

An Impact study on  
**MOBILE FINANCIAL SERVICES (MFSs)**  
in Bangladesh



BANGLADESH BANK



ঢাকা বিশ্ববিদ্যালয়


**An Impact Study on  
Mobile Financial Services (MFSs) in Bangladesh**

**A Joint Research by**

**Bangladesh Bank and University of Dhaka**

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## Contributors

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## Executive Summary

*This study is designed to elicit information about the impact of Mobile Financial Services (MFSs) on households and small and medium business firms in Bangladesh. Mobile Financial Services (MFSs) are getting huge popularity among the large masses of Bangladesh due to its swiftness, easy accessibility and for many other reasons, but still the industry is not in its stable position. Bangladesh Bank and other relevant agencies of Bangladesh are putting their all-out efforts to put this industry into take-off mode. This study is an example of it which is aimed at taking a look into the effects of MFSs into the lives of people and small and medium business firms plus its overall service quality. The survey for the study is conducted over thirty six (36) districts of Bangladesh and a total of one thousand and sixty five (1065) of households and two hundred sixty five small and medium business firms are surveyed over these districts.*

*Three survey questionnaires are developed and used in the study; the first one is for family households, the second one is for small and medium business firms and the third questionnaire is constructed and used for measuring the service quality of Mobile Financial Services (MFSs) in Bangladesh.*

*The survey brings lots of interesting findings in all dimensions. In the households' front, it is seen that dominant users (79%) of MFSs services are male; female participation (21%) is not yet up to the mark. All levels of people in terms of education are using MFSs for fulfilling their purposes. Money transfer is the most preferred service of MFSs in the households of Bangladesh. Mostly family members transfer money among themselves and they do it predominantly for family groceries and education. Mobile payment is the next best preferred service form of MFSs in the households in Bangladesh. Paying Bills, purchasing digital contents and store items are also made through mobile payment. Mobile banking is still unpopular among the households of Bangladesh. Savings, bills payment and balance inquiry are the most common mobile banking services taken by the households' users of MFSs in Bangladesh. Through all these services, MFSs are having significant impacts on the family lives of Bangladeshi people. MFSs are helping families when family households suffer from shortage of money, groceries, medicines, fertilizers etc.; even from taking loan from local money lenders.*

*On the other hand, for small and medium business firms, 75% surveyed firms are registered users of MFSs. Most (62%) of the firms are proprietorship firms. Majority (71%) of the firms are doing business for less than ten years. They are predominantly in trading and distribution business. The main reasons to small and medium business firms for using MFSs is to bring more revenue and more customers to their businesses. Revenue collection and suppliers' payment are the most frequent transactions incurred through MFSs in the surveyed small and medium business firms.*

*The usage of mobile banking via MFSs is not very popular among the surveyed business firms, still significant firms do use mobile banking for transferring fund between accounts and to get access to their accounts. About the impact of MFSs on firms' revenue and profit, most of the surveyed firms agree that MFSs help to increase sales revenue and profit for their firms. But significant percentage of firms disagreed to the point that MFSs reduce their costs of business and even stood neutral on the point that MFSs increase their business investment.*

*This study identifies several major challenges about mobile financial services in Bangladesh. Majority customers complain that the service fees charged by MFSs operators are bit high. Many customers have bad experiences like blackmailing and hijacking for money using MFSs by criminals. Another great challenge being exposed by MFSs is illegal remittance from foreign countries. Migrant workers living in Middle Eastern Countries, Singapore and Malaysia etc. are sending money to Bangladesh through a coordinated network MFSs agents which are not legal in Bangladesh.*

*In this study, the service quality of MFSs industry of Bangladesh is measured by a questionnaire developed on the basis of SERVQUAL Model. Tangibility got the highest score (3.75 in the scale of 5.00) of all the five dimensions of SERVQUAL model. Of Tangibility, the customers give the highest point to the large scale promotion of MFSs whereas they give the lowest score to the MFSs agents' neat and clean appearance. The worst performing dimension of SERVQUAL model in MFSs industry of Bangladesh is Responsiveness. This dimension got an overall score of (3.40 in the scale of 5.00). Surveyed customers point out that MFSs agents are always too busy to respond to the clients' queries and they do not welcome clients with smile like the customer service executives of contemporary commercial banks.*

*The second worst dimension (3.42 in the scale of 5.00) is Assurance dimension and under this dimension, clients are asked about the trustworthy of MFSs services and involvement of MFSs agent with illegal transactions.*

*The other two dimensions of SERVQUAL model discussed in this study are Reliability and Empathy. The overall score of both of these dimensions in this study are 3.55 and 3.52 respectively. The Reliability dimension SERVQUAL model in the MFSs industry of Bangladesh points out the error free and on time promised delivery of services. Surveyed clients give highest score to the in time service delivery of MFSs in Bangladesh, but they give the lowest score to the right delivery of service at first time.*

*Regarding Empathy aspect, surveyed customers are comparatively most satisfied with the service hours of the industry, but they express dissatisfaction about agents' undestability regarding the needs of the customers.*

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## 1.0 Background of the Study

This study is a collaborative research effort of Bangladesh Bank and University of Dhaka. The goal of the study is to investigate some questions surrounding Mobile Financial Services (hereafter MFSs) in family households and small and medium business firms of Bangladesh.

There are around 160 million people in Bangladesh with a very small percentages of these people have bank accounts. Safe and reliable money transaction through regular banking system is not available for most people of Bangladesh. People with no bank account used to send money through the slow and unreliable postal money transfer systems and through by middlemen. One dramatic change in recent decade of the life style of Bangladeshi people is the use of mobile phones (Islam & Tareq 2016). With the availability of cheap phone sets and low call rates offered by the mobile operators, about 95% people of the country use mobile phone. With this backdrop, MFSs started in Bangladesh in 2012 by Dutch Bangla Bank with the full fledge operation from 2014. Currently about 18 banks are providing MFSs to the people who are out of the traditional financial services. The role of financial institutions and banks in the economic development is well researched and agreed by past research. Past research shows that the services provided by financial institutions through facilitating transactions, mobilizing savings, providing capital for business, and so on - are essential for economic development of a country (Schumpeter 1934, Porter 1966, Adelman and Morris 1967, Mckinnon 1973, Shaw 1973 and Levine and Zervous 1996, Emmanuel and Adegboyega 2014). For example, Emmanuel and Adegboyega (2014) study seeks to establish among others, the relationship between financial sector development in Nigeria and economic growth and the impact of regulations of financial institutions on economic growth. The results show that the financial services have significant positive impacts on growth in Nigeria under all the regulatory regimes.

Though past studies show that the traditional way of providing financial services through banks and financial institutions has positive impacts on the economy of a country through mobilizing savings, creating capital, and facilitating transactions which improve the economy of a country, there is dearth of studies that investigated MFSs and its economic impact on the households and small and medium business firms in Bangladesh. Especially the literature on Bangladeshi mobile banking is not tapped yet except few notable exceptions e.g Islam & Tareq (2016), Khan et al (2016), Islam, et al. (2017), Parvin, A. (2013), and Boston Consulting Group (2011). Khan et al. (2016) however investigated

the research questions related to the individual level factors (such as age, education and so on) that influence the adoption of mobile banking services in Bangladesh. Mobile banking services such as, cash in, cash out, money transfer, business to individual money transfer, bill payments among others have been helping the unbanked people of Bangladesh in getting the banking services for the last few years. And using a panel data, from January 2014 to January 2016, Islam and Tareq (2016) investigates the macro-economic antecedents and trends in mobile banking services in Bangladesh. However, there are questions like how the mobile banking services have been used in the past years at household and business firms ? How satisfied individuals and business firms' owners are with the services and service fees for the mobile financial services? What are the usage patterns of mobile financial services in households and small and medium business firms ? What are the socio-economic effects of MFS on the households and small business ? What are the challenges households and business firms are currently facing with the MFS ? These research questions are not studied and therefore unanswered in literature. This study will fill-up the gap in literature by shedding light on the above research questions. It is expected that this will help policy makers in formulating policy on Mobile Financial Services (MFSs) in Bangladesh.

## **2.0 Objectives of the Study**

MFSs are fast becoming the most popular and essential medium of financial transactions over a large mass of people deprived of these services through the regular channels. And the socio-economic importance of including of these large masses into the MFSs net is huge as mentioned in the earlier section. Considering the economic and social effects of inclusion of these people, the study is designed to find out the following aspects of MFSs in Bangladesh:

- Ö For what types of activities, households and business firms' use mobile financial services ?
- Ö What are the usage patterns of mobile financial services in the households and small and medium business firms in Bangladesh ?
- Ö What are the effects of mobile financial services on the households and small and medium business firms in Bangladesh ?
- Ö To what extent individuals and small and medium business firms' owners are satisfied with the service charge of mobile financial services ?
- Ö What challenges households and small and medium business firms are facing with the MFS in Bangladesh ?



### **3.0 Review of Literature**

#### **3.1 Past Research on Mobile Financial Services (MFSs)**

The spread of mobile phones in the developing world is one of the best technology stories of the last decade. Indeed, across the developing world, there are probably more people with mobile handsets than with bank accounts (Porteous, 2006). There were around 16 million people in Bangladesh in 2012 of which only 13% have bank accounts whereas more than 95% are mobile users (ADB 2013). This situation ultimately led Bangladesh Bank allowing commercial banks to provide financial services to "the banked and the unbanked" through mobile networks and commonly named as mobile banking, mobile transfers and mobile payments.

The mobile platform offers a convenient additional method for managing money without handling cash. Mobile phone operators recognize M-banking as a potential service to offer customers. On the other hand, banks and other financial institutions see M-banking as a medium to provide services to "the unbanked". Government regulators also see a similar appeal, but are working on its security and taxation issues. Interestingly, scholarly work on the impact of mobile banking system on the developing economy is scarce (Maurer, 2008).

The Boston Consulting Group did a study in 2011 on the socio-economic impact of mobile financial services: Analysis of Pakistan, Bangladesh, India, Serbia and Malaysia. This study shows that mobile banking system is highly used in Bangladesh regarding bill payment, savings and remittance, not so significant in the areas of credit and insurance. Several other researchers (e.g. Shibli and Tareq (2016), Khan et al.(2016), Islam,S. (2013); Parvin, A. (2013) also conduct study on different aspects of mobile banking in Bangladesh. As mentioned earlier, Khan et al. (2016), investigated the research questions related to the individual level factors (such as age, education and so on) that influence the adoption of mobile banking services in Bangladesh. Mobile banking services such as, cash in, cash out, money transfer, business to individual money transfer, bill payments among others have been helping the unbanked people of Bangladesh in getting the banking services for the last few years. Shibli and Tareq (2016) investigate the macro-economic antecedents and trends in mobile banking services in Bangladesh using a panel data, from January 2014 to January 2016.

