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FACTORS INFLUENCING THE USE OF MOBILE PAYMENT SERVICES IN SELECTED AREAS OF BANGLADESH

Md. Rasheduzzaman[1*]
Md. Salauddin Palash[1]
Md. Mostafizur Rahman[2]

ABSTRACT

Mobile payment services are spreading in Bangladesh like a spider net with the development of information and communication technology (ICT) and ubiquitous internet access. The present study was conducted to explore the influencing factors of e-commerce transaction through mobile payment services and to investigate the customer experiences with the services where sources of satisfaction and dissatisfaction were identified. Data were collected from 240 users of mobile payment services through field survey during March to April in 2020 by purposive sampling method from Mymensingh and Sylhet Districts. The main satisfaction sources those emerged from the content analysis were, in descending order of incidents: convenience, problem solving, offer and discount, security and trust, and efficacy. On the other hand, complexity and network failure were the main reasons of customer dissatisfaction with mobile payment services. The findings of the multiple linear regression models revealed that age, education, monthly income and residential area had statistically significant effect on monthly e-commerce transaction over mobile payment services. Young people were more prone to use mobile payment services than older. People with higher education transacted less money over mobile payment services. Higher income earner transacted more money over mobile payment services. People live in urban area used the services frequently and transacted more money. The service providers should increase their availability and more advertisements are required to be placed at every possible means of medium in order to aware people about mobile payment services. Building trust among the users and feel them secured are also crying need to develop this sector at a faster way in near future.

Keywords: Socioeconomic attributes, transaction behavior, customer experiences, mobile payment services, Bangladesh.

[1]Department of Agribusiness and Marketing, Faculty of Agricultural Economics and Rural Sociology, Bangladesh Agricultural University, Mymensingh 2202, Bangladesh
[2]Department of Agricultural Marketing and Business Management, Faculty of Agricultural Economics and Business Studies, Sylhet Agricultural University, Sylhet 3100, Bangladesh

[*]*Correspondence: Md. Rasheduzzaman, Department of Agribusiness and Marketing, Bangladesh Agricultural University, Mymensingh. Email: rzrashed2917@gmail.com*

I. INTRODUCTION

As we are moving towards the cashless society, mobile proximity payments are the most probable way of solution in Bangladesh. Mobile payment services have increasingly become a part and parcel of everyday life (Hwang *et al.,* 2007). Cash is already a past thing in some markets but many markets are slower to switch in mobile payment for number of reasons across the world. Mobile payment can fast the economic system across the world. It was forecasted in 2019 that 1 billion people will use a mobile payment app worldwide in 2020 and it will grow to 1.31 billion people worldwide using mobile payments apps over 6-month period by 2023 (Bloom *et al.*, 2013). The forecasted mobile payment market size will be USD 3081 billion by 2024. This is a remarkable increment from USD 881 billion in 2018 and a compound annual growth rate of 23.2 percent during the forecasted period (2019-2024) (IMARC, 2019).

Mobile Payment Service (MPS) industry has been experiencing growth in Bangladesh since 2011. According to experts, the mobile wallet market in Bangladesh is likely to gain momentum in 2019. A global report forecasts its growth to USD 250 billion by 2024 from over USD 100 billion in 2017 (Azad, 2019) in Bangladesh and identified digital shopping, introduction of the QR code and cash back offers as the main factors responsible for growing mobile wallet market in Bangladesh. More than 50 million people are using mobile financial services (MFS) offered by 15 banks to meet their needs under a conducive regulatory environment in Bangladesh (Rahman, 2021). According to Bangladesh Bank official, a multinational company "bKash, is a leading Mobile Financial Services provider in Bangladesh with a lion's share of the market, followed by Rocket, SureCash and Nagad". Currently there are 346.37 lac active mobile financial service accounts are working till March, 2021; accounted BDT 59642.41 crore transactions happened which is 8.3 percent higher than February, 2021 (BB, 2021). The number and amount of yearly transaction over MFS are increasing in Bangladesh (Figure 1).

