

ARTICLE

Evidence from the Productive Safety Net Programme in Ethiopia: Complementarities between social protection and health policies

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Abstract

Motivation: Social protection policies typically involve multiple sectors, ranging from food security to health care. Despite this, limited research is directed toward understanding how different social protection programmes complement each other.

Purpose: We explore complementarities between three major national social protection programmes in rural Ethiopia: the Productive Safety Net Programme (PSNP), the Community Based Health Insurance (CBHI) scheme and the Health Fee Waiver (HFW) system.

Approach and methods: We use secondary data from districts in which the PSNP operates to study the coverage of the CBHI and the HFW schemes. We then quantify the prevalence of health shocks reported by poor households and calculate the annual out-of-pocket (OOP) health care expenses incurred by poor households in these districts.

Findings: We find limited overlap between the PSNP and the CBHI or HFW schemes. In districts in which the CBHI operates, about 22% of the PSNP households are enrolled into CBHI. For 10% of all PSNP households, the CBHI insurance premium was waived due to their poverty status. In non-CBHI districts, 3.5% of PSNP households report having benefitted from HFW. Moreover, many households report serious health shocks that resulted in loss of consumption or assets. The estimated OOP health expenditures are high, even among those households enrolled into CBHI or benefitting from HFW.

Policy implications: Taken together, these findings suggest that there is scope to improve the linkages between these three major social protection programmes in Ethiopia to protect the poorest and most vulnerable households.

KEY WORDS

health care policy, health insurance, safety nets, social protection

1 | INTRODUCTION

Social protection refers to public policy that aims to reduce poverty and to protect vulnerable groups (African Union, 2008; Norton et al., 2001). Social protection programmes are considered to provide a more sustainable alternative to ad hoc humanitarian relief to address the root causes of deprivation in poor countries (Ellis et al., 2009). Such programmes are also becoming more and more popular across the globe (ILO, 2014). In Africa alone, the number of social protection programmes has tripled since 2000 (Cirillo & Tebaldi, 2016).

In practice, social protection policy encompasses multiple sectors, ranging from food security programmes to health care to social services for the vulnerable. Ideally, these different social protection programmes work in a harmonized way to maximize coverage, impact and cost effectiveness. At the core of this idea is a systems approach to social protection that aims to minimize piecemeal programming and instead promote a harmonized social protection policy at the national level (Ajemian, 2014). While the systems approach is strongly endorsed by major international organizations such as the International Labour Organization (ILO), UNICEF and the World Bank (ILO, 2014; Rawlings et al., 2013), there is a genuine lack of empirical evidence about the degree to which social protection programmes are harmonized at the country levels in low-income countries.

In Ethiopia, the focus of this study, the National Social Protection Policy lists 12 different active social protection programs (FDRE, 2014a).¹ As part of its systemic approach, the National Social Protection Policy emphasizes synergies between different types of vulnerabilities and calls for the delivery of a harmonized set of activities (FDRE, 2014a, 2016). So far, this harmonization aspect has been lagging behind—a caveat that has been identified by the Ethiopian Government and which it aims to address through the implementation of the National Social Protection Strategy (FDRE, 2016).

In this study, we investigate the synergies between three major social protection programmes operational in rural Ethiopia: the Productive Safety Net Programme (PSNP), the Health Fee Waiver (HFV) system and the Community Based Health Insurance (CBHI). By doing so, we aim to contribute to the international evidence on the harmonization of different social protection programmes as well as to inform the design and co-ordination of social protection policy in Ethiopia.

2 | CONTEXT

2.1 | Productive Safety Net Programme

The Government of Ethiopia started the implementation of the PSNP in 2005 with the support of international donors. PSNP was developed in response to widespread and chronic food insecurity and the recurrent need for emergency food relief (MoARD, 2006). The two main components of the PSNP are a public works programme for households that have the capacity to work and a direct support element that provides food or cash transfers directly to households that do not have the capacity to take part in public works (FDRE, 2014b). PSNP is currently in its fourth implementation phase and operates in 330 food insecure rural *woredas* (districts) in eight regions of the country: Afar; Amhara; Harari; Dire Dawa; Oromia; Somali; Southern Nations, Nationalities, and Peoples (SNNP); and Tigray.

¹These are: Social Insurance Programme (pension); Food Security Programme; Provision of Basic Social Services; National Nutrition Programme; Support to Vulnerable Children; Health Insurance; Disaster Risk Management; Support to Persons with Disabilities; Support to Older Persons; Urban Housing and Grain Subsidies; Employment Promotion; and Community-based Social Support.

Since its inception, PSNP has been subject to several rigorous mixed methods evaluations (Wiseman et al., 2010). While the evaluations of the first phase of the PSNP showed limited impact on the beneficiaries (Gilligan et al., 2009), more recent research reports that the programme is well targeted in most areas in which it operates (World Bank, 2015). Consequently, the available evidence shows that PSNP has been successful in reducing household food insecurity and distress sales of assets, and in increasing household expenditures and the uptake of agricultural inputs (Berhane et al., 2014, 2016; Hoddinott et al., 2012).