The International Growth Centre (IGC) and BRAC Institute of Governance and Development (BIGD), BRAC University conduct titled "Mobile Banking and Remittances: Evidence from Migrant Workers of Urban Bangladesh". The study found that illiterate households, especially women, can adopt and use mobile banking technology if given small incentive and training. Even though many in the sample households are illiterate, the study found that training can help to break the digital divide. Focusing on the impact of mobile banking on household welfare, the study finds positive effects of mobile money on the frequency of remittance, health and education outcomes for rural households as well as decrease in borrowing. The findings suggest a promising avenue of greater financial inclusion through mobile banking in developing countries. Bangladesh Bank (2012) issues a policy paper on "Mobile Financial Services in Bangladesh: An Overview of Market Development" which points out a market level overview of the early stage progress of Mobile Financial Services (MFSs) in Bangladesh. All the previous works acknowledge the growing importance of MFSs to poverty reduction and economic wellbeing in the context of Bangladesh.

### **3.2 Mobile Financial Services (MFSs) in Bangladesh**

As mentioned earlier, MFSs in Bangladesh was started by Dutch-Bangla Bank Limited (DBBL) in 2012 but the full fledged operation took another two years. Currently 28 banks have the license for offering MFS and many institutions are waiting for authorization. Even though 28 institutions have licenses, 18 are providing the services. The services which are provided by these institutions are as follows:

**Cash-in:** The process for cash-in service starts with visiting a MFSs agent by a customer and then informing the agent the amount someone wants to cash in. The customer has to write down his/her account number and cash-in amount in the agent's register. Then s/he has to give the money to the agent. The agent will cash-in into the customer's account. Both the customer and the agent will get confirmation messages from the MFS service provider in their mobile phones.

**Cash-out:** Like cash-in customer has to visit an agent shop for cash-out service. The customer has to write down his/her account number and cash-out amount in the agent's register. Customer has to dial the cash-out number and need to enter all necessary information including the cash-out amount, agent number and code number. Then both the customer and the agent will get messages regarding the cash out. After that the agent will give the cash-out money to the customer.

**Money Transfer:** Customers do not need to visit an agent for money transfer service. Customers can transfer money from their account to any other mobile bank account from anywhere. A customer has to dial a number and then enter the desired amount, receiver mobile banking account number, secret pin number among others. After this money will be sent; and both the sender and the receiver will receive a message regarding the money transfer. Receiver of the money can cash-out the money by visiting an agent shop.

**Shopping:** The payment for shopping is like money transfer. In this case, the shoppers have to pay the merchants mobile bank accounts.

**Other Services:** Apart from the above services, customers can buy mobile phone talk time, pay utility bills, and buy bus ticket and so on through MFS.

### 3.3 Definitions

The MFSs literature is its infancy. Therefore, some terminologies may have dubious meaning. To avoid confusion, this section provides definitions of some terminologies used in this study.

**Mobile Financial Services (MFSs):** MFSs are the products and services that a financial institution provides to its customers through mobile devices. The mobile channel provides an opportunity for financial institutions of all sizes to increase customer access to financial services and decrease costs.

**Mobile Money:** Mobile Money is a stored value account that is accessed from the user's mobile phone. It is typically operated by the mobile network operator and managed separately to the user's phone account. Mobile money is popular in developing nations where most people do not have regular bank accounts (the unbanked population).

**Mobile Banking:** Mobile banking is actions on a traditional bank account through mobile devices. These actions include obtaining account information, doing banking transactions and so on through mobile devices. Mobile banking is offered by nearly all the major banks in developed nations and typically uses a smartphone app to securely perform bank transactions.

**Mobile Payment:** Mobile Payments are payment for goods and services using a personal mobile device as the transaction terminal. Mobile payments can use a traditional bank account or a mobile money account.

**Family Households:** The Chula or the family household in Bangladesh means an extended family using jointly held property and being fed from a jointly operated kitchen.

**Small and Medium Enterprises:**As per Bangladesh Bank Definition.

#### **4.0 Research Methodology**

This study starts on 1st November 2016 with an expected finishing time of six months. At the beginning of the November 2016, the research team consisting of both Bangladesh Bank officials and some faculty members of the University of Dhaka conducted several focus group discussions (FGD hereafter) on MFS. With the inputs from the FGDs, a set of two questionnaires for the study are prepared: the first one is for the households and the other one is for firms. These draft questionnaires were presented at the Bangladesh Bank's Board Room on 23rd October at 10.30 am in the presence of Deputy Governor-1. With the suggestions from the participants of the presentation, the questionnaires were amended and finalized. Before starting the final survey, a joint team of five members from Bangladesh Bank officials and Dhaka University faculty members carried out a pilot study by administering the questionnaires on 50 individuals and business firms of Dhaka city from 3 November to 14 November 2016. The pilot survey provides information for the sample size determination and survey design.

#### **4.1 Sampling Method**

The MFSs in Bangladesh started its journey in the early 2014 and gradually increased its operations all over Bangladesh. Now there are 18 MFSs providers serving millions of household and business firms all over Bangladesh. And there are about 41.9 million customers at the beginning of 2017 out of which 16.5 were active customers (Bangladesh Bank, 2017). Therefore, the population for the study is these 16.5 million active users of MFS scattered all over the country.

The researcher aimed to collect a representative sample from the population. Due to the unavailability of the list and address of all the 16.5 million users, Simple Random Sample became an unviable option. MFSs users are scattered all over Bangladesh. Moreover, most professions and occupations are now using the services. Therefore, the researchers decided to get a sample from each of the divisions of Bangladesh taking survey participants from each of the following occupations using Stratified Sampling method: micro-business owners, casual labor, rickshaw pullers, garment workers, domestic workers, white collar workers, house wives and others.

The reason for taking a stratified sample is to obtain a more efficient sample than would be possible with simple random sampling in the current context. Suppose, for example, that casual labor and domestic workers may have different usage pattern of migration, but workers within each category hold very similar pattern. Random sampling error will be reduced with the use of stratified sampling, because each group is internally homogeneous but there are comparative differences between groups. More technically, a smaller standard error may result from this stratified sampling because the groups will be adequately represented when strata are combined. Another reason for selecting a stratified sample is to ensure that the sample will accurately reflect the population on the basis of the criterion or criteria used for stratification. This is a concern because occasionally simple random sampling yields a disproportionate number of one group or another and the sample ends up being less representative than it could be (Zickmund, 2010).

#### **4.2 Sample Size and Sample Design**

One of the real advantages of quantitative methods is their ability to use smaller groups of people to make inferences about larger groups that would be prohibitively expensive to study (Holton & Burnett, 1997). But to do that determining appropriate sample size is essential (Bartlet, Kotrlc & Higin, 2001). To determine the appropriate sample size some a-priori information about the population is needed. A joint team of five members from Bangladesh Bank officials and Dhaka University faculty members carried out a pilot study by administering the questionnaires on 50 individuals and business firms of Dhaka city from 3 November to 14 November 2016 to know the required a-priori information. The Stratified Sample size formula as mentioned below uses three key factors: (1) the margin of error, or the error the researcher is willing to accept, and (2) the alpha level, the level of acceptable risk the researcher is willing to accept that the true margin of error (3) the design effect for the stratified sample.

$$n = \frac{t^2 \times s^2}{a^2} \times \text{design effect}$$

*Where, t = value for selected alpha level*

*s = estimate of standard deviation in the population*

*d = acceptable margin of error for mean*

*design effect = the design effect for Stratified Sampling*

However,  $n$  calculated above should be adjusted if the  $n$  estimated above is more than 5% of the population by the following:

$$n^* = \frac{n}{1+n/\text{population size}}$$

As mentioned earlier, a smaller standard error may result from this stratified sampling because the groups will be adequately represented in this sampling design. Therefore, generally design effect is less than one. However, this study uses a more conservative and representative design effect of 1.5.

Using the Stratified Sampling Design a total of 1065 households and 265 business firms are decided for survey. The data are collected from all five divisions of Bangladesh. Considering higher proportion of users in Dhaka division, 50% of the household samples are taken from Dhaka city and greater Dhaka; the remaining 50% of the sample are taken from the other division of Bangladesh. Using the same method 40% business firms were selected from Dhaka division, 20% from Chittagong division and rest from other division. This is consistent with the proportional stratification in Stratified Sampling method.

Moreover, to ensure a representativeness of the population, samples chosen for the study ensures the following:

- Ö Households and business firms from villages.
- Ö Households and business firms from Upazila town.
- Ö Households and business firms from District town.
- Ö Households and business firms from Divisional town.
- Ö Households and business firms from Capital city, Dhaka.

Households and business firms are chosen only in against of one criterion which is the use of mobile financial services. The types of households and nature of business firms are of varied natures. Business firms chosen for the study are small and medium enterprises. Some of the business firms are the independent distributors of large multinational company. The following tables provide a view of the sample distribution

**Table 1: Sample Composition of Households Survey**

<b>Categories</b>	<b>Dhaka</b>	<b>Chittagong</b>	<b>Other divisions</b>
Micro-business	10%	10%	20%
Casual labors	10%	10%	20%
Rickshaw pullers	20%	20%	15%
Garments workers	25%	25%	0%
Domestic workers	10%	10%	5%
White Collar workers	10%	10%	15%
Housewives	10%	10%	20%
Others	5%	5%	5%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Table 2: Sample Composition of Business Firms**

Dhaka		40%	
Chittagong		20%	
Other divisions		40%	

### 4.3 Data Collection and Analysis

The researchers administered a structured questionnaire. Enumerators were recruited to carry out the survey. The 1065 filled in questionnaires of household and 265 firms were checked, coded and data were inputted into a MS Excel file by one of the members of the research team. After the data input, correctness was cross checked by another member of the team. Finally, the data were converted into STATA software file and all the analysis were done by that software.

## 5.0 Key Findings

### 5.1 Mobile Financial Services (MFSs) Quality in Bangladesh

Mobile Financial Services (MFSs) quality is a big concern for the relevant authorities of financial markets in Bangladesh. The industry is growing very rapidly and so, ensuring the best quality mobile financial services to consumers is a big concern for them.

**Table 3: Index Scores of Service Quality of MFSs industry of Bangladesh**

<i>Dimension</i>	<b>Measurement Indicators</b>	<b>Index Value</b>	<b>Average Value</b>
<b>Tangibility</b>	Mobile banking's physical features are visually appealing.	3.72	3.75
	Mobile banking's agents are neat appearing.	3.48	
	Materials associated with MFSs (such as banners, and pamphlets ) are visually appealing.	4.04	
<b>Reliability</b>	Mobile banking delivers service in time.	3.90	3.55
	Mobile Banking agents deal customer complaints with due care.	3.51	
	Mobile banking performs the service right the first time	3.37	
	Mobile banking rare fails to provide service	3.37	
	Mobile banking insists on error free records.	3.61	
<b>Responsiveness</b>	Agents of mobile banking always serve you with smile.	3.36	3.40
	Agents of mobile banking give you prompt service.	3.58	
	Agents of mobile banking are always willing to provide total service.	3.46	
	Agents of mobile banking are never too busy to respond to your request.	3.14	
<b>Assurance</b>	Mobile Banking system is trustworthy	3.92	3.42
	Mobile Banking always provides safe services.	3.78	
	Mobile Banking agent does not transact illegal transactions.	2.93	
	Mobile banking agents are proactive in stopping illegal transactions.	3.04	
<b>Empathy</b>	Mobile banking provides complete solution to individual needs	3.47	3.52
	Mobile banking has operating hours convenient to all its customers.	3.70	
	Mobile banking has your best interests at heart.	3.52	
	Mobile banking agents understand your specific needs.	3.40	



The service quality measurements of MFSs industry of Bangladeshis made by SERVQUAL model in a scale of 1.00 to 5.00 where 1.00 shows strongly disagree to the point and 5.00 shows the strongly agree to the point. A copy of the questionnaire is attached in appendices. The survey findings show that three dimensions out of five dimensions of SERVQUAL model namely Tangibility, Reliability and Empathy comparatively scored better than the other two dimensions (Responsiveness and Assurance) of the model.

