

Final report

# Households' attitudes towards school reopening during COVID-19 in Ethiopia

Evidence from phone  
surveys

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# Final Report

## Households' Attitudes Towards School Reopening during COVID-19 in Ethiopia: Evidence from Phone Surveys

March 2021

**Stanford** | King Center on  
Global Development

This report was prepared by Daniel Agness, Pascaline Dupas, Marcel Fafchamps, Tigabu Getahun and Eva Lestant. We are grateful to the International Growth Center for financial support. Contact: Eva Lestant, [elestant@stanford.edu](mailto:elestant@stanford.edu).

# 1 Introduction

This report highlights key results from a phone survey of households in Addis Ababa and Oromia during the Winter of 2020. We focus our results on the ways in which labor market and educational outcomes were affected by COVID-19. As the phone survey drew from a pre-existing panel of households, we can leverage our pre-COVID data to better understand how key outcomes have changed over time.

Prior to the reopening of schools, there was some anxiety regarding parents' and/or children's willingness to go back to school, given the risk of contagion that it entails. Our survey indicates that, at least for our study population, fear is not a major factor: most parents did send back their children to school as soon as it became possible. Any lack of attendance that we still observe at the end of the survey is due primarily to some local schools not having reopened yet. We expect school reopenings to be critical for education in this context: while schools were closed, children spent less than 6 hours per week on educational activities. We additionally document meaningful differences between Oromia and Addis Ababa in the utilization of educational resources during school closures.

We document substantial decreases in income for our sample population relative to the pre-pandemic period. These losses are concentrated amongst the self-employed, are disproportionately born by men rather than women. Further, we find that relative to pre-pandemic levels of income, losses are more acute for respondents with only primary or secondary education: while also experiencing losses in average income, respondents with higher degrees were comparatively better off.

Grouping respondents into quantiles of income from during the pre-pandemic period, we document substantial mobility across income quantiles, with movement concentrated amongst the middle quantiles. Specifically, many women and men who earned no income in the pre-pandemic period remain without work in 2020. This is particularly true amongst women who have much lower labor market participation. Looking at the topmost income quintile, we document relatively high levels of persistence: nearly 50% of men and women who were in the topmost quintile (for their gender) in 2018 remain in the topmost quintile in 2020. Within the second and third quintiles, we see many respondents move into both higher and lower income quintiles by 2020. We

do not believe that relative income mobility was dramatically changed by Covid-19: patterns in mobility between 2016 and 2018 are remarkably similar to patterns observed between 2018 and 2020.

Focusing on sectoral employment shares, the share of women who were unemployed increased to nearly 50% during the peak of the pandemic in July 2020 before returning to pre-pandemic (2018) levels. The share of women who were unemployed has previously fallen from around 45% in 2018 to 40% in February of 2020. For men, the share of men who were unemployed jumped over 30% in July (from a base of 15%) before similarly returning to near 2018 levels. Across both genders we see persistent decreases in the share of respondents who are self-employed.

In the final section of the report, we present suggestive evidence on changing prices and consumption. We show that large shares of respondents report prices for every-day consumption items rising during the Covid-19 crisis. Further, we document decreases (relative to 2018) in dairy and meat products. Most strikingly, we find large increases in the shares of respondents who report being food insecure over the prior 6 months. This is reflected by large increases in the number of days where respondents either cut meals or decreased portion sizes.

This report contributes to the growing body of work documenting the impact of the Covid-19 pandemic and subsequent recovery in Ethiopia. [Abay et al. \(2020\)](#) find that Covid-19 led to large increases in food insecurity for Ethiopian households, primarily in rural areas. The severity of this increase is dampened via the Productive Social Safety Net program which provides households with a limited work and income guarantee. In contrast, [Hirvonen et al. \(2021\)](#) find little change in food consumption or insecurity for households located in Addis Ababa. This holds despite the authors finding significant drops incomes for many households, similar to those observed in our own study.

Our research complements impressive efforts by teams at the World Bank to conduct high-frequency surveys with households and firms. In their survey of households, [Wieser et al. \(2021\)](#) use this high-frequency data to document the evolution of public perceptions and responses to the pandemic. They broadly find that economic impacts were most severe during the early months of the pandemic with most urban economic indicators returning to approximately pre-pandemic levels by the end of 2020. These findings are consistent with our own. In the

accompanying survey of firms, [Abebe et al. \(2020\)](#) find that following a short period of state-mandated shutdown the vast majority of firms reopened by the summer of 2020. Due to widespread drops in demand the majority of firms experienced difficulties or delays in payments, laid off temporary employees, and expected to minimize short-term hiring. This survey focuses primarily on larger firms which positions our analysis on the impacts for micro- and small-firms as a useful point of comparison.

## 2 Survey and Sample Design

The survey was conducted under the auspices of Stanford University’s Africa Urban Development Research Initiative (AUDRI). It started on November 12, 2020 (EC: Hedar 3, 2013) and was completed on December 6, 2020 (EC: Hedar 27, 2013). Respondents were selected among individuals having participated in AUDRI’s Urban Panel Survey project (AUPS). The first two rounds of the panel surveys were collected in-person in 2015 and 2018, giving us an accurate snapshot of conditions and trends before the onset of COVID-19. We conducted a short phone survey in 2020 in order to document potential challenges brought about by the COVID-19 crisis. By describing how COVID-19 has changed work and living conditions for individuals, we hope to provide useful insights for the medium-to-long term policy response at the regional and city level.

Sampling Methodology: For this phone survey, we sampled 2,000 individuals from AUDRI’s Urban Panel Survey (AUPS), accounting for approximately 51% of all panel respondents. Sampling from the AUPS was done using stratified random sampling, in the sense that we purposefully sampled all business owners included in the AUPS sample. This was motivated by the desire to specifically understand how COVID-19 affected small businesses and the self-employed in Ethiopia, who are a particularly vulnerable population.

Table 1: Summary Statistics of surveyed Sample

Variable	Mean	SD	Median	Min	Max
Respondents Characteristics					
Is female	55%				
Age	36.35	11.6	34	18	82
No education	17%				
Primary Education	41%				
High School Education	32%				
Nb of children	1.73	1.39	2	0	8
Household Characteristics					
Nb of adults	2.86	1.38	2	1	11
Nb of children	1.85	1.39	2	0	9
Employment					
Wage employed	23%				
Self-employed	32%				
Farmer	7%				
Region					
Oromia	79%				
Addis Ababa	21%				
Observation	1952				

Source: COVID Survey Ethiopia (2020)

After sampling business owners, the remaining respondents were sampled randomly within their geographic sampling unit, defined by the location where the respondent reported living during the second round of AUPS survey. Sampling units were defined as the *woreda* within the Addis Ababa city limits and as the *kebele* in Oromia. The targeted number of sampled individuals within a sampling unit was proportional to the share of respondents in that sampling unit found in the AUPS.<sup>1</sup> Non-sampled individuals were rank-ordered as replacements within their sampling unit to substitute for sampled individuals who either refused to be surveyed (less than 1%) or could not be reached (around 30%). This strategy allowed us to maintain sample sizes that are proportional to those found in the full AUPS survey. We ultimately

<sup>1</sup>Respondents who lived outside of the AUPS study area in Oromia were grouped into a generic “non-AUPS kebele” sampling unit. Similarly, respondents who moved outside of the AUPS sampling area *within* Addis Ababa were grouped into a generic “non-AUPS woreda” sampling unit.

reached and surveyed 1,979 respondents among which 1,952 still lived either in Oromia or Addis Ababa.

