

Fintech's game-changing opportunities for SMEs: A study on selected SMEs in Bangladesh



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ABSTRACT

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The growth of a developing economy, such as that of Bangladesh, relies on its small and medium-sized enterprises (SMEs) as they account for more than 25% of the country's gross domestic product (GDP). The present study assesses the impact of financial technology (fintech) on the growth of SMEs in Bangladesh. A structured questionnaire was developed and used to collect primary data from 77 respondents who work at 10 selected SMEs. Fintech products, especially mobile money, digital lending and mobile or online banking, are used as explanatory variables, while the growth of SMEs is the response variable. IBM SPSS was used to analyze the collected data, and regression analysis was used to assess the effect of fintech on the growth of SMEs in Bangladesh. Mobile money and mobile or online banking were found to have a statistically significant impact on SME growth, while digital lending did not. Therefore, fintech service providers should increase efforts to advertise their products to encourage more merchants to use them. This is the only study to date that conclusively proves that fintech products, especially mobile money and mobile or online banking, significantly affect SME growth in Bangladesh.

Contribution/Originality: This research mainly contributes to the literature that addresses fintech products such as mobile money and mobile or online banking on the growth of SME sectors in Bangladesh. This study will help SMEs to flourish through the use of fintech products.

1. INTRODUCTION

Financial technology (fintech) is the use of technology-based financial products and services to execute the financial aspects of a business. The acceptance of fintech is driven by customer expectations that have changed in relation to advances in technology. As such, numerous small organizations, start-ups, and mid-range firms have adopted technology-based financial products that adversely affect their traditional financial service channels. Fintech is a buzzword in small innovative firms that develop financial technologies and related services. Recent developments in mobile applications, as well as high-traffic websites, have marked the existence of fintech in the global financial industry (Saba, Kouser, & Chaudhry, 2019). A structured financial system, adequate networking facilities and increased smartphone usage have led to the growth of digital technologies in the Bangladeshi economy as well as the adoption of technology for financial matters. Furthermore, the adoption of fintech by banks and other financial institutions ensures financial transparency, accountability, and dynamism in Bangladesh's economy (Islam, 2019).

Fintech in Bangladesh: Although fintech adoption is in its infancy in Bangladesh, the country's agricultural industry already provides mobile financial services (MFS); digital payment services, such as bill and e-commerce payments; as well as online crowd funding platforms (I-Farmer). Furthermore, additional noteworthy services will be launched in Bangladesh soon. Grameen Phone Ltd. was the first in Bangladesh to use fintech to launch a railway ticketing service followed by a mobile top-up service in 2007. In 2011, Dutch Bangla Bank Limited (DBBL) was the first business to use the second type of fintech. Shortly thereafter, the Bangladesh Rural Advancement Committee (BRAC) Bank launched bKash, a cashless mobile financial service (MFS) that uses unstructured supplementary service data (USSD), interactive voice response (IVR), the systems tool kit (STK) menu, and the short message service (SMS) on mobile phones as well as point of sale (POS) terminals, near field communication (NFC) technology and websites to digitally send and receive money as well as pay for goods and services. The rapid increase in smart phone users as well as better nationwide network coverage from mobile operators has increased fintech adoption and shaped the service distribution channels of Bangladesh Bank as they can now provide banked and unbanked communities with faster remittances across the country. The existing Bangladeshi regulatory and legal frameworks for MFS (*Guidelines on Mobile Financial Services for Banks 2011; Source: Bangladesh Bank*) only allow the bank-led model to operate in the country. Therefore, only the following MFS are approved for use:

1. Paying incoming offshore remittances.
2. Inward and outward cash remittances via a mobile account with the help of agents, bank branches, ATMs, and mobile operator outlets.
3. Individual to business remittances, such as utility bills and merchant payments.
4. Business to individual remittances, such as payroll, dividends, refunds and vendor payments.
5. Government to individual remittances, such as elderly stipends, freedom fighter grants and subsidies, etc.
6. Individual to government remittances, such as tax and levy payments.
7. Individual to individual remittances, such as from one enlisted mobile account to another listed mobile account.
8. Other remittances, such as microfinance, overdrafts, insurance premiums, deposit pension schemes, etc.

As of June 2020, fintech MFS have been used to transact 44,830.66 Core Bangladeshi Taka (BDT) (*Source: Mobile Financial Services (MFS) comparative summary statement*).

