

**Employment and income sources during the COVID-19 in Ethiopia:  
Youth, female, and informally employed household heads fared worse**

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The COVID-19 pandemic has triggered various mobility and lockdown restriction measures in many countries to control spread of the infection, which in turn disrupted economic activities and created unprecedented shocks in the labor market. As the pandemic quickly spread worldwide, one particular concern has been its adverse impact on the employment and livelihood sources of vulnerable groups such as women and youth in general, and informal workers in particular (ILO 2020). Women and youth are at high risk of employment and income losses due to the pandemic as majority of them work in the less protected informal sector in the form of temporary wage employment without formal contract, or self-employed in family business (ILO 2018). Informal workers usually have no access to social protection and employment insurance, and mostly not covered by formal employment laws (Bonnet et al 2019; ILO 2020). Because of this pre-existing situation, the labor market impact of the pandemic is expected to be enormously heterogeneous and more devastating for informal workers.

Understanding how and to what extent the COVID-19 pandemic disproportionately impact employment outcomes of women, youth, and informal workers is important policy issue in our context, Ethiopia. First, informal employment is the source of livelihood for vast majority of the people in the country. The Jobs Creation Commission of Ethiopia notes that informality remains a major characteristic of employment with informal wage and self-employment are dominant in the country (JCC, 2020). For instance, in the service sector, where the COVID-19 is expected to hit hard, two-third of employment share is informal (Cancedda et al., 2020, JCC, 2020). Second, even prior to the pandemic there was a pressure on employment creation due to massive population growth and youth bulge, which has been challenging the absorption capacity of labor markets. Before the pandemic, young people were three times more likely to be unemployed than those of adult counterparts (Filmer and Fox, 2014; Bonnet et al 2019).

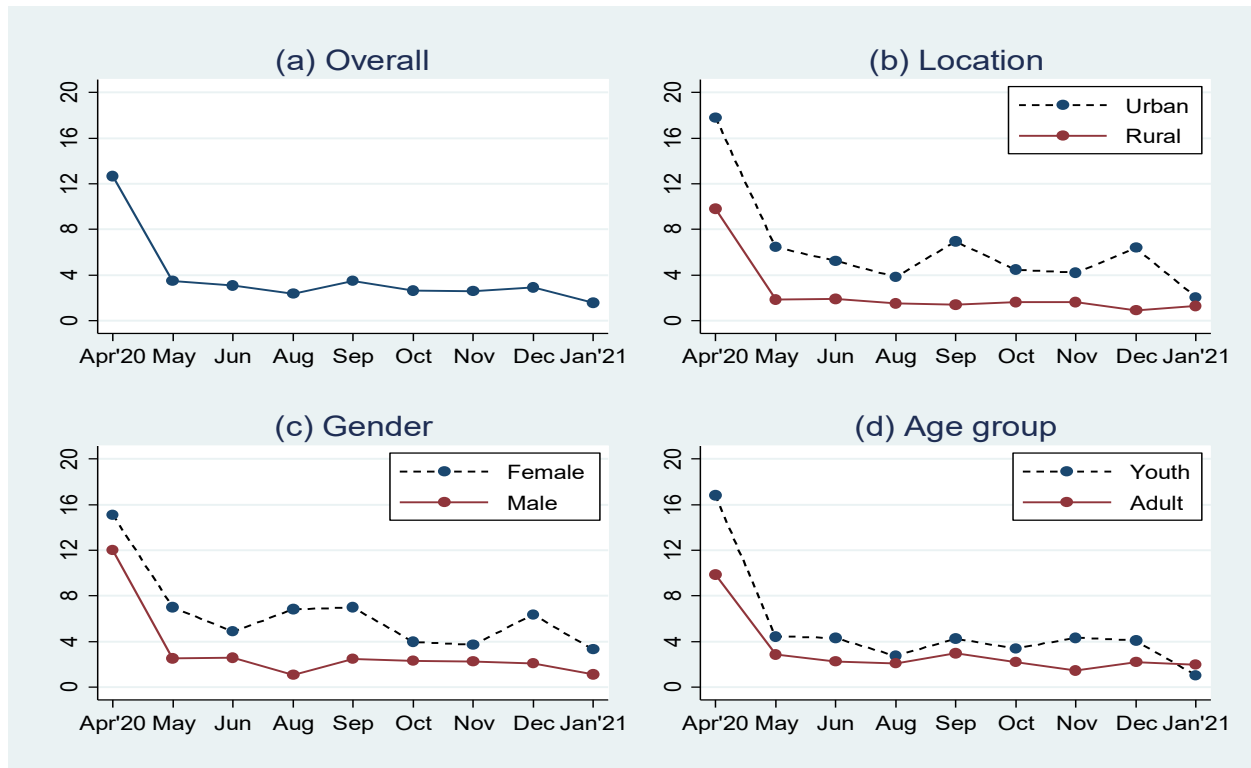
In our study, we examine the effects of the spread of the COVID-19 infections and the pandemic-related mobility restriction measures on employment opportunities and income sources using a nationally representative panel dataset of Ethiopia Living Standard Measurement Study–Integrated Study of Agriculture (LSMS-ISA). The panel data combined pre-COVID-19 baseline data and post-COVID-19 high-frequency-phone-survey data. The pre-pandemic data was collected in August 2019 using in-person household survey, and the post-pandemic data was collected monthly during April 2020–February 2021 using phone surveys. The LSMS-ISA panel data provide detail information on employment and income sources before and after the

