

# 18. Uneven recovery and a lingering food crisis during the COVID-19 pandemic for rural safety net transfer recipients in Ethiopia

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In the first few months of the COVID-19 pandemic, researchers at IFPRI and elsewhere worked quickly with their partners in government, the private sector, and survey firms to provide evidence on the immediate impacts of the COVID-19 health crisis and related restrictions in low- and middle-income countries (LMICs). However, systematic evidence on the effects of the crisis has been more limited in the ensuing months up to and after the one-year anniversary of the pandemic. Early analysis of economic models of the crisis suggested that its economic effects would be severe in the short run and greatest in Africa south of the Sahara, where the pandemic and related lockdowns were projected to depress incomes of both urban workers and rural households (Laborde, Martin, and Vos 2021). Phone surveys and rapid assessments conducted in the first weeks of the pandemic reported significant job losses in both rural and urban areas (Wieser et al. 2020), disruptions to urban food value chains (Tamru, Hirvonen, and Minten 2020), and declines in household dietary diversity in Addis Ababa (Hirvonen, de Brauw, and Abate 2021). In the time since those initial projections and rapid surveillance surveys were conducted, researchers have revisited the same samples to analyze the medium-term effects of the pandemic. In addition, they have gathered information on households at the economic margins of society and those considered to be less affected by the pandemic by virtue of their sector of employment or remote location.

In this chapter, we draw on evidence from rural Ethiopia to depict the effects of the COVID-19 pandemic at least 6–12 months since its start, with a focus on households that receive food and cash transfers from Ethiopia’s national flagship social protection program, the Productive Safety Net Program (PSNP). The program is targeted to households living with chronic food insecurity; its beneficiaries are among the poorest 10 percent of households in Ethiopia. Evidence on the effects of the pandemic on PSNP households is drawn from two separate research projects in Ethiopia. Each had collected detailed data from rural household surveys one to two years before the pandemic began. The research teams conducted follow-up phone surveys either in the period right after the pandemic began and then again in subsequent months, or roughly one year after the start of the pandemic.

Data from these two studies allow us to track trends in outcomes during the pandemic, in some cases after the most significant restrictions to mobility and economic activity had been lifted. In the days immediately after the start of the pandemic, schools were closed and public gatherings were restricted. A national state of emergency was imposed from early April to early September 2020, but by October, restrictions began to ease and schools reopened. Generally, the restrictions in Ethiopia

were much lighter than elsewhere in Africa. Nonetheless, the pandemic disrupted many dimensions of economic activity. Here, we examine the changes in well-being for vulnerable PSNP households during these events and synthesize this evidence to draw lessons about the extended effects of the pandemic and about effective pandemic responses. We emphasize that with the data we present here, we are only able to show trends in outcomes during the pandemic and cannot conclude that the relationships of these outcomes to pandemic events or participation in the PSNP are causal. Nonetheless, this investigation provides several lessons about the pandemic and the effectiveness of the response.

In the first study profiled here, Leight and colleagues interviewed PSNP participant households three months and six months after the start of the pandemic to assess food security and livelihood effects. The surveys documented food shortages, income loss, and travel restrictions during the first three months of the pandemic, followed by additional coping strategies and some reduction in severity of pandemic effects in the subsequent three months.

In the second study, Berhane and colleagues compared how PSNP participant and non-participant households experienced the effects of the pandemic, including their changing food security and coping strategies. Additional analysis estimates how access to the PSNP was associated with lower household food insecurity and shorter hunger gap duration one year after the start of the pandemic.

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## **STUDY 1 The effect of the COVID-19 pandemic on PSNP beneficiaries in Ethiopia in 2020: Evidence from phone surveys**

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The COVID-19 pandemic has had profound implications for poverty and food security around the globe. Although many of the most obvious initial effects occurred in urban areas, which were more exposed to international travel and trade and where denser patterns of economic activity led to more intense lockdowns, it is critical to understand the effects of the pandemic on rural households characterized by a lower level of economic integration ex ante. Here, we seek to provide an overview of the real-time consequences of the onset of the COVID-19 pandemic on the livelihoods and food security of extremely poor households in rural Ethiopia by drawing on data from two phone surveys conducted in the early phase of the pandemic in 2020.