SSL COMMERZ, an e-commerce payment platform and gateway, was the first to use the third type of e-commerce fintech in Bangladesh, which enables customers to make digital payments to e-commerce merchants via their credit cards and bank accounts. Cash on delivery accounts for a significant portion of the approximately 340 Core BDT that is transacted monthly. Therefore, there is a significant opportunity to enable more digital payment and fintech services in this sector (*Uz Zaman & Islam, 2011*).

Islamic fintech in Bangladesh: Bangladesh is a Muslim majority country; it has significant potential for Islamic fintech, which has transformed modern finance and reformed conventional forms of finance in Bangladesh. Prior to the launch of the bKash application in 2011, there were only 63 million mobile phone users in Bangladesh. This figure had increased to 143 million in 2017, anticipated by the Bangladesh Telecommunication Regulatory Commission (BTRC). At present, there are 10 fully-fledged Islamic banks in Bangladesh. Nine conventional commercial banks have 19 Islamic banking branches and 198 Islamic banking windows for 14 interest-based commercial banks that also provide Islamic financial services (*Source: Bangladesh Bank*).

Much like their counterparts, Bangladeshi Islamic banks can provide smooth banking services to their large number of customers via fintech. Recently, Islami Bank Bangladesh Ltd. (IBBL) developed the CellFin application to provide up-to-date financial services as well as traditional banking services. It is the latest financial technology and digital banking innovation in the Bangladeshi banking industry and boasts special features such as quick response (QR)-based POS purchases, the ability to add IBBL debit, credit and prepaid cards, as well as the ability to add mCash and IBBL accounts. Al-Arafah Islami Bank Limited launched the Islamic Wallet mobile app; however it

is unable to reach many of its clients (Ahmad & Al Mamun, 2020). Therefore, if other Islamic banks in Bangladesh decide to provide banking services via mobile applications, Bangladeshi Muslims will be more interested in Islamic banking and Islamic fintech will be an enormous success in the country's Islamic banking sector.

Small and medium-sized enterprises (SMEs): According to the World Bank, an SME is an enterprise with less than 300 employees, an annual turnover of less than \$15 million and property worth less than \$15 million. However, the Inter-American Development Bank classifies SMEs as having less than 100 employees and less than \$3 million in earnings. Meanwhile, the European Union classifies micro, small and medium enterprises as having less than 250 employees, a regular turnover of less than 50 million Euros, and/or an annual balance sheet total of less than 43 million Euro. Therefore, any company with 10 to 250 employees and a turnover of more than 10 million Euros is classed as an SME.

According to Bosri (2016), an enterprise is considered an SME if the following criteria are met:

Table 1. Bangladeshi SME criteria.

Serial No.	Industry type		Investment amount in BDT (Includes replacement cost and value of fixed assets, excludes land and factory buildings)	Number of employees
1	Cottage industry		Less than 1 million	Less than 15
2	Micro industry		1 to 7.5 million	16 to 30
3	Small enterprise	Manufacturing	7.5 to 150 million	31 to 120
		Service	1 to 20 million	16 to 50
4	Medium enterprise	Manufacturing	150 to 500 million	121 to 300
		Service	20 to 300 million	51 to 120

Sources: SME foundation.

Table 1 outlines SME criteria for various industries in Bangladesh. Any enterprise in the cottage industry with less than 1 million BDT in total investments and up to 15 employees is considered an SME, while in the micro industry, an SME has 16 to 30 employees and between 1 million and 7.5 million BDT in investments. In the manufacturing industry, a small enterprise has 7.5 million to 150 million BDT in investments and 31 to 120 employees, while a medium enterprise has 150 million to 500 million BDT in investments and 51 to 120 employees. Meanwhile in the service industry, a small enterprise has 1 million to 20 million BDT in investments and 16 to 50 employees, while a medium enterprise has 51 to 120 employees and 20 million to 300 million BDT in investments.

Small and Medium-Sized Enterprises in Bangladesh: Small and medium-sized enterprises (SMEs) play an important role in the global economy as they are present in multiple industries, such as manufacturing, mining, wholesale, retail, and services. As such, it is an effective means of economic progress. At present, 99.85% of Bangladeshi SMEs are non-agricultural (Rahman, 2009). These SMEs significantly affect the economy in many ways as they create jobs, increase gross domestic product (GDP), foster innovation and stimulate other commercial activities (Gamage, 2003).