On the Tangibility side, customers give highest score (4.04) to the visibility of promotion materials of MFSs industry of Bangladesh. The least scoring point (3.48) in the dimension is the neat and clean appearance of MFSs agents in Bangladesh. The overall score of this dimension is 3.75.

On the Reliability side, highest score (3.90) is given by surveyed customers to the point that states MFSs always deliver service in time. The least scoring points in this dimension are (3.3768) and (3.3787) that state that MFSs always perform right service in its first attempt and MFSs rare fails to provide services to the customers respectively. The other points in this dimensions are: MFSs agents insist on error free records scored (3.61) and MFSs agents deal with customers complaints with due care got score point (3.51). The overall score of this dimension is 3.55.

On the Responsiveness side, the highest score point (3.58) indicates that mobile banking agents are swift in delivering service to the clients. The least score (3.36) points out that MFSs agents are less willing to welcome clients with smile and to provide total services proactively. The overall score of this dimension is 3.40.

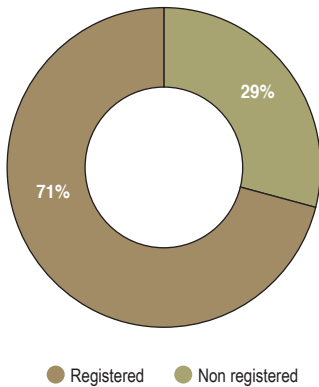
On the Assurance side, the best scoring point (3.92) indicates that MFSs are trust worthy to the clients of Bangladesh, but the worst point (2.93) in this dimension infers the involvement of MFSs agents with illegal transactions. That overall score of this dimension is 3.42.

On the Empathy side, the highest scoring point (3.70) expresses that clients are comparatively satisfied with the service hours of MFSs industry of Bangladesh. The least scoring point (3.40) confirms that clients have doubt about the agents undestability of clients wants and demands. The overall score of this dimension is 3.52.

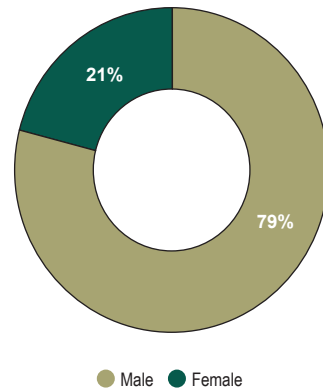
## 5.2 Findings on Family Households

**5.2. A: Demographic Facts:** This part of the study reports the demographic features of households that are surveyed. Adoption of mobile financial services among financial households in Bangladesh is widespread. Of the households survey participants, 71% are registered users; remaining 29% are non-registered users of MFSs. MFSs users are mostly men. Around 80% of the surveyed clients are male and the remaining is female.

**Fig. 2a: Registration Status**



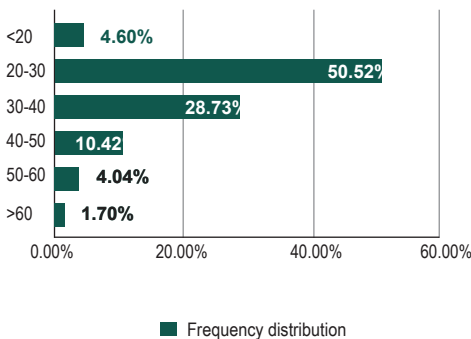
**Fig.2b: Gender**



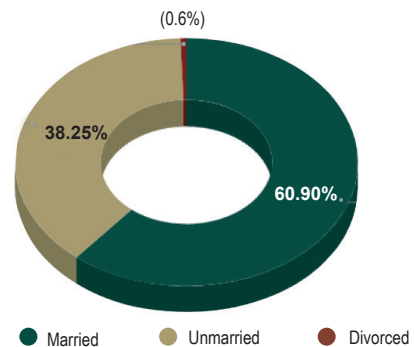
The age distributions of the respondents show that mostly matured people are taking MFSs services. Fifty percent (50%) of the respondents are within the age range of twenty to thirty (20-30) years old; Thirty percent (30%) are within the age range of thirty to forty (30-40) years old and ten percent (10%) are within the range of forty to fifty (40-50) years old. Around 60% of the people surveyed in this study are married and 39% of them are unmarried.

The survey is designed to cover various types of professionals. The highest percentages (17%) of respondents are the small business owners. A significant percentage of them are rickshaw puller, garments workers, casual labourers, professional workers and housewives.

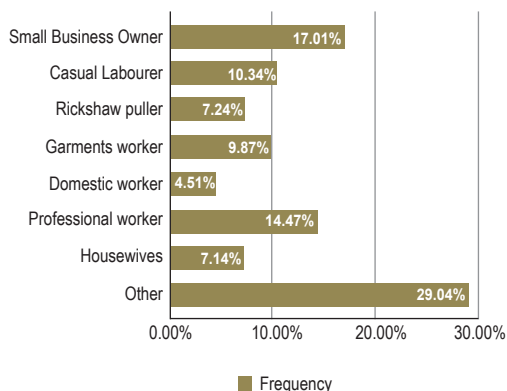
**Fig.2c: Age**



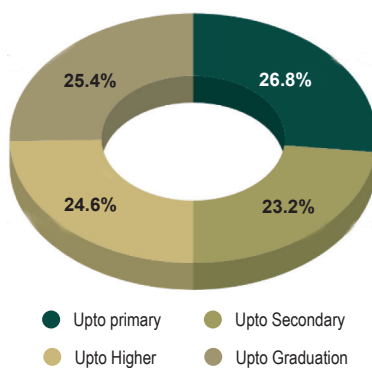
**Fig. 2d: Marital Status**



**Fig. 2e: Job Status**



**Fig. 2f: Educational Status**

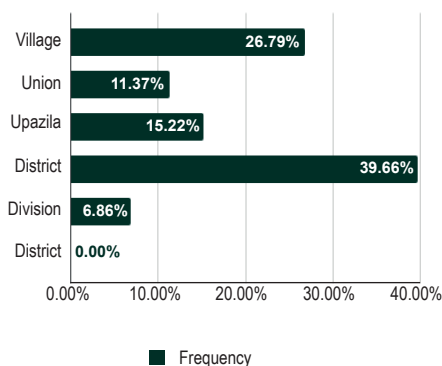


In terms of education, twenty six percentages (26%) of the respondents have education only up to primary level. Twenty three percentages (23%) of the respondents have education up to secondary level and twenty four percentages (24%) of them have education up to higher secondary. The remaining twenty five percentages (25%) have graduation degree.

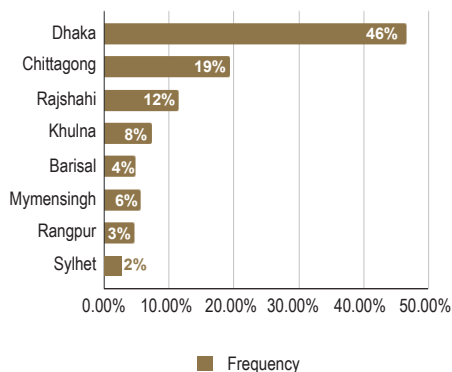
The survey is also designed to cover the majority areas of Bangladesh. Around forty percentages (40%) of the respondents are from the Dhaka division and the second highest respondents (20%) are taken from Chittagong division. A considerable percentages (10%) are taken from Rajshahi division. The remaining percentages are taken from the rest of the divisions of Bangladesh.

The surveyed individuals are living in the different locations of Bangladesh. The highest percentages (39.65%) of people are living in the district towns. The second highest percentages (26.79%) are living in the villages. Considerable number of people are living in divisional headquarters, upazilas and union perished headquarters.

**Fig. 2g: Living Place**



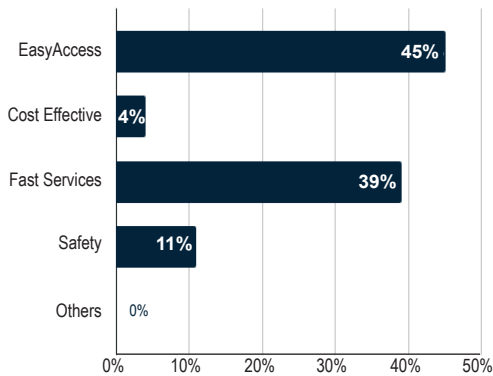
**Fig.2h: Regional Location**



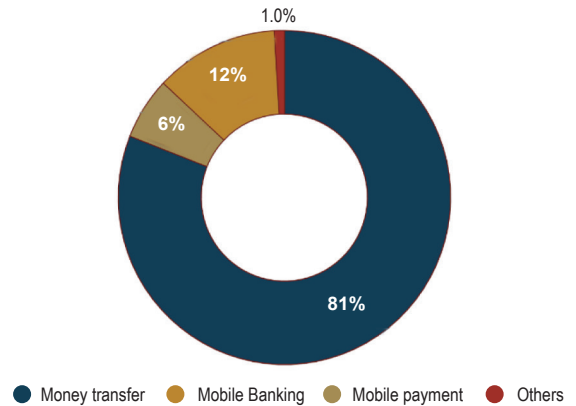
## 5.2 B: Mobile Financial Services (MFSs) and Households of Bangladesh

Mobile financial services are getting increasing popularity among the households of Bangladesh. By this survey study, the researchers try to point out the different features of MFSs usages in Bangladeshi households.