pandemic. In addition, we compiled region-level COVID-19 cases data for all regional states in Ethiopia using the weekly reports by Ethiopia Public Health Institute (EPHI 2020). The LSMS-ISA panel data, combined with the region-level COVID-19 cases data, allows us to assess the impact of the pandemic on employment using a difference-in-differences estimation approach, controlling for a number of confounding factors.

### Employment trend and job losses

Our descriptive analysis shows that the COVID-19 pandemic has triggered employment losses among all groups of household heads irrespective of their location, gender and age group. But employment of the urban, female and youth household heads have fared worse compared to their counter parts, particularly in the onset of the pandemic in April 2020 (Figure 1). While overall employment plunged by about 12 percent in April 2020, it fell sharply by about 18, 16, and 17 percent in the urban areas and among female and youth household heads, respectively.

**Figure 1: Job loss has been relatively higher in urban areas, and among female and youth household heads, particularly at the onset of the pandemic in April 2020.**

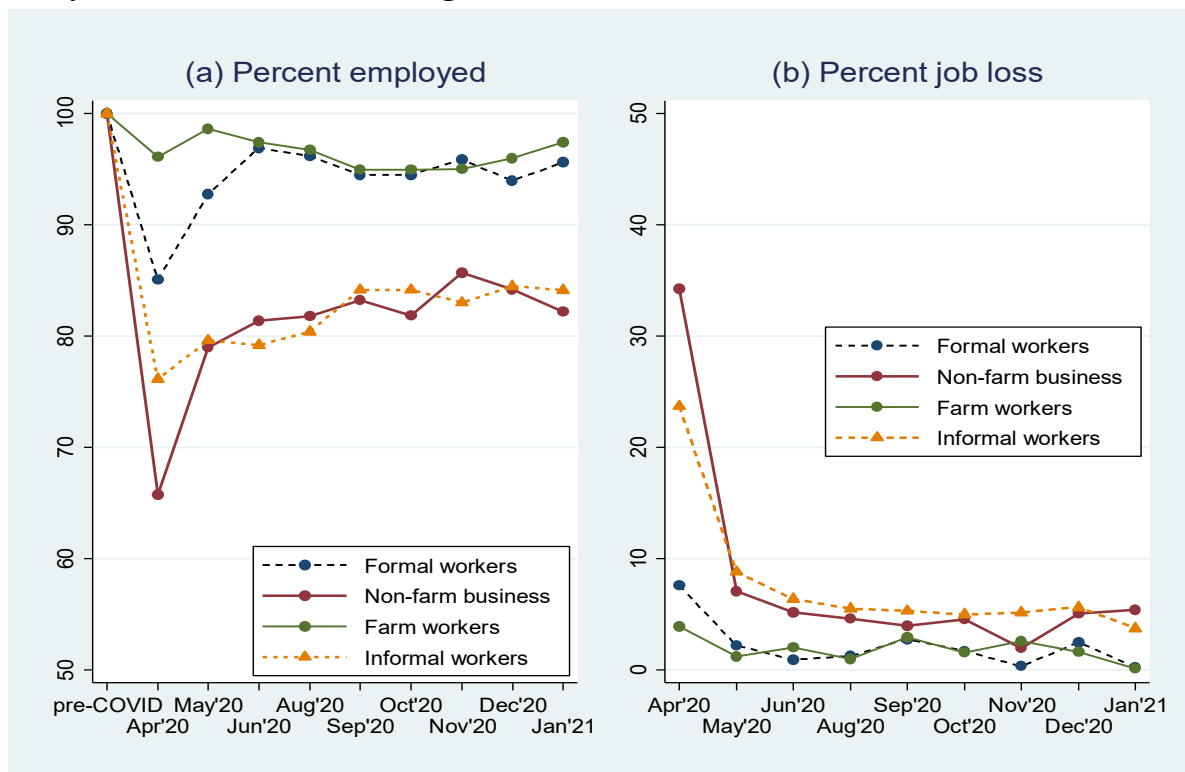


Source: Authors' calculation based on Ethiopia LSMS-ISA household phone survey data 2020-2021.