The service receivers of MPS are usually satisfied with the security and privacy, service quality, information presentation and ease of use (Alwi *et al.,* 2019); perceived value, ease of use, trust, perceived security, loyalty and self-efficacy (Sambaiah and Reddy, 2019); mobile recharging facility, bill payment facility, insurance payment facility, privacy policy, bus ticket, movie ticket and hotel room booking facility, fund transfer facility, cash back offers, online shopping facility (Saviour, 2019); convenience, problem solving, efficacy and security (Smolarczyk, 2018); reliability, responsiveness, assurance and accessibility (Hossain, 2014). On the other hand, the dissatisfaction arises in using MPS because of complexity and inefficiency (Smolarczyk, 2018); technology failure (Meuter *et al.,* 2000); incompetency of technology (Fournier, 1998).

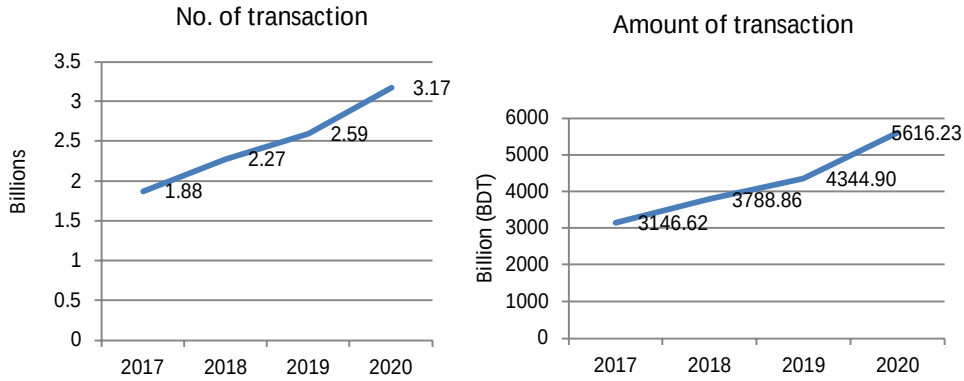

Figure 1: Trend line of yearly transaction behavior of MFS in Bangladesh
Source: Bangladesh Bank, 2021

Social, economic and demographic factors like marital status, sex, age, education and job position had significant influence on E-payment transaction system (Oladejo and Oluwaseun, 2015). Demographic variables such as gender and age influence consumer transaction behavior and so satisfaction of mobile wallets (Singh *et al.,* 2017). The age of user might impact the dominant positive perception of usage rate; younger individuals are overall more confident in learning and using new technologies and experience less adoption problems (Liébana-Cabanillas *et al.*, 2014).

Academic literature investigates the mobile payment topic; including the factors influencing adoption and use of mobile payments (e.g., Kim *et al.,* 2010; Yang *et al.,* 2012); the differences in the perceptions of various factors by different consumer groups (Lu *et al.,* 2011; Oliveira *et al.,* 2016; Baptista and Oliveira, 2015; Liébana-Cabanillas *et al.,* 2014). But there is a limited study has been conducted in response to effect of social, economic and demographic attributes and post evaluation phase of using mobile payment services in our country. The economy of our country is increasing at a faster rate with respect to technology and socioeconomic conditions of the people. We are already in the verge of developing a next generation payments system. According to the report of Bangladesh Bank, out of every three registered mobile financial services (MFS) accounts in November 2020, only one was active (BB, 2021). In October and November of 2020, the number of active clients decreased by 9.4 million. Earlier, in five months from July to November, the number of clients decreased by 1.11 crore due to Covid-19. The statistics of the central bank also showed that the cash-out growth rate was much lower than that of cash-in. Despite rapid growth, there are some issues of this services hinder the consumer acceptance in terms of decreasing transaction over MPS. Insight investigation is needed to explore the influencing factors of ecommerce transaction through mobile payment services and to investigate the customer experiences with MPS.

II. METHODOLOGY

Study area and sampling

Mymensingh and Sylhet district, which also reflect the divisional attributes since both are the division headquarter, were selected purposively because of its various groups of population involved in the usage of online and offline payment procedures. A huge number of shopping complex, retail shop and chain shop are available in those two districts.

To capture the socioeconomic attributes of users properly, purposive sampling; a non-probability sampling technique was used to select the respondents. The respondents were the customer of Mobile Payment Services (MPS) especially the users of bKash, Rocket, Nagad and SureCash. The total sample size was 240; equally from two districts based on the age and gender. The distribution of sample is presented in Table 1.

