



Synopsis: Ethiopia's social protection program is associated with improved household resilience

Kibrom A. Abay, Mehari H. Abay, Guush Berhane, and Jordan Chamberlin

Abstract

We examine the implication of the Productive Safety Nets Program (PSNP) in Ethiopia on the economic resilience of rural households. Using five-rounds of household panel data covering nine years, we implement a recently developed probabilistic moment-based approach to measure resilience and evaluate the role of PSNP transfers and duration of participation in PSNP on household resilience.

We document three important findings. First, although PSNP transfers are positively strongly associated with resilience, we find that transfers below the median are less likely to generate meaningful improvements in resilience. Second, continuous participation in PSNP is associated with higher resilience. Third, our evaluation of both short-term welfare outcomes and longer-term resilience suggests that these outcomes are likely to be driven by different factors.

These findings suggest boosting household resilience will require significant investments in social protection programs and continuous participation in these programs. Our findings have important implications for the design and targeting of social protection programs in Africa, where safety nets programs generally operate at small scale with small transfers to beneficiaries over relatively short durations.

Introduction

Improving the resilience of poor households to negative economic shocks has become a top priority for governments of developing countries and their development partners, as witnessed by substantial investments in social protection programs in Africa over the past decade. The primary objective of such programs is to reduce the food insecurity and economic vulnerability of poor households by helping them to build long-term resilience against various types of shocks. Ethiopia's

flagship social protection program, the Productive Safety Net Program (PSNP), one of the largest in Africa, aims to enhance the resilience of beneficiary households of the program by bridging consumption gaps they otherwise might experience. This enables the households to retain or even build their assets, rather than depleting them to cope with any gaps in consumption.

Several impact studies of social protection programs, including PSNP, have documented that social protection interventions address short-term food insecurity and protect household assets (Gilligan et al. 2009; Hoddinott et al. 2012; Berhane et al. 2014; Andrews et al. 2018; Hidrobo et al. 2018). However, empirical evidence remains scant on whether and to what extent these programs contribute to longer-term household level resilience – defined as the sustained capacity of households to avoid poverty over time in the face of various shocks and stressors (Cissé and Barrett 2018). Understanding the roles social protection programs might play in helping poor households become economically resilient and eventually extricate themselves from poverty is crucial in itself. Moreover, such understanding is also important in enabling governments and development partners to assess the longer-term returns of investments in such programs.

Context

The Government of Ethiopia and a consortium of donors started PSNP in 2005 to respond to chronic food insecurity, replacing annual emergency appeals that were largely unpredictable and at times insufficient. PSNP was designed as a multi-year program to provide recipients with reliable and predictable transfers. A mix of geographic and community-based targeting has been used to identify food insecure participants from areas prone to droughts and prolonged food insecurity (GFDRE 2010). PSNP makes regular transfers to beneficiary households to enhance their resilience through bridging consumption gaps and preventing asset depletion in the face of recurrent droughts. At the same time, PSNP contributes to community level resilience through labor-intensive public works projects designed to reverse environmental degradation via, for example, soil and water conservation works, and to create community assets, such as improving local road access (GFDRE 2004, 2010). About 80 percent of PSNP beneficiaries participate in these labor-intensive public work projects to receive transfers. The remaining 20 percent receive direct transfers as they lack the critical labor needed to take part in those public works. Payments are made in kind (food) or their cash equivalents. PSNP has been operational in the four highland regions of Ethiopia – Amhara, Oromia, Southern Nations and Nationalities (SNNP), and Tigray – where this study also focuses. Between 2005 and 2015, PSNP annually benefited about 8 million people with a budget of about USD 500 million per year, making it one of the largest social protection programs in sub-Saharan Africa (Slater and McCord 2013).