Note: Figure 1 shows the share of household heads with job loss during Apr 2020–Jan 2021, by location (Panel b), gender (Panel c), and age group (Panel d).

Similarly, in April 2020, when the Ethiopian parliament declared a State of Emergency (SOE) to slow spread of the COVID-19 cases, all types of employment activities have dropped sharply (Figure 2a). However, the job loss among the initially self-employed non-farm family business and informal wage workers was substantially higher, compared to the formal wage workers and self-employed farm workers (Figure 2b). The number of household heads employed prior to the outbreak of the pandemic as non-farm family business and informal wage workers shrank by about one-third and one-fourth, respectively, between March and April 2020, which corresponds to the job loss of about 34 and 24 percent, respectively (Figure 2b). Moreover, up until January 2021, their employment level had not been fully recovered—it was, in fact, about 23 percent lower than the pre-COVID-19 period (Figure 2a). In contrast, the fell in formal wage and farm employment was relatively small with job loss of, on average, less than 10 and 5 percent, respectively (Figure 2b), and rebounded quickly to the pre-COVID-19 levels (Figure 2a).

**Figure 2: Job loss had been substantially higher among initially self-employed non-farm family business and informal wage workers.**

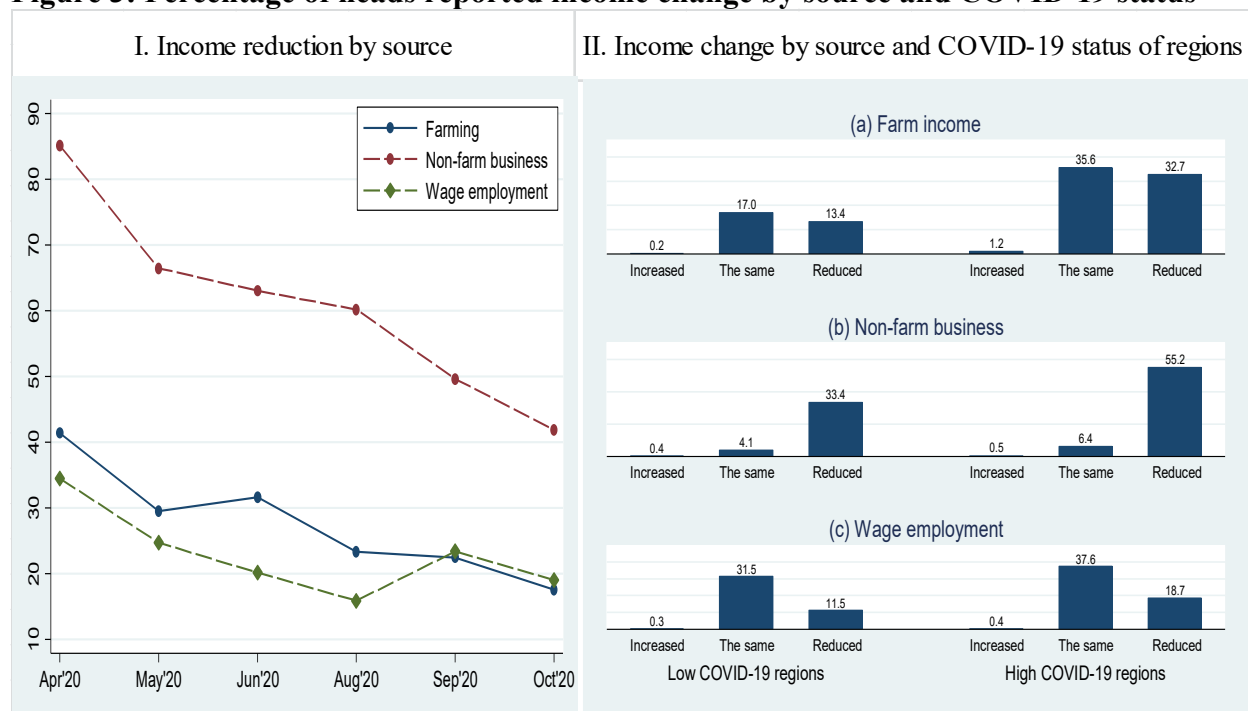


*Source:* Authors' calculation based on Ethiopia LSMS-ISA baseline survey 2019 and HFPS panel data 2020-2021.  
*Note:* Figure 2 and (b) present the percent of household heads employed (Panel a) and lost job (Panel b) during the post-COVID-19 period, by pre-COVID-19 employment category.

