, while children between 24 and 60 months

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[4] Calculated assuming an exchange rate of TSh. 1,640 per US$1 at the time the revised CCT benefit structure for the scale up was defined in September 2014.

should visit at least once every six months.[5] Penalties are linked to individuals to incentivize compliance, and like the transfers penalty amount is differentiated by age (Annex 1). To monitor compliance, data is collected at health centers and schools within PSSN communities and then entered on a bi-monthly basis at the Project Area Authorities (PAA) level[6] into the PSSN's Management Information System. Payments are made every two months and compliance starts to be tracked after the first-ever payment cycle. Penalties are deducted from the subsequent payment cycle, which effectively means no penalties are applied until the third payment cycle.

B.   PSSN Scale Up

In March 2013, the Government of Tanzania decided to massively scale up the PSSN to reach the poorest one million households across the country. The decision was taken by Government to expand PSSN to the 9.8 percent of the population living under the food poverty line, plus an additional 5 percent of the population in transient poverty. This represented approximately 920,000 households based on the 2011 HBS, which when rounded led to a target of 1 million households. By August 2015, the target was exceeded with a total of 1,113,137 households enrolled in 9,960 communities – villages, mitaa (urban streets), and shehia, covering all 161 PAAs in the mainland and all PAAs in Zanzibar. The operational set up for the rollout, which was based on a geographical targeting model, was key to achieve the full scale up within the tight timeframe defined by Government.

TASAF selected the areas to be covered by the PSSN scale up based on a geographical targeting model at the PAA and community level. PSSN's geographical targeting model relied on a PAA and community level poverty index that was generated from estimates provided by the PAAs.[7] The first stage of the geographical targeting model was assigning quotas, or the target number of households to reach, at the PAA level. This was done by first dividing PAAs into quartiles of the poverty index (about 40 PAAs per quartile), and then defining the proportion of households within the PAA that would be targeted taking into account the program resource constraint. The second stage assigned quotas at the community level, which involved: (i) selecting the poorest 66 percent of communities (with at least 250 households) in each PAA to ensure adequate coverage; (ii) dividing these communities into quartiles of the community level poverty index; and (iii) defining the share of the PAA quota that would be assigned to communities in each quartile (Table 2).

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[5] In areas where no health services are available the primary caretakers of children under 60 months are required to attend bi-monthly PSSN community health and nutrition sessions

[6] Local Government Authorities in Mainland and Zanzibar District Authorities.

[7] The indices were based on food insecurity, accessibility (school, roads, and electricity), and share of most vulnerable children. A broader set of variables were collected, but had insufficient data to construct an index.

Poverty Quartiles	PAA Quotas (coverage)	Village Quotas (share)
Highest	20%	30%
High	15%	26%
Medium	12%	24%
Low	10%	20%

TASAF conducted the rollout of the PSSN national scale up in five waves. PAAs were grouped into nine clusters based on geographical proximity. In the rollout, preference was given to the clusters with the most PAAs in highest poverty strata (Figure 2Figure 2: PSSN Scale Up Geographical Rollout). Each wave consisted of a continuous flow of activities to start CCT operations, that is, targeting, enrolment, and delivery of the first payment. The TASAF Management Unit trained a dedicated national team of staff to support scale up operations. The scale up was designed so that the first waves covered only a few clusters in order to gradually build capacity. As the technical and operational capacity of the implementing agency increased at central and local levels, coverage increased by adding clusters covering a larger number of PAAs, villages, and beneficiaries (Figure 3).

FIGURE 2: PSSN SCALE UP GEOGRAPHICAL ROLLOUT
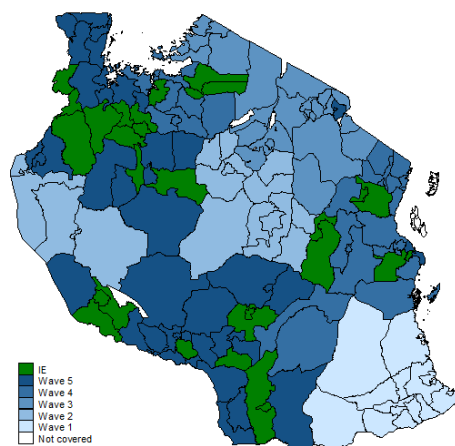
FIGURE 3: PSSN SCALE UP BY WAVES
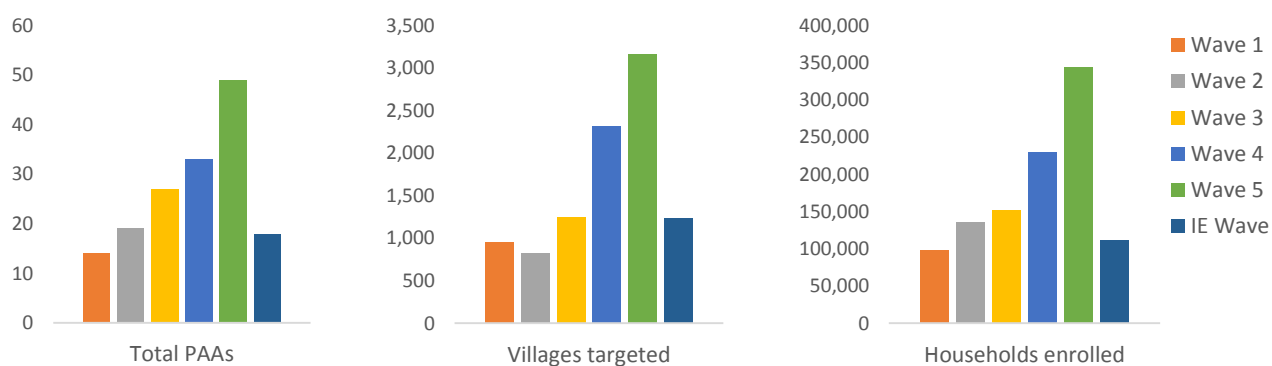
IV. Impact Evaluation Objectives and Methodology
A. Impact Evaluation Research Objectives

The IE design and research questions follow the logic of the PSSN program. The PSSN aims to reduce consumption poverty in the short, medium and long term by promoting human capital investments among the poor and help households mitigate income shocks through the CCT and PW components respectively. The logic behind the program's objectives is that: (i) the cash transfers offered to beneficiary households will increase and smooth current consumption thus improving their children's nutrition and the household's food security; and (ii) that the health and schooling conditionality will translate into more years of schooling and better health status among beneficiaries, thereby improving productivity. Ultimately, these impacts are expected to translate into greater poverty reduction in the long term (see Figure 4).

FIGURE 4. PSSN PROGRAM LOGIC
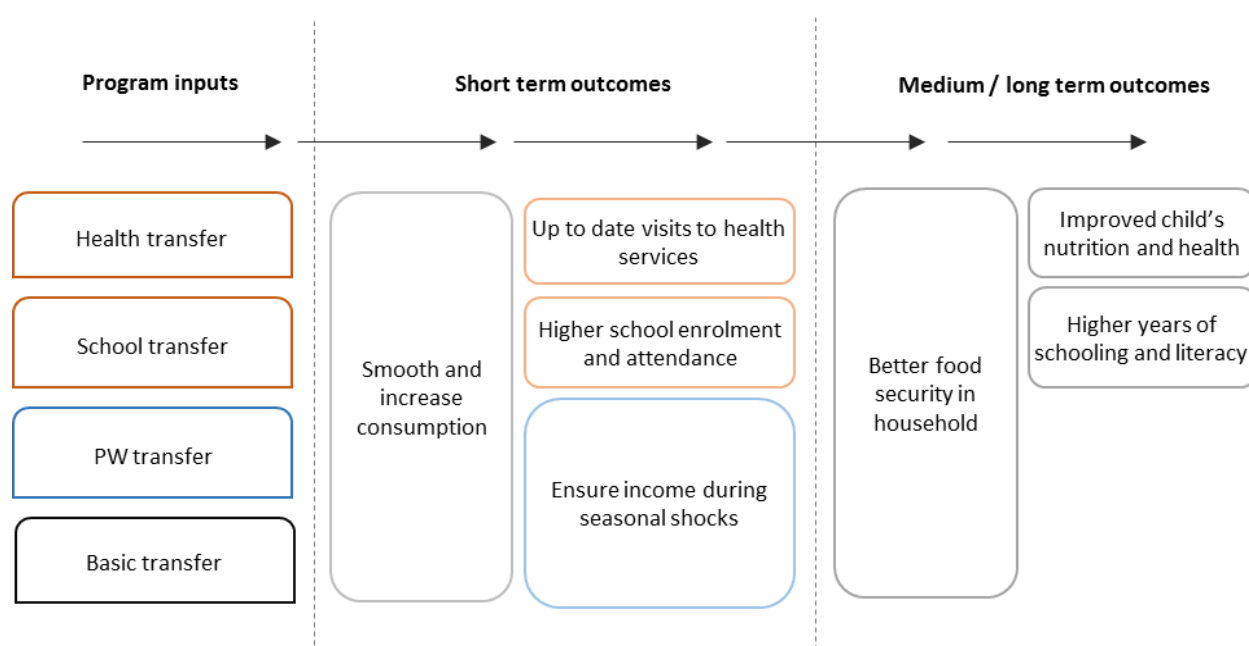
Following this logic, four core research questions were selected to guide the impact evaluation:

1. *Does participation in PSSN lead to positive changes in health-seeking behavior, particularly as related to child health (such as immunization and visits to health facilities)?*

2. *Does participation in PSSN have an impact on key educational outcomes such as school enrolment, school attendance, repetition, literacy, and years of schooling?*

3. *What is the impact of PSSN on household food and non-food consumption?*

4. *What is the impact of PSSN on food security and on the negative coping strategies used by households in the face of shocks?*

A set of supplementary questions will also be used to analyze other positive spillovers on beneficiary households. These aspects, while not defined explicitly as program objectives, will be studied to assess whether PSSN has broader positive externalities:

1. *Does participation in PSSN influence household members' existing economic activities, time use, and/or encourage new economic activities?*
2. *Does participation in PSSN increase household accumulation of assets?*
3. *Does participation in PSSN impact savings and use of financial instruments?*
4. *How does it influence the incidence of domestic violence among women or change other family or social dynamics (particularly given the transfers are typically made to women)?*
5. *Are there any positive spillovers for non-selected households within the targeted communities (e.g., increased consumption, investment)?*

For each of the core and supplementary research questions, the evaluation will also assess the relative effectiveness of providing only the CCT intervention versus providing CCTs plus the PW intervention.

In addition, the IE will be used to assess the targeting performance of the PSSN and community knowledge of and satisfaction with the program:

1. *What is the overall targeting performance of the program in terms of coverage, incidence, and errors of inclusion and exclusion?*
2. *How do the community-based targeting processes and PMT process perform in terms of identifying the poorest?*
3. *How do the households selected for enrolment into the PSSN differ from non-selected households?*
4. *How aware are households within targeted communities of key program information (e.g., objectives, co-responsibilities)?*
5. *How satisfied are households within targeted communities with the targeting process and how does this differ between selected and non-selected households?*

B.   Sampling and Data Collection

The impact evaluation covers a subset of 16 PAAs randomly selected from Waves 4 and 5 of the scale up plus all PAAs in Zanzibar. In the mainland, the 16 PAAs selected for the evaluation were drawn randomly from the 96 PAAs in Waves 4 and 5 of the scale up. These PAAs are considered largely representative of the mainland, as: (i) they themselves cover more than 100,000 eligible households; and (ii) Waves 4 and 5 were the last and largest waves of the PSSN scale up covering 60 percent of the 161 PAAs covered by the program and close to 660,000 eligible households. In Zanzibar, all 10 PAAs in Zanzibar were selected for the evaluation, covering a population of almost 28,000 eligible households.

The impact evaluation relies on a stratified two-staged cluster randomization methodology. The IE effectively exploited over-subscription as the PSSN geographical targeting covered about 70 percent of all communities in the country. The sampling approach involved three steps (see Figure 5). First, within selected PAAs, a number of IE communities from within IE PAAs were randomly selected proportional to PAA size (see Annex 2).[8] The total number of communities to be sampled was based on ex-ante power calculations, with a total of 240 mainland communities and 90 (out of a total of 330) in Zanzibar, with Zanzibar oversampled to ensure sufficient power to report results separately. Then, the first stage of the

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[8] "PSSN communities" refer to villages, mitaa, or shehia identified as eligible for PSSN through geographical targeting. A minimum distance of 5 kilometers was imposed between study arms to prevent contamination.

cluster randomization consisted of randomly assigning PSSN communities to one of two treatment groups or to a control group. The advantage of this method is that all eligible individuals in a selected cluster are exposed to the intervention and there is no contamination through spillovers or practical issues of offering an intervention to only some of the eligible. In this stage, the IE communities were randomly divided into three study arms: Group A to receive CCTs only; Group B to receive CCTs plus public works; and Group C, the control group, not to receive any treatment.

FIGURE 5. PSSN RANDOMIZED DESIGN

Stratification
330 villages randomly selected proportional to PAA size

First stage of randomization
Random assignment of communities to study arm

● Treatment A: CCT only (110)
● Treatment B: CCT + PW (110)
● Control group: (110)

Second stage of randomization
Random selection of 7,480 HHs

Selected Communit

CBT — Selected / Not selected

PMT — Pass / Fail

Randomly Select — 16 beneficiary / 5 failed PMT / 5 not targeted

The second stage of the cluster randomization selected 16 PSSN eligible households plus an additional 10 ineligible households in each community selected for the IE. The sampling approach mirrored the study's two main objectives: (i) to rigorously evaluate the impact of PSSN on beneficiary households; and (ii) to assess PSSN's targeting performance. To achieve the first goal, a subset of eligible poor households were sampled from the list of those selected both by the community and verified by the PMT. To achieve the latter, two subsets of ineligible households were sampled for comparison: (i) households who were prelisted by the community but did not pass the PMT, sampled based on the preliminary lists (administrative data); and (ii) households who were not prelisted by the community, sampled through a listing and in-field sampling process.[9] In each cluster 16 households were sampled for purposes of examining the program's impacts and an additional 10 ineligible households per cluster, 5 from each subset, were sampled only in the treated groups (treatment groups A and B) to assess the PSSN's targeting performance. As a result, 7,480 households were randomly selected to be interviewed (see Figure 5).[10]

The baseline survey was undertaken in IE PAAs following the completion of the targeting process and prior to enrolment. The baseline survey was completed in June-July 2015 after the targeting process was completed in the IE Wave, but prior to notifying targeted households of their eligibility status and subsequent enrolment into the PSSN (see Figure 6). In addition to the standard training on the targeting

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[9] For simplicity, households passing the PMT will be referred to as beneficiary households, while those not prelisted by the community will be referred to as non-targeted households.

[10] An additional 2,310 households were randomly selected as replacements in case of absence/refusal. Regression analysis indicates there is no statistically significant difference between respondents and non-respondents.

methodology, TASAF provided the IE PAAs training on the objective of the evaluation, the process used to select IE communities, and the importance of adhering to the randomized design. The PAAs involved were responsible for communicating within their PAAs that communities participating in the targeting process were not guaranteed immediate program participation. Some communities would be integrated to the program first while others would be added at a later stage, and this would be decided through a lottery. In addition, the randomization was "double-blind" in the sense that neither TASAF, PAAs, NBS, nor OCGS were aware of which villages would eventually be treated until after the baseline data collection was completed. Taken together, these approaches are expected to minimize potential contamination as well as any anticipation effects among communities at baseline.

FIGURE 6. IMPACT EVALUATION TIMELINE[11]

Year		2015		2016		2017		2018	
Month	JUN	JUL-AUG	SEPT-DEC	JAN-DEC	JAN-FEB	MAR	APR-DEC	JAN-FEB	MAR
Treatment A (110 villages)	Baseline survey	Cash transfers				First follow up survey**	Cash transfers		Second follow up survey***
Treatment B (110 villages)		Cash transfers	Cash transfers + public works				Cash transfers + public works		
Control group (110 villages)		Control					Control		

Electronic data collection conducted by NBS and OCGS resulted in high quality data. NBS and OCGS conducted the baseline data collection in mainland Tanzania and Zanzibar, respectively, relying on a Computer Assisted Personal Interviewing (CAPI) approach using tablets.[12] The use of CAPI to collect data can help reduce many of the errors commonly occurring when using paper-based methods, such as skip errors and coherence of the answers given (Caeyers, Chalmers & De Weerdt, 2010). Partnership with the national statistical agencies ensured sufficient survey capacity and experience to carry out large national surveys with wide geographical spread. The national statistical agencies were also responsible for translating the survey instruments to Kiswahili, and interviews were conducted in Kiswahili or in the relevant local language as required to ensure integrity of the questionnaire. The overall quality of the data is high, which is expected to have resulted in part from the CAPI efforts.[13]

Survey response rates were high, minimizing non-response bias. During the fieldwork more than 7,400 households were interviewed, 7,319 of which completed the questionnaire in full (see Table 3). All interviews were conducted in Kiswahili. Field protocols were also put in place to achieve a high response

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[11] The first follow up survey will be carried out 18 months following the first payment cycle in September 2015. After the first follow up survey the control group may enter the program; if so, the second follow up would compare Groups A-B (which received treatment for 30 months) to Group C (which received the treatment for 12 months only). The public works program implementation is currently delayed, likely for one year.

[12] An electronic application was also developed to support the in-field random sampling process.

[13] One exception was data from the anthropometric module, for which resources in terms of field staff capacity and training were insufficient.

rate, together with a replacement strategy in which a restricted number of households were randomly selected as replacements to be interviewed in case the selected households could not be found or refused to participate. Regression analysis indicates there is no statistically significant difference between those who were respondents and non-respondents. Thus, these approaches are considered to have ensured data quality and successfully minimized unit non-response and non-response bias.

TABLE 3. SURVEY COMPLETION AND RESPONSE RATES

Type of household	Mainland	Zanzibar	Total
Sampling design	5,440	2,040	7,480
Total completed surveys	**5,288**	**2,031**	**7,319**
Prelisted and passed PMT	*4,015*	*1,399*	*5,414*
Prelisted only	*482*	*329*	*811*
Non-targeted HH	*791*	*303*	*1,094*
Non-response rate	3%	0%	2%

C.   Internal Validity

Statistical tests were conducted to assess balance between treatment and control groups. Assessing the impacts of a program requires identifying a counterfactual comparable to the treatment group prior to the start of the intervention. The study design used in this IE, as discussed in Section B, uses random assignment of the units of analysis (i.e., households) to each these two groups. This methodology is widely agreed to be the best found at guaranteeing that both sets (treatment and counterfactual) are statistically equivalent. To confirm this is the case in our data, a series of statistical tests are conducted to compare the main outcomes of interest[14] and key background variables across in each of the three study arms designed for this study.

These tests show there is balance across treatment and control groups, indicating the randomization was successful. Finding statistical differences in some variables is expected even when randomization is successful. In this case, the number of variables with a significant difference was low: statistically significant differences were found for only two out of 35 of the indicators used for comparison (see Table 4 for a list of 11 example indicators).[15] To test the effectiveness of the randomization, F-tests were used to test for significant differences across treatment groups; then, for variables exhibiting differences, t-tests were used to identify which groups differ and the magnitude of these differences. The variables exhibiting differences are the proportion of males in the sample and within households and child school absenteeism.

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[14] Following the program logic presented in Figure 4, balance test include outcomes related to education, health and food security indicators. Note this analysis does not include ineligible households, who will not be used in the IE analysis, but are sampled in the treatment groups solely for purposes of assessing targeting performance.
[15] See Annex 3 for the complete list of variables tested.

TABLE 4. EXAMPLE OF BALANCE TEST RESULTS[16]

Variables of interest	Significant difference in means				Mean		
	F-test	T1 v. C	T2 v. C	T1 v. T2	T1	T2	C
Demographics							
Mean age	0.388	0.276	0.844	0.196	25.5	24.5	24.7
% of males in sample	0.018	0.020	0.009	0.824	0.46	0.47	0.44
Education							
School enrolment rate	0.973	0.864	0.943	0.833	0.77	0.78	0.78
% of children missing school	0.588	0.580	0.303	0.644	0.12	0.13	0.11
No. of days child was absent	0.689	0.706	0.388	0.662	0.6	0.7	0.6
Visits to health facilities							
No. of visits to health facility (under 5)	0.840	0.809	0.556	0.738	1.97	2.05	1.92
Labor force participation rate	0.723	0.423	0.598	0.763	0.35	0.36	0.37
Household characteristics							
Household size	0.814	0.533	0.870	0.675	4.85	4.94	4.97
Ratio of males to females	0.319	0.095	0.030	0.731	1.04	1.06	0.96
Characteristics of household head							
Age of head	0.280	0.580	0.275	0.119	56.8	55.1	56.2
Food security							
Food consumption score	0.841	0.565	0.952	0.510	18.9	19.6	19.5

D.   Statistical Power

The study design took into account the implications of using cluster sampling. Cluster sampling, the approach used in the IE, minimizes the political economy costs of offering a poverty reduction program to a limited number of people within a larger group of potential beneficiaries. In addition, it prevents the contamination that is likely to occur if the program has spillovers to non-beneficiaries located near beneficiaries. Despite these benefits, cluster sampling will produce estimates with a larger variance due to the similarity of households that are in close geographical proximity. High levels of correlation between households in the same cluster, as measured through the intra-class correlation coefficient, reduces the power of the estimation and thus affects the overall validity of the study. The best way of solving this issue is by increasing the number of clusters rather than simply increasing the overall sample size while keeping the number of clusters constant.

