

## Labor Market Impact of Lockdown Measures and Coping Strategies of the Vulnerable People

Naim Uddin Hasan A Chy<sup>1\*</sup>, Fatema Akhter Hiramoni<sup>2</sup>, Shovon Roy<sup>3</sup>, Md. Maznur Rahman<sup>4</sup>

### Abstract

This study investigated the impact of lockdown measures, resulting from COVID-19 pandemic, on lives and livelihoods of low-income people engaged in multifarious informal works, including agriculture. It used convenience sampling to collect data from the study respondents. Based on descriptive statistics and bivariate analyses, it examined pre and during-lockdown differences in earnings, expenditures, and working hours. Among other results, the study found 66 to 78 percent fall in income for the low-income individuals during the lockdown period compared with the pre-lockdown normal time. The participants heavily relied on past savings, borrowing from formal and informal sources, selling properties, and rationing consumption to cope with the hard times. Those receiving income from sources other than the main profession and from livestock were found better in terms of coping compared with individuals depending on just one work.

**Keywords:** Coping; COVID-19; Expenditure; Income; Lockdown; Working hours.

### 1. Introduction

Strict lockdown, fully or partially implemented in more than 100 countries during the first wave of COVID-19 pandemic, aiming at avoiding transmission of the coronavirus infection brought severe economic consequences. While the nation-wide lockdown helped reduce infection and save lives in many countries, it proved to be economically expansive as well, creating multifarious unfavourable labour market effects. Many governments came forward with stimulus packages that varied to a noticeable extent in terms of intensity (Siddik 2020). Although some developed countries were able to support people without work during the lockdown period in multiples ways, the stories in the developing world were quite different. For many individuals living in the low-income countries, the fight during the lockdown was twofold in true sense - coronavirus infection and hunger. Coibion, Gorodnichenko, and Weber (2020a) documented that some 20 million people across the world lost jobs by April 8 of 2020, creating even stronger impact on unemployment compared with the entire period of the great recession. Available evidence shows that the lockdown measures tremendously impacted the unemployment situation in the developed countries. Bauer and Weber (2021) find that shutdown policies in Germany caused 60% of the increase in unemployment inflows

---

<sup>1</sup> Associate Professor, Department of Economics, University of Chittagong, Chattogram 4331, Bangladesh; E-mail: naim@cu.ac.bd \* Corresponding author

<sup>2</sup> Lecturer, Department of Economics, University of Chittagong, Chattogram 4331, Bangladesh; E-mail: fatema.hiramoni@cu.ac.bd

<sup>3</sup> Lecturer, Department of Economics, Sheikh Hasina University, Netrokona 2400, Bangladesh; E-mail: shovon.roy@shu.edu.bd

<sup>4</sup> Assistant Professor, Department of Economics, Noakhali Science and Technology University, Noakhali 3814, Bangladesh; E-mail: maznur.rahman@nstu.edu.bd

in April 2020 and a 20% increase in unemployment rate in the US (Bell and Blanchflower 2020). Cajner et al. (2020) employing administrative payroll data from ADP, found that aggregate employment fell by 21% through late April, with employment rebounding somewhat through late June. Australia saw a 9.5% decline in hours worked in the March-April period (Borland and Charlton 2020). Similar labour market effects of COVID-19 were reported in Canada, with employment decreasing by 15% and aggregate hours worked per week decreasing by 32% among workers aged 20-64 years (Lemieux et al.2020). One-third of the workers in the US and Canada, 25% of workers in the UK and 45% of workers in China experienced income fall because of COVID-19 (Bell and Blanchflower 2020). Coibion, Gorodnichenko, and Weber (2020b) investigated the income and expenditure effects of COVID-19 interviewing 10,000 respondents. About 50% of them reported income and wealth losses due to the COVID-19 pandemic. They also showed that discretionary expenses such as expenditures on transport, travel, recreation, entertainment, clothing, and housing significantly compressed; on average 5% of survey participants were found likely to purchase durables. A large drop in debt payments and rents was also reported.

A few studies have documented the labour market effects of the on-going COVID-19 pandemic in the developing country context, focusing on measures like unemployment and hours worked. The unemployment rate in India increased by more than 23% during the April-May, 2020 period, a level of unemployment that is three times higher than that of the previous year (Kapoor 2020). A total of 2,084,593 workers were terminated or sent back home by the employers by April 20, 2020 in Indonesia (Inayah and Surisman 2020). Fernandes (2020) examining the economic impact of the COVID-19 crisis across industries and countries, showed that lockdown has led to a decrease in consumption and interruptions in production in China. International Labour Organization (2020) reported that this crisis is expected to wipe out 7.2% of working hours or 125 million fulltime workers in Asia and the Pacific. However, the literature on the labour market effects of the COVID-19 pandemic in the developing-country context is still limited (Jain et al.2020).