### Income dynamics during the COVID-19

The household heads engaged in informal non-farm family business employment have also suffered severely in terms of income reduction. More than 80 percent of the household heads in informal non-farm family businesses have reported reduction in income in April 2020, compared to about 40 and 35 percent of the household heads engaged in farming and wage employment, respectively (Figure 3, Panel I). Although these figures reduced over time, the share of household heads reported income reduction remained higher (about 40 percent) among the non-farm business up until October 2020, while it reduced to about 20 percent for wage and farm workers. In addition, the reported income reductions from each employment sources were greater in regions that are more severely affected by the spread of the pandemic. A large share of the household heads reported income reductions from each of the employment sources are concentrated in the regions with high COVID-19 infections (Figure 3, Panel II).

**Figure 3: Percentage of heads reported income change by source and COVID-19 status**



Source: Authors' calculation based on Ethiopia LSMS-ISA panel data 2019–2020 and region-level COVID-19 cases data (EPHI 2020).

In our difference-in-differences regression, we find that COVID-19 disproportionately affected urban areas, women, youth, informal wage workers and non-farm self-employed. The results show that the number of confirmed COVID-19 cases is negatively and significantly associated with employment. Specifically, doubling the number of COVID-19 cases is associated

with a 5.4 percentage-points decrease in probability of being employed in April 2020. One reason for this is that onset of the COVID-19 pandemic was shaped by strong mobility and other pandemic-related restrictions in the country. Although there was no national lockdown in Ethiopia, after the first case of COVID-19 was detected in mid-March, the federal and regional governments have quickly imposed relatively strict measures in April 2020. In fact, the government enacted with strict measures by declaring State of Emergency to contain the domestic spread of COVID-19. Our finding consistently show that the employment shocks due to the COVID-19 pandemic was more pronounced in April 2020, and most households reported job losses and income reductions more in that month. We also find that the negative impact of the spread of the COVID-19 pandemic on employment—controlling for region, industry and occupation specific trends—was higher in urban areas and among female and youth household heads, particularly during the onset of the pandemic. Overall, urban areas in general and female and youth household heads in particular have faced the largest declines in employment due to the COVID-19 pandemic in Ethiopia.

We also estimate the heterogeneous impact of mobility restrictions and lockdowns on employment of informal workers, self-employed farm and non-farm workers relative to formal workers. Our results show that the informal workers have suffered the largest and significant declines in employment in all rounds during April 2020–February 2021, compared to reference employment group of formal wage workers. On average, informal workers have suffered highest job loss between 13–19 percentage points higher than that of formal workers during Apr–Oct 2020. Overall, the results strongly suggest that informal and non-farm family business workers have disproportionately suffered with higher job loss than formal wage workers, as well as higher than the farm workers, due to the pandemic-related mobility restrictions and spread of the COVID-19 infections in Ethiopia. Furthermore, we note that irrespective of their location and employment industries, informal workers are highly vulnerable to job losses in the face of the COVID-19 pandemic.

The labor market impact of the COVID-19 pandemic is heterogeneous and devastating for informal employment and livelihood sources, compared to formal employment. Lastly, we examine whether there is a differential recovery pace across the employment types. The results show that the speed of recovery for informal workers was differentially slow, and most strikingly, their employment levels did not fully recovered up until February 2021. This suggests

that the employment impact of the COVID-19 pandemic on informal workers is less likely to span short, compared to the formal workers.

Our findings have important policy implications. We find that the female, youth, and informally employed household heads disproportionately impacted by the COVID-19 pandemic and related mobility restrictions. These groups were already vulnerable in the labor market before the pandemic because they mostly engage in the informal sector with no access to social protection or coverage by employment protection laws and insurance. The COVID-19 aggravates the situation for these already disadvantaged groups. This underlines the importance of social protection interventions to support the vulnerable groups during the pandemic, as well as labor market interventions to cover them through formal employment protection laws, especially the informal workers. The negative impact of the pandemic on employment is also concentrated more among the household heads in urban areas relative to those in rural areas. This also highlights the need for effective and timely social protection programs in urban areas to respond to the employment and income loss of the vulnerable informal workers during the pandemic. Overall, our results highlight the relevance of considering location, demographic characteristics and types of employment in developing labor market interventions to protect and promote vulnerable groups in the labor market.

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