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[16] Results reported here show statistical significance at the 5 percent level. For only one variable is the difference significant at the 99 percent confidence level.

The IE design relied on ex-ante statistical power analysis to determine how many clusters were needed in order to detect economically and statistically meaningful impacts. Before the baseline, the 2012 Household Budget Survey (HBS)[17] was used to estimate the intra-class correlation of food insecurity and children's school enrollment and conduct a power analysis, which recommended between 60 and 80 clusters to detect effects in the range of 0.20-0.30 standard deviations at conventional power and confidence levels. To be conservative, the study was sampled using 80 clusters per study arm for mainland Tanzania and a further 30 in Zanzibar, for a total of 110 clusters per study arm.

FIGURE 7. CLUSTER RANDOMIZED TRIAL EX-POST POWER CALCULATIONS[18]
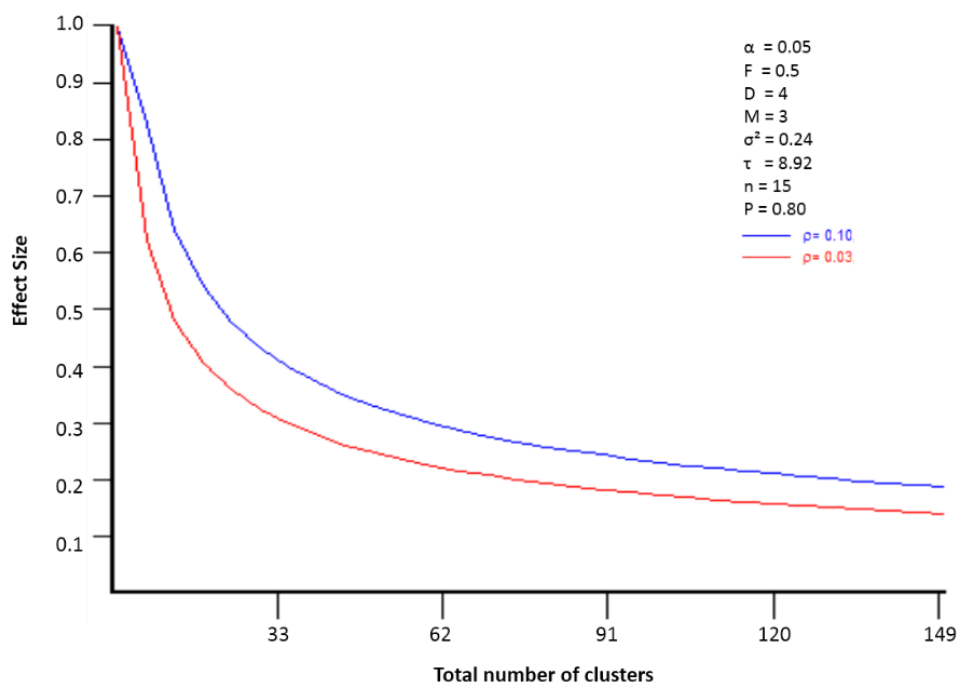
Ex-post power calculations indicate the IE has sufficient statistical power to detect the effect size estimated during the design phase. Following the baseline data collection, the ability of the IE to detect program impacts was re-calculated using baseline data. Based on this power analysis, the study has enough power to test the hypothesis that PSSN has positive impacts on key household outcomes of interest (Figure 7). The IE was designed to be able to detect an effect size of 0.20-0.30 standard deviations and school enrollment and food security (10 to 15 percent, and 24 to 36 percent, respectively). With a total of 110 clusters per study arm, the IE will be able to detect a change of 8 percent in school enrollment and 27 percent in the coping strategies index, a measure of food security.

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[17] The Household Budget Surveys (HBS) are cross sectional surveys that are the official source for analyzing poverty trends, changes in standard of living, and consumption patterns.
[18] The label (F) is the number of periods between data collection; (D) is the total duration of the study; (M) is the total number of observations (M=FD+1); (σ^2) is the measurement error understood as the intertemporal correlation; (τ) the between person variability at baseline; (ρ) the intra-cluster correlation; (n) is the number of observations per cluster; and (P) is the power of the study. The intertemporal correlation of the outcomes of interest is calculated using data from NPS waves 2 and 3 since this is the only available panel data on poverty.

V.   Baseline Findings – Beneficiary Profile

This section provides an in-depth profile of PSSN beneficiaries at baseline to better understand the population the program serves and whether it is expected to have the desired expected impacts. Following the PSSN design outlined in Section IV.A, this analysis focuses on the key outcomes of interest at baseline, namely, health, education, food security, consumption, coping strategies. In line with the IE's supplementary research questions, this section also present findings related to livelihoods, banking, and family and social dynamics. This profile is not only useful for the PSSN to continue to fine-tune its operational processes to meet beneficiaries' needs, but also provides key information that can be useful in designing complementary programs.

The beneficiary profile uses baseline data for those passing the PMT irrespective of the treatment group and provides comparisons to the national poor where relevant. While the IE baseline data includes data from both eligible and ineligible households, for purposes of this profile, only data from eligible households will be used. These households will be referred to as PSSN households, while PSSN beneficiaries will be used to refer to all members of PSSN households. This profile will also include those who passed the PMT in the control group as these were also deemed to be eligible households based on the targeting process, although they were not enrolled in the program following the baseline data collection for purposes of the IE. The profile will include analysis of how beneficiaries compare to Tanzania's broader poor population[19], which helps benchmark the PSSN's targeting performance as well as establish the study's external validity in case of further scale up to areas not yet covered by the program.

A.   Demographics and Household Composition

PSSN beneficiaries tend to be older than the poor population at the national level. The average age among PSSN households at baseline is 24.9 years, compared to 21.2 years among the national poor. Even though the difference is present among both men and women, the gap is wider among women. As seen in Figure 8, the share of women above 50 and men above 55 is higher among PSSN beneficiaries, while the share of children and youth of both sexes is lower than the national poor. Similarly, among PSSN beneficiaries the share of the population between 0 and 49 years of age is 83 percent, compared to 90 percent among the national poor.

The older age structure may be a legacy from the pilot and reflects the communities' perception of the elderly as the target population for the PSSN. One hypothesis is that since the CCT pilot implemented prior to the introduction of PSSN targeted the elderly, this notion persisted into the PSSN rollout. A related hypothesis is that communities have limited awareness of who the PSSN targets, which is confirmed by the baseline data showing that 35 percent of beneficiary households report that PSSN targets households with elderly. Evidence from other contexts suggest another plausible alternative is that the community, which conducts the first stage of PSSN household targeting, has a different perception of poverty than the one measured in national household surveys and used for the PMT (Banerjee et al, 2010).

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[19] Comparisons with the poor are from the 2011/2012 HBS, unless otherwise specified. Only 4.9% of the sample is in Dar-es-Salaam and 4.4% in other urban areas, so reesults for these areas should be interpreted carefully.

FIGURE 8. AGE DISTRIBUTION, COMPARISON TO NATIONAL POOR
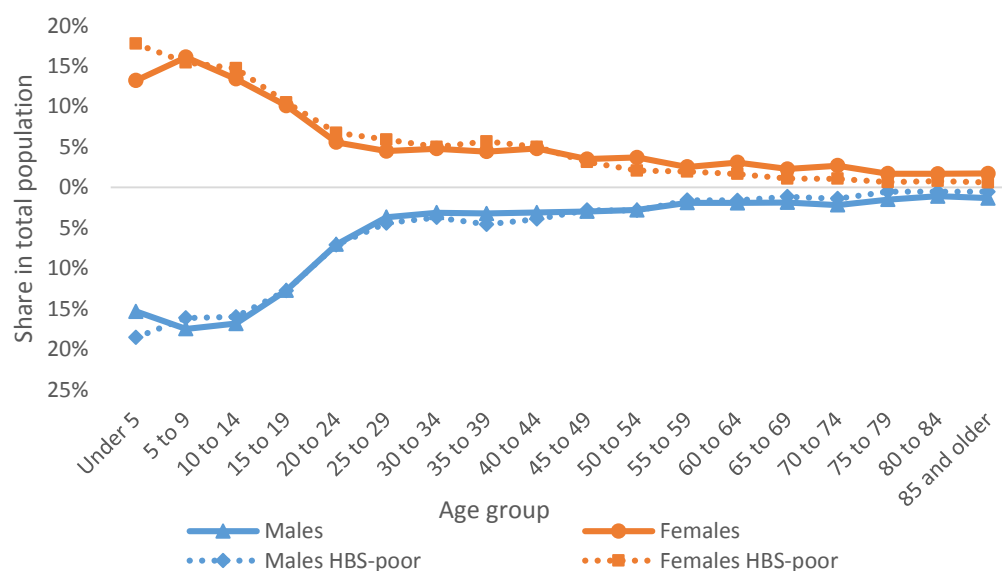
The population pyramid suggests inaccuracies in reporting for children under 5, which implies more effort is needed to improve reporting so households receive the full amount they are due. Among PSSN beneficiaries, 14 percent of the population is under five, while this share is 18 percent among the national poor. However, as seen in Figure 9A, the pyramid for PSSN beneficiaries has a very narrow base for children under 5, lower than what is expected given the percent of the population in the next oldest age group (5 to 10 years). This suggests that the lower share of children under five in our population is not a consequence of lower birth rates among PSSN households, but is likely a problem of under-reporting. This finding is important for two reasons: (i) the program explicitly targets this age group for health transfers, thus effort is needed to ensure complete reporting of compliance data for under-fives so the right amount is delivered; and (ii) to the extent that households misreporting under-fives have different outcomes than those reporting, the health outcomes presented will not be fully representative of the true outcomes.

FIGURE 9. POPULATION PYRAMID, COMPARISON TO THE NATIONAL POOR

FIGURE 9.A: PSSN BENEFICIARIES

FIGURE 9.B: NATIONAL POOR
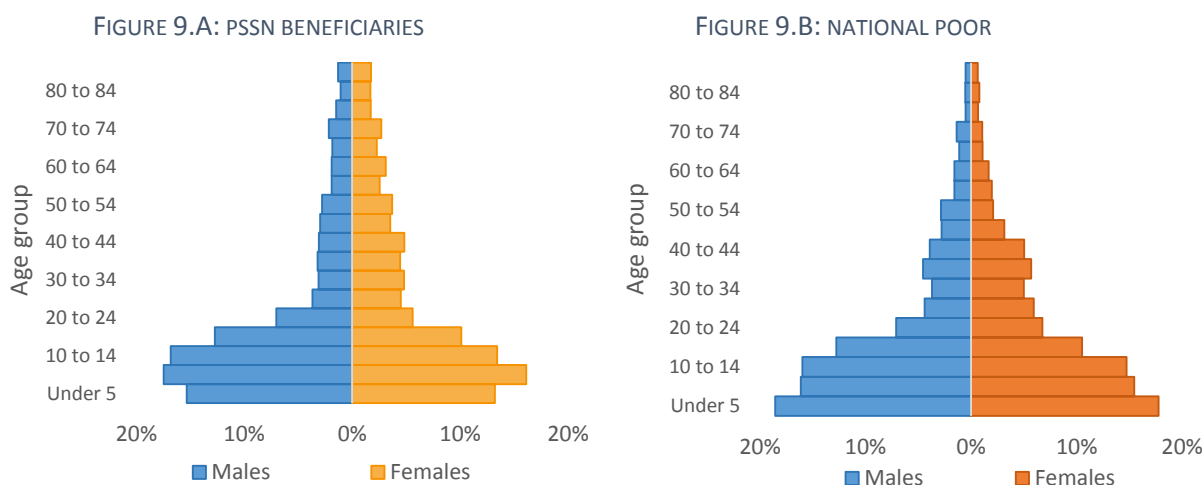
Household size is smaller than the national poor, but this is partly explained by the under-reporting of small children. As shown in Figure 10, the average number of children under 5 in our sample is of 0.7 per household, a figure that appears to be small when compared to 1.2 and 1.0 as estimated with HBS and NPS data respectively. This has an impact on the average size of PSSN households of 4.9 members, a small number compared to HBS and NPS data that indicate nationally poor households have 6.6 and 5.9 members, respectively. In addition, another indication of under-reporting is that age-specific fertility rates among PSSN women are higher for all age groups above 20 years of age relative to their national counterparts in the 2010 DHS.[20]

FIGURE 10. AVERAGE NUMBER OF MEMBERS OF THE HOUSEHOLD BY AGE
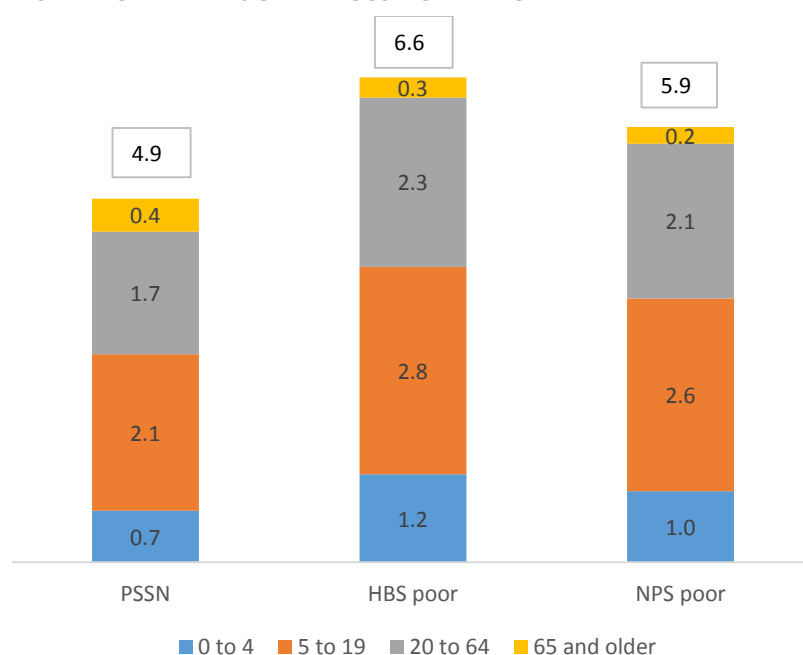
The dependency ratio in PSSN households is higher than among the national populatin, putting pressure on the working age to generate income. Every PSSN household member between 15 and 64 years of age has to generate income for themselves and an additional 1.37 persons, while the national poor need to do so for an additional 1.22 people according to the NPS (see Table 5). This higher dependency ratio is a consequence of (i) the older age among PSSN household's members discussed above, and (ii) a higher total fertility rate. PSSN women at the end of their fertile years would have given birth to 8 children according to current age specific fertility rates, while the total fertility rate at the national level is of 5.4 children per woman according to the DHS.[21]

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[20] Estimated following 2010 DHS, Age-specific fertility rate is the number of births occurring per 1,000 women in the age group. However, estimated age-specific fertility rates in the IE data are lower than expected for women ages 15 to 19 due to a less comprehensive data collection approach.

[21] Total fertility rate is the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates. Age-specific fertility rate refers to the number of births occurring during a given reference period per 1,000 women of reproductive age.

TABLE 5. COMPARISON OF BASIC VARIABLES BETWEEN NATIONAL SURVEYS AND PSSN HOUSEHOLDS

Indicator	Baseline value	HBS Poor	NPS poor
Average age	24.9	21.2	21.1
Average HH size	4.9	6.6	5.9
HH dependency ratio	1.37	1.35	1.22
HH child dependency ratio	1.16	1.24	1.13
HH elderly dependency ratio	0.20	0.12	0.09
% of male headed HH	50.9%	76.9%	70.9%

PSSN households are more likely to be female-headed, who tend to have lower incomes than male-headed ones in the Tanzanian population. Over half (51 percent) of PSSN households have a woman as head, compared to less than one-third among the national poor. This figure is consistent with administrative data for all households in the IE PAAs collected as part of the PMT process, in which 50 percent of heads are women. This finding is important as based on Tanzania's most recent poverty assessment, households headed by women tend to be worse off than those headed by men (WB, 2015a), and this situation has not been improving over time. Given the large reach of the program and the high proportion of PSSN households with women heads, the PSSN provides a unique opportunity to increase welfare among this disadvantaged group.

B.   Education

Literacy levels among members of PSSN households are low, even when compared to Tanzania's poor. In general terms, two out of every five (42 percent) of PSSN beneficiaries ages 15 and above in PSSN households cannot read a simple text any language, compared to about one-third among the national poor (see Figure 11.A). This large gap could be explained in part by the older PSSN population. However, even when restricting the analysis to those ages 15 to 64 years of age, illiteracy levels remain 6 percentage points higher among PSSN beneficiaries than among their national poor counterparts. The highest illiteracy rates are among women at 48 percent (compared to 32 percent for men) and in rural areas at 47 percent (versus 19 percent in Dar-es-Salaam, 27 percent in other urban areas, and 35 percent in Zanzibar).

FIGURE 11. LITERACY LEVELS - PEOPLE 15 YEARS OF AGE AND OLDER AND BY AGE GROUP

FIGURE 9FIGURE 11.A: PEOPLE 15 AND OLDER   **FIGURE 11.B: BY AGE GROUP**
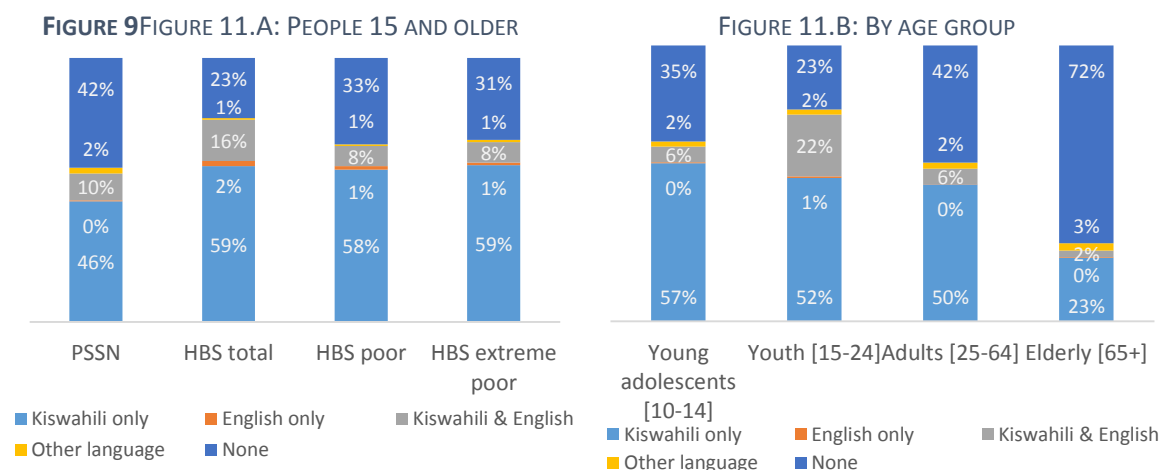
Literacy levels are increasing over time, but the program has room to have an impact particularly on young adolescents, especially girls who lag behind boys. Based on program design, the higher levels of illiteracy among adults and the elderly are not likely to be changed by the program, while literacy levels among youth are difficult to impact as many of them have already left the schooling system. More than one-third (35 percent) of young adolescents (ages 10 to 14) are illiterate, suggesting PSSN has strong potential to achieve its objective of improving educational outcomes among future generations (Figure 11.B). Female young adolescents between the age of 10 and 14 have lower levels of illiteracy than males.

The low levels of literacy are linked to low levels of educational attainment among PSSN household members. According to the education and training policy framework of the Ministry of Education and Culture, by the age of 14 Tanzanians should have completed all primary level grades after a seven year education cycle. Education in Tanzania between the ages of 7 and 13 is compulsory, but less than half (46 percent) of PSSN household members 14 years of age and above have completed primary school. They enter school at age 7.9 among those of working age on average and age 7.3 when restricted to those ages 15 to 19. These low levels of educational attainment are similar to those found among the national poor (47 percent).

Decomposing the level of school attainment by age groups shows that younger generations exhibit better schooling outcomes. Similar to the differences found in the literacy levels among age groups, educational attainment among the elderly is considerably lower than that of younger generations (6 percent versus 63 percent for primary level). As shown in Figure 12 (A), while those 65 and above only have 4.1 years of schooling on average, this number increases to 6.5 and 7.5 for adults (25 to 64) and youth (15 to 24), respectively. On average, adults and the elderly have less than the seven years of schooling than those required to complete primary level, while on average youth are above this threshold.