Approximately 31 million people, or 40%, of Bangladesh's population aged 15 and above are employed by roughly six million micro, small and medium enterprises (MSMEs). In terms of SME distribution, 40% of companies in the wholesale and retail sectors are SMEs, 22% in the production & sale of agricultural goods, 15% in the service sector and 14% in the manufacturing sector. Meanwhile, the manufacturing sector accounts for 38% of the country's GDP, followed by the agricultural sector with 24%, and the wholesale and retail sectors with 23% (Mintoo, 2006).

1.1. The Role of Fintech in SMEs

SMEs are key to improving the Bangladeshi economy as many of these businesses survived the financial turmoil of the COVID-19 pandemic. Fintech brought creative innovations that were successfully adopted by small businesses during the pandemic. According to fintech financial service providers, the life cycle of fintech products in

an SME includes plantation, growth, adulthood, rebuilding and decline. As such, the fintech industry has endeavored to develop alternative patterns of lending, such as POS loans, P2P credit, invoice-based lending, and short-term loans, as well as payment gateway systems such as personal payment, merchant payment, and digital payment wallets.

1.2. *The Opportunities that Fintech offers to SMEs*

Fintech products provide users with a digital platform for growth and expansion. The following offer benefits to SMEs:

Payment Gateways: A payment gateway is a front-end technological premise that enables users to use debit cards, credit cards or digital wallets to clear outstanding payments directly on the merchant's website via their mobile phone.

Digital Payment Wallets: Digital payment wallets have made cashless transactions such as send and receive funds directly to or from a bank account convenient as they do not require the user to be physically present at a premise.

Faster Payment Collection: According to a survey that was conducted by the display picture (DP) Information Group in December 2018, 84% of SMEs' surface payments are from customers. Therefore, fintech can significantly reduce the payment collection duration.

If SMEs across Bangladesh were to adopt digital infrastructures and financial solutions it could stimulate the country's economy. As the transaction charges are modest, fintech has inspired SMEs to offer technological solutions that complement their business models as well as the opportunity to adapt fintech products.

1.3. *Rationale of the Study*

Bangladesh has become a digitally perceptive country. At present, smartphone penetration stands at 50% and is expected to reach 69% in five years (*Source: The Daily Star*). In January 2020, there were 163 million mobile connections from multiple different mobile phone operators as well as 66.44 million internet users. This is an ideal opportunity for fintech to grow rapidly. The recent increase in digital transactions in Bangladesh was widely discussed during the COVID-19 pandemic. According to Bangladesh Bank, the average number of daily mobile financial services (MFS) transactions in the third quarters of 2019 and 2020 was 8% higher than the previous quarters. Digital transactions are ever evolving as we move toward a cashless society. Bangladesh's fintech industry enjoys an unsaturated market with opportunities to develop innovative financial services. Of the fintech products, MFS platforms are the most popular. Creative digital financial solutions have steadily increased due to the rising number of smartphone users, an impoverished financial system, and the significant number of unbanked individuals. Bangladesh's start-up industry is currently at the upturn phase. In recent years, smartphone penetration has significantly ignited the start-up industry and has become a powerful means of communication and interaction as well as executing many other business activities. Fintech relies on technological advancement to increase financial inclusion and access to financial services. The digital financial services and augmented risk valuation that fintech offers decreases uncertainty and information deficiency at SMEs. It also alters and creates new business platforms in the SME industry. Different SME startups can be developed using fintech. For instance, the bKash application solved the payment issues of multiple different enterprises. This type of fintech service helped multiple SMEs boost their business operations. However, only a few studies have examined the effect of fintech on the SME sector of Bangladesh. Therefore, this present study attempts to fill this gap by assessing the effect of fintech on selected SMEs in Bangladesh.

Objective of the Study: The main objective of this study is to assess the impact of fintech as well as the opportunities that they create for selected SMEs in Bangladesh.