The impact of PSNP on a number of household level outcomes has been rigorously assessed, including on food security, assets, agricultural productivity, and child nutritional outcomes (Andersson et al. 2011; Hoddinott et al. 2012; Berhane et al. 2014; Hill and Tsehaye 2014; Berhane et al. 2016a; Knippenberg and Hoddinott 2017). While evaluations of the first phase of the program showed little impact on beneficiaries (Gilligan et al. 2009), more recent evaluations show that the program has reduced household food insecurity and the distress sale of assets and increased household expenditures and the uptake of agricultural inputs (Hoddinott et al. 2012; Berhane et al. 2014; Berhane et al. 2016b). Other studies have shown that PSNP has reduced poverty and vulnerability to drought (Hill and Tsehaye 2014) as well as improved household recovery when drought hits (Knippenberg and Hoddinott 2017).^{*} While these studies documented important

^{*} Using multiple rounds of nationally representative household datasets, Hill and Tsehaye (2014) estimated that PSNP has reduced poverty by 0.5 percentage points each year since its implementation in 2005. Similarly, Filipiski et al. (2017) employed a general equilibrium impact assessment method and found that PSNP increased productivity as a result of the public works component that builds and restores community assets, which has led to positive spillover effects for non-recipient households and to the rest of the economy.

findings related to the impacts of PSNP on several household outcomes, evidence on the extent to which PSNP has contributed to overall household resilience is limited.

Data and methodology

We used household panel data that were collected bi-annually in five rounds (2006, 2008, 2010, 2012, and 2014) from food insecure woredas where PSNP was operational in the four highland regions of Ethiopia. These data were collected by the Central Statistics Agency (CSA) of Ethiopia in collaboration with the International Food Policy Research Institute (IFPRI). The survey sample consists of 3,700 households – both PSNP beneficiaries and non-beneficiaries – selected in 2006 from 146 kebeles located in 68 woredas. These households were resurveyed in the following four rounds.

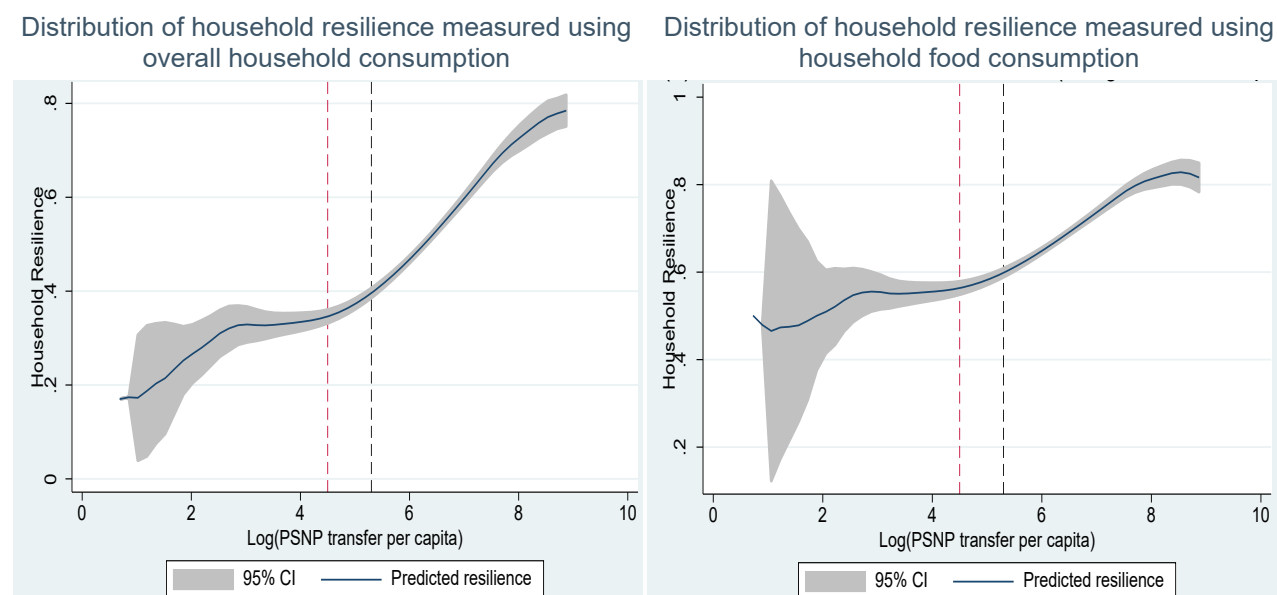
We used alternative econometric techniques to estimate the association between participation in and receipt of PSNP transfers on measures of household resilience. The consumption expenditures of each household was our key welfare indicator. Following Cissé and Barrett (2018), we adopt a probabilistic moment-based approach to evaluate PSNP impacts on households' resilience, employing the first two moments of the welfare outcomes for households, i.e., the conditional mean and conditional variance, in constructing period-specific measures of resilience for each household. This resilience measure represents the probability that a household will avoid slipping into poverty during the period or, alternatively, the probability that a household's consumption-based measure of welfare will be above the national poverty line at the end of the period.