FIGURE 12. EDUCATIONAL ATTAINMENT, TOTAL AND BY AGE GROUP

FIGURE 12.A: AVERAGE YEARS OF SCHOOLING

FIGURE 12. B: EDUCATIONAL ATTAINMENT
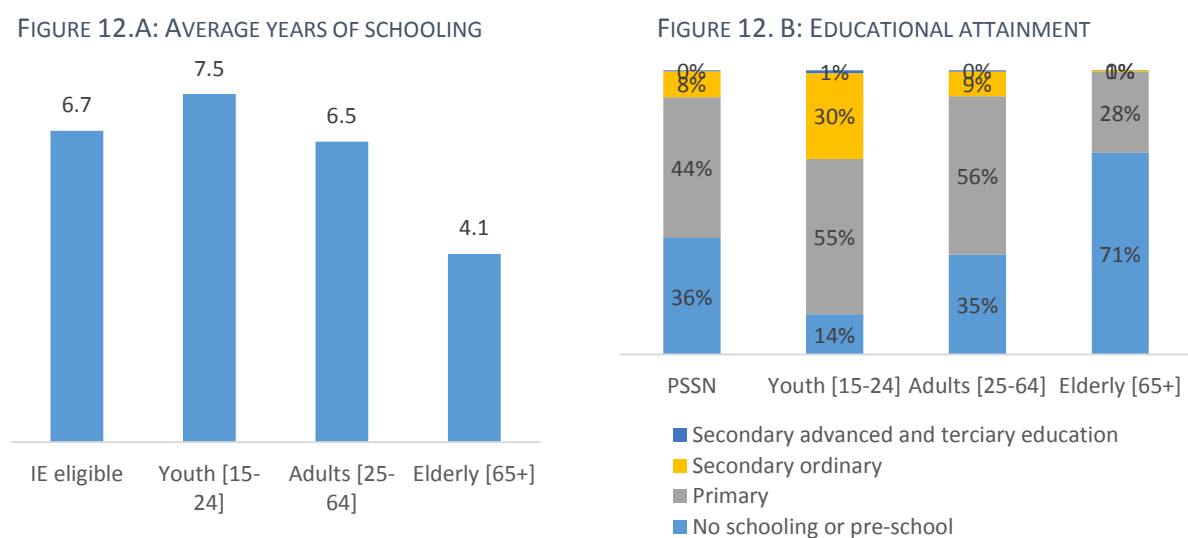
Enrollment rates[22] among PSSN beneficiaries are high when children are in primary but decline steeply at the age when they should be enrolling in lower secondary school. More than three of every four children in school age (5 to 19) are enrolled in school and enrolment is nearly universal before 10 years of age (see Figure 13). However, there is a high drop-out rate around the time children reach 14 where accordingly to education policy they should be entering secondary (Form I). By the time children reach age 16, only half of them are still in school. In addition, only 56 percent of those enrolled in primary 7, the final grade in primary, are estimated to progress to Secondary Form I. The low progression especially at higher levels of education suggests that PSSN's benefit structure with transfers increasing with the benefit level is contextually appropriate.

FIGURE 13. ENROLLMENT RATES, BY AGE AND GENDER AND COMPARISON WITH THE NATIONAL POOR
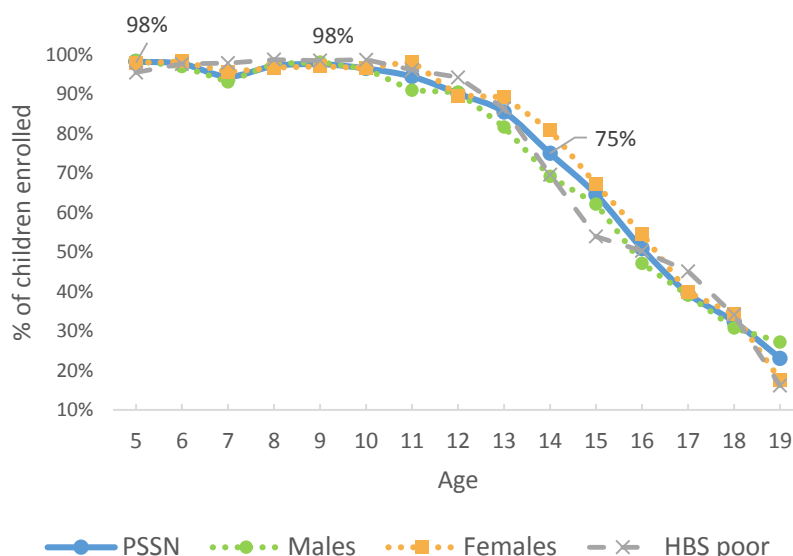
Financial constraints are the most significant barrier to school enrollment among PSSN households and this proportion has increased over time due to supply side improvements and changes in perceptions. The percentage of PSSN household members who have never been to school because of distance to school facilities is only 3 percent among children compared to 21 percent among the elderly (see Figure 14). Similarly, perceptions of the importance of schooling have shifted positively. Despite this change, more than half (56 percent) of the children ages 5 to 9 who have never been in school are not enrolled because they are considered too young. Even at age 7, which is the official age of mandatory school entry, more than two out of every five children are not enrolled because they are perceived to be too young. At the same time, financial constraints are increasingly being reported as a reason for never going to school, with this being the main reason for one in every two young adolescents.[23] PSSN transfers could both reduce the age of school entry and the financial barriers preventing enrollment.

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[22] Enrollment rates are calculated as the share of children enrolled for a given age.
[23] Financial costs include the additional costs households face when enrolling children in school, these include the cost of school materials such as uniforms and exercise books, which about 90 percent of school-going children have compared to a negligible proportion among out-of-school children (see Annex 4).

FIGURE 14. MAIN REASONS FOR NEVER HAVING GONE TO SCHOOL, BY AGE GROUP

FIGURE 14. MAIN REASONS FOR NEVER HAVING GONE TO SCHOOL, BY AGE GROUP
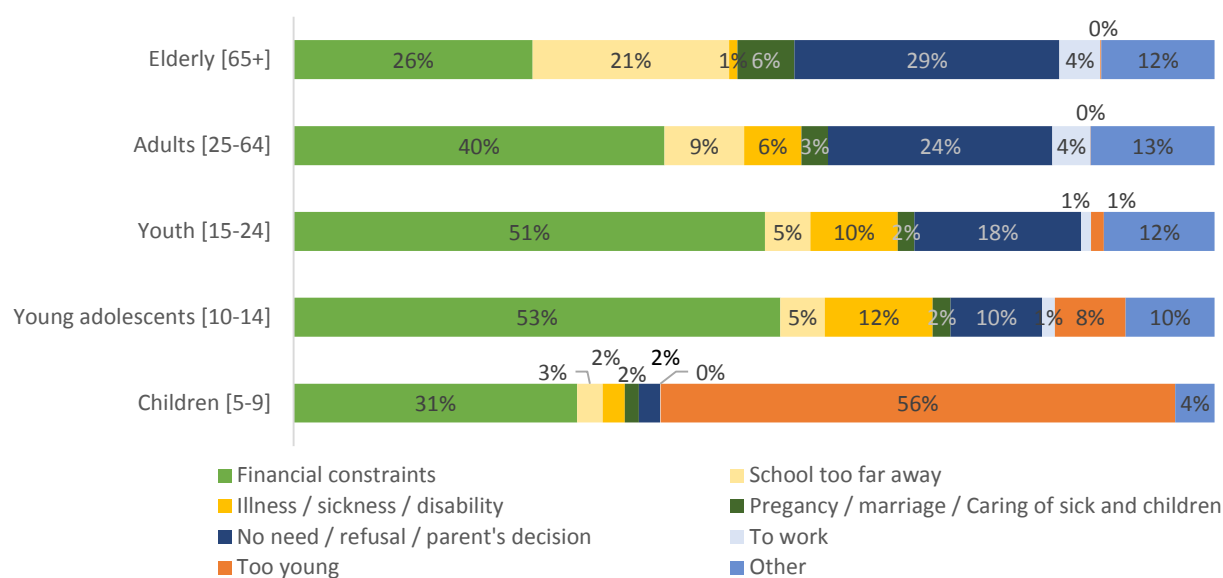
Due to repetition and age of entry into school, children in PSSN households face high risk of dropout. Among school-age children who are enrolled in school, almost one of every five has repeated a grade, with an average repetition of 1.4 years. An analysis of the repetition rate by grade shows that it has an upward trend between pre-primary and primary level 4, before declining steeply close to entry into secondary (Figure 15). This is consistent with low progression into secondary, as evidence suggests children who have repeated at least one grade tend to be more likely to drop out of school (No et al, 2016). The high repetition results in almost one of every three children being behind the expected school grade. On average, PSSN children of school age are 2.1 years behind, which can increase their risk of dropout as they lose interest in school, especially when reaching adolescence when they could begin participating in the labor force.

FIGURE 15. REPETITION RATES AMONG ENROLLED, BY CURRENT GRADE

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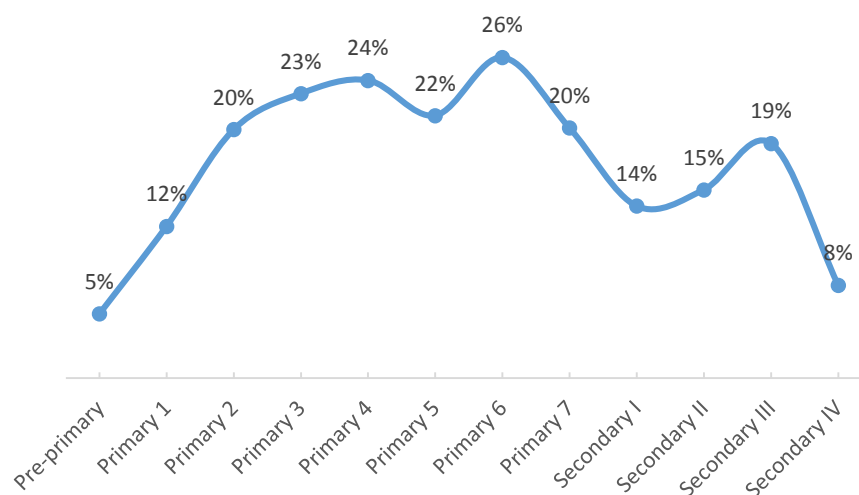
For those enrolled in school, attendance tends to be high, indicating this is not likely to be an area where the program would have substantive positive impacts. The majority of enrolled children (88 percent) report not missing any school days in the past two weeks and 92 percent attend more than 80 percent of the time.[24] However, children who are missing school miss on average 5.1 days every two weeks. Statistically significant differences are found when decomposing by age group and gender. Attendance levels are slightly higher among children 5 to 9 (94 percent) than among young adolescents and youth (90 percent and 91 percent respectively). Girls are slightly more likely to be attending school, although attendance levels are high for both genders (91 percent for boys vs. 93 percent for girls). These high levels of attendance imply a high cost-benefit to monitoring school attendance of all children, instead targeted monitoring of vulnerable children might be more effective.

The main reason for school absence is illness of the child with financial constraints the second main constraint. Half of the children who miss school days do so due to illness, with this reason being reported equally by both girls and boys. The second most common reason for not attending school is not being able to meet the costs of schooling, with this reported for one of every 5 children. This reason is most prevalent in Dar-es-Salaam (46 percent) but much less important in Zanzibar (7 percent). In some areas, school closures and teacher absenteeism are affecting children's access to education; for example, 22 percent of children in Zanzibar reported not going to school because the institution was closed or the teacher was absent. This means that in these areas children's education is affected by supply issues, on which the program has very limited influence.

FIGURE 16. MAIN REASONS FOR SCHOOL ABSENCE

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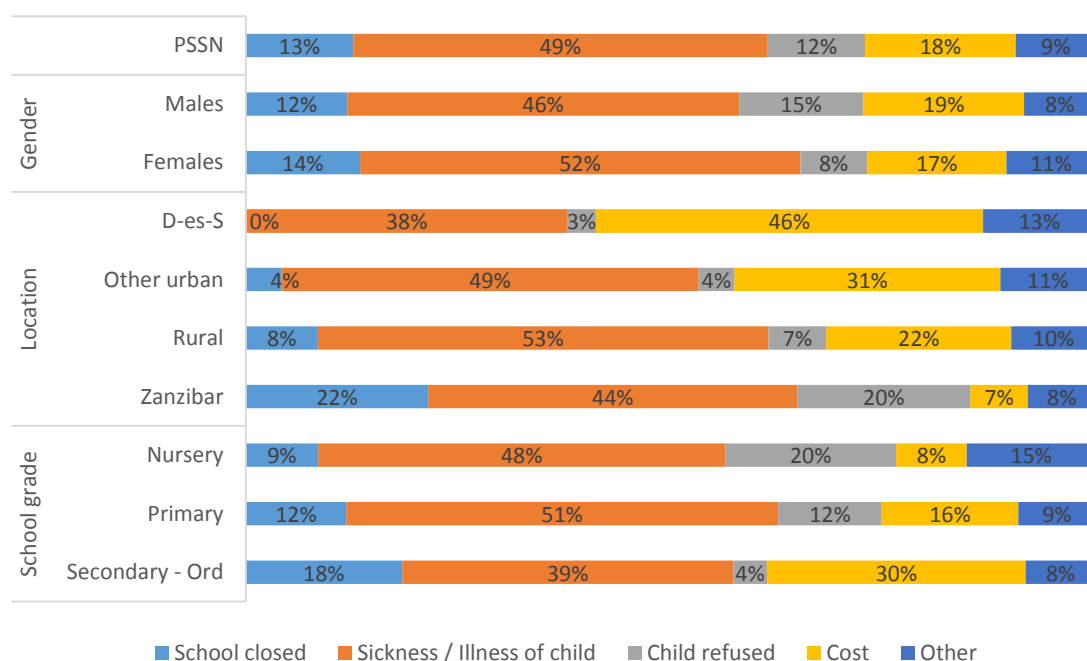
[24] At the time of baseline data collection 15 percent of enrolled children were on school break, and are therefore excluded from this analysis. However, breaks are not expected to be correlated with any variable of interest.

Supply side constraints could emerge due to higher demand from the program, particularly since most children attend public schools. Almost all (97 percent) of children in PSSN households go to public schools. While distance is not mentioned as key constraint to schooling, the average time spent to go to school is 47 minutes, and there are not statistically significant differences across geographical areas. Although primary enrollment rates are high, secondary enrollment is low and to the extent the program encourages secondary school, additional enrollment especially in secondary could lead to significant capacity issues. The most common way of reaching school facilities is on foot, with 97 percent of all school age children using this mode of transport. As expected, there are some differences by location and while public transport is used by 13 percent of the children in Dar-es-Salaam, less than 2 percent use this mode of transport in other areas.

C.   Health-seeking behavior

Half of pregnant women in PSSN households received the recommended minimum of four antenatal care visits or more, similar to national levels. Nearly half (46 percent) of all the females in reproductive age (between 12 and 49 years of age) received four or more antenatal visits during their last pregnancy, as recommended by the World Health Organization. This is similar to take-up at the national level as measured by the 2010 Demographic and Health Surveys (2010 DHS). This percentage is much higher in Dar-es-Salaam (88 percent), indicating that location is a strong predictor of the number of antenatal visits pregnant women receive. Nonetheless, even in rural areas, almost nine of every ten women are already receiving antenatal care at least once during pregnancy (see Figure 17.A). The fact that women already take-up ante-natal care, even if at a lower than optimal level, suggests this may be an area where the PSSN could more easily encourage behavioral change.

FIGURE 17. MATERNAL HEALTH INDICATORS BY AREA

FIGURE 17.A: ANTE-NATAL CARE VISITS

FIGURE 17.B: POST-NATAL CARE VISITS

29
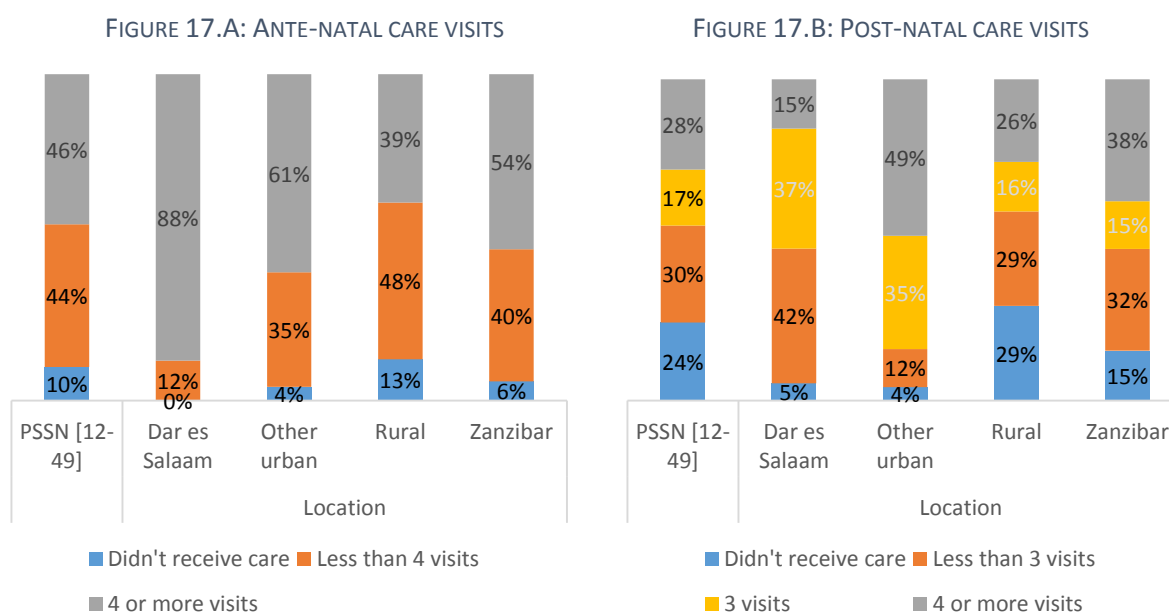
Institutional birth delivery within PSSN households is higher than the national levels, but post-natal care levels are very low. More than half (59 percent) of children under 24 months were delivered at a hospital or clinic (compared to 50 percent nationally), but one in four women did not receive any post-natal care visits in the first 8 weeks of their child's life during their last pregnancy. The first few weeks after birth are critical for the lives of both mothers and newborns as most maternal and infant deaths occur during this time (WHO, 2013). International guidelines recommend four or more post-natal care visits if the birth is at home and at least three if the birth is in a health facility. More than half of the women report receiving postnatal care less than three times, a percentage that is of almost 60% in rural areas (Figure 17.B). The available data available on post-natal care does not allow a cross-check with institutional births, but even in Dar-es-Salaam – where 92 percent of all children under 24 months were delivered at a clinic or hospital – only half of the women received at least three post-natal visits. Similar to ante-natal care, post-natal care is an area where the PSSN could have a significant impact.

PSSN households' members tend to be sicker than national poor and have lower health care use, driven primarily by cost constraints and social norms. Almost one-third (31 percent) of adults has been sick in the last 4 weeks. However, only a little over half of these visited a health provider (54 percent), including traditional healers; this is lower than among the national poor (64 percent). Most (92 percent) of those visiting a health provider do so because they are sick, suggesting that preventive medicine is not sought out by adults. This is confirmed by the fact that most adults, when not sick, think it is either unnecessary or not customary to visit a health facility. Cost is the main barrier to seeking healthcare when sick, followed by perception that it is unnecessary or not customary (see Figure 18).

FIGURE 18. MAIN REASONS FOR NOT SEEKING HEALTHCARE, ADULTS (25-64)
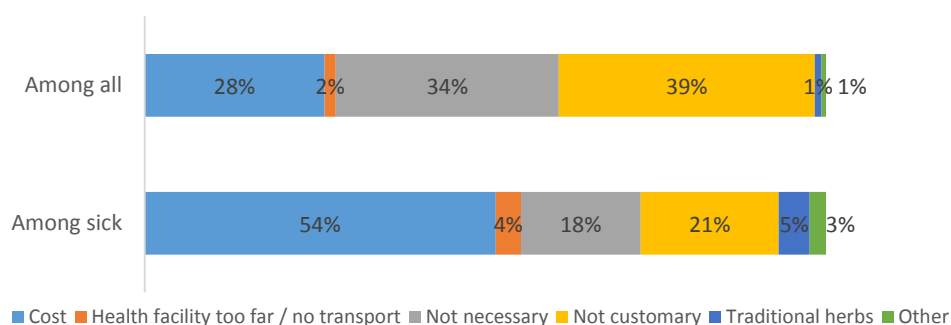
Similar to adults, children under five are not taken to the doctor mainly due to costs and social norms, aspects which the program could impact. Overall, only 23 percent of children under five visit a health provider and only a little more than one-third (63 percent) of those who are sick do so. The national health protocols suggest a monthly visit for children under 24 months and biannual visits for children between 24 and 60 months. However, most (90 percent) of children under five who visit a health provider do so because they are sick, suggesting that these routine checks are rare. This is driven primarily by social norms around receiving treatment, with more than three in four children not taken to a provider because parents think it is not customary or unnecessary. On the other hand, the fact that when children are sick this plays a smaller role suggests social norms are not binding: among children under five who are sick, cost is the most common barrier to access (Figure 19). This hypothesis is validated by high immunization rates among

children under five, with 81 percent of children reportedly fully immunized.[25] The program, through the transfer, is expected to relax cost constraints, and could also help further reduce the influence of social norms on routine health checks.