2. LITERATURE REVIEW

“Fintech is the marriage of finance and technology” (Zavolokina, Dolata, & Schwabe, 2016). Therefore, it is said that fintech is linked with financial innovation because it discovers unique financial products and services, updates processes, and creates new organizations (Frame & White, 2014). It also formulates and pushes advanced financial instruments, modern financial technologies, firms, and markets along with new business models (Fichman, Dos Santos, & Zheng, 2014; Lerner & Tufano, 2011). In this way, fintech is highly related to information technology, as it addresses the technology in facilitating financial services to initiate and recast people’s attention toward money and banking (Baur, Bühler, Bick, & Bonorden, 2015). Thus, fintech plays positive role in supporting people by reducing dependency on arbitration and its charges, thereby strengthening transparency (Zavolokina et al., 2016). Nowadays, fintech companies’ creative financial services are widely used e.g., the use of mobile phones for accessing financial services. Accordingly, fintech companies can be described as modern financial services providers with a new organizational design or an updated production mechanism (Frame & White, 2004). Truong (2016) examined how the fintech industry can modify the world by determining the success factors of fintech along with its real-life operations. The study examined the negative impacts on the financial sector, the accommodation process of financial institutions, and the potential to innovate financial technology in the future. Nemoto, Storey, and Huang (2019) outlined that SMEs play an indispensable role in the Asian economy, which encompasses about 70% of the workforce in GDP. They suggested that smooth SME financing contributed to increased output and sustainable economic growth in Asian countries. It is suggested that innovative digital financial products could allow SMEs to access finance through different routes. Ratna et al. (2020) found that the COVID-19 health crisis has led to the formulation of new online financial services to expedite financial inclusion. Currently, SMEs are vital to the development of a country. The scenario of SME business has now changed and they have adopted the cashless payment mechanism. Most SMEs have adopted financial technology, and some SME businesses started by capitalizing on fintech. Chowdhury, Azam, and Islam (2013) outlined that in Bangladesh SMEs receive less funding and have finite assets, are geographically diverse, have a high mortality rate, lack knowledge regarding credit, have restricted access to formal sources of credit, and insufficient cash flows in transactions, have inadequate record protection, have little or no financial disclosure regarding tax affairs, and the excessive risk perception has led to high levels of borrowing. Srinivasan and Rajarajeswari (2021) scrutinized the role of fintech and digital financial services in India. They assert that quick growth of technology promotes fintech, which brings revolutionary progress in the area of financial services. The consolidation of technology with financial services means that numerous approaches and platforms are being constructed and developed to make utilizing financial services easier, i.e., applying for corporate loans, online personal loans, etc. Haider, Khan, Rabbani, and Thalassinos (2020) examined the possibility of using Islamic taxes (zakat) and benevolent loans (qardh-al-hasan) as funding instruments to overcome the negative financial effects of COVID-19 on poor individuals and SMEs. The study recommended using artificial intelligence and a natural language process (NLP) based on an Islamic fintech model to combine both zakat and qardh-al-hasan. It was proven that Islamic finance could be used to overcome unexpected circumstances, such as the ongoing COVID-19 pandemic.

Research Methodology: This present study used a research-based methodology. Multiple stages of this scientific process were sequentially adopted to conduct the survey. The research includes research design, sample choice, designation of the variables, data collection, econometric model specifications, and identifying precise statistical tools and techniques to analyze the collected data.

Research Design: An illuminative research design was deemed the best framework for data collection and to analyze the impact of fintech on the growth of SMEs in Bangladesh. The illuminative design was the best choice for this study as it illustrates the charter of the respondents and presents the results in a way that helps to answer the research question.

3. CONCEPTUAL FRAMEWORK

This survey uses a structure containing explained and explanatory variables. The explanatory variables comprise financial technology services such as mobile payment, mobile finance, and mobile banking. The explained variable is the growth of SMEs. The theoretical structure for the study is shown below where the relationship between the independent and dependent variables is indicated.