### Education Module

At the request of the Ministry of Education of Ethiopia, we included a module on schooling and schooling plans into the survey. This module was administered for every school-aged (6 to 16 in 2020) child living with the respondent. Just about half of our respondents (1,021) had at least one school-aged child living with them at the time of the survey, with an average of 2.14 children per respondent with children. This yields a sample of 1,585 children for which we have education outcomes. The survey answers we collected were typically given by one of the parents (87%). The characteristics of the children for whom educational outcomes and intentions were collected are shown in Table 2. Children are 10 years old on average. The great majority of the sample is in the Oromia region (83%), with the rest in Addis Ababa (17%). Two thirds were surveyed in November 2020, when almost all schools were still closed. The remaining third were surveyed in December 2020, when school started reopening.

Table 2: Child Characteristics

Variable	Mean
Age of the child	10.1
The child is the son/daughter of the respondent	87 %
Lives in Oromia	83 %
Lives in Addis Ababa	17 %
Surveyed in November 2020	67 %
Surveyed in December 2020	33 %
Observations	1584

## 3 Schooling

We present the key educational outcomes measured in Table 3. We show overall averages in column 7. The other columns show averages separately by survey month (November or December); by child gender; and by region. Panel A shows current schooling and plans to return for those not enrolled. Panel B documents educational investments made while schools were closed.

Table 3: Schooling Outcomes

	Surveyed in		Child Gender		Child lives in		Overall
	Nov 20	Dec 20	Female	Male	Addis	Oromia	Average
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Panel A: Return to school</b>							
The child is currently going to school	7%	53%	27%	23%	30%	24%	25%
<i>If child is not going to school:</i>							
Main reason: school is closed	98%	94%	97%	97%	98%	97%	97%
Main reason: Fear of COVID	0%	3%	2%	0%	1%	1%	1%
Child pre-enrolled in a specific school	92%	89%	91%	91%	96%	91%	91%
Parents plan to send child back to school	97%	92%	95%	95%	98%	95%	95%
<b>Panel B: Education while schools are/were closed</b>							
<i>While at home during school closure:</i>							
Weekly hours spent on educational activities	5.47	6.47	6.01	5.71	8.11	5.41	5.86
The child is/was with parent	86%	88%	89%	85%	86%	87%	87%
<i>Tools used for at-home educational activities</i>							
No material	33%	36%	32%	36%	25%	36%	34%
Textbooks	40%	50%	44%	43%	30%	46%	44%
Material from school	16%	14%	17%	14%	27%	13%	15%
Television	14%	9%	14%	10%	14%	12%	12%
Homeschooling by household	10%	8%	9%	10%	12%	9%	9%
Text messages	10%	3%	10%	5%	2%	9%	8%
Internet	8%	5%	6%	7%	27%	2%	7%
Radio	3%	2%	3%	2%	3%	2%	3%
Homeschooling by other member of family	2%	1%	1%	1%	2%	1%	1%
Private tutor	0%	0%	0%	0%	1%	0%	0%
Observations	969	616	808	777	264	1321	1585

The first row of Table 3 shows schooling status at the time of the survey. Among those surveyed in November, 93% of children were out of school (column 1). This was almost exclusively because schools were closed: for 98% of children not in school, parents mentioned schools closure as the reason. Fear of COVID was the main factor for less than 1% of children.

By December, a much higher share of children were back in school: 53% (column 2). This is thanks to more schools reopening. Still 47% of children were out of school, again exclusively

because of schools being closed.

Intentions to return to school as soon as allowed are extremely high: 95% of the children out of school in the survey period intend to go back to school as soon as possible (column 7).

Panel B of Table 3 provides information on children’s outcomes during school closures. The great majority of children were at home with their parents. They report doing only about 6 hours of educational activities per week on average. About a third of children living in Oromia and a quarter of children living in Addis Ababa did not use any educational material. Based on our data, only 13% of children living in Oromia used material supplied by the school to complete their education activities. In Addis Ababa the proportion is 27%.

## 4 Incomes

We collected earned income data from all AUDRI respondents in late 2020, which we can compare to the earned income they reported in the AUDRI individual survey of 2018. As a benchmark, we also report the income change between the 2016 and 2018 SEDRI individual surveys. All incomes are deflated using year-to-year inflation rates and presented in 2016 ETB equivalent units.<sup>2</sup>

We find that male individuals interviewed in the Covid-19 2020 survey incurred a drop in average earned income of 20.9% between 2018 and 2020. The equivalent figure for female respondents is 12.6%. The fall in the median male income is 14.2%. Since the median earned income of women is 0, there is no change in the median for that population. Two-third of the respondents to the covid survey report a loss of income since the beginning of the covid crisis. These results speak to the severity of the Covid-19 crisis for households in urban and peri-urban settings.

Over the same duration, between 2016 and 2018, male respondents in our SEDRI surveys experienced a fall of 9.1% in average deflated income, while women enjoyed an increase in average earned income of 15.4% – albeit from a low base. These numbers confirm that earned incomes of male adults fell more than twice as fast between 2018 and 2020 than between 2016 and 2018, while the early gains in earned incomes made by women were partly reversed.

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<sup>2</sup>As deflators, we used year-to-year inflation rates of 10.69% in 2017, 13.83% in 2018, 15.81% in 2019, and 20.16% in 2020 – Source: <https://www.statista.com/statistics/455089/inflation-rate-in-ethiopia/>

These averages, however, mask varied experiences by occupation category. We divide workers into not employed, salaried workers, occasional/casual wage workers, and self-employed workers.<sup>3</sup> The evolution of daily earnings between 2018 and 2020 are presented in Figure 1. We condition on the occupation of the respondent in 2018 and report their daily earnings in 2020, irrespective of their occupation then. We note that some of those who were not in employment in 2018 experienced an increase in income, indicating that they started to work during the interim period.

We see that incomes did not fall significantly for those workers who were salaried in 2018, but daily earnings fell dramatically for individuals who were occasional and self-employed workers in 2018. Confirmation is found in the difficulties encountered by respondents engaged in self-employment at the time of the Covid survey: only 15% of them reported being able to run their business as easily as before the pandemic, while 55% reported it much harder and 5% outright impossible. Most respondents (52%) blame these difficulties on lack of demand, inputs, or work, while 35% blame them on government prohibitions related to covid and 8% on transportation difficulties or lack of access to their place of work. Only 3 respondents mention having to look for their children as the source of their self-employment difficulties. Furthermore 84% report that these difficulties resulted in a loss of income, with two third of respondents mentioning a large or complete loss of income. Panel A of Table 4 provides displays additional information about the nature of adaptation by the self-employed: there were large drops in the number of paid employees, small increases in the number of unpaid employees, and most self-employed respondents changed business activities in response to Covid-19 (Panel B). These respondents nonetheless remain confident in the future: 56% are somewhat or completely confident that their business will still be in existence in five years time, while 21% have negative expectations in that respect.

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<sup>3</sup>Self-employed workers should be thought of as those who are proprietors of their own, typically informal, business. These self-employed individuals are frequently their businesses only employee.

