Northwestern | INSTITUTE FOR POLICY RESEARCH

IPR Working Paper Series

WP-22-06

Gendered Impacts of Covid-19 in Developing Countries

Titan Alon
University of California San Diego

Matthias Doepke
Northwestern University and IPR

Kristina Manysheva
Northwestern University

Michèle Tertilt
University of Mannheim

Version: January 13, 2022

DRAFT

Please do not quote or distribute without permission.

1 Introduction

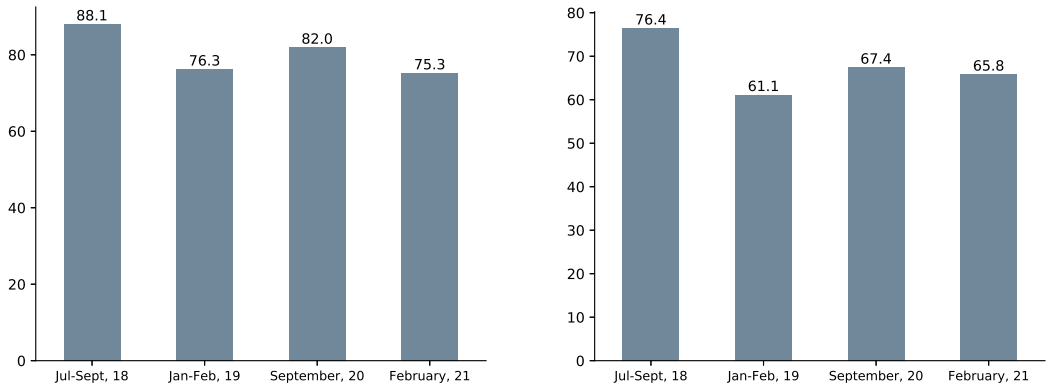
The Covid-19 pandemic and the associated shutdowns, social distancing measures, and school closures have resulted in a global recession that sharply reduced output and employment in nearly all countries. In many high-income economies, one of the most unusual characteristics of this recession has been a disproportionate impact on women in the labor market (Alon et al., 2022*b*). In the United States, for example, the unemployment rate increased by three percentage points more for women compared to men. This marks a sharp deviation from the usual pattern of recent recessions in high-income economies, which have affected men's employment more than women's.

In this paper, we explore how the Covid-19 recession has affected women's versus men's employment in developing countries. While the impact of school closures is similar, we argue that differences in the distribution of job characteristics and in the role of income effects have limited the employment reductions experienced by women in low-income economies. As a case study, we show how these factors play out in Nigeria, the most populous country in Sub-Saharan Africa.

2 Origins of Gender Differences in the Pandemic

The literature on the gendered impact of the Covid-19 pandemic has pointed out two primary reasons why women in advanced economies experienced unusually large employment reductions. The first is the distribution of job characteristics of employed women and men. In the Covid-19 recession, employment losses were concentrated in contact-intensive occupations in the service industry, such as wait staff in restaurants and workers in hotels and entertainment. In many countries, these sectors and occupations have high female employment shares, which contributed to large job losses for women during the pandemic (Albanesi and Kim, 2021; Alon et al., 2022*b*).

While developing countries also employed shutdowns and social distancing measures, contact-intensive service industries account for a small share of women's employment (see Figure B1 in the appendix). Especially in the poorest economies, many more women work in family-based agriculture and in non-farm household enterprises, where there are only small employment changes over the cycle.



(a) Men (b) Women

Figure 1: Share of Working Adults in Nigeria by Gender

Notes: The share of adults of age 21-55 that worked in the past week (at time when interview was conducted). Sample includes $\approx 9,000$ and $\approx 4,000$ individuals for pre-Covid and Covid interviews, respectively.

Hence, the distribution of job characteristics for women and men in the economy is one explanation for why the impact of the pandemic on women's employment was different in low-income countries.

The second reason underlying women's reduced labor supply in high-income economies was the impact of increased childcare needs during closures of schools and daycare centers. A number of studies document that during school closures parents, and in particular mothers, spent much more time on childcare and home schooling tasks (Adams-Prassl et al., 2020). Correspondingly, reductions in labor supply were particularly large among mothers of school-age children (Alon et al., 2022*b*).