### **Survey and data**

We conducted two phone surveys with a subsample of respondents from a large-scale panel survey of households as part of the Strengthening PSNP4 Institutions and Resilience (SPIR) evaluation in rural areas of the Amhara and Oromia regions. All households participate in Ethiopia's Productive Safety Net Program, and thus correspond approximately to the poorest 10 percent of households in Ethiopia.

We conducted the first phone survey between June 1 and 14, 2020, and the second survey between August 20 and September 2, 2020. The target sample included 1,326 households who reported ownership of a phone in the previous midline survey in 2019, and the realized sample included around 1,200 households in both rounds, for a response rate of about 90 percent.

In the first round, our objective was to collect data on the immediate effects of the pandemic's onset and associated restrictions. Accordingly, we posed questions to households about the impact of shocks experienced since the beginning of Lent (February 24, 2020), a date that was both salient and proximate to the beginning of the pandemic. In the second round, questions were framed with reference to the period since the previous survey round. In both cases, the effective recall period was around three months. We present results by region in order to highlight whether experiences with the pandemic varied by location.

## Key findings

In general, our findings suggest that rural households in Ethiopia experienced meaningful disruptions to their livelihoods due to the onset of the COVID-19 pandemic. When asked about the most significant effects of the pandemic on their household, respondents reported food shortages, income losses, and travel restrictions, as summarized in [Figure 1](#). In both regions, there was a significant increase between rounds in the percentage of respondents who reported food shortages as the greatest negative impact and a decrease in those who reported travel restrictions. This shift suggests that households encountered increased challenges in maintaining adequate food supplies as economic disruptions persisted.

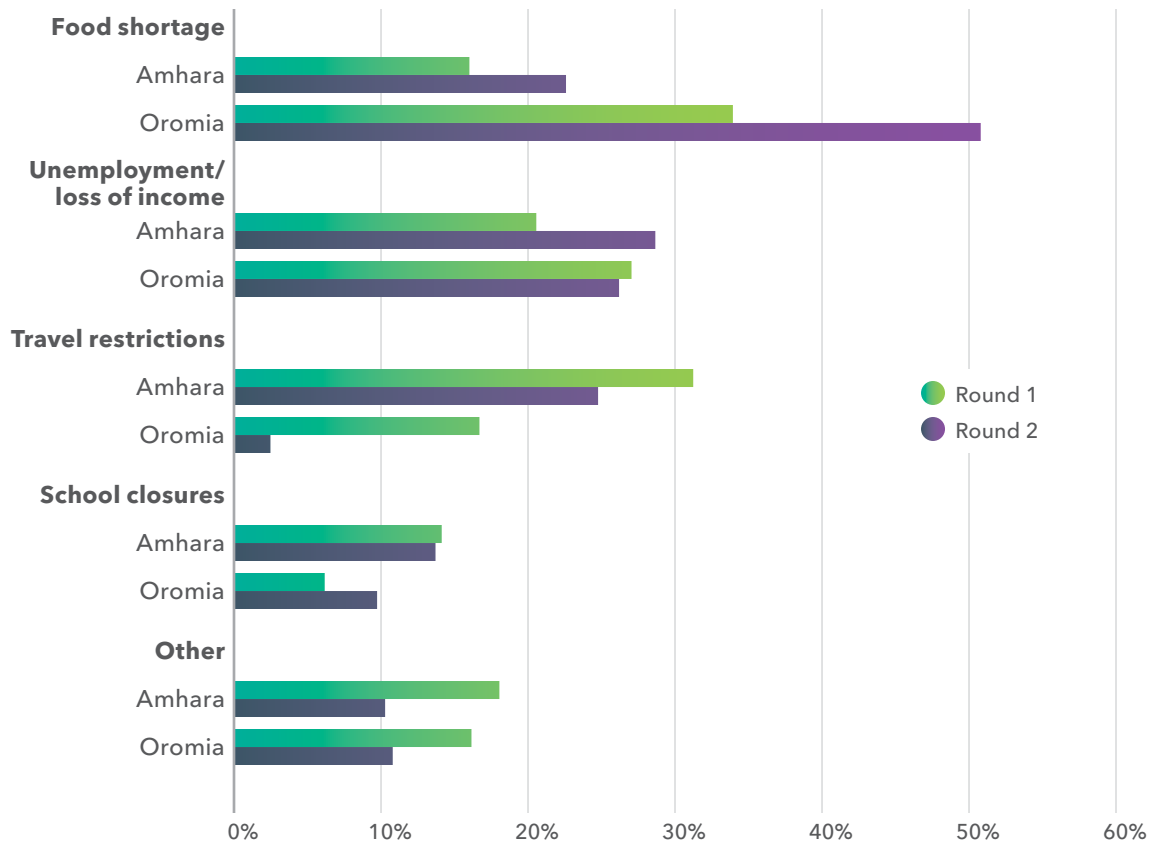
We also assessed households' self-reported shifts in income over the previous three months, and in the second survey round, we probed further about shifts in various sources of income. In the first round, the majority of households reported income loss (including more than 80 percent of households in Oromia), but by the second round of the survey, incomes were stable or slightly higher for around one-third of households. Adverse effects were concentrated among households reporting non-agricultural income: around half of households reported that their agricultural income was stable, but among those households with a non-agricultural household business (a sample that was only 30 percent of those surveyed), 70 percent reported that their income from this business decreased.