Table 1: Sample distribution of MPS customer based on age and gender

Age group	Sample size (No.)		
	Male	Female	All
15-24	44	45	89
25-34	25	28	53
35-44	20	19	39
45-59	18	16	34
60+	13	12	25
Total	120	120	240

Data administration

A standard interview schedule was developed and pre-tested with small sample including age group 15-24 and 25-34 of Mymensingh district to identify and eliminate any possible issues prior to administrating the survey, such as whether the questions are worded clearly, understood, and placed in the best order, or whether additional or specifying questions are needed or whether some questions should be eliminated (Pinsonneault and Kraemer, 1993).

The firsthand information was collected from the consumer of MPS users, which was gathered during the field survey from March to April in 2020. Data were collected through face-to-face interview method. The questions were asked sequentially and in an easy and simple manner in order to convenience of the respondents. After each interview, filled schedule were checked carefully in order to minimize errors. The data of each and every interview were rechecked to ensure reliability and consistency with the aims and objectives of the study. The collected data were scrutinized and summarized carefully before the actual tabulation.

Accordingly, data were entered into excel sheet and cleaning was made to ensure the accuracy of the data entry.

Data analysis

Descriptive statistics (mean, percentage and standard deviations) was used to analyze the socio-economic characteristics of the respondents. Multiple Linear Regression (MLR) analysis was used to present the socio-economic effect on ecommerce transaction over mobile payment services with the help of STATA12. MLR used 232 valid responses and remaining 8 responses of the sampling frame were incomplete in some decision variables. Finally, Content analysis (a qualitative analytical tool used for post evaluation technique) helped to analyze the consumer experiences with mobile payment services with the help of ATLAS.ti 9 program. About 218 responses were reported in satisfaction category and 27 were in dissatisfaction category which afterward taken into this analysis.

Multiple Linear Regression Model

In order to measure the relationship between the independent and dependent variables a multiple regression analysis was used. The multiple regression model for this study was as follows:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + e_i$$

Where,

Y: Monthly e-commerce transaction over MPS; X_1: Gender; X_2: Religion; X_3: Age (Years); X_4: Level of education (Years); X_5: Income (BDT/Month); X_6: Marital Status; X_7: Residential area; e_i: Unobserved Variables; a = constant; and β = is the coefficient on all of the predictor variables.

Content analysis

The common sources of satisfaction and dissatisfaction associated with the use of mobile payment services were identified and classified with the help of content analysis. Data analysis began with information coding, which was first performed on a paper and then repeated with the aid of the ATLAS.ti program. The analysis of the critical incidents began with creating a single document containing all data. Further, each response was read multiple times and the specific word(s), phrase(s) or sentence(s) describing the sources of satisfaction or dissatisfaction were marked and coded. Given the suggestions of Wagner *et al.* (2012), codes were underlined with distinct colors and the list of all codes was made on a separate paper. Each response was compared to existing codes and either assigned the existing or a new code; such process is known as a constant comparative method and was used to facilitate the categorization of the data (Wagner *et al.*, 2012). The similar procedure of coding was repeated with aid of the ATLAS.ti program; the software is commonly used for qualitative studies to determine relationships and patterns among data. First, the frequency count (how many times certain words are used by the study participants) was obtained from the ATLAS.ti program to provide a broad

view of the data. Further, the initial codes were saved within the system and the data set was reread and re-coded. After the final initial codes were developed, the similarities and relationships between the codes were identified. This process was used to determine the main sources of satisfaction and dissatisfaction with mobile payments and identify the subgroups within the main groups. The development of categories was intuitive, while focused on the research questions of this study. In addition, the categories were developed considering such dimensions as mutual exclusivity (each piece of data fits into a single category), congruency (categories represent the equivalent levels of abstraction) and exhaustiveness (all significant information is categorized) (Wagner *et al.*, 2012).

III. RESULTS AND DISCUSSION

Social, economic and demographic factors of the respondents

Results revealed that 37.08 percent respondents were at the age group of 15-24 which is highest and lowest from 60+ age group (10.42 percent). Young people are more prone to use mobile payment services. About 22.08 percent respondents were from the age group of 25-34, 16.25 from 35-44 age group and 14.17 percent from 45-59 age group (Table 2).