The first case of COVID-19 was identified on March 8, 2020 in Bangladesh, and a country-wide lockdown was imposed at the end of March to contain the disease transmission. The two and a half months long lockdown, prohibiting operations of nearly all activities, ended on May 30, 2020. In the meantime, it adversely hit more or less everyone within the economy, especially the poor and vulnerable. About 22% of country's population live below the national poverty line and are mainly engaged in informal work such as rickshaw pulling, vending, mending shoes, tailoring, and so on (Asian Development Bank 2019). The lion share of their earnings is spent on the purchases of food items, with the remaining, if any, being spent on children's education, health, and entertainment. Lockdown made many of them completely out of work, while reducing the length of working hours for many others. It is not hard to imagine how difficult the time was for those who were fully or partially unemployed with little to no income, especially the poor and vulnerable. Islam et al. (2020), surveying 340 Bangladeshi adults, found that economic hardship was related with food crisis and caused mental stress during COVID-19. Two studies, exploring the labour market and poverty impacts of COVID-19, were conducted using Bangladeshi data. Genoni et al. (2020),

combining household surveys and telephone surveys implemented in three different cities of Bangladesh before and after the arrival of COVID-19, found substantial impact that varied across region and gender. BRAC (2020) reported that about 95% of households experienced shrinks in income, up to 72%, during the first two months of the pandemic. According to the South Asian Network on Economic Modelling, poverty rate may double to 40.9% compared with the pre-pandemic time (Raihan 2020). They report approximately 100.22 million people are staying at high risk of economic and health vulnerabilities, with 53.64 million people being extremely poor. While the above studies focus on before-and-after-lockdown income differences and poverty impacts, no study investigates the patterns of changes in expenditures and the economic coping strategies like using savings, borrowing and selling properties. Therefore, the present study aimed to investigate the patterns of changes in income, expenditure among Bangladeshi vulnerable people, and subsequent economic coping strategies to confront the changes due to the lockdown. Main objective of the study was to investigate the impact of lockdown measures on lives and livelihoods of the low-income people engaged in multifarious work including agriculture and their economic coping strategies to overcome this hardship due to lockdown measures. Specific Objectives were the following:

- (a) To estimate the changes household expenditures between before lockdown and during lockdown;
- (b) To explore the pattern of economic coping strategies taken by vulnerable people.

## **2. Methods**

### **2.1. Participants**

In the present study, participants were recruited from two sub-districts of Bangladesh – Ashuganj of Brahmanbaria and Agailjhara of Barisal districts. In Ashuganj, we collected data from CharChartala union and Ashuganj Bazar. In Agailjhara, we collected data from Goila and Bagdha unions. The respondents from the municipal areas in the two sub-districts were mostly involved in operating small enterprises, vending things, and in the transport sector while those from the outskirts were mainly engaged in agriculture and manual labor. These two areas were selected via convenience sampling technique, as COVID-19 pandemic limited the scope of choice of sampling design. In this study, people who are in marginal income level were the study population. Participants were selected via convenience sampling technique. The data from participants collected through face-to-face interview as they had no or little access to mobile telephone. A priori power calculation was utilized to estimate the minimum sample size of the present study. With a statistical power of 0.95 to detect the small-sized correlation coefficient (.20) (Kohn and Senyak 2021), minimum 319 respondents required. A total of 485 people was approached to participate in this study and 399 (88% male) of them agreed to participate (response rate 82.27%). Number of participants were above the minimum required number of participants.

### **2.2. Data collection tool**

A structured questionnaire (Supplementary File 1) was utilized to collect data in this study. The questionnaire contained three sections – personal information section, employment, income, and expenditure section, and economic coping with changed situation section. The personal

information section contained questions about participants' age, gender, marital status, number of family members, number of dependents, and education. Among the variables, *gender* is dichotomous with two categories - male and female. *Marital status* is a nominal categorical variable with the three categories of married, unmarried, and other, where other includes divorced and separated individuals. *Education* is a binary variable focusing on whether the responded ever attended school or not. Finally, *age*, *number of family members* and *number of dependents* are quantitative in nature. Next section included 27 questions about employment (i. e., "How many days a week do you work during the period of covid-19, on an average?"), income (i. e., "What is your approximate daily income during covid-19 period, on an average?"), and expenditure (i. e., "Does covid-19 cause you to decrease any cost?") both before lockdown and during lockdown. Last section of the questionnaire included 15 questions about economic coping strategies to cope with the challenging condition during the lockdown (i. e., "Did you have to spend from savings to bear family expenses in last 4 months"). This section included questions about number of meal intake, borrowing money, relief assistance, etc.

