

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Master's Thesis

**Mobile Financial Service (MFS) in Bangladesh: A
comprehensive study of different service providers**

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

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DIPLOMA THESIS ASSIGNMENT

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Thesis title

Mobile Financial Service (MFS) in Bangladesh: A comprehensive study of different service providers

Objectives of thesis

The broad objective of this thesis is to analyze and explore the performance and effectiveness among different Mobile Financial Service providers in Bangladesh.

The specific objectives of the thesis are:

- To determine the general usage patterns of MFS in Bangladesh.
- To evaluate and analyze the market environment of the current MFS industry in Bangladesh through three major MFS service providers namely bKash, Rocket and Nagad.
- To determine the competitiveness of the market in terms of each company's strengths, weaknesses, and external environmental factors affecting the MFS business.

Methodology

The overall data will be collected from Primary and Secondary Data sources. Primary data will be collected through field study and a questionnaire with relevant questions. Besides this, interviewing with many bKash, Rocket and Nagad employees and clients will also be a source of related data. The secondary sources for data collection will be from internet, newspaper, journal, official website of bKash, Rocket and Nagad and their published annual reports, monthly newsletters.

-The sample size will be 300. (Customers 250, Agents 30 and Employees 20). I will use this data to analyse SWOT and Porter.

-Software like Grtel, Excel and SPSS will be applied for complex analysis.

-SWOT analysis, PASTEL analysis and Porter's Five Forces Model will be added in the thesis.

The proposed extent of the thesis

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Keywords

bKash, Rocket, Nagad, Mobile financial service, Customer service, Bangladesh

Recommended information sources

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Declaration

I declare that the title of the Master's Thesis called 'Mobile Financial Service (MFS) in Bangladesh: A Comprehensive Study of Different Service Providers', which forms my principal task for my master's degree, excellence in Economics and Management, is a completely unmodified, original and authentic piece of my work. Within the thesis, I have assiduously performed the research and analysis as specified in its conclusion section, following the path only of the referenced sources. As an author, I agree that this thesis, under my responsibility, complies with all copyright norms, and infringement of the intellectual property rights of no single person or company will happen.

In Prague on 31-03-2024

MD Saiful Islam

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Ranging from last but not least, I would like to thank every member of the senior generation for their utmost contribution to the knowledge in the area of study that this thesis has held. They inspired and made breakthroughs in this area and had groundbreaking ideas that got the evolution of the field going. I feel so lucky to be a part of this conversation. Each person who stands out in my academic career, and these are the lucky ones, has played a huge role in my academic world, and that is why I am extremely grateful.

Mobile Financial Service (MFS) in Bangladesh: A comprehensive study of different service providers.

Abstract

The Mobile Financial Service (MFS) is considered a revolution in the global financial sector, profoundly affecting, most especially, the countries in which the traditional banking system may be poor. The position of companies, such as bKash, Nagad, and Rocket, as important players in the banking system operating through mobile technology to deliver services that are convenient, practical, and within reach of the public cannot be ignored. This abstract takes a bird's eye view. It provides a short general introduction to the MFS sector, showing its favourable aspects, difficulties, and particular issues within the settings of Bangladesh. The thesis spotlights how MFS creates opportunities for financial inclusion, digital transformation, and financial empowering people while dealing with those issues that include digital gaps, platform inability, security lapses, and restrictions.

Mobile Financial Service (MFS) platforms have not only expanded access to financial services for unprivileged people but also enabled them to execute a wide range of transactions commence any transaction via their mobile devices. Nonetheless, along with the lack of security and regulation, there are some complexities that need to be urgently solved so that the industry can perform successfully in the long run. In addition, providing financial literacy training and increasing the agents' reach are indispensable steps to produce the best financial outcome for MFS, and subsequently, the mass population will become acquainted with the product.

Besides, the Mobile Financial Sector (MFS) is an integral part of our economy, which encompasses women's capacity building as well as building a more inclusive banking structure. Integrating efforts of safety and security, financial literacy, and building of collaboration between all stakeholders to realize the promising potential of mobile financial services in Bangladesh, which then can bring a positive impact on the lives of individual citizens by accelerating the country's growth path.

keywords: Mobile Financial Services (MFS), Financial Inclusion, Digital Transformation, Financial Literacy, Regulatory Challenges, Economic Empowerment, bKash, Nagad, Rocket.

Mobile Financial Service (MFS) v Bangladéši:

Komplexní studie různých poskytovatelů služeb.