The fourth phase of the PSNP (PSNP-4) includes a number of important innovations, of which the most important is the transition to an integrated service delivery system (FDRE, 2014b, 2014c). The way to achieve this is by ensuring that poor and vulnerable households benefit from an essential set of services, including safety net transfers, livelihood interventions, key health and nutrition services, and community assets constructed through public works. Reflecting this, one of the indicators against which progress is measured is the number of safety net clients benefitting from health fee waivers.

2.2 | Community Based Health Insurance

Previous research from Ethiopia shows how health shocks (illnesses) can have serious economic consequences for rural households (Asfaw & Von Braun, 2004; Dercon et al., 2005, 2012; Yilma et al. 2014). With limited access to formal credit or insurance markets, sudden illnesses force poor households to sell their assets or to cut back on their consumption in order to cover out-of-pocket (OOP) health expenditures. In the worst cases, illnesses remain uncured, thereby potentially destabilizing the earning capacity of the household. Indeed, one conclusion from this earlier work was that “there would be a significant amount of welfare gain if existing endogenous risk sharing arrangements can be strengthened or some kind of community health insurance scheme can be introduced in the rural areas of Ethiopia” (Asfaw & von Braun, 2004).

To address these issues, in 2011 the Government of Ethiopia began piloting a CBHI in 13 woredas in the highland regions (Amhara, Oromia, SNNP and Tigray). The pilot woredas were selected based on five criteria (Yilma et al., 2015). The first criterion was a buy-in from the woreda officials. Second, the woreda had to commit to support the scheme. Third, the health centres in the woreda had to be geographically accessible. Fourth, the woreda health centres had to be of good quality. Fifth, the infrastructure for cost recovery, local revenue retention and public pharmacy policies in health centres had to be in place.²

The CBHI scheme focuses on rural households and urban workers employed in the informal sector. The objectives of CBHI are five-fold (Feleke et al., 2015):

1. To improve access to health services by making it more affordable.
2. To improve the quality of the health services.
3. To improve the financial viability of the health sector.
4. To engage and strengthen community participation in the management of health services.
5. To strengthen the capacity of the national health sector.

The decision to enrol into the scheme is left to kebeles (sub-districts), which, together with woreda officials, manage the scheme (EHIA, 2015). Once the kebele has joined the scheme, each household

²These selection criteria were set to ensure that the CBHI scheme would be implemented well during the pilot phase. This in turn increases the likelihood that the scheme has a positive impact on its beneficiaries. It is important to note that these same criteria do not necessarily apply once the scheme is scaled up.

residing in the kebele decides whether to enrol or not. If the household decides to enrol, it agrees to pay an insurance premium—which, on average, amounted to less than 1.5% of household monthly non-medical expenditures during the pilot phase (Yilma et al., 2015). The health insurance covers both outpatient and inpatient health services at public facilities.³ However, the collected insurance premiums were not sufficient to cover the cost of the scheme. As a result, the pilot scheme was subsidized through federal-, regional- and woreda-level government funds (Feleke et al., 2015).

The pilot scheme was extensively evaluated and researched by researchers from the Ethiopian Health Insurance Agency and the Erasmus University Rotterdam. The evaluation of the pilot phase was based on a quantitative survey in 12 pilot woredas as well as four control woredas that were not part of the pilot. The purpose of the control woredas was to provide a yardstick against which progress in the CBHI pilot woredas could be measured. The baseline data were collected in 2011, before the CBHI was launched in the pilot woredas. The midline survey was administered in 2012 and the endline survey in 2013. The evaluation also included a qualitative component in the form of key-informant interviews and focus group discussions.

As with any formal insurance instrument, the working idea behind the CBHI scheme is to pool the financial risk of health shocks across participating households. When enrolment is voluntary, the financial viability of the scheme hinges on the extent of adverse selection among those who demand the insurance. In the case of health insurance, adverse selection refers to a situation where individuals or households that have a high risk of getting ill are more likely to buy the insurance. If the insurance scheme is dominated by such high-risk households, the scheme must raise premiums in order to break even. Research conducted during the pilot phase suggests that adverse selection is not a major concern in CBHI (Mebratie et al., 2015b), possibly because the insurance is offered to households, not to individuals.

While financial viability is one of its core objectives, CBHI maintains a strong equity dimension. One of its objectives is to be inclusive of all segments of society. To this end, the CBHI scheme contains targeted subsidies for the poorest households, that cannot afford to pay the insurance premium, defined as “indigents.” These indigent households are exempt from paying the insurance premium. The selection of which households qualify as indigents is decided by the kebeles themselves. These indigent provisions are financed through subsidies from the woreda and region-level budgets. The target is that a minimum of 10% of eligible households can benefit from the indigent provisions of CBHI.⁴

Using the evaluation data from the pilot phase, Mebratie et al. (2015a, 2015b) document that CBHI enrolment rates were 41% in 2012 (one year after the pilot scheme began) and 48% in 2013. Yilma et al. (2015) show that enrolment decreased the likelihood that the household had to borrow. The authors also show that CHBI enrolment increased disposable income, possibly due to the ability to reallocate resources away from health expenditures to agricultural inputs or through reductions in sick days. However, there was no evidence that CBHI enrolment affected consumption outcomes or levels of livestock holdings. In addition, the research carried out by Mebratie et al. (2014) suggests that CBHI did not reduce OOP health care expenditures. An evaluation conducted by the Ethiopian Health Insurance Agency also found that enrolled households continued to incur OOP health care expenditures (EHIA, 2015).