### **2.3. Procedure**

This study was carried out in accordance with the Declaration of Helsinki and its later amendments, and other comparable ethical standard and approved by one of the authors' university's ethics committees. Data were collected immediately after the Bangladesh government lift up the countrywide lockdown. Although lockdown lifted, but there was risk of COVID-19 disease. Therefore, all preventive measures suggested by the govt. and the WHO were taken, and social distancing maintained to avoid the risks of being affected. Prior to conducting the main survey, necessary changes in the instrument were made based on the feedback received from eight respondents in a pilot survey. Before conducting the interview, participants' informed consent was taken. They were informed about the study objectives, potential risks and benefits, time need to complete the interview, and confidentiality of responses. Participants were informed that their responses would be kept anonymous and utilized for the research purposes only. As their data would be kept anonymous, they had no chance to withdraw their responses after completing the interview. Participants had right to withdraw from the research during the interview.

### **2.4. Statistical analysis**

In this study, Stata/MP 14 and GraphPad Prism were utilized for data management and data analysis. Descriptive statistics (mean, standard deviation, frequency, and percentages), and student-t-tests performed to analyze the data. Besides, bar diagram and pie chart were utilized to present results graphically. The student-t tests were performed to examine if there exist statistically significant differences in the various labor market outcomes before and during lockdown. The impact on spending was also analyzed using the t-test, focusing on expenditures made on various broad categories in the context of household spending. The percentage changes in income and expenditures between the two periods under consideration were also calculated. Bar diagrams were used to analyze the coping strategies or expenditure financing modes adopted and meal intake during the lockdown by the respondents. Finally, pie charts were used to analyze the patterns of relief assistance received.

### 3. Results

#### 3.1. Participants' characteristics

Demographic information of the present study participants is presented in Table 1. Participants age mean was 42 years (SD = 13.6 years). Among participants, majority were male (88.0%). Around 89% participants were married, and 8% were unmarried. Approximately, 62% of participants attended formal schools and studied up to some level, starting from the first grade. On average, 5 persons (SD = 1.9) lived in one family, with the number of dependents per family being approximately 3.6 (SD = 1.7). Most of the participants (81%) worked for wage, earning on a daily basis, while the remaining (19%) worked for salary, earning on a monthly basis. The distribution of work sectors was found to be wide, with 26% of the participants working in agriculture, 20% in transportation, 25% in jobs using manual labor, and 12% in jobs with technical skills.

**Table 1:** Summary statistics for study population (N=399)

|                                 |           |
|---------------------------------|-----------|
| Age (mean, SD)                  | 42 (13.6) |
| Gender                          |           |
| Male                            | 353 (88%) |
| Female                          | 46 (12%)  |
| Marital status                  |           |
| Married                         | 354 (89%) |
| Unmarried                       | 33 (8%)   |
| Other                           | 12 (3%)   |
| Attended school                 | 249 (62%) |
| Family size (mean, SD)          | 5 (1.9)   |
| Number of dependents (mean, SD) | 3.6 (1.7) |
| Mode of compensation            |           |
| Wage                            | 320 (81%) |
| Salary                          | 77 (19%)  |
| Work type (N=373)               |           |
| Small enterprise                | 23 (0.3%) |
| Agriculture                     | 96 (26%)  |
| Manual labour                   | 94 (25%)  |
| Skilled worker                  | 44 (12%)  |
| Transport                       | 74 (20%)  |
| Vendor                          | 33 (9%)   |
| Other                           | 9 (2%)    |

#### 3.2. Impact on income and expenditure

Table 2 presents the changes in percent and mean differences in work and income, and expenditure between before lockdown and during lockdown. Results shows that lockdown led to significant changes in the total length of working time for the low-income people, reducing the number of days worked per week from an average level of 6.3 to 2.4 (-62%) (t-value = 29.6,  $p < .001$ , cohen d = 2.140). Changes in hours worked per day also significantly declined (-62.5%) (t-value = 23.4,  $p < .001$ , cohen d = 1.686). Table 2 also shows substantial decrease in incomes for the wage-based participants, from Tk475.12 to Tk160.35 (-66.17%)

(t-value = 20.6,  $p < .001$ , cohen  $d = 1.583$ ). Same trend also showed for the salary-based participants, from Tk9742.45 to Tk2135.48 (-78.08%) (t-value = 10.6,  $p < .001$ , cohen  $d = 1.661$ ).