Abstraktní

Mobilní finanční služba (MFS) je považována za revoluci v globálním finančním sektoru, která hluboce ovlivňuje zejména země, ve kterých může být tradiční bankovní systém chudý. Nelze opomenout pozici společností, jako jsou bKash, Nagad a Rocket, jako důležitých hráčů v bankovním systému, kteří prostřednictvím mobilních technologií poskytují služby, které jsou pohodlné, praktické a dostupné široké veřejnosti. Tento abstrakt zabírá pohled z ptáčích perspektivy. Poskytuje krátký obecný úvod do sektoru MFS, ukazuje jeho příznivé aspekty, potíže a konkrétní problémy v prostředí Bangladéše. Práce se zaměřuje na to, jak MFS vytváří příležitosti pro finanční začlenění, digitální transformaci a finanční posílení lidí při řešení problémů, které zahrnují digitální mezery, neschopnost platformy, výpadky zabezpečení a omezení.

Platformy mobilních finančních služeb (MFS) nejen rozšířily přístup k finančním službám pro neprivilegované osoby, ale také jim umožnily provádět širokou škálu transakcí a zahájit jakoukoli transakci prostřednictvím mobilních zařízení. Spolu s nedostatkem zabezpečení a regulace však existují určité složitosti, které je třeba urychleně vyřešit, aby toto odvětví mohlo dlouhodobě úspěšně fungovat. Poskytování školení v oblasti finanční gramotnosti a zvyšování dosahu agentů jsou navíc nezbytnými kroky k dosažení nejlepšího finančního výsledku pro MFS a následně se s produktem seznámí široká veřejnost.

Kromě toho je mobilní finanční sektor (MFS) nedílnou součástí naší ekonomiky, která zahrnuje budování kapacit žen i budování inkluzivnější bankovní struktury. Integrace úsilí o bezpečnost a zabezpečení, finanční gramotnost a budování spolupráce mezi všemi zúčastněnými stranami s cílem realizovat slibný potenciál mobilních finančních služeb v Bangladéši, které pak mohou mít pozitivní dopad na životy jednotlivých občanů urychlením cesty růstu země.

klíčová slova: mobilní finanční služby (MFS), finanční začlenění, digitální transformace, finanční gramotnost, regulační výzvy, ekonomické posílení, bKash, Nagad, raketa.

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1. Introduction

The fast and growing financial technologies are one of the biggest innovations existing markets must deal with. Almost every country, including the one we are keen on getting involved with its economic expansion, making a higher standard of living for citizens and promoting new technology that will improve people's access to better living sooner or later. The nervous system of national economies is the financial sector. Therefore, accountability should shift from the manual to the digital industry to accomplish that. The invention of mobile-based banking or mobile banking (also called Mobile Financial Services) operations on mobile devices discovered new forms of financial services by means of mobile banking. The purpose for traditional bank customers, who now turn to digital banking channels, is also that everything is changing and evolving.

Household banking is the cradle in the nest of mobile banking. The rise of mobile banking as an alternative, vastly giving rise to mobile financial services, is being witnessed systematically. Through a technology that allows people to conduct all their affairs using mobile banking phones, MFS is focused on the development of an electronic payment system that results in banking in a cashless fashion. To be more exact, the approach of mobile financial services to achieve this goal is to create a digital e-wallet in which the user can store funds. Through banking services (cash-in, cash-out, bill payments, etc.) for the unbanked population, the process of mobile financial services has achieved sufficient expansion in the economy of Bangladesh. This massive scale of operations, which has been mainly driven by the acceptance of customers for high-quality services, is unprecedented. Notice that these 3 – bKash, Rocket, and Nagad have the most powerful role in the market among the other 13 MFS providers.

2. Objectives and Methodology

2.1 Objectives

The broad aim of this thesis is to analyze and explore the performance and effectiveness among different Mobile Financial Service providers in Bangladesh.

The specific aims of the thesis are:

- To determine the general usage patterns of MFS in Bangladesh.
- To evaluate and analyze the market environment of the current MFS industry in Bangladesh through three major MFS service providers namely bKash, Rocket and Nagad.
- To determine the competitiveness of the market in terms of each company's strengths, weaknesses, and external environmental factors affecting the MFS business.

2.2 Methodology

The overall data will be collected from Primary and Secondary Data sources. Primary data will be collected through field study and a questionnaire with relevant questions. Besides this, interviewing many bKash, Rocket, and Nagad employees and clients will also be a source of related data. The secondary sources for data collection will be from internet, newspaper, journal, official website of bKash, Rocket and Nagad and their published annual reports, monthly newsletters.

- The sample size will be 300. We tried to identify the result from 300 respondents regarding 12 questions with respect to different ages genders and professions.
- Software like Grtel, Excel and SPSS will be applied for complex analysis.
- SWOT analysis, PASTEL analysis, and Porter's Five Forces Model will be added to the thesis.