³The use of private facilities is only allowed if the particular service or drug is not available in public facilities.

⁴Eligible households are defined as those that are involved in the informal sector. As such, this relates to most of the rural population and urban population engaged in the informal sector. Regions make estimations of the total CBHI eligible households per woreda. Based on these estimates, each woreda gets the possibility of allocating free access to CBHI to 10% of the households.

Research during the pilot phase also indicated that CBHI does not suffer from social exclusion. Mebratie et al. (2015b) found no evidence that consumption or education levels were correlated with the likelihood of enrolment. Moreover, Shigute et al. (2017) found that PSNP households were 24 percentage points more likely to enrol into CBHI. Taking into account the 41% overall uptake, this means that PSNP households were 50% more likely to enrol in CBHI, after controlling for differences in wealth and educational levels of the household, among other factors. Both qualitative and quantitative evidence presented by the authors suggests that this was, at least partly, driven by pressure applied by government officials on PSNP beneficiaries to enrol in CBHI.

Unlike CBHI schemes in other countries, insurance renewal rates were extremely high during the pilot stage. Mebratie et al. (2015a) found that more than 80% of those who enrolled during the first year renewed their membership in the second year. This low turnover suggests that clients are generally satisfied with the scheme—a hypothesis supported by the findings of Badacho et al. (2016).

The research carried out during the pilot phase greatly informed the redesign and scale-up of the programme. In 2014/2015, the programme expanded to 185 woredas (MoH, 2015, 2016). It is worth noting that the woredas for the pilot were selected to optimize the implementation capacity and to make sure that the health care services were available. It is therefore important to continue to monitor the developments after the pilot phase because the programme is bound to operate in less favourable settings due to considerable geographical expansion. To the best of our knowledge, this study is the first to do so.

2.3 | Health Fee Waiver system

Health care policy in Ethiopia has traditionally maintained strong social protection and equity dimensions. To this end, poor households have been exempted from paying for certain basic health services (Ashagrie & Abebe, 2017; Kloos, 1998; Purvis et al., 2011). This fee waiver system, which has been running for over a decade, is still operational in woredas in which the CBHI has not yet been rolled out. In woredas in which the CBHI is operational, the HFW scheme is replaced by the indigent scheme (FDRE, 2015), as described above.

3 | DATA

To explore complementarities between the three major national social protection programmes described above, we use a large household survey in woredas in which the PSNP was operational. The survey took place between January and February 2016 and was administered in six regions of the country: Afar, Amhara, Oromia, SNNP, Somali and Tigray. The survey was funded by the PSNP Donor Working Group and conducted by the Central Statistical Agency of Ethiopia (CSA) with inputs from the International Food Policy Research Institute. The primary purpose of the survey was to obtain pre-intervention (baseline) information in localities in which the fourth phase of the PSNP operates.⁵

About half of the households in the sample are PSNP beneficiaries—either Public Works (PW) or Permanent Direct Support (PDS) clients. The other half of the sample are households that are not

⁵The PSNP programme has been evaluated with surveys conducted every two years since 2006. The first longitudinal survey had five rounds and were administered between 2006 and 2014. To account for the anticipated geographical expansion of the programme and the fact that the sample of households that were followed from 2006 was getting relatively old, a new more representative sample was drawn in 2016.

directly benefitting from the PSNP, but live in communities in which the PSNP is operational. The latter group serves as the control group for the evaluation and is carefully selected based on a seven-scale subjective poverty assessment to ensure comparability with the beneficiary households. Only households that identified themselves as being on the bottom four rungs of the poverty ladder, relative to other households in the village, were eligible to be sampled into the control group. Consequently, these data should not be considered to represent the population as a whole of these woredas as such. If anything, the sample is representative of the poorest households in the woredas in which the PSNP operates.

Because the CBHI did not operate in Afar and Somali regions during the data collection, we restrict our sample to the four highland regions: Amhara, Oromia, SNNP and Tigray. The final sample used in this secondary analysis is 6,739 households that group into 81 woredas and 243 kebeles. Table A1 in the Online Supplementary Material (OSM) provides the sample sizes disaggregated by region and by household type. Apart from the household interviews, the PSNP-4 baseline survey included structured focus group discussions with key informants and knowledgeable people in each kebele and woreda in which sample households resided.

4 | HEALTH INSURANCE AND HEALTH FEE WAIVER COVERAGE IN PSNP LOCALITIES

The geographic access to CBHI remains limited to one third of all PSNP woredas; out of the 81 PSNP woredas in our sample, CBHI is operational in 27 woredas (Table A2 in the OSM).⁶ We also note some heterogeneity across regions. In Tigray, CBHI is operational in 41% of PSNP woredas, while in the SNNP region CBHI was operational only in 29% of PSNP woredas (six out of 21). Focusing on the 27 woredas in which both CBHI and PSNP are operational, in 77% of the woredas, officials say that they have made special efforts to mobilize PSNP households to enrol in CBHI (Table A2 in the OSM).

