

Picture of the Socio-Economic Development of Rural People of Bangladesh through Mobile Financial Services - a study on bKash

Mohammed Shakhawat Hossain¹ *Aminul Haque Russel²

1. Principal (In-charge) & Associate Professor, Daffodil Institute of IT, Dhaka, Bangladesh
 2. Lecturer, Department of Business Administration, Daffodil Institute of IT, Dhaka, Bangladesh
- * E-mail of the corresponding author: ahrfinance@gmail.com

Abstract

Mobile Banking is a remarkable tool of financial inclusions that has been applied to connect (combines) the unbanked and underprivileged people into formal financial channel. At present, Bangladesh adores the incredible success in mobile banking particularly in rural areas (where bank branch facility is not available) of which bKash holds the leading position. This study is based on the assumption of socio-economic development of rural people of Bangladesh through bKash. Type of the research is exploratory in nature and followed by a conclusive method. The findings revealed that bKash has generated the various positive socio-economic impact like create employment opportunities, encourage savings, easy to received foreign remittance, women financial empowerment, role to developing the SMEs & agricultural sector, increase the financial productivity of seasonal workers & businessmen, break-down the power of middlemen & easy to business transaction, increase the money mobilization, save non-monetary cost. Finally this impact uplifting the living standard of rural people and contribute to reduce vicious cycle of poverty in rural area of Bangladesh.

Key words: Mobile Banking, Financial inclusion, Rural area, Socio-economic development, bKash.

1. Introduction

Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost (Rangarajan Committee, 2008). In Bangladesh, 66% people live in rural area as a percentage of total population (The World Bank report-2015), of which most of the people didn't have a bank account. This represents a huge untapped market for commercial banks. However, establishing bank branches across rural Bangladesh is not a suitable option because of the costs and of regulatory restrictions as the central bank only grants new branch opening licenses for a maximum of 15 branches in a year (Kabir, Islam & Inam, 2013).

Since 2011, few commercial banks are tried to include the unbanked people in formal financial channel through Mobile Financial Services (MFS). So, branchless banking is the best idea for solving this problem. Because, branchless banking has great potential to extend the distribution of financial services to poor people who were not reached by traditional bank branch networks; it lowers the cost of delivery, including costs both to banks of building and maintaining a delivery channel and to customers of accessing services e.g., travel or line up times (Ivatury and Mas, 2008). Therefore, Mobile Financial Services (MFS) is an approach to offering financial services that combines banking with mobile wireless networks which enables customers to execute banking transactions. This means the ability to make deposits, withdraw, and to send or receive money from a mobile account. Regularly these services are enabled by the use of bank agents that allow mobile account holders to transact at independent agent locations outside of bank branches. It offers the opportunity to build another channel beyond the bank branch and ATM network to enable millions to have easier access to the formal banking system. Bangladesh Bank aims to build a commercially viable, competitive and safe MFS market (Bangladesh Bank, 2012).

The first Mobile Banking services was established in European Banks before 1999 via SMS, which is known as SMS banking as well as later on its operated via mobile web. However, the new era of banking in Bangladesh 'Mobile Banking', through any mobile device, was inaugurated at 31st March 2011 by Dutch Bangla Bank Limited (DBBL). At present, in Bangladesh, almost 17 banks are affiliated with Mobile Banking operations.

Mobile Banking also directly deals with Foreign Exchange through remittance payment. Some of the Banks including Dutch Bangla Bank Ltd, Bangladesh Islamic Bank Ltd, Mercantile Bank Ltd as well as Brac Bank Ltd has already made strategic alliance with different international Money Exchanger for receiving remittance from foreign countries (Alam, Patwary and Rahim, 2013). The Brac Bank-initiated mobile banking service, 'bKash', is at present the country's leading service provider in mobile banking. Dutch-Bangla Bank and Islami Bank Cash are next in line, after 'bKash', as the service-providers in mobile banking, in terms of volume of transactions, clientele coverage and number of personnel, directly or indirectly, involved in the process of making such services available to the people. (The Financial Express, March 09, 2013).

Socio-economic development is the process of social and economic development in a society. It is measured with different indicators, such as GDP, life expectancy, literacy and levels of employment. Changes in less-tangible factors are also considered, such as personal dignity, freedom of association, personal safety and freedom from fear of physical harm, and the extent of participation in civil society. Causes of socio-economic impacts are, for example, new technologies, changes in laws, changes in the physical environment and ecological changes. (https://en.wikipedia.org/wiki/Socioeconomic_development, 2009). Economic development usually means improvement of standard of living of the citizens by alleviating poverty through increased productivity.

Scholars argue that there is a strong relationship between poverty elevation and economic development (Kifle, Olukoshi & Wohlgemuth, 1997). In another way, Economic Development refers to the raising of the productive capacity of a country through the introduction of policies designed to enhance the productivity of land, labour and capital, raise standards of living and reduce or alleviate the poverty of the inhabitants of the country (Pokrant, 2001). Thus, in the socio-economic context, development means the improvement of people's lifestyles through improved education, incomes, skills development and employment.