FIGURE 19. MAIN REASONS FOR NOT SEEKING HEALTHCARE, CHILDREN UNDER 5
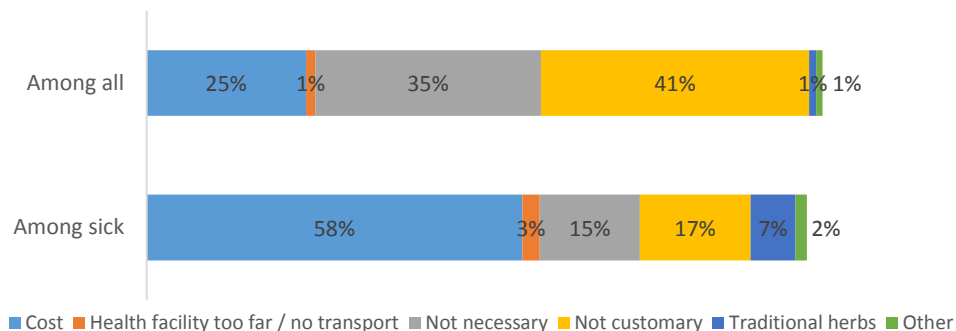
The most common illnesses among PSSN beneficiaries are fever and malaria. More than half of children under five were affected by fever in the past four weeks, and close to one-third had their activities disrupted by malaria (see Figure 20.A). Diarrhea is another common illness among younger children, affecting 10 percent of those under 24 months compared to 2 percent of those between 24 and 60 months. However, diarrhea incidence among under-fives is likely under-reported, as the 2010 DHS national estimate is 15 percent, compared to only 3 percent of PSSN under-fives. Among the broader PSSN population, and more specifically among children from five to nine, the most common illnesses were also fever and malaria (see Figure 20B).

FIGURE 20. MOST COMMON ILLNESSES

FIGURE 20.A: CHILDREN UNDER 5

FIGURE 20.B: CHILDREN 5 TO 9

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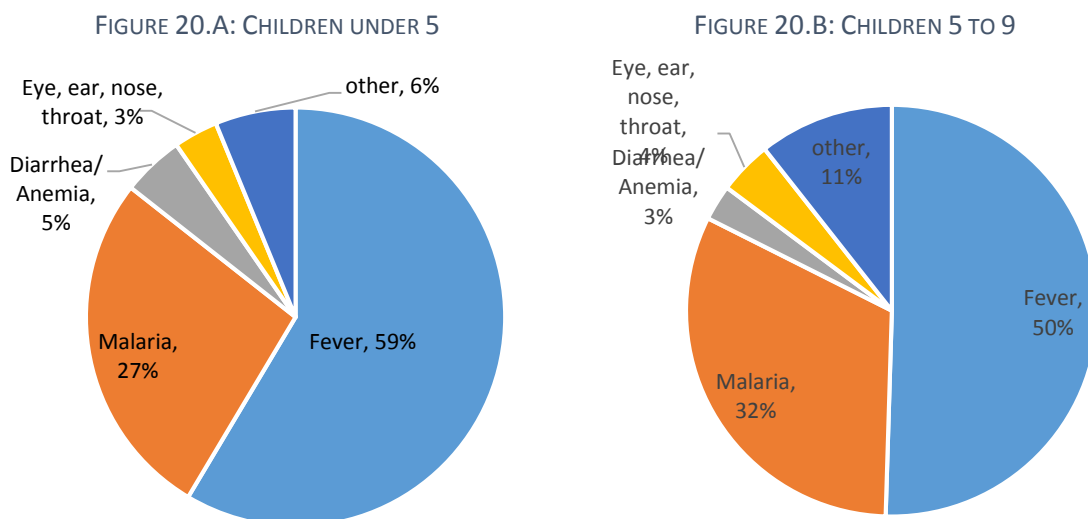
[25] This is much higher than national the average of 64 percent (2010 DHS), suggesting possible reporting inaccuracies. Enumerators checked vaccination cards, but the data does not distinguish confirmed from reported answers.

In seeking healthcare, PSSN households rely primarily on public facilities in the form of dispensaries, similar to the national poor. Under half (40 percent) of PSSN beneficiaries use dispensaries, similar to the national poor (40 percent). Health centers are the second most common used health provider (25 percent). However, there are important geographical differences; while in rural areas dispensaries are more commonly used, in Zanzibar there is greater use of health centers (see Figure 21). Most of the health centers visited are public (79 percent). On average all children under five visit dispensaries 0.5 times every four weeks (0.5 for children under 24 months and 0.4 for children between 24 and 60 months). PSSN, through the co-responsibilities, is aiming to increase this visits to once per month for children under 24 months, and once every two months for children between 24 and 60 months.

FIGURE 21. TYPE OF HEALTH PROVIDER VISITED[26]
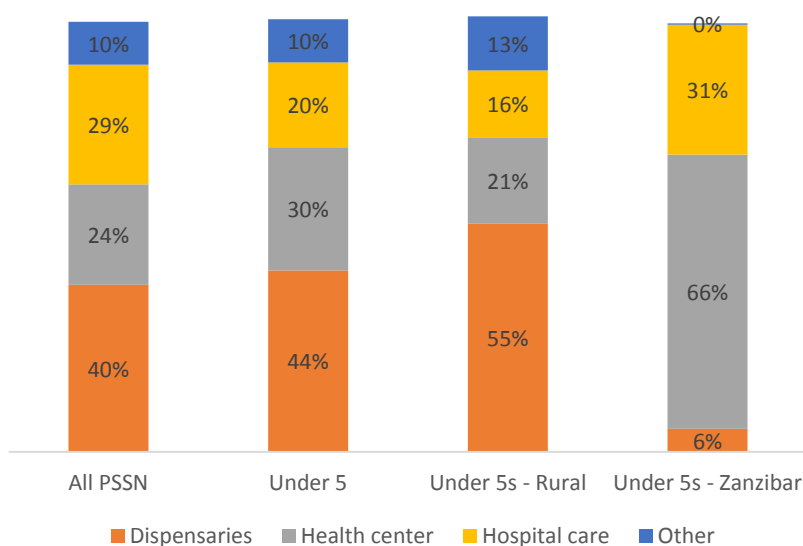
As with education, access to basic healthcare exists but constraints could emerge due to higher demand from the program. Although distance is not cited as a key constraint to accessing healthcare, households spend on average 62 minutes to reach the closest health provider. Here again, there are significant geographical differences, with Zanzibar having more immediate access (average distance of 35 minutes) compared to mainland (71 minutes), and within mainland Tanzania urban areas (50 minutes) have easier access than rural areas (74 minutes). A little over three in every four households mainly access health providers on foot.

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[26] Due to small sample size, Dar-es-Salaam and other urban areas in the mainland are not presented separately.

FIGURE 22. MODE OF TRANSPORT TO NEAREST HEALTH PROVIDER
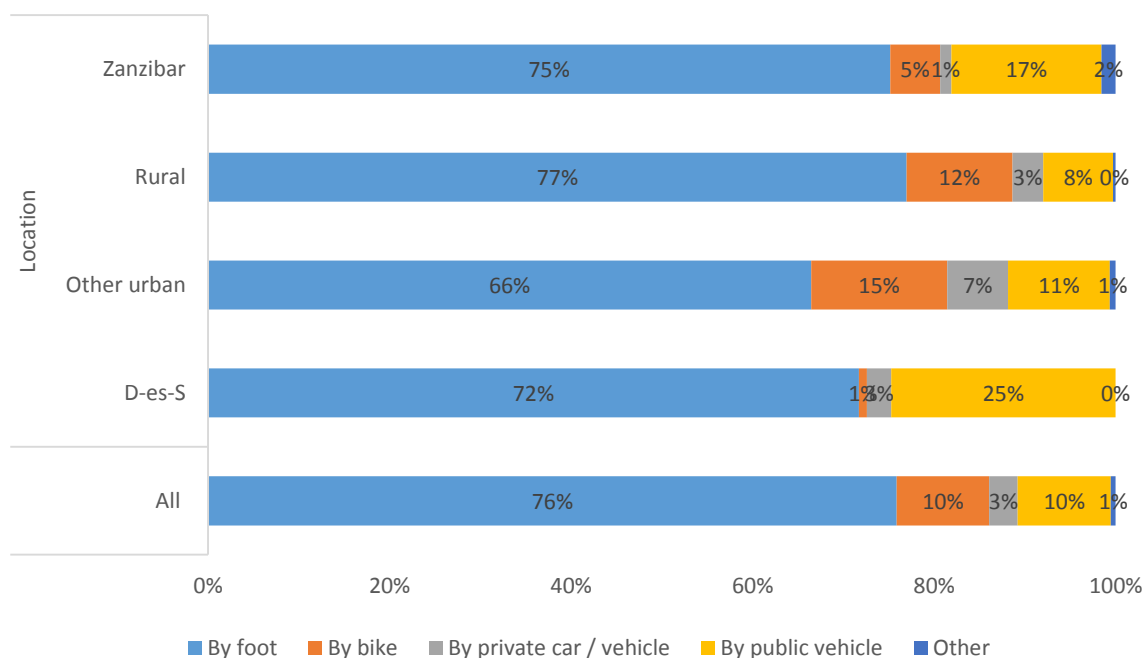
D.   Consumption and Food Security

The share of food in total consumption among PSSN households is very high, suggesting that PSSN households are among the poorest in the country. Poorer households tend to spend a higher share of their consumption on food. By this metric, PSSN households are substantially poorer than the national poor, based on an analysis of per adult equivalent consumption constructed following the 2012/13 National Panel Survey (NPS) methodology.[27] Both the median and the average monthly consumption of PSSN households – both below TSh. 30,000 (equivalent to roughly $15) – are lower than the national food poverty line adjusted for 2015 prices of TSh. 31,600. This translates into 69 percent of households identified as eligible living below the basic needs poverty line.[28] In rural areas, the food share is higher (91 percent) than in Dar-es-Salaam and Zanzibar (80 and 85 percent respectively). Very high food expenditure shares are also considered a key indicator of food insecurity (WFP, 2013).

The majority of PSSN households derive substantial part of their consumption from their own production and in-kind transfers, paralleling the situation of the national poor. The majority (82 percent) of PSSN households report that some of their consumption comes from in-kind sources, similar to levels among the national poor based on 2012/13 NPS data and once again indicative that PSSN households are among Tanzania's poorest. On average, PSSN households derive 39 percent of food consumption from gifts or from the household's own production. This is expected to come primarily from own production, based on the NPS data indicating that poor households typically derive only 20 percent of in-kind consumption

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[27] The NPS approach to measuring consumption was used instead of the HBS as it is requires a data collection process that is less complex and shorter in duration. The 2012/13 NPS methodology for adult equivalency scales by gender and age was applied to account for differences in consumption needs.

[28] A more detailed analysis of poverty among targeted households can be found in Section VI.A.

from gifts. Analysis by location shows important differences, with higher prevalence of consumption from in-kind sources in rural areas and Zanzibar of above 80 percent compared to 37 percent in Dar-es-Salaam. Also, the share of in-kind consumption in total food consumption varies from 7 percent in Dar-es-Salaam to 44 percent in rural areas (see Figure 23).

FIGURE 23. SHARE OF IN-KIND FOOD IN FOOD CONSUMPTION, BY LOCATION
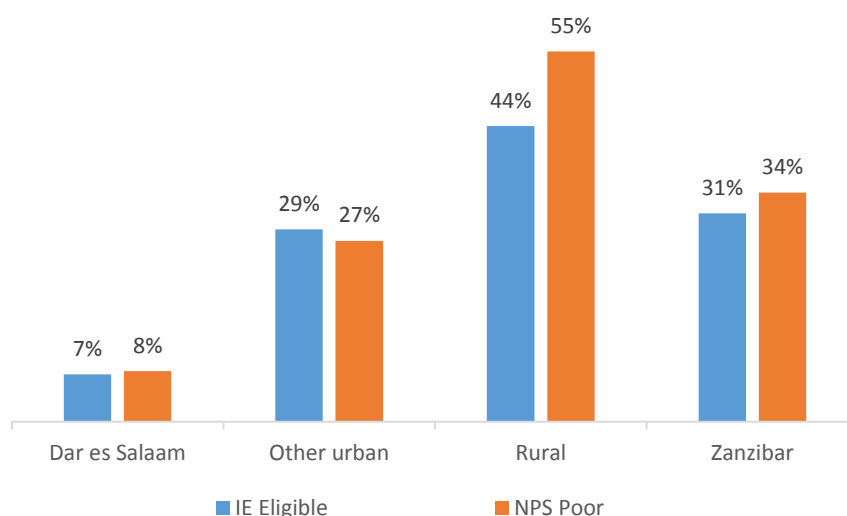
Food security is low among PSSN households, even relative to Tanzania's poorest households. The majority (73 percent) of PSSN households have low diet diversity, a key measure of food security. [29] This figure is severe even when benchmarked against the national poor (50 percent) based on the 2012/13 NPS 2012. It is of particular concern that one in four households consume food items from two or less groups and that the two food groups with the highest nutrient density, animal proteins and dairy products,[30] are consumed by less than 43 percent and 5 percent of the households respectively (see Figure 24). Food security as measured by the food consumption score, which takes into account dietary diversity, frequency of consumption, and nutrient composition, is also low (WFP, 2008). The food consumption score is on average 19.5, below the threshold delineating a poor and a borderline score and almost two thirds of PSSN households (65 percent) have a poor food consumption score. These high levels of food insecurity once again indicate the program's design is well-suited to impact the targeted households.

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[29] See World Food Programme (2013) for the methodology. Under this approach, households that consume four or fewer of seven key food groups during the week-long reporting period are considered to have low diet diversity. Food groups are: 1) cereals, roots and tubers; 2) pulses and legumes; 3) dairy products; 4) oils and fats; 5) meat, fish, eggs; 6) fruit; and 7) vegetables. The exceptionally low diet diversity compared to the national might indicate some over-reporting of food security questions and thus these data should be interpreted with caution.

[30] According to WFP (2008), "'nutrient density' is a term used to subjectively describe a food group's quality in terms of caloric density, macro and micro nutrient content, and actual quantities typically eaten."

FIGURE 24. CONSUMPTION OF KEY FOOD GROUPS, BY LOCATION
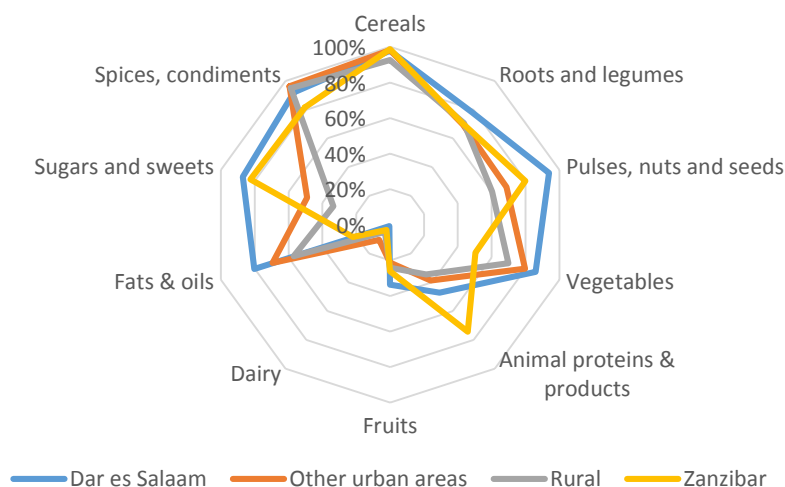
Aside from food, utilities represent the highest share of household expenditure, and only a very small amount goes toward children's clothing. Households spend on average 5 percent of their expenditure on utilities, and a further 6 percent on other household expenses, transport and communications. When including clothing in total consumption, less than two percent of expenditures goes towards children's clothing (see Figure 25).[31] PSSN households spend more on children's clothing than on adult's clothing (TSh. 375 versus TSh. 194 on average). Analyzing expenditure on children's clothing is of interest because cash transfer programs in various countries, including Tanzania (Evans et al, 2014), have shown to have a positive effect on the amount of money households set aside for these items.

FIGURE 25. SHARE OF EACH GROUP IN TOTAL CONSUMPTION, TOTAL INCLUDING EXPENSES ON CLOTHING

FIGURE 25.A: TOTAL CONSUMPTION INCLUDING CLOTHING
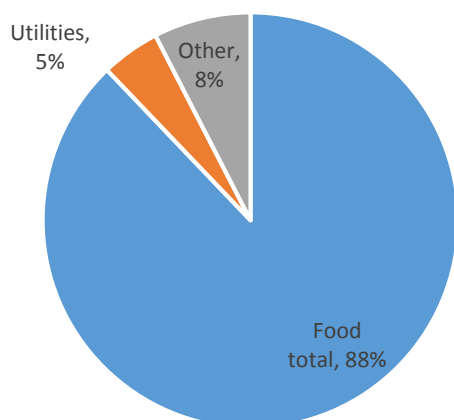
FIGURE 25.B: CONSUMPTION WITHOUT FOOD

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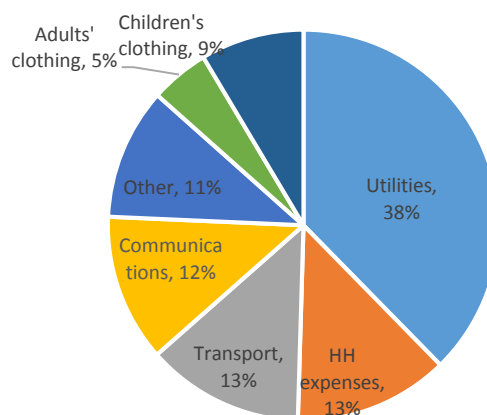
[31] NPS poverty estimates, which this analysis replicates for comparability, do not include clothing expenses i total household consumption. However, adding to the total household consumption the money spend on clothing leads to a very small drop in the share of food, utilities and other expenses.

Few PSSN households receive external support in the form of transfers, with food and cash being the most common types. Only about a quarter (26 percent) of PSSN households received some form of transfer in the last 12 months. Among PSSN household, 17 percent received food support coming from programs such as free food distribution and food for work and another 9 percent received support in cash. Other forms of support were rare, such as inputs in exchange for work (less than 1 percent), scholarships or bursaries (1 percent), and other support (7 percent). Most of the cash support comes from friends, family or neighbors, while the food support comes from both friends and family, and government.
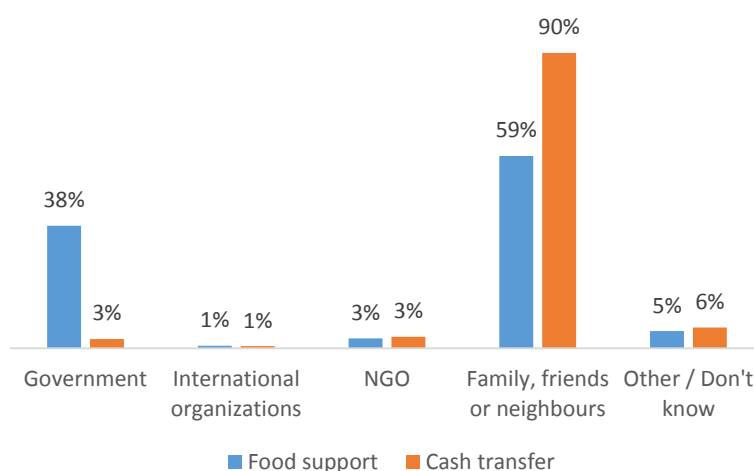
The PSSN CCT transfer size as a percent of household consumption is in line with international benchmarks for similar programs. Taking into consideration household composition, on average the CCT transfer is approximately TSh. 21,000 (approximately US$13), representing 21 percent of monthly total consumption among PSSN households and 24 percent of monthly food consumption.[32] As expected, there are differences across geographical areas since the transfer size does not vary based on location. At 25 percent, the transfer represents the highest proportion of household monthly consumption in rural areas, while lower in other urban areas and Zanzibar at 17 percent, and lowest in Dar-es-Salaam at 14 percent. Benchmarking against key poverty indicators, the transfer represents 10 percent of the national basic needs poverty line and 13 percent of the food poverty line or 113 percent and 156 percent of the amount poor households would need to close the basic needs poverty food poverty gap, respectively. Taken together, this evidence indicates the PSSN transfer amount is consistent with global experience[33] and is not creating a risk of dependency as it covers only a portion of PSSN households' basic consumption needs.

