

InM Covid-19 Research

**The Psychology of Covid-19 and Financial Behaviour:
The Urban Middle Class in Bangladesh**



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1. Introduction

The economic effects of the Covid-19 pandemic are evident across all countries in the world including Bangladesh. While the impact of Covid-19 is no doubt dramatic, it is also human nature to adjust his/her financial behaviour to avoid falling prey to 'behavioural traps' in such a crisis situation. Moreover, the impact of Covid-19 on financial behaviour will be as varied as the situations in which different income classes in society find themselves. In the present Covid-19 pandemic situation, it is likely that the households belonging to the lower middle class are facing great pains as many of their earning members have lost their jobs or income earning opportunities, especially those working in the informal economy. Households belonging to the middle class are more likely to be unwilling to express their sufferings in public due to social stigma; and no policy and administrative structure is available to the government for reaching these groups at times of emergencies like the present pandemic, even if the government wishes to do so.

This study is based on an online survey conducted by InM to capture the impact of Covid-19 pandemic on the financial behaviour of the urban middle class in Bangladesh. The prime objective is to analyse how the economic behaviour and the choice of financial instruments by the urban middle class have been affected by the pandemic. The study also focuses on how the patterns of income, expenditure and savings have changed due to the pandemic; especially its impact on the use of digital financial services including changes in the preference pattern for different financial products.

2. The Middle Class in Bangladesh

There is no universally accepted definition of the middle class, and the characteristics vary across countries. Traditionally, the concept of the middle class has been a social and cultural construct in Bangladesh (PPRC, 2019). At present, the economic characteristics are prominent in defining the middle class. A simple definition is to consider the people who earn between USD 2 and USD 20 per day as belonging to the middle class (Riana, 2017). As per the Asian Development Bank (ADB) definition, about 37 to 40 million people of Bangladesh – 22 per cent of the total population – belong to the middle class. The middle income household, with four family members, have a monthly income between BDT 70,000 and BDT 150,000 (Sen, 2016). In other contexts, the lower middle class and the upper middle class are taken to have a monthly income ranging between BDT 31,000 and BDT 99,999 and between BDT 100,000 and BDT 250,000 respectively (JICA, 2016).

In reality, all four dimensions of food security--food availability, access to food, food utilisation and food stability--have been challenged, either directly or indirectly, due to Covid-19. Furthermore, some middle class households have been forced to sell physical as well as financial assets; while others have resorted to borrowing and deplete past savings to meet regular household expenses. The consequences have been major adjustments in their financial behaviour and financial portfolios to

mitigate the financial impact of the Covid-19 pandemic (Figure 1).

Figure 1: Transmission of Covid-19 Financial Impact on Middle Class Households



Source: InM Online Household Survey 2020

Another related aspect of the country's urban middle class is the rapid transition towards digital financial services (DFS) and online marketing channels. For instance, online purchasing and reliance on digital services have jumped up significantly during Covid-10 and the key issue is to explore whether this will continue to experience record-setting rates even in the post-pandemic period. During the Covid-19 period, credit card transactions rose by nearly 24 per cent year-on-year in September 2020, while debit card transactions experienced close to 15 per cent growth year-on-year (Bangladesh Bank). Moreover, monthly transactions through mobile phones in September 2020 are recorded at Tk. 491.21 billion, which is 152 per cent higher than the corresponding month of 2016. The consumers are now fearful of physical contact with others, they are spending more online and the key issue is: are they likely to continue their increased spending online after the crisis ends?