2. Literature Review

Haque and Rahman (2014) revealed that MFS rapidly growing mobile technology based financial service providers in Bangladesh exclusively by including the millions of women and rural low income people i.e. it's became possible to wider the financial inclusion. Also, it has played an energetic role for removing the barriers in basic financial access, economic development of women providing them access to easy and secure transfer of money, remittance, insurance, and savings facilities as well as by increasing the bargaining and decision making power in the family. Lastly, it is argued that in general MFS and bKash in particular has been contributed to reduce poverty by including in active engagement of the disadvantaged people.

Das, Biswas & Islam (2014) showed that mobile money transfer has been developed the socio-economic position of the rural areas people like South-Western Region of Bangladesh. In their research paper, they argue bKash is opened a radical window for poor and unbanked people for transferring money by removing all the obstacles of formal transaction system. They have concluded due to having bKash account frequency of transaction (sent and received money) is increased by 1.97 times and during the shocks increased by 0.14 times.

Macharia (2013) investigated that in Kenya, mobile banking has played a significant role to improve the standard of living through wealth creation of unbanked people.

Kamal and Mondal (2016) described that most of the customers are satisfied and comfortable by using mobile financial services (MFSs) because it's save cost & time, and easy to use. So, customers believed that it helps to develop the socio-economic life of the poor people of Bangladesh.

Nandhi (2012) exposed that in India mobile banking brings blessed to low income people by making payments and deposits easier and more accessible also seems to improve the saving behavior of rural people. In concluded that it is most popular among the country particularly who depends on risky informal savings practices.

Mago and Chitokwindo (2014) identified that low income people are eager to adopt mobile banking because it is easily accessible, convenient, cheaper, easy to use, faster means of sending & receiving money and secure. These attributes helps to boost up the economic growth in rural areas. Also, recommended that central bank should monitor the non-bank led mobile banking model and reconsider the transaction limits and cost structure.

3. Objectives of the Study

The main objective of this research paper is to explore the role of bKash for the socio-economic development of rural people of Bangladesh. The other objectives are given below:

- To demonstrate the concept of financial inclusion and mobile banking.
- To show the growth scenario of mobile banking in Bangladesh.
- To assess the impact of bKash over the rural economy of Bangladesh.

4. Rationality of the Study

There is no doubt, banks are playing a vital role in the economic development of a country though the mobile financial services which is not significant because most of the rural peoples are not included in the formal banking systems. In recent years, Bangladesh has been experiencing a remarkable progress in the mobile financial services, contributed by the mobile banking operators especially by bKash, the pioneer in the MFS world. The fact is that there is a very few academic research have been made to explores to what extent this development affects the socio-economic life of the people of rural areas in Bangladesh. That's why it's material issue to recognized the contributing scale of bKash in regards to the development process of rural people those who are really deprived decades to decades from a formal financial support by the banks or any financial institutions in Bangladesh. The findings of the study may give a notion of new potentiality for bKash as well as other mobile financial service providers in the financial sector of Bangladesh.

5. Methodology

This paper is an exploratory type of research which has been conducted based on the primary and secondary data also followed by a conclusive approach. A set of structured questionnaire was used to collect primary data and organized interviews of users, agents and officials of bKash by using unstructured questionnaire. The interviews were conducted in Bengali, the then pertinent information was translated into English. For the purpose of this study, we also collected data from secondary sources such as, monthly report of Bangladesh Bank on mobile financial services, published papers, journals, newspaper reports, and so on. In this study total sample size was 100 respondents who were the users of bKash. Non-probability convenient sampling method and a 5-point Likert scale (1 for 'highly disagreed' to 5 for 'highly agreed') was applied to assess the response of the respective audience. Therefore, collected data was analyzed by the statistical tools, like, descriptive statistics, frequencies, and regression analysis.

Relevant Information demonstrates as one of the core elements for any social or scientific research. Unlikely Authority of bKash showing the cause of confidentiality reluctant to reveal or published data in regards of number of bKash accounts, appointed agents and the volume turnover made in rural areas of Bangladesh. Dearth of authentic journals and research papers were recognized as the other bottle necks of this study.

6. Development Scenario of Mobile Banking in Bangladesh

Mobile banking is relatively a new dimension in the economy of Bangladesh. Still about two third of the total banks are not using this service. The table – 01, shows a list of banks and their mobile banking products.

Table – 01: List of banks and their mobile banking products

SL. No.	Name of the Banks	Product Name
01.	Dutch-Bangla Bank Limited (DBBL)	Dutch-Bangla Bank Rocket
02.	BRAC Bank Limited	bKash
03.	Prime Bank Limited	EasyCash
04.	Islami Bank Bangladesh Limited	mCash
05.	Trust Bank	Mobile Money
06.	Bank Asia Limited	Mobile Banking
07.	Dhaka Bank	SMS Banking
08.	National Credit and Commerce Bank Limited	Sure Cash
09.	Mercantile Bank	MyCash
10.	South East Bank	SMS Banking
11.	First Security Islami Bank	Sure Cash
12.	AB Bank	SMS Banking
13.	United Commercial Bank	Ucash
14.	ONE Bank Limited	Ok
15.	Bangladesh Commerce Bank	Sure Cash
16.	South East Bank	SMS Banking
17.	IFIC Bank	IFIC Mobile Bank

Source: Bangladesh Bank

Two years ago there were 28 MFS license holders who were interested in launching the service. However, currently, 19 banks have approval for offering MFS but 17 have rolled out the service so far. Among the banks, BRAC bank i.e. bKash takes the leading market share with its unique features. *Firstly*, bKash is a private limited company. *Secondly*, BRAC bank is a commercial bank of BRAC group that owns the 51% share. *Thirdly*, a U.S. company called Money in Motion LLC invested the initial minority 49% share and *finally*, The International Finance Corporation (IFC) and the Bill & Melinda Gates Foundation joined as minority investors in 2013 and 2014 respectively.