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[32] This results in a transfer of TSh. 20,800 assuming all eligible children comply with co-responsibilities. The lower bound, that is, assuming only currently enrolled children comply, results in an average transfer of TSh. 17,500, 18 percent of household monthly consumption, and 96 percent of basic needs poverty gap.

[33] See Stampini and Tornarolli (2012) for evidence that the CCT transfer size in most countries represents more than 20 percent of poor beneficiaries' income. See Garcia and Moore's (2012) recent review of cash transfers in sub-Saharan Africa showing the household monthly transfer size ranges from US$8 to US15; a study by UNICEF (2015) shows average social transfer values in sub-Saharan Africa range from US$8 to US$25 per household per month and impacts on consumption are seen when transfer size is at least 15-20 percent of household food consumption.

E.   Shocks and Coping Strategies

PSSN households rely on negative coping strategies when facing food insecurity, and are more prone to employing them than the national poor. Almost three of every four (72 percent) PSSN households used at least one negative coping strategy to respond to food shortages (see Figure 27). To assess the combined risk of employing a negative strategy, analysis of the coping strategy index (CSI) was conducted, which gives lower weight to coping strategies that are more reversible such as eating less preferred foods, limiting portion size and reducing the number of meals per day, and higher weight to more severe responses that indicate longer periods of food shortages.[34] PSSN households have a higher CSI of 7.5 than among the national poor as estimated with NPS data (5.2), signaling higher risk of using negative coping mechanisms.

FIGURE 27. COPING STRATEGIES EMPLOYED FOR FOOD INSECURITY

Any strategy — 72%
Used less preferred foods — 59%
Reduced No. of meals — 41%
Limited portion size — 38%
Borrowed food or relied on help — 28%
Restricted consumption of adults — 19%
Member went a whole day without eating — 14%
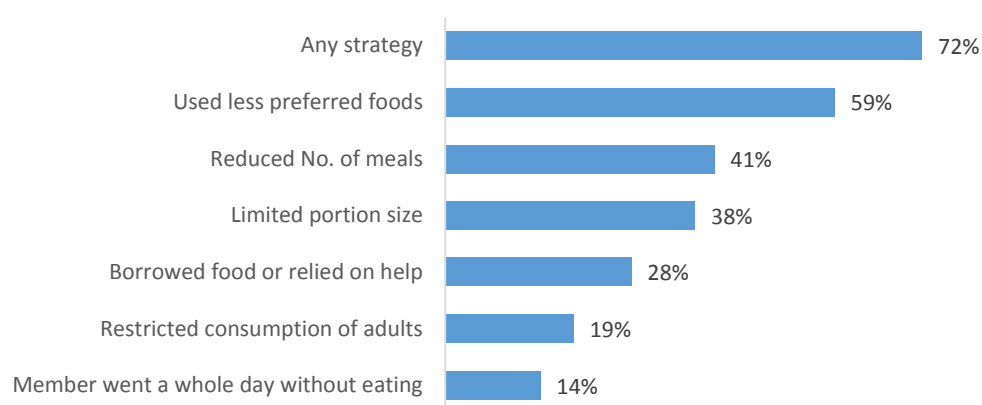
Almost one third of PSSN households suffered any shock in the past 12 months and more than half of these shocks led to an income or asset loss or both. Among PSSN households who faced a shock in the last year, 70 percent faced only one event and the remaining 30 percent suffered two or more. The most prevalent type of shocks, suffered by around 30 percent of households are: damages to dwelling, drought or floods, and death of a family member outside the household. Of these three, the most severe is droughts or floods, as more households lost income or assets as a consequence of this event (see Figure 28). While a household member's death, illness, or accident are less common, when these shocks occur they are more likely to deplete assets and income. These findings validate the PSSN design, particularly the combination of interventions to address both idiosyncratic and covariate shocks. They also provide some options to consider when communities are affected by covariate shocks: (i) beyond the CCT program, labor-intensive public works could be used as a tool to dampen the effects, for example through scale up or specific works aimed at restoring damaged infrastructure or crops; and (ii) co-responsibilities could be temporarily waived as school and health providers are also likely to be affected.

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[34] See WFP (2013) and Maxwell and Caldwell (2008) for details on the CSI methodology.

FIGURE 28. INCIDENCE AND IMPACT OF SHOCKS

	% of HH affected by shock	% HH affected by shock who suffered income/asset loss
Drought or Floods	30%	82%
Hijacking/robbery/burglary/assault	1%	73%
Chronic/severe illness or accident of HH member	19%	66%
Death of a HH member	15%	57%
Break-up of the HH	15%	53%
Dwelling damaged, destroyed	30%	41%
Death of other family member	27%	27%
Other	2%	53%
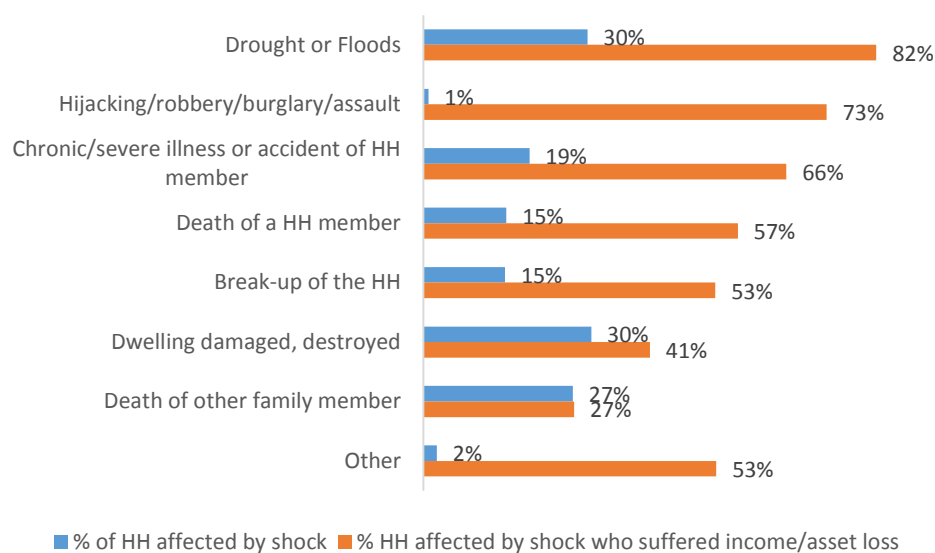
Most households who used a coping strategy in response to shocks depleted savings or relied on informal safety nets. It has been widely documented that vulnerable households may respond to shocks through strategies that could be damaging in the long run, such as taking children out of school, selling productive assets and obtaining credit at high rates. Overall, almost half of the households report not having reacted to shocks, possibly because they were not severe enough or due to a perception of the chosen response as inactive rather than active. Some events tend to be more severe than others. When the dwelling is damaged or a family member dies close to half of the households used a coping mechanism, while after droughts or floods and after illnesses or accidents the number using of households using a coping strategy is higher (60 and 70 percent, respectively). Of particular interest for the program is the fact that it is after droughts or floods that children are more likely to leave school (see Figure 29).

FIGURE 29. COPING STRATEGIES USED BY HOUSEHOLDS

	Any shock	Drought or Floods	Chronic/severe illness or accident of HH member
Did nothing	47%	40%	31%
Relied on relatives & friends	25%	18%	28%
Savings	23%	22%	19%
Sold assets	8%	4%	12%
Changed eating patters	4%	11%	2%
Children started working or left school	4%	10%	1%
Unconditional government assistance	1%	1%	2%
Other	14%	10%	15%
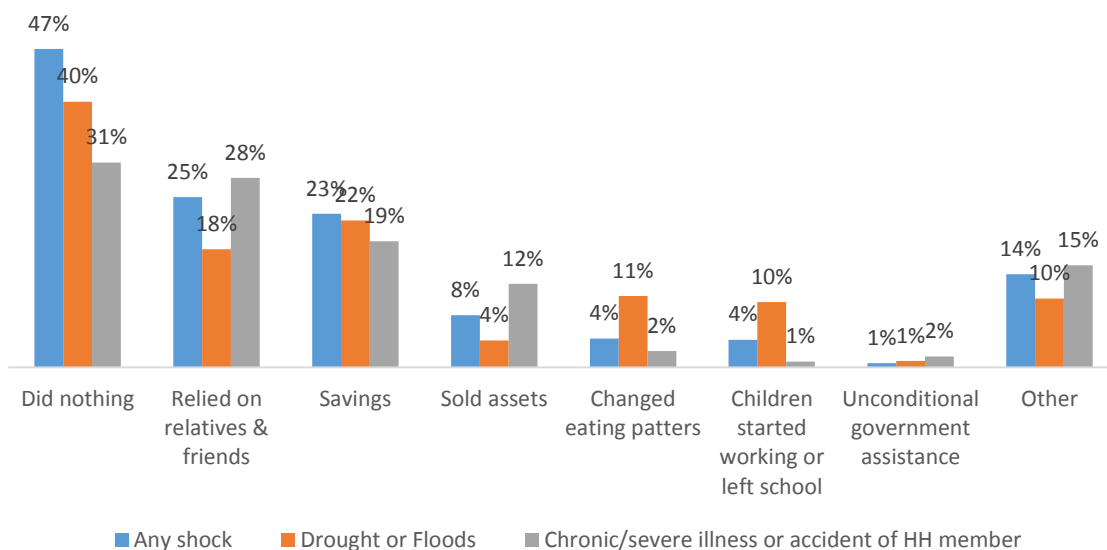
F.   Jobs, Livelihoods, and Time Use

PSSN households are heavily reliant on agricultural activities to meet their consumption needs. A large share (69 percent) of PSSN households own, cultivate or raise land and livestock. More than half (61 percent) of PSSN households own or cultivated land and 36 percent own or raised livestock. The percent cultivating land is higher among the national poor (86 percent according to the 2012 NPS) and the NPS data suggests that among the poor there is a positive relationship between participation in farming activities and consumption. This relationship is negative among all households in Tanzania, but positive when only poor households are considered. In other words, poorer households are more likely to be involved in farming activities than nonpoor households, but among the poor, the poorest households are less likely to be engaged in these activities.

Only one third of PSSN farming households diversify their income sources. Among all PSSN households, 31 percent diversify their activities to generate income through activities other than farming, including wage employment and non-farming activities (see Figure 30.A). Among all PSSN farm households, 17 percent diversified their income with a non-farm business, which compares to 33 percent among poor rural households nationally (2012 NPS). Diversification of income sources is desirable, especially to reduce household dependency on one single source of income. Also, as seen Figure 30.B, diversification strategies already used by PSSN households result in higher monthly consumption. Data from 2012 NPS suggests that as beneficiary households start receiving the transfer, the composition of income sources among PSSN households may change. While poorest families may engage in farming activities, those relatively wealthier may establish a non-farm business.

FIGURE 30. LIVELIHOODS AMONG **PSSN** HOUSEHOLDS

FIGURE 30.A: SOURCES OF INCOME
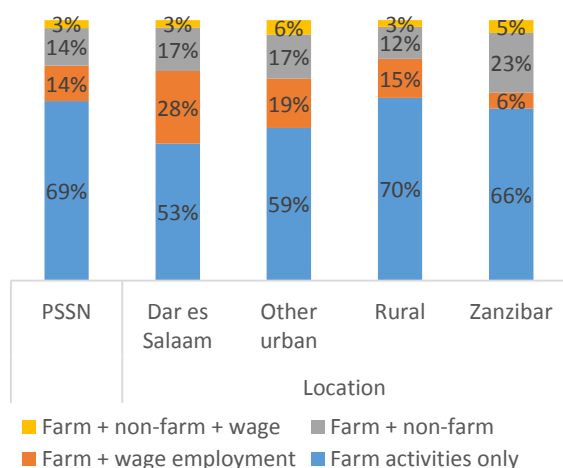
FIGURE 30.B: MEDIAN MONTHLY HOUSEHOLD CONSUMPTION
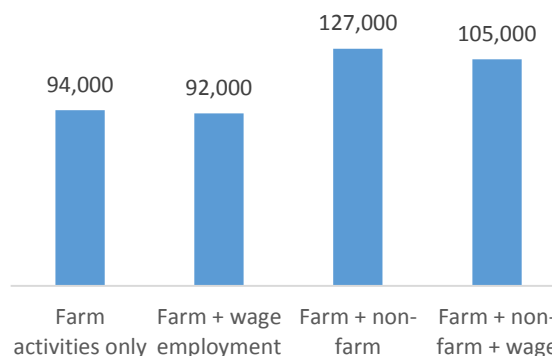
Labor force participation is relatively low and unemployment is high among PSSN beneficiaries. Only 49 percent of PSSN household members between 15 and 64 years of age are economically active, compared to participation of 88 percent among the national population (2014 ILFS). More than one in five PSSN beneficiaries are unemployed, double the unemployment rate at the national level (NBS, 2015). There are significant gender gaps in labor force participation (45 percent versus 55 percent for men), which is of

particular interest for PSSN considering that in <mark>X percent [data on women recipients to be provided by TASAF]</mark> of PSSN households the recipient is a woman and in over half of PSSN households have a woman as head. These gender gaps are widest in Zanzibar and Dar-es-Salaam (Figure 31.A). Less than two in every five PSSN beneficiaries of working age are employed and almost a quarter of those in the labor force are unemployed (Figure 31.B). The share of employed women is significantly lower than that of men (35 vs. 42 percent), but there are no significant gender differences in unemployment.

FIGURE 31. LABOR FORCE PARTICIPATION, EMPLOYMENT AND UNEMPLOYMENT RATE

FIGURE 31.A: LABOR FORCE PARTICIPATION BY GENDER   FIGURE 31.B: EMPLOYMENT AND UNEMPLOYMENT RATE
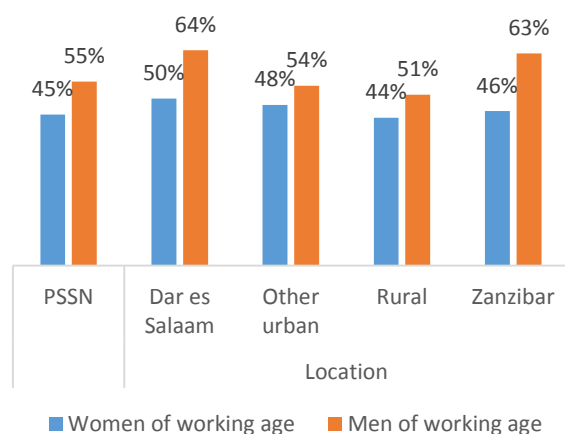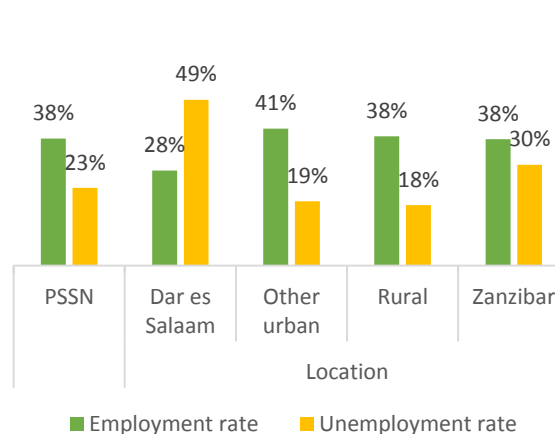
Most workers in PSSN households have low job security. More than half (62 percent) of PSSN employed workers ages 15 to 64 have jobs in agricultural, forestry and fishing activities, which are by nature unstable as they provide job opportunities only in certain months of the year. In addition, 27 percent of all employed workers ages 15 to 64 in PSSN household have unpaid jobs, and more than half (54 percent) are self-employed. The majority of the unpaid workers and the self-employed (85 and 58 percent respectively) work on agricultural activities. Among the 19 percent of the workers who are in wage employment, the majority (81 percent) have casual or seasonal jobs. All of the previous translates in less than 2 percent of PSSN beneficiaries who are working in wage employment with a stable job. This vulnerability is confirmed by the fact that most (87 percent) of the employed lack a contract.

The economic sectors in which male and women are employed differ, generating differences that need to be considered by the PW component when designing job offers. Women are more likely than men to be involved in service and sales, and agricultural, forestry and fishing activities. In contrast, the opposite is the case for crafts and related activities, and plant and machine operators or assemblers (see Figure 32). These gender differences show that the type of jobs that are made vacant through PW will have different outcomes by gender. Again, as mentioned above, the fact that more PSSN households have women heads suggest that it would be wise for the program to generate jobs on the sectors preferred by women.

FIGURE 32. EMPLOYMENT BY SECTOR AND GENDER
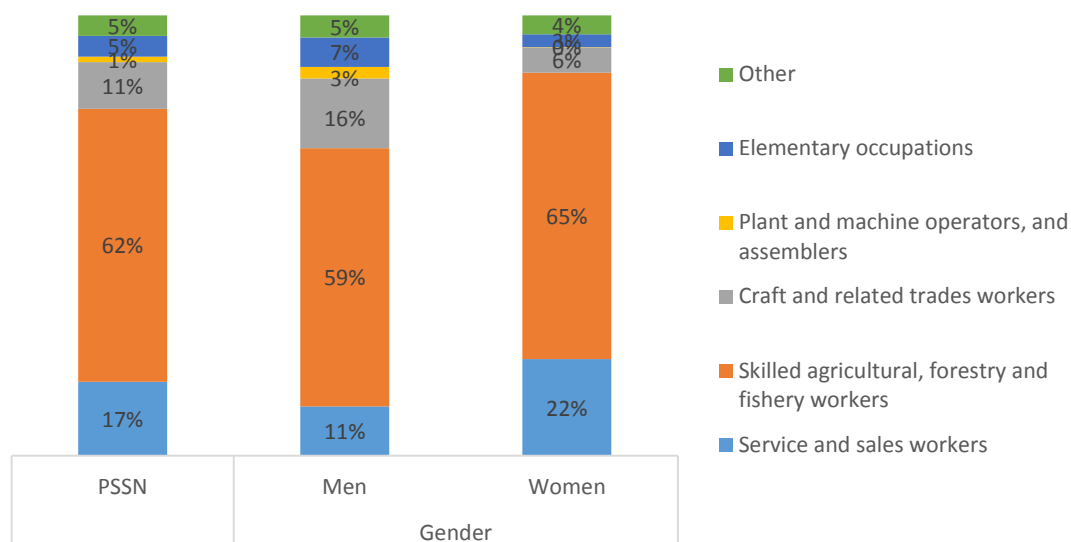
The PSSN is not expected to create labor disincentives based on the labor profile of the beneficiaries. Given the low labor force participation, high unemployment, and prevalence of self-employment, the program has the potential to generate job opportunities both through public works and by providing capital through cash transfers. With cash transfers, there tends to be a concern that they could create labor disincentives.[35] However, given that PSSN's average transfer represents only 11 percent of current labor income among beneficiaries who receive income, this does not seem to be of major concern in the Tanzanian's context. [36] This is also supported by the fact that the cash transfer covers only a portion of the households' consumption needs (see Section D). However, this will be tested through the IE.

Women spend more time on household activities and men on milling and food processing activities. Men spend significantly more time in milling and food processing, while women in activities such as collecting water or firewood, constructing household dwelling, farm buildings, private roads or wells, preparing food, and taking care of children, the elderly or sick household members (see Figure 33). Among children of school age most of these gender differences are significant, except for the time spent in construction of household dwelling that is similar for both girls and boys. As expected, when compared to other locations, in rural areas more time is spent collecting water and firewood for the household. The time devoted by PSSN beneficiaries in Zanzibar on making handicrafts (6 hours a week) is considerably higher than the time used in other locations (under 4 hours a week). The IE will examine shifts in household labor allocation that might occur as a result of the program.

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[35] Evidence of the Impacts of CCT programs on adult labor is inconclusive. While some studies have found that these programs create modest disincentives for adult work, others find no evidence (Fiszbein and Schady, 2009).
[36] Just under 15 percent of all PSSN beneficiaries that are currently employed reported having no labor income.