3. Literature Review

3.1 Mobile Financial Services (MFS)

Mobile financial services, which are digital services where a consumer interacts with a bank's agent via a mobile phone, are among the new streams that have been made available by the technological developments. Ashta broadly touched upon mobile financial status in his works saying that such mobile financial services encompass the acquisition of short-term insurance, checking your account balance and account transaction histories, making payments, transferring funds, trading stocks, and managing your portfolio and all you need to do is just to use your mobile phone. Mobile financial service (MFS) and mobile banking are almost synonyms as (Ashta, 2010).

On the other hand, the banking customers' perception of mobile banking should be cleared up as well. According to Herstatt et al. (2007), mobile banking can be regarded as a process that a bank provides a few particularised banking and financial services and that the customers conduct on mobile telecommunication devices. On the other hand, people's value of MFS might be highly attributed to the fact that MFS stands for the fusion of mobile banking with mobile technology (Chung & Kwon, 2009). Material the application and link to a mobile network serves as a requirement for this function.

Mobile banking which in the broader case of Mobile Payments simply means the use of a mobile device to affect a payment transaction; in which monies are either sent by way of a payer to a receiver either directly, without an intermediary or via an intermediary. The spectrum of payments with the help of mobile devices has expanded and those options cover purchase of tangible goods, admissions, parking and transportation costs, and digital content (for instance banners, ringtones, music, or games). Moreover, invoices and bills can be paid using the services delivered via the mobile interface.

3.2 The trend of mobile financial services (MFS) in developing countries

The World Bank (2014) estimates that 2.5 billion individuals worldwide, or half of those who are fifteen years old and older, do not have bank accounts. In emerging markets, conventional banking only reaches roughly 37% of the population, although mobile phone adoption is 50%. According to Christopher et al. (2010), there is one bank branch and one ATM for every 10,000 people in these nations, but these 10,000 people use 5,100

mobile phones. For instance, the Philippines has a nearly 80% mobile subscriber penetration rate, but just a 35% banking subscriber penetration rate, leaving 21 million mobile subscribers without a bank account. Nevertheless, from a bank's perspective, providing basic financial services to the world's unbanked represents a huge market opportunity and also a philanthropic one. Of course, the chance is not brand-new. However, in recent years, mobile technologies have developed to the point where they offer a delivery method that is affordable, making the possibility more accessible (Sanjay, 2013).

Dutch-Bangla Bank Limited (DBBL), which is a precedent-setter for the undocumented, went on to launch a precedent-setter for the unbanked in Bangladesh. At the very beginning of 2012, the bank based in Bangladesh went on to introduce mobilized banking services that waived off the unbanked and entered the banking system. In an astonishing development, the company welcomed about 1 million new clients within a period of ten months only. Over the period, about 100 thousand people every month took advantage of our services, and since the inception of mobile banking, up to \$7.75 million has been deposited. (Islam, 2010).

It is very likely that mobile banking services are common in developing countries such as Mexico, Peru, South Africa, and India, which are known for very few bank branches on bad or no roads with no reliable choice of transportation. Accordingly, smartphone serve as the portals for the users to access mobile technologies. Both China and Brazil experienced a 100% percent and 75% respectively increase in their new customers over the mobile platforms in year one shifting completely from their traditional banking mechanisms. This was documented by Thomas (2010). In particular, the recent study of mobile banking from Juniper Research (2014) forecasts that at the end of this year (2017), more than 1 billion people would conduct banking transactions using their mobile devices.

3.3 Consumer Perception and Attitude Toward Mobile Financial Services

The phenomenon how mobile finance services are dominating money transactions during the past decade has been investigated excessively by now. The principle of most of these studies was the research methodology and models which have previously been established in early explorations of IS (Hoehle & Huff, 2009). The TAM (Technology

Acceptance Model) (Davis, 1989), a model that was a result of the TRA (Theory of Reasoned Action) (Ajzen & Fishbein, 1980), appears, in fact, to be the most preferred among the numerous other models out there. At each stage, a user will embrace a new system if mind set plan to use those system, this embracement will in turns depends on subjective acceptance of the system which according to the TAM. Studies by the TAM (1989) showed that these two beliefs usefulness of the product and ease of use — are the prime factors to know the rapid change in users' behaviour. Besides, using the analysis in his (Davis, 1989) study, Davis considered it as necessary to examine not only other product factors, but also the user perceptions on utility, simplicity of use and behavioural intention in technology acceptance. Therefore, there is a need to search for a set of which all the elements can prove to be strong factors to determine whether mobile banking will gain market acceptance.

It is likely that the factors of "perceived ease of use", "perceived convenience", and "perceived usefulness" will not fully account for the targeting goals of the engagement with mobile banking. The hypothesis dubbed as the diffusion of innovations by (Rogers, 1983) is also a concept which is intended to bring a comprehensive understanding of how new innovations are embraced. As pointed out by (Rogers, 2003) in her work, there is a total of five peculiarities associated with innovation qualities that may either be considered to generate a positive or a negative response towards an idea. The factors include advantage(s), compatibility, complexity, trialability, and the visibility (of the product). The appeal of mobile financial services can be measured using the strategies advocated in the frameworks designed by (Tan and Teo, 2000) and (Rogers, 2003).