**Table 2:** Comparison of work, income and expenditure before and during lockdown periods

|                        | N   | Before               | During               | % change | t-value | p-value | Cohen's $d$ |
|------------------------|-----|----------------------|----------------------|----------|---------|---------|-------------|
|                        |     | Lockdown             | lockdown             |          |         |         |             |
|                        |     | M (SD)               | M (SD)               |          |         |         |             |
| <b>Work and income</b> |     |                      |                      |          |         |         |             |
| Days worked/week       | 317 | 6.3 (1.06)           | 2.4 (2.36)           | -61.9    | 29.6    | <.001   | 2.140       |
| Hours worked/day       | 317 | 8 (2.65)             | 3 (3.19)             | -62.5    | 23.4    | <.001   | 1.686       |
| Wage earned/day        | 317 | 475.12<br>(225.68)   | 160.35<br>(167.98)   | -66.17   | 20.6    | <.001   | 1.583       |
| Salary earned/month    | 70  | 9742.45<br>(5017.57) | 2135.48<br>(4078.37) | -78.08   | 10.6    | <.001   | 1.661       |
| <b>Expenditure</b>     |     |                      |                      |          |         |         |             |
| Housing                | 399 | 425.06<br>(991.81)   | 412.33<br>(904.42)   | -3.09    | 0.9     | .35     | .014        |
| Children's education   | 399 | 1488.14<br>(1665.46) | 589.65<br>(1072.40)  | -60.35   | 14.7    | <.001   | .641        |
| Health                 | 399 | 1314.21<br>(1237.85) | 1231.91<br>(1271.79) | -6.23    | 2.5     | .01     | .065        |
| Food                   | 399 | 6204.52<br>(2424.80) | 5502.03<br>(2399.34) | -11.33   | 11.1    | <.001   | .291        |
| Other                  | 399 | 1159.79<br>(1238.70) | 881.51<br>(746.61)   | -23.95   | 6.05    | <.001   | .272        |

Note: All figures on income and expenditure are reported in BDT and on a monthly basis.

Table 2 also present changes and mean differences in category-wise household expenditures between before lockdown and after lockdown. Expenditure for children's expenditure was significantly from Tk1488.14 to Tk589.65 (-60.35%) (t-value = 14.7,  $p < .001$ , cohen  $d = .641$ ). Significant reduction was found also found in health (-6.23%) (t-value = 2.50,  $p < .01$ , cohen  $d = .065$ ), food (-11.33%) (t-value = 11.1,  $p < .001$ , cohen  $d = .291$ ), and other (-23.95%) (t-value = 6.05,  $p < .001$ , cohen  $d = .272$ ) expenditure between before and during lockdown.

**Table 3:** Comparison of household expenditures made by wage earner and salary earner

| Expenditure          | Wage earner (N=320) |                 |          | Salary earner (N=77) |                 |          |
|----------------------|---------------------|-----------------|----------|----------------------|-----------------|----------|
|                      | Before lockdown     | During lockdown | % change | Before lockdown      | During lockdown | % change |
| Housing              | 375.85              | 378.40          | 0.081    | 610.02               | 526.02          | -13.74   |
| Children's education | 1570.43             | 670.26          | -57.3    | 1127.56              | 246.04          | -78.14   |

|        |         |         |        |         |         |        |
|--------|---------|---------|--------|---------|---------|--------|
| Health | 1316.75 | 1215.79 | -7.67  | 1288.76 | 1235.31 | -4.15  |
| Food   | 6035.69 | 5327.25 | -11.75 | 6894.29 | 6186.71 | -10.27 |
| Other  | 1101.25 | 846.73  | -23.12 | 1410.93 | 1026.59 | -27.27 |

Note: All expenditure figures are reported in BDT and on a monthly basis.

The percentage decreases in all types of household expenditures for salary-based earners were higher than those earning on a daily basis except expenditure on health and food. For example, expenditures on children's education saw a greater decline (78% vs.57%) for individuals earning monthly income compared to those living on daily earnings (Table 3).