Within the 27 woredas in which CBHI and PSNP are both operational,⁷ 22% of all poor households are enrolled in the CBHI scheme (Table 1). A regional disaggregation provided in Table A3 in the OSM, reveals that this percentage is considerably higher in Amhara where 40% of households in the sample are reported to have been enrolled. There is little variation by PSNP client status when looking at the full sample (Table 1). However, regional disaggregation shows that PDS households are more likely to be part of the scheme than PW households in SNNP, while the opposite is true for Tigray and Oromia (Table A3 in the OSM). We also see that enrolment rates among PSNP households are similar to other poor households that are not benefitting from PSNP (Table 1).⁸ In Amhara, PSNP

⁶We triangulated the information across different sources. In some instances, woreda informants reported that CBHI is not operational in the woreda, whereas kebele informants said that it is. In these cases, we also looked at household level data. If there were a sufficient number of households that reported to be enrolled in CBHI, we concluded that the information received from the woreda officials was incorrect and that the CBHI is operational in the woreda.

⁷As described in Section 2, after the CBHI has been rolled out in the woreda, the kebele then decides whether to participate or not. Generally, kebeles choose to participate if the CBHI is available in the woreda. This is also supported by our data: in the 27 woredas that have a CBHI, there is not a single kebele in which the CBHI is not operational.

⁸Shigute et al. (2017) found that PSNP households were much more likely to enrol into CBHI in the pilot stage. There are a number of reasons that may explain the differences between our findings and those presented by Shigute et al. First, Shigute et al. use data collected during the pilot phase whereas our data has been collected after the scale-up. In other words, the survey timing and the geographical coverage of the surveys do not overlap. Second, Shigute et al. use multivariate regression methods that control for differences in socioeconomic status to make comparisons between PSNP and non-PSNP households whereas our analysis is based on less rigorous data tabulations that compare PSNP households to other poor households residing in the same localities.

TABLE 1 Percentage of households enrolled in CBHI in CBHI woredas and percentage of households with a health fee waiver in non-CBHI woredas, by PSNP beneficiary status

Household type:	All households (%)	PSNP households (%)	Non-PSNP households (%)
CBHI woredas:			
Households enrolled in CBHI	21.8	22.2	21.4
– as an indigent	9.9	9.6	10.1
Non-CBHI woredas:			
Households with a health fee waiver	3.9	3.5	4.2

Note: PSNP = Productive Safety Net Programme. CBHI = Community Based Health Insurance Scheme. Non-PSNP refers to poor households not benefitting from PSNP.

Source: Authors' calculations from the PSNP-4 baseline survey in January/February 2016.

households are somewhat more likely to enrol compared to poor non-PSNP households in Oromia (Table A3 in the OSM). The opposite is true for SNNP where non-PSNP households are somewhat more likely to enrol.

Next, we look at households that are enrolled in CBHI as indigents, i.e., households for which the insurance premium is waived. The middle row in Table 1 shows that nearly 10% of the households in our sample have CBHI, but did not have to pay for it. Comparing the first two rows in Table 1 reveals that under half (45%) of the CBHI-enrolled households in our sample are considered as indigents. This high fraction may not be a surprise given that our sample consists of the poorest households in these communities. Interestingly, the share of indigent households is very similar across PSNP and non-PSNP (but still poor) households. This implies that the targeting used to select PSNP beneficiary households and indigent households for CBHI is different. Finally, about 42% of the PDS households enrolled in CBHI as indigents (Tables A3 and A4 in the OSM). This is a somewhat lower share than is observed for Public Works (44%) and poor non-PSNP households (47%).

As described in Section 2, in woredas in which the CBHI *does not* operate, a select number of the poorest households are exempted from paying for selected health services through the HFW scheme. We have 54 non-CBHI woredas in our sample. The last row in Table 1 shows that less than 4% of households in these woredas reported that they receive the HFW.⁹ The percentages are somewhat higher in Amhara and Tigray compared to Oromia and SNNP (Table A5 in the OSM). As before, we see little difference between PSNP and non-PSNP (but still poor) households.

5 | HEALTH SHOCKS AND HEALTH EXPENDITURES

Self-reported health-related shocks are prevalent among poor households in these PSNP woredas. Table 2 shows that 9% of poor households in the PSNP woredas reported to have experienced a serious income shock because of the illness of a household member in the past 15 months.¹⁰ A regional disaggregation provided in Table A6 in the OSM shows that the health shocks prevalence is higher in

⁹This is in line with Barnett and Tefera (2010) who report that 5.5% of the households in the Ethiopia Young Lives sample received an HFW. It is noteworthy that the sample in the Young Lives surveys is also formed of the poorest households in Ethiopia through a sampling strategy that oversampled poor areas.

¹⁰The recall in this question was based on the Ethiopian calendar. We considered all shocks that took place in 2007 or 2008 in the Ethiopian calendar. Since the survey took place in February 2016, this roughly corresponds to September 2014 up to February 2016 in the Gregorian calendar.

TABLE 2 Percentage of households reporting an illness shock and loss of consumption or assets due to the illness shock, according to PSNP beneficiary status

Household type:	All households (%)	PSNP households (%)	Non-PSNP households (%)
Reporting an illness shock	9.4	10.2	8.7
<i>Conditional on reporting an illness shock:</i>			
Reporting loss of consumption	74.0	73.1	75.0
Reporting loss of assets	41.6	41.1	42.1
Reporting loss of consumption and assets	35.4	34.4	36.5

Note: PSNP = Productive Safety Net Programme. Non-PSNP refers to poor households not benefitting from PSNP.