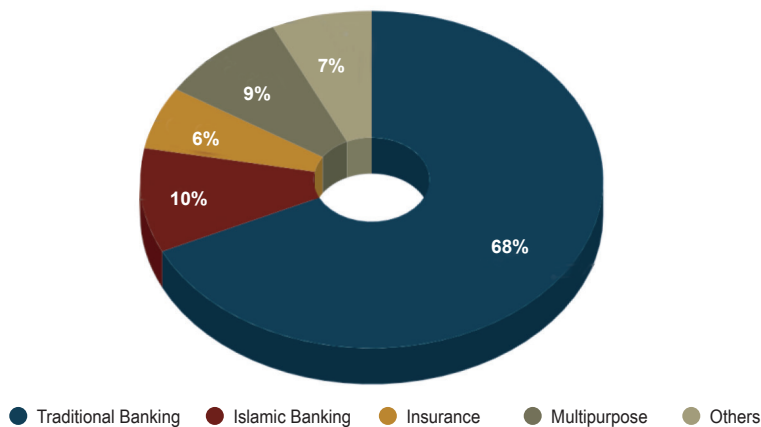
**Fig. 2i: Reasons for Taking MFSs**



**Fig.2j: Services taken by MFSs**



**Fig. 2k: Services taken in addition to MFSs**

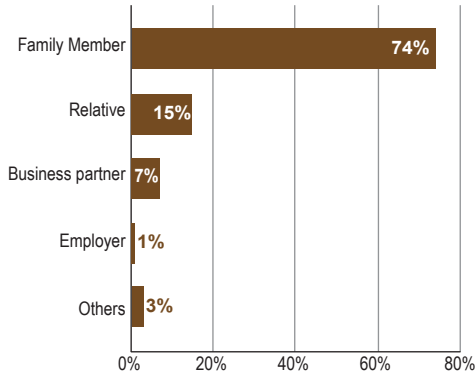


The chart 2i shows that easy access is the prime reasons for taking MFSs services in the households of Bangladesh. Besides, fast services (39%) and safety (11%) are the leading causes to drive MFSs growth in the households of Bangladesh. The chart 2j is stating the different types of services taken by MFSs. Of all the services given by MFSs, mostly (81%) households in Bangladesh take the mobile money transfer service. The other notable services taken MFS are mobile banking (12%) and mobile payment (6%). The chart 2k shows what other financial services are taken by the households of Bangladesh in addition to mobile financial services. Sixty eight percentages (68%) have traditional bank accounts whereas ten percentages (10%) and six percentages (6%) are taking the services of Islamic banking and insurance respectively.

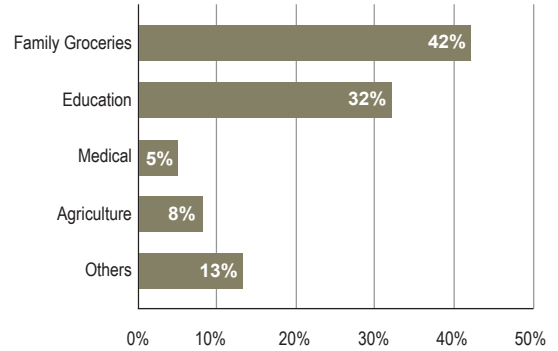
## 5.2 C: Mobile Money Transfer and Households of Bangladesh:

Mobile Money Transfer is the highest usage MFSs in the households of Bangladesh and it is getting more and more response in the market. The key features of this service are given below:

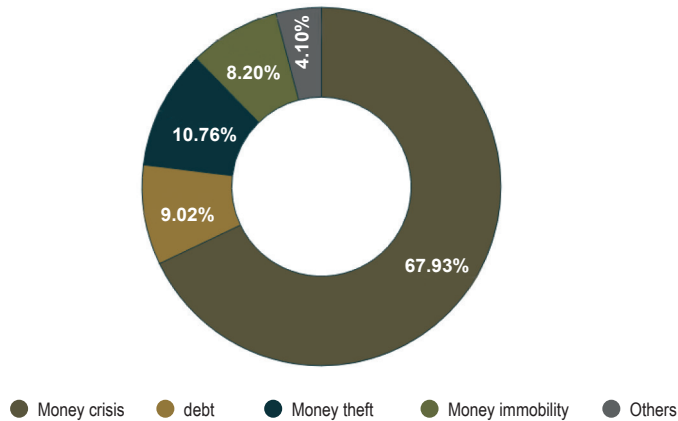
**Fig.2l: With whom money transfer takes place**



**Fig.2m: Purposes of mobile money transfer**



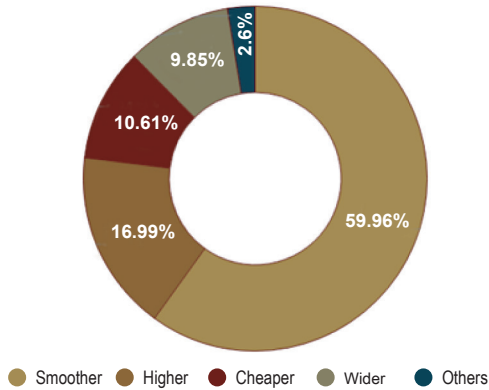
**Fig.2n: Mobile Money Transfer and Family Financing**



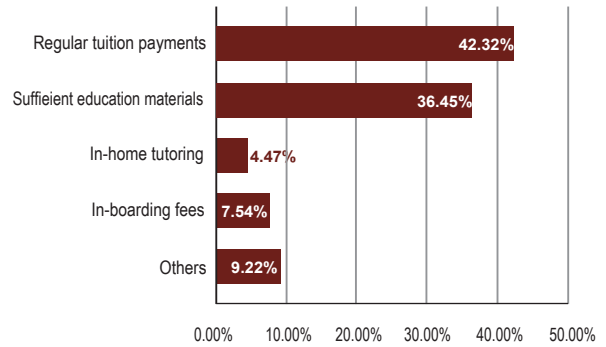
The chart 2l points out that most of the respondents (74%) make money transfer with their family members only. The second highest transfer (15%) takes place with the relatives and a significant transfer is incurred between business partners (7%).

The chart 2m describes the purpose of using MFSs in family households. It is seen that mostly money transfer is made for family groceries consumption (42%) and family education (32%). Money transfer for family medical and farming is negligible. The chart 2n shows that money transfer helps households financing from money crisis (67.93%), debt (9.02%), money theft (10.76%) and money immobility (8.20%).

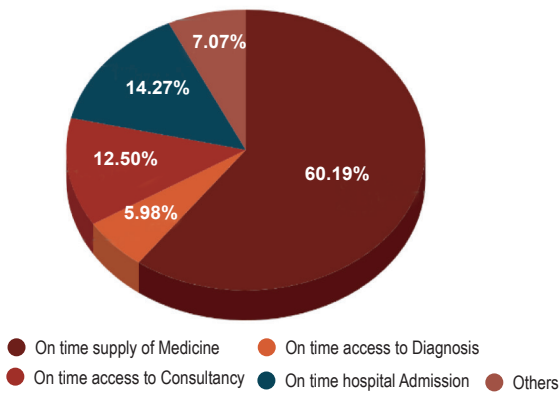
**Fig.2o: Mobile Money Transfer and Household Transfer and Groceries Consumption**



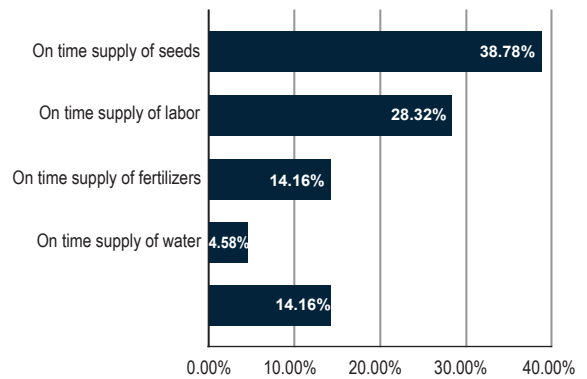
**Fig.2p: Mobile Money Family Education**



**Fig.2q: Mobile Money Transfer And Households Health**



**Fig.2r: Mobile Money Transfer and Households Farming**



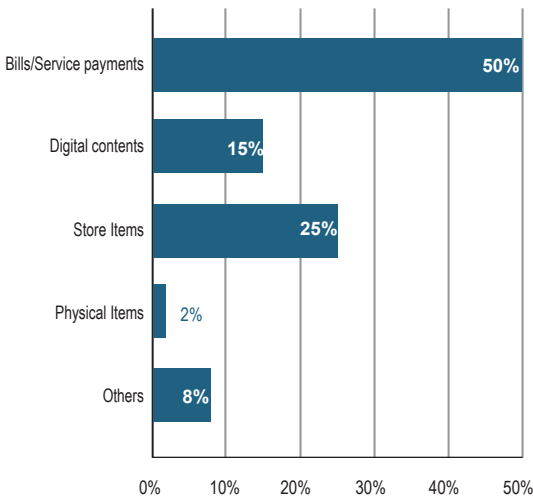
The chart 2o shows the effects of mobile money transfer on households' groceries consumption. Majority respondents (60.19%) agree that mobile money transfer makes groceries consumption smoother while others point out that it makes groceries consumption higher (16.99%), cheaper (10.61%) and wider (9.85%). The chart 2p points out the relationship between mobile money transfer and households education. Regular tuition payments (42.32%) and buying education materials are the leading causes of mobile money transfer for family education.

The chart 2q presents that majority respondents (60.19%) agree that mobile money transfer ensure timely supply of medicines to their family members. It also helps in getting timely admission to the hospital and medical consultancy services. The chart 2r depicts that thirty eights percentages (38%) and twenty eight percentages (28%) respondents state that mobile money transfer helps households farming by providing on time supply of seeds and labour respectively. It also helps family farming by ensuring timely supply of fertilizers and water.

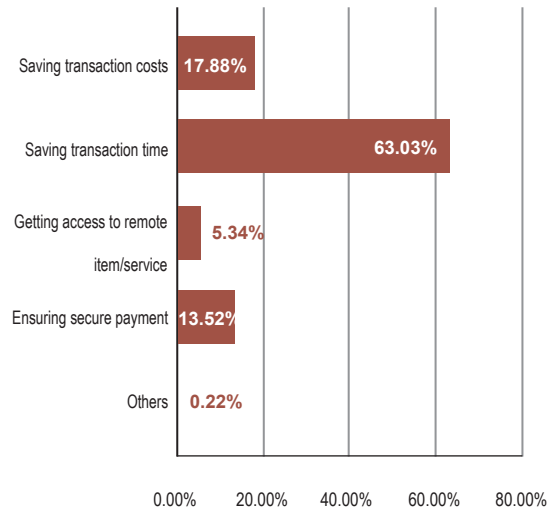
### 5.3 : Mobile Payment and Households of Bangladesh

Mobile payment is one of the most popular services offered by MFSs to modern day customers. It makes transaction easier and faster. The notable features of mobile payment service of MFSs are given below:

**Fig.3a: Types of Purchase by Mobile Payment**



**Fig.3b: Mobile Payment Benefits**



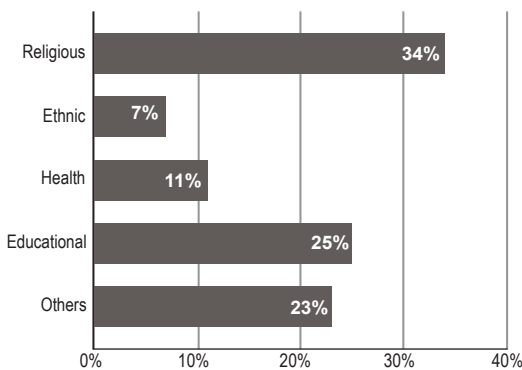
The chart 3a shows the respondents opinions about the purchase pattern by using mobile payment. Fifty percents (50%) make mobile payment for the utility and service bills. Twenty five percents (25%) and fifteen percents (15%) of the respondents opine that they use mobile payment for buying store items and digital contents respectively. A very negligible percentage (2%) buys physical items through mobile payment. The chart 3b elucidates the benefits of mobile payment. The most important benefit according to the highest percentages of respondents (63.03%) is transaction time. Mobile payment also saves transaction costs (17.88%) and guarantees a secured payment (13.52%).