FIGURE **33.** AVERAGE HOURS A WEEK SPENT IN EACH HOUSEHOLD ACTIVITY

FIGURE 33. AVERAGE HOURS A WEEK SPENT IN EACH HOUSEHOLD ACTIVITY
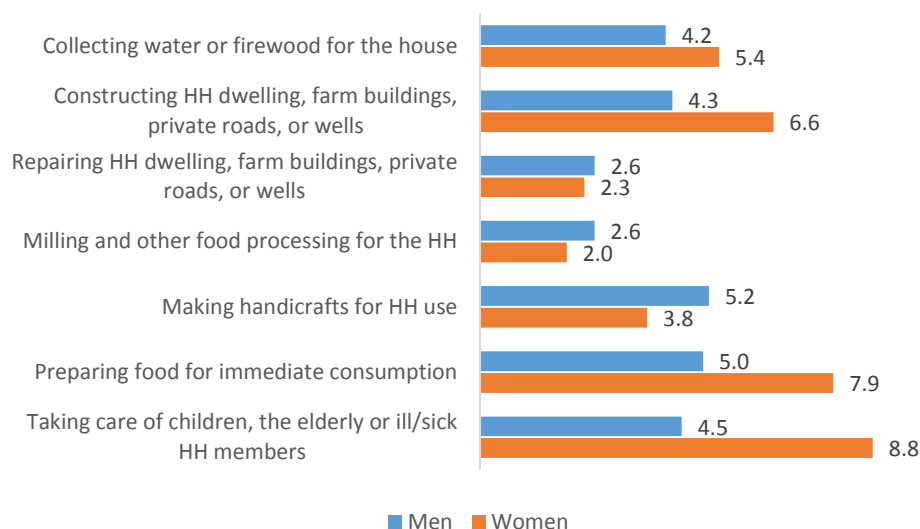
G.   Access to Finance

Very few PSSN households have a financial account and access to banking is more common in urban areas. Among all PSSN households, less than 2 percent have at least one member holding a bank account and 18 percent have a member with a mobile banking account. These levels of mobile banking penetration are associated with the share of PSSN households with any kind of savings (see Figure 34). There are important differences by location: Dar-es-Salaam as expected has the highest access to banking of all types. Somewhat surprisingly, access to mobile money accounts and savings accounts in lower in Zanzibar than in rural areas in the mainland.

FIGURE 34. ACCESS TO BANKING AMONG PSSN HOUSEHOLDS
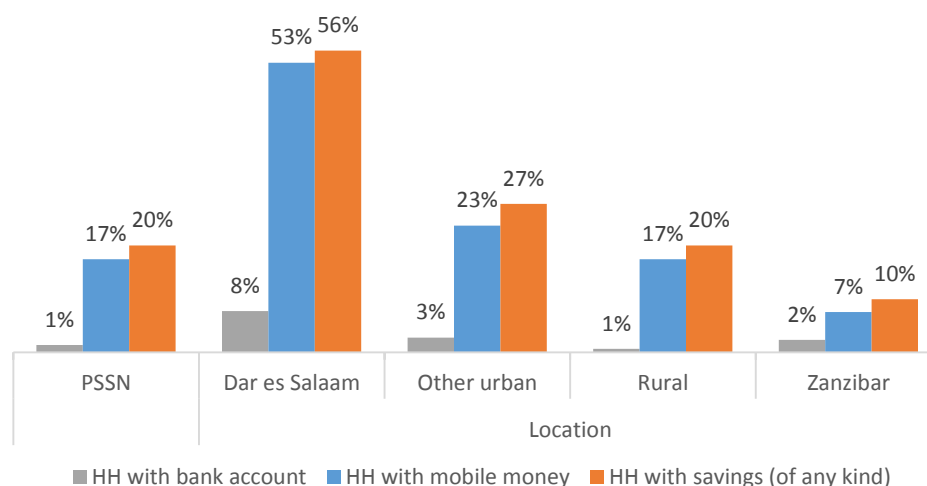
Most PSSN households that save use mobile money accounts to store their savings. Among the 20 percent of PSSN households that report having savings, most (87 percent) keep them in a mobile money account, with only a small proportion (7 percent) keeping savings in a bank account. There are important differences by location: Dar-es-Salaam as expected having the highest access to banking of all types and in Zanzibar it is less common for households with savings to store them in mobile money than other locations. The recent steady growth in mobile phone subscription[37] and the financial behavior of PSSN households suggests that mobile banking has strong potential to be used as a payment method. Encouraging PSSN households to open a mobile account could also potentially promote savings.

FIGURE 35. MOST COMMON PLACES TO KEEP SAVINGS
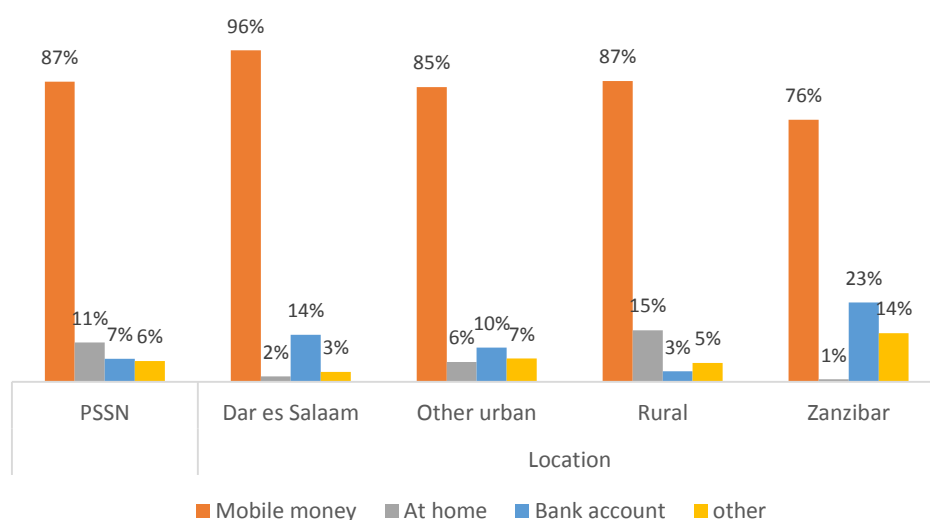
Note: Other includes SACCOs, village funds and other places to keep savings.

PSSN households have access to loans, but mostly through informal sources and for subsistence purposes. Only a small proportion of PSSN households (26 percent) requested a loan in the last 3 months and among those who applied for a loan, less than 10 percent were denied. In addition, more than half (67 percent) of households reported they could borrow money in the next two weeks if needed (median amount TSh. 20,000). Among PSSN households that borrowed money in the last 3 months, most borrowed from friends, relatives, or neighbors (see Figure 36). Loans taken from friends or relatives tend to be small (median Tsh. 20,000), while larger loans are taken from community savings groups (median Tsh. 100,000). Most loans requested by PSSN households are used for subsistence needs (64 percent), medical costs (32 percent), business expenses (11 percent) and school fees (10 percent), suggesting that households receiving PSSN transfers will most likely use the cash to cover their basic needs.

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[37] This has increased from a little under 3 million subscriptions in 2005 to almost 32 million in 2014, according to data reported by the Tanzania Communications Regulatory Authority (TCRA, 2014).

FIGURE 36. MOST COMMON SOURCES OF LOANS AMONG PSSN HOUSEHOLDS
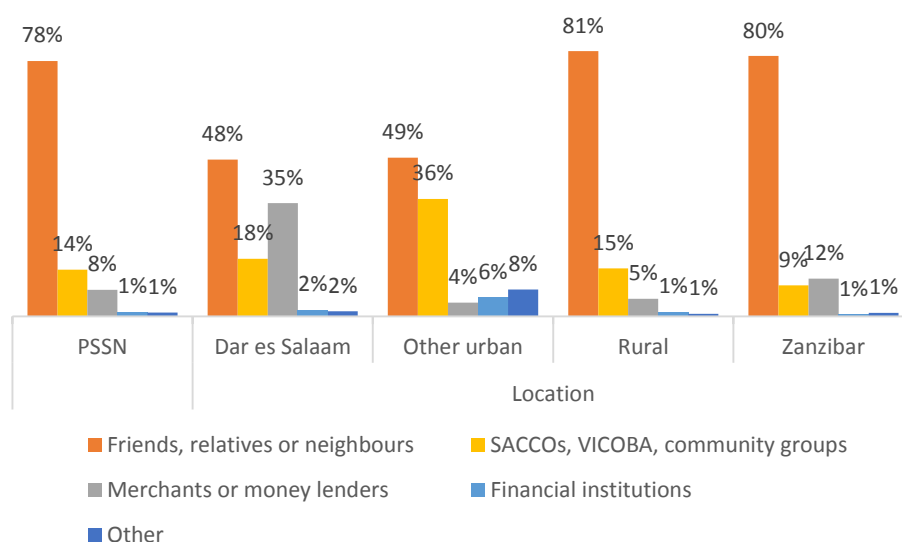
H.   Intra-household and Community Cohesion

Women of reproductive age have less bargaining power within the household when they have a partner. Women are more likely to be the sole decision-makers across all categories of decisions within the household when they are single, separated, divorced or widowers, than when married or living with a partner. Among women with partners, joint decision making is very common, but for around two of every five PSSN women, their partners are the sole decision makers when it comes to children's healthcare and schooling, household purchases, and contraceptive use (see Figure 37). Women with partners in Zanzibar tend to be the least likely to make decisions on their own; in all categories except for decisions about their own earnings, the share of women who rely on their partners to make decisions or make joint decisions is above the PSSN average. These findings suggest PSSN, in which X percent (TASAF to confirm percent) of cash transfer recipients are women, could affect intra-household dynamics.

FIGURE 37. WOMEN'S POWER ON HOUSEHOLD DECISION-MAKING

FIGURE 37.A: WOMEN CURRENTLY WITHOUT A PARTNER   FIGURE 37.B: WOMEN CURRENTLY WITH PARTNER
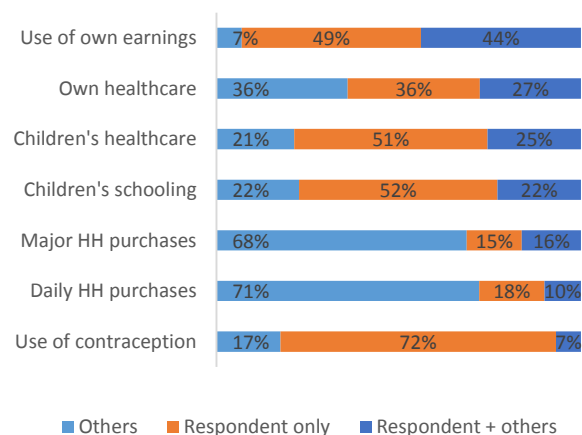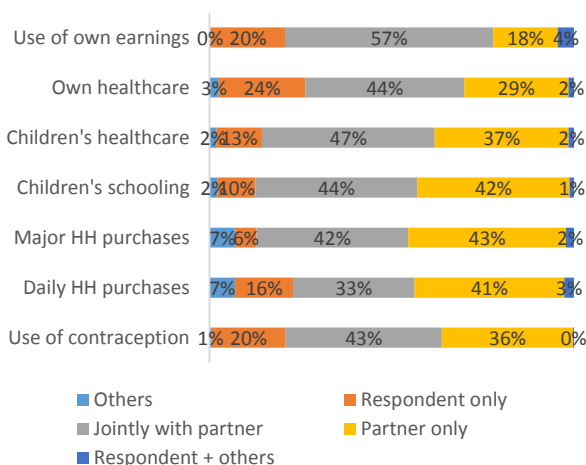
Women in PSSN households report suffering from frequent incidents of domestic violence. One in every five women of reproductive age (between ages 15 and 49) report ever being a victim of domestic violence by their husband or partner. This is lower than the national level estimates of 46 percent among women in the lowest quintile according to the 2010 DHS; however, this difference may be partially due to comparability issues.[38] Emotional violence is the most common type of violence (14 percent), followed by physical violence (11 percent) and sexual violence (6 percent). In all categories considered more than half of the victims reported the events had occurred in the last three months. Acts of sexual violence have the highest frequency, with more than 80 percent of victims reporting this incident occurred in the last three months (see Figure 38). These findings highlight the need to link PSSN households to existing domestic violence support services as well as to encourage expansion of these services in PSSN communities.

FIGURE 38. VIOLENT ACTS SUFFERED BY WOMEN VICTIMS, LAST THREE MONTHS

PSSN households have low levels of trust in people living outside their households and have relatively low participation in the community. More than half of PSSN household heads (55 percent) trust family members who live within the household, but trust levels drop significantly for individuals outside the household regardless of religion, ethnicity, or kinship (see Figure 39). The highest levels of trust are found in Zanzibar and the lowest in rural areas, but in general PSSN beneficiaries have low trust in people outside the household (Annex 4). In terms of participation in community meetings, PSSN household heads are split equally between those who were present at community meetings in the last month, those who were not, and those who reported that no community meeting was held. Contrary to what was found for trust indicators across location, social cohesion as measured by participation in community meetings is lowest in Zanzibar and highest in rural areas, and these type of meetings appear to be less frequent in Dar-es-Salaam. By injecting cash into select households, PSSN could potentially increase trust within targeted communities, particularly if there are positive spillovers to non-beneficiaries, or could create a larger wedge.

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[38] All of the violence acts were included in the IE questionnaire; however, DHS uses more questions to collect the same data. The DHS was also collected four years before the IE data.

FIGURE 39. LEVELS OF TRUST IN DIFFERENT GROUPS[39]

Legend: ■ Very low ■ Low ■ Neither low nor high ■ High ■ Very high
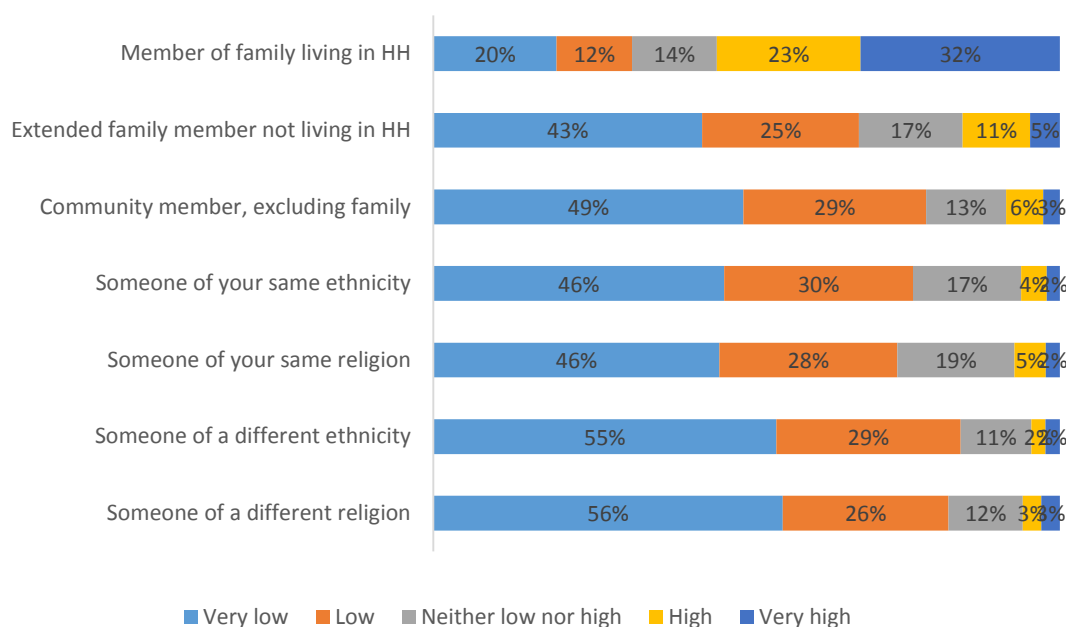
I.   Adolescent Behaviors, Expectations and Aspirations

Although adolescent fertility and early family formation in PSSN households are below national levels, they are likely disrupting schooling. A non-negligible proportion (13 percent) of adolescent girls have started childbearing, and this is higher in rural areas (17 percent). Adolescent childbearing is statistically similar to national levels and family formation is significantly below the national level (Table 6). These indicators are important in the context of this evaluation for two main reasons. First, being pregnant and having a husband or partner significantly lowers the probability of being enrolled in school. Second, PSSN could have positive spillovers in reducing the probability of marriage and pregnancy of school age girls, as has occurred in other CCT programs (Baird et al., 2010). This is particularly relevant in rural areas where the percentage of adolescents who have partners or children is higher.

TABLE 6. ADOLESCENT FERTILITY AND FAMILY FORMATION, COMPARISON WITH DHS

	PSSN	DHS
Women [15-19] who have given birth	13.3%	14.9%
Average No. of children per girl [15-19]	0.16	0.20
Women [15-19] never married	90.2%	79.9%

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[39] Following Andrabi and Das (2010), trust is measured by asking: "Imagine you were walking down a street and dropped a Tsh 10,000 note without noticing. Now imagine a person was walking behind you without you knowing and picked it up. If that person walking behind you was [PERSON], what is the likelihood that he/she would return the Tsh 10,000 note to you?"

Adolescents expect to marry younger and have lower educational levels than what they would prefer.
Young men and women would like to marry at an average age of 25 years, but they think they will do so
1.3 years before their aspiration. This gap is wider in Dar-es-Salaam where youngsters aspire to marry at
age 27 but expect to marry at 23. Women have an aspiration to marry younger than men (24 and 26 years
respectively), but their expectation is also to marry at a younger age than their male counterparts. When
it comes to educational attainment, young girls and boys aspire to have more than 12 years of schooling
but they think they will get around 11. While a half of PSSN adolescents expect to reach secondary ordinary
education or lower, just over one third think this is their preferred level of schooling (see Figure 40).

FIGURE 40. ADOLESCENT EXPECTATIONS AND ASPIRATIONS OF EDUCATIONAL ATTAINMENT
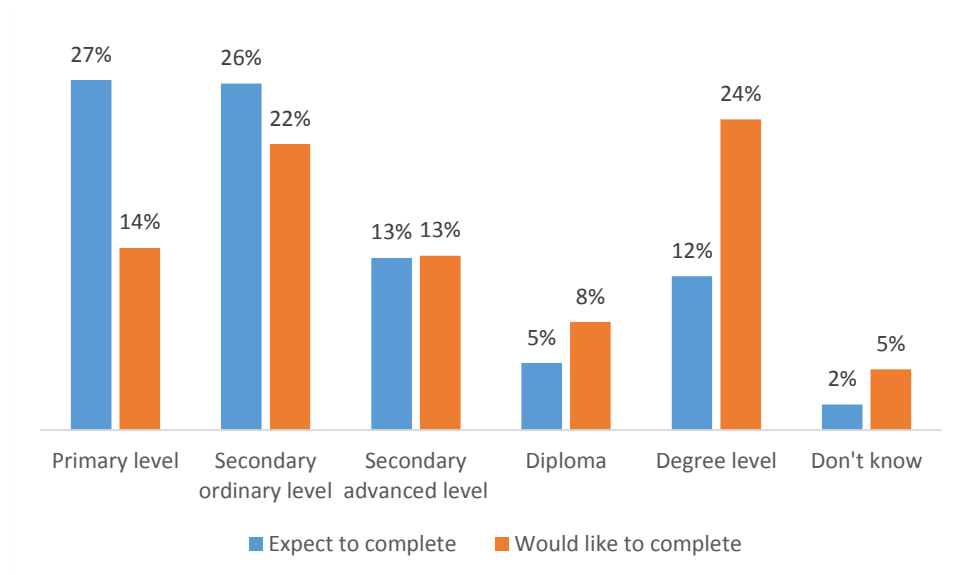
VI.   Targeting Performance and Program Awareness

This section analyzes PSSN's accuracy in selecting the poorest Tanzanian households through the targeting mechanism used in the scale up. All countries, and developing countries in particular, have resource constraints that limit the financial resources available for poverty reduction programs such as the PSSN. This leads to a focus on choosing wisely who will benefit by the program and how to identify them efficiently. The PSSN scale up relied on a combination of geographical targeting, community based targeting, and a PMT (see Section III.A). This targeting mechanism aimed to reach the poorest by identifying the geographical areas most in need, using community knowledge to identify the poorest households in these areas, while maintaining an objective verification of eligibility through the PMT. This section analyzes: (i) PSSN's targeting performance in reaching the poorest; (ii) how successful community based targeting is at identifying the poorest and if there is possible capture or bias; and (iii) how successful is the PMT in reducing inclusion errors. Since the IE consumption data was collected to be comparable to the most recent NPS, the analysis of targeting performance relies on a combination of NPS and IE data.

This section also assesses the levels of awareness community members have about the program at baseline. The community's perception and knowledge about PSSN is key for various reasons. Guaranteeing that beneficiaries have complete understanding of their rights, entitlements and responsibilities can increase the program's accountability (Samuels and Jones, 2013). In addition, information flow increases a program's acceptability, reduces chances of mistargeting, and lessens tensions between beneficiaries and non-beneficiaries by creating fair understanding of the eligibility criteria (van Stolk, 2010; Samuels and Jones, 2013). The analysis of community knowledge about the PSSN at baseline can help inform future information, education, and communication efforts.

A.   Targeting Performance

In terms of consumption levels and spending patterns, PSSN households are poorer than non-selected households. On average, PSSN households consume 70 cents for every $1 consumed by non-selected households. While 89 percent of this consumption is used in food items and beverages among PSSN households, non-selected households spend 82 percent of their consumption on food (75 and 83 percent of households listed by the community who failed the PMT and non-targeted households, respectively). As a result, PSSN households spend significantly less on utilities, transport and communications.