Source: Authors' calculations from the PSNP-4 baseline survey in January/February 2016.

SNNP (17% of poor households) and lower in Tigray (6.2%). The differences are marginal between households that benefit from PSNP and other poor households (Table 2), except in Oromia and SNNP where the PSNP households were somewhat more likely to report a health shock than other poor households (Table A6 in the OSM). Within CBHI woredas, we see that households enrolled in CBHI are somewhat less likely to report an illness shock compared to households that are not enrolled (Table A6 in the OSM).

The survey also asked how households coped with these illness shocks. Table 2 shows that 74% of shock-affected households had to cut consumption and nearly 42% reported that they sold assets because of these shocks. More than 35% of all shock-affected households had to do both: cut consumption and sell assets. The differences between PSNP and other poor households are marginal (Table 2),¹¹ although regional disaggregation reveals some differences in this regard (Table A7 in the OSM). For example, in Amhara, poor non-PSNP households are more likely to cut their consumption because of an illness as compared to PSNP households. The opposite is true for Oromia. We also note that, according to our data, very few households (only about 1%) took a loan to cover health expenditures.

Data from the consumption module of the survey reveal that 38% of the sampled households incurred health expenditures¹² in the 12 months preceding the interview (Table 3).¹³ These percentages are highest in SNNP and lowest in Tigray (Table A8 in the OSM). Table 3 also breaks down these data by household PSNP, CBHI and HFW status. Interestingly, a considerable proportion of the sampled households who had enrolled in CBHI or who benefit from the HFW also incurred OOP expenditures for health care. This finding is in line with the research carried out during the pilot phase (EHIA, 2015; Mebratie et al., 2014). Using more rigorous methods, Mebratie et al. (2014) do not find evidence that CBHI reduced OOP health care expenditures. Qualitative data collected by Mebratie et al. (2014) suggests that many CBHI members still had to pay for health fees and medicine. Some of the reasons cited by the authors were innocuous, such as forgetting their CBHI card at home when visiting the health facility or forgetting to renew their CBHI membership on time. However, some cited problems with the quality of the health care received or a lack of available medicine, both of which required them to visit private health care facilities. A recent

¹¹We do not break down these statistics further by CBHI and non-CBHI or HFW and non-HFW status. This is because the resulting cell sizes tend to get too small (fewer than 30 households) for meaningful inference.

¹²Unfortunately, the survey instrument does not permit us to distinguish between inpatient and outpatient health care costs.

¹³We do not consider costs related to traditional medicine in this section. About 6% of the survey households reported incurring costs related to traditional medicine and healers. The mean cost among households that reported these was 79.5 birr, with a median cost of 25 birr. Using the average USD exchange rate during the 2015 calendar year (1 USD = 20.69 birr), these amounts translate to 3.84 and 1.21 USD, respectively.

TABLE 3 Percentage of households with out-of-pocket health care expenditures and average annual out-of-pocket expenditures (in birr) among those who incurred them, by presence of programme in woreda and household programme participation status

Woreda type:	All PSNP woredas			CBHI woredas		Non-CBHI woredas	
Household type:	All	PSNP	Non-PSNP	CBHI	Non-CBHI	HFW	Non-HFW
Households with OOP health care expenditures (%)	38.1	38.0	38.2	33.9	42.2	41.6	36.7
<i>Conditional on reporting with OOP health care expenditures:</i>							
Means (birr):	183	175	191	237	177	195	180
Medians (birr):	60	58	60	60	75	45	57

Note: PSNP = Productive Safety Net Programme. CBHI = Community Based Health Insurance. HFW = Health Fee Waiver. Non-PSNP refers to poor households not benefitting from PSNP, CBHI refers to poor households enrolled in CBHI, non-CBHI to poor households not enrolled in CBHI. HFW refers to poor households benefitting from HFW, non-HFW to poor households not benefitting from HFW.

Source: Authors' calculations from the PSNP-4 baseline survey in January/February 2016.

systematic review of the international literature also finds that there is no conclusive evidence that social or community-based health insurance schemes reduce OOP health expenses (Acharya et al., 2012).¹⁴

The Table 3 shows the average *annual* per capita OOP health care expenditures among poor households that did report health expenditures. The mean was 183 birr per capita per year (or 15 birr a month¹⁵), with a median of 60 birr per capita per year (or five birr a month)^{16,17}. It is noteworthy that average annual per capita consumption expenditures in this sample is 3,993 birr, of which 85% was spent on food (3,397 birr) with only 608 birr being used for non-food related items or services. In Table A9 in the OSM, we compare health care expenditures to total expenditures and total non-food expenditures. For poor households that incurred health expenditures, those expenditures represent, on average, about 5% of total annual consumption expenditures and 18% of total annual non-food expenditures.

The last row of Table 3 reports the median annual per capita OOP health care expenditures, which are less influenced by very high OOP expenditures incurred by some households. Median OOP health expenditures are considerably higher in Oromia than in the other regions (Table A10 in the OSM). The differences in medians between PSNP and poor non-PSNP households are marginal. The median expenditures incurred by CBHI and HFW poor households are somewhat lower than in non-CBHI and non-HFW poor households, respectively.¹⁸

WHO (2010) defines health spending to be “catastrophic” if it exceeds a certain percentage of total expenditure. There is no widely accepted threshold on what constitutes catastrophic health spending.