Gender can influence the acceptance behavior of mobile payment services. The study reported equal percentage of gender participation. About 50 percent male and 50 percent female were the customer of mobile payment services in this study (Table 2).

Religious issues can affect the behavioral pattern of using mobile payment services in our country. Muslims make up almost 90 percent of the population of Bangladesh, Hindus account for about 9 percent, and other religions constitute the remaining 1 percent (BDHS, 2014). In this study about 81.25 percent of the consumers of MPS were Muslim and 18.75 percent were Hindu (Table 2).

The level of literacy is generally considered as an index of social advancement of a community. It is also considered as important measuring rod for progressive attitude in adopting modern technology. Literacy helps a person to be capable to have day to day information on the modern techniques together with technological scarce resources and maximizing profile.

This study reported that majority of the respondents were highly educated. About 36.25 percent consumers of MPS were at graduation level and 31.67 percent were at post-graduation level and followed by secondary (15.83 percent), up to primary (8.33 percent) and Higher Secondary (7.92 percent) (Table 2). As MPS users must have the ability to use mobile phone (either smartphone or featured phone), there was none any uneducated respondents in the sample.

Table 2: Social, economic and demographic factors of the respondents (n=240)

Variables	Frequency	Percentage
Age Group		
15-24	89	37.08
25-34	53	22.08
35-44	39	16.25
45-59	34	14.17
60+	25	10.42
Gender		
Male	120	50
Female	120	50
Religious Status		
Muslim	195	81.25
Hindu	45	18.75
Educational Status		
Up to primary	20	8.33
Secondary	38	15.83
Higher secondary	19	7.92
Graduation	87	36.25
Post-Graduation	76	31.67
Occupational Status		
Student	109	45.42
Govt. job	35	14.58
Housewife	23	9.58
Private job	19	7.92
Farming	16	6.67
Teacher	14	5.83
Entrepreneur	12	5.00
Retired officer	4	1.67
Business	8	3.33
Marital Status		
Single	132	55
Married	106	44.17
Divorce	2	0.83
Residential Area		
Urban	156	65
Rural	84	35
Monthly Income		
Up to BDT 5000	54	23.28
BDT 5001 - BDT 10000	85	36.64
BDT 10001 - BDT 20000	28	12.07
BDT 20001 – BDT 30000	22	9.48
BDT 30001 – BDT 40000	14	6.03
BDT 40001 – BDT 50000	24	10.34
BDT 50001 – BDT 60000	5	2.16

Source: Field survey, 2020

The interviewed users of MPS for this study were engaged in various types of occupation. The work in which a person engaged throughout the year is known as the main occupation of that person (Ray, 1998). Besides students, some were engaged in petty business, some were engaged in government, semi-government, non-government jobs, some of them were engaged in rural nonfarm activities. About 45.42 percent consumers were engaged in academic means students and 14.58 percent government job followed by housewife, private job, farming, teaching, entrepreneur, retired officer and business (Table 2).

About 55 percent of the respondents were single because majority of them were related to academic and early job holder. On the other hand, 44.17 percent were married who used MPS mostly for ordering their necessary family requirements online apart from others mobile payment services and only 0.83 percent respondents were divorced (Table 2).

About 65 percent respondents were selected and interviewed from urban areas and 35 percent were from rural areas in this study. It's expected that urban people are more prone to use MPS because of the touch of modernization or urbanization effects.

Monthly income is correlated to the mobile payment services as highly income earners are more tends to adopt modern technology (Trutsch, 2016). In this study income of students meant to be money received from family and earned from his additional work. Income of farmer meant monthly monetary value of output earned from his farming activities and income of housewife meant earnings from gardening, rearing duck, hen etc. and received from family. The average monthly income of the respondents was BDT 17540.95. Where maximum monthly income was BDT 60000 and minimum income was BDT 4000. About 48.92 percent respondents had monthly income up to BDT 10000 because the respondents in this range were mostly students. Only 12.50 percent respondents had monthly income in the range of BDT 40001 to BDT 60000 (Table 2).