Table-02: Summary of mobile financial services

Description	2014 (December)	2015 (December)	2016 (December)
No. of approved banks	28	28	19
No. of banks started to convey the services	19	18	17
No. of Agents	5,40,984	5,61,189	7,10,026
No. of registered clients in Lac	251.86	318.45	410.78
No. of active accounts in Lac	121.54	132.18	158.74
No. of total transaction	74,473,558	114,847,197	133,727,455

Source: Bangladesh Bank monthly mobile financial services (2014 to 2016)

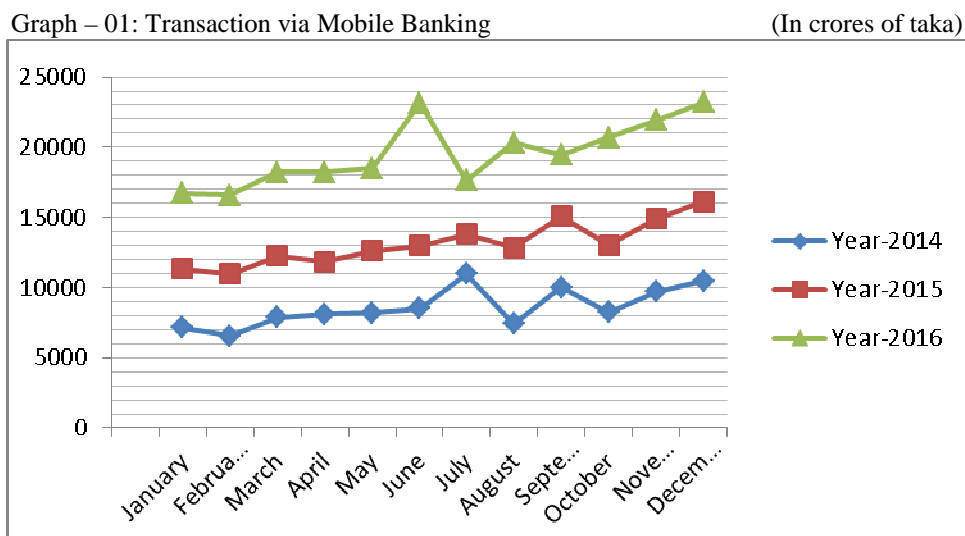
Initially under the regulation of Bangladesh Bank 28 commercial banks applied for the approval of operating mobile banking services, finally 19 banks have got the permission and among them 17 banks have launched their services so far (see table - 01). The expansion is clearly reflecting through message of the number of agents and the registered accounts increased. In the Table 02, we see that from 2014 to 2016 the number agents increased from 5.40 lac to 7.10 lac and number of registered clients from 251.54 lac to 410.78 lac. The rate of expansion of client is 63.33% and for agents its 32%.

Also, we see the number of transactions through MFS channels, at the same time, has increased by around 16.67% per cent during the same period. Around 1.14 billion transactions were made through MFS platform in 2015, which surged to 1.33 billion last year. There has also been a slight increase in the number of active MFS

accounts in the country, from 13.21 million in December 2015 to 15.87 million in December 2016. So, it's clearly reflecting the demand and popularity of the services to the people of Bangladesh specially those who are vulnerable, unbanked and underprivileged in the society.