To manage these shocks, between 30 and 40 percent of households in both rounds reported selling assets, and 20–30 percent reported decreasing consumption. Households were more likely to report declines in consumption in August, suggesting challenges in managing the pandemic's effects as disruptions continued. More than 60 percent of households reported moderate or high food insecurity in both rounds.

## Policy implications and conclusion

The evidence presented here suggests that poor, rural households in Ethiopia experienced meaningful shocks linked to the pandemic. However, our findings also suggest the most acute effects were observed for households with non-agricultural businesses. This result is also consistent with other

**FIGURE 1** Aspect of COVID-19 pandemic that most affected households, by region



**Source:** SPIR phone surveys, June and August 2020.

**Note:** Four most popular answers across regions and rounds: in Oromia, fear of getting sick/fear of dying (6.4%) was more prevalent than travel restrictions (2.5%) at Round 2.

evidence from Africa south of the Sahara (Mahmud and Riley 2021). In this sample, only a minority of households were engaged in non-agricultural activities, while the majority were concentrated in subsistence agricultural production. The latter group arguably had somewhat less to lose. The full-scale endline survey conducted in person in 2021 showed no substantial shifts in consumption relative to the baseline survey: households in this sample generally did not exit poverty (perhaps in part because of COVID-19-related shocks), but neither is there any evidence of meaningful declines in consumption over time.

In 2021, Ethiopia was also increasingly affected by violent conflict. As in other contexts, tracking the long-term effects of the pandemic requires understanding the complex effects of multiple shocks. Building resilience to these shocks remains a crucially important policy goal.

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## **STUDY 2 Ethiopia’s Productive Safety Net Program: Perceived effects of the pandemic, coping strategies, and the program’s role in protecting food security**

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Social safety nets, including cash transfers, have been prominently used to support the most vulnerable throughout the global COVID-19 pandemic (Kumar et al. 2021). Ethiopia’s Productive Safety Net Program (PSNP) is one of the largest and longest-running social protection programs in Africa. To better understand the effects of the pandemic on PSNP participants and neighboring households, we conducted a phone survey one year after the start of the pandemic that explored respondents’ awareness of the pandemic, behavioral changes in response to the crisis, food security, and coping strategies. Here, we provide an overview of the key findings from this research, as well as a discussion of the impacts of the pandemic and other shocks, the role of social protection programs like PSNP in responding to crises, and the limitations of survey-based research.