Table 4: Self-employment Outcomes

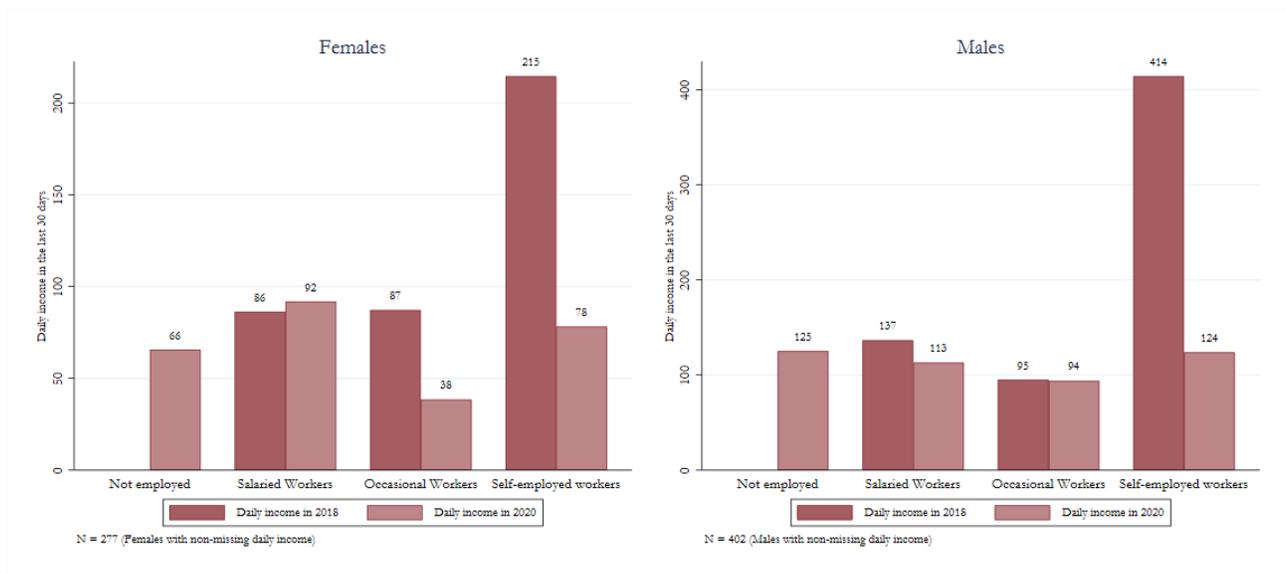
	Males	Females	No education	Primary education	High- School Education	Higher Education	Overall Average
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Panel A: Characteristics</b>							
Is a business owner in 2018	0.35	0.37	0.41	0.41	0.34	0.19	0.36
Is a business owner in Oct 2020	0.26	0.26	0.24	0.31	0.25	0.14	0.26
<i>If self-employed in Oct 2020</i>							
Number of paid employee 2018	0.89	0.26	0.30	0.26	0.80	2.57	0.55
Number of paid employee October 2020	0.95	0.14	0.20	0.39	0.69	1.70	0.51
Number of unpaid employee 2018	0.36	0.41	0.55	0.33	0.35	0.52	0.39
Number of unpaid employee October 2020	0.55	0.65	0.75	0.59	0.54	0.48	0.60
<i>If self-employed in 2018</i>							
Closed business in February 2020	0.65	0.70	0.69	0.68	0.67	0.64	0.68
Closed business in July 2020	0.57	0.58	0.56	0.61	0.54	0.52	0.57
Closed business in October 2020	0.54	0.55	0.52	0.59	0.51	0.00	0.55
<b>Panel B: COVID Impact on self-employed (Oct 2020)</b>							
Change in business activity due to COVID	0.87	0.82	0.76	0.86	0.88	0.78	0.84
Harder to operate business now than before COVID	0.87	0.83	0.81	0.88	0.83	0.88	0.85
<i>If respondent found it harder to operate now than before COVID</i>							
Main reason: Government prohibitions related to covid-19	0.39	0.33	0.22	0.38	0.42	0.32	0.36
Main reason: Lack of jobs	0.27	0.22	0.29	0.26	0.21	0.18	0.25
Main reason: Lack of demand	0.18	0.26	0.19	0.24	0.17	0.39	0.22
Main reason: Political unrest and government response to it	0.03	0.01	0.02	0.00	0.06	0.04	0.02
Observations	904	1079	433	726	592	232	1983

Source: COVID Survey Ethiopia (2020) AUDRI Wave 2 Survey (2018)

In Figure 2, we compare the experience of male and female respondents as a function of their education level. Unsurprisingly, less educated individuals earn less, and returns to education are convex – a feature often observed in sub-Saharan Africa. We see that the fall in average income is proportionally higher for individuals with primary or secondary education. Highly educated individuals also see their income fall, but the proportional change is smaller.

Comparing across panels of Figure 2, we observe that losses in income are larger in both absolute magnitude and proportional terms amongst men than women, albeit from a much higher base. We can only conjecture about the cause of these differences but, given the lower labor market participation rate among women, we suspect that women reporting earned income are more positively selected and more likely to hold a job that was insulated from Covid-induced

Figure 1: Daily income change between 2018 and 2020 by occupation type in 2018

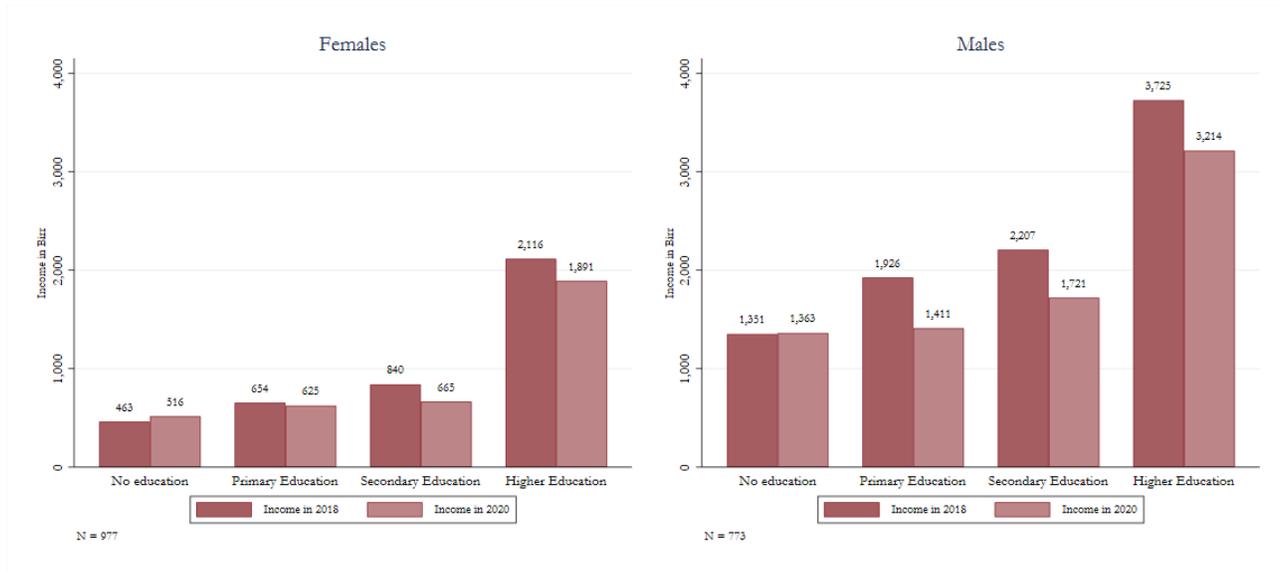


Source: AUDRI Panel Data (Individual Survey (2018) and Special COVID Phone survey 2020)

disruption. Furthermore, women in our sample tend to work fewer hours conditional on being employed. This points to gender differences in business type within the self-employed category. The larger relative drops in self-employment income seen in Figure 1 for males is suggestive of this point.