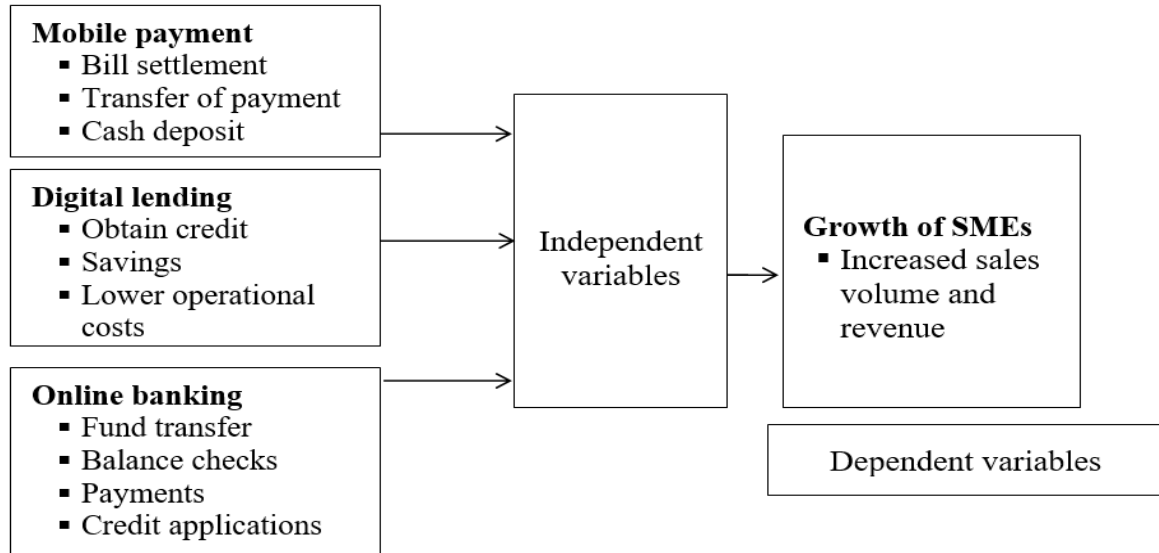


Figure 1. Theoretical framework of this study.

Source: Developed from existing literature.

Figure 1 outlines the theoretical framework of the present study where mobile payment, digital lending and mobile or online banking are explanatory variables, while the growth of the SMEs is the response variable. An increase in sales and revenue are the indicators of SME growth. Mobile payments include bill settlements, transfer of payments and cash deposits, while digital lending includes obtaining credit, savings, and lower operational costs. Mobile or online banking includes fund transfer, balance checks, and payment and credit applications. It is estimated that the adoption of fintech products, such as mobile payment, digital lending and mobile or online banking, in SMEs will increase sales and revenue, which indicates growth of SMEs in Bangladesh.

Sampling: Purposive sampling was used to select the sample size from the population. According to Bangladesh Bank, there are 132 SME subsectors in Bangladesh. A total of 100 SMEs were selected from the subsectors listed in Table 2 below.

Table 2. SMEs subsectors selected for the present study.

SME subsectors	No.	Percentage	Cumulative
Agro-based and agro processing industry	10	10%	
Agro processing products for import and export	8	08%	18%
E-commerce	20	20%	38%
Information technology-based activities	5	05%	43%
Mobile phone accessories	8	08%	51%
Cable operator	8	08%	59%
Photography	5	05%	64%
Super shop (A large store offering a wide variety of products)	15	15%	79%
Computer software and ICT goods	6	06%	85%
Hotels, restaurants and tourism	5	05%	90%
Others	10	10%	100%
Totals	100	100%	100%

Source: Records from Bangladesh bank.

Data Collection: A questionnaire was used to collect data and was sent to the respondents online. Primary and secondary data are used in this study and were collected from published documents of the relevant authorities.

Data Processing and Analysis: Quantitative methods are used for the analysis of the data, and both illustrative methods and inferential statistics are used to evaluate the data. The correlation coefficient is used to determine whether the independent variables are associated with SME growth or not. To measure the impact of the independent variables on SME growth, multiple regression analysis is employed. The level of deviation of the explained variable can be interpreted by changes in the explanatory variables.

The multiple regression model is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Outlined SME growth.

B0 = Constant.

X1 = Mobile money.

X2 = Digital lending.

X3 = Online banking.

ε = Error term.

β_1 , β_2 and β_3 represent the regression coefficients of the independent variables.

Analysis and Interpretation: The data were analyzed and inferences were drawn as per the objective of the study, which is to examine the effects of fintech on the growth of SMEs in Bangladesh. A reliability review was conducted to evaluate the internal consistency of the variables. Cronbach's Alpha was used to determine the reliability.

Table 3. Reliability test.

Variable	No. of items	Alpha value
Mobile money	6	0.833
Digital lending	5	0.791
Mobile/Online banking	6	0.815

To ensure the internal consistency of the variables, the Cronbach's Alpha values should be between 0.6 and 0.9. Table 3 outlines that the Cronbach's Alpha value for all the identified variables are within this range, so it is concluded that all the identified variables in this study are reliable.

Response Rate: Of the 100 respondents, a total of 77 from 11 SME subsectors completed the questionnaire. Table 4 shows the SME subsectors and the response rate of each.