### 3.3. Coping during lockdown

We investigated the coping strategies adopted by lower-income people during the adverse time, focusing on a number of indicators, including dissaving (spending from savings), borrowing from formal and informal sources, and selling property. Table 4 shows the proportions of people, engaged in different sectors, adopting the three types of non-erosive strategies during lockdown. About 73% of respondents employed as street vendors and 68% employed in the transport sector survived on savings. A similar trend was observed for individuals working in the remaining sectors. More than half, about 55%, of those engaged in different types of manual labour that is employment requiring physical effort, reported to have survived on savings. About 48% of the respondents having small enterprises and 50% of those involved in jobs requiring technical skills lived on savings. In contrast, relatively fewer individuals involved in agriculture, about 30%, reported using savings to finance the required household expenditures during lockdown.

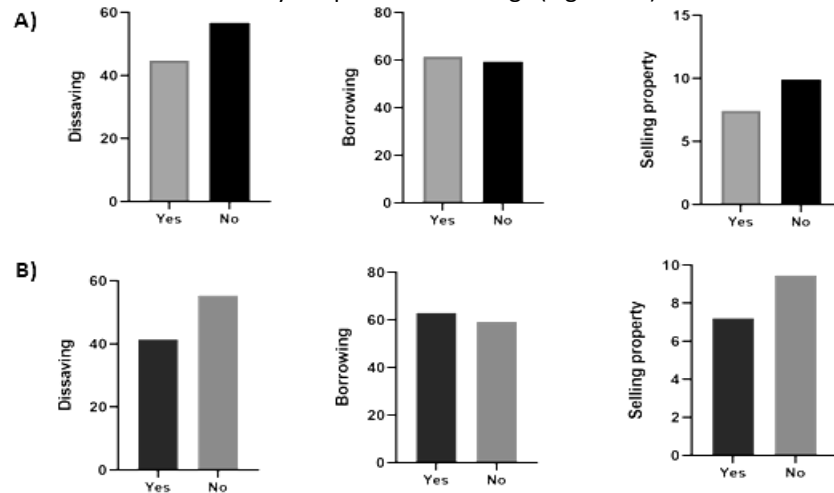
**Table 4:** Coping of the low-income people by work type

|                      | (N) | Use of savings | Borrowing | Selling property | Inadequate meal | Skipping meal |
|----------------------|-----|----------------|-----------|------------------|-----------------|---------------|
| Small enterprise (%) | 23  | 48             | 43        | 4                | 4               | 30            |
| Agriculture (%)      | 96  | 30             | 56        | 7                | 8               | 13            |
| Manual labour (%)    | 94  | 55             | 63        | 5                | 14              | 29            |
| Skilled worker (%)   | 44  | 50             | 61        | 9                | 11              | 27            |
| Transport (%)        | 47  | 68             | 69        | 8                | 18              | 36            |
| Vendor (%)           | 33  | 73             | 55        | 30               | 15              | 30            |
| Other (%)            | 9   | 56             | 67        | 0                | 11              | 33            |
| Total (%)            | 373 | 52             | 60        | 9                | 12              | 26            |

Borrowing played another important role in coping with the unfavourable time, making at least 50% of people in each sector except small enterprises borrowing from formal or informal sources. A large proportion of individuals, about 69%, working in the transport sector relied on borrowing. On the other hand, more than 60% of people engaged in skilled work and manual labour and about 55% of individuals involved in agriculture and vending things on streets resorted to borrowing to cope with the changed situation. The proportion of respondents reporting selling properties was quite low in all sectors but street vending; about 30% of vendors reported to have sold properties of some type. It is worth mentioning that at least 70%

of the study participants engaged in any sector reported a debt increase during the lockdown period. About 85% of people working in *agriculture, skilled labour* and *other* sectors reported a rise in debt (not shown in Table 4).

A total of 174 (43.61%) respondents had income source (s) such as remittance, livestock, poultry, agriculture and small enterprise other than the main job. People lacking additional income sources were more likely to spend from savings (Figure 1A).