Mobile payment now a days is facing various problems. To make the MFSs more popular and trustworthy among the people of Bangladesh, it must be more protected and insulated from different types of risks.

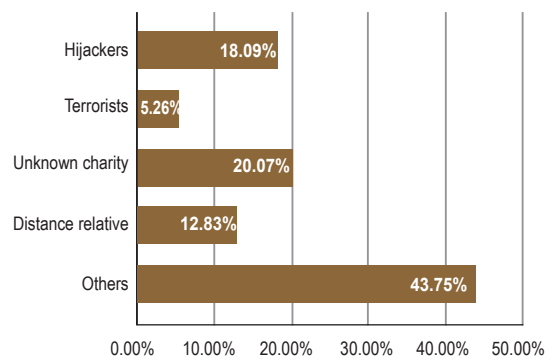
The chart 3c presents the charity contribution made by the respondents of the study through mobile payment. The highest percentages of respondents (34%) state that they make religious charity contribution by mobile payment. Twenty five percentages of respondents contribute to education via mobile payment and another significant eleven percentages (11%) point out that they contribute to health charity through mobile payment.

MFSs also open a new window to criminals for seeking ransom to the common people of Bangladesh. The chart 3d describe the types of harassment people face due to the mobile payment. Hijackers (18.09%), unknown charity (20.07%) and distance relative (12.83%) are the most common types of blackmails they face according to the respondents.

**Fig.3c: Charity Contribution by Mobile Payment**

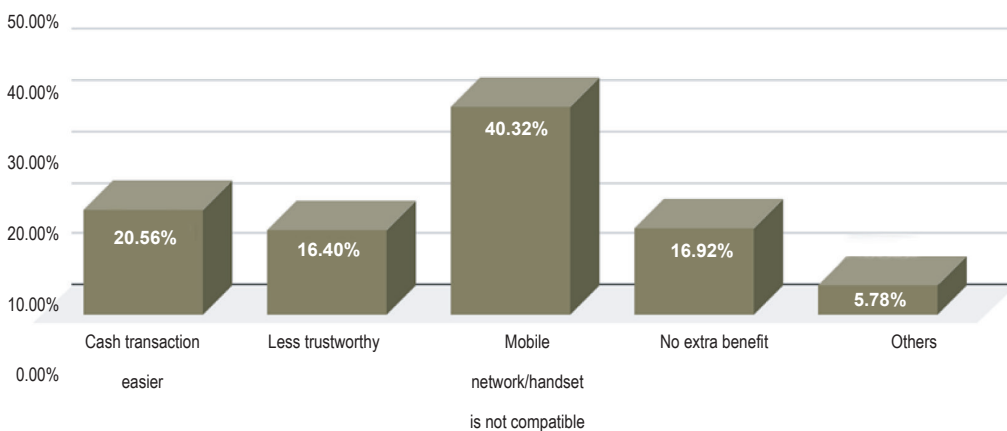


**Fig.3d: Blackmailing by mobile payment**



The chart 3e points out the problems of mobile payment. According to the respondents, forty percents (40.32%) of them point out that mobile network/handset is not compatible with the mobile financial services. A significant respondents (20.56%) think that cash transaction is easier in comparison to mobile payment. Sixteen percents (16%) opine that mobile payment is less trustworthy whereas same percentages of respondents think that mobile payment does not provide extra benefits.

**Fig.3e: Problems of Mobile payment**

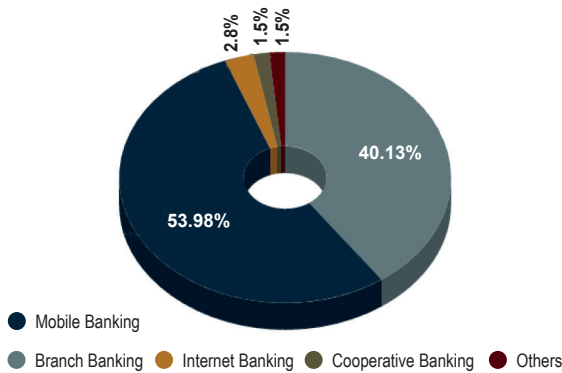




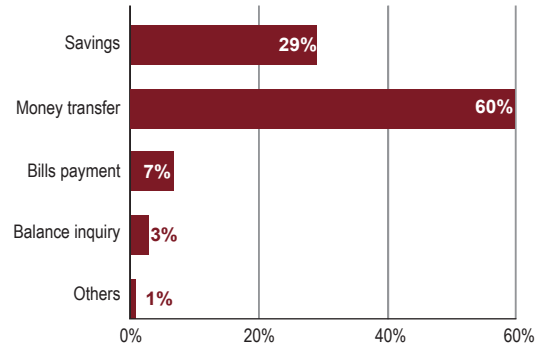
## 5.4 : Mobile Banking and Family Households of Bangladesh

Mobile banking is still not very popular service of MFSs; but it has huge potentials. It can attract a huge number of unbanked people in Bangladesh. The key features of mobile banking from this survey study are given below:

**Fig.4a: Types of banking services taken by respondents**



**Fig.4b: Services taken by Mobile Banking**



The chart 4a shows the different types of banking services taken by the respondents. Mobile banking is making significant breakthrough to the domain of traditional banking and other types of banking services. Fifty three percents respondents agree that they take mobile banking services of MFSs. The second biggest group (40.13%) takes the banking services of traditional branch banking. Only two percentages of the surveyed customers (2%) are taking the services of internet banking.

The chart 4b points out the banking services taken through mobile banking by the respondents. The most popular services of mobile banking according to the respondents are money transfer (60%), savings (29%), bills payment (7%) and balance inquiry (3%) respectively.

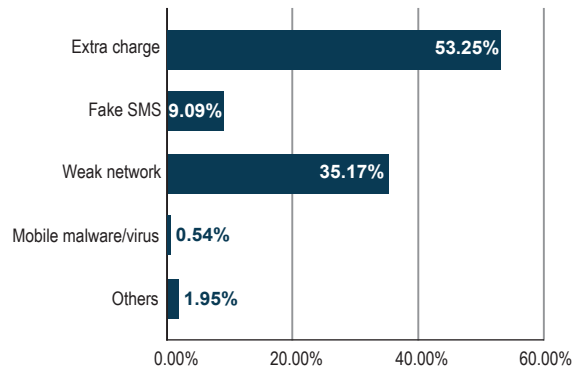
The chart 4c point out the benefits of mobile banking. Majority respondents (84%) agree that convenience is the number one benefits given by the mobile banking. A significant percentages of respondents (9%) state that mobile banking reduces fraudulent transactions while five percents (5%) give credit to mobile banking for more savings.

The chart 4d shows the demerits of mobile banking. The most serious disadvantages of mobile banking according to the respondents are extra charge (53.25%) and weak networks (35.17%). A notable percents (9.09%) respondents mention the fake short message service as a serious weakness of mobile banking. The future trends of mobile banking transactions are presented in chart 4e.

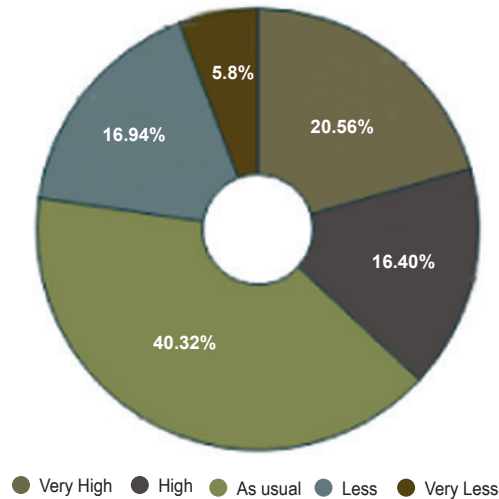
**Fig.4c: Mobile banking benefits**



**Fig.4d: Mobile banking demerits**



**Fig.4e: Mobile Banking Transactions Trend**



### 5.5: Mobile Financial Services and Savings in Households Expenditure

Mobile financial services without doubt have been contributing a lot to the national economy of Bangladesh. It also has great impact on the day to day management of family households. The following findings regarding savings in household expenditures are found from the survey study:

**Table: MFSs and Savings in Households Expenditures**

Queries	Yes	No	Yes, But Not Give it Thought
<b>Does MFS save your time?</b>	16.72%	0%	83.28%
<b>Does MFS save your costs?</b>	12.31%	4.14%	83.55%
<b>How much time does MFS save for the users?</b>	10 minutes to 6 days		
<b>How much cost does MFS save for the users?</b>	Tk. 10 to tk. 40 per tk. 1000 transfer		
<b>How much extra cost does MFS incur for the users?</b>	Tk. 10 to tk. 20 per tk. 1000 transfer		

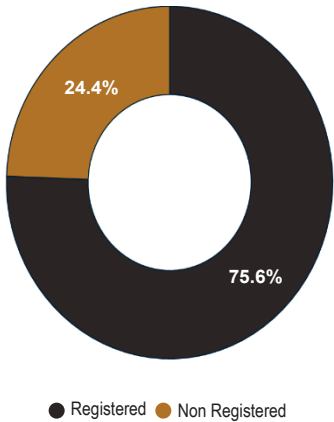
Source: Survey Study (2017).

From the survey findings, it is clearly seen that 100% respondents agree that MFSs save time, but a significant respondents (83.28%) are not very thoughtful about it. In case of saving costs, a very small percentages (4.14%) of respondents reported that MFSs does not save costs in delivering its services to clients. The respondents point out that MFSs can save time from ten (10) minutes to almost six full days and it can also saves tk. 10 to tk. 40 for per tk. 1000 transfer. On the other hand, few respondents said that MFSs chare extra fees of tk. 10 to tk. 20 for per tk. 1000 transfer.

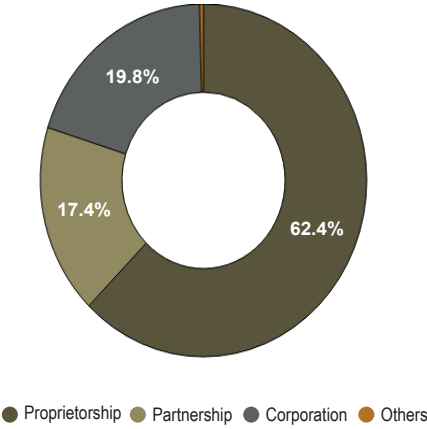
**5.6 : Findings on Small and Medium Business Firms**

**5.6 A: Demographic Facts:** Of all the small and medium business firms surveyed in this study, ninety eight percents (98%) have agreed to use MFSs for their business purposes. But when it becomes the issue of registered or non-registered users MFSs, it is found that only 75% surveyed small and medium business firms are registered users; the remaining 25% firms are non-registered users. The firms surveyed in this study are taken almost from all divisions of Bangladesh. The maximum firms are chosen from Dhaka Division and Chittagong Division. In case of choosing firms from all the divisions of Bangladesh, district and divisional towns are given most importance. Many firms are also chosen from villages and Upazila towns. The ownership structure of the surveyed firms are also different. Sixty two percents (62%) firms are proprietorship firms whereas seventeen percents (17%) firms are partnership and twenty percents (20%) firms are retail outlets of corporation.