¹⁴Acharya et al. (2012) note a number of explanations why OOP health expenditures are not lower for the insured group. For example, insurance led to more frequent use of health services. This is associated with informal payments or other expenditures that are not covered by the insurance. Moreover, insured households may be more likely to seek services that are not covered by the insurance.

¹⁵15 Ethiopian birr = 0.72 USD.

¹⁶60 Ethiopian birr = 2.90 USD.

¹⁷The Household Health Service Utilization and Expenditure Survey for 2015/2016 (MoH, 2017) reports similar OOP levels based on nationally representative data: the average annual per capita OOP as 199 birr for the rural areas of the country and 162.5 birr for the poorest quintile. More than 95% of these expenditures were incurred for outpatient care and less than 5% to inpatient care.

¹⁸It is noteworthy that these costs do not include the health insurance premium fee.

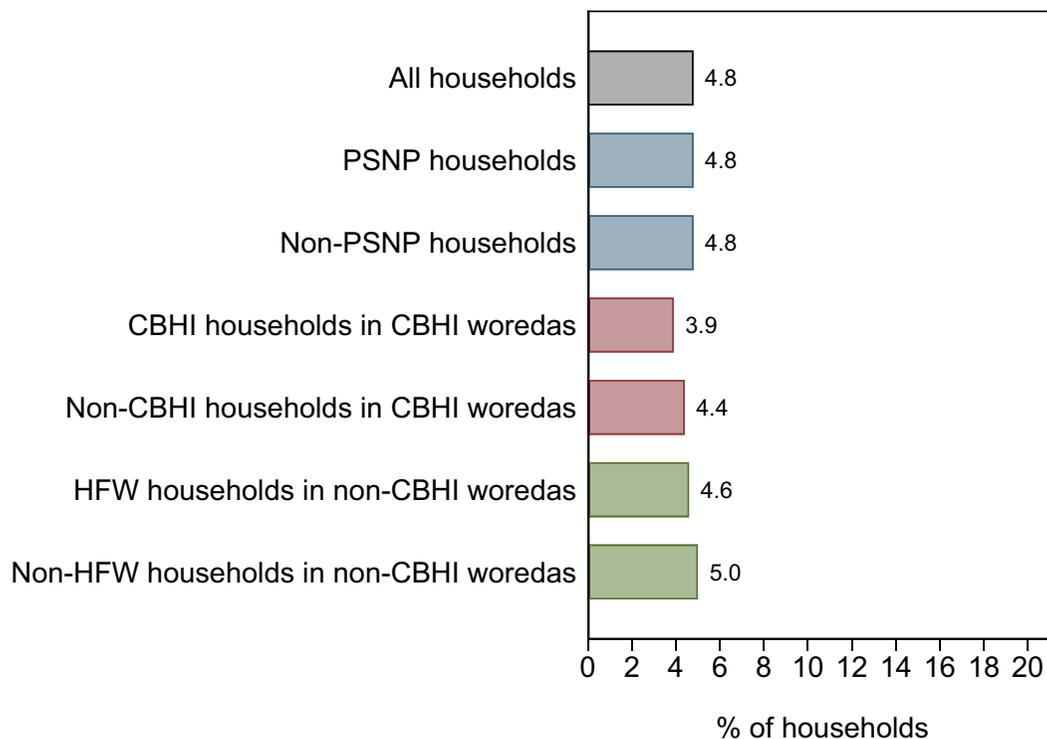


FIGURE 1 Percentage of households for which health care spending is at least 10% of total expenditure

Source: Authors' calculations from the PSNP-4 baseline survey in January/February 2016.

Note: PSNP = Productive Safety Net Programme. CBHI = Community Based Health Insurance. HFW = Health Fee Waiver. Non-PSNP refers to poor households not benefitting from PSNP, CBHI refers to poor households enrolled in CBHI, non-CBHI to poor households not enrolled in CBHI. HFW refers to poor households benefitting from HFW, non-HFW to poor households not benefitting from HFW.

[Colour figure can be viewed at wileyonlinelibrary.com]

Some researchers have used 40% of a household's capacity to pay and defined capacity to pay in relation to non-food expenditures (Xu et al., 2003), while others have set this threshold at 10% of total annual expenditures (O'Donnell et al., 2008, pp. 204–205). In Figure 1, we report the head count of households experiencing catastrophic health spending using the 10% threshold. Out of the total 6,739 households in our sample, 4.8% had health spending at a level considered catastrophic. Defining health expenditures as catastrophic if they exceed 40% of non-food expenditures yields similar results (Figure 2). In Table A11 in the OSM we consider alternative health spending thresholds and also provide a regional disaggregation of these results.