3. Methodology

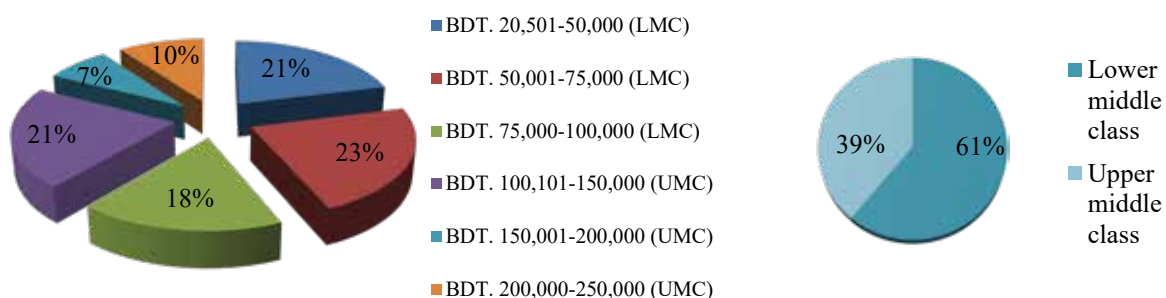
A total of 80 respondents participated in the InM online survey. The study uses the level of household income as the proxy for identifying the middle class in the urban areas. Keeping in view the primary objectives of this study and the methodological limitations, we have used the level of income as the indicator for identifying the urban middle class in Bangladesh. For the present analysis, two segments of the urban middle class households have been differentiated: (i) the lower middle class (with household income ranging between BDT 20,501 and BDT 100,000); and (ii) the upper middle class (having household income between BDT 100,001 and BDT 250,000). The distinction has been used to test the hypothesis based on anecdotal evidence that there exist noticeable differences in the financial behaviour between the upper and lower middle class households since these two groups face significantly different types of constraints and challenges on the one hand and opportunities and prospects on the other.

Among the surveyed households, 61 per cent belong to the lower middle class (LMC) category as per the adopted definition while the rest 39 per cent are upper middle class (UMC) households (Figure 2). Further, among the LMC households, 23 per cent belong to the income range between

¹In order to minimise the measurement complexities, we have used income ranges rather than exact levels of income to define the middle class since one would expect that individuals would be more willing to reveal their range of income more correctly than their true incomes.

BDT 50,001 and BDT 75,000 closely followed by 21 per cent in the income range of BDT 20,501 and BDT 50,000. Among the UMC, 21 per cent of the households have income ranging between BDT 100,101 and BDT 150,000.

**Figure 2: Income ranges of middle class households
(% of households)**



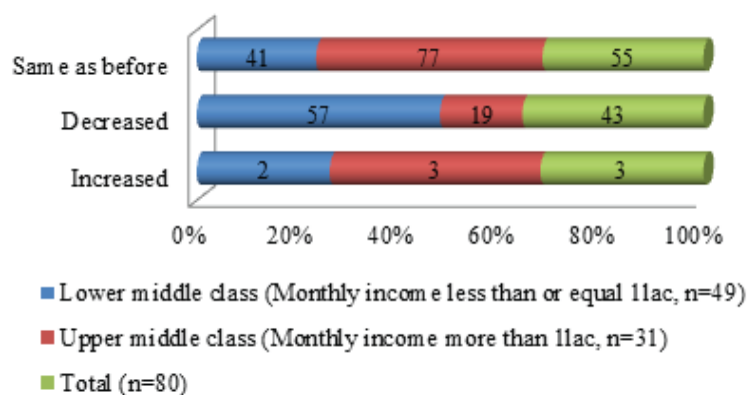
Source: InM Online Household Survey 2020

4. Study Findings

4.1 Impact on household income and savings

The household income analysis shows the overall Covid-19 risks faced by respondents and the key sources from which such risks are generated (Figure 3). It shows that 43 per cent of surveyed households have experienced income losses. There is, however, significant variation across the two categories; 57 per cent of the LMC households have suffered income losses compared with only 19 per cent of the UMC households. This shows that the UMC households have more stable sources of income; whereas 77 per cent of the UMC households have reported no change in their income levels due to Covid-19 disruptions in economic activities, similar share is 41 per cent for the LMC households.