**Fig.6a: MFSs Registration Status of Business Firms**



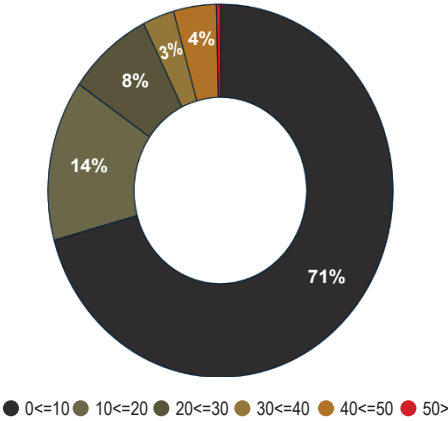
**Fig.6b: Ownership Structure of Surveyed Firms**



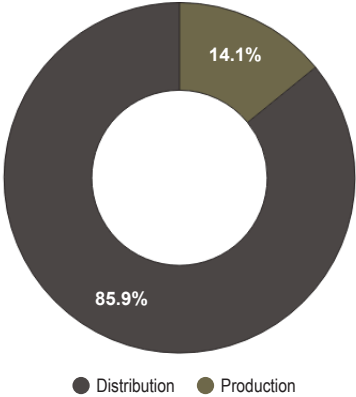
The surveyed firms are also different in terms of their business nature and length of business operations. The chart 6c shows the lengths of business operations of the surveyed firms. Seventy one percents (71%) of the surveyed firms are serving the markets for less than ten (10) years while fourteen percents (14%) firms are having business experience in between ten years to twenty years. Eight percents (8%) firms have service lengths of twenty years to thirty years whereas four percents (4%) have operational lengths of forty to fifty years. The chart 6d shows the primary functions of the surveyed business firms. Around eighty five percents (85%) firms are distribution firms and the remaining fifteen percents (15%) firms are production firms.

The chart 6e depicts that Sixty eight percents (68%) of the surveyed firms are trading firms whereas the remaining 20% and 11% firms are manufacturing and service firms respectively.

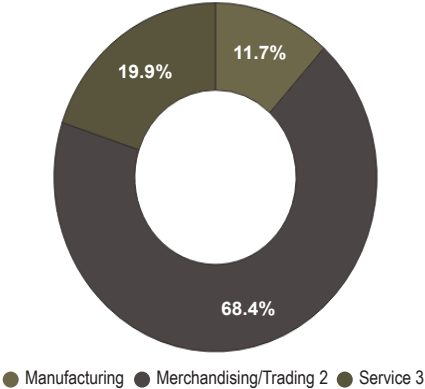
**Fig. 6c: Lengths of Business Operations**



**Fig.6d: Primary functions of Business**



**Fig.6e: Nature of Business**

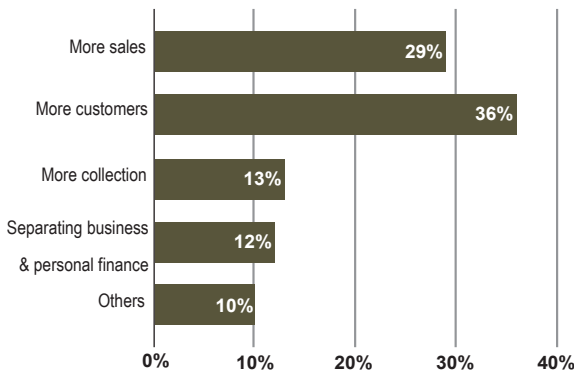


**5.7: MFSs and Small and Medium Business Firms**

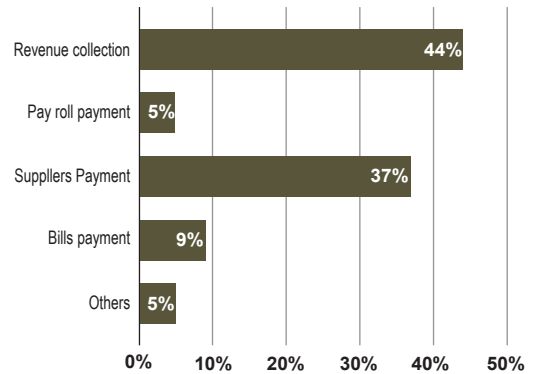
Mobile Financial Services come as blessings not only for the households but also for the small and medium business firms. These services are even changing the patterns of many

business activities. The main features of using MFSs in small and medium business firms derived through the survey study are presented below:

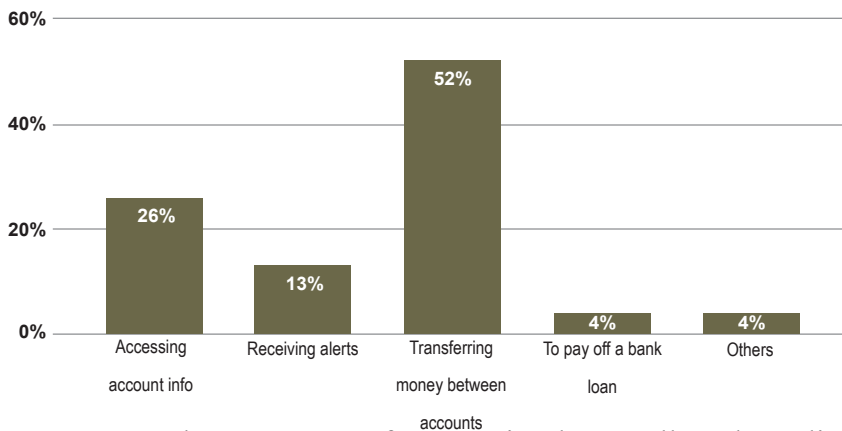
**Fig.7a: Purposes of MFSs in small and medium Business firms.**



**Fig.7b: MFSs usages in small and Medium business firms**



**Fig.7c: Mobile banking in small and medium business firms**



The chart 7a presents the purposes of MFSs in the small and medium firms of Bangladesh. Thirty six percents (36%) surveyed firms reported that they use MFSs for more customers whereas twenty nine percents (29%) firms pointed to more sales for usage of MFSs. Apart from these, significant number of firms (13%) said that they use MFSs for more collection and for separating personal and business finance.

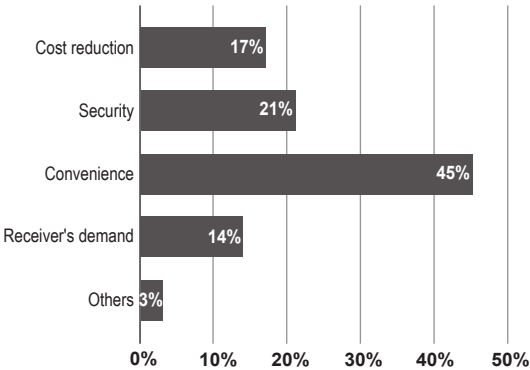
The chart 7b shows the functional usages of MFSs in the small and medium firms of Bangladesh. Forty Four percents (44%) firms stated that they use MFSs for revenue collection whereas thirty seven percents (37%) noted that they use MFSs for suppliers' payment. Bills payment and payroll payment are also considerably made by MFSs.

The chart 7c mentions the usages of mobile banking in the small and medium firms of Bangladesh. The highest number of firms (52%) reported that they use mobile banking

for transferring fund between accounts. The second highest (26%) group of firms use mobile banking to get access to their accounts. Thirteen percents firms (13%) stated that mobile banking is used by them for getting alerts of their banking transactions.

The chart 7d presents that forty five percents (45%) of surveyed firms confirms that convenience is the prime reason of using mobile banking in business. Besides, less costs (17%), security (21%) and receiver's demand (14%) are driving the usage of mobile banking in business.

**Fig.7d: Reasons for using mobile banking in business firms**

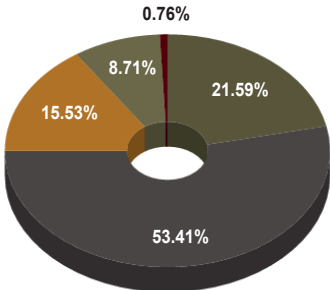


**5.8: MFSs and Business Firms' Performance**

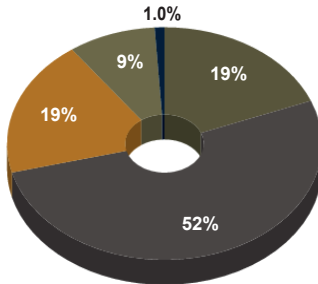
**5.8 A: MFSs and Firms' Revenue, Costs, Profit and Investment**

MFSs are increasingly using for business purposes and these services are contributing to the different operational areas of business. As MFSs services are fast and costs saving, many small and medium business firms are expanding the scope of its usages to their businesses and subsequently the benefits come to the firms. The prime features derived from the survey study about the effects of MFSs on business firms are given below:

**Fig. 8a: MFSs and Firms Revenue**

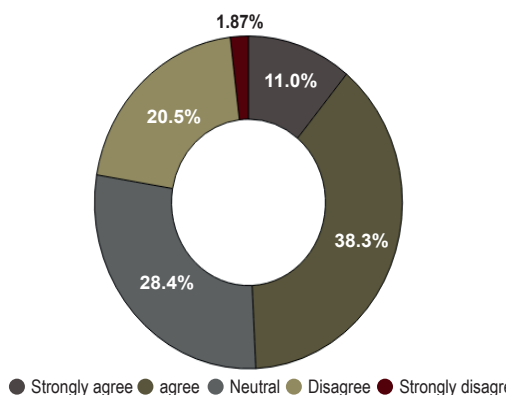


**Fig. 8b: MFSs and Firms Profit**

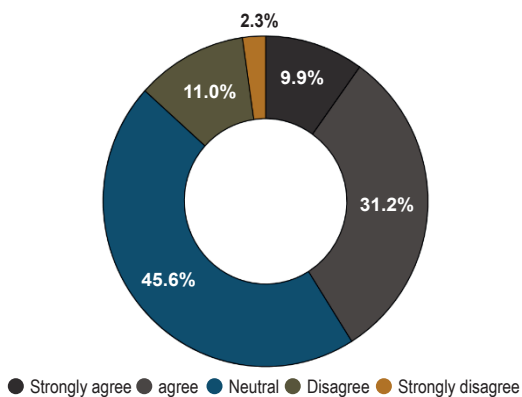


● Strongly agree ● agree ● Neutral ● Disagree ● Strongly disagree      ● Strongly agree ● agree ● Neutral ● Disagree ● Strongly disagree

**Fig. 8c: MFSSs and Firms Costs**



**Fig. 8d: MFSSs and Firms Investment**

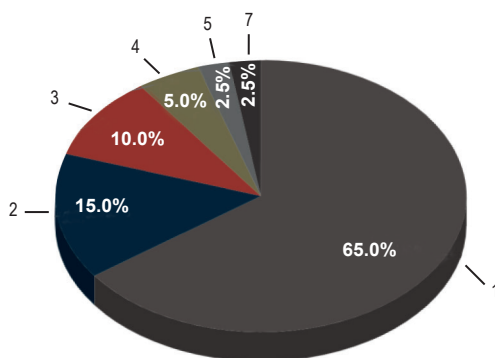


The chart 8a shows the opinions of the surveyed small and medium business firms about the relationship of MFS and sales revenue. Most of the firms fifty three point forty one percent (53.41%) agree that MFSs increase sales revenues of the firms. Significant firms eight point seventy one percent (8.71%) also disagree with this statement.