6.1. Depiction of the growth picture of mobile banking

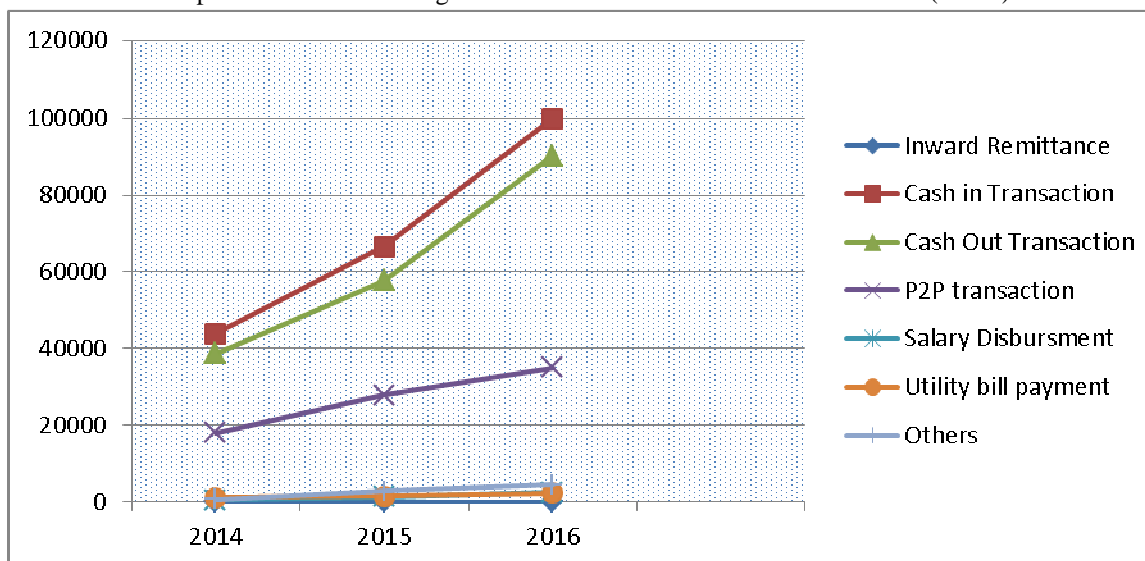
Mobile Banking is now very buzz word everywhere in the world regardless of developed or under developed countries. Last couple of years the same scenario has been reflecting in Bangladesh also. It seems now the best alternative of the financial transactions to the people of the country both in urban or rural areas. It's true that still the mobile banking activities confined in cash out and cash in transactions between P2P and B2P or whatever else. The starting of mobile banking was not so easy as there were huge number of obstacles stand over the path of the story, like the totally new operating system, liking-disliking of the people, to reach to the target audiences successfully and the issue of technological supports really a very vital point to make it successful one. However, lastly it has been created milestone in the financial sector of Bangladesh.



Source: Bangladesh Bank monthly mobile financial services report (2014 to 2016)

Graph 01, Shows the trends of the transactions made between 2014 and 2016. Where in 2014 it was started from the transactions of 7000 crore, at the end of the year 2016 it reached to near about 25,000 crore. So the average growth is more than 300%. We see that mobile banking went from strength to strength, in terms of transactions increasing 48.75% year – on- year to Tk. 2,34,691.79 crore in 2016, according to Bangladesh bank. This is a very significant growth and this growth will continue for the next few years. A record of Tk. 2.34 trillion has been transacted through mobile-based financial services in the country last calendar year, up from Tk. 1.57 trillion in 2015. We see that mobile banking went from strength to strength, in terms of transactions increasing 48.75% year – on- year to Tk. 2,34,691.79 crores in 2016, according to Bangladesh bank. This is a very significant growth and we hope this growth will continue for the next few years.

Graph – 02: Product wise growth scenario of Mobile Financial Services (MFSs)



Source: Bangladesh Bank monthly mobile financial services report (2014 to 2016)

From the graph 02, remittance picture through mobile banking is also rising in good patch. Where in 2014 the remittance 5 crore it reaches 8 crore. Recently bKash made an agreement with Western union in regards of transferring money through bKash to reach the remittance to the respective person without any hesitation. A village woman of remote areas now is receiving money sent her relatives at her home just with a very innovative support of bkash. Whereas few months before they couldn't think it rather had to do to maintain a lot of formalities to have this money. It's another revolution made by bkash and the result is estimating that

- Inflow of remittance will increase.
- Make the life of the people easy

Cash in and cash out transactions as well as P2P transactions remained the predominant mode of transactions on the MFS platforms in the country. Out of around Tk. 232.13 billion transactions through MFS in December 2016, cash in transactions amounted more than Tk. 100 billion, cash out transactions amounted around Tk. 90.46 billion, and Tk. 33.68 billion accounted for P2P transactions. When queried about this transaction pattern, the central bank officials admitted that other forms of transactions through mobile banking should also become popular. Already, a significant amount of transactions are taking place through MFS in the forms of salary disbursement and utility bill payment. However, there are scopes for further growth of such transactions through MFS, which will take place with the change in transaction patterns of the common people. So, in the last couple of years, we have observed that people at the bottom of the pyramid are also massively taking part in economic activities and that volume is increasing significantly every day. This contribution directly impacted the transactions in mobile banking.

7. Data Analysis

Based on the survey with different users of bKash and mobile banking operators (agents), we try to demonstrate the role of bKash for development of socio-economic position of rural people of Bangladesh by using different statistical tools.

Table - 03: Demographics profile of the respondents (%)

Gender	Male	74	74%
	Female	26	26%
Total			100%
Age	15 – 20	7	7
	20 – 25	31	31
	25 – 30	28	28
	30 - Above	34	34
Total			100%
Educational qualification	Under SSC	58	58
	SSC level	14	14
	HSC level	19	19
	Honor's Level	8	8
	Master's level	1	1
Total			100%
Occupation	Farmer	35	35
	Job	10	10
	Business	22	22
	Others	33	33
Total			100%
Monthly Income Level	5000 – 10,000	43	43
	10,000 – 15,000	30	30
	15,000 – 20,000	13	13
	20,000 above	14	14
Total			100%
Respondents with Bank Accounts	Yes	39	39%
	No	61	61%
Total			100%
Distance of Nearest Transaction Centre	Under 1 K.M.	34	34%
	1-2 K.M.	12	12%
	3-4 K.M.	35	35%
	Over 5 K.M.	19	19%
Total			100%

Source: Field Survey

Table 03 is demonstrating the demographic variables of the respondents surveyed. We see that from the total respondents 74% are male and 26% female. More than 70% respondents are below SSC and SSC passed and their income level mostly BDT 5000-15000 monthly. Out of 100 respondents 61% does not have any bank account they are mainly the rural poor whom no banks welcomed for providing any service rather recognized as unbanked, underprivileged and vulnerable part of the society. In the scale of occupation 35% are farmers and 33% others. The “others” are actually here indicated the masses like rickshaw pullers, day labors, seasonal workers and small producers or marginal farmers and so on. So 68% are here basically the low income people who don't have educational qualification. Only 10% are job holder and 22% doing business. So, obviously the demographic depiction already have provided here showing the profile of the respondents of the surveyed.