**Figure 3: Income changes due to Covid-19 impact
(in %)**



Source: InM Online Household Survey 2020

For the LMC households, 27 per cent report a salary cut as opposed to only 6 per cent for the UMC households (Table 1). Other major reasons for reduced monthly income of the LMC households are losses in businesses, reduced rent income from houses/properties, and job termination. It may be mentioned that the average earning members per household is slightly higher for the UMC relative to the LMC households (1.9 vs. 1.8 per household). The average reduction in monthly household income, however, is higher (18 per cent) for the UMC households compared with the LMC households (13 per cent). In order to mitigate the pandemic impact, half of the middle class households had to reduce their savings to meet current expenses, which is a high of 63 per cent among the LMC households. Even 29 per cent of the UMC households were forced to reduce their savings. Nearly one-third (31 per cent) of the LMC households reduced their food costs compared with 6 per cent of the UMC households to mitigate the income effect of the Covid-19 pandemic.

Table 1: Income effect of Covid-19 on middle class households

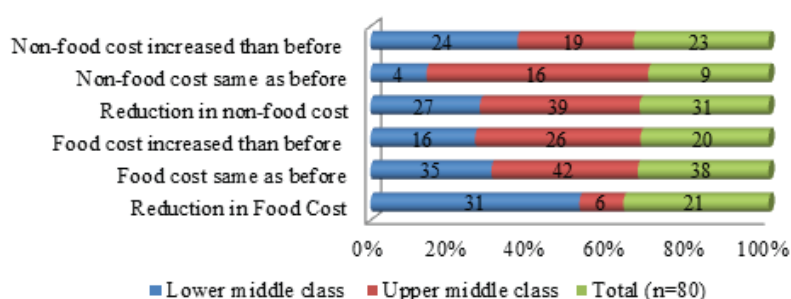
	LMC	UMC	Total
Average earning member, number	1.80	1.90	1.84
Average reduction in household income, %	13	18	14
Reasons behind income loss, % of households			
Termination from job	4	6	5
Irregular salary payment	4	10	6
Salary reduction	27	6	19
Non-receipt of property rent income	2	...	1
Reduced rent income	12	0	8
Business losses	12	0	8
Gender division of earners, % of households			
Females (n=31)	55	45	100
Males (n=49)	65	35	100
Adjustments effects of income reduction, % of households			
Savings reduction	63	29	50
Food expenditure reduction	31	6	21

Source: InM Online Household Survey 2020

4.2 Impact on expenditure and consumption

In order to analyse the impact of Covid-19 on the consumption pattern of the middle class households, the expenditure patterns during the pre- and post-Covid-19 period have been compared. To see the impact at the aggregate level, two broad expenditure categories--food and non-food—have been considered. It is evident that the LMC households are more vulnerable relative to the UMC households (Figure 4).

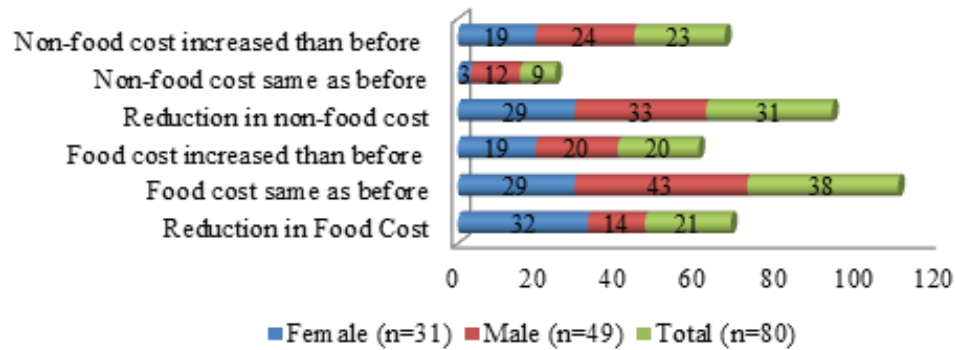
Figure 4: Covid-19 impact on expenditure pattern of middle class households (% of households)



Source: InM Online Household Survey 2020

Figure 5 shows the changes in consumption pattern at a more disaggregated level and distinguished in terms of gender of the respondents. It shows that the female respondents are more vulnerable compared with the male ones in terms of reduction in household food expenses.