### **Survey and data**

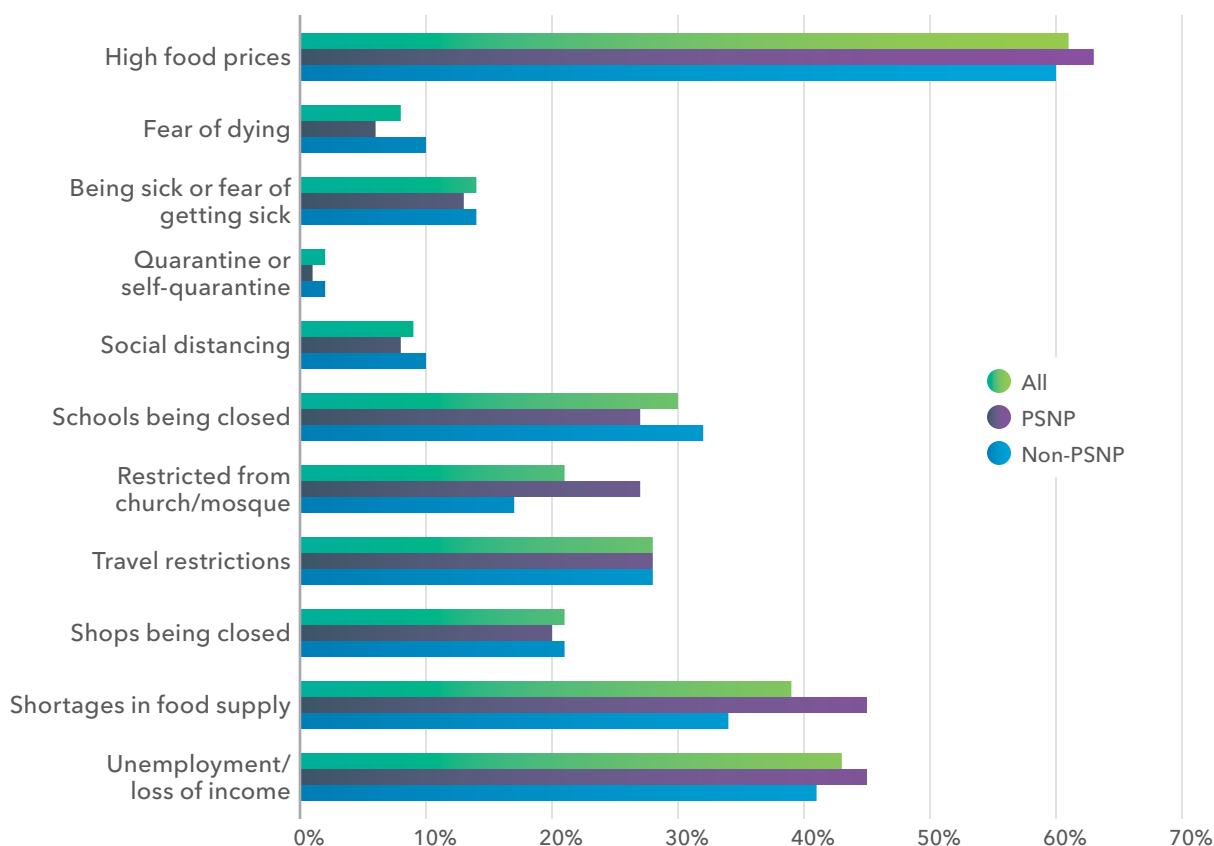
From April to May 2021, we conducted a phone survey of 1,318 PSNP and non-PSNP households drawn as a subsample from two recent in-person surveys across five regions of Ethiopia (Berhane et al. 2021). The phone survey addressed several research questions, including whether households were aware of the pandemic and had changed practices around health, social interaction, and mobility in response. It explored whether levels of household food insecurity had changed and what coping strategies were being used by households. The survey also addressed how levels of food security compared between PSNP households and non-PSNP households, and whether there were differences in these households’ coping strategies.

### **Key findings**

With regard to overall pandemic awareness and behavioral responses, nearly all of the respondents could identify at least five COVID-19 safety practices, including wearing a mask (83 percent) and avoiding shaking hands (68 percent). Only 5 percent of all respondents did not take any measures when leaving their household. Households adjusted their practices to comply with travel restrictions. Although 69 percent of respondents had left their household in the past seven days, the majority (62–69 percent) stayed within their community.

Households experienced a range of impacts from the pandemic. On average, almost half (43 percent) of all households experienced an income loss, with slightly fewer households reporting food supply shortages (39 percent), disruptions from school closures (30 percent), and being impacted by travel restrictions (28 percent) ([Figure 2](#)).