School closures during the pandemic were widely adopted in high- and low-income economies alike, and while the duration of school closures varies widely across countries, there is no clear correlation with income levels (Alon et al., 2022*a*). Nevertheless, the effects of these closures on women's and men's labor supply may still depend on local conditions. The need for additional childcare is reduced if informal modes of childcare are available, for example, if an extended family is living together and grandparents can look after children during closures. The need for spending time on home schooling also depends on how much

Table 1: Impact of Covid-19 on Employment and Hours of Work for Adults

	Employment Status				Weekly Working Hours			
	Sept.	Sept.	Febr.	Febr.	Sept.	Sept.	Febr.	Febr.
Covid	-0.045	-0.025	0.036	0.004	-2.766	-4.136	4.859	3.197
	(0.013)	(0.014)	(0.031)	(0.033)	(0.969)	(1.228)	(2.272)	(2.224)
Covid × Female		-0.035		0.058		2.784		3.242
		(0.018)		(0.024)		(1.264)		(1.210)
# Obs	12,229	12,229	12,444	12,444	9,634	9,634	8,519	8,519
R-squared	0.20	0.20	0.22	0.22	0.23	0.23	0.25	0.25
Mean Pre-Covid	0.817	0.817	0.680	0.680	34.3	34.3	31.6	31.6
Age FE	Y	Y	Y	Y	Y	Y	Y	Y
LGA FE	Y	Y	Y	Y	Y	Y	Y	Y
Control Variables	✓	✓	✓	✓	✓	✓	✓	✓

Notes: Robust standard errors (in parentheses) are clustered at the state level. Controls include gender, urban, number of HH members, access to electricity & internet, ownership of different assets (radio, car, land, etc.), access to finance, consumption quantile before the pandemic, education and literacy of the individual, marriage status, whether individual is a head of household, a geographic fixed effect (LGA), and a dummy for pre-covid interview held in January. In regressions for weekly working hours only working adults are included. Results for weekly working hours that combine both intensive and extensive margins are reported in Table B1 in the appendix.

remote schooling actually takes place. If no remote schooling is available and families decide that kids will simply take a break from learning, parental time needs are lower. The evidence indeed suggests learning activities during school closures were reduced even more in low-income compared to high-income countries (see Figure B2 in the appendix), which is consistent with a lower impact of closures on parents' time needs.

Another factor determining the impact of school closures on labor supply is the extent to which spending time on childcare and home schooling interferes with work. Alon et al. (2022*b*) show that among parents who can work from home (e.g., workers with office jobs who can connect remotely) there is no gender gap in the impact of increased childcare needs on labor supply. It is mothers with jobs that have to be done at a specific workplace (such as a manufacturing plant

or a retail store) who reduce labor supply a lot when childcare needs go up. In low-income economies, a large share of employment is done in or around the home, such as family based agriculture and other forms of self-employment. This fact suggests, once again, that the impact of school closures on labor supply in general and on women's labor supply in particular may be smaller in low-income economies.

In what follows, we document how these factors shape the impact of the pandemic on women's employment in Nigeria.

3 The Employment Impact of the Covid-19 Pandemic in Nigeria

Nigeria was one of the first African countries that reported Covid-19 cases. As in many other countries, the government implemented strict measures to contain the spread of the virus, including travel restrictions and school closures. We use data from the Nigeria COVID-19 National Longitudinal Phone Survey (Covid-19 NLPS) to assess the impact of the pandemic on employment. We focus on data collected in September 2020, covering outcomes when school closures and other containment measures were still in effect, and in February 2021, when schools were open again. For these survey waves, we can compare outcomes to data collected around the same months two years prior in Nigeria's General Household Survey. Comparing outcomes for the same season is important given that employment in Nigeria varies over the planting and harvesting seasons.

In both September 2020 and February 2021, a variety of Covid mitigation measures were in place (see Figure B3 in the appendix for a timeline). Measures of people's mobility had mostly recovered by September 2020; restrictions and shutdown measures were the most stringent in April and May of 2020 and gradually relaxed afterwards. However, school closures were still ongoing in September 2020; most schools fully reopened only in November 2020 (see Figure B4 in the appendix). Hence, the comparison of outcomes for September 2020 and February 2021 is informative about the impact of school closures.

Figure 1 shows how overall employment of prime-age adults (ages 21 to 55) varies across the survey waves for women and men. Comparing the levels in July-September of 2018 and September of 2020, we observe a substantial drop

Table 2: Role of Childcare for Impact of Covid-19 on Employment and Hours of Work

	Employment Status		Weekly Working Hours	
	Sept.	Febr.	Sept.	Febr.
Covid × Female × Young Kids	0.028	0.070	0.374	-3.007
	(0.029)	(0.035)	(1.975)	(2.102)
Covid × Female × School-Age Kids	-0.058	0.031	2.768	6.701
	(0.028)	(0.035)	(1.542)	(2.134)
Covid × Female × No kids	-0.035	-0.025	1.137	-0.878
	(0.048)	(0.052)	(2.196)	(3.093)
# Obs	12,229	12,444	9,634	8,519
Mean Pre-Covid	0.817	0.680	34.3	31.6
Age FE	Y	Y	Y	Y
LGA FE	Y	Y	Y	Y
Control Variables	✓	✓	✓	✓