Information about using mobile payment services

In this study respondents were interviewed on the condition of being users of mobile payment services. So, there is none who had no experience of using MPS. Around half (47.08 percent) of the total respondents used MPS in a regular basis followed by many times users (28.33 percent), few times users 23.33 percent) and one time users (1.25 percent). Again, above the half of the total respondents (57.92 percent) used MPS many times in a month where the average usage rate was 10.63 times per month (Table 3).

Table 3: Information about using MPS

Variables	Frequency	Percentage
Usage Experiences		
One-time users	3	1.25
Few time users	56	23.33
Many times users	68	28.33
Regular users	113	47.08
Frequency of Usage Experiences		
Daily	2	0.83
Once a week	21	8.75
Once a month	78	32.50
Many times a month	139	57.92
Choice of MPS Provider		
bKash	116	48.33
Rocket	20	8.33
bKash and Rocket	88	36.67
bKash and Nagad	3	1.25
bKash and SureCash	2	0.83
bKash, Rocket and Nagad	8	3.33
bKash, Rocket, Nagad and SureCash	3	1.25
Safety Range of Transacting/Paying Money over MPS		
<1000	18	7.50
1001-5000	52	21.67
5001-10000	75	31.25
>10000	95	39.58
MPS Received by Respondents		
Mobile banking	82	8.79
Paying bills (for electricity, water, etc.)	131	14.04
Offline shopping (for necessary agricultural goods)	156	16.72
Online shopping	142	15.22
Telecommunication services (mobile recharge or top-up)	188	20.15
Transaction to children who are studying away from home	25	2.68
Students educational fee/bill payment	89	9.54
Transaction to relatives and friends	120	12.86
Monthly Transaction		
Average (BDT/month)	6320.83	
Maximum (BDT/month)	80000	
Minimum (BDT/month)	1000	
Monthly Payment		
Average (BDT/month)	1684.17	
Maximum (BDT/month)	10000	
Minimum (BDT/month)	200	

Source: Field survey, 2020

Note: The total number of frequencies for MPS Received by Respondents was 933.

As Rocket and bKash are early in MPS provider, people were tending to use them. Even though many respondents above age group 50 didn't know about MPS providers like SureCash which is disappointing. About 48.33 percent respondents were found user of bKash followed by bKash and Rocket (36.67 percent), Rocket (8.33 percent), bKash, Rocket and Nagad (3.33 percent), bKash and Nagad (1.25 percent), bKash, Rocket, Nagad and SureCash (1.25 percent) and bKash and SureCash (0.83 percent). Respondents have been using MPS for an average of 38.20 months where maximum time was 96 months and minimum was 5 months (Table 3).

Majority of the respondents (98.33 percent) felt safe using MPS and doing their transactions and payments over MPS. Among them 39.58 percent believed that transacting or paying money greater than BDT 10000 over MPS is safe and secured followed by BDT 5001- BDT 10000 (31.25 percent), BDT 1001- BDT 5000 (21.67 percent) and less than BDT 1000 (7.50) (Table 3). These stats indicating that people are feeling safe while using Mobile Payment Services.

Among the mobile payment services, 20.15 percent respondents received telecommunication services like mobile recharge or top up, 16.72 percent received offline shopping services, followed by online shopping services, paying bills (for electricity, water, etc.), transacting money to relatives and friends, paying students educational fees, mobile banking facility and transacting money to children who are away from home (Table 3).

The average monthly transaction was BDT 6320.83 for using various kinds of services from MPS and mobile payment like bill payment, offline and online payment was BDT 1684.17. Importantly maximum transaction was recorded BDT 80000 and minimum was BDT 1000 monthly. Whereas Maximum mobile payment was recorded BDT 10000 and minimum was BDT 200 monthly (Table 3).

Customer experiences with mobile payment services

To identify and classify the common sources of satisfaction and dissatisfaction associated with the use of mobile payment services and compare them to the determinants of satisfaction with technology-based services, customer experiences with mobile payment services needs to be overlooked. The positive perception of mobile payment services should motivate greater merchant acceptance. The knowledge of customer satisfaction sources with different consumer groups and at different stages of the payment process can help companies in designing, improving, and marketing mobile payment services.