Table 4. Respondents from different SME subsectors.

SME subsector	Sample	Response	Response rate (%)
Agro-based and agro processing industries	10	8	10.38 %
Agro processing products for import and export	8	5	6.49 %
E-commerce	20	17	22.07 %
IT-based activities	5	3	3.90%
Mobile phone accessories	8	6	7.79%
Cable operators	8	5	6.49%
Photography	5	3	3.89%
Super shops	15	14	18.18%
Computer software and ICT goods	6	5	6.49%
Hotels, restaurants and tourism	5	3	3.89%
Others	10	8	10.38%
Totals	100	77	100%

Average Annual Turnover: The use of fintech will be an important analysis of the annual turnover in an attempt to establish whether there is a positive relationship with the increase in sales turnover. Here, 45% of the SMEs made transactions worth between Tk.1–3 million, 20% of the SMEs made between Tk.3 million and Tk.5 million, 12% of the SMEs yielded between Tk.5 million and Tk.10 million, and 13% of SMEs had mean yearly yield under Tk.1 million.

Mobile Financial Services and Growth of SMEs: Here, some respondents agreed that they use mobile financial services to pay their vendors, with a mean of 15.4 and a standard deviation of 7.73, and 57.14% of the respondents strongly agreed that they use mobile phones to pay their vendors. The majority (64.93%) of respondents also consented ($M = 15.04$, $SD = 11.61$) that they received payments from their clients with the help of mobile financial services. Respondents again concurred that cashless transactions ($M = 15.40$ and $SD = 8.65$) could help SMEs conduct business. This extends the chances of being able to quickly reach customers across the country. Most of the respondents stated that they used mobile financial services such as bKash, Rocket, Ucash, and Naga instead of cash, especially during COVID-19. Most of the respondents strongly agreed/agreed (49.35%) that they would not accept cash from customers as they completely accept fintech service ($M = 15.40$, $SD = 5.98$). Also, 62.34% of the respondents ($M = 15.40$, $SD = 11.39$) stated that they transfer money to their business peers through mobile financial services. They also stated that mobile payments have increased business efficiency ($M = 15.40$, $SD = 7.53$), with the majority of respondents strongly agreeing with this statement. According to our observations, e-commerce giants such as Chaldal, Daraz, Pickaboo and Evaly, have seen incredible growth owing to the lockdown, although they were frequently unable to fulfill customer demand due to supply issues. Hence, this prompted enormous scope for rural SMEs who are capable of adapting and will continue to operate. According to numerous investigations, most SMEs use fintech services, especially mobile financial services, because it is suitable for most of them in terms of speed and money. Thus, the respondents were asked to point out the most common mechanism applied for mobile money, and most stated that they use mobile financial services to transfer money and pay bills. It transpired that the majority of small and medium corporations try to satisfy customers' needs through the use of mobile financial services as there is no charge for the customer when using this payment method.

Digital Lending and Growth of SMEs: Digital lending services are new for Bangladesh. Most of the respondents stated that this service will create opportunities for them, with 89.6% of the respondents ($M = 15.40$, $SD = 5.94$) agreeing that they are able to borrow from financial institutions. In addition, SME owners hope that they will be able to get adequate funding via digital finance to expand their business. The result outlines that the majority of SMEs adopt digital lending platforms due to no pledge, which is the opposite to formal financial institutions. It was also found that digital lending is processed more speedily than formal bank loans, which take at least ten working days to process and disburse. Just under half (45%) of the respondents are hopeful that they will get the opportunity to use City Bank Limited's security free digital lending. Users will be able to request and receive up to Tk.10,000 instantly through bKash. However, they argued that this amount was too small and the processing fee was too high with interest rates.