Figure 5: Gender dimension of expenditure reduction due to Covid-19
(% of households)



Source: InM Online Household Survey 2020

Around 21 per cent of the households reduced their food expenditure due to several factors, such as reduced mobility resulting from lockdown restrictions, reduced household income and rising health-related expenses. Total food expenses at the household level declined by 25 per cent for the female respondents and 22 per cent for the male respondents showing higher level of adjustments by women-dominated households (Table 2).

Table 2: Factors behind reduced household food expenses due to Covid-19
(% of households)

Causal factor	Gender of respondent			Household's middle class status		
	Female	Male	Total	LMC	UMC	Total
Reduced income level	13	10	11.3	14.3	6.5	11.3
Rising health related cost	10	12	11.3	16.3	3.2	11.3
Reduced mobility	42	18	27.5	32.7	19.4	27.5
Extent of decline in food expenses due to Covid-19, %	25	22	24	22	35	24

Source: InM Online Household Survey 2020

Probit analysis for household income and food consumption

The probit regression model can conveniently be used to identify the factors that determine whether a respondent's source of income has been affected by the Covid-19 and whether the household's usual food consumption have worsened during the pandemic.

For the present analysis, the estimation of the cross sectional data has been performed following equation (1): $Y_i = \alpha + \gamma_i I + \varphi_i O_i + \beta_i X_i + \varepsilon_i$ (1)

Where, Y is the binary outcome variable for respondent i . Two different probit regressions have been estimated. First, Y takes the value of 1 if a respondent's regular source of income has been reduced by Covid-19 and 0 otherwise. Second, Y is equal to 1 if a respondent has experienced deteriorated food security and 0 otherwise. I and O are two main variables of interest. I denote 1 if a respondent falls in the LMC category and 0 for UMC category. O denotes 1 if a respondent is involved in any private job and 0 otherwise. X represents the vector of other explanatory variables—which stands for, gender, age, number of earning members (1 if more than one earning member and 0 if one earning member). $\gamma_i, \phi_i, \beta_i$ are statistics to be estimated. ε_i is random error term that varies among individuals. The estimation results are given in Table 3 and Table 4.

Table 3: Factors affecting income sources by Covid-19

	Probit co-efficient	Marginal effect (dy/dx)
Income category (1=LMC, 0= UMC)	1.12***	.40***
Number of earning member (1=more than 1 earning member, 0=1 earning member)	.17	.07
Occupation (1 = private job, 0= others)	.26	.09
Gender of respondent (1 = male, 0= female)	-.16	-.06
Age	-.01	-.004
Number of observations	80	

Note: ***, **, and * represent 1%, 5%, and 10% significance level, respectively.

Table 4: Factors affecting food consumption by Covid-19

	Probit co-efficient	Marginal effect (dy/dx)
Income category (1=LMC, 0= UMC)	1.15***	.24***
Number of earning member (1=more than 1 earning member, 0=1 earning member)	.36	.08
Occupation (1 = Private job, 0= others)	.08	-.17
Gender of respondent (1 = male, 0= female)	-.64	-.16
Age	-.03	-.007
Number of observations	80	

Note: ***, **, and * represent 1%, 5%, and 10% significance level, respectively.

The result shows that the respondents belonging to the LMC category are 40 per cent more likely than the UMC respondents to experience a worsening of their income sources by the Covid-19 crisis (Table 3). Similarly, Table 4 shows the probit estimation results on the factors affecting respondent's normal food consumption pattern during the Covid-19 pandemic. The estimate shows that the respondents in LMC are 24 per cent more likely than UMC to suffer from adverse impact on their normal food consumption pattern due to Covid-19. Both these results reflect heightened vulnerability of the LMC in coping with major shocks like Covid-19.

Although the results are not statistically significant, the marginal coefficients show that in terms of

gender, male respondents are respectively 6 per cent and 16 per cent less likely than female respondents to experience that their sources of income and food consumption have been adversely affected by the Covid-19 crisis. The results further suggest that although the Covid-19 pandemic causes damaging effects on all income classes, the detrimental effects on the LMC households is severe due to multiple factors, such as difficulties for LMC households to maintain stable earning source, decreased income, and rising health related costs. The analysis suggests that the respondents belonging to UMC are more likely to balance income hazards from Covid-19 than respondents from LMC.