**FIGURE 2** Aspect of COVID-19 pandemic that most affected households, by PSNP status



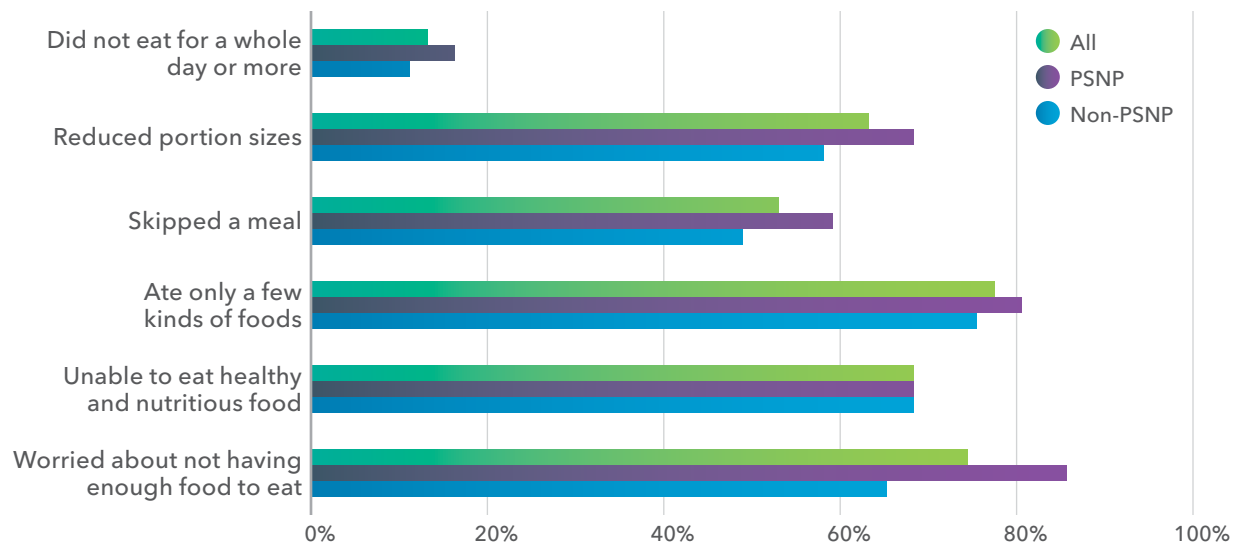
**Source:** PSNP Phone Survey (2021).

**Note:** Difference in means are statistically significant at 10 percent or lower for “fear of dying,” “quarantine or self-quarantine,” “restricted from church/mosque,” and “shortages in food supply.”

To mitigate these negative effects, households employed a variety of coping strategies. More than half of all households sold productive assets or means of transport and nearly half borrowed money to buy food, reduced spending on essential nonfood purchases, and reduced spending on agricultural or livestock inputs. Households reported that their strategies to mitigate lost income in the last 30 days were similar to those used since the pandemic started. The reported approaches varied significantly between PSNP and non-PSNP households, with a higher percentage of PSNP households borrowing money to buy food, selling productive assets or means of transport, and reducing their expenditures on agriculture or livestock inputs. PSNP households were also more likely to report spending their savings since the start of the pandemic as compared to non-PSNP households.

Findings on household food security showed that the likelihood of becoming food insecure increased by 37 percentage points on average since the start of the pandemic and the food gap – the number

**FIGURE 3** Food security in the last 30 days, by PSNP status, April/May 2021



**Source:** PSNP Phone Survey (2021).

**Note:** Differences are statistically significant at 5 percent or lower for all items except “unable to eat healthy and nutritious food” and “ate only a few kinds of food.”

of months that households were unable to meet food needs over the last year – increased by one month. Survey responses suggested this was partly due to high food prices, the most commonly reported problem during the pandemic (60 percent). PSNP households were significantly more concerned about their food security (64 percent) than non-PSNP households (43 percent). PSNP households reported more instances of having to skip a meal, reduce portion size, or endure a day without eating. Among all households, 73 percent worried about not having enough food to eat, 67 percent reported not being able to eat healthy and nutritious food, and 76 percent reported consuming only a few kinds of foods (Figure 3).

An econometric analysis compared food security for PSNP and non-PSNP households, controlling for differences between these households. Despite the challenges posed by the pandemic, the analysis found that the PSNP was significantly associated with reducing the likelihood of food insecurity by about 20 percentage points and the size of the food gap by about 0.83 months (about 25 days a year).

## Discussion

### The pandemic is a simmering food crisis

These interviews demonstrate the experience of the pandemic for rural households, many of which were participants in the PSNP. Households in the PSNP receive monthly transfers through public works or direct support for the first 6 months of each year. These households are at the margins economically, have limited assets, and are vulnerable to extreme deprivation in the face of significant

economic or weather shocks. In phone surveys conducted 3 to 12 months after the pandemic's onset, these households reported that food shortages were the most significant effect of the pandemic. This result is remarkably consistent across the two studies presented here. In addition, many households reported facing substantial increases in food prices, which are part of a trend of general price inflation that began before the pandemic. Given that these households were already food insecure at the start of the pandemic, the protracted food shortages indicate that these households remained vulnerable to worsening food security as a result of the pandemic.