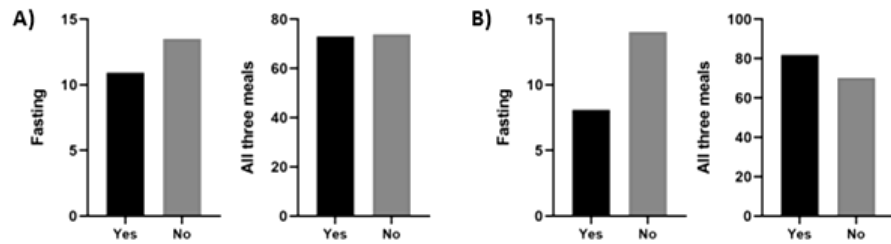


**Figure 1:** Coping with income shocks by having access to income other than main income (A) and by possession of livestock (B). Here 'Yes' denotes having income other than main income (A) or possessing livestock (B) and 'No' denotes no income other than main income (A) or no livestock (B).

About 57% of such respondents used savings to survive as opposed to 45% of people having other income sources surviving on past savings. However, these two groups of with and without other income sources do not show any significant difference in terms of borrowing. About 60% of both groups of people had to borrow to finance expenditures during the lockdown. Respondents lacking other income sources were found more likely to sell properties than those receiving income from other sources (10% vs.7%). As Figure 1B shows those receiving income from livestock were less likely to use savings (41% vs.55%) and to sell property (7% vs.9%) compared with individuals lacking livestock.

We also analysed the variations in meal intake between the two periods under consideration to see if the vulnerable people had to cope with the adverse situation by reducing food consumption. Individuals receiving income from sources other than the main work were found to be less likely (11% vs.13.5%) to spend at least one whole day fasting compared with those without such income (Figure 2A).

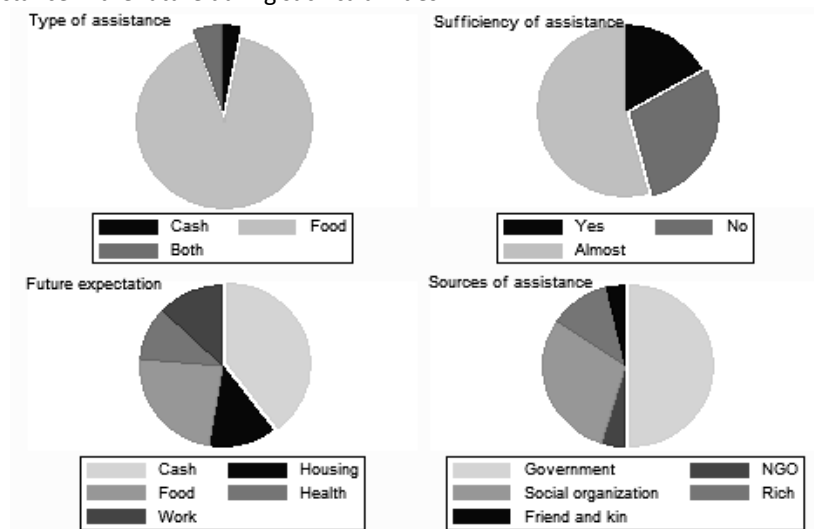




**Figure 2:** Mean intake during lockdown by having access to income other than main income (A) and by possession of livestock (B). Here ‘Yes’ denotes having income other than main income (A) or possessing livestock (B) and ‘No’ denotes no income other than main income (A) or no livestock (B).

The possession of livestock seemed to play a significant role in helping people fight the expenditure-related challenges encountered during the lockdown situation. There exists a six-percentage point difference in fasting for at least one day between individuals with and without livestock (8% vs.14%). This particular result is consistent with that for the three meals measure; those possessing livestock were found more likely to have all three daily meals (Figure 2B).

The people in need received some help during lockdown from some sources, including the rich, friends, relatives, and the government. About half of the respondents (54%) received relief assistance from the government (Figure 3). Food was the dominant form of assistance (91%). While about 17% people were fully satisfied with the help they received from various sources, 29% reported that the assistance was not sufficient to live a satisfactory life. Although food was found to be a desirable form of assistance to many, most respondents (40%) expect to receive cash assistance in the future during such calamities.