There were six elements at play, and they are as follows: There were six elements at play, and they are as follows:

1) **Self efficacy:** It is the authors (Taylor and Tod, 1995) who see it as such a term where a person would realize their own ability to do a job.

2) **Trialability:** This involves of those they choose to try the innovation many are often the first intended users and other users who belong to their social network (Agarwal and Prasad, 97).

3) **Compatibility:** (Talking about Agarwal and Prasad, 1997) This function tells much about the level of acceptance of the invention and the level of trustworthiness it has as well as its compatibility with the preexisting views of the users.

4) **Complexity:** The (Taylor,1995) term is used for the specification of how cumbersome it could be for the sensing apparatus to make the invention more feasible.

5) **Risk:** This is the perceived amount of risk the net user believes that relates to the act of disclosing financial and personal data (Tan n Teo, 2000).

6) **Relative advantage:** A person can accept an innovation when they see that the new idea offers better solutions to problems earlier tasks used to face (Taylor and Tod, 1995). His is known as relative advantage.

3.4 Cost of Service

As the price charged by the service provider is the key factor in the decision to use the service, this is known to have a significant impact on employing the service. However, the view that customers regard as meaning higher the quality of service in exchange for higher services is not always universally correct. Customers can tailor their experience to their taste by choosing from many options. For some customers, the typical reason is to choose the cheaper plan in order to spend less money. Others just can't live without upgrading their services, no matter how much it costs. Every payment company in MFS charges a common levying rate and the control is reserved for the central banking authority to amend the policy (Ashta, 2010).

3.5 Service providers' Brand Image

MFS or money-related services is a banking activity, and if there is a possibility of a financial association, trust is essential. This is where it really matters – it is the human mind and heart where brands have their lives. In a sense, the brand stands as an amorphous notion of trustworthiness. From -> Brand People are known to choose to partner with firms that are believed to be honest, fair, and responsible (Sanjay, 2013).

3.6 Competitive Analysis

There is a continuous development of information regarding the risks inherent in any business situation and the information asymmetry. This helps the organization to make the right decision at any given time. The manager's role is to develop the superior business plan that will be put into action, identify, and develop specific goals, track the effectiveness, and adjust where needed, to ensure success (Thompson and Strickland 2001). (Nag et al.'s 2007) massive multi-researcher project) brings up an agreement sample of strategic management definition. These findings indicate that an external

environment has a decisive role that should be considered for achieving strategic goals adequately.

The strategic moment gave rise to strategic thinking which began with the work of Porter (Porter 1979) with CA having a close link ever since. In the viewpoint of Porter, regarding the waves of competitive strategy, identifying a company's proper place in the market and standing out from its competitors are the most crucial factors of a competitive strategy. Corporations have to know and take into consideration the competitors' current strategies and objectives for the long-term, along with the assumptions made about their capabilities and attitude that may lead to the responses that could include their possible scenarios of how they might react (Porter, 1980).

Also following the same path as the strategic marketing process, an organization will develop the alternative marketing strategies, examine the ones that are viable, select the one that seems the best, execute and evaluate it throughout the whole time (Homburg 2017). Therefore, strategic management and marketing management are basic to the whole system of the corporate environment understanding.

Scanning the environment can be defined as the element of competitive analysis (Aguilar 1967). A company is concerned with where it is positioned and what is going on around that location and this is the core difference between operating environment and general environment which can be also termed as its external environments. The first category involves the background variable as in social or political matters of society, while second is sales and the people with whom the business deals, such as the clients, rivals, suppliers, investors, among others (Thomas 1974). Thus, this helping one to do the environmental scanning and to study the competitor behaviour.

3.7 Analysis of Porter's 5 Forces Model

The framework of the competitive advantage model by Michael Porter clearly states that there are five key factors to consider when building a competitive advantage in the market, which can be utilized by a company by judiciously capitalizing on the forces that exist in that market.

The five forces are the makeup of the factors that either support or weaken the standing of a particular firm in the given industry. This accounts for The Bargaining power of Buyers, The Bargaining power of Sellers, The Threat of Substitutes, The Threat of

Potential Entrants, and The Threat of Existing Competition. The threat contribution from company to company is conducted in relation to business.