Regional disaggregation shows that the headcount of households experiencing catastrophic health spending based on the 10% budget threshold is slightly higher in Oromia (5.7%) than in other regions (Table A11 in the OSM). Overall, the share of households with catastrophic level of health spending is comparable to what has been estimated for various countries in Asia (van Doorslaer et al., 2007), but considerably lower than the estimated headcount among the poorest households in neighbouring Kenya (Chuma & Maina, 2012).¹⁹ The share of poor households with

¹⁹Van Doorslaer et al. (2007) estimate this for 14 Asian countries. The shares of households with catastrophic health expenditures range between 2% (Malaysia) and 15.6% (Bangladesh). Chuma and Maina (2012) calculate that 23% of the poorest (lowest quintile) households in Kenya had catastrophic health expenditure levels.

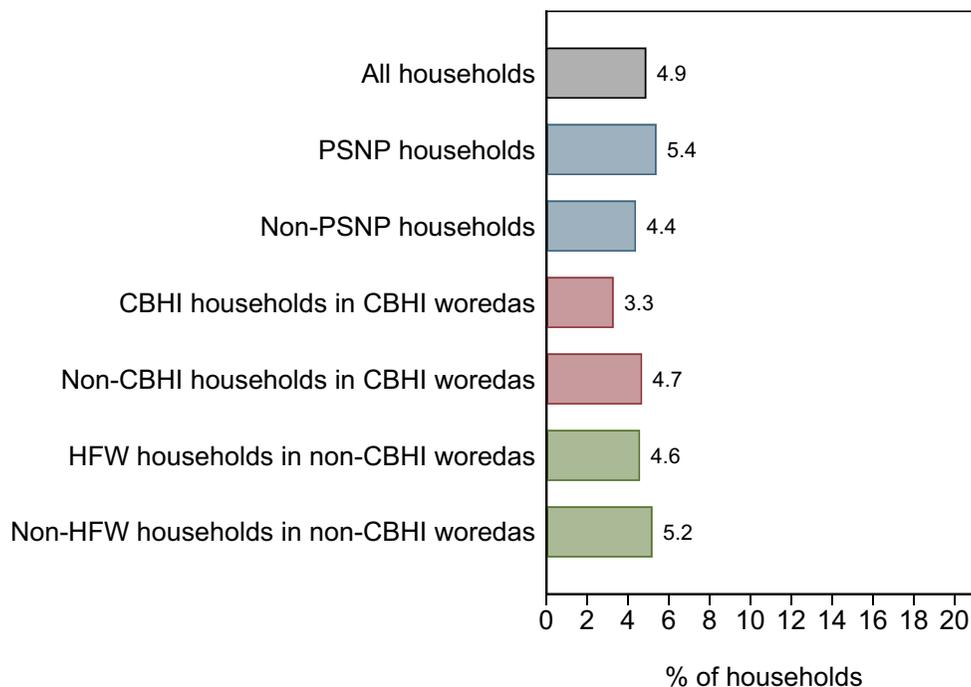


FIGURE 2 Percentage of households for which health care spending is at least 40% of non-food expenditure

Source: Authors' calculations from the PSNP-4 baseline survey in January/February 2016.

Note: PSNP = Productive Safety Net Programme. CBHI = Community Based Health Insurance. HFW = Health Fee Waiver. Non-PSNP refers to poor households not benefitting from PSNP, CBHI refers to poor households enrolled in CBHI, non-CBHI to poor households not enrolled in CBHI. HFW refers to poor households benefitting from HFW, non-HFW to poor households not benefitting from HFW.

[Colour figure can be viewed at wileyonlinelibrary.com]

catastrophic health care spending is the same across PSNP and poor non-PSNP households. Figure 1 shows that the headcount is lower among CBHI households (3.9%) and slightly higher among HFW households (4.6%).

In Table 4 we look at overshoot: the amount or degree to which health care spending exceeded the 10% threshold. Mean overshoot measures the overshoot for the whole sample and is expressed as the share of total expenditures divided by the total number of households irrespective of whether they incurred catastrophic health expenditures (see O'Donnell et al., 2008, pp. 205–206). The mean overshoot is only 0.5% of total expenditures in the PSNP woredas.

The mean positive overshoot is estimated at the bottom half of Table 4. This measure only considers households that incurred catastrophic health expenditures, giving a better understanding of the intensity of catastrophic health spending among those who experienced such spending. The mean positive overshoot is 11.2%, implying that the average household with catastrophic levels of OOP spent, on average, 22.4% (12.4% + 10%) of their total budget on health care. The average figures are slightly larger for Oromia than what is observed for other regions (Table A12 in the OSM). Overall, the mean positive overshoot figures estimated here are similar to what has been estimated for a number of Asian countries by van Doorslaer et al. (2007).²⁰

²⁰Out of the 14 Asian countries analysed by the authors, the highest mean positive overshoot (based on the 10% budget threshold) is estimated for Bangladesh (13%) and lowest for the Kyrgyz Republic (6%).

TABLE 4 Intensity of catastrophic health expenditures, based on 10% budget threshold, by presence of programme in woredas and programme participation status, budget overshoot in percentage points

Woreda type:	All PSNP woredas			CBHI woredas		Non-CBHI woredas	
	All	PSNP	Non-PSNP	CBHI	Non-CBHI	HFW	Non-HFW
Mean overshoot based on the 10% threshold (%-point)	0.5	0.5	0.5	0.4	0.4	0.9	0.6
Mean positive overshoot based on the 10% threshold (%-point)	11.2	11.1	11.4	10.8	8.8	20.1	11.8

Note: PSNP = Productive Safety Net Programme. CBHI = Community Based Health Insurance. HFW = Health Fee Waiver. Non-PSNP refers to poor households not benefitting from PSNP, CBHI refers to poor households enrolled in CBHI, non-CBHI to poor households not enrolled in CBHI. HFW refers to poor households benefitting from HFW, non-HFW to poor households not benefitting from HFW.