PSSN is clearly pro-poor and outperforms the targeting accuracy of many other cash transfer programs, but some beneficiaries are nonpoor. Comparing the distribution of consumption of PSSN beneficiaries to the national poverty line adjusted to 2015 prices indicates PSSN is clearly pro-poor (Figure 41.B). The vast majority of PSSN beneficiaries (83 percent) are in the bottom 40 percent of the consumption distribution and almost half are in the lowest decile (Figure 41.B). Applying the strict definition of poverty based on the program's adjusted food poverty line[40], 64 percent of PSSN beneficiaries are poor, compared to 48 percent of those not selected. Based on recent evidence from CCT programs in Latin America, the PSSN is outperforming programs at similar coverage levels, which have inclusion errors above 35 percent

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[40] PSSN targets 15 percent of the population, including of the 10 percent of the population living under the food poverty line plus an additional 5 percent of the population in transient poverty.

(Stampini and Tornarolli, 2012). Some leakage exists, with 12 percent of beneficiaries in the five highest consumption deciles. However, given that Tanzania's consumption distribution is relatively flat (WB, 2015a), the key question is whether there is leakage to the top end of the distribution; in PSSN's case less than 3 percent of beneficiaries are in the top three deciles.

FIGURE 41. HOUSEHOLDS' CONSUMPTION DISTRIBUTION AND PSSN COVERAGE

FIGURE 41.A: CONSUMPTION DENSITY FUNCTION
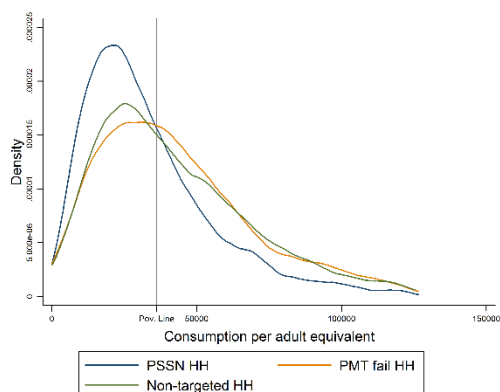
FIGURE 41.B: PSSN COVERAGE BY CONSUMPTION DECILES
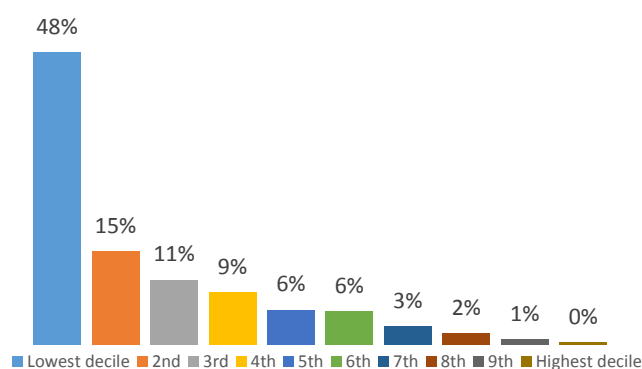
The profile of households prelisted by the community is not fully aligned with PSSN's target group, but communities incorporate information on shocks. Having a person living with disabilities, the number of elderly people in the household, and the head's age have a strong influence on whether a household is prelisted, among others. This mirrors communities' perception of PSSN's target group, which is skewed toward people living with disabilities and the elderly (see Section VI.B). However, prelisted households are also more likely to have suffered a negative shock, have less savings, less non-agricultural businesses, and higher food insecurity (Annex 5). These findings are in line with evidence from other countries showing that communities' concept of poverty goes beyond households' current consumption levels, for example by taking into account earning potential and ability to smooth shocks (J-PAL, 2013; Alatas et al., 2012). It also suggests community knowledge may be useful in identifying households that have suffered recent shocks, which are not typically captured well by PMTs (Mills et al, 2015).

Overall, community-based targeting is effective at identifying poorer households, but there are geographical differences. The consumption of households prelisted by the community is lower than that of non-targeted households. This translates into a higher poverty incidence among prelisted households compared to non-targeted households (54 percent vs. 41 percent), confirming that there is not substantial elite capture by the community at the community stage. The community approach is more effective in identifying the poor in urban areas (Figure 42), which is somewhat surprising as anecdotal evidence from TASAF field teams suggests this does not function as well in urban settings where community ties are weaker. The result observed may stem from more heterogeneous poverty higher inequality in urban areas, which makes it easier to differentiate between the richer and the poorer (Alatas et al, 2012).[41]

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[41] This may also reflect the fact that in urban areas the PMT was more likely to exclude all prelisted households, so these communities are not in the IE sample; but this is unlikely as only 4 communities were excluded (Annex 2).

FIGURE 42. LOG CONSUMPTION DENSITY FUNCTION BY AREA AND HOUSEHOLD TYPE
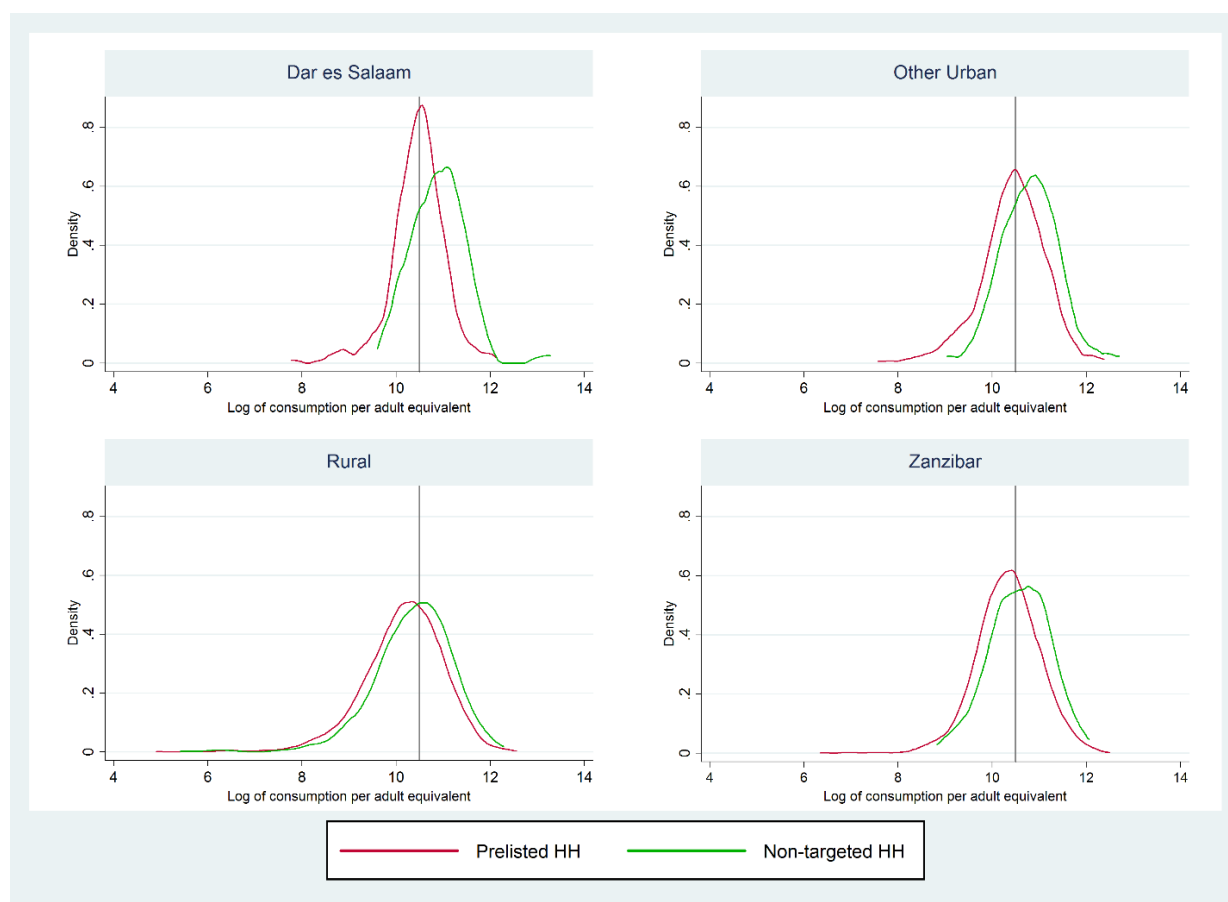
As expected the PMT carries an important tradeoff between inclusion and exclusion errors, and urban households are less likely to pass the PMT.[42] Since it is a prediction, the PMT has built-in errors of inclusion and exclusion, and as one decreases the other increases. This tradeoff, combined with the targeting errors associated with the geographical and community-based targeting stages, limits PSSN's ability to reach higher coverage of the poor. PSSN's coverage of its target group, the bottom 15 percent, is 44 percent within targeted communities. There are also differences in the proportion passing the PMT by location, with a much lower proportion passing the PMT in Dar-es-Salaam (Figure 43). The data shows this is not due to differences in predictive power of the PMT, and therefore, likely reflects the higher wealth levels in the capital. Despite these results, which indicate the PMT is performing well, the PMT would benefit from regular updates to the formula as new HBS becomes available. TASAF could also explore additional recalibration of the cutoffs points, potentially by using the IE data. In addition, these results highlight the importance of further improving complementary tools such as the geographical targeting – and community-based – mechanisms.

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[42] Inclusion calculated as the proportion of beneficiary households who are nonpoor beneficiaries and exclusion as the proportion of the poor who are not selected. Households are considered as misclassified when they are selected but are non-poor, or not selected despite being non-poor.

FIGURE 43. PMT HOUSEHOLD VERIFICATION PASS RATE
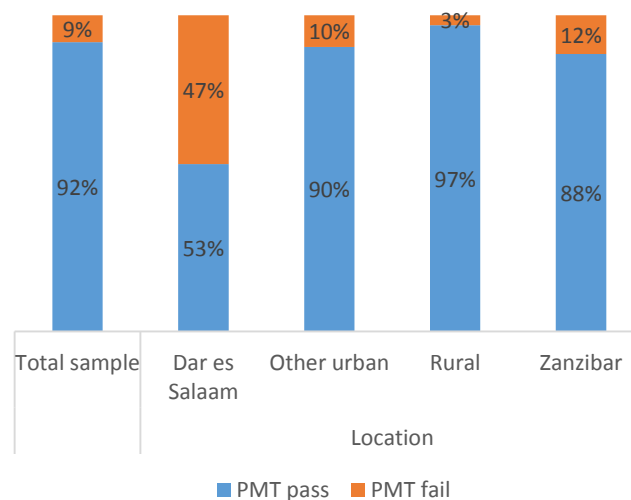
Overall, the PMT acts as a cost-effective tool for PSSN in minimizing inclusion. The PMT successfully excluded 35,000 nonpoor households that were mistargeted by the community. This would have implied an annual cost of about US$ 5.5 million per year based on an average household monthly transfer of US$13. Since the PMT costs only US$12 per questionnaire administered, using the PMT led to a cost savings of close to US$4.3 million in the first year alone. This represents a lower bound PMT cost-effectiveness ratio of 4/1. However, there are two issues are to be considered. First, given that Tanzania's consumption distribution is relatively flat, particularly around the poverty line, more than half of the nonpoor beneficiaries (52 percent) are in the 3rd and 4th consumption deciles. Therefore, the problem of leakage needs to be weighed carefully against exclusion errors in future retargeting or recertification efforts. Second, this analysis does not take into account the costs of exclusion, including the cost of resolving grievances; however, this is less of a concern as the percentage incorrectly excluded by the community is similar to the PMT.

B.   Community Knowledge and Perceptions

The PSSN targeting process is mostly perceived positively, especially among households prelisted by the community. The process of selecting beneficiary households is seen as fair and transparent by 66 percent of non-targeted households and by 86 percent of households prelisted by the community. This positive perception could indicate the community involvement helped ease tensions around selection. Additionally, 75 percent of households prelisted by the community are satisfied with the process and 78 percent think it was not influenced by personal interest. These percentages, as expected, are lower among non-targeted households at 57 percent and 73 percent respectively. There is no statistically significant difference in perceived transparency, influence on the process, or fairness between those who failed and those who passed the PMT, which is a signal that beneficiaries did not have knowledge of their status in the program. These indicators will be analyzed again in the follow up surveys to assess satisfaction with different stages of the targeting process.

Perceptions of PSSN target group continues to be skewed towards elderly and disabled and knowledge of the program co-responsibilities is limited. Among all households surveyed, the majority thought that beneficiaries should be households without enough resources for adequate food and clothing, with elder and disabled members (Figure 44). The perceptions inevitably influenced the community targeting process and may be a legacy from the pilot implemented prior to PSSN, which targeted the elderly. One third (34 percent) of prelisted households don't know beneficiaries will have a co-responsibility. Among those who know about the existence of co-responsibilities, 74 percent mention that beneficiaries are supposed to send children to school, 52 percent thought that all members of the households should visit a health care provider, and 41 percent knew that children should attend a clinic. TASAF will need to work with partners at all levels to strengthen communication efforts around co-responsibilities as well as on PSSN's target group, particularly before conducting any additional targeting efforts.

FIGURE 44. CHARACTERISTICS OF THE TARGET POPULATION REPORTED BY HOUSEHOLDS

Characteristic	Percentage
HH cannot afford sufficient food or clothing	42%
HH with elders	36%
HH with disabled members	36%
HH with (primary) school-aged children, cannot afford school	25%
Large HH with unreliable source of income	22%
HH with vulnerable women (e.g. single and pregnant)	22%
HH with poor shelter, no livestock	22%
HH cannot afford to access treatment or immunize children	11%
Child headed HH	7%

VII. Conclusions

The Government of Tanzania created and scaled up the PSSN to reduce extreme poverty and break the intergenerational transmission of poverty and designed a randomized IE to evaluate it. The objective of the PSSN is to increase income and consumption and improve the ability to cope with shocks among targeted vulnerable populations€ while enhancing and protecting the human capital of their children. In 2013, the Government of Tanzania made the decision to scale up the PSSN to cover all households in or at risk of falling into extreme poverty and by 2015 the program was delivering cash transfers to over one million households across the country. To demonstrate that the scaled up PSSN is generating the intended impact at the household level, a randomized IE was built in to the scale up design.

The IE baseline results suggest there is strong internal validity of the study as well as external validity to Tanzania's poor population. The IE identification strategy relies on randomization at the community level and uses the full list of targeted households in the PAAs randomly selected for the IE as a sampling frame. The baseline confirms that the randomization resulted in balance between treatment and control groups, signaling strong internal validity of the study. External validity to the broader poor population in the country is also strong, as overall surveyed households are generally representative of PSSN's target group. However, PSSN beneficiaries are slightly older than the national poor and there is likely under-reporting of children under five. In extrapolating the IE findings to the broader poor, these differences should be taken into account, particularly as they relate to health and food security outcomes, which exhibit the largest deviations. In addition, greater efforts are needed both within program administration and in follow up surveys to accurately capture the number of children under five.

The baseline data indicate PSSN households have lower welfare than the national poor prior to entering the program. PSSN households are poorer than non-targeted households with PSSN communities and approximately 85 percent of PSSN beneficiaries are in the bottom 40 percent of the consumption distribution. Confirming previous evidence from targeting assessments, the age structure in PSSN households is older, which reflects the legacy from the CB-CCT pilot as well as communities' perception of the elderly as the target population for the PSSN. In terms of targeting performance the program performed well when compared to other cash transfer programs, but targeting could be further refined, in particular at the geographical targeting stage. TASAF, in partnership with NBS and with support from the World Bank, has already developed poverty maps that can be applied to future retargeting efforts (WB, 2015c).

PSSN is expected to have important positive effects on household consumption and food security, but there could be important spillover effects. By providing a regular, additional source of income PSSN is expected to increase the currently low levels of both food and non-food expenditures among PSSN households. The transfer is also expected to improve food security, which is extremely low among PSSN beneficiaries. Larger impacts on consumption are expected in rural areas, where the PSSN transfer represents a higher share of household consumption. Depending on various socioeconomic factors, the additional income could also influence the sources of consumption, a large proportion of which currently is in-kind. One hypothesis related to cash transfer programs is that the cash injection into the communities will create positive demand spillovers (such as more demand at local shops), but an alternative hypothesis is that the cash injection could be inflationary in targeted communities. To the extent it is feasible, the follow up surveys should seek to measure these spillovers.

The complementary nature of the CCT and PW programs is expected to reduce the use of negative coping mechanisms, but additional measures are needed to sustain gains. By increasing consumption and reducing income volatility through both the CCT and the PW components, PSSN helps mitigating the negative shocks households could face. Furthermore, by creating incentives for school enrollment the program is expected to increase the opportunity cost of responding to shocks by pulling children out of school and into the labor force. However, given the relatively low levels of productive employment among beneficiary households, other complementary interventions, such as livelihoods programs, will likely be required to sustain poverty reduction achieved under PSSN. The baseline data can serve as an important tool to design these interventions.

The baseline data also indicate the program, as designed, has high potential for impact on human capital accumulation. The beneficiaries' profile in terms of education and health also indicates the PSSN has significant potential to reduce intergenerational transmission of poverty through investments in human capital. Specific aspects of program design are expected to contribute to the program's impact. For example, the CCT benefit structure, which places more weight on the higher tiers of schooling, appears adequately designed for the target group in which schooling participation decline substantially at secondary levels. Of course supply side issues will mediate these impacts. As PSSN reduces the demand side barriers for health and education take up, issues around access, quality, and appropriateness of services gain importance.

PSSN could further enhance its cost-effectiveness and impacts by adjusting some program parameters. The baseline data suggest that while the program is well-tailored to PSSN beneficiaries, some aspects could benefit from adjustments. Two main program reform possibilities emerge from the baseline findings. The first is the need to continue to make regular adjustments to the targeting mechanisms as new technology and sources of information become available and to invest in strong communication especially at the community level in any future targeting efforts. The second is that the CCT conditionalities may need to be further adjusted to the contextual realities of PSSN beneficiaries. In particular, given the high rates of enrollment and attendance at the primary level but lower performance in secondary, it may be worth lifting the conditionality for primary school and designing a system of bonuses for graduation from primary, lower, or upper secondary. However, given the program began implementation very recently and operational procedures are still in the process of being stabilized, TASAF should carefully time the introduction of such reforms. The first follow up survey will provide critical information to guide any necessary reforms once more is known about how the program affects these aspects.

As the program matures, attention should be given to the challenges the PSSN will bring along with its successes. Evidence from CCT programs around the world demonstrates that the success of getting children into school carries some challenges. More children with no interest in schooling will be sent to school, thus attendance levels could fall, especially for reasons related with school relevance. Furthermore, as the transfer is tied to school enrollment, repetition rates could increase as those who would have dropped out in absence of the program might now remain in school and repeat grades. PSSN should therefore pay particular attention to repetition rates and the reasons behind missing school among its beneficiaries. Additional pressure on the supply side may also emerge. For example, if the transfer increases the number of visits to health providers among children under five, the availability and quality of care received may decrease. PSSN should therefore continue to make an effort to systematically track the supply of services in its target communities.

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Annex 1: PSSN CCT penalties

Non-compliance type	Non-compliance type detail	Penalty	Amount (Tsh.)	Penalty cap
Individual non-compliance infants 0-5	Infant not complying with health conditionalities	Loss of infants benefit	4000	Total HH infants benefit
Individual non-compliance primary	Child in primary not complying with education	Loss of individual primary benefit	2000 per non-compliant child	Total HH primary benefit
Individual non-compliance junior secondary	Child in lower secondary not complying with education	Loss of individual JSS benefit	4000 per non-compliant child	Total HH JSS benefit
Individual non-compliance senior secondary	Child in upper secondary not complying with education	Loss of individual SSS benefit	6000 per non-compliant child	Total HH SSS benefit
Complete non-compliance	No children complying after 3 compliance cycles	Loss of family benefit and individual	4000 + all individual benefits	Total HH variable benefits

This includes school repetition: child can have maximum one school repetition, but benefit can be reinstated with grade advancement.

Annex 2: Additional Sampling Information

As shown in Figure 5, the first stage of randomization consists of the random selection of IE villages, proportional to PAA size (i.e., total PSSN villages in each PAA). The table below shows the total number of IE villages to be selected in each IE PAA.