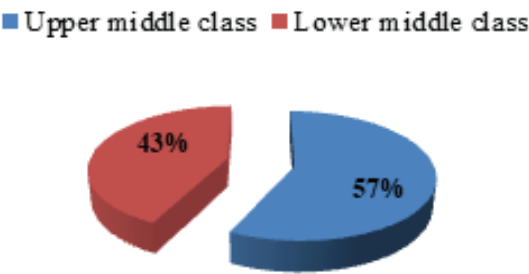
4.3 Adjustments in savings behaviour

The survey shows that around 17 per cent of the households purchased savings products (e.g. fixed deposit and deposit pension schemes) during the Covid-19 period. The behaviour is, however, more pronounced for the UMC households (57 per cent of these households purchased savings products) relative to the LMC households (43 per cent).

Table 5 shows that around 29 per cent of the UMC households have experienced savings reduction while the similar share is 63 per cent for the LMC households. The savings reduction difference between the two groups is significant in terms of t-statistic at 1 per cent level. This is consistent with our earlier assertions regarding the savings behaviour of the two groups of middle class households.

There are three major factors behind the savings reduction of the middle class households—job loss, increased health expenses and income reduction. At the aggregate level, savings declined by around 30 per cent due to Covid-19 (Figure 7).

Figure 6: Purchase of saving products
(% of households)



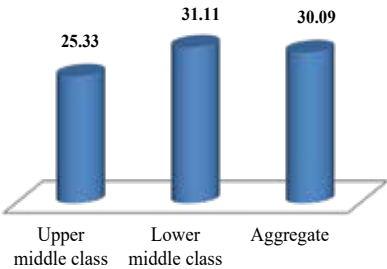
Source: InM Online Household Survey 2020

Table 5: Savings Reduction of UMC and LMC households
(% of households)

UMC	LMC	Difference
29.03	63.26	34.23***

Source: InM Online Household Survey 2020

Figure 7: Extent of savings reduction
(% of households)

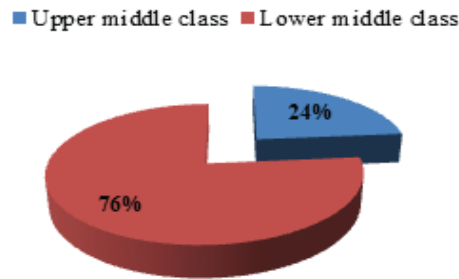


Source: InM Online Household Survey 2020

4.4 Adjustments in borrowing behaviour

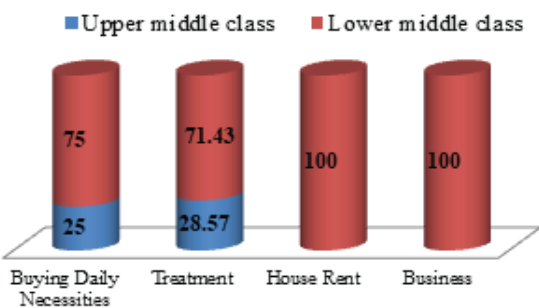
The information on borrowings shows that 21 per cent of the middle class households have taken loans during Covid-19 of which 76 per cent are from the LMC households (Figure 8). Obviously, the UMC households are more secure financially compared with the LMC households and hence the latter group is more likely to borrow during the crisis. This is also reflected in the purpose of borrowing by the households. It is seen that 75 per cent of the LMC households have taken loans for meeting daily expenses compared with only 25 per cent of the UMC households (Figure 9).