7.1. Relationship between different demographic variables and role of bKash

Table - 04: Cross sectional relationship among Age, Gender and Socio-economic development of rural people through bKash

Age			Socio-economic development of rural people through bKash				Total
			Disagree	Neither agree nor disagree	Agree	Fully Agree	
15-20	Gender	Male	1	2	3	1	7
	Total		1	2	3	1	7
20-25	Gender	Male	1	9	7	5	22
		Female	0	5	3	1	9
	Total		1	14	10	6	31
25-30	Gender	Male		9	7	0	16
		Female		4	6	2	12
	Total			13	13	2	28
Over 30	Gender	Male	2	11	12	4	29
		Female	0	2	3	0	5
	Total		2	13	15	4	34
Grand Total	Gender	Male	4	31	29	10	74
		Female	0	11	12	3	26
	Grand Total		4	42	41	13	100

Source: Data collected from Field Survey (Analysis by SPSS)

The results from the analysis of demographic variables in relation to socio-economic development of rural people of Bangladesh through bKash show that majority of the respondents i.e. 93% belongs the age group of 20 to 30 years and overall 54% male and female strongly believe bKash plays important role to the develop of the socio-economic condition of rural people by mobilizing, utilizing their money and also connecting into formal financial channel. It is also found here that the masses particularly above 20 years express their positive consent regarding the role of bKash.

Table 05 - Cross-sectional relationship among Occupation, income and Socio-economic development of rural people through bKash

Monthly Income			Socio-economic development of rural people through bKash				Total
			Disagree	Neither agree nor disagree	Agree	Fully Agree	
5000-10000	Occupational Ability	farmer	1	4	10	4	19
		job	0	1	1	0	2
		Business	0	3	3	1	7
		Others	1	3	6	0	10
	Total		2	11	20	5	38
10000-15000	Occupational Ability	farmer	1	3	8	4	16
		job	0	1	2	0	3
		Business	0	4	3	1	8
		Others	0	7	5	0	12
	Total		1	15	18	5	39
15000-20000	Occupational Ability	job	0	1	1	0	2
		Business	1	1	0	0	2

		Others	0	4	1	1	6
	Total		1	6	2	1	10
Over 20000	Occupational Ability	job	0	3	0	0	3
		Business	0	3	2	0	5
		Others	0	0	2	3	5
	Total		0	6	4	3	13
Total	Occupational Ability	farmer	2	7	18	8	35
		job	0	6	4	0	10
		Business	1	11	8	2	22
		Others	1	14	14	4	33
	Grand Total		4	38	44	14	100

Source: Data collected from Field Survey (Analysis by SPSS)

The table 05 reflects the relationship between dependent variable “socio economic development of rural people by bKash” and the demographic variables income and occupation. Here we see that 44 respondents agree and 14 respondents fully agree that bKash is playing role to the socio economic development of rural masses of Bangladesh. 38% respondents somewhat agree with the statement and only 4% fully disagree. A lion portion that is 58% respondents has the positive consent that bkash is contributing in the socio economic development of the rural people of Bangladesh, even if we consider the middle point of the scale “ somewhat agree” then the picture will be more clear as 96% has the strong believe regarding the statement. As we have collected data from the rural and remote rural areas and both male and female were participated so a real picture has been plotted.

Table 06 – Statement of the perceptions of respondents on bKash

Statements / Variables	Opinion					Total	Mean	Rank
	1	2	3	4	5			
Employment opportunity for rural people	0	4	25	42	29	396	3.96	5 th
Encouraging Savings	1	21	31	30	17	341	3.41	11th
Easy to received foreign remittance	1	4	20	40	35	404	4.04	4th
Save cost and time	0	0	5	43	52	447	4.47	1st
Women financial Empowerment	6	15	31	24	24	345	3.45	10th
Role to Developing the SMEs	4	14	34	35	13	339	3.39	12th
Role to Developing the Agriculture	2	17	40	23	18	338	3.38	13th
Improve living standards of rural people	1	6	30	48	15	370	3.70	7th
Break-down the power of middleman	1	2	12	37	48	429	4.29	2nd
Poverty reduction in rural area	3	21	43	20	13	319	3.19	14th
Contribution to the productivity of Workers	3	7	33	46	11	355	3.55	9th
Increase the financial productivity of seasonal workers	0	10	29	36	25	376	3.76	6th
Increase the financial productivity of seasonal businessmen	1	8	31	40	20	370	3.70	7th
Purchase the agricultural ingredients in timely	1	7	40	33	19	362	3.62	8th
Easy to business transaction	0	4	6	60	30	416	4.16	3rd

Source: Data collected from Field Survey (Authors Calculation)

Like table 04 and 05 here we also see positive outcomes of the variables associated with Soci-economic environment of rural Bangladesh. In this table out of 15 variables one is dependent and the remaining 14 are independent variables. The highest mean value here is 4.47 regarding the statement “bKash saves cost and time” means almost every respondents fully agree with this variable and the lowest one is 3.19 and no mean value is below average. The all variables are giving positive indication regarding the contribution of bKash in the socio economic development of the people in the rural areas of Bangladesh.