Mobile/Online Banking and Growth of SMEs: After the outbreak of the pandemic in March 2020, there was a crackdown on such payments, mass panic, and many businesses shut down, but soon thereafter, payments grew slightly. About 71.42% of respondents acknowledged that mobile banking facilitates them to track transactions in the bank ($M = 15.40$, $SD = 11.41$). Another 47.3% of respondents recognized that they are able to deposit money in a bank account through mobile banking ($M = 15.40$, $SD = 9.7$). Additionally, 25% of respondents concede ($M = 15.40$, $SD = 11.50$) that they trust mobile banking for banking transactions. Finally, 77.92% of the respondents consented that ($M = 15.40$, $SD = 14.08$) online banking is convenient in all aspects, including time as well as transaction charges. All of the SMEs acknowledged that it is easy to access and oversee business accounts through mobile or online banking and that it saves time and money. The respondents believe that fintech is capable of mitigating the shortcomings of MFS, as digital banking services have greater transaction limits which are

appropriate for SMEs trading in greater volumes. The respondents also acknowledged that mobile banking services are conveniently accessible and flexible and have a significant positive influence on the growth of SMEs. Through mobile banking, SMEs record their dealings which saves them time and money. Even though the pandemic had decreased business across the country, the increment of online banking shows that an adequate number of people have switched to digital services for their business and day-to-day operations. This has inspired both financial inclusion and COVID-19 hygiene etiquette by limiting face-to-face contact. Similarly, indispensable services, such as grocery conveyance, online buying, etc., have greatly increased fintech-facilitated payments.

Respondent's General Opinion on Fintech: Respondents agreed that fintech would help reduce the risk of counterfeit currency circulating in the country. Fintech also permits disbursement processing and will reduce the sum of cash needed to issue and distribute currency notes. Respondents argued that Islamic fintech will be more helpful to Muslim majority countries such as Bangladesh. We can also justify this argument by the research of [Ahmad and Al Mamun \(2020\)](#), which states that Islamic fintech products help business programs that are being institutionalized by competent Shariah legal frameworks to mobilize funding and uphold business prospects in Turkey and Bangladesh. Fintech is redefining customer interaction across financial services companies. Generally, customers have called service centers, visited the branch, or written letters to the branch officers to request services or assistance. Now, customers have the option to chat online with their financial service providers. The general perception of the respondents is that fintech is an updated model of business operation.

Growth of SMEs: It was found that 55.84% of the respondents agreed that the use of fintech services has increased their sales in the past three years ($M = 15.40$, $SD = 10.17$), and 23.48% of the respondents stated that the practice of fintech services contributes to increasing their customer numbers ($M = 15.40$, $SD = 10.48$). In addition, 69% of the respondents ($M = 15.40$, $SD = 12.42$) agreed that the operational costs of their companies have decreased since they started using fintech. From this study, it is observed that there is a direct connection between fintech and the prosperity of SMEs as it has a positive impact on their business.

Table 5. Descriptive statistics.

Variable	Mean	Std. deviation	N
Mobile money	3.70	0.947	77
Digital lending	3.09	1.138	77
Online/Mobile banking	3.64	0.931	77
Growth of SMEs	3.51	1.021	77

Table 5 shows that the mean values of mobile money, digital money and online banking are 3.70, 3.09 and 3.64, respectively. The respective standard deviation values are 0.947, 1.138 and 0.931. The values of the descriptive statistics revealed that there is normality among the data collected in this study.

Table 6. Correlation analysis results.

Variable		Growth of SMEs using fintech	Digital lending	Online banking	Mobile money
Pearson correlation	Growth of SMEs using fintech	1.000	0.186	0.556	0.349
	Digital lending	0.186	1.000	0.156	0.026
	Online banking	0.556	0.156	1.000	0.278
	Mobile money	0.349	0.026	0.278	1.000
Sig. (1-tailed)	Growth of SMEs using fintech	-	0.052	0.000	0.001
	Digital lending	0.052	-	0.088	0.413
	Online banking	0.000	0.088	.	0.007
	Mobile money	0.001	0.413	0.007	.
N	Growth of SMEs using fintech	77	77	77	77
	Digital lending	77	77	77	77
	Online banking	77	77	77	77
	Mobile money	77	77	77	77

Table 6 focuses on the relationship between the explanatory variables (mobile money, digital financing and mobile/online banking) and the explained variable (growth of SMEs). The results show that there is a statistically significant link between the growth of SMEs and mobile money (sig. = 001). There is also a significant link between the growth of SMEs and digital lending ($r = 0.186$) at the 0.05 level. Finally, there is a significant correlation between the growth of SMEs ($r = 0.556$) with mobile/online banking at the 0.05 level. From these results, it is concluded that study of fintech's game-changing opportunities for SMEs in Bangladesh is valid because all explanatory variables show a positive correlation with the growth of SMEs that are statistically significant at the 1% and 5% levels.