The main satisfaction sources that emerged from the data analysis are, in descending order of incidents: convenience, problem solving, offer and discount, security and trust, and efficacy. The percentage distribution is shown in detail in Figure 2. Overall, convenience is the most discussed source of customer satisfaction with mobile payment services. Convenience is a state of being able to proceed with

something without difficulty. In mobile payment service sector, convenience is the key to lead the satisfaction of using those services. Figure 2 showed that the majority of respondents (63.3 percent) identified convenience as a satisfaction source in the context of mobile payment services. Mobile payments allow consumers to make payments easily, fast, and efficiently. Similarly, to the online versus physical shopping, mobile versus traditional payments bring customers a convenience advantage (Szymanski and Hise, 2000; Hayashi, 2012).

In total, 16.52 percent of the respondents referred to problem-solving as a source of their satisfaction (Figure 2). Problem-solving can be described as the possibility to use mobile payments in the situations when alternative payment methods fail or are not available. For example, one female respondent described that a mobile payment solution allowed her to finalize a payment when she forgot cash and could not pay with her card. Smolarczyk (2018) found only 5 percent responses in this category. In similar Context, the ability of technology to help users in urgent situations was previously addressed in the context of self-service technologies (Meuter *et al*., 2000).

Offer and discount can perform as a self-motivating factor in mobile payment service sector. About 9.63 percent respondents reported offer and discount as a source of their satisfaction for using mobile payment services (Figure 2) whereas 3.1 percent by Yuvaraj and Evelien (2018). On the other hand, Saviour (2019) found 52 percent among all respondents satisfied with cash back offer. Overall, they suggested that the offer and discount in time of paying over mobile payment system instead of using cash payment generates satisfaction.

Perceived risk is one of the main mobile payment adoption inhibitors (Mallat, 2007). In 6.88 percent of the incidents, the security and trust in time of transaction was mentioned as a satisfaction source whereas Smolarczyk (2018) found 8 percent response. Saviour (2019) found highly satisfaction privacy policy in Pay through mobile (Paytm). In general, mobile applications generate a feeling of trust, making the user feel confident that his/her money are managed securely. Most respondents simply referred to safety without including any experience details. For some individuals, however, the security feeling was associated with a specific trusted application.

About 3.67 percent of the respondents referred to the ability to perform the intended service as a satisfactory feature of the underlying mobile payment solution (Figure 2). Most commonly, satisfaction resulted from the capability to make a successful payment. In several incidents, the users were surprised by the performance of the mobile payment solution. Age group and education has an impact in generating satisfaction for efficacy. Functionality as a determinant of quality and satisfaction has been previously discussed in the context of electronic services (e.g., Parasuraman *et al.*, 2005; Collier and Bienstock, 2006; Smolarczyk, 2018).

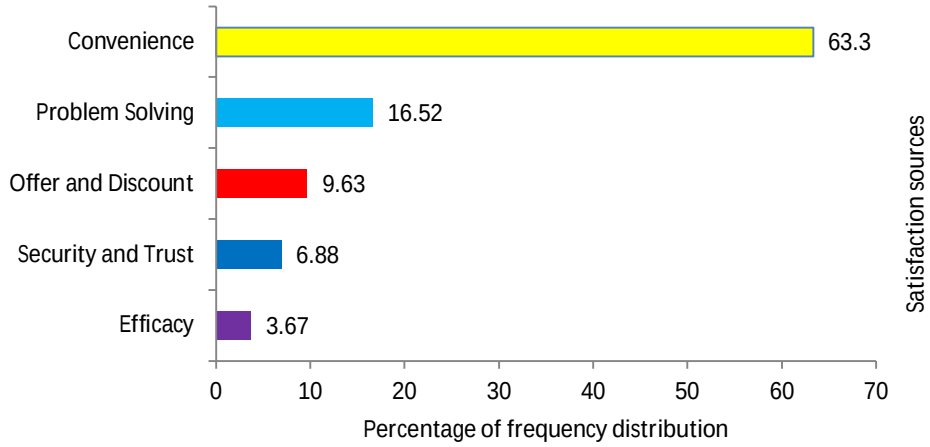

Figure 2: Total percentage distribution of satisfaction source
Note: Percentages refer to the total number of responses (n=218).