**Figure 3:** Relief assistance received during lockdown.

**4. Discussion**

Using a sample of marginalized people, engaged in different types of work in sub-urban areas of Bangladesh, this study investigates the impact of country-wide lockdown on their lives and livelihood. It contributes to the literature exploring the labour market impacts of the COVID-19 pandemic, performing a before-after analysis and focusing on changes in income, expenditure, working hours and analysing coping strategies. Significant differences in hours worked per day and days worked per week were observed between pre and during-lockdown periods. These findings indicate that sectors employing high proportions of marginalized people were unable to satisfactorily operate after the lockdown was imposed, making workers either completely out of work or work for a limited amount of time. This particular finding also suggests that lockdown measures changed the status for many low-income people employed in informal sectors, turning them from fulltime to part-time. Most sectors including small enterprise transport, vending, and sectors involving skilled and manual work could hardly operate during the lockdown. In contrast, those employed in the agriculture sector were able to continue their work, to a great extent if not full, during lockdown due to the very nature of the work. Understandably, the decline in working hours translated into a fall in income significantly, seriously affecting both wage-based and salary-based individuals. The substantial fall in average income of people working on a monthly pay system implies that the low-paying informal service sector was also vulnerable, being unable to support their staff during the unfavourable condition. The impact of lockdown on the expenditure pattern of the marginalized is clearly supportive of their income fall. The decrease in expenditure on children's education might have happened due to multiple reasons, including income fall, school closure, postponing receiving lessons from private tutors, and so on. However, the decline in expenditures made on health, food, and other things can be explained to a great extent by the decreased or zero income earned during the lockdown period. Given that the supply chain throughout the country was nearly perfect and the infection awareness level of the marginalized was less than satisfactory (Lau et al.2020), reasons other than income fall is less likely to inhibit them from spending less on health, food, and other necessities. Mean housing expenditure remained the same during the lockdown period, implying that demand for housing services is less income elastic compared with other goods and services. An investigation into the coping strategies reveals that all individuals except those employed in the agriculture heavily relied on previous savings to finance the basic necessities. This particular finding is reinforced with the results that agricultural workers borrowed less compared with others. Using past savings and borrowing by individuals employed across sectors are supplemented by property sales in some cases. Livestock possession played an important role during the economically turmoil days for the limited-income people. Those possessing livestock lived better lives in term of meal intake after the lockdown was imposed, indicating that cows, goats, poultry, and similar animals can serve as an alternative income source for the poor and vulnerable.

This study comes up with the following policy recommendations based on the findings.

- i) It was found that the affected low-income people heavily relied on savings and borrowing to cope with the bad situation. The government may develop separate savings instruments for the marginalized people engaged in the informal sectors. This can serve as insurance for smoothening consumption during potential future disasters.
- ii) This study provides labour market effects for the first wave of the pandemic for the marginalized. However, it seems the pandemic would last for an extended period, creating

long-term impact on the poor and the vulnerable. Keeping this into consideration, the government should bring more marginalized people under the social security programs, helping them fight the long-term consequences of the pandemic.

- iii) While the government's initiative of providing incentive packages to the businesses to arouse the down falling economy is commendable, a program targeting only the low-income people would have been highly helpful for them. Relief assistance, in the forms of food and cash, received from different sources benefited those requiring help during the lockdown to some extent. However, in many cases it was insufficient. Given this, separate program to provide cash assistance to the poor may be undertaken during disasters to help them avoid starvation.

There are some key limitations to the study. Although using a sample of 399 respondents is sufficient to provide correct estimates, the non-probability type of the sample limited the scope of generalizing the results for the whole population. Drawing samples from a large sampling area, consisting of a good number of sub-districts located in different parts of the country, would make the data more representative. The study couldn't circumvent these limitations due to the restricted movement during lockdown. The pandemic hasn't ended yet. In view of this, it is not hard to imagine that the on-going pandemic would create significant long-term impact on the lives and livelihoods of the vulnerable people, which can be a future direction of research.

## **5. Conclusion**

Based on surveys implemented using structured questionnaire, this study provides insights into the labour market effects of the COVID-19-caused lockdown measures, especially focusing on the vulnerable people employed in the informal sectors. This study, employing retrospective information reported by respondents, first ascertained the differences in mean incomes and category-wise expenditures between the pre-lockdown and during-lockdown periods. It then analysed the coping strategies adopted by the low-income people that helped them survive during the little-to-no-work period. Finally, it looked at the impact on meal intake for the marginalized. The results show that income for the wage-based and salary-based workers decreased by 66% and 78%, respectively, during the lockdown period. The pandemic resulted in the reduction of work hours, turning many individuals part-time from full time while making some completely unemployed. The average number of days worked per week decreased by about 62% while hours worked per day, on average, fell by 63%. People adopted different means to cope up with the changed situation during lockdown including, rationing consumption and managing emergency funds. This study documents significant lockdown-period decreases in expenditures of various types, with children's education category experiencing the highest percentage decrease. On the other hand, they chose different strategies to finance the purchase of the subsistence-level goods and services during the lockdown period. For instance, those who had little savings had to spend it, those who lacked savings had to borrow and those who were unable to manage loans had to sell their handy properties such as TV, phone, ornaments, rickshaw, cattle and so on. Also, borrowing on an emergency basis mostly from informal sources that came with a high interest rate increased the debt levels for many. The miserable conditions of the vulnerable people are better manifested by the findings that the calamity made many of

them adopting the erosive coping strategy of consumption rationing work hours.