7.2. Regression Analysis

The purpose of this analysis is to measure the relative effect of each independent variable on the dependent variable.

Hypothesis:

H₀ (Null Hypothesis): Socio-economic development of rural people of Bangladesh is not dependent on bKash.

H₁ (Alternative Hypothesis): Socio-economic development of rural people of Bangladesh is dependent on bKash.

Model: We have used the Socio-economic development of rural people of Bangladesh as the dependent variable and others dimensions of bKash are namely – [bKash save cost and time, bKash encourage to saving, Easy to received foreign remittance, Contribution to the productivity of Workers, bKash generating employment opportunity, bKash improve the living standard of rural, Role to agricultural development, Role of bKash to develop SMEs people, Increase the financial productivity of seasonal workers, Increase the financial productivity of seasonal businessmen, bKash reduce the poverty in rural areas, Purchase the agricultural ingredients in timely, Break-down the power of middleman, Easy to business transaction, Role of bKash to women economic empowerment] as the independent variables.

The Regression model as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \beta_{13} X_{13} + \beta_{14} X_{14} + \beta_{15} X_{15} + e_i$$

Where,

Y = Socio-economic development of rural people of Bangladesh through bKash

X₁ = bKash save cost and time

X₂ = bKash encourage to saving

X₃ = Easy to received foreign remittance

X₄ = Contribution to the productivity of Workers

X₅ = bKash generating employment opportunity

X₆ = bKash improve the living standard of rural

X₇ = Role to agricultural development

X₈ = Role of bKash to develop SMEs people

X₉ = Increase the financial productivity of seasonal workers

X₁₀ = Increase the financial productivity of seasonal businessmen

X₁₁ = bKash reduce the poverty in rural areas

X₁₂ = Purchase the agricultural ingredients in timely

X₁₃ = Break-down the power of middleman

X₁₄ = Easy to business transaction

X₁₅ = Role of bKash to women economic empowerment

e_i = Error

The overall regression model and its ANOVA are summarized as follows:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.760 ^a	.577	.501	.53730

a. Predictors: (Constant), X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, X12, X13, X14, X15

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.060	15	2.204	7.635	.000 ^b
	Residual	24.250	84	.289		
	Total	57.310	99			

a. Dependent Variable: Y

b. Predictors: (Constant), X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, X12, X13, X14, X15

From the ANOVA Test it is clear that the table significance value 0.05 is greater than the calculated significance value 0.000. It reflects the alternative hypothesis at 5% level of significance. It means that there was a significant relationship between dependent variable and independent variables. So, socio-economic development of rural people of Bangladesh is dependent on bKash. But it is also true that scale of socio-economic development of rural people is not significant level.

Interpretation of R:

Here, the value of R= 0.760

There is a high degree of positive correlation among the independent and dependent variables.

Comment on model fitting:

Here, the value of R² = 0.577 or 57.7%

57.7% variation in the dependent variables can be explained by the regression model.

Interpretation of Adjusted R²:

Here, the value of adjusted R² = 0.577 or 57.7%

The adjusted R square value of 57.7% indicates that the model explains roughly about 57.7% of the dimensions of bKash are responsible for socio-economic development of rural people.

Table 07: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.764	.667		4.142	.000
	X1	.407	.131	.336	3.109	.003
	X2	.193	.075	.262	2.582	.011
	X3	.301	.086	.401	3.484	.001
	X4	.031	.075	.036	.410	.683
	X5	.239	.101	.263	2.366	.020
	X6	.232	.122	.272	1.892	.065
	X7	.252	.113	.354	2.230	.031
	X8	.038	.094	.046	.401	.690
	X9	.243	.119	.301	2.036	.045
	X10	.045	.082	.051	.552	.582
	X11	.331	.088	.441	3.776	.000
	X12	.188	.073	.225	2.578	.012
	X13	.250	.101	.276	2.470	.016
	X14	.246	.120	.306	2.056	.043
	X15	.168	.093	.246	1.809	.078

a. Dependent Variable: Y

The Regression Equation

Role of bKash (Y) = 2.764 + 0.407 (X₁) + 0.193 (X₂) + 0.301 (X₃) + 0.031 (X₄) + 0.239 (X₅) + 0.232 (X₆) + 0.252 (X₇) + 0.038 (X₈) + 0.243 (X₉) + 0.045 (X₁₀) + 0.331 (X₁₁) + 0.188 (X₁₂) + 0.250 (X₁₃) + 0.246 (X₁₄) + 0.168 (X₁₅)

The ANOVA table 07, illustrating significant F values implies that the model and data are well fit in explaining the role of bKash to develop the socio-economic condition of rural people of Bangladesh.