By only focusing on changes in average incomes, we miss substantial mobility in incomes and occupation across years, for both men and women. In Figure 3 we summarize the income transition matrix of male respondents between 2018 and 2020. Horizontal bars Q1 to Q4 each correspond to a particular quartile of the income distribution in 2018. We add a 'quartile' Q0 that includes those respondent with zero income in 2018. We see that about half of non-working males in 2018 (17.9% of the sample) are still not working in 2020. Not all these individuals are unemployed, however: some are studying, others retired, etc. The different colors capture the income quartile in 2020 and, in light blue, their probability of earning no income in 2020. For instance, of those individuals who were in quartile Q1 2018, over 40% were still in the bottom quartile in 2020. The rest moved up in the income distribution, with nearly 20% joining the upper half of the income distribution and about 15% earning nothing at the end of

Figure 2: Income change between 2018 and 2020 by gender



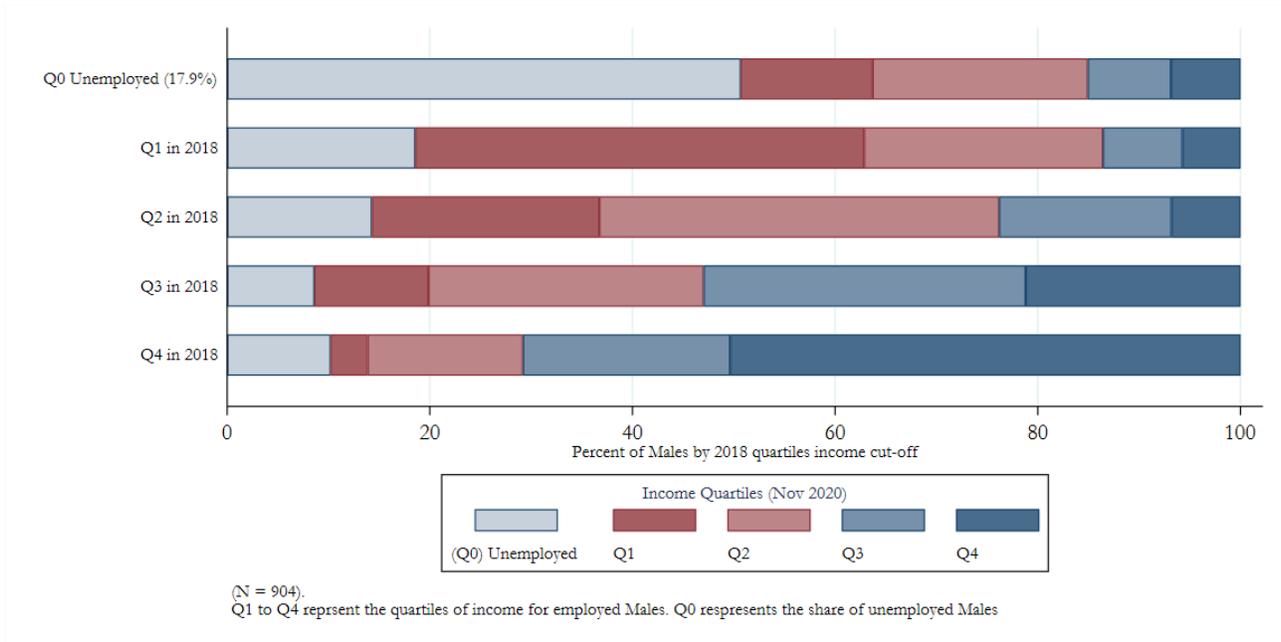
Source: AUDRI Panel Data (Individual Survey (2018) and Special COVID Phone survey 2020)

2020. Among those in the top quartile (Q4) in 2018, however, we note that more than 50% of them managed to remain in the same quartile, suggesting less relative mobility at the top of the income distribution. Keep in mind, however, that over the period average incomes for males dropped by more than 20%, implying that the cutoff income to be in the top quartile fell as well. The middle two quartiles are those with the most mobility: about 40% of Q2 males remained in the same quartile, and about 37% of Q3 males remained in the third quartile. In both cases we observe some individuals moving up in the distribution while others move down or stop being employed.

Figure 4 display the same transition matrix for female respondents. The primary difference relative to males (Figure 3) is that there is much more persistence at the bottom of the distribution for women. In 2018, 46.2% of female respondents were not working. Of those, more than 75% are still not working in 2020. Similar, we see a large fraction of women in each quartile Q1 to Q4 in 2018 transiting to not working in 2020. For those who work, however, we observe movements across quartiles that are of a magnitude similar to those of male respondents – and a similar persistence in income rank at the top of the income distribution.

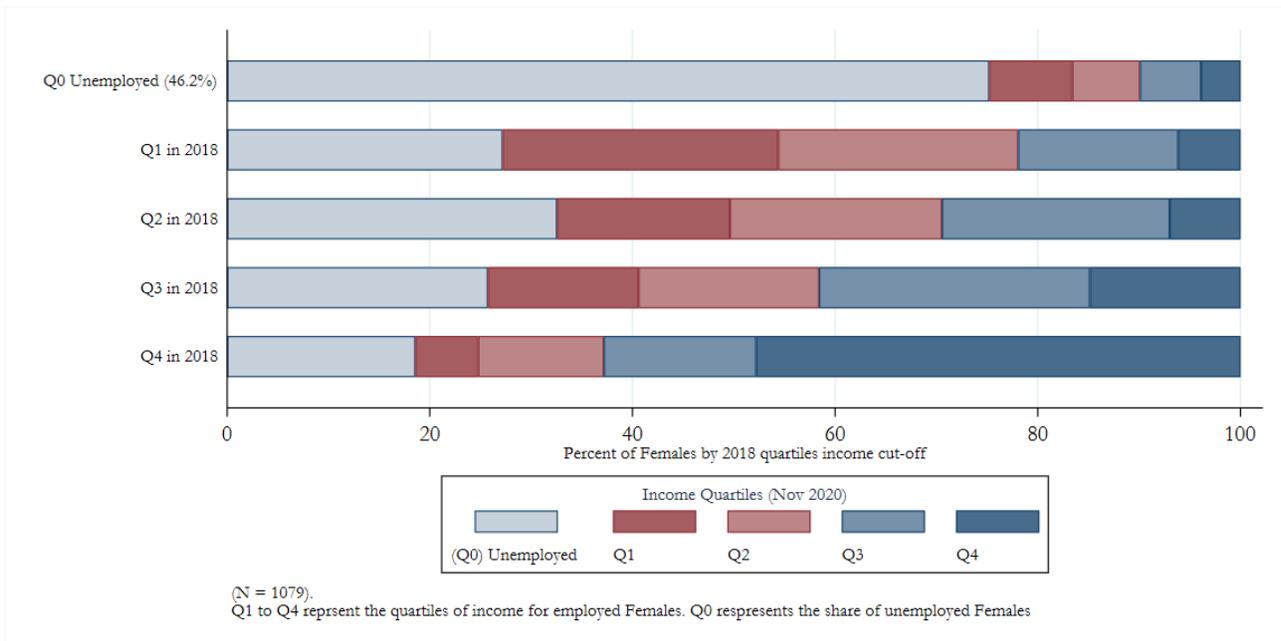
How much of this relative income mobility can be attributed to Covid-19? To investigate

Figure 3: Income distribution by 2018 income quartiles for Males



Source: AUDRI Panel Data (Individual Survey (2018) and Special COVID Phone survey 2020)