Source: Authors' calculations from the PSNP-4 baseline survey in January/February 2016.

6 | DISCUSSION

This research explored synergies between PSNP, CBHI and HFW—three major social protection programs in rural Ethiopia. In February 2016, CBHI operated in about one third of the PSNP woredas. Further expansion of CBHI is ongoing, but this is far from the targets set by the National Social Protection Strategy of Ethiopia, which calls for equitable geographic distribution of social protection resources and instruments in order to ensure that poor households have access to all the protection they need.

In PSNP woredas in which the CBHI is operational, nearly 22% of all PSNP beneficiary households are enrolled into it. Considering that PSNP beneficiaries consist of the poorest and most food insecure households who would potentially benefit significantly from health insurance, this relatively low proportion of enrollees among PSNP beneficiaries is of concern. This percentage is considerably higher in Amhara where 40% of all PSNP households are enrolled. We find no evidence that PSNP households are either more or less likely to enrol into CBHI than are other poor households.

About 10% of all PSNP households in woredas in which CBHI is operational benefitted from the indigent provisions. Concretely, this means that among PSNP households enrolled in CBHI, 44% did not have to pay the CBHI fee while 66% did have to do so. Moreover, the share of indigent households is very similar across PSNP households and other poor households. In woredas in which CBHI is not operational, only 4% of poor households benefitted from the HFW. As with the indigent scheme in CBHI, we find little difference between PSNP and other poor households in access to HFW benefits.

These findings suggest the targeting criteria for the PSNP and the insurance premium waiver (i.e., indigent) or HFW schemes are somewhat different. It could be that communities feel that they support through the PSNP is not sufficient to cover all vulnerable households and that the waiver schemes are seen as a way to extend the total social protection coverage. Assessing whether this hypothesis is correct is left for future research.

Our further analysis indicates that poor households in PSNP woredas are vulnerable to health shocks. In line with previous research from Ethiopia, self-reports from households suggest that sudden illnesses are associated with depleted assets and lower consumption. Moreover, nearly 40% of the households in our sample incurred OOP health expenditures. Mean (median) annual OOP health expenditures among households that incurred them are estimated at 183 birr (60 birr) per capita,

representing about 5% of total annual expenditure and 18% of annual non-food expenditure for these households. For 5% of all households, OOP spending can be characterized as catastrophic, when defined as 10% of the total annual household budget. Interestingly, a high share of households enrolled in CBHI (34%) or benefitting from HFW (42%) incurred OOP expenditures, and between 4% and 5% of these households incurred catastrophic OOP. This finding corresponds to the results of research conducted during the pilot phase (EHIA, 2015; Mebratie et al., 2014). Based on experiences in the pilot and insights from other research, a potential explanation for these OOP expenditures among households participating in CBHI and HFW could be because CBHI and HFW provisions were not accepted in all government health facilities or that they did not cover drugs (Barnett & Tefera, 2010; Mebratie et al., 2014). The CBHI benefit package was expanded over time, and now includes more referral options to the private sector or higher-level hospitals. Expenditures made based on referrals are reimbursed, but require an initial OOP expense. However, more dedicated research is needed to explain this.

Finally, the limitation of focusing on OOP expenditures is that it only considers households that incurred them—not households that experienced health problems but could not afford to treat them (O'Donnell et al., 2008, p. 203). Therefore, it would be important to assess how many poor households in these chronically food insecure woredas simply cannot afford to treat their illnesses and so would potentially benefit from participation in CBHI.

7 | CONCLUSIONS

The findings reported in this article indicate that more work remains to be done to better link these three major social protection programmes in rural Ethiopia. Despite the positive impact of PSNP on improving household food security and preventing asset depletion (Berhane et al., 2014, 2016), many PSNP households remain vulnerable to health shocks that result in loss in consumption or assets. This is particularly worrying considering the core objectives of the PNSP.

Extending the geographical coverage of CBHI to all PSNP woredas could be a first step to address this. However, our findings also suggest that when CBHI is operational in the woreda, the enrolment rates among PSNP households are low. This could be an indication that PSNP households cannot afford to pay the insurance premium or that the indigent provisions are not large enough to cover all disadvantaged households. Finally, many households enrolled in CBHI or benefitting from HFW incur OOP health expenditures. This suggests that CBHI and HFW do not fully cover all relevant health care costs incurred by households.

Finally, after an extensively researched pilot phase, it is paramount to keep monitoring the implementation of CBHI. To this end, this study highlights several important research questions for the future. First, the affordability of the CBHI premium among the poorest households needs to be assessed. Second, a better understanding of the differences in the community-level targeting criteria between the PSNP and indigent-CBHI households as well between PSNP and HFW households is warranted. Third, it is not clear why CBHI and HFW households incur OOP health expenses. Fourth, future research should also investigate whether OOP health expenses inhibit the health-seeking behaviour of the poor in rural Ethiopia.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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