The chart 8b presents the relationship between MFSs and Firms Profit. Fifty two percents (52%) surveyed firms agree that MFSs increase firms profit while nine percent (9%) disagree with the statement.

The chart 8c elucidates the relationship between MFSs and Firms costs. Most of the surveyed firms twenty point five percent (20.5%) disagreed that MFSs reduce costs for the firms. The chart 8d shows the relationship between MFSs and firms investment. Interestingly, most of the surveyed firms forty five point six percent (45.6%) remain neutral on this point.

**Fig. 8e: MFSSs and Staffing in Business**



The chart 8e shows that sixty five percent (65%) firms have only one (1) dedicated staff to see the mobile financial services operation whereas fifteen percents (15%) have two (2) dedicated staff and ten percents (10%) have three (3) dedicated staff.

## 6.0: Mobile Financial Services and Illegal Remittances

MFSs are creating new challenges for the policy makers of Bangladesh. Money transfer through MFSs from different foreign locations to Bangladesh is getting increasing

popularity among the expatriates which is totally illegal. A group of intermediaries in a clustered network is doing this illegal business. The survey findings on this illegal remittance are given below:

**Table 2: MFSs and Illegal remittance**

Queries	Yes	No
Have you received remittance from abroad in the last six months?	5.82%	94.12%
How many times did you receive remittance in the last six months?	One (1) to Six (6) times	
How much money have you received in the last six months?	Tk. 10,000 to tk. 1,00,000	

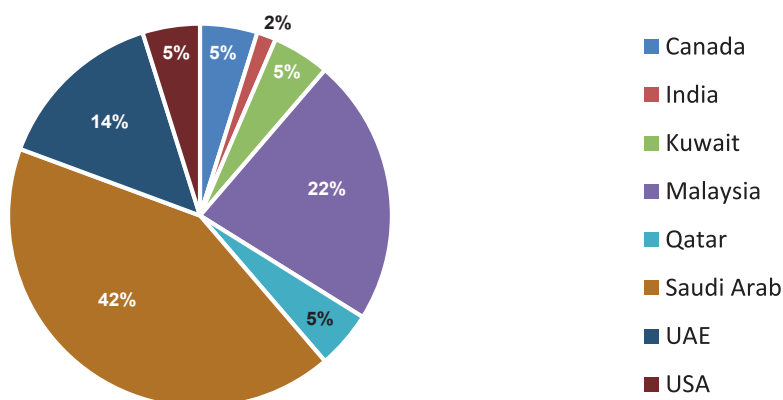
Source: Survey Findings (2017)

The findings show that the frequency of illegal remittance through MFSs is not very high, but it can go up to a significant volume if immediate control mechanisms are not taken. Through this illegal money transfer, the intermediaries are taking in discriminatory charge depending on the situations of the clients. People from the rural areas of Bangladesh are their victims.

### 6.1: Sources of Illegal remittances through MFSs

The survey findings show that the illegal remittance is coming mainly from certain locations of the world. The chart 6a points out that Saudi Arabia, Malaysia and United Arab Emirates are the prime sourcing points of this illegal remittance. Canada, USA, India, Kuwait and Qatar are also mentioned by the respondents from where they receive remittance. From the survey findings, it is known that a group of people collects money from people in abroad, then through they instructs the local agents to disburse money among the relatives of those who deposited money to them in abroad.

**Fig. 6a : MFSs and Remittance Inward from Abroad**





## 7.0: Policy Prescriptions

Mobile Financial Services are getting massive popularity among the masses of Bangladesh due to its many attractive features (fast, secured, accessible and cheap etc.). This survey research comes up with notable interesting findings MFSs usages in the households and small and medium business firms of Bangladesh. Based on these findings, the major policy suggestions to the Bangladesh Bank authority are the followings:

1. In terms of mobile financial services quality, there are large rooms for development. The survey findings show that agents of MFSs industry of Bangladesh are not trained for delivering services. The agents are not efficient in dealing with customers' queries and complaints. They do not know how to provide total services to clients. They are even blamed for colluding with miscreants in illegal transactions through MFSs in Bangladesh. In these situations, Bangladesh Bank can take the following actions to improve the service quality of MFSs industry of Bangladesh:
  - i. Bangladesh Bank can arrange mandatory basic training program (maximum 1 month) on MFSs for the agents of MFSs operating firms of Bangladesh solely or in conjunction with respective MFSs firms.
  - ii. The agents of MFSs firms must have unique dress code.
  - iii. The agents must be given information on how to deal with sensitive/criminal type of monetary transactions.
  - iv. The agents must be given week long training on human psychology and behaviors.
  - v. The customer end apps used in the MFSs industry of Bangladesh must be improved and upgraded in terms of security, client's compatibility and physical attractiveness.
2. Female participation in the MFSs industry of Bangladesh is still negligible. The reasons for this situation could be many, such as: distributor -agent relationship pattern right now is more rigid and demanding, females have to visit nearby bazars for taking any MFSs, lack of knowledge about the services etc. Besides, in many cases, female customers take the help of a male relative who might make the best use of this opportunity for own interest. In this situation, Bangladesh Bank can take several initiatives that will increase female participation into this sector.

- i. Provision for female quota for giving agentship or distributorship by the MFSs operating firms of Bangladesh.
  - ii. A special team of women can be formed for each and every territory of Bangladesh who will motivate and facilitate marginalized class of women in saving money through MFSs.
  - iii. Special campaign may be launched over digital media, print media or radios to attract female users for the MFSs industry of Bangladesh.
3. The market is highly concentrated to a particular company named bKash Limited. In such a monopoly market, the service providers become less attentive, creative and committed in creating new and better services for customers. Based on the current situation of MFSs industry of Bangladesh, Bangladesh Bank can take the following initiatives:
  - i. All firms providing MFSs in Bangladesh must promote various types of services that they can provide through their leaflets, booklets, pamphlets, banners etc. The concept 'MFSs are not only limited to money transfer' must be circulated to the minds of MFSs clients in Bangladesh.
  - ii. Bangladesh Bank can encourage the other small market shared MFSs provider firms to integrate/merge their operations so that the competition in the MFSs industry increases and becomes fair.
4. The service fees charged by MFSs operators in Bangladesh can be revised. A significant percentage of customers are not giving it a thought till now, but the users of these services are increasing rapidly. These huge volume of customers have opened a window to consider the earlier price structure set by the authority as the industry remains a very profitable one with a very huge amount of producers' surplus. The reduced price structure may increase the volume of transactions which will compensate the loss in price reduction.
5. The illegal money transfer from abroad can only be reduce if more and more financial services options are open to migrant workers of Bangladesh abroad.
  - i. Agents or agents banking can be appointed by the different commercial banks of Bangladesh who have their branches in abroad. These agents will collect money from door to door so that the money cannot be handed over to the unwanted people.

- ii. The MFSs operators can be partnered with public and private commercial banks of local and foreign type in case of transferring fund from abroad to Bangladesh. The service fees then will be distributed among the parties in a proportionate ratio.

## **8.0: Case Studies**

### **Case 1**

Mr. Sirajul Islam is a retired police Constable. He lives in village kharera of Kasba Upazila of Brahmanbaria district. His family consists of nine members: his one son, one daughter in law, two grandsons, three daughters and wife. His son has come back from Singapore where he worked as migrant worker. He is now running a small poultry shop in the village. His eldest daughter is working in a boutique house as a sales person in Dhaka. His second daughter has a boutique shop in Brahmanbaria district town run jointly with husband. The youngest daughter is recently married whose husband is also a migrant worker in Saudi Arabia. He got a very minimum pension allowance from the government of Bangladesh every month which is quite insufficient to run this joint family. MFSs have great impact on the family lives of Mr. Sirajul Islam. Since the pension he receives every month is very minimal, his two daughters who are working in different cities send him some sum of money every month for family expenditures. Since the daughters can't take leave every month from their work stations, they send money to Sirajul Islam through mobile money transfer. The MFSs also help them to send money to their father whenever they have some money on their hands. This opportunity reduces the chances of losing money either by theft or by unnecessary expenditures. Even the daughters away from home instructed a few groceries shop owners of the village to provide materials to their father whenever he asks them. They pay the price to the shop owners later via MFSs. By these ways, MFSs make the consumption pattern of Mr. Sirajul Islam's family expenditure smoother, larger and wider. Mr. Islam's son started the business six months back. The business is growing at a slow rate. The supplier's deliver chicken to the shop of Mr. Islam's son on a daily basis. The suppliers like to receive payment through MFSs as it is less risky. That is why, Mr. Islam's son makes the payment to the supplier via mobile money transfer once in two or three days. Mr. Islam has relatives living in different parts of the country. They normally do not visit village. He has communication with them only by mobile. When Mr. Islam's feels severe crisis of money, he contacts with his distance relatives. Very often they help him by giving money through mobile money transfer. Overall, Mr. Islam is very happy with this newly introduced financial service names MFSs.

He said that mobile money transfer makes life easier and reduces transaction costs and time significantly. He categorically points out that if the government reduces transfer charge of mobile money transfer, it would help them highly.

## **Case 2**

Bata Bangladesh has many retail outlets across Bangladesh. One of its very popular retail outlet is situated at the Elephant Road of Dhaka. The branch has approximately fifty staffs. The branch is two storied. On top floor, the branch has recently launched a new sales service, i.e. buying items from Bata through bKash or Mobile Money Transfer. The sales man who is charge of this section is interviewed about this new addition of business. He said that the branch introduced this new segment looking at the best interests of the customers. There are customer's who do not bring sufficient cash with them to buy their chosen items. In that case, the customer can purchased preferred items from the store by making mobile money transfer payment to the merchant mobile account of the branch. Sometimes, the customer's choose particular items and request their familiar ones outside to make mobile payment to the store's mobile merchant account. If the relatives make the mobile payment, the customers can go way with the items. The in-charge of the section informs that every day five to six transactions happen through this mobile money transfer. He mentions that though the branch expects good response from the customers during the introduction of the service, it cannot garner expected attention from the customers. But still this section is contributing to the partly to the sales of the branch. One dedicated staff looks after this section of the branch.

## **9.0 Conclusion:**

Mobile Financial Services (MFSs) are working as a valuable driver in the changing socio-economic pattern of Bangladesh. The survey is conducted to find out the impact of MFSs on the family households and small and medium business firms of Bangladesh. The survey shows that MFSs are bringing noticeable breakthrough in the family households and small and medium business firms of Bangladesh. On the households' side, it is found that mobile money transfer is the most preferred service of MFSs in the households of Bangladesh. MFSs help family from money crisis, loan and even from the theft or loss of money. MFSs makes family groceries consumption higher, wider and larger. It also ensures on time supply of medicines, on time admission of hospital to the members of the family. Mobil financial services are also used in case of family farming. It helps family in arranging regular supply of seeds, labor and water.