### References

- Asian Development Bank. "Poverty Data: Bangladesh." 2019.
- Bauer, Anja and Enzo Weber. "Covid-19: How Much Unemployment Was Caused by the Shutdown in Germany?". *Applied Economics Letters* 28 (2021) : 1053-58.
- Bell, David N. F. and David G. Blanchflower. "Us and UK Labour Markets before and During the Covid-19 Crash." *National Institute Economic Review* 252 (2020) : R52-R69.
- Borland, Jeff and Andrew Charlton. "The Australian Labour Market and the Early Impact of Covid-19: An Assessment." *Australian Economic Review* 53 (2020) : 297-324.
- BRAC. "Rapid Perception Survey on Covid19 Awareness and Economic Impact." Dhaka, 2020.
- Cajner, Tomaz, Leland D. Crane, Ryan A. Decker, John Grigsby, Adrian Hamins-Puertolas, Erik Hurst, Christopher Kurz and Ahu Yildirmaz. "The U. S. Labor Market During the Beginning of the Pandemic Recession." *National Bureau of Economic Research Working Paper Series* No.27159 (2020).
- Coibion, Olivier, Yuriy Gorodnichenko and Michael Weber. "Labor Markets During the Covid-19 Crisis: A Preliminary View." *National Bureau of Economic Research Working Paper Series* No.27017 (2020a).
- Coibion, Olivier, Yuriy Gorodnichenko and Michael Weber. "The Cost of the Covid-19 Crisis: Lockdowns, Macroeconomic Expectations, and Consumer Spending." *National Bureau of Economic Research Working Paper Series* No.27141 (2020b).
- Fernandes, Nuno "Economic Effects of Coronavirus Outbreak (Covid-19) on the World Economy." *IESE Business School Working Paper* No. WP-1240-E (2020).
- Genoni, Maria Eugenia, Afsana Iffat Khan, Nandini Krishnan, Nethra Palaniswamy and Wameq Raza. "Losing Livelihoods : The Labor Market Impacts of Covid-19 in Bangladesh." Washington DC, 2020.
- Inayah, Inayah and Surisman Surisman. "Work Termination During the Covid-19 Pandemic in the Perspective of Positive Law in Indonesia." *Legal Standing: Jurnal Ilmu Hukum* 4 (2020) : 247-54.
- International Labour Organization. "ILO Monitor: Covid-19 and the World of Work: Updated Estimates and Analysis." 2020.
- Islam, S. M. Didar-Ul, Md Bodrud-Doza, Rafid Mahmud Khan, Md Abidul Haque and Mohammed A. Mamun. "Exploring Covid-19 Stress and Its Factors in Bangladesh: A Perception-Based Study." *Heliyon* 6 (2020) : e04399.
- Jain, Ronak, Joshua Budlender, Rocco Zizzamia and Ihsaan Bassier. "The Labor Market and Poverty Impacts of Covid in South Africa." *Working Paper Series* 264 (2020).
- Kapoor, Radhicka. "Covid -19 and the State of India's Labour Market." In *ICRIER Policy Series*, 2020.
- Kohn, Michael, and Josh Senyak. "Sample Size Calculators." 2021.
- Lau, Lincoln Leehang, Natalee Hung, Daryn Joy Go, Jansel Ferma, Mia Choi, Warren Dodd and Xiaolin Wei. "Knowledge, Attitudes and Practices of Covid-19 among Income-Poor Households in the Philippines: A Cross-Sectional Study." [In eng]. *Journal of global health* 10 (2020) : 011007-07.
- Lemieux, Thomas, Kevin Milligan, Tammy Schirle and Mikal Skuterud. "Initial Impacts of the Covid-19 Pandemic on the Canadian Labour Market." *Canadian Public Policy* 46 (2020) : S55-S65.
- Raihan, Selim. "Covid-19's Effect on Poverty and Policy Response in Bangladesh." 2020.
- Siddik, Md Nur Alam. "Economic Stimulus for Covid-19 Pandemic and Its Determinants: Evidence from Cross-Country Analysis." *Heliyon* 6 (2020) : e05634.