Figure 8: Borrowing during Covid-19
(% of households)



Source: InM Online Household Survey 2020

Figure 9: Purpose of borrowing
(% of households)

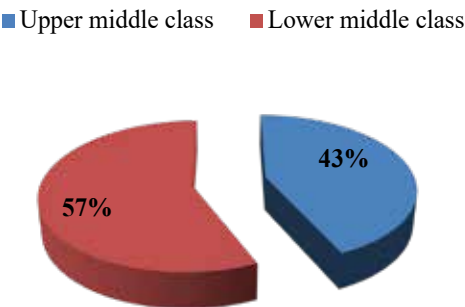


Source: InM Online Household Survey 2020

4.5 Use pattern of insurance products

The access to insurance products is an important coping mechanism during any crisis. The survey shows that 37 per cent of the middle class households have any type of insurance coverage; 57 per cent from the LMC households and the rest 43 per cent belonging to the UMC households (Figure 10). One of the reason for wider coverage of the LMC households is that the vast majority of the earning members of these households work in salaried jobs in the private sector. As part of their job benefits, many of them enjoy life and other insurance facilities. In practice, only about 7 per cent of the households claimed any insurance benefits during the Covid-19 period.

Figure 10: Insurance coverage
(% of households)

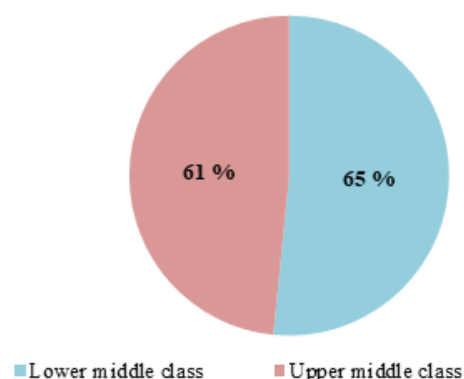


Source: InM Online Household Survey 2020

4.6 Transactions behaviour

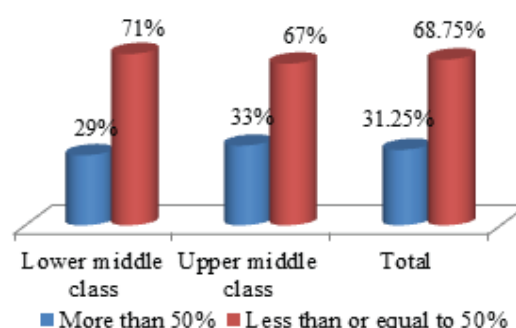
Covid-19 has compelled the consumers to substantially revise their spending habits and adopt the online mode of buying more widely. Online purchasing, digital payments and contactless shopping all have risen substantially for the urban middle class households. Considering the safety and security issues, e-commerce and contactless payments have grown tremendously in popularity. The survey shows that around 64 per cent of the respondents report that their online product purchasing habit has increased significantly during Covid-19. This is higher (65 per cent) for LMC relative to the UMC (61 per cent). Around 31 per cent respondents hold that the increase in online purchasing of products is more than 50 per cent and this rate is higher for UMC (Figure 12).

Figure 11: Increased online purchase during Covid-19



Source: InM Online Household Survey 2020

Figure 12: Percentage increase in online purchase



Source: InM Online Household Survey 2020

During Covid-19, the respondents are observed to purchase more food items, medicine, Covid-19 protective items, daily groceries etc. through the online shops. A well-known online grocery shop in Bangladesh, Chaldal.com reports an increase in daily order to 5,000 from its pre Covid-19 level of about 2,000. The owner of the e-shop recruited and trained up about 900 extra employees during the pandemic to meet the market demand. In the case of online purchase, the survey shows that 35 per cent of the consumers encountered frauds and the rate is almost double for the LMC households relative to the UMC ones (Table 6). One major factor could be the bias of the LMC households towards selecting non-brand items and new online shops. The fraudulent practices cover a wide range of cheating including delivering different products rather than the displayed products in the catalogue, poor quality of the delivered products, and charging higher prices than in other shops.