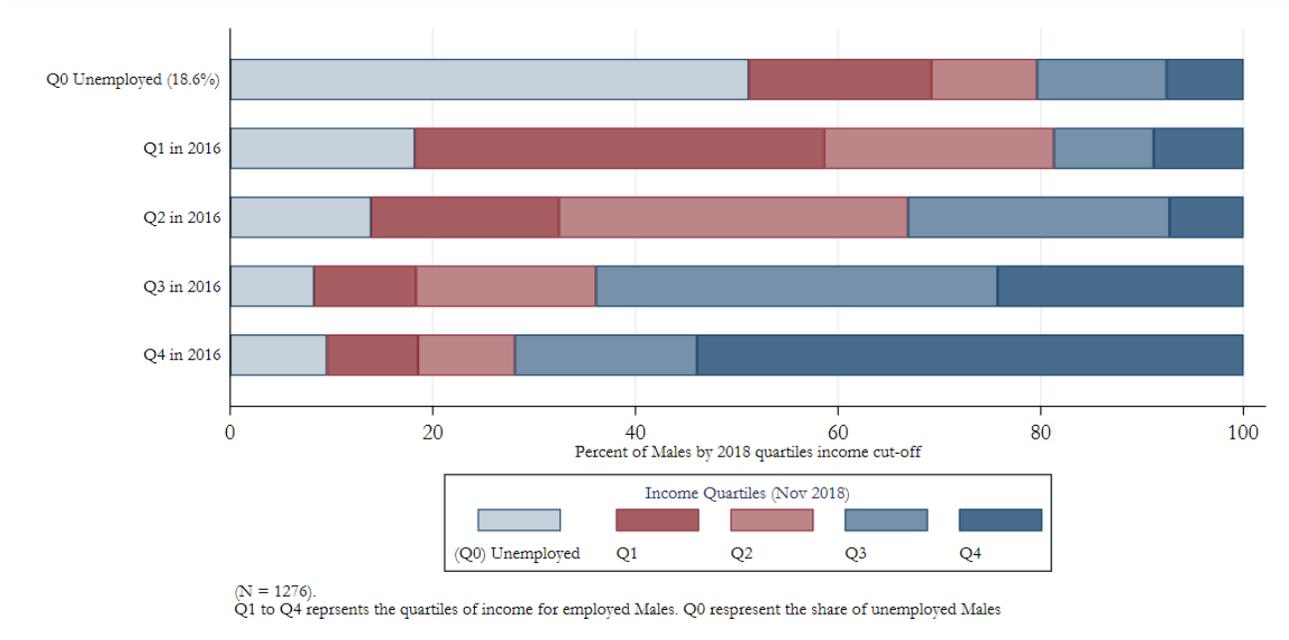
Figure 4: Income distribution by 2018 income quartiles for Females



Source: AUDRI Panel Data (Individual Survey (2018) and Special COVID Phone survey 2020)

this issue, we calculate similar transition matrices for the period 2016 to 2018. Results are presented in Figures 5 and 6. If we compare the transition matrices for male respondents presented in Figures 3 and 5, we see little difference in relative mobility. Half of the men who were not working in 2016 are not working in 2018, and there is considerable persistence in income rankings at the top of the distribution. Otherwise, we observe considerable mobility across quantiles between years. If anything, we note a slightly larger proportion of Q1 male respondents in 2018 remain in Q1 in 2020, than between 2016 and 2018. Put differently, we do not find evidence that Covid-19 is associated with a massive change in relative income mobility: our study population experiences large changes in relative rankings over time periods as short as two years, suggesting considerable mobility – both upward and downward.

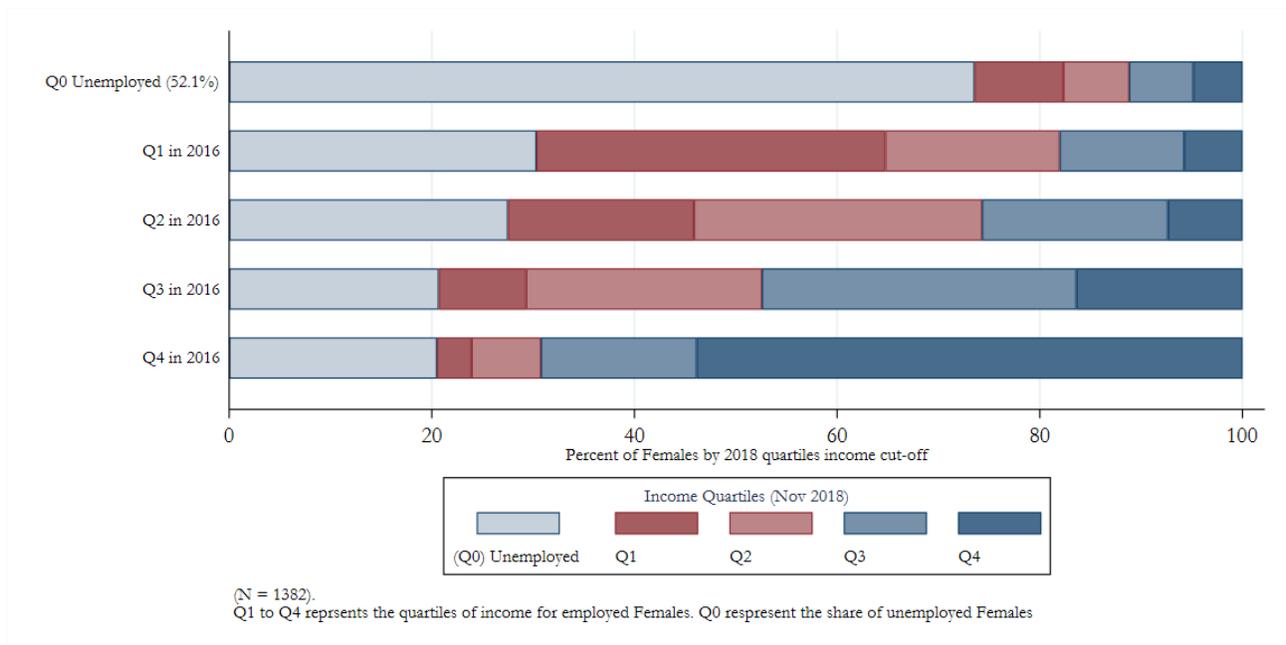
Figure 5: Income distribution by 2016 income quartiles for Males



Source: AUDRI Panel Data (Individual Survey (2016) and Individual Survey (2018))

A similar picture emerges if we compare the female 2016-2018 transitions (Figure 6) to the 2018-2020 transitions presented in Figure 4. Three quarters of the female respondents who were not working in 2016 are still not working in 2018, and 70% of those in the top quartile of the female income distribution in 2016 remain there in 2018. In between, however, we see substantial mobility in income rankings – both before and during Covid-19.

Figure 6: Income distribution by 2016 income quartiles for Females



Source: AUDRI Panel Data (Individual Survey (2016) and Individual Survey (2018))

We get similar findings if we focus on individuals who were either salaried, self-employed, or occasional workers at the onset of the crisis: mobility in income rankings is observed for all categories, although mobility is less among salaried workers.