Notes: Robust standard errors (in parentheses) are clustered at the state level. Controls include gender, urban, number of HH members, access to electricity & internet, asset ownership, access to finance, consumption quantile before the pandemic, education and literacy, marriage status, head of household status, a geographic fixed effect (LGA), and a dummy for pre-covid interview held in January. In regressions for weekly working hours only working adults are included.

in the share of employed adults. Women's employment drops by 9.0 percentage points, much larger than the drop of 6.1 percentage points for men. Hence, the initial impact mirrors the observation from high-income economies that women's employment was disproportionately affected by the pandemic. However, this picture is reversed by February 2021: here we observe a substantial increase of women's employment by 4.7 percentage points compared to the pre-pandemic period, versus a moderate decline of one percentage point in men's employment. Similarly, in terms of weekly hours worked conditional on being employed, there is a sharp rise in women's labor supply in February 2021 compared to before the pandemic (see Figure B5 in the appendix).

Table 1 displays individual-level regression results of the impact of the pandemic on employment by gender that include individual and household controls and

geographic fixed effects (LGA). Regressions for September pool data for September 2020 with the July–September survey in 2018, and regressions for February include data for February 2021 and January–February 2019. "Covid" is an indicator variable equal to 1 for September 2020 and February 2021, respectively, and zero for the pre-pandemic period.

The regressions confirm that women lost substantially more employment in the early phase of the pandemic, but also experienced an expansion of employment later in the recovery, both relative to men and in absolute terms. On the intensive margin, women who continued working worked more hours both in September and February compared to the pre-pandemic period.

4 The Role of Childcare

To examine the possible role of childcare needs during school closures for employment changes, we expand the regressions displayed in Table 1 by including indicator variables for the presence of children in the household. Following the empirical setting in Alon et al. (2022*b*), we distinguish between households with at least one child under the age of five, households where the youngest child is of school age (here defined as 5 to 14, as compulsory education in Nigeria is completed at age 14), and households who either don't have children or only have older children. These indicator variables are interacted with the Covid indicator variable and gender. Table 2 displays the coefficient estimates for the double interaction of Covid with the female indicator variable and the child variables. For September 2020, the regressions confirm the finding of Alon et al. (2022*a*) for high-income economies that employment declined the most among mothers of school-age children. Given that schools were still closed in September 2020 but not in February 2021, this finding strongly suggests that as in high-income countries, increased childcare needs during school closures were an important driver of women's employment declines during the pandemic.

Overall, the aspect of increased childcare needs for school-age children is the main parallel between the experience of women in high-income economies during the pandemic and women in Nigeria. However, even among parents of school-age children we do not observe a statistically significant gender gap in

working hours during school closures conditional on continued employment. This may reflect that in low-income countries, a smaller share of children continued learning activities during school closures, which reduces the need for parental time. Moreover, unlike in high-income countries, we do not observe statistically significant gender differences in initial employment changes among those without children. This observation is consistent with the notion that in low-income countries, the industry composition of employment did not favor one gender over the other in the pandemic recession. Likewise, there are no statistically significant gender differences among those with young children, which may be due to lower initial use of formal childcare, the fact that a lot of work takes place at home, and the availability of informal childcare.

A final major difference between the employment outcomes of women in high- and low-income economies is that in many high-income economies, women's employment losses have been persistent; in the United States, for example, labor force participation remained well below pre-pandemic levels even after schools reopened and unemployment rates fell to historic lows. In contrast, in Nigeria we observe that women's employment not only recovered quickly, but actually rose above pre-pandemic levels once schools reopened.

For explaining the rise in women's employment in the later phase of the pandemic, based on Alon et al. (2021) we conjecture that income effects play a role. In the United States and other high-income countries, governments provided generous transfer payments during the crisis, making many households less dependent on the next paycheck. In low-income countries, households received few transfers and were much poorer to begin with. The need to make up for income losses during the economic downturn caused by the pandemic may have induced many women to work more or to take on additional jobs. Given that women's labor supply was initially lower than that of men, women had more room to expand labor supply to increase household income. The income channel is supported by the observation that the positive effect of the pandemic on women's labor supply in February 2021 is concentrated among poorer households (see Table B3 in the appendix for regression results that split the sample by consumption quantiles). This mechanism resembles the insurance role of women's labor

supply analyzed by Alon et al. (2020), but here the main impact is during the recovery rather than at the height of the pandemic.