Table 6: Fraudulence practices in online purchasing

Category	Lower middle class	Upper middle class	Total
Encountered any kind of fraud in online purchase (%)			
Sometimes	41	26	35
No	59	74	65
Type of fraud (%)			
Differences in shown and delivered products	30	38	32
Poor quality of delivered product	30	50	35
Higher price compared with quality and price in other shop	39	13	33

Source: InM Online Household Survey 2020

Mode of Payments and online digital transactions

During Covid-19, the middle class has become more accustomed with online purchase and digital payments. The preference, however, is for cash on delivery rather than advanced payments as the practice reduces risks. About 65 per cent paid product prices in cash after delivery and checking of the products (Table 7). Many have also used bKash, bank card and Rocket/Nagad services. The UMC seems to have a preference for purchasing products through bank cards; 16 per cent of UMC purchasers used bank cards relative to 10 per cent of LMC purchasers. Considering safety and temporary closure of shopping stores during Covid-19, the widely used online and digital transaction medium is bKash (60 per cent) during Covid-19 (Table 7).

Table 7: Mode of payments and digital transactions medium during online purchase

Mode of payments	Lower middle class (%)	Upper middle class (%)	Total (%)
Cash on delivery	61.22	70.97	65.00
Advance from bKash	24.49	12.90	20.00
Through bank card	10.20	16.13	12.50
Through Rocket/Nagad	4.08	---	2.50
Transactions medium			
ATM	40.82	38.71	40.00
Credit card	16.33	29.03	21.25
BKash	59.18	61.29	60.00
Nagad	8.16	19.35	12.50
Rocket	2.04	3.23	2.50
UCash	-	-	-
Directly from bank	18.37	6.45	13.75
Debit card	22.45	16.13	20.00

Source: InM Online Household Survey 2020

Around 21 per cent of the middle class households opened new mobile accounts and 85 per cent have used bKash account during the pandemic situation (Table 8). The respondents mainly used their mobile accounts for mobile recharge, money transfer and bill payments. Around 74 per cent use their mobile accounts mainly for recharging their mobile phones.

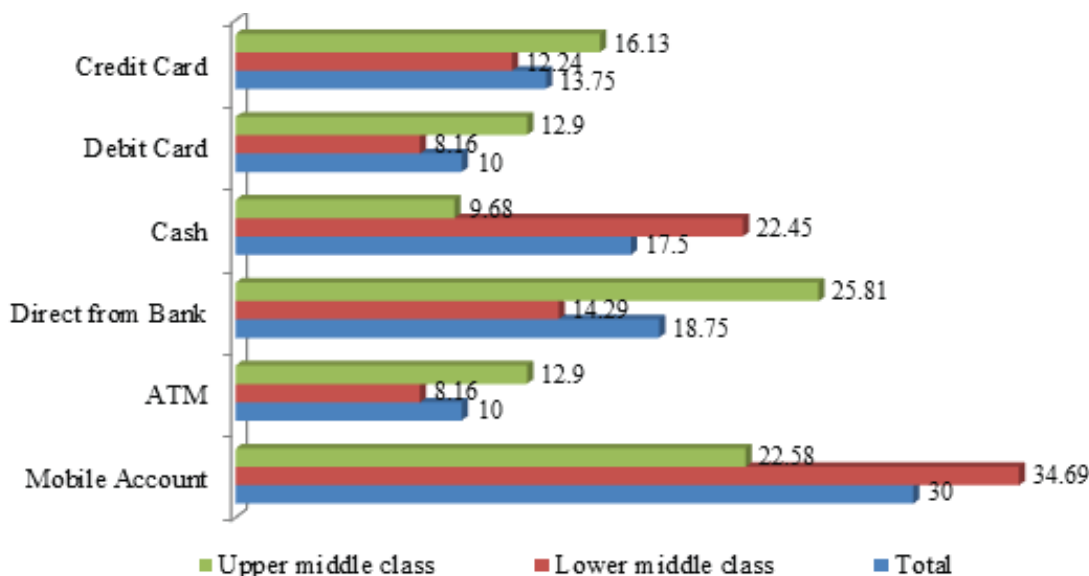
Table 8: Mobile account use during Covid-19

	Indicator	Lower middle class (%)	Upper middle class (%)	Total (%)
1	Open new mobile account (yes)	18.37	25.81	21.25
Type of mobile account				
1	BKash	83.67	87.10	85.00
2	Rocket	32.65	16.13	26.25
3	Nagad	12.24	6.45	10.00
4	UCash	2.04	--	1.25
5	No account	8.16	12.90	10.00
Major purpose of mobile account use				
1	Payment of electricity/gas bill	34.69	38.71	36.25
2	Mobile recharge	77.55	67.74	73.75
3	Money transfer	55.10	58.06	56.25
4	Collection of house rent	6.12	3.23	5.00
5	School fee	14.29	9.68	12.50

Source: InM Online Household Survey 2020

Around 30 per cent of the middle class consumers hold the view that the easiest and most reliable channel for money transactions is mobile account (Figure 13). However, the rate is higher for LMC than UMC lower middle class households. Around 19 per cent of the consumers prefer direct transactions from the banks.