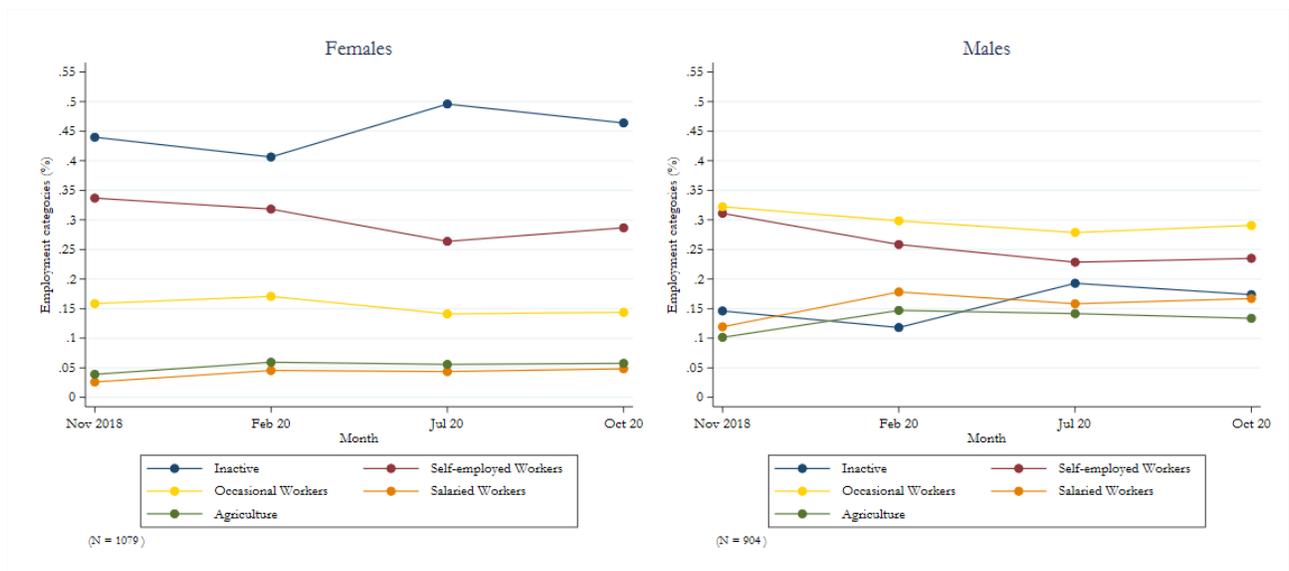
## 5 Employment and occupation

Next we turn to changes in employment and occupation across survey years. We show in Figure 7 the evolution of employment shares between 2018 and 2020, split by employment type. As noted earlier, a much larger proportion of women than men are persistently not working – reflecting lower labor market participation among women. In the left panel, we observe a slight fall in the proportion of non-working female respondents between the end of 2018 end February 2020. This movement is then reversed, with an increase of nearly 10 percentage point in non-working women between February and July 2020, followed by a gradual recovery after that. Overall, the share of women not working as of October 2020 is comparable to the share from the pre-pandemic period. The sharpest declines in female occupation between February and July

are in self-employment and, to a lesser extent, in occasional work. If anything, the proportion of women working in agriculture or salaried work increase a little bit between 2018 and February 2020, and remain more or less constant after that.

We observe a somewhat similar trend for men, with the proportion of males not working falling between the end of 2018 and February 2020, followed by a sharp rise in July, and a partial recovery in October. We similarly notice a fall in self-employment and occasional work in July 2020, but the difference is less marked than for women. The proportion of salaried and agricultural workers remain relatively constant over time.

Figure 7: Evolution of employment between 2018 and 2020

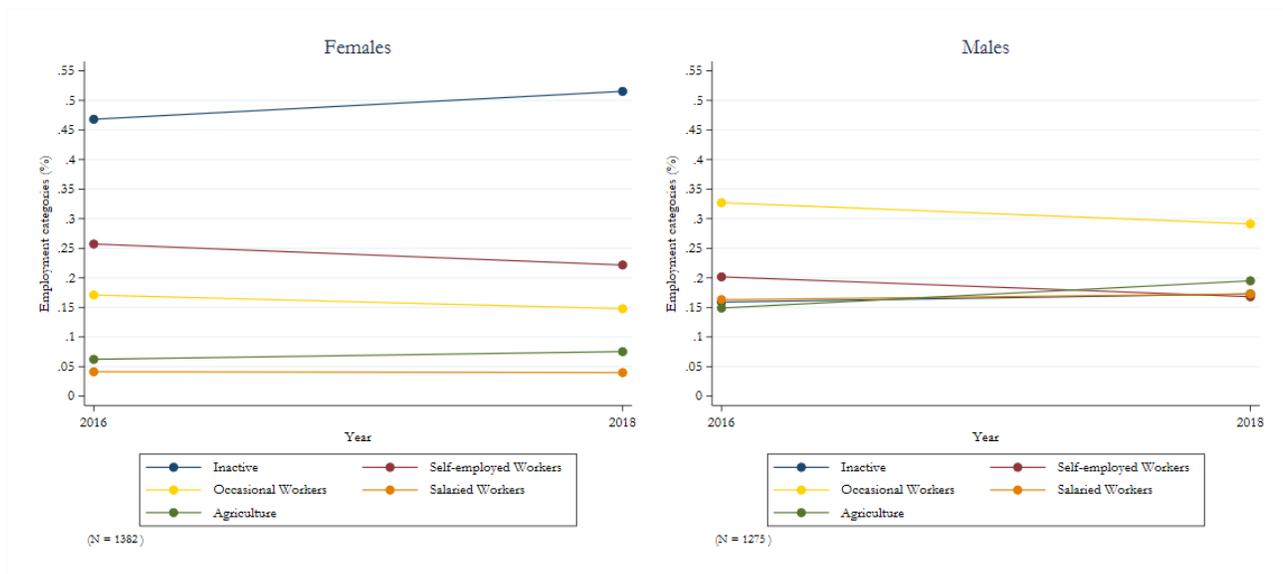


Source: AUDRI Panel Data (Individual Survey (2018) and Special COVID Phone survey 2020)

How do these changes during Covid-19 compare with those occurring between 2016 and 2018? For women, Figure 8 shows some increase in non-activity and agricultural work and a small fall in self-employment. Changes in average occupation are more subdued among men, except for a small decrease in the proportion of men in occasional employment.

Next we look at changes in the number of days worked between 2018 and 2020, separately by education status and gender. We observe an increase in the number of days worked for both genders and all education levels, conditional on working. The increase is smallest for highly educated workers, who tend to report working more hours anyway. The change is largest for

Figure 8: Evolution of employment between 2016 and 2018



Source: AUDRI Panel Data (Individual Survey (2016) and Individual Survey (2018) )

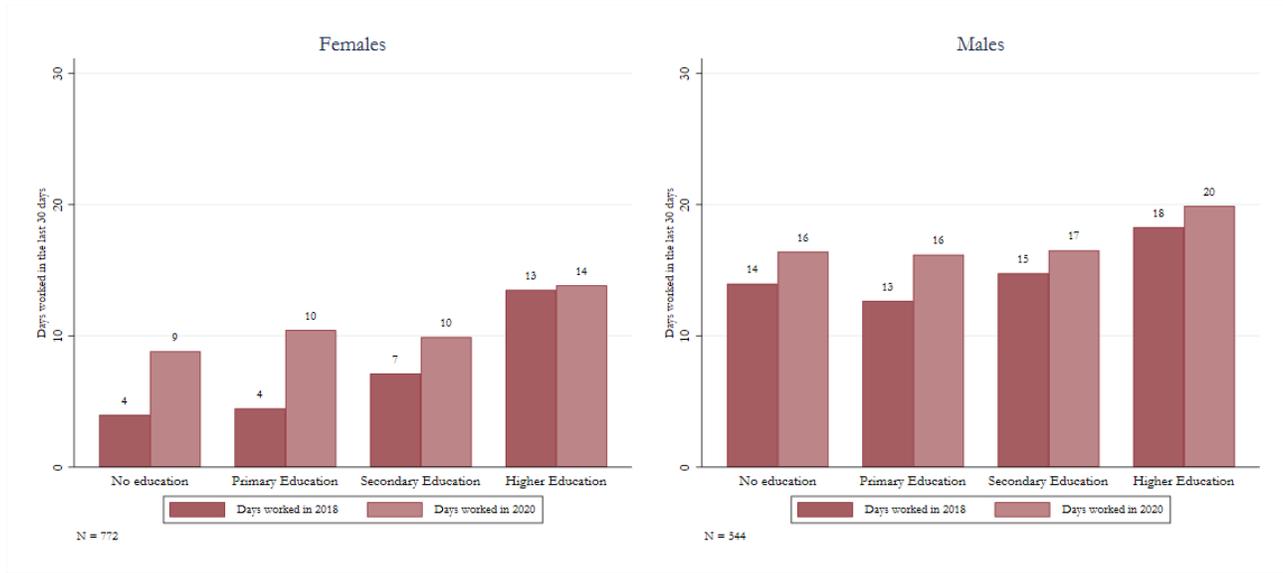
women with either no education or primary education. Combined with the large fall in income per day worked presented in Figure 1, this evidence suggests that workers worked longer hours in an effort to compensate for lower incomes per hour – a finding reminiscent of the ‘target income’ hypothesis of [Farber \(2008\)](#).