Findings

We document three important findings.

- First, we find that PSNP transfers are strongly and positively associated with both improved welfare and resilience. However, in contrast to welfare outcomes, small safety net transfers are less likely to significantly improve household resilience. Specifically, we find that PSNP transfers can only generate a significant boost in resilience for a household if they are large enough – in our study, transfers below the median levels were less likely to generate meaningful improvements in resilience (Figure 1).

Figure 1: PSNP transfers and household resilience



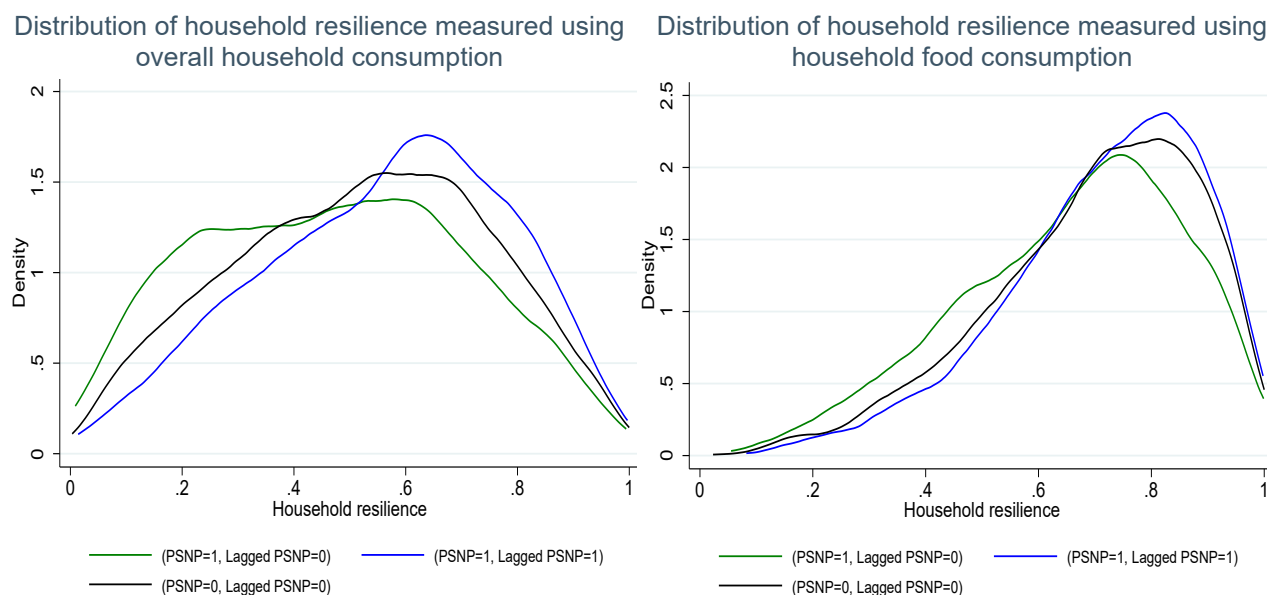
Source: Authors' analysis.

Figure 1 shows the relationships between household resilience and PSNP transfers. The left vertical axis (red) in the plots of both graphs corresponds to the 25th percentile of PSNP transfers, while the right vertical axis (black) corresponds to the median value of transfers. Both graphs show that PSNP transfers below about the median are less likely to generate meaningful improvements in resilience. In particular, the relationship between household resilience and PSNP transfers that are less than the 25th percentile is statistically insignificant.