## Social protection systems: A key response tool, but flexibility is needed

Social protection programs like the PSNP play an important role in the pandemic response by providing the infrastructure to target and deliver transfers, which allows the government to increase transfers to households that were vulnerable before the pandemic began. Indeed, the capacity of existing social protection programs to provide additional assistance to current beneficiaries during a crisis is often an important secondary objective beyond the main objective of providing regularly scheduled consumption support. In Ethiopia, *woreda* (district) officials used the PSNP payment mechanism to provide accelerated payments (two months at one time) to beneficiaries in many districts. These payments expedited the delivery of transfers, but did not increase PSNP entitlements.

At the start of the pandemic, the government also provided temporary humanitarian food assistance (HFA) transfers to households to address their exposure to shocks. Unlike the PSNP, which primarily targets chronically food-insecure households, the HFA targets households that are acutely vulnerable (Sabates-Wheeler et al. 2021). By using both the PSNP and HFA, the Ethiopian government was able to protect chronically food-insecure households from the effects of the economic shock and also respond to the shock by targeting transfers to those most directly affected. As part of the government's humanitarian response, HFA transfers are temporary, which helps ensure that the fiscal effects of the response are temporary as well.

## A multitude of shocks

Many of the poor households in these surveys faced other devastating shocks in 2020–2021, including disruptions from pest infestations and conflict. In the survey in June 2020, 25 percent of respondents in Oromia reported damage to crops and 28 percent reported damage to vegetation on their grazing land due to desert locusts in the previous three months. By the endline survey in March–April 2021, nearly 60 percent of households in the same region reported losing at least some crops to fall armyworm, another pest, in the last *mehr* season (the main agricultural season). Although more households were affected by fall armyworm, the damage from desert locusts was worse, with 28 percent of those affected saying that desert locust caused a total or near total crop failure on their land. Households that experienced locust damage had an additional 0.4 months of food insecurity on average, as measured by the food gap. The ongoing conflict in Ethiopia also affected many households in the communities where surveys were conducted. We emphasize that the relative contribution of COVID-19 and these other shocks to reported food insecurity and other effects cannot be fully assessed.

## Poverty, uncertainty, and mental health

Recent literature has explored how poverty contributes to mental health challenges, showing that poverty-induced stress interferes with decision-making and can contribute to a mental-health-induced poverty trap (Ong, Theseira, and Ng 2019). Related evidence shows that the prevalence of many mental health problems is greater among the poor and that positive income shocks reduce depression (Christian, Hansel, and Roth 2019). These effects of stress are likely to be accentuated in periods of greater uncertainty, such as the pandemic. In the survey of PSNP participants conducted six months into the pandemic, respondents' average reported level of stress was 8 out of 10, and 45 percent of households reported the highest possible stress level, a 10 out of 10. Given the protracted nature of the COVID-19 crisis, it is likely that the accompanying mental health challenges will linger as well. Our surveys have also confirmed that there is little access to mental health services in the districts where the PSNP operates.

## Lessons on phone survey methods and the need for caution in interpreting phone survey evidence

In the absence of timely and representative data on economic well-being, food security, and health during the pandemic, phone surveys have offered a valuable source of surveillance on the situation facing the most vulnerable households in Ethiopia. However, the methodology used for these surveys has important limitations that must be considered when interpreting findings. These include lack of representativeness of phone-owning households (see Ambel, McGee, and Tsegay 2021; Brubaker, Kilic, and Wollburg 2021), gaps in understanding of questions asked by phone, and differences in survey fatigue between phone and in-person interviews. Concerning representativeness, for example, the sample of PSNP households interviewed by phone three and six months after the start of the pandemic was generally better off than other households in the sample, with 13.8 percent of phone survey households severely food insecure<sup>1</sup> compared to 19.8 for the sample overall.

In our projects, household survey data collected before and during the pandemic showed that the apparent effects of the pandemic sometimes varied by indicator and suggested that respondents may react differently to some questions administered by phone rather than in-person. In-person surveys conducted one year after the start of the pandemic indicate that PSNP beneficiaries are no worse off in terms of household consumption than they were before the pandemic, but they continue to report heightened food insecurity on subjective measures collected by phone. This pattern may be consistent if, during the pandemic, households shifted the composition of their diets and paid more for food, adding to food insecurity while leaving the value of consumption unchanged. However, it is also possible that households are more likely to report a heightened sense of food insecurity during phone surveys.