Model Fit: A multiple regression analysis was performed to outline the impact of fintech on SME growth in Bangladesh. It is approximated that the stipulating regression model will best serve the objective of this study.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

Where:

γ = Dependent variable (SME growth).

B_1, \dots, B_3 = Coefficients for the independent variables.

B_0 = Constant.

X_1 = Mobile money.

X_2 = Digital lending.

X_3 = Mobile/online banking.

e = Error term.

Regression Analysis: The results of the regression analysis outline that the R^2 value (0.361) is statistically significant at the 1% level. This shows that the explanatory variables in the model explain 36.1% of the variation in the dependent variable (growth of SMEs). The results also reveal that almost all the explanatory variables are noteworthy determinants of SME growth in Bangladesh. An adjusted R^2 of 0.335 shows that 33.5% of SME growth is due to mobile money, digital lending and mobile/online banking.

Table 7. Summary of the model.

Model summary									
Model	R	R ²	Adjusted R ²	Std. error	Change statistics				
					R ² change	F change	df1	df2	Sig. F change
1	0.601	0.361	0.335	0.833	0.361	13.771	3	73	0.000

As shown in Table 7, the regression model is significant ($F(3, 73) = 13.771, p = 0.000$), which means that the identified fintech variables are able to interpret SME growth in Bangladesh. The goodness of fit of this model is also confirmed by the consistency of the results between the R^2 (0.361) and adjusted R^2 (0.335) values.

Table 8. Results of multiple regression analysis.

Regression coefficients						
Model		Unstandardized coefficients		Standardized coefficients		Sig.
		B	Std. error	Beta	T	
1	(Constant)	0.446	0.520	0.427	0.857	0.394
	Mobile money	0.229	0.105	0.213	2.183	0.032
	Digital lending	0.095	0.085	0.106	1.119	0.267
	Online banking	0.527	0.108	0.481	4.877	0.000

From Table 8, it is observed that mobile/online banking and mobile money ($r = 0.481, p = 0.000$) and ($r = 0.213, p = 0.032$) have a significant impact on the growth of SMEs. Digital lending also influences the dependent variable but this is not statistically significant.

The model becomes:

$$Y = 0.446 + 0.229 \text{ mobile money} + 0.095 \text{ digital lending} + 0.527 \text{ online banking} + 0.520$$

A one-unit variation in mobile money will appear in a 22.9% change in SME growth, a unit deviation in digital lending will produce 9.5% modification in SME growth, and finally, a unit fluctuation in online banking will result in a 52.7% change in SME growth.

4. CONCLUSIONS

Currently, the technological revolution of fintech is an innovative concept in the business industry. As SMEs are a part of the business platform, they cannot be excluded from fintech adoption. The purpose of this study was to determine the impact of fintech on SME growth in Bangladesh. Mobile money, digital lending and mobile or online banking are sub-categories of fintech. Different relevant statistical tools were employed to achieve the primary goal of this study. The results indicate that all the identified explanatory variables, i.e., mobile money, digital lending and mobile or online banking have a statistically significant relationship with SME growth in Bangladesh. The results of the multiple regression analysis revealed that mobile money (5%) and mobile or online banking (1%) had a statistically significant positive impact on SME growth in Bangladesh, while digital lending did not have a statistically significant impact. The adoption of fintech enables SMEs to provide customers with many advanced services at affordable prices that they can use from home.

Based on the results, it is recommended that fintech service providers increase consumer awareness of their business via digital advertising channels, so that more people will be encouraged to use fintech products. Fintech services also improve business operations. Furthermore, the next stage in the growth of Islamic finance could be driven via Shariah-compliant financial solutions. In Bangladesh, Islamic fintech in particular can be used to provide financial services to young, middle-class people who are unaware of financial technology. However, there are some barriers to the spread of Islamic fintech in Bangladesh. The following recommendations will help to overcome these barriers:

- Consumers should be able to access fintech services via smartphone devices. Security concerns should be more flexible so that less educated people can also use fintech services.
- The legal challenges include a lack of Islamic-specific banking and financial regulations in Bangladesh. Therefore, specific regulations should be developed to increase fintech adoption.
- Participating banks should prioritize Islamic financial technologies.
- Financial companies should work with mobile phone service operators to provide merchants with convenient financial services.
- SME wholesalers and retailers should adopt mobile financial services (MFS) as a tool for business progress and will also help to protect businesspeople from fraud or deception.

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