Figure 13: Preferred medium for money transactions

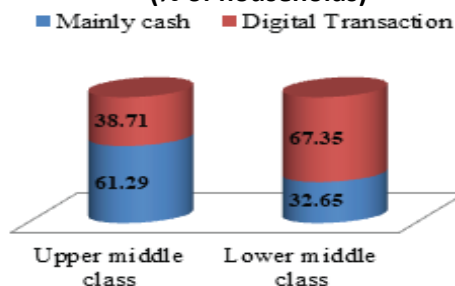


Source: InM Online Household Survey 2020

5. Post Covid-19 Financial Management

The Covid-19 pandemic has pushed forward the largest digital boom in the financial landscape of Bangladesh along with remarkable growth performance by E-commerce giants, like Chaldal, Daraz, Pickaboo and others. Further, mobile financial services (MFS), such as bKash, Rocket, UCash, and Nagad have set new directions in transferring, transacting and storing money digitally instead of cash. The increased use of mobile application and web-based financial services of the banks during the pandemic has also created rooms for faster and secured transactions with little or no human intervention. Even the small retail grocery shops in the city streets are getting paid through MFS by the customers as handling of cash poses the risk of getting infected by the coronavirus. The retail and online shops receive orders by phone calls and SMS and deliver the products at the doorstep of the customers. The digital boom has prompted one of the commercial banks, the City Bank, to launch a digital loan product up to BDT 10,000 without any collateral on a pilot basis in collaboration with bKash, the largest mobile financial service provider in the country. This enables the customers to access finance with their smartphones.

Figure 14: Transaction preference by mode (% of households)



Source: InM Online Household Survey 2020

It appears from the survey that the Covid-19 pandemic has started to change the financial behaviour of the middle class population in a number of ways. What is important to notice is the rapidly rising trend of adopting digital financial services and the strong indication from the digital users that the preference for digital products will be sustained in the post-pandemic period. The survey results show that more than two-thirds of the LMC households have switched to digital modes of transaction during the pandemic and intend to pursue digital financial transactions in the post Covid-19 period. Among the UMC households, digital transformation is lower at 39 per cent; and still 61 per cent of the household members conduct their transactions mainly with cash.

6. Conclusions

The information collected through the InM online survey on the urban middle class households shows that Covid-19 has directly affected household income, expenditure, food security, savings as well as the financial behaviour of formal and informal sector working population. Due to the lack of a regular income flow, many middle class (especially belonging to the lower middle class category) have adjusted household food intake downwards and changed their food habits to minimise food expenses through less consumption of proteins and nutritious foods. Dietary changes have also been found in both lower and upper middle class households, specifically those without a guaranteed source of income. Online purchases and digital transactions have risen significantly and the indications are strong that the transition will continue in future as well.

The study highlights the need for elimination of all sources of vulnerability of the country's middle class, specifically the challenges of the lower middle class. The rising expectations of the expanding middle class are the critical drivers of social change in Bangladesh, needed to overcome the low living standards of the majority of the population and reach the cherished goal of emerging as a high income country by 2041. The key for such dynamic transformations is the creation of a more learning middle class; that is, a dynamic middle class that would be ready to exploit the opportunities of the 'new normal' after the Covid-19 pandemic. The time is now ripe to identify and focus on the drivers of change of the country's middle class and explore and understand the basic human needs and desires of the middle class to ensure its sustained expansion especially focusing on productive thrusts of the lower middle class and reducing the gaps in their competencies.

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