Recent surveys conducted in Ethiopia have begun to quantify the severity of these methodological limitations. For example, Hirvonen, de Brauw, and Abate (2021) exploit a rich set of monthly phone survey data collected soon after the start of the pandemic. This data set is based on a sample of

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1 Based on the FAO's Food Insecurity Experience Scale.

households in Addis Ababa for which detailed data on household well-being was collected through in-person surveys before the pandemic. The researchers took the unusual step of collecting detailed data on household consumption expenditures in their phone surveys to triangulate this measure of household well-being with the subjective measures of income changes and the rapid food security measures more typically used in phone surveillance surveys.<sup>2</sup> They find that food security is mostly unchanged in Addis Ababa when measured by consumption expenditure modules, while the subjective income measures indicate a worsening situation, suggesting bias in these subjective measures. In a follow-up study conducted by the same research team, Abate and colleagues (2021) split the sample randomly into either an in-person or phone interview in which households respond to questions about their food and nonfood consumption in a specific recall period. Strikingly, phone survey respondents report consumption levels that are 23 percent lower than those of the otherwise identical in-person survey respondents, effectively doubling the poverty rate. Both survey modes result in similar estimates when diet-based food security is measured, suggesting that the phone survey method works well for questions that are less cognitively demanding. Even when focusing on simpler indicators, however, it seems important to keep the phone interviews short. Using data from phone surveys of mothers with young children from PSNP localities, Abay and colleagues (2021) show that when the timing of a dietary diversity module in the interview is delayed by 15 minutes, mothers report considerably fewer foods consumed and thus lower dietary diversity and heightened food insecurity.

## Policy implications and conclusion

The body of evidence presented here confirms that social protection programs play an important role in the pandemic response by supporting the delivery of transfers to households that were vulnerable before the pandemic. As in Ethiopia, the targeting and delivery structures from already-established safety nets can also assist with humanitarian responses to a crisis like the pandemic by targeting resources to newly vulnerable households.

Government should prioritize the provision of additional pandemic-related assistance to households that are also affected by other shocks (like pests in Ethiopia), as there is evidence that households facing multiple contemporaneous shocks are more likely to resort to distressed asset sales and that this coping strategy has long-term welfare implications.

Phone surveys used for surveillance during a pandemic, when in-person interviews are not feasible, often rely on subjective indicators of well-being that require less time to collect but may not be as accurate as other more objective measures. Therefore, this evidence should be triangulated with other data sources, when possible, to avoid misinterpreting crisis effects.

The two studies profiled in this chapter illustrate how the COVID-19 pandemic has affected the food security, livelihoods, and well-being of poor, rural households in Ethiopia. Leight and colleagues show

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<sup>2</sup> The subjective measures of income ask, for example, whether incomes were “much lower,” “somewhat lower,” “the same,” “higher,” or “much higher.” The proxy for household food security used is the household dietary diversity score (HDDS), a count of the number of food groups (out of 12) in which the household consumed any food.

that while meaningful shocks were experienced by all households under observation, the most acute effects were experienced by those with non-agricultural businesses. Berhane and colleagues find that, for rural PSNP beneficiaries, food shortages and food price increases were reported as the worst effects of the pandemic.

Many months into the pandemic, the effects of the crisis continued to be felt unevenly. Some households were relatively unaffected economically while others reported persistent effects, particularly in terms of food insecurity. At times, the apparent effects of the pandemic varied by indicator and survey method. It is unclear whether these discrepancies were the result of conducting interviews by phone or genuine heightened stress and uncertainty on subjective measures of food insecurity. A pervasive effect of the pandemic was a heightened sense of uncertainty about the future and vulnerability to a worsening situation, with more households reporting high levels of stress than reporting directly pandemic-related effects on food shortages or travel restrictions.

While the COVID-19 pandemic presents a challenge to poor, rural households in Ethiopia, it was only one of many shocks in 2020 and 2021. Many households experienced significant losses to crops or grazing lands due to pest infestations. After conflict began in northern Ethiopia in November 2020, it expanded to other regions in 2021, leading to devastating effects for many communities and displacing millions of people. Multiple contemporaneous shocks like these generate complex effects and long-term implications for welfare, which require greater attention and understanding to fully assess the impacts of the pandemic and ultimately build the resilience of vulnerable populations.

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