This suggests that, although small safety net transfers and light interventions may improve household welfare, boosting household resilience or pulling the poor out of poverty requires significant investments in social protection programs. However, empirical definition of threshold effects – particularly, “How much is enough?” – may vary considerably across contexts and may not be generalizable to other contexts.

- Second, we find that continuous, longer-term participation in the PSNP is associated with improved resilience. Figure 2 shows the distribution of the measure of household resilience across three groups of households: those receiving PSNP transfers in the current and last rounds (PSNP=1, lagged PSNP=1), those receiving PSNP only in the current round (PSNP=1, lagged PSNP=0), and those who have not received PSNP transfers in the current and last round (PSNP=0, lagged PSNP=0). These density functions clearly show that a longer duration of PSNP participation is positively associated with higher resilience. This holds both for measures of welfare and for measures of resilience. In sum, these findings imply that improving resilience requires sustained long-term investments in social protection programs.

Figure 2: Duration of PSNP participation and household resilience



Source: Authors' analysis.

- Third, while some of the observable household- and community-level characteristics are significantly associated with both household welfare and resilience, there are some distinct patterns unique to each of the two measures that are worth highlighting. Household characteristics, such as gender, age, marital status and occupation of household head, appear to be less relevant for household welfare, while turning out to be significantly associated with resilience. Similarly, community characteristics, such as access to electricity and distance to nearest town, appear to be significantly associated with resilience – having access to electricity is associated with higher household welfare, while remoteness contributes to deterioration in resilience. These results suggest that household welfare and resilience may be driven by

different factors, implying interventions that generate improvements in household welfare may not necessarily improve resilience and vice versa.

Policy recommendations

Our results point out the practical significance of examining household resilience outcomes associated with participation in social protection programs beyond the impacts of these programs on short-term welfare outcomes alone. We find that household short-term welfare outcomes and resilience are likely to be driven by different factors. Hence, interventions that generate improvements in household welfare may not necessarily improve households' resilience and vice versa.

Although small safety net transfers and light interventions may improve short-term household welfare, our findings suggest that enhancing household resilience or improving the chances of pulling the poor out of poverty likely require quite significant investments in social protection programs. Improvements in resilience are associated with sustained program participation for relatively longer periods. In short, ensuring resilience through social protection programs may require sufficiently large transfers for sustained periods and, thus, program graduation targets based on short-term welfare outcome criteria alone may not be sufficient to bring about significant improvements in the economic resilience of beneficiary households. These findings have important implications for the design and targeting of social protection programs elsewhere in Africa, where safety nets programs generally operate at small scale levels with small transfers to beneficiaries and for relatively short periods of time.

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ABOUT THE AUTHORS

Kibrom A. Abay is a Research Fellow in the Development Strategy and Governance Division (DSGD) and Program Leader of the Egypt Strategy Support Program of the International Food Policy Research Institute (IFPRI), based in Cairo, Egypt. **Mehari H. Abay** is an independent consultant working with IFPRI's Ethiopia Strategy Support Program (ESSP). **Guush Berhane** is a Senior Research Fellow in DSGD of IFPRI working with ESSP, based in Washington DC. **Jordan Chamberlin** is an Economist at the Food and Agriculture Organization of the United Nations, based in Rome, Italy.

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INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

1201 Eye St, NW | Washington, DC 20005 USA
T. +1-202-862-5600 | F. +1-202-862-5606
Email: ifpri@cgiar.org | www.ifpri.org | www.ifpri.info

IFPRI-ESSP ADDIS ABABA

P.O. Box 5689, Addis Ababa, Ethiopia
T. +251-11-617-2000 | F. +251-11-667-6923
Email: ifpri-essp@cgiar.org | <http://essp.ifpri.info>

POLICY STUDIES INSTITUTE

P.O. Box 2479, Addis Ababa, Ethiopia
T. +251.11-550-6066; +251-11-553-8633 | F. +251-11-550-5588
<http://psi.gov.et/>



Foreign, Commonwealth
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