Given that the number of dissatisfactory incidents is low, the sample size does not allow drawing statistically significant conclusions. Within the data collected, it is observed (Figure 3) that the sources of dissatisfaction are opposite to the satisfaction sources, falling mainly into the umbrellas of complexity (44.44 percent) and network failure (29.63 percent). Complexity was mentioned by the study participants as technical errors. In particular, the incidents revealed that some mobile applications are complicated to use, leading to overall payment dissatisfaction. In addition, respondents also mentioned that the application did not provide clear instructions and the payment process was overall confusing. Network failure in time of using mobile payment services generates dissatisfaction to use MPS. They reported that weak network connection in time of urgent transaction or payment causes losses or work failure and so creates dissatisfaction. Apart from those, respondents referred higher transaction cost, unable to get proper services with only one MPS, limitation of inter-linkage issues among service providers as a source of dissatisfaction. We all the stakeholders needed to give concentration on this section of dissatisfaction of using MPS along with satisfaction issues.

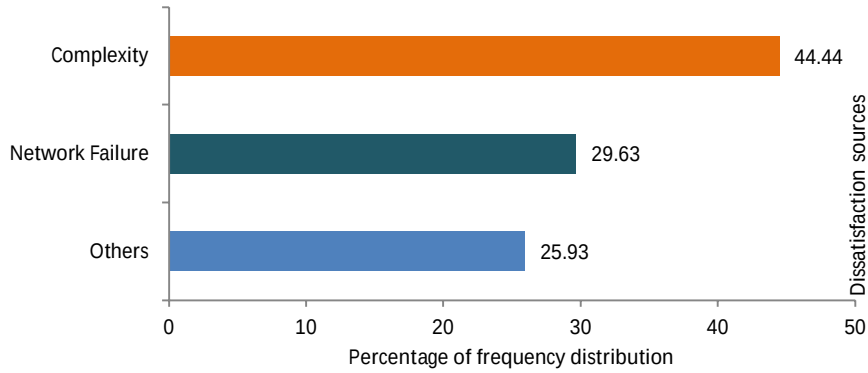

Figure 3: Total percentage distribution of dissatisfaction source
Note: Percentages refer to the total number of responses (n=27).

Influencing factors in e-commerce transaction through MPS

To identify the influencing factors in e-commerce transaction through using mobile payment services, this study uses multiple linear regression models. The independent variable of this regression model is monthly e-commerce transaction of mobile payment services users and the social, economic and demographic characteristics of the respondents apply as independent variables namely gender, religion, age, education, income, marital status and residential area. Among the independent variables gender, religion, marital status and residential area are categorical variables. Gender has two categories male and female; religion has two categories Islam and Hindu, marital status has three categories single, married and divorced; and residential area has two categories urban and rural. The model is running with 232 valid data. The following section describes the findings of the analysis.

The regression results in Table 4 revealed that adjusted R-squared was 0.104. This indicates that 10.4 percent of changes in monthly transaction over MPS were captured by social, economic and demographic variables (gender, religion, age, education, income, marital status and residential area). The regression model specifically indicates that gender, religion, age, education, income, marital status and residential area jointly explain 10.4 percent of systematic variation in the monthly transaction over MPS in Bangladesh. Skogqvist (2019) found 11.97 percent R-squared value and Abayomi *et al*. (2019) found 10.6 percent adjusted R-squared value in similar kind of analysis. The remaining 89.6 percent is explained by other elements not included in this model. The significance of the F-value at 1 percent level implies that the demographic factors as a group are actually relevant in explaining the monthly transaction over MPS by the respondents.

Table 4: Findings of the Multiple Linear Regression model

Explanatory Variables	Estimated Coefficient	Standard Errors	T-values
Constant	14019.08	5462.07	2.57
Gender			
Male ⟶ Female	-1007.64	897.64	-1.12
Female ⟶ Male	1007.64	897.64	1.12
Religion			
Islam ⟶ Hindu	-1477.82	1148.47	-1.29
Hindu ⟶ Islam	1477.82	1148.47	1.29
Age	-175.53	77.24	-2.27*
Education	-647.70	235.14	-2.75*
Monthly income	0.17	0.04	4.31*
Marital Status			
Single ⟶ Married	-2343.34	1846.33	-1.27
Single ⟶ Divorced	-2281.82	6973.95	-0.33
Married ⟶ Single	2343.34	1846.33	1.27
Married ⟶ Divorced	61.53	6712.07	0.01
Divorced ⟶ Single	2281.82	6973.95	0.33
Divorced ⟶ Married	-61.53	6712.07	-0.01
Residential Area			
Urban ⟶ Rural	-2339.95	1123.83	-2.08*
Rural ⟶ Urban	2339.95	1123.83	2.08*

a. Dependent Variable: Monthly Transaction (BDT) over MPS
Note: * Significant at 5% level
Number of obs = 232, R-squared = 0.135, Adj R-squared = 0.104, F (8, 223) = 4.36,
Prob > F = 0.0001
Source: Field survey, 2020