## 6 Prices and Consumption

The drops in income and job losses described in the previous sections may be exacerbated if the cost of living is simultaneously rising. We provide suggestive evidence that this is the case. A first piece of evidence on this point can be seen in Figure 10. Substantial shares of respondents report prices for everyday consumption goods rising during the Covid-19 crisis. Furthermore, when asked what were the most pressing problems facing the country over the six months preceding the survey, 73% of respondents mention price increases as one of the top three issues they would like the government to address. This compares to 60% of them mentioning security issues due to crime, ethnic tensions, or civil unrest.

In addition, 46% report difficulties buying some of their groceries from the same shop or market

Figure 9: Days Worked of the Past 30 by Education Level



Source: AUDRI Panel Data (Individual Survey (2018) and Special COVID Phone survey 2020)

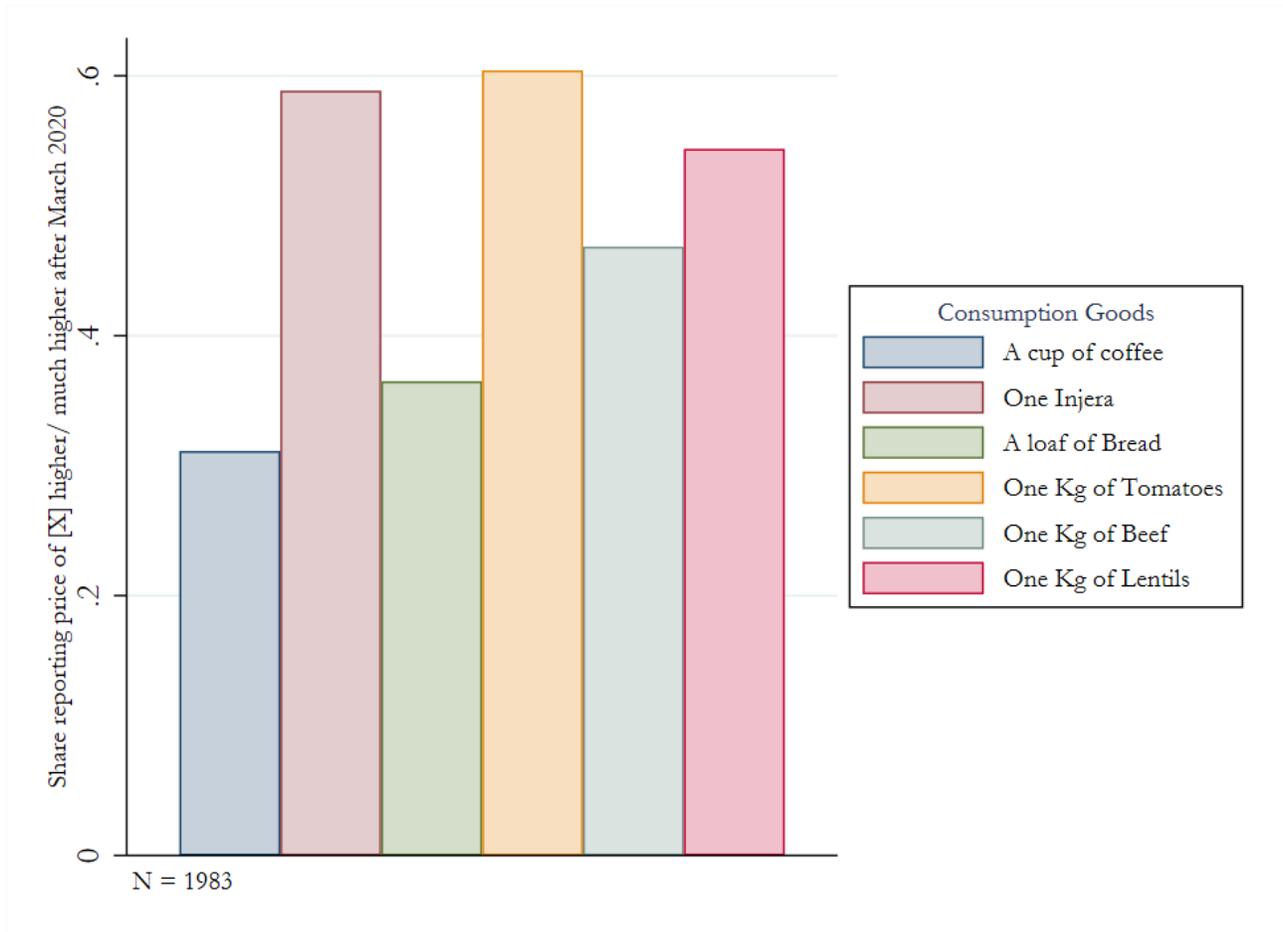
as before the Covid crisis, and 18.5% declaring having to switch the source of their groceries. Only 16% of respondents report being able to eat or drink from the same restaurants and bars as they did before the Covid crisis. The rest report some disruption, with as many as 38% reporting having lost access to all of them.

How might these changes in prices and access affect consumption? We document statistically significant decreases in the number of days out of the past 7 in which respondents consumed milk/dairy products or beef compared to consumption in 2018. These decreases are partially offset by an increase in fruit consumption.

However, the most telling evidence that consumption and general well-being have been negatively affected comes from responses related to worrying about and rationing food. During the phone survey in October 2020, over 37% of respondents reported being worried about having enough food on the table during the previous 6 months. This is more than double the rate of self-reported food insecurity recorded during the 2018 survey when only around 17% of respondents reported being worried about having enough food.<sup>4</sup> Amongst those respondents who

<sup>4</sup>The 2018 was asked about worrying about having food during the previous 12 months. The 2020 survey asked about the previous 6 months. The responses in the 2018 survey are thus an upper bound on the share of respondents who were food insecure over the prior 6 months.

Figure 10: Increase in Prices



Source: AUDRI Panel Data (Special COVID Phone survey 2020)

worried about food, they reduced portion sizes or cut meals an average of 27.8 days during the preceding 6 months. This is a 209% increase from a base of 9 days during the 2018 survey. These results imply that not only has food insecurity increased during the Covid-19 pandemic but also that it may have become increasingly severe for the subset of respondents who are food insecure. Details on consumption and food security during the 2020 survey can be found in Table 5.