Bargaining Power of Buyers: This quote is used by the author to make a statement that customers are in all sense, navigators when a journey toward further steps of business. In some markets, clients may have a very strong bargaining power, for example, they may buy within a small circle that is on making large purchases. This is particularly true of enterprises that have very expensive fixed costs. Where goods primarily are rote, and the switching cost is low for purchasers, the impact on consumers and others can be tremendous. The addition of a second market player allows the integration of the production process. If vendors start showing inclination towards high profitability (Porter, 2008) the buyer has the option of reversing the integration and taking charge of making the products of the market itself.

Consumers' power can be decreased by limiting their switching channels, developing brand assurance, bargaining, or providing additional value to the consumer to shift the focus from price to quality (Recklies, 2015).

Bargaining Power of Suppliers: The power disparity that can arise from strong suppliers may be addressed through raising prices, lowering the quality of products or services they offer or shifting the costs around the market. A particular sector, e.g. the aviation industry, that has limited resources for revenue enhancement through the manner of its prices may in turn end up being economically disadvantaged by its strong upstream supply partners. (Porter, 2008).

Narrowly concentrated, differentiated, and innovative suppliers are small and often they become formidable forces to the respective industry. An organization can take them by back of the shop to meet their needs or by turning outsourcing business to out.

Threat of New Entrants: In the context of today's world which is integrated almost throughout the globe and the entrance has become a non-factor, the management gurus have arguably contended this to be the crucial challenge for organizations. The incumbent firms are always in competition with the new players who either offer lower prices (more affordable) or better margins (greater profit). Emerging technologies can change the global markets, especially the competition, as it has caused even the top companies in the world to be affected in terms of the market share, they can no longer compete in. For instance, Nokia, which still does a 1% share from the mobile phone industry (Spence, 2018) as Apple has taken the throne of the sector.

One of the run a business barrier is brand loyalty and switching costs, where new entrants find it difficult to destroy the existing well-known brands. In addition, fair distribution system needs to be implemented because new entrants may have unequal access to distribution channels or supply chain efficiency. Another strategy that a business could apply to get rid of the diffusion by new competitors is steps to be taken which include the advertising through price reduction. An entrant once in a while may worry and unable to enter to the market due to the most significant incumbent may use this strategy to frighten the new entrant.

Threat of Substitutes: Further competition among the alternatives, and the fact that the consumer must decide between the close similarities of the product, are the examples of the threat of substitutive products. Here, it could be vividly visualized that by the services of the Eurostar railway network, an individual may go for a trip from London to Paris rather taking a flight, and the cost and efficiency that follow this provides a possibility of the train trip to be the first choice for many.

In this case, when the price and value relationship is good as well as the buyer not facing switching costs, the threat of alternative is contained in the industry. It seems that they only occupy a lot of space so to get rid of can be a hassle when the businesses don't fully know their alternatives. These add a lot of complexities to the process. In (Porter, 2008). Existing Rivalry: The winner takes it all scenario and how much it saves an industry's potential for profit mainly depend on the degree of competition within a specific industry and the level of competition those within a same industry compete on.

Such indices tend to be elevated or depressing during periods when economic growth is slow or when there is significant competition in the market. While such situations might occur when businesses cannot read each other's market signals, the reason for such signals might arise from verbal or direct communication. The decreasing marginal rates of substitution imply that the Prisoner's Dilemma Model from Game Theory is also applicable, where the collaboration between companies becomes impossible, and one company's profit is the other company's loss (Deng and Deng, 2014). That way, every contender reduces their attention to the same market segments; then this threat may turn to become an even positive-sum game effect (Porter, 2008).

3.8 SWOT Analysis

During the times of uncertainty, one of the most popular methods of businesses is conducting of the strengths, weaknesses, opportunities, and threats (SWOT) analysis which is directed at the assessment of the market and some internal and external factors of organizations (Rozmi et al. (2018.), Wu (2020)). Your four elements of marketing tell about those elements, internal or external, which help or hamper the promotion of your products or services. Within an organizational context, the strengths are those aspects that positively contribute to the milestones, while the weaknesses make this process hard or even impossible. The possibilities are – external factors that help the firm to succeed rather than the favorable environment and the chances to conquer the market – may include everything that is missing and even launching new endeavours. However, threats are factors which are coming in from the external environment of the organization and which can act as barriers in the achievement of the goal of the organization, either that way or the other (Aldehayyat & Anchor, 2008; Fleisher & Bensoussan, 2003; Lee & Lin, 2008; Shrestha et al., 2004).