TABLE A2.1: NUMBER OF VILLAGES / SHEHIA SELECTED FOR THE IMPACT EVALUATION BY REGION

Region	PAA	PSSN villages / shehia per PAA	% of villages / shehia over total	IE villages / shehia
Mainland				
Tanga	Handeni DC	62	8%	18
Morogoro	Kilosa DC	76	9%	23
Pwani	Kisarawe DC	36	4%	11
Dar es Salaam	Ilala MC	64	8%	19
Ruvuma	Songea DC	38	5%	11
Iringa	Mufindi DC	11	1%	3
Mbeya	Rungwe DC	87	11%	26
Tabora	Uyui DC	67	8%	20
Rukwa	Sumbawanga DC	52	6%	15
Kigoma	Kibondo DC	30	4%	9
Shinyanga	Kahama TC	39	5%	12
Kagera	Ngara DC	48	6%	14
Mwanza	Missungwi DC	52	6%	16
Njombe	Njombe TC	40	5%	12
Simiyu	Itilima DC	67	8%	20
Geita	Mbongwe DC	37	5%	11
Zanzibar				
Kaskazini Unguja	Kaskazini A	22	11%	10
Kaskazini Unguja	Kaskazini B	17	9%	8
Kusini Unguja	Kati	23	12%	10
Kusini Unguja	Kusini	14	7%	6
Mjini/Magharibi Unguja	Magharibi	24	12%	11
Mjini/Magharibi Unguja	Mjini	29	15%	13
Kaskazini Pemba	Wete	19	10%	9
Kaskazini Pemba	Micheweni	15	8%	7
Kusini Pemba	Chake Chake	19	10%	8
Kusini Pemba	Mkoani	18	9%	8

Some PSSN villages that were initially selected to participate in the IE had to be replaced due to low count of targeted households, that is, villages with less than 16 households prelisted by the communities and passed the PMT. The table below shows the total number of villages replaced by PAA. The replacement villages were selected following the randomization order, with the next villages in the random sequence taken as replacements.

Area	Region	PAA	Total villages replaced
Mainland	Dar es Salaam	Ilala	4
Zanzibar	Unguja	Kaskazini A	2
Zanzibar	Unguja	Kaskazini B	1
Zanzibar	Unguja	Kusini	1
Zanzibar	Unguja	Magharibi	1
Zanzibar	Pemba	Wete	3
Zanzibar	Pemba	Micheweni	2
Zanzibar	Pemba	Chake Chake	3
Zanzibar	Pemba	Mkoani	1

In the second stage of randomization, 16 beneficiary households were selected in each cluster. In treatment villages an additional 10 non-selected households were randomized (5 households who had failed the PMT and another 5 non-targeted households).

The selection of non-targeted households (those not prelisted by the community) was done through a listing exercise following structured in-field sampling protocols:

FIGURE A2.3: LOCATION OF SAMPLED HOUSEHOLDS

Before the fieldwork:
- One Enumeration Area (EA) was randomly selected in each one of the treatment IE villages. Corresponding EA maps were printed.
- A smartphone application was developed specifically to support the systematic random sampling approach. This application allowed to generate random numbers and record the outcomes of each lottery process, this was useful to improve on usual downsides of manually conducting lotteries in the field.

During the fieldwork:
- Enumerators were asked to collaborate with community leaders to list all households within selected EAs using the predefined paper listing tool.
- Households that had participated in the PMT survey were excluded from this list. Community leaders were part of both the community targeting exercises and thus were key in validating this information.
- Under the assumption that households within an EA are similar, supervisors were responsible for selecting 5 households through systematic random sampling, using the smartphone application. Systematic random sampling reduces the chances that all selected households fall within a certain area of the EA, thus ensuring the 5 selected households are well spread in the EA.

Annex 3: Balance test results

	CCT only		CCT + PW		Control group		Significance in difference		
	Mean	SE	Mean	SE	Mean	SE	T1 v. C	T2 v. C	T1 v. T2
Demographic									
Mean age	25.5	0.554	24.5	0.516	24.7	0.527	0.276	0.844	0.196
% of males in sample	0.46	0.015	0.47	0.014	0.44	0.015	**0.020**	**0.009**	0.824
Education									
Literacy	0.40	0.047	0.42	0.049	0.39	0.055	0.774	0.458	0.616
School enrolment rate	0.77	0.038	0.78	0.056	0.78	0.039	0.864	0.943	0.833
% of children missing school	0.12	0.080	0.13	0.073	0.11	0.082	0.580	0.303	0.644
No. of days child was absent	0.6	0.091	0.7	0.091	0.6	0.071	0.706	0.388	0.662
Health									
% of people sick	0.28	0.041	0.26	0.046	0.26	0.038	0.400	0.938	0.400
No. of visits to health facility (under5)	1.97	0.157	2.05	0.180	1.92	0.119	0.809	0.556	0.738
No. of visits to health facility (all)	1.97	0.157	2.05	0.180	1.92	0.119	0.809	0.556	0.738
Labor force participation rate	0.35	0.040	0.36	0.039	0.37	0.045	0.423	0.598	0.763
Households characteristics									
Size of household	4.85	0.137	4.94	0.161	4.97	0.145	0.533	0.870	0.675
Dependency ratio	138.1	4.292	132.7	3.489	138.9	4.755	0.899	0.288	0.324
Male to female ratio	1.04	0.035	1.06	0.030	0.96	0.031	*0.095*	**0.030**	0.731
No. children < 18 in HH	2.6	0.101	2.6	0.109	2.7	0.108	0.387	0.782	0.566
No. children < 5 in HH	0.6	0.036	0.7	0.048	0.7	0.044	0.280	0.606	0.115
No. children 5 to 18 in HH	2.1	0.080	2.1	0.078	2.2	0.081	0.534	0.514	0.983
No. females 18 to 60 in HH	1.0	0.032	1.1	0.040	1.0	0.039	0.511	0.667	0.263
No. able bodied adults in HH	1.4	0.050	1.5	0.060	1.5	0.055	0.419	0.918	0.510
Rural	0.8	0.199	0.9	0.160	0.9	0.166	0.848	0.700	0.587
Non-agricultural business	0.2	0.064	0.2	0.069	0.2	0.069	0.633	0.432	0.736
Agricultural business	0.6	0.084	0.6	0.066	0.6	0.076	0.582	0.918	0.626
Household head characteristics									
Age of head	56.8	0.779	55.1	0.739	56.2	0.686	0.580	0.275	0.119
Head of working age (15-64)	0.6	0.052	0.7	0.050	0.6	0.047	0.510	0.355	0.130
Head 65 or older	0.4	0.052	0.3	0.051	0.4	0.047	0.542	0.317	0.125
Male	0.5	0.051	0.5	0.037	0.5	0.051	0.591	0.396	0.143
Literate	0.5	0.064	0.5	0.050	0.4	0.069	0.406	*0.052*	0.285
Up to primary school	1.0	0.087	0.9	0.073	1.0	0.107	0.424	0.868	0.244
Working	0.5	0.052	0.5	0.048	0.5	0.056	0.477	0.486	0.966
Food security									
Food consumption score	18.9	0.775	19.6	0.661	19.5	0.728	0.565	0.952	0.510
Coping Strategies Index	7.3	0.349	7.5	0.371	7.7	0.416	0.556	0.758	0.771
Days skipping meals - Head	0.2	0.029	0.3	0.030	0.3	0.041	0.325	0.689	0.483
Assets									
Possession of basic assets	0.1	0.006	0.1	0.007	0.1	0.008	0.488	0.169	0.389
Possession of luxury assets	0.0	0.001	0.0	0.001	0.0	0.001	0.769	0.778	0.600

Annex 4: Additional baseline results

TABLE A4.1: MARITAL STATUS 15 TO 64 YEARS OF AGE

	Monogamous married	Polygamous married	Living together	Separated	Divorced	Never married	Widow(er)
PSSN	29.9%	4.9%	5.2%	7.1%	3.4%	40.7%	8.7%
Dar es Salaam	31.7%	1.5%	3.4%	4.6%	3.1%	46.4%	9.4%
Other urban	22.7%	1.8%	8.5%	11.1%	0.2%	44.1%	11.6%
Rural	29.9%	4.6%	6.9%	9.1%	2.6%	37.8%	9.2%
Zanzibar	31.2%	7.4%	0.1%	1.0%	6.5%	47.0%	6.7%
Males	30.9%	4.5%	5.5%	3.1%	0.9%	53.8%	1.4%
Females	29.3%	5.3%	5.0%	10.0%	5.3%	30.8%	14.3%

TABLE A4.2: PSSN HOUSEHOLD COMPOSITION, AVERAGES

	HH size	Children under 5	School age children	Adults 20 to 64	Elderly (65+)
PSSN	4.9	0.7	2.1	1.7	0.4
Dar es Salaam	5.6	0.7	2.3	2.2	0.3
Other urban	4.7	0.6	2.1	1.7	0.3
Rural	4.7	0.7	2.0	1.5	0.5
Zanzibar	5.6	0.7	2.5	2.0	0.4

TABLE A4.3: YEARS OF SCHOOLING AND AGE OF ENTRY, 15 AND OLDER

	Average years of schooling	Average age of school entry
PSSN	6.7	7.6
Dar es Salaam	7.2	7.7
Other urban areas	7.1	8.1
Rural	6.3	8.3
Zanzibar	7.6	7.3
Males	6.6	7.7
Females	6.8	7.4
Youth [15-24]	7.5	7.4
Adults [25-64]	6.5	8.3
Elderly [65+]	4.1	9.4
Heads	5.8	8.7

TABLE A4.4: HEALTH STATUS

	% of people sick	Avg. days sick (among sick)	Avg. days sick (among all)
PSSN	27%	9.7	2.6
Dar es Salaam	20%	9.2	1.8
Other urban	25%	8.3	2.1
Rural	30%	9.8	2.9
Zanzibar	20%	9.9	2.0
Males	25%	9.5	2.3
Females	29%	9.9	2.8
Early childhood	33%	6.8	2.2
Children 5 to 9	20%	6.5	1.3
Young adolescents	20%	7.3	1.4
Youth [15-24]	17%	7.5	1.3
Adults [25-64]	31%	11.0	3.4
Elderly	49%	15.7	7.7

TABLE A4.5: DIET DIVERSITY, AVERAGE NUMBER OF DAYS EACH FOOD GROUP IS CONSUMED

	Dar es Salaam	Other urban	Rural	Zanzibar	PSSN
Cereals and starches	5.47	6.20	6.36	4.11	6.10
Roots and legumes	2.42	3.86	4.35	3.56	4.11
Pulses, nuts and seed	3.15	3.09	3.41	2.16	3.23
Vegetables	4.77	5.99	5.51	2.59	5.18
Animal proteins & products	1.81	1.65	2.01	4.50	2.83
Fruits	3.37	2.52	3.76	3.75	3.66
Dairy		2.78	3.49		3.35
Fats & oils	6.79	5.62	5.27	2.86	5.21
Sugars and sweets	6.03	5.18	5.10	6.35	5.53
Spices, condiments	6.42	6.50	6.74	6.60	6.69
Beverages non-alcoholic			2.33	3.11	2.60
Beverages alcoholic			3.29		3.27

TABLE A4.6: CONSUMPTION MEANS PER ADULT EQUIVALENT PER MONTH

TSh.	Food & beverages	Alcohol & tobacco	Food total	Utilities	Hygiene and repairs	Transport	Communi-cation	Other	Total cons.
PSSN	26,227	339	26,566	1,328	327	655	479	331	29,684
Dar es Salaam	34,686	31	34,717	4,996	31	2,957	1,035	220	43,956
Other urban	31,587	222	31,809	1,885	655	648	599	199	35,797
Rural	25,475	449	25,924	930	400	377	279	259	28,169
Zanzibar	25,477	93	25,571	1,624	94	1,007	947	604	29,846

TABLE A4.7: MEAN PER ADULT EQUIVALENT CONSUMPTION PER MONTH

	Total consumption	Adults' clothing	Children's clothing	Total consumption, incl. clothing
PSSN	29,684	194	375	30,253
Dar es Salaam	43,956	44	145	44,145
Other urban	35,797	373	478	36,648
Rural	28,169	137	180	28,486
Zanzibar	29,846	361	1,000	31,206

TABLE A4.8: DIET DIVERSITY, NUMBER OF FOOD GROUPS CONSUMED BY HOUSEHOLDS

No. of groups consumed	Dar es Salaam	Other urban	Rural	Zanzibar	PSSN
0	1.6%	0.0%	1.2%	0.7%	1.1%
1	1.9%	4.3%	6.7%	4.3%	5.9%
2	5.4%	13.4%	20.1%	15.3%	18.3%
3	10.2%	25.2%	22.8%	29.1%	23.6%
4	26.8%	24.5%	23.4%	27.0%	24.3%
5	35.4%	18.4%	16.5%	17.0%	17.5%
6	18.6%	8.3%	7.5%	6.1%	7.8%
7	0.0%	5.8%	1.7%	0.6%	1.6%
Low diet diversity	45.9%	67.4%	74.3%	76.3%	73.1%
Sufficient diet diversity	54.1%	32.6%	25.7%	23.7%	26.9%

TABLE A4.9: IMPACT OF NEGATIVE SHOCKS ON HOUSEHOLDS

	Income loss	Asset loss	Loss of both	Neither
Drought or Floods	61.5%	11.9%	8.6%	18.0%
Chronic/severe illness or accident of HH member	46.6%	3.4%	15.8%	34.2%
Death of a HH member	37.5%	5.7%	13.7%	43.0%
Death of other family member	22.8%	1.9%	2.7%	72.7%
Break-up of the HH	17.5%	18.0%	17.4%	47.1%
Hijacking/robbery/burglary/assault				
Dwelling damaged, destroyed	17.4%	13.9%	9.7%	59.0%
Other	24.5%	14.1%	14.5%	46.9%
Any shock				39.6%

TABLE A4.10: LABOR FORCE PARTICIPATION

	Working age population [15+]	Working age population [15-65]	Working age women	Working age	Working age HH heads
PSSN	45.7%	49.2%	45.0%	54.8%	63.5%
Dar es Salaam	50.8%	55.8%	49.8%	64.2%	69.9%
Other urban	49.0%	50.5%	47.9%	53.6%	65.2%
Rural	43.1%	46.9%	44.0%	50.9%	57.8%
Zanzibar	51.6%	53.9%	46.0%	63.2%	81.2%

TABLE A4.11: EMPLOYMENT TO POPULATION RATIO

	Adults [15+]	Adults [15-65]	Women [15-65]	Men [15-65]	HH heads [15-65]
PSSN	36.1%	37.9%	34.7%	42.0%	54.8%
Dar es Salaam	26.3%	28.3%	23.7%	34.8%	46.5%
Other urban	40.5%	40.8%	37.0%	45.5%	56.9%
Rural	36.1%	38.5%	36.5%	41.2%	50.2%
Zanzibar	37.2%	37.7%	31.6%	44.9%	71.9%

TABLE A4.12: TYPE OF WORK

	Wage employment	Self-employment	Unpaid workers
PSSN	19%	54%	27%
Dar es Salaam	42%	57%	1%
Other urban	19%	63%	18%
Rural	21%	44%	35%
Zanzibar	11%	82%	7%

TABLE A4.13: UNEMPLOYMENT RATE

	Adults [15+]	Adults [15-65]	Women [15-65]	Men [15-65]	HH heads [15-65]
PSSN	21.1%	23.1%	22.8%	23.4%	13.8%
Dar es Salaam	48.4%	49.4%	52.6%	46.0%	33.5%
Other urban	17.4%	19.1%	22.8%	15.1%	12.6%
Rural	16.3%	18.0%	17.1%	19.2%	13.2%
Zanzibar	27.9%	30.0%	31.4%	28.9%	11.4%

TABLE A4.14: USE OF LOANS

	All sources	Friends, relatives or neighbors	SACCOs, VICOBA, other community group
Subsistence needs	63.5%	63.1%	51.6%
Medical costs	32.4%	35.7%	26.1%
School fees	10.2%	7.4%	20.9%
Ceremonies & weddings	1.7%	1.6%	2.8%
Purchase of land and/or dwelling	2.7%	2.1%	6.6%
Investment in productive assets	10.5%	7.8%	23.8%
Other	0.9%	0.9%	1.5%
Respond to shocks	1.1%	1.2%	0.9%

TABLE A4.15: HIGH TRUST

High or very high trust in:	Dar es Salaam	Other urban	Rural	Zanzibar	PSSN
Member of family living in HH	68.4%	28.8%	52.0%	69.4%	54.8%
Extended family member not living in HH	13.0%	11.9%	10.8%	34.9%	15.5%
Someone from community, not including family members	1.7%	12.7%	5.8%	19.7%	8.6%
Someone of your same ethnicity	2.1%	12.3%	4.7%	11.0%	6.2%
Someone of your same religion	9.3%	19.2%	6.3%	7.2%	7.3%
Someone of a different ethnicity	1.2%	12.2%	4.1%	5.0%	4.6%
Someone of a different religion	0.7%	18.4%	5.7%	4.9%	6.0%

Annex 5: Profile across target groups

TABLE A5.1: POVERTY LEVELS BY HOUSEHOLD TYPE

Group	% under food poverty line			% under adjusted food poverty line			% under basic needs line		
	All	**Urban**	**Rural**	**All**	**Urban**	**Rural**	**All**	**Urban**	**Rural**
Total sample	46.4	29.0	51.3	53.8	35.6	58.9	58.0	39.3	63.2
PSSN	55.8	47.1	57.2	63.5	56.4	64.7	69.2	64.6	70.0
PMT fail	35.4	35.9	34.8	45.9	48.2	43.2	53.0	57.1	48.2
Non-targeted	41.2	21.8	47.7	48.2	26.8	55.3	51.2%	28.2	58.9

TABLE A5.2: COMPARISON BETWEEN PRELISTED HOUSEHOLDS AND NON-TARGETED HOUSEHOLDS

	Prelisted households		Non-targeted households		T-test
	Mean	SE	Mean	SE	
Demographic					
Mean age	25.1	0.302	23.0	0.508	**0.000**
% of males in sample	46%	0.008	48%	0.025	**0.042**
Education					
Illiteracy	37%	0.033	25%	0.064	**0.000**
Years of schooling	5.7	0.049	6.4	0.171	**0.000**
Age of school entry	7.5	0.036	7.5	0.062	0.259
% of people repeating a school grade	7%	0.023	8%	0.052	0.294
School enrolment rate	78%	0.026	82%	0.065	**0.046**
Health					
% of people sick	26%	0.024	23%	0.060	*0.052*
Child born in hospital or clinic	5%	0.017	6%	0.040	**0.001**
% of women with 4+ antenatal visits	2%	0.031	2%	0.060	**0.046**
Percentage with disabilities	5%	0.025	2%	0.065	**0.000**
Labor force					
Labor force participation rate	46%	0.023	50%	0.058	*0.091*
Employment rate	36%	0.023	41%	0.065	*0.053*
Unemployment rate	22%	0.043	18%	0.075	0.123
Wage employment	20%	0.040	22%	0.110	0.513
Intra-household violence	19%	0.064	19%	0.127	0.954
Adolescents expectations & aspirations					
Age of wedding - aspiration	13.2	0.427	12.1	0.941	0.317
Age of wedding - expectation	11.7	0.426	10.6	1.006	0.300
Below secondary ordinary - aspiration	6%	0.020	5%	0.061	**0.036**

Below secondary ordinary - expectation	10%	0.015	8%	0.037	**0.007**
Household size					
Size of household	4.81	0.084	4.83	0.147	0.906
Number of children under 5 in HH	0.67	0.025	0.72	0.043	0.350
Number of children 5 to 19 in HH	2.0	0.045	1.9	0.098	0.290
Number of adults 20 to 64 in HH	1.7	0.032	1.9	0.066	**0.000**
Number of elderly [65+] in HH	0.4	0.014	0.2	0.024	**0.000**
Coping Strategies Index	7.5	0.209	4.2	0.324	**0.000**
HH suffering a negative shock	30%	0.035	24%	0.077	**0.023**
Livelihoods					
Farming/livestock business	67%	0.049	67%	0.104	0.953
Non-agricultural business	17%	0.038	26%	0.070	**0.000**
HH received transfers in	27%	0.040	16%	0.068	**0.000**
Banking					
HH borrowed money	23%	0.030	18%	0.065	**0.008**
HH has savings	21%	0.040	43%	0.076	**0.000**
Household head					
Age of head	55.6	0.445	47.3	0.845	**0.000**
Gender of head	51%	0.026	70%	0.076	**0.000**
Widowed, divorced or separated	48%	0.028	22%	0.072	**0.000**
Age of 1st wedding	22.1	0.153	23.6	0.386	**0.000**
Illiteracy	48%	0.037	25%	0.078	**0.000**
Years of schooling	5.9	0.065	6.9	0.214	**0.000**
Age of school entry	8.6	0.072	8.5	0.129	0.418
% of people repeating a school grade	4%	0.039	6%	0.082	**0.043**
Number of children born	6.6	0.088	5.6	0.230	**0.000**
% sick	39%	0.033	26%	0.070	**0.000**
Head is disabled	11%	0.037	4%	0.091	**0.000**
Labor force participation rate	52%	0.029	66%	0.067	**0.000**
Employment rate	46%	0.030	57%	0.071	**0.000**
Unemployment rate	12%	0.047	13%	0.097	0.674
Wage employment	18%	0.046	23%	0.103	0.134