8. Discussion of Findings

8.1. Generating employment opportunity for rural people

A cross country (BCG, 2011) study investigated the impact of Mobile Financial Services (MFS) on financial inclusion and economic growth in Bangladesh, Pakistan, India, Serbia and Malaysia (BCG, 2011). In almost all the countries studied, it was found that MFS has positively impacted financial inclusion, economic growth and income distribution. Findings of the study show that MFS has increased financial inclusion up to 20 percent in Pakistan and 5 percent in Malaysia (Ibid). MFS also could accelerate rate of economic growth by up to 5 percent by creating jobs and generating revenues. For instance in India, it created around 4 million additional jobs and sizable amount of revenue for the government and in Bangladesh, GDP growth can increase by 2 to 3 percent by 2020 due to MFS (Ibid). From the analysis of table 06, a significant number of respondents i.e. 71% reported that bKash created employment opportunity for rural people which is ranked by 5. Also, result of ANOVA coefficients table the significance value is less than 5%. So, there is a high degree of positive relation between generating employment opportunity for rural people and bKash. Finally, bKash has been changed the socio-economic condition of rural people through building employment opportunity.

8.2. Encouraging Savings

Research shows that poor people including women are likely to lose as much as 20 percent of their saving due to the unsafe way they tend to save money (Iskenderian, 2011) in this respect, mobile banking not only offers safe and convenient mechanism for saving but also makes an encouraging environment for women to save more money. Pointing to the MFS's potential to spur private savings, the governor of Bangladesh Bank (2012) notes that "when banking activities become easier, the savings tendency of people also increases" (Rahman, 2012). In Bangladesh, bKash opens the accessible opportunity for low-income rural people to save money in their mobile accounts. For example, Shirin, a domestic worker in Dhaka uses bKash to send money to her mother at village and to save money as she said that:

I can also save any excess amount left with me at the end of each month securely for my future. So, many times I lost my savings because it was forgotten inside a pillow or eaten up by white ants (Quoted from Sharmin, 2013)

The MFS provides to benefit millions of rural people like Shirin in Bangladesh by giving them financial independence as well as making life comfortable. From the table 06, a number of respondent opined that bKash encourage savings to the people. Only, 22% respondents are disagreeing and 47% respondents are agreeing with this statement. 31% respondents neither agree nor disagree. Also, result of ANOVA coefficients table the significance value is less than 5% which indicates that encourage of savings through bKash is a significant variable. However, currently savings tendency through bKash is not in huge volume due to the lack of facility, lack of product differentiation and business operation duration of bKash service. In future, authority of bKash must be re-thinking how to overcome these limitations.

8.3. Easy to received foreign remittance

Bangladesh is the eighth largest recipient of international remittance in the world. Also foreign remittance, which accounts for 10 percent of the GDP, is one of the largest contributors to Bangladesh's economy. The new service stands to improve the ease and security with which millions of people are able to receive money from their loved ones abroad (The Daily Star, 2016). Table 06 show that a very significant number of respondents i.e. 75% felt that receive foreign remittance is easy through bKash which is ranked by 3. Also, result of ANOVA coefficients table states that the significance value is less than 5% which indicates that easy to receive foreign remittance

over bKash is a significant variable. But, problem is that a person cannot send and cash out large amount money at a time due to the policy of Bangladesh bank. However, most of the time we see rural people transact small amount money within their limits.

8.4. Save cost and time

bKash mobile financial services reduce the expenses of stepping in and out of a as well as allow people living in remote areas to get money in real time. It is available anytime, anywhere all over the country. From table 06, most of the respondents i.e. 95% are argued that bKash save time and cost which is ranked by 1. Finally, result of ANOVA coefficients table states that the significance value is less than 5% which indicates that bKash save the step in & out time and cost. So, this is an influential variable for dependent variable.

8.5. Role of bKash to women financial empowerment

Today women are more or less empowered in all cases. They are now Member of Parliament, prime minister, CEO, and CFO at organization. Question is how much the rural women are empowered financially with the golden touch of bKash. Now women are very close to their husband what was very difficult in the past. Once, husband could not send money for his family in time thus the respective women were in problems. But now every husband from far the place can send his money instantly and thus the women in the village maintain her family and save some money, invest in cattle or in small business or in farming. Result is she becomes self-sufficient. From the table 04, picture is clear out of 26 women respondent 15 are agree and fully agree that bKash play a momentous role to develop the socio-economic condition of rural people as well as improve the financial capability of the rural women. From the table 06, a number of respondents opined that bKash improve the financial capability of rural people which is ranked by 10.

8.6. Improve living standards of rural people

Rural people are getting money through bKash so easily without any hassle and can use that money quickly for their convenient time. It helps a lot for the development of living standard of rural people of the Bangladesh. Table 06 show that 63% respondents opined that bKash helps to improves the living standards of rural people which is ranked by 7 and ANOVA coefficient table clear that it is an significant variable.