Besides that, to evaluate a company in all aspects like strengths, weaknesses, opportunities, and threats (SWOT) (Kim and Kokko, 2016; Kim, 2005), a SWOT analysis is formulated. SWOT analysis takes note of the vital factors inside and outside an organization which are critical in implementing a plan. The terms "(dependent variables)" and "(independent variables)" are used to describe the different variables that can be controlled by internal process or are influenced by external factors (Bull, et al., 2016; David, et al., 2017; Hill & Westbrook, 1997; Lee and Ko, 2000; Shariatmadari, et al., 2013). The SWOT analysis can be indispensable instruments for negation of prospects and internal capacities of a firm introducing different chances that can be followed based on assessment of strengths, weaknesses, opportunities and threats (Lee & Ko 2000, Valentin 2001, Weihrich 1982). Based on internal and external factors, managers can create four strategies: These types of products should be advertised on social media platforms which will be not only cost effective, but also will be use for the promotion of the strengths and weaknesses, threats and opportunities (SO, ST, WO, WT) of ancillary products (Bayram & Üçüncü, 2016; Povilanskas & Labuz, 2012, Usman & Murakami, 2011). In accordance with (Davis, 2003), additional matrices such as the CPM, EFE and IFE matrices can be used to generate the SWOT matrix.

The SWOT matrix can be summarized as follows: The SWOT matrix can be summarized as follows:

- **SO strategies:** utilizing the given chances.
- **ST strategies:** protection from. hazards.
- **WO strategies:** through digital transformation, the use of information technology allows the government to expose weaknesses but also introduces new opportunities.
- **WT strategies:** by debilitating threats, one leads to eliminating weaknesses.

SWOT analysis is one of the instruments for getting a bleak picture of at least future consequences. SWOT analysis is a very simple tool of analysis in that it relies on realistic evaluation for a company's strengths and weaknesses. In addition, it has the function to be aware of what becomes the previous plan with the development of plan and determine the level of the company's competition (Robinson & Pearce, 1988). SWOT analysis is something that doesn't involve heavy computer and systems or software and is very easy to use by interested parties (Beeho & Prentice, 1997).

3.9 PESTLE analysis

The PESTLE Analysis is one of the most popular models for strategy of environment, which is dynamic and varied currently (Gupta, 2013). It is incorporated as a case scenario model for business strategic analyses. A business entity tries to do its operations, but still, it doesn't have control over them although as they belong to outside world. Moreover, the PESTLE analysis could lead to the brainstorming of SWOT analysis's strengths and weaknesses. The PESTLE model takes the elements of the general environment into account and does an examination of every one of these elements one by one to come to the conclusion regarding the market attractiveness, potential opportunity in the industry, if the current market and industry are profitable or not, and to forecast the key factors of success and the trends in the market or industry that may influence the future growth and success in the market or in the industry.

The model would be deeply dependent upon the market or the area of business the organization would be engaged in. Therefore, not all the concerns that a corporation operating in one industry should worry about will be of the same kind as those that a company competing for clients and resources in a different area would have. Besides academia-related work, the model can be used to write greater volumes of works of different types such as research reports, assignments, thesis, business-related writing et

cetera. This mode is very applicable to comprehend operation models of students and how they should be applied in their academic writings. Such a strategy provides a company with a lot of benefits as it allows a corporation to differentiate itself from the competitors (Dwyer & Tanner, 2002). While it is not always sufficient, the efficiency of the decision-making is that actual limits must be recognized, and consequently, measures should be taken to decrease the difference in the output model.

Importance of PESTLE analysis in Business: Importance of PESTLE analysis in Business:

A model is tuned up to the image to appraise a dynamic and competitive business environment by considering every decisive factor that may be determining or not impacting the business performance (Johnson et al., 2013). It may result in developing plans and methods that will help solve the difficulties and identify new opportunity areas. The model helps to see where the organization stands within its market, trends and other important issues that have to be taken into account in the process of updating the overall strategy, indicators, and execution plan (Dwyer & Tanner, 2002).

This approach can as well help in assessing the risk and the sensitivity of the risk points of the organization leading to mitigation of the risk based on the organization's risk appetite.

- Political: The administrative issues will be concerned with government policies, views pertaining to industries, competition, monopolies, government stability, taxation, foreign trade controls, and political alignments at sectional, national, domestic, and global levels.
- Economic: Inflation, interest rates, exchange rates, private and public investment spending, consumer expenditure, disposable income, and infrastructure costs and availability, e.g., energy, transport, and telecommunications, which influence the general cost of living and the rate at which profit can be made are the factors that determine the economy.
- Socio-cultural: The demographic shifts, consumer behaviors, the roles of education and health, society's attitude and views of work life, the environment, and social standing and income distribution are some of the issues that conflict with any cultural difference.
- Technological: A government can boost its research investment or adopt new technology, which stimulates the introduction of new products and the obsolescence of older ones.

- Legislation: Employment law, taxation law, company law, knot safety law, patent law, and industry regulations.
- Ecological: Pollution management techniques, planning policies, transport policies, operation of waste and sanitation facilities.