The study also comes up with interesting findings of mobile payment by the family households of Bangladesh. The family households mostly use mobile payment for paying bills, purchasing digital or store items. The mobile payment is used because it saves transaction times and costs. The mobile payment also bring some serious problems for the users. Sometimes criminals or fake distance relatives make phone calls and demand certain amount of money via mobile payment.

Mobile banking is not very popular among the households of Bangladesh. The use of it is very much limited to money transfer or a very minimal savings. Several problems pointed out by the households of Bangladesh about the mobile financial services. They are: weak networks, handsets are not compatible, charges for MFSs are high etc. If these problems are addressed, the services would be more popular among the households of Bangladesh.

MFSs are increasing used by the small and medium business firms of Bangladesh. The survey has found that small and business firms mostly use MFSs for more customers and sales revenues. The most common transactions occurred through MFSs in the surveyed firms are revenue collection and suppliers payment. Mobile banking used by small and medium business firms for transferring funds between accounts or to get know the balance of the accounts at the end of the day. MFSs certainly increase the revenues and profit of the surveyed firms according to the respondents. But it has little connection with the reduction of costs and investment of the firms. Majority of the surveyed firms agree that they would increase the MFSs transaction in future.

The service quality of MFSs industry of Bangladesh is also analysed in this study. The study shows that there are still large scope for improving many dimension of MFSs services in Bangladesh. The other challenges of MFSs industry of Bangladesh are illegal money transfer from abroad, weak network systems, misuse of MFSs by the miscreants, service fees of MFSs etc. If these challenges are addressed immediately, the industry will get a big boost.

So, the understanding of mobile financial services and how these sectors are contributing to the national economy of Bangladesh will obviously help the different stakeholders of Bangladesh. The policy makers can take inputs from the relevant research works to formulate policies that will ensure the growth of this sector. This study is a reference for all stakeholders in this regard. Further works in this area are highly suggested so that the industry and others can always be updated about the dynamics of MFSs industry of Bangladesh.

## 10.0 Appendix

### Appendix A:

(1=Strongly Disagree, 2=Disagree, 3=Undecided, 4= Agree, 5=Strongly Agree)

Tangibles	Mobile banking's physical features are visually appealing.	1	2	3	4	5
	Mobile banking's agents are neat appearing.	1	2	3	4	5
	Materials associated with the service (such as banners, pamphlets or statements) are visually appealing at the mobile banking facility.	1	2	3	4	5
Reliability	Mobile banking delivers service in time.	1	2	3	4	5
	Mobile Banking agents deal customer complaints with due care.	1	2	3	4	5
	Mobile banking performs the service right the first time.	1	2	3	4	5
	Mobile banking rare fails to provide service	1	2	3	4	5
	Mobile banking insists on error free records.	1	2	3	4	5
Responsive ness	Agents of mobile banking always serve you with smile.	1	2	3	4	5
	Agents of mobile banking give you prompt service.	1	2	3	4	5
	Agents of mobile banking are always willing to provide total service.	1	2	3	4	5
	Agents of mobile banking are never too busy to respond to your request.	1	2	3	4	5
Assurance	Mobile Banking system is trustworthy.	1	2	3	4	5
	Mobile Banking always provides safe services.	1	2	3	4	5
	Mobile Banking agent does not transact illegal transactions.	1	2	3	4	5
	Mobile banking agents are proactive in stopping illegal transactions.	1	2	3	4	5
Empathy	Mobile banking provides complete solution to individual needs	1	2	3	4	5
	Mobile banking has operating hours convenient to all its customers.	1	2	3	4	5
	Mobile banking has your best interests at heart.	1	2	3	4	5
	Mobile banking agents understand your specific needs.	1	2	3	4	5

## Appendix B:

### Roster

ID	Do you use mobile Financial services?	Registration Status	Name	Sex:	Age		Education (Highest Class Passed)	Marital Status	Job Status	Region	Living place
	(code)	(code)		(code)	Year	Month	(code)	(code)	(code)	(code)	(code)
	Yes 1 No 2			Male 1 Female 2							

### Coding

Registration Status	Job Status	Marital Status code:	Educational status	Region	Living Place
Registered 1	Small Business Owner 1	Married---1	Upto primary 1	Dhaka 1	Village 1
NonRegistered 2	Casual Labourer 2	Unmarried ---2	Upto Secondary 2	Chittagong 2	Union 2
	Rickshaw puller 3	Divorced--- 3	Upto Higher Secondary 3	Rajshahi 3	Upazila 3
	Garments worker 4		Upto Graduation 4	Khulna 4	District 4
	Domestic worker 5			Barisal 5	Division 5
	Professional worker 6			Mymensingh 6	District 6
	Housewives 7			Rangpur 7	
	other 8			Sylhet 8	

### Question on Individual Household

Background Questions	1. Why do you use mobile financial services ?	Easy Access 1	Cost Effective 2	Fast Services 3	Safety 4	Others 5
	2. What mobile financial services you take ?	Money transfer 1	Mobile payment 2	Mobile Banking 3	Mobile Insurance 4	Others 5
	3. What other financial services you use in addition to mobile financial services ?	Traditional Banking 1	Islamic Banking 2	Insurance 3	Multipurpose Cooperatives 4	Others 5
Money Transfer	4. With whom you make mobile money transfer ?	Family Member 1	Relative 2	Business partner 3	Employer 4	Others 5
	5. For what purposes you make mobile money transfer ?	Family Groceries 1	Education 2	Medical 3	Agriculture 4	Others 5
	6. Mobile money transfer protects your household from...	Money crisis 1	debt 2	money theft 3	Money immobility 4	Others 5
	7. Mobile money transfer makes your family groceries consumption...	Smoother 1	Higher 2	Cheaper 3	Wider 4	Others 5

	8. Mobile money transfer helps your family education in.....	Regular tuition payments 1	Sufficient education materials 2	In-home tutoring 3	In-boarding fees 4	Others 5
	9. Mobile money transfer helps your family health by .....	On time supply of medicines 1	On time access to diagnosis	On time access to consultancy 4	On time hospital admission 4	Others 5
	10. Mobile money transfer helps your family agriculture by...	On time supply of seeds 1	On time supply of labor 2	On time supply of fertilizers	On time supply of water	Others 5
<b>Mobile Payment</b>	11. For what purchase, you use mobile payment system?	Bills/Service payments 1	Digital contents 2	Store Items 3	Physical Items 4	Others 5
	12. Mobile payment helps you in ...	Saving transaction costs 1	Saving transaction time 2	Getting access to remote item/service 3	Ensuring secure payment 4	Others 5
	13. Do you make any donation to any charity ? If yes, what type of charity ?	Religious 1	Ethnic 2	Health 3	Educational 4	Others 5
	14. Does anybody ever blackmail you by seeking money through mobile payment ? If yes, what type of body ?	Hijackers 1	Terrorists 2	Unknown charity 3	Distance relative 4	Others 5
	15. What problems you face with mobile payment ?	Cash transaction easier 1	Less trustworthy 2	Mobile network/handset is not compatible 3	No extra benefit 4	Others 5
<b>Mobile Banking</b>	16. What types of banking services you already have access ?	Branch banking 1	Mobile banking 2	Internet Banking 3	Cooperative Banking 4	Others 5
	17. For what banking services, you use mobile banking ?	Savings 1	Money transfer 2	Bills payment 3	Balance inquiry 4	Others 5
	18. Mobile banking benefits you by...	Convenience 1	More interest 2	Fraud reduction 3	More savings 4	Others 5
	19. Mobile banking disturbs you by...	Extra charge 1	Fake SMS 2	Weak network 3	Mobile malware/viruses 4	Others 5
	20. Will you increase your transactions through mobile financial services in coming days ? If yes ? How much?	Very high 1	High 2	As usual 3	Less 4	Very Less 5

### Additional Questions

	*Are you happy with mobile money transfer service charge? If yes, how much you are ready to pay for per tk. 1000 transfer ?	If 20, then how much .....		If 20, then how much .....	
	** How did you transfer money before mobile money transfer?	Bank A/C 1	Courier 2	Transport 3	Post Office 4 Others 5
	*** Does mobile money transfer saves your	Cost (tk. Per 1000)		Time (hours)	
		Then	Now	Then	Now
	*** Have you received remittance (inward Foreign) for the last six months ?	How many times (.....), From where (.....)How much (.....)			



## Appendix C:

### Roster

ID	Does your firm use mobile financial service ?	Merchant Mobile Account Status	Name	Ownership Structure	Length (time) of Business		Business Nature	Primary Function	Region	Business Location
	(code)			(code)	(code)	Year				
	Yes 1 No 2			Proprietorship 1 Partnership 2 Corporation 3 Others 4						

### Coding

Registration Status	Region	Business Location	Business Nature	Primary Function
Registered 1	Dhaka 1	Village 1	Manufacturing 1	Production 1
NonRegistered 2	Chittagong 2	Union 2	Merchandising /Trading 2	Distribution 2
	Rajshahi 3	Upazila 3	Service 3	
	Khulna 4	District 4		
	Barisal 5	Division 5		
	Mymensingh 6	District 6		
	Rangpur 7			
	Sylhet 8			

### Questions on Business Firm

1. For What purpose does your firm's use merchant mobile account ?	More sales 1	More customers 2	More collection 3	Separating business & personal finance 4	Others 5
2. What activities does your firm do through merchant mobile account ?	Revenue collection 1	Pay roll payment 2	Suppliers Payment 3	Bills payment 4	Others 5
3. Does your firm conduct mobile banking through merchant mobile account ? If yes, what banking activities ?	Accessing account info. 1	Receiving alerts 2	Transferring money between accounts 3	To pay off a bank loan 4	Others 5
4. Mobile financial services increase your firm's revenue.	Strongly agree 1	Agree 2	Neutral 3	Disagree	Strongly disagree 5
5. Mobile financial services increase your firm's profit.	Strongly agree 1	Agree 2	Neutral 3	Disagree	Strongly disagree 5

6. Mobile financial services reduce your firm's cost.	Strongly agree 1	Agree 2	Neutral 3	Disagree	Strongly disagree 5
7. Mobile financial services increase your firm's savings & investment?	Strongly agree 1	Agree 2	Neutral 3	Disagree	Strongly disagree 5
8. Why does your firm make payment through merchant mobile account?	Cost reduction 1	Security 2	Convenience 3	Receiver's demand 4	Others 5
9. Does your firm have dedicated staff for mobile financial services? If yes, how many?					
10. Which group of stakeholder of your business firm is happier with mobile financial services?	Owners 1	Employees 2	Suppliers 3	Customers 4	Others 5
*Does your firm ever face any troubles due to mobile financial services? If yes, why?	Account hacked 1	Fraudulent customers 2	Ransom seeking 3	Over Payment 4	Others 5

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