Table 5: Consumption and Food Security

	Males	Females	No education	Primary education	High- School Education	Higher Education	Overall Average
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Panel A: Number of days [X] was consumed (last 7 days)</b>							
Milk and Milk Products	1.24	1.14	0.76	1.03	1.27	2.23	1.18
Meat and Other Animal Products	1.21	0.88	0.66	0.87	1.28	1.61	1.03
Fruits	1.37	1.32	0.66	1.07	1.73	2.45	1.34
<b>Panel B: Food Security (last 6 months)</b>							
Was worried about having enough food on the table	0.33	0.41	0.44	0.39	0.34	0.28	0.37
Number of months this household suffered a food shortage	0.83	1.19	1.43	1.12	0.79	0.55	1.02
Number of days respondent needed to reduce portion size	8.72	11.68	18.71	9.48	7.31	5.05	10.33
Observations	904	1079	433	726	592	232	1983

Source: COVID Survey Ethiopia (2020) AUDRI Wave 2 Survey (2018)

We asked respondents whether they were aware of a government intervention called the safety net program. 38% respondents answered that they were, but only 47 of them (2.4% of the sample) have benefited from it, most in the Addis Ababa region. In general, only 9.3% of respondents report receiving any form of transfers from the government or from charitable or religious organizations – albeit not necessarily for Covid-related reasons. If we drop government or work-related pensions, the proportion falls to 4.4%.

Respondents have not responded to this situation by massively taking more debt. Only one third of them report taking any loan in cash or in kind in the 12 months preceding the survey. Only 8.7% report borrowing more than before the Covid crisis; 59% report borrowing less. Asked whether borrowing was easier than before the Covid crisis, 43% said it was harder and 22% that it was impossible. Only 3% said it was easier. This is not, however, because of financial exclusion: 82% of respondents report having a bank account, among whom 17% also have a mobile money account. Panel B of Table 6 provides more detail on borrowing patterns.

To the extent that friends and relatives can be a source of assistance in cash and in kind during difficult times, socialization may have provided some relief. Unfortunately, the nature of the response to the Covid pandemic also reduced access to informal assistance. Only 2.5% of respondents state that they were able to visit friends and relatives at their home as they did before the Covid crisis. 58% report only being able to meet a few of them, and 26% none

of them. Could they make new friends instead? Unfortunately not: only 2% of respondents report that they were able to get out and make new friends as they did before the Covid crisis. 65% they could go out only rarely or never. Although we did not seek to collect information on sex work in our survey, the closure of bars and restaurants and the diminished opportunities for going out must have reduced the sex trade as well, which is known to be a safety net of last resort for many women in this part of the world. Panel C of Table 6 documents splits this data by educational and employment status.

Table 6: Impact of COVID

	No edu- cation	Primary educa- tion	High- School Educa- tion	Higher Educa- tion	Was salaried in 2018	Was casual workers in 2018	Was self- employed in 2018	Was unem- ployed in 2018	Overall Average
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Panel A: Income</b>									
Income percentage change between end of 2018 and Oct 2020	-0.09	-0.18	-0.24	-0.10	-0.20	-0.03	-0.17	-	-0.17
Has experienced a loss of income during COVID (Self-declared)	0.61	0.71	0.67	0.54	0.60	0.58	0.80	0.78	0.66
<i>If respondent has experience a loss of income</i>									
Main reason: Government prohibitions related to covid-19	0.42	0.46	0.42	0.48	0.41	0.39	0.52	0.47	0.44
Main reason: Loss of job	0.61	0.66	0.68	0.60	0.67	0.64	0.81	0.63	0.65
Main reason: Household business failure	0.12	0.14	0.09	0.07	0.09	0.05	0.05	0.18	0.12
Main reason: Political unrest and government response to it	0.08	0.09	0.08	0.04	0.06	0.06	0.09	0.09	0.08
<b>Panel B: Transfers</b>									
Have borrowed more since COVID crisis	0.09	0.08	0.09	0.10	0.05	0.09	0.15	0.11	0.09
Have borrowed less since COVID crisis	0.59	0.61	0.59	0.50	0.58	0.56	0.67	0.60	0.59
Harder to borrow since COVID crisis	0.64	0.67	0.65	0.61	0.61	0.64	0.73	0.69	0.65
<b>Panel C: Social Activities</b>									
Can continue to buy from all the same shop as before covid	0.58	0.55	0.52	0.52	0.57	0.55	0.47	0.51	0.54
Can continue to go to the same restaurants as before COVID	0.24	0.17	0.12	0.13	0.14	0.15	0.14	0.19	0.16
Can continue to visit all their friends and relatives at their ho	0.03	0.02	0.02	0.03	0.02	0.02	0.01	0.02	0.02
Is always or most of the time able to socialize as before COVID	0.09	0.07	0.07	0.06	0.06	0.06	0.10	0.07	0.07
Observations	433	726	592	232	605	468	135	642	1983

Source: COVID Survey Ethiopia (2020) AUDRI Wave 2 Survey (2018)

Taken together, the evidence indicates that respondents faced a fall in income which was not compensated by transfers or borrowing. This fall in income was further compounded by changes in prices and by disruptions in the food chain that left some households unable to buy some of their usual groceries or forced them to purchase their supplies elsewhere. Respondents were

also less able to socialize – with 93% reporting that they were unable to visit sick or bereaved friends and relatives as they used to before the Covid crisis.

This does not mean that all the respondents are dissatisfied with their life achievements: 85% report being moderately or very content with their life, and only 3% not happy at all. But 75% report having been depressed sometimes or often in the seven days preceding the Covid survey, and two thirds state that they are only partially in control of their life or not at all. One could hoped that reductions in social interactions may have reduced the risk of harassment and crime, thereby at least providing some sense of security. Whatever this effect may have been, it is more than compensated by the fear of Covid itself: 72% of respondents feel less safe than before the Covid crisis, 62% of whom because they fear that they or their relatives may fall ill to Covid – while another 14% fear a loss of job for themselves or a household member and 18% are worried about increased civil unrest. While 12% of respondents fee that their chance of reaching the life to which they aspire has increased since the Covid crisis, the overwhelming majority (71%) feel it has reduced. The Covid crisis has thus had a dramatic negative effect not only on respondents' material outcomes such as income, employment, and consumption – it also has cut normal coping channels through friends and relatives and reduced their subjective well-being and generate much depression and anxiety about the future.

## 7 Conclusion

We conduct a phone survey with approximately 2,000 previously interviewed households to better understand the effects of the Covid-19 pandemic on labor market and educational outcomes in Addis Ababa and Oromia.

With regards to education, we show that time spent on schooling dropped precipitously during the pandemic. There appear to have been meaningful differences in access to educational materials for students living in Addis Ababa versus those living in Oromia. Fortunately, we do not find evidence that Covid-19 has pushed students out of the educational system: the vast majority of students returned immediately upon schools re-opening. For those whose schools had not reopened at the time of the survey, parents indicated that they were planning on sending students back as soon as it was allowed. This helps to assuage the worry that a fear of

Covid-19 transmission would delay parents in allow their children to return to school

We document substantial drops in labor income that have persisted despite the recovery of other economic indicators like overall employment rates. These incomes losses have been most severe for the self-employed workers and concentrated amongst those with only a primary or secondary education. Differences in employment outcomes by gender appear to be mostly explained by the very low female labor force participation rate; while this rate dropped during the peak of the pandemic, it has since recovered to its (still very low) pre-pandemic level. We provide suggestive evidence that self-employed men were particularly hurt: average incomes amongst this group dropped by over 70%.

In terms of consumption, we observe an increase in prices and a reduction in access to groceries, without much support from the government or charitable organizations and with reduced access to informal insurance channels. Many respondents are anxious about their future food situation, and a large proportion of them report having little control over their life and between depressed and worried about their future. They also worry a lot about catching Covid itself. All in all, most feel their chance of reaching the life to which they aspire has deteriorated since the Covid crisis. Combined with the serious concerns respondents have about security, ethnic violence, and civil unrest, this sense of failed expectation represents a massive challenge for the government, lest the economy can quickly recover from the Covid-induced crisis.

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