4. Practical analysis

4.1 Introduction of the Chosen Companies

4.1.1 Introduction of bKash

In Bangladesh, bKash is a mobile financial service (MFS) that functions under the jurisdiction of Bangladesh Bank, a subsidiary of BRAC Bank PLC. Initially, BRAC Bank Limited and Money in Motion LLC collaborated to establish this mobile financial services provider. Users of bKash can deposit funds into their mobile accounts and then access a variety of services, since the company offers mobile financial services (MFS) in Bangladesh. Specifically, making payments and sending and receiving money within the country. With the bKash App and USSD (*247#), you can also pay utility bills and recharge your phone.

4.1.2 History of bKash

The word "bKash" connotes progress, individual wealth, and societal advancement. Millions of people's lives have been impacted by bKash since its launch in 2011. It has entered every Bangladeshi family through quick, simple, and safe digital transactions, and the term "bKash" has become a verb. Saying "bKash koro (me)" has replaced the phrase "send me money." In addition to meeting people's basic necessities, it is advancing the nation and enabling them to realize their goals.

bKash's roots are in financial inclusion. The business has been offering a variety of services to empower clients and provide them financial freedom while advancing technical innovation and upholding compliance in all of its business interactions. With about 330,000 agents and 550,000 merchants nationwide, bKash has amassed a sizable network over the years. In order to improve the nation's cashless digital financial ecosystem, bKash also integrated with banks, financial institutions, and service providers. Because of this, bKash has grown to become a reliable platform with over 70 million users.

Bangladesh Bank regulates bKash, a joint venture of BRAC Bank, US-based Money in Motion LLC, International Finance Corporation of the World Bank Group, Bill & Melinda Gates Foundation, Ant Group, and SoftBank Vision Fund.

Due to its rapid expansion, bKash is already well-known both locally and internationally. At the Bangladesh Startup Summit in 2023, Prime Minister Sheikh Hasina presented bKash with the "Fintech Pioneer Award" in recognition of their innovative role in the

country's fintech industry. bKash was named the top Value Added Tax (VAT) payer in the *service sector by the National Board of Revenue for the 2020–2021 fiscal year. bKash has been named the nation's Best Brand for four years running—2019, 2020, 2021, and 2022—according to Bangladesh Brand Forum customer surveys. It was placed 23rd out of the top 50 firms worldwide for implementing long-lasting social impact in Fortune Magazine's annual "Change the World" list published in 2017.

Additionally, according to NielsenIQ's Campus Track Survey B-School, bKash ranked as the top "Employer of Choice" among significant local and worldwide corporations in all areas for three straight years, 2020, 2021, and 2022. Additionally, the "DHL-The Daily Star - Bangladesh Business Awards" have recognized bKash as the "Best Financial Institution of the Year" of 2021 for its outstanding contribution to the nation's financial inclusion. Asiamoney named bKash the "Best for Digital Solutions in Bangladesh" in 2022 and 2023, respectively.

4.1.3 Mission and Objective bKash

By providing financial services that are convenient, affordable and reliable, bKash aims to widen the net of financial inclusion. bKash wants to provide a solution for Mobile Financial Services, built on a highly scalable Mobile Money platform, allowing the people of Bangladesh to send and receive money via mobile devices safely.

4.1.4 Introduction of Rocket

Rocket is the stable and first-time mobile banking facility of the Dutch-Bangla Bank Limited that is supervised according to the policy of the Bangladesh Bank. It is a financial service mobile solution that is dynamic and secure in nature, thus helping the users in their daily transactions like bill payment, merchant, cash in and cash out, send money (P2P) and mobile recharge, and cash in and cash out. In addition, Rocket can launch new goods and services by using dazzling outcomes.

4.1.5 History of Rocket

Through creating mobile banking in Bangladesh, Dutch-Bangla Bank is known to be a founder of this banking. Being a first one it gave an opportunity to offer financial aid through issued mobile devices. Rocket is an approach that is a bank and not a bank where a person can do all the usual banking activities, i.e., transferring money, paying bills, saving money, etc, quickly and in a low-cost manner. Rocket provides system technologies for banking and money transactions through its mobile phones. These

include cash-in/out, pay utility bill, remittance of money to others, salary disbursement, and government allowance distribution plus visiting ATM stand.

4.1.6 Vision and Objective Rocket

The vision of the Dutch-Bangla Bank Rocket is to promote Banking to the unbanked (unlike other models in developing countries, which promote P2P or 'Send Money'), and to develop savings habits among the unbanked. Accordingly, Dutch-Bangla Bank Rocket started with and provided the highest importance to the registration with proper KYC, Cash-in, and Cash-out activities. Other activities like P2P, disbursement of foreign remittance, salary/wages, government's/other allowances, air-time top-up, buying goods and services etc are considered as the by-product of the basic banking services.