It can be seen from Table 4 that the regression coefficient of respondents age was 175.53 with a negative sign. This coefficient was statistically significant at five percent probability level. It explains that an increase in one year of respondent's age, keeping other factors constant, would lead to decrease in the monthly transaction over MPS by BDT 175.53. The younger people are technology pioneer and more skilled in ICT which let them to use mobile payment services much more (Abayomi *et al.*, 2019; Yaokumah *et al.*, 2017; Stavins, 2016). This could be a reason to spend more money in MPS by younger people.

It is evident from Table 4 that the regression coefficient of level of education was 647.70 with a negative sign. This coefficient was statistically significant at five percent probability level. It indicates that an increase in year of education, remaining other factors constant, would lead to decrease in the monthly transaction over MPS by BDT 647.70. As result showed that 45.42 percent respondents were the students having higher education (Table 2) and lower income earner, it could be a reason of lower transaction behavior in MPS by them. On the other hand, older respondents with lower education background but higher income earning capability could be another reason of lower transaction behavior over MPS. Skogqvist (2019)

found that higher educated are likelihood to have more savings in mobile and customers with higher level of education felt less secured in using mobile payment services (Yaokumah *et al.*, 2017).

The magnitude of the regression coefficient of respondent's monthly income was 0.17 with a positive sign. This coefficient was statistically significant at five percent probability level. It implies that one BDT increase in monthly income of the respondent, remaining other factors constant, would lead to an increase in the monthly transaction over MPS by BDT 0.17 (Table 4). Lower income consumers are less payment instrument adopter than higher income consumer (Abayomi *et al*., 2019; Stavins, 2016).

The regression coefficient of residential area was 2339.95 with a negative sign when 'Urban' taken as base and positive sign when 'Rural' taken as base. The coefficient was statistically significant at five percent probability level, it implies that when changes urban to rural, remaining other factors constant, would lead to decrease in the monthly transaction over MPS by BDT 2339.95 and would lead to increase by BDT 2339.95 when rural changes to urban. The consumer of advance geographical background spends more money on payment instruments (Stavins, 2016).

It is evident from Table 4 that the regression coefficients of gender, religion and marital status were not statistically significant. So, they had no significant effects on monthly transaction over MPS.

The findings of the multiple linear regression models concluded that respondent's age, education, salary and residential area showed statistically significant relationship with monthly transaction over MPS at five percent probability level. Where age and education showed negative relationship and salary showed positive relationship with the dependent variable. On the other hand, in case of residential area the people live in urban area are more tends to use MPS as it showed positive relationship with monthly transaction over MPS and less tends to use MPS by rural area as result showed a negative relationship between variables (Residential area and Monthly transaction over MPS).

IV. CONCLUSION

Bangladesh is experiencing rapid growth in mobile financial service sector which is needed to be continued. Result indicated that the social, economic and demographic characteristics such as age, education, income and residential area showed significant influence over monthly MPS transaction behavior of the respondents in Bangladesh. The satisfaction and dissatisfaction were identified with the help of content analysis. The study revealed that users are satisfied with mobile payments; significantly more study participants chose to describe a positive experience with a specific mobile payment solution as it is convenient, having problem solving

capability, provide offer and discount, trust ability and efficacy in using MPS. The service providers should take the satisfaction and dissatisfaction sources in account and appropriate measures should be taken under policy guideline. More advertisements are required to be placed at every possible means of medium in order to aware people about MPS, building trust among the users and feel them that MPS is a secured medium of transferring their valuable money. It is therefore needed a continuous public awareness program and consumer education on invariability of MPS usage to facilitate attainment of cashless society in Bangladesh.

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