5 Adolescent Labor and Education

Compared to high-income economies, the gender differences in the employment impact of the pandemic that we document for the case of Nigeria are muted. A channel that is potentially more important in developing countries is the impact of the pandemic on children's education. Early indications are that learning losses in developing countries are larger than in high-income economies, and that many older children dropped out of school and started working during the pandemic (see the appendix for evidence on the impact of the pandemic on adolescents' labor supply). These changes can have long-run repercussions for children's future earnings as well as for outcomes such as marriage and childbearing. We examine the impact of the pandemic on children's education in low-income economies in Alon et al. (2022*a*).

References

Adams-Prassl, Abi, Teodora Boneva, Marta Golin, and Christopher Rauh. 2020. "Inequality in the Impact of the Coronavirus Shock: Evidence from Real Time Surveys." *Journal of Public Economics*, 189: Article 104245.

Albanesi, Stefania, and Jiyeon Kim. 2021. "Effects of the COVID-19 Recession on the US Labor Market." *Journal of Economic Perspectives*, 35(3): 3–24.

Alon, Titan, Matthias Doepke, Jane Olmstead-Rumsey, and Michèle Tertilt. 2020. "This Time It's Different: The Role of Women's Employment in a Pandemic Recession." NBER Working Paper 27660.

Alon, Titan, Matthias Doepke, Kristina Manysheva, and Michèle Tertilt. 2022*a*. "What is the Aggregate Impact of Pandemic School Closures in Low-Income Countries?" Unpublished Manuscript, Northwestern University.

Alon, Titan, Minki Kim, David Lagakos, and Mitchell VanVuren. 2021. "Macroeconomic Effects of COVID-19 Across the World Income Distribution." Unpublished Manuscript, UCSD.

Alon, Titan, Sena Coskun, Matthias Doepke, David Koll, and Michèle Tertilt. 2022*b*. "From Mancession to Shecession: Women's Employment in Regular and Pandemic Recessions." Forthcoming, NBER Macroeconomics Annual.

Online Appendix for: "Gendered Impacts of Covid-19 in Developing Countries"

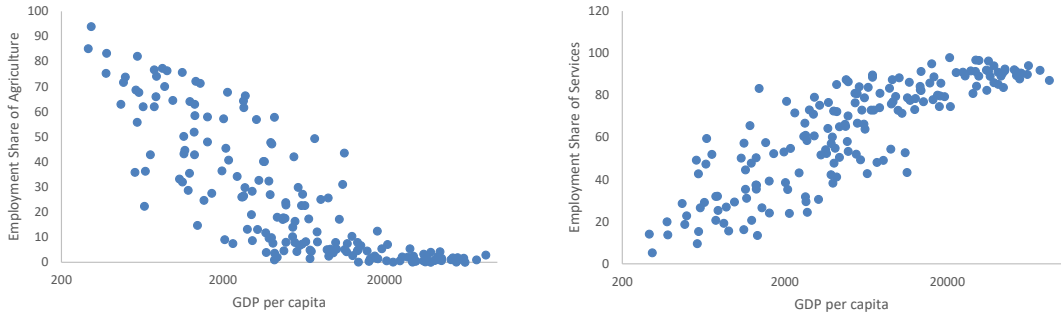
Titan Alon, Matthias Doepke, Kristina Manysheva, and Michèle Tertilt

A Data Sources

We use data from the Nigeria COVID-19 National Longitudinal Phone Survey (Covid-19 NLPS) implemented by the National Bureau of Statistics to track the impact of the pandemic. The survey was conducted for one year on a monthly basis starting from the end of April, 2020, and included households interviewed face-to-face in 2018/2019 for Wave 4 of the General Household Survey Panel (GHS-Panel), which was designed to be representative at national and zonal levels. The extensive information collected in the GHS-Panel just over a year prior to the pandemic provides a rich set of background information on Covid-19 NLPS households. 1,950 households were successfully interviewed in Round 1, and the same households were contacted by phone in subsequent rounds.[1] There are total 12 phone surveys conducted on a monthly basis starting from the end of April 2020 (see Figure B3).

We rely on data collected in Rounds 5 and 10 of Covid-19 NLPS and 2018/19 GHS-Panel. We choose these two surveys because they line up with the timing of the pre-pandemic information from GHS-Panel. Round 5 of Covid-19 NLPS was conducted in September 2020 and Round 10 in February, 2021. The post-planting part of the 2018/19 GHS-Panel was conducted in the period July–September 2018 and the post-harvest part in January–February, 2019. For the former, data on employment status and hours worked on a primary job in the week before the interview is collected for up to six randomly selected members of households age 15-64 plus the primary respondent. In GHS-Panel, employment status and hours

[1]Households that do not have access to a phone and could not be interviewed despite several call attempts were excluded from the sample, which may introduce potential selection bias. To overcome this bias, a balanced sampling approach was adopted, and phone survey weights are available.



(a) Women's Employment Share in Agriculture

(b) Women's Employment Share in Services

Figure B1: The Sectoral Composition of Women's Employment Across Countries in 2015

Notes: Women's employment in agriculture and services as a fraction of total women's employment in 2015. Each dot is a country. Source: World Bank Development Indicators; accessed online on 12/21/2021.

worked on each job a week before the interview were collected for each member of household age five and above. For consistency with the Covid-19 NLPS data, we use hours worked on the primary job, defined as job were individual spent the most time during the last week, rather than all jobs.

B Additional Tables and Figures

Figure B1 plots the employment shares for women (out of all employed women) in agriculture and services in 2015 against GDP per capita for most countries in the world. The figure shows that in low-income countries, the majority of the female labor force is in agriculture, whereas services are relatively unimportant. The opposite pattern is observed in high-income economies, where the employment share of agriculture is negligible and most women work in services. The figure suggests that unlike in high-income countries, in low-income countries the specific impact of Covid-related shutdowns on contact intensive services does not play a substantial role for women's employment losses during the pandemic.

Figure B2 depicts the cross-country relationship between income per capita and engagement of children in any learning activities during school closures. We use data from High Frequency Phone Surveys conducted by the World Bank to

identify the share of households with children engaged in any learning activity after schools were closed due to Covid-19. Only households with children who attended school prior to the pandemic are considered when this share is calculated. The figure shows that in countries with higher income per capita, on average, children were more likely to continue their education during the pandemic. In a number of countries in Sub-Saharan Africa, children continued with learning activities in less than half of households.

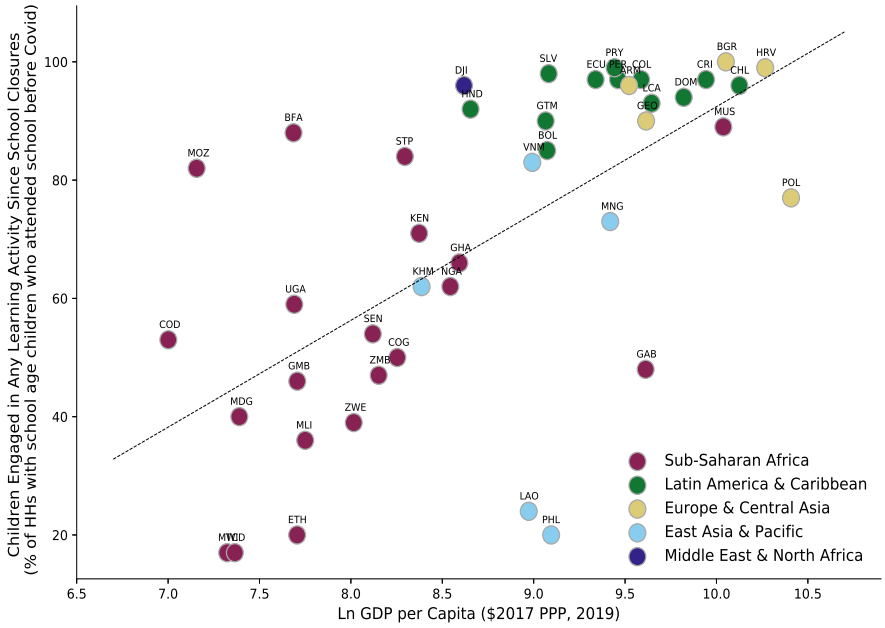


Figure B2: Learning Activities during School Closures and Income

Notes: This figure is generated using data from High Frequency Phone Surveys (World Bank). Data collected during first rounds of phone surveys for each country is used for the share of HHs where children engaged in any learning activity. In most countries, first rounds were conducted in May-June 2020.

Figure B3 provides a timeline of the stringency of government containment measures during the pandemic and of mobility data collected by Google. The figure also shows when each wave of the Covid-19 NLPS survey was conducted. The figure shows that restrictions were the most severe from April to July of 2020, and that by September (when the 5th wave that we use here was collected) restrictions were already more relaxed. There is little change overall between waves 5 and

10; however, most schools fully reopened in November of 2020, in between the data collection of these two waves.

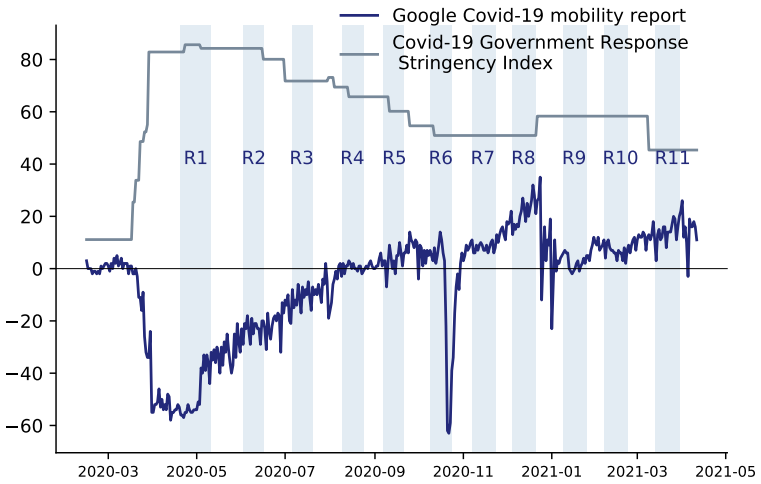


Figure B3: Timeline of Government Restrictions and Population Mobility

Notes: Google Covid-19 mobility report shows mobility trends for public transport hubs (subway, bus, and train stations) relative to a baseline value – median value for the corresponding day of the week during the 5-week period Jan 3 - Feb 6, 2020. Covid-19 Government Response Stringency Index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, re-scaled to a value from 0 to 100 (100 = strictest).

Figure B4 provides a timeline of school closures during the pandemic. The figure shows that schools were closed in March 2020 as a response to Covid-19 outbreak. School reopened partially for some students at the end of September 2020, and fully reopened for all students in November 2020.

Figure B5 provides an impression of the intensive margin of employment changes by plotting for each survey wave and each gender the weekly hours worked conditional on being employed. For wave 5 (September 2020), hours changes compared to the pre-pandemic period are moderate, but weekly working hours of both women and men are considerably higher than previously in the wave 10 data (February 2021). A caveat is that average weekly working hours are computed for the primary activity only. Therefore, increase in working hours might reflect that some individuals shift from multiple jobs to the single one, which can drive up average weekly hours for primary activity.

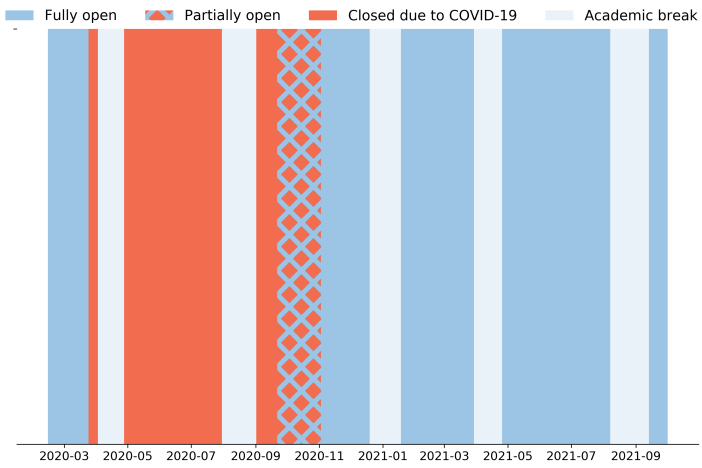
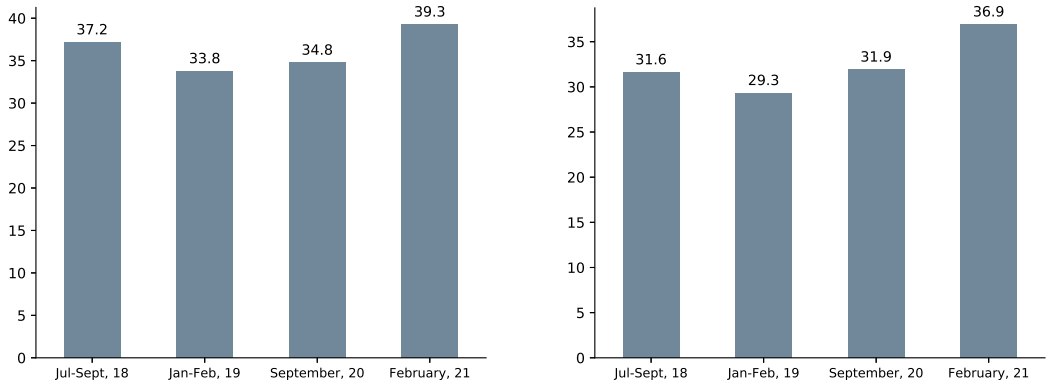


Figure B4: Timeline of Schools Closures in Nigeria

Notes: This figure is generated using UNESCO "Global monitoring of school closures" data.

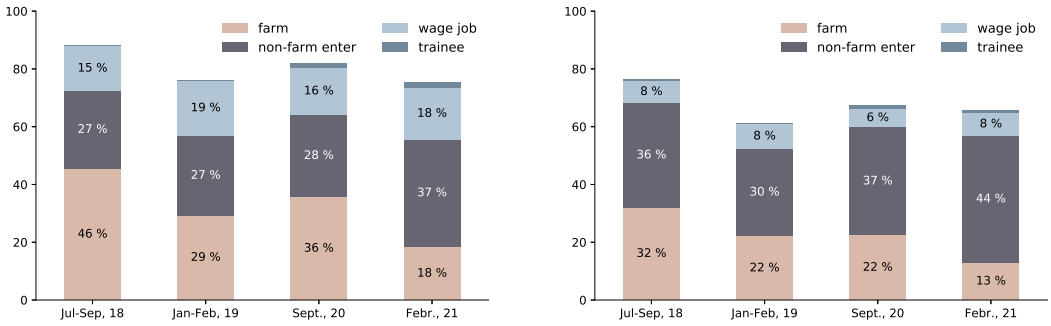


(a) Male Adults (b) Female Adults

Figure B5: Average Weekly Working Hours by Gender

Notes: Average weekly working hours are computed for the primary working activity and conditional on individual to have a job. Primary working activity is defined as the job in which the individual worked the most hours.

Figure B6 depicts employment across different sectors for both women and men. The most notable change is a sharp rise in non-farm enterprise; for women, for example, we observe an increase from 30 percent in January-February 2019 to 44 percent in February 2021. The data is consistent with the view that households



(a) Male Adults

(b) Female Adults

Figure B6: Share of Working Adults by Sector

Notes: The share of adults of age 21-55 that worked in the past week (at time when interview was conducted) at a given sector as a primary employment. Non-farm enterprise stands for the enterprise that belongs to a member of household. Sample includes $\approx 9,000$ and $\approx 4,000$ individuals for pre-Covid and Covid interviews, respectively.

responded to income losses by increasing self-employment and small-scale entrepreneurship. We also observe a decline in agricultural employment; because only the sector of the primary job is reported, this may reflect that some households members took on a new job as primary employment, leaving agriculture as a secondary activity.

Table B1 displays individual-level regression results of the impact of the pandemic on both extensive and intensive margin of employment by gender that include individual and household controls and geographic fixed effects (LGA). The regressions confirm that individuals worked less in the early phase of the pandemic, but experienced an expansion of working hours later in the recovery, driven primarily by female working hours.

The combination of school closures and the socioeconomic impact of the pandemic might have induced some adolescents, especially from poor households, to stop their education and start working. Table B2 displays regression results for the impact of the pandemic on the employment of individuals at ages 15 to 20. Panel A displays the results for all individuals aged 15-20 years old, while Panels B and C show the results for those who are supposed to be in secondary school or receive tertiary education, based on their age. We find that the pandemic led

Table B1: Impact of Covid-19's Weekly Working Hours for Adults

	Weekly Working Hours				log (Weekly Working Hours)			
	Sept.	Sept.	Febr.	Febr.	Sept.	Sept.	Febr.	Febr.
Covid	-4.156	-4.926	4.251	2.573	-0.356	-0.298	0.154	0.022
	(0.980)	(1.297)	(1.739)	(1.935)	(0.067)	(0.082)	(0.135)	(0.152)
Covid × Female		1.414		3.096		-0.107		0.243
		(1.073)		(1.252)		(1.264)		(0.010)
# Obs	12,094	12,094	12,404	12,404	12,094	12,094	12,404	12,404
R-squared	0.21	0.21	0.23	0.23	0.21	0.21	0.24	0.24
Mean Pre-Covid	28.0	28.0	21.5	21.5				
Age FE	Y	Y	Y	Y	Y	Y	Y	Y
LGA FE	Y	Y	Y	Y	Y	Y	Y	Y
Control Variables	✓	✓	✓	✓	✓	✓	✓	✓

Notes: Robust standard errors (in parentheses) are clustered at the state level. Controls include gender, urban, number of HH members, access to electricity & internet, ownership of different assets (radio, car, land, etc.), access to finance, consumption quantile before the pandemic, education and literacy of the individual, marriage status, whether individual is a head of household, and a dummy for pre-covid interview held in January. Results for weekly working hours that combine both intensive and extensive margins and we apply inverse-hyperbolic sine transform of hours worked last week for the logarithm.

both to a higher probability for adolescents to work and more weekly working hours. While we observe an increase in the probability of performing some work for all age groups, weekly hours are higher only for the older cohort. Additionally, we find that the probability of work increased more for those living in urban areas compared to rural. We find no significant differences in the effects of the pandemic between women and men.

To examine the possible role of the income channel for employment changes, we split the sample into the top 40% vs. the bottom 60% of households defined by consumption prior to the pandemic. Table B3 displays regression results for the impact of the pandemic on the employment by gender in February for the two groups. We find that the positive effect of the pandemic on women's labor supply in February 2021 is concentrated among poorer households. In fact, there is no effect for those households in the top 40% of the (pre-pandemic) consumption

Table B2: Impact of Covid-19's on Employment and Hours of Work for Adolescents

	Employment Status			Weekly Working Hours		
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: All individuals aged 15-20					
Covid	0.075	0.078	0.056	4.515	4.087	4.830
	(0.013)	(0.014)	(0.008)	(1.546)	(2.185)	(1.741)
Covid × Female		-0.006			1.062	
		(0.016)			(2.652)	
Covid × Urban			0.051			-1.121
			(0.016)			(3.095)
# Obs	4,997	4,997	4,997	1,639	1,639	1,639
R-squared	0.93	0.93	0.93	0.44	0.45	0.44
Mean Pre-Covid	0.301			23.7		
	Panel B: All individuals aged 15-16					
Covid	0.056	0.061	0.043	-0.431	0.014	-0.797
	(0.011)	(0.015)	(0.008)	(2.977)	(3.305)	(3.009)
Covid × Female		-0.008			-1.094	
		(0.022)			(3.214)	
Covid × Urban			0.042			1.870
			(0.020)			(5.639)
# Obs	1,828	1,828	1,828	457	457	457
R-squared	0.95	0.95	0.95	0.59	0.59	0.59
Mean Pre-Covid	0.250			20.2		
	Panel C: All individuals aged 17-20					
Covid	0.087	0.091	0.067	5.763	5.143	6.714
	(0.016)	(0.018)	(0.012)	(1.579)	(2.261)	(1.823)
Covid × Female		-0.011			1.566	
		(0.017)			(3.592)	
Covid × Urban			0.055			-3.184
			(0.019)			(3.406)
# Obs	3,115	3,115	3,115	1,095	1,095	1,095
R-squared	0.93	0.93	0.93	0.47	0.47	0.47
Mean Pre-Covid	0.333			25.4		
Age FE	Y	Y	Y	Y	Y	Y
Occupation FE	Y	Y	Y	Y	Y	Y
LGA FE	Y	Y	Y	Y	Y	Y
Control Variables	✓	✓	✓	✓	✓	✓

Notes: Robust standard errors (in parentheses) are clustered at the state level. Controls include gender, urban, number of HH members, access to electricity & internet, ownership of different assets (radio, car, land, etc.), consumption quantile before the pandemic, education and literacy of the HH's head, and dummy for pre-covid interview held in January. In regressions for weekly working hours only working adolescents are included.

Table B3: Impact of Covid-19's on Employment in February for Different Income Groups

	Employment Status				Weekly Working Hours			
	Bottom 60%		Top 40%		Bottom 60%		Top 40%	
Covid	0.100	0.049	-0.037	-0.036	6.635	4.565	0.387	-0.671
	(0.043)	(0.044)	(0.041)	(0.042)	(2.331)	(2.710)	(2.211)	(2.207)
Covid × Female		0.086		-0.003		3.462		2.145
		(0.033)		(0.024)		(1.747)		(1.375)
# Obs	8,243	8,243	4,162	4,162	8,222	8,222	4,142	4,142
R-squared	0.23	0.21	0.30	0.30	0.24	0.24	0.28	0.28
Mean Pre-Covid	0.67	0.67	0.71	0.71	28.9	28.9	36.8	36.8
Age FE	Y	Y	Y	Y	Y	Y	Y	Y
LGA FE	Y	Y	Y	Y	Y	Y	Y	Y
Control Variables	✓	✓	✓	✓	✓	✓	✓	✓

Notes: Robust standard errors (in parentheses) are clustered at the state level. Controls include gender, urban, number of HH members, access to electricity & internet, ownership of different assets (radio, car, land, etc.), access to finance, consumption quantile before the pandemic, education and literacy of the individual, marriage status, whether individual is a head of household, and a dummy for pre-covid interview held in January. Consumption quantiles are computed for pre-pandemic quantities.

distribution. These findings provide suggestive evidence for the income channel.