4.1.7 Introduction of Nagad

Rocket is the reliable mobile banking service provided by Dutch-Bangla Bank Limited, which is governed by Bangladesh Bank policies. It is a dynamic and safe mobile financial service that helps users with their everyday financial transaction needs, including bill payment, merchant, cash in and cash out, send money (P2P), mobile recharge, and cash in and cash out. Additionally, Rocket will introduce alluring new goods and services.

4.1.8 History of Nagad

In an effort to encourage the nation's expanding e-commerce and to better serve the rural population, the Bangladesh Post Office revised the Bangladesh Postal Service Act in 2010. Two systems for simple, quick, and safe money transfers and payments were introduced in the wake of the amendment: the Electronic Money Transfer System in 2010 and the Postal Cash Card in 2011. Through a vast network of postal departments, Bangladesh Post Office offers services relating to money transactions and online payments under these two categories. Nagad, the nation's first state-owned MFS, was introduced on November 11, 2016, carrying on with the two former services. Under a public-private partnership, Bangladesh Post Office and Third Wave Technologies jointly operated the service, with Bangladesh Postal Service owning 51% of the business and Third Wave Technologies owning the other 49%. The essential technology and infrastructure were set up at roughly 10,000 post office branches nationwide prior to the formal debut on March 26, 2019.

4.1.9 Mission and Objective of Nagad

bKash is one of the most popular MFS providers in the country. Their mission is clear: they want to ‘provide a comprehensive digital and ever-evolving financial service to the country's people and small businesses’.

4.2 Competitive Analysis

Porter’s Five Forces Analysis



Figure 1 Porter’s Five Forces model.

Sources: www.yourfreetemplates.com/porter.five.forces.model

Threat of new entrants: Low

Since mobile financial services is a recently introduced concept in the financial service system and is moving past the growing stage, the threat of new entrants is either favourable or minimal. The threat posed by new entrants in the MFS business is being minimised for the following reasons.

Since the mobile financial services industry is a component of the financial system, it is subject to numerous legal and regulatory constraints that erect obstacles for new competitors from the established market players. Several reasons, including the following, limit or deter others from entering the market:

- **Large Capital Requirement:** In order to offer mobile financing services, a company needs to be highly capitalised and maintain the necessary cash sufficiency and capital adequacy ratios.
- **Strict Requirements, Rules, and Policies:** The Central Bank of Bangladesh, Bangladesh Bank, is the only entity authorised to grant a licence to a newly established business. Before joining the MFS sector, certain Bangladesh Bank requirements must be properly adhered to.
- **Incumbency edge:** Due to their expertise, technology, management, agent pool, extensive networks, advantageous geographic locations, Know Your Customer (KYC) policies, and customer base finance, organisations that are already established in this industry have an edge over new ones. Negotiating with mobile network operators (MNOs), IT vendors, and above all building an agent pool is challenging for a startup.
- **Unfair Distribution Channel Access:** To effectively reach every area of the nation, the mobile financial service is delivered through a network of knowledgeable and experienced agents. It, therefore, needs a unique and complex distribution channel.
- **Anticipated Retaliation:** A number of strong and influential banks are participating, and they consistently work to prevent new players from joining the market. Additionally, they exert pressure on regulatory agencies and the government, raising the likelihood of reprisals against new businesses.

Bargaining Power of Suppliers: High

IT vendors and mobile network operators (MNOs) are important suppliers in the mobile financial services sector.

- **Mobile Network Operator Bargaining Power (Very High):** Without the cooperation of mobile network operators, mobile financial services cannot function at all. As a result, they are totally dependent on them. Since there isn't a viable substitute for this service and mobile network operators have a plethora of other services to provide, the six mobile network operators that control the Bangladeshi market provide them significant bargaining power. In order to reach the target client base, MFS operators need to engage in MNO partnerships.
- **IT providers' Bargaining power (moderate):** One of the main prerequisites for mobile financial services is an IT system that is secure, effective, and efficient. Mobile financial service providers in the business are served by both domestic and international IT suppliers. Because there are many sellers to choose from, bargaining power is relatively low. However, because mobile financial services are such sophisticated systems, system security and quality are critical considerations. Additionally, the IT system should be developed in accordance with the organisational structure and operational methods of MFS providers. As a result, well-known and seasoned IT vendors have more clout in the market.
- **Bargaining Power of the Investor (High):** In the MFS sector, investors' interests are crucial since funds are essential for survival and effective competition. Investors in this sector have more influence over MSF operators since greater returns influence investment decisions and there are more avenues and chances for investment.

Threat of Substitute Services: Moderate

Banks and other organisations that provide microfinance services used to offer conventional payment and money transfer services, microfinance services, and inward remittance services. These services served as a stand-in for mobile financial services.

- **Threat of Traditional Banking Service:** The dependence and preference of