8.7. Break-down the power of middleman & easy to business transaction

bKash reduce the corruptions and fraudulent done by dealers, media and brokers in rural area. From the table 06 describe that a very significant i.e. 85% respondents are agree with this statement which is ranked by 2 and result of ANOVA coefficients table states that the significance value is less than 5% which indicates that bKash successfully break-down the power of middleman. So, this is an influential variable for dependent variable. Also, study exposed that a significant number of i.e. 90 percent respondents agree that bKash made easy to business transaction for rural as well as all areas businessmen which is ranked by 3.

8.8. bKash bridge the gap

Poor people are often not considered valuable customers by the formal financial sector due to their transaction sizes are small, and many live in remote areas beyond the reach of branch networks. Informal banking services such as micro-finance and village savings and loan associations remain limited in their reach (Kamal & Mondal, 2016). The results of the study showed that bKash incredibly open the door of financial transaction for rural disadvantageous people.

8.9. Role to Developing the SMEs

About 60 to 65 percent of SMEs are located outside the metropolitan areas of Dhaka and Chittagong (Ahmed, 2009). SMEs are tremendously important to a developing country's economy. This is because they create new jobs, new opportunities. Therefore, adoption of mobile banking technology makes banking more convenient and accessible for customers, and particularly improves accessibility for customers in rural or remote areas who do not have easy access to a physical bank branch. Thus, the adoption of mobile financial services is also a positive development in Bangladesh's banking sector (the daily star, 2017). A number of i.e. 48% respondents believe that bKash play a role for developing the SMEs. Only, 18% respondents disagree and 34 percent neither disagree nor agree with this statement.

8.10. Role to Developing the Agriculture

Bangladesh is mainly an agriculture based country. Most of the rural people is depends on agriculture for their living. Tables 06 illustrate that only, 8% respondents are disagree and 44% respondents neither agree nor disagree. Also, 52% respondents are agree bKash is an amazing instruments that helps to a farmer for purchasing agricultural ingredients like seeds, fertilizer, insects killer medicine in timely without physical visits of the farmers. As well as, farmer opined that they can sell their products in perfect price in wright time through direct communicate to the urban side buyer.

8.11. Help to reduce poverty in rural area

bKash lead the financial inclusion to reduce poverty especially in rural area through its unique mobile financial services. Tables 06 demonstrate that only, 24% respondents are disagree & 43% respondents neither agree nor disagree and finally 33% respondents agree, to this statement. On the other side, we hope in future the bkash not only used as a tool of sending and receiving money but also it may ensure the digital financial inclusion for the rural people in Bangladesh. The ultimate consequence is poverty will be reduced in the rural area.

8.12. Increase the financial productivity of seasonal workers & businessmen

The seasonal workers specially the rickshaw pullers, day labors, hawkers, small businessmen and other workers during the off season they usually go to the out-side of their district like, the people of North Bangle work in Dhaka, Comilla and in other districts. Before MFS operation started they used to go home every 15 days to 30 days to reach the money to their relatives and family members. In the personal interview it was revealed that now every week or every fortnight they send their money through bkash and they go home after two to three months or more and even they reduced their leisure time at home. The result is that with the opportunity of bkash the productivity of this said groups in respect of income have increased by two to three times. Similarly Table 6 shows that the mean value is 3.76 where 36% masses fully agree and 25% agrees and 29% somewhat agree with this statement. So as a whole among the 100 people 80% masses voted on behalf of this statement.

8.13. Increase the mobility of money

The velocity of money is a measure of the economic activity of a nation. It looks at how many times a unit of currency (BDT. 1 in the case of the Bangladesh) flows through the economy and is used by the various members of a society. All else equal, the faster money travels (the higher the velocity of money) and the more transactions in which it is used, the healthier the economy, the richer the citizens, and the more vibrant the financial system. The velocity of money tells how efficient BDT.1 of money supply is at creating economic activity (Joshua Kennon, 2012). When the velocity is low, each BDT is not being used very often to buy things. Instead, it's used for investments and savings. According to this theory inception of mobile banking service contributed billions of dollars cash flows in the formal economy. The statistical report of Bangladesh shows that in 2016 number of total transaction made by mobile banking was 13.37 Crore and total amount of transactions was BDT 2,34,691 Crore (source: Bangladesh Bank). So this huge amount of money velocity is contributing to the economic development of the country and people as well. Here contribution of bkash is more than 90%.

9. Conclusion

Financial inclusion is considered to be one of the important determinants for social inclusion of poor & vulnerable masses and reduction of poverty & socio-economic inequalities in the society (Rangarajan, 2008). Considering the lack of development and a predominantly rural context, it would have been difficult to imagine even a few years ago that an elderly widow living in a remote corner of this impoverished South Asian country like Bangladesh could be receiving money from her son staying in abroad. The study shows not anymore, now it is possible through the blessing of mobile financial services led by bKash. Moreover the findings focus a large number of respondents agreed that there is no doubt, as a tool of financial inclusion bKash has proved to be a real weapon to eliminate poverty and can achieve the sustainable development goals (SDGs) by stimulating millions of Bangladeshis out of poverty. Side by side, this development is currently not seen in large scale

however it must be born in mind that, bKash supposed to be a game changer for the bottom of pyramid (BOP), financial sector, country's growth story as well.

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