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An Assessment of the COVID-19 Pandemic Induced Shocks in Urban Household Livelihoods: A Case Study of Werabe Town Administration, Ethiopia

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Abstract

The main purpose of this study was to examine the COVID-19 pandemic induced Shocks in urban household livelihoods in the case of Werabe town administration, Ethiopia. The study was conducted based on primary data collected from 149 randomly selected households. It involved estimation of the impacts on livelihood and identification of factors that explain differences across households in the impact of covid-19 on livelihoods. It was learned from the results of the study that the COVID-19 pandemic caused households to lose as high as 15.6% of their pre COVID-19 earnings on average and incur coping expenses as high as 22.3% of their pre COVID-19 earnings on average. The impact of the covid-19 pandemic on livelihood, however, varies across households. It was found out that households that are less educated, have credit access, possess no bank account, and are employed in transport service as main source of livelihood were more likely to lose earnings due to the COVID-19 pandemic. Similarly, the share of coping expenses in household income showed increases with less education, access to credit, and employment in transport service as main source of livelihood but showed decrease with possession of bank account.

Key Words: 1. Livelihood 2. COVID-19 3. Households 4. Pandemic 5. Expenses

1. Introduction

There have been a number of significant pandemics recorded in human history, including smallpox, cholera, plague, dengue, AIDS, influenza, severe acute respiratory syndrome (SARS), West Nile disease and tuberculosis. In recent years, there has been widespread concern among policymakers and public health experts about the possibility of worldwide influenza pandemics. Such pandemics are not new: Influenza pandemics have struck about three times every century since the 1500s ((W.Qiu et al, no date), (Rubin, 2011)).

It should be noted that public health concerns are rising not just because pandemics claim human lives. Pandemics also claim economic wellbeing of affected societies in multiple ways. The impact of pandemics can result in instability of the economy. The impact is manifested through different dimensions: direct costs, long term burden, and indirect costs. The direct costs of dealing with pandemic, which principally include administrative costs and immediate loss of GDP, can be very high ((W.Qiu et al, no date), (Bloom & Canning, no date), (Delivorias&Scholz, 2020), (Rubin, 2011)). For example, the Ebola outbreak in Sierra Leone in 2015 cost USD 6 billion in direct costs (hospitals, staff, medication). Also, a USD 1.6 billion loss of GDP was recorded in the three Ebola hard-hit countries including Sierra Leone (W.Qiu et al, no date). The long-term burden may include loss of income due to reduced future availability of resources as peoples die (loss of labour force/manpower) and resources are currently diverted for emergency cases (at the cost of current investment). The indirect costs can also be very heavy. They include everything that contributes to a decline in GDP ((W.Qiu et al, no date), (Delivorias&Scholz, 2020)).

In general, disease pandemics represent an atrocious threat to human life chiefly also for the economic consequences. If the worst occurs, evidences in the literature imply that more mortality can result from the increased poverty than the disease infection. For example, the USA Congressional Budget Office (CBO) estimated that in a severe pandemic there would be about 4.25% reduction in GDP and about 1% reduction in a mild pandemic compared to what it would have been in the absence of a pandemic (CBO, 2006). The 2003 annual GDP of China decreased by 1% and the GDP of Southeast Asia also declined by 0.5% as a result of SARS outbreak (MacKellar, 2007, cited in W.Qiu et al, no date).
This is also evident from the fact that the virus traveled across the world, infected millions and killed more than 250 thousand lives in just 5 months. In response to the situation, governments – including the Government of Ethiopia – declared state of emergency in which peoplewere forced to stay at home till the situation is contained.

In Ethiopia, state of emergency was declared within days after the first case of COVID-19 was identified on February 2020. The country closed its entire international boundary, closed all schools, banned all gatherings of any business, doubled air and bus ticket fees by

law, ordered some businesses to close down, imposed restrictions on non-essential movements outside residence, and enforced 'no mask no service' campaigns. The immediate consequence of all these measures was overall cease down in economic activities. Shops, restaurants and hotels were closed, busy market centers turned empty, tourist flows were reduced, etc. This poses one question in the mind. How are livelihoods affected by the situation?

Hence, the government is required to carry out two principal missions: one is controlling the spread of the disease as quickly as it should be, and the other to counteract the economic retardation with urgent economic policy measures that can generate stimuli to economic activities. While accomplishment of these two missions of the government may interact with each other, they can address certain welfare and/or equity concerns at the same time. This becomes even more interesting when the impact of the pandemic on the vulnerable parts of society is considered.

Thus, government's role in dealing with the pandemic is imperative. Especially in the case of LDCs, knowledge on how livelihoods are affected is very important as it sheds light on the right package of strategies for coping with the pandemic as well as for rehabilitating the economy. Sometimes, coping strategies are expensive for the poor – as with the stay-at-home principle for example –and efforts to control a pandemic may appear difficult without taking this in to account. How livelihood is affected and the way households respond may have special implications about how the economy may be saved. A joint report by IFRC, Livelihoods Center, British Red Cross and Spanish Red Cross (no date), pointed out some coping strategies damaging to the economy including altered food consumption, selling assets essential for household livelihoods and productions like animals, unaffordable debts, migration, abandon of farm fields, increased school dropout, etc.

This study is intended to respond to this problem by producing reliable information on the impacts of the COVID-19 pandemic on household livelihoods in the case of Werabe town administration, Ethiopia.

Methodology

Data and Method of Data Collection

The study used primary data collected from a household survey to be conducted in selected urban Kebeles of Werabe City administration. Because the town administration includes both downtown (urban) and peripheral (rural) villages, 2 downtown survey kebeles (namely Werabe 01 and Werabe 02 kebeles/administrative villages), were purposively selected for the survey since the study focusses on urban livelihoods. The formula $N \geq 50 + 8$ m, where 'N' is minimum number of households and 'm' is the number of explanatory

variables (Green, 1991) was used as a rule of thumb to determine the total sample size for this study. Accordingly, the sample size was determined to be 149 since the number of variables planned to be included in the regression analysis were 12 during proposal development. Then, data collection tools – which primarily include a semi-structured questionnaire – were prepared. The semi-structured questionnaire was used to collect data on household socioeconomic and demographic characteristics, household wealth, household employment, household income and sources of income, household purchases of safety equipment, household saving and borrowing, etc.

Method of Data Analysis

The assessment of the COVID-19 pandemic induced difficulties in acquiring food and other necessities was based on descriptive analysis of data from survey. Such difficulties are mostly measured in terms of lack of ability to afford prices due to fall in income.

The assessment of pandemic induced shocks to household livelihoods involved the estimation of household income losses and coping expenses. However, because full year data was not available when this research was done, the study relied on observing semi-annual incomes and expenses from the month of March to August 2020. Specifically, the estimation of income losses and expenses on coping strategy were done as follows:

Household earnings loss (semi-annual) = (value of lost labour market opportunities) + (business losses due to reduction in sales and/or shutdowns) = (value of days under quarantine) + (forgone salary of displaced workers) + (forgone income due to business shutdown days) + (loss on revenue due to economic cease down)

Household expenses on coping strategies (semi-annual) = (½*semiannual transport expenses) + (value of days under quarantine) + (forgone salary of displaced workers) + (forgone income due to business shutdown days) + (loss on revenue due to economic cease down) + (expenses on safety equipment)

Semiannual transport expenseswere calculated as the sum of the total expenses on taxi ride services for local transport obtained by converting the expenses on the latest week in to monthly and semiannual expense (weekly expense x 4 x 6) and the sum of two-way ticket fees for longer travels outside town in the study period (6 months from march – august, 2020 GC). Because all ticket fees were doubled with the state of emergency as part of government measures to practice social distancing, ½ of the total transport expense made by a household is part of expenses on coping strategies, be it forced or voluntary.

Value of days under quarantine refers to the market value (according to average market wage rate) of days a household (member) spent under quarantine. Because being quarantined results in loss of income (that would be earned otherwise), this represents part of loss in household earnings as well as part of household expenses on coping strategies, forced or voluntary. It can be calculated as (number of days spent under quarantine) x (average market wage rate).

Forgone salary of displaced workers stands for the total loss of earning when a household member is displaced from his work due to impact of covid-19. It is part of the shock to household earning because of the pandemic. It can also be considered as part of the household expenses were forced or voluntary, on coping strategies since most of the worker displacement occurred due to the state of emergency which banned many social and economic activities and resulted in economic cease down. It was calculated as (number of days a worker is displaced from work) x (daily wage of the worker before job loss).

Forgone income due to business shutdown was calculated as (number of days of business shutdown) x (average income from the business before state emergency is declared). People quitted their business for days to practice the stay-at-home prescription both being forced by the state of emergency and being terrified by the covid-19 situation. So, it represents both shocks to household earnings as well as expenses on coping strategies, forced or voluntary.

Loss on revenue due to economic cease down is meant to say the reduction in business earnings because of the reduction in sales resulting from the economic cease down with the state of emergency and/or the pandemic. The state of emergency resulted in the ban of many social and economic activities as a result of which many businesses lost their market. This represents both part of shocks to household earnings as well as part of expenses on cooping strategy, forced or voluntary, by the household. It was calculated as (reduction in daily/weekly/monthly income from the business) x (6 months).

Expenses on safety equipmentstand for purchases of soaps, detergents, alcohol, sanitizers and masks. The calculation included all purchased and unpurchased consumption of those items since the unpurchased (such as gifts by friends, donors, employers, etc.) consumption can be considered as transfer incomes.

The variation across households in the impact of the covid-19 pandemic on livelihood and factors determining it was analyzed using regression techniques. However, the study results indicated that the loss of earnings due to the COVID-19 pandemic as well as the coping expenses greatly varied across households. While some of the surveyed households did not lose any income due to the COVID-19 pandemic others suffered income loses at

varying degrees. Similarly, the expenditure on coping mechanisms – including forgone incomes and direct expenses – was not uniform across households. Thus, a logistic regression was done to identify the socioeconomic factors (see table 1) that determine the likelihood a household loses earnings due to the COVID-19 pandemic. The logit model was used instead of OLS regression of lost earnings in ETB on socioeconomic variables because both category of households – those who lost earnings due to the COVID-19 pandemic and those who did not – were found in the survey. And, a Tobit model was used to identify the socioeconomic factors (see table 1) that explain differences in share of coping expenses in total income across households. The Tobit model was used because the share of coping expense in total household income runs between 0 and 1. In addition, the Tobit model allows to run censored regression which is advisable in such cases where the dependent variable assumes values only within a given interval. The description of the dependent and explanatory variables included in both the Logit and Tobit models are presented in table 1.

Table 1: Description of variables included in the Logit and Tobit models

Variable	Description	Value
LOSER	Whether a household lost earnings due to the COVID-19 pandemic	1 = a household lost earnings, 0 = otherwise
SHARE	Share of coping expenses in household total income	Between 0 & 1
SEX	Sex of household head	1 = male, 0 = female
AGE	Age of household head	In years
EDUC	Education level of household head	In years of schooling
MARRIED	Marital status of household head	1 = married, 0 = unmarried single
FAMILLYSIZE	Number of household members	
FWORKERS	Number of working age household members	
CREDIT	Household access to credit	1 = credit was accessed by household in last 12 months, 0 = otherwise
DWELLING	The type of house the household lives in	1 = own house, 0 = otherwise
BANKACCOUNT	Whether a household possess bank account	1 = household possess a bank account, 0 = otherwise
AVERDISTANCE	The average of distance from home to downtown and from home to workplace	Number of walking hours
SECTOR	Whether a household is employed in	1 = household is employed in

	transport sector as main source of livelihood	transport sector, 0 = otherwise

Results and Discussion

Household Socioeconomic Characteristics

The sample population revealed socioeconomic characteristics similar in many aspects to that of the town's population where the study was conducted. This might be aevidence that the sample taken for the study is a good representative of the population. Table 2 below presents some of these evidences. Particularly, while all the aspects are equally important, the diversity in the main sources of livelihood, credit access and food availability may capture attention. The main sources of livelihood range from day labor to civil service employments including agriculture. Yet, one should not panic how agriculture appeared considerably important and small trade took only the second place. That is because the town under study is only an emerging urban center that has grown to a town administration few years ago. The proportion of respondents having access to credit also showed greater percentage (which may confuse with the fact that many in LDCs do not have access to formal credits) because the study considered all borrowings – from formal and informal lenders, in kind and in cash, and small and large borrowings – to determine credit access. The sizable proportion of households who were under food shortage in the study period is also within expectation in view of the limited availability of economic opportunities in such an emerging town.

Table 2: household demographic and socioeconomic characteristics

Variables (description)	**Measurement (& Category)**		**Result (Percent/Mean)**
Sex of household head	valid %	Female	51.0
		Male	49.0
Marital status of household head	valid %	Single	39.5
		Married	60.5
Main source of livelihood of household	valid %	Small trade	15.6
		Agriculture	9.5
		Civil services	34.0
		Transport business	9.5

		Day labour	6.8
		Others	24.5
Credit access by household head	valid %	Have credit access	91.8
		No access to credit	8.2
Food availability in household	valid %	Under food shortage	20.5
		No food shortage	79.5
Dwelling type of household	valid %	Own house	38.2
		Otherwise	61.8
Household possession of bank accounts	valid %	Have bank account	56.2
		Have no bank account	43.8
Age of household head	Mean years of age (st. deviation)		29.90 (7.91)
Education of household head	Mean years of schooling (st. deviation)		6.76 (6.42)
Family size	Mean no. of members (st. deviation)		3.76 (1.83)
No. of workers in the household	Mean no. of workers (st. deviation)		1.82 (0.641)
Average distance to work place	Mean walking hours (st. deviation)		15.61(10.38)

Source: Primary Data

In general, sampled households showed great diversity in sex (around one half of them is female headed), marital status (around 3 out of 5 are married), source of livelihood (around a third of them are civil servants and the remaining proportion is made up of several occupations), credit access (denied to around 2 in 25 people), availability of food (diminutive for 1 in 5 people), dwelling type (around 2 out of 5 own a house) and possession of bank accounts (more than one half of them own a bank account). Similarly, age of head, education of head, family size, number of working age household members and average distance to work place varied across households (see table 2). Interestingly, such variation across households allows us to observe the varying degrees of impact levied by the pandemic on the different parts of the society in the town under study.

The Impact of the COVID-19 Pandemic on Household Livelihood: Difficulties in acquiring food and necessities

An outbreak of a pandemic affects household livelihoods in several ways. Recent papers [FEWS NET (2017), A.de la Fuente et al, (2019), Degye et al (2020), HLPE (2020)] reported that household face difficulty to get food and other necessary consumption during a pandemic which led to reduced consumption level and/or welfare. Such difficulty is mostly manifested in the form of job losses and fall of business revenue due to the pandemic situation. The results from this study confirm the same. It was discovered in the survey that

loss of earnings made some households unable to afford purchase of basic requirements such as food. This is also evident from the government's so called "**maedmagarat**" or "**meal sharing**" campaign which was practiced nationwide to help poor citizens cope up with the difficulties referred.

Table 3 indicates that the outbreak of the pandemic and the subsequent state of emergency resulted in loss of jobs in 11.6% of surveyed households – a case similar to what was observed in Liberia, Sierra Leone and Guinea during the 2014 Ebola virus outbreak FEWS NET (2017). Similarly, while both or either of voluntary and/or forced business shutdowns were encountered by 13.6% of surveyed households, nearly 1 in 3 surveyed households (32.7%) experienced decline in business revenues due to market losses associated with the pandemic and the state of emergency. Altogether, sizable proportion of surveyed households (42.2%) suffered declines in their earnings since the pandemic occurred due to job loss, business shuts, business revenue reduction or a combination of these. This was lower than the result in a recent study in Ethiopia, Degye et al (2020), in which the total income of half of the surveyed households (50.7%) has been found to be adversely affected by the pandemic.

Table 3: household income: jobs, business and revenues under covid-19

Variable	Category	Percent
Household income under covid-19	No declines	57.8
	Declined	42.2
Household jobs under covid-19	No jobs lost	88.4
	At least 1 household member lost job	11.6
Household business under covid-19	no business shut	86.4
	At least 1 household member shut business temporarily	13.6
Household revenues from business under covid-19	No decline	67.3
	Declined	32.7

Source: Primary Data

The figures in table 3 are also compatible with the other results in this study stressing further that the pandemic posed extensive difficulties to households. The study results indicate that nearly 2 in 5 surveyed households (40.1%) faced lack of finance for purchase of food and other basic requirements due to the pandemic and the subsequent state of emergency (See figure 1). This in turn led to other distortions on the financial and purchase decisions of households when households were threatened by the situation to borrow (28.3 % of surveyed households), dissave (21.7 % of surveyed households), sell property (5 % of surveyed households) or cut their consumption levels (43.3% of surveyed

households) to raise funds. (See figure 2). In short, survey results in this study indicated that households were exposed – due to the pandemic and the state of emergency declared – to lack of financial viability to purchase food and other basic requirements as well as overall distortions in the current and intertemporal consumption spending decisions. This was comparable to Degye et al (2020) which identified three strategies of dealing with the lack of finance adopted by households: reliance on savings (19.5%), reduction of food (19.5%) and non-food consumption (12.8%).

Figure 1: Distribution of Households by difficulty to finance basic purchases

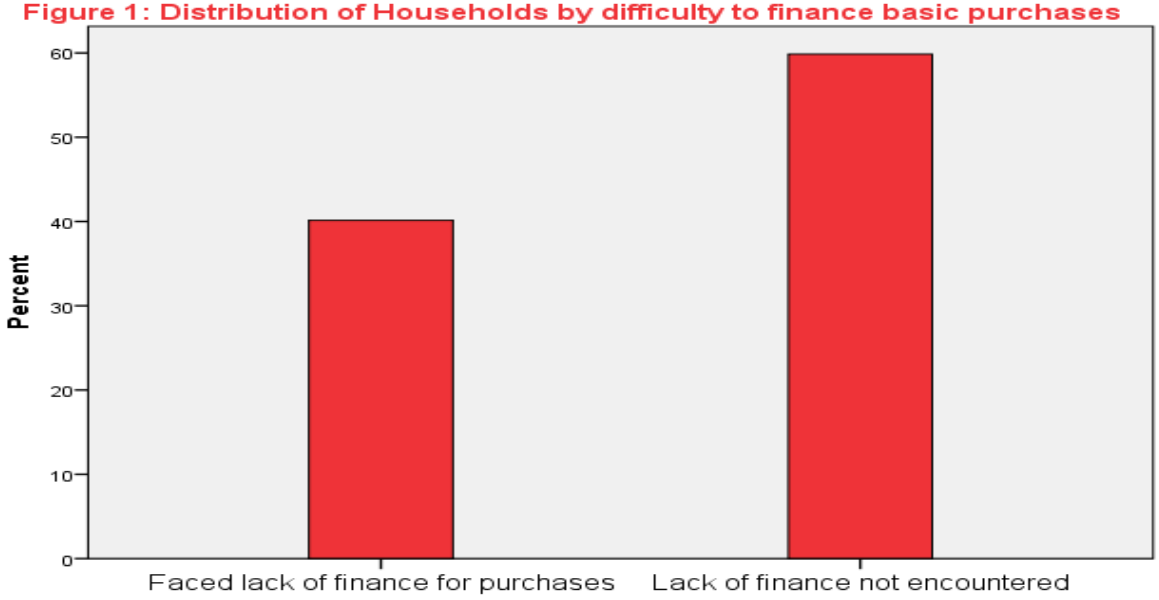
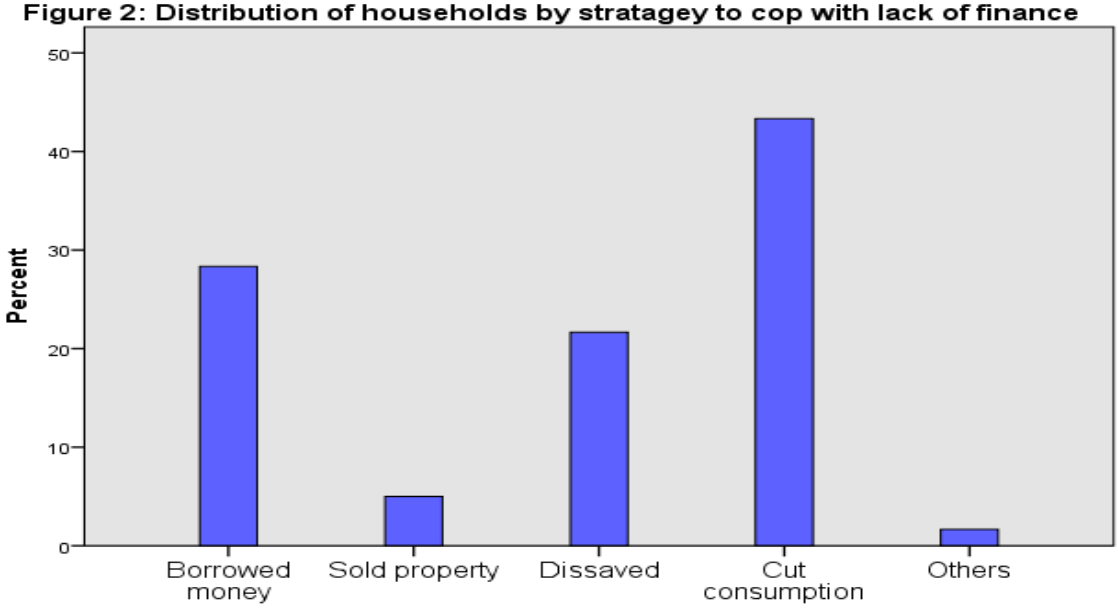


Figure 2: Distribution of households by stratagey to cop with lack of finance



The Impact of the COVID-19 Pandemic on Household Livelihood: Induced shocks in earnings and coping expenses

As can be seen in table 4, some lost no earning and others lost as much as 85% of their earnings. The share of household coping expenses in the total income ranges from zero to 94% of the total income before the pandemic. Such great variation across households is not surprising since the pandemic affected sectors of the economy differently. On average, surveyed households lost considerable proportion of their earnings (15.62% of their income before the pandemic) due to the COVID-19 pandemic and spent a sizable sum (22.31% of their income before the pandemic)
on coping mechanism – voluntarily or being forced by the state of emergency rules.

Table 4: Estimated income fall and coping expenses relative to pre covid-19 income

Description	Minimum	Maximum	Mean	Std. Deviation
Income decline (ETB)	0	93000	9194.80	19257.148
Percentage income decline	.00	.85	.1562	.23577
Coping expenses (ETB)	0	97728	11151.79	19507.617
Share of coping expenses	.00	.94	.2231	.24021

Source: Primary Data

The COVID-19 pandemic induced income shocks and coping expenses also showed varied intensity across the different category of households. While all category of households suffered loss of earnings and coping expenses, some suffered the same at greater intensity. The results from this study regarding the impacts of the pandemic on the different household categories (see table 5) were consistent with WFP (2020).In table 5, households that are single, earn mainly from day labor, are under food shortage and do not own a house; not only lost greater portion of their income but also spent greater portion of their income on coping mechanisms compared to the respective other categories. Female headed households also spent slightly higher on coping mechanisms than male headed households in relative terms. This may mean that the indicated categories of households suffered the most in terms of income losses and paid higher price in the fight against COVID-19 pandemic. This is particularly pressing because some of the less fortunate parts of society (females, poor day laborers, assetless citizens and the food insecure) are paying the ultimate prices for the common good of a COVID-19 free country.

Table 5: loss of earning and coping expense across social groups			
Variable		**Mean (Std. Deviation)**	
	Categories	**Income decline (ratio)**	**Share of coping expense**
Sex	Female	.1562 (.24637)	.2285 (.25303)
	Male	.1562 (.22592)	.2175(.22774)
Main source of livelihood	Small trade	.1845(.24056)	.2609 (.23497)
	Agriculture	.0277 (.10363)	.0701 (.11851)
	Civil services	.0342 (.10838)	.0895 (.11986)
	Transport business	.3385 (.25376)	.4083 (.20626)
	Day labor	.4343 (.26251)	.5065 (.24545)
	Others	.2153 (.25960)	.2972 (.27090)
Food availability	Under food shortage	.2094 (.23122)	.3100 (.23417)
	No food shortage	.1438 (.23661)	.2025 (.23797)
Dwelling type	Own house	.1087 (.19921)	.1906 (.22177)
	Otherwise	.1833 (.25316)	.2423 (.25113)

Source: Primary Data

Variation Across Households in the Impact of the COVID-19 Pandemic on Livelihood and Factors Responsible for It

. As indicated before, a logistic model was used to identify the factors that determine the likelihood a household loses earnings during the COVID-19 pandemic. And, a Tobit model was used to identify the factors that explain differences in share of coping expenses in total income across households. In both models, no serious collinearity was found (the highest VIF was 1.72), no influential outliers were found (the highest Cook's D was equal to 0.079), and heteroscedasticity was taken care of by running robust regression. The regression results are presented here after.

The logit model yielded mostly the expected results (see table 6). Education of the household head was found to have a negative significant – at 1% level of significance – impact on the likelihood that a household suffers from lose of earnings due to COVID-19. This means the more educated ones are less likely to suffer from loss of earnings. This may be because more educated workers get more secure job contracts than less educated workers. Similarly, households who possess bank accounts are also found to be less likely to be affected by the COVID-19 pandemic at 5% level of significance. Possession of bank account was entered in the model as an indicator of access to liquidity. Since access to liquidity means that businesses are more resistant for shocks and households can easily find other income earning opportunities when jobs are lost, households with bank account are less prone to loss of earnings. Thus, the negative impact of possession of bank account

on the likelihood of suffering loss of earnings might arose from the enhanced liquidity associated to it.

Table 6: Results from logistic regression of whether a household lost earnings on a set of socioeconomic variables

Wald chi^2 (11) = 36.86*
Log pseudolikelihood= - 75.349471
Pseudo R^2=0.2209

LOSER	Coef.	Robust Std. Err.
SEX	- 0.074	0.458
AGE	-0.0265	0.0313
EDUC	-0.147*	0.039
MARRIED	0.0053	0.566
FAMILLYSIZE	-0.0026	0.138
FWORKERS	0.0484	0.411
CREDIT	2.76*	0.952
DWELLING	0.503	0.517
BANKACCOUNT	-1.015**	0.453
AVERDISTANCE	0.0213	0.019
SECTOR	1.434**	0.709
_cons	0.768	1.097

The superscripts * & ** mean significant at 1% & 5% significance level, respectively.

Source: Primary Data

The Tobit model also mostly yielded the expected results (see table 7). The exception might be the significant positive impact, at 5% significance level, of credit access on the share of coping expenses in household income. It was hypothesized that credit access will result in smaller (share in income of) coping expenses since availability of funds means less vulnerability to loss of earnings and better incomes. However, the result obtained from the Tobit model were otherwise. This may be because residents of the town are mostly poor, just like other emerging towns of LDCs, who borrow often from informal sources mostly for consumption purposes. In such cases, credit is not associated with higher incomes. The vulnerability to loss of earnings during hard times like COVID-19 is still high even with access to credit used for consumption since the people are poor. This is also intuitive from the results in the estimated logit model that the less educated and those who do not possess bank account (intuitively the poor) are more likely to be a loser of earnings due to the COVID-19 pandemic. Hence, credit access rather implies high expenses on coping

mechanisms and lower incomes, or higher share of coping expenses. Moreover, availability of borrowed funds may mean increased consumption of safety equipment like masks, alcohol, sanitizer, etc (coping expenses) just like other consumptions. The poor without credit access have little to lose due to market shocks.

Table 7: Results from Tobit regression of share of coping expense in income on a set of socioeconomic variables

Log pseudolikelihood=14.276216
2 left-censored observations at SHARE <= 0.000427
1 right-censored observationsat SHARE >= .93774498

SHARE	**Coef.**	**Robust Std. Err.**
SEX	-0.052	0.043
AGE	-0.0024	0.0028
EDUC	-0.0123*	0.0029
MARRIED	-0.059	0.049
FAMILLYSIZE	-0.011	0.0141
FWORKERS	0.053	0.0405
CREDIT	0.1413**	0.067
DWELLING	0.062	0.044
BANKACCOUNT	-0.096**	0.037
AVERDISTANCE	0.0013	0.002
SECTOR	0.145**	0.0583
_cons	0.343*	0.101
/sigma	0.2121**	0.0169

The superscripts * & ** mean significant at 1% & 5% significance level, respectively.
Source: Primary Data

Households employed in the transport sector also spend significantly higher proportion – at 5% significance level – of their income on coping expenses for understandable reasons. As indicated before, state of emergency law associate with reduced revenues for peoples in transport service as well as increased need for consumption of safety equipment due to the nature of the business. This may be the reason whether the household is employed in the transport sector has the hypothesized positive effect on share of coping expenses in income.

Education of the household head has shown a significant negative effect – at 1% significance level – on the share of coping expenses in income as it was hypothesized.

Again, the negative effect was hypothesized because educated workers tend to have more secure job contracts and better incomes, hence, lower share of coping expense in income.

Similarly, households who possess bank account spend significantly lower proportion of their income – at 5% significance level –on coping expenses as it was hypothesized. In the Tobit model too, possession of bank account was entered as indicator of access to liquidity. Possession of bank account implies more access to liquidity and, hence, better resistance to market shocks and better incomes. So, this may be the reason share of coping expense in income was found to decrease with possession of bank accounts.

In summary, the results of this study indicate that both the likelihood of a household being a loser of earnings and the share of coping expenses in income tend to be higher (lower) with less (more) education, credit access (no credit access), households possessing no bank account (possessing bank account), and households in transport service (not in transport service). It may be most impressive in this finding that the less educated, households possessing no bank account, and intuitively even households with credit access are also most probably the poorer. Considerable proportion of peoples in transport service, if not greater proportion, can also be deemed to belong to the poor. These altogether mean that the less fortunate poor citizens are more likely to be victimized by the COVID-19 pandemic and are forced (by state of emergency laws and/or the terrifying situation) to pay the ultimate sacrifices so every citizen of the globe can see COVID-19 under control. As the fruits from enforcement of state of emergency laws and practicing preventive methods against the spread of COVID-19 are equally shared by all across the nation and the globe, such extra burdens on those already in miserable living conditions may raise some series growth and equity concerns. It might even inflict failure on the efforts to prevent the spread of the disease since the poor cannot afford to hold long with such heavy prices of compliance to state of emergency laws and prevention methods.

Conclusion and Recommendation

Conclusion

This study exposed that the COVID-19 pandemic affected livelihoods in the study area. It has led to loss of earnings which in turn resulted in lack of finance for basic purchases like food. It has left many households less well-off as consumptions are cut due to the difficulty with money. Future wellbeing of households is also compromised as future consumption will be affected one way or the other when borrowed funds, property and/or current savings are used to fulfill transitory financial requirements for consumption.

The COVID-19 pandemic caused households to lose considerable earnings (as high as 15.6% on average) and incur substantial coping expenses (as high as 22.3% on average). Yet, the loss of earnings as well as the coping expenses were most despicable for the less

fortunate and poor parts of society (females, day laborers, asset less citizens and the food insecure).

The impact of the covid-19 pandemic on livelihood varies across households. While a portion of the households lost no earnings, the likelihood a household may lose earnings due to COVID-19 pandemic tends to be higher for households that are less educated, have credit access, possess no bank account, and are employed in transport service as main source of livelihood. Similarly, the share of coping expenses in household income increases with less education, access to credit, and employment in transport service as main source of livelihood but decrease with possession of bank account.

Recommendation

The following recommendations are drawn based on the findings of this study.

- The findings of this study indicate that households were faced difficulties in acquiring basic requirements of life like food due to the COVID-19 pandemic. And, the loss of earnings and coping expenses incurred were more intense where economic viability is lacking, i.e., on the poor. The cooping strategy is putting much burden on part of society that is big in number but cannot afford to shoulder the difficulties that arose – specially with food – and pay the coping expenses for long. This implies that, the eradication of COVID-19 requires economic strategies to be combined with the pure epidemiological strategies. This may include safety net programs aimed at helping the poor in acquiring food and delivering subsidized supply of safety equipment like masks, sanitizers, alcohol. This is especially important in view of the lengthened period of COVID-19 pandemic.

- It was found out that household strategies to deal with the induced lack finance involve intertemporal distortion in the flow of financial resources (borrowings for current consumption, dissaving, and sale of property). This may mean that the pace of current and future investment is threatened by rising interest rates and/or lack of investible funds. Since such distortion understandably occur with the poor households, it will specifically have a major impact on small scale businesses which provide employment mostly for the poor. Particularly, this is obvious since small businesses are mostly operated with either resources from own savings or resources borrowed at high interest rate from informal sources, and highly vulnerable to shocks in the highly imperfect informal financial markets. Specially in LDCs, this can interfere with the national target of lifting out the poor from their miserable living condition. Thus, it might be helpful for

the local and federal government to counter act with measures to stimulate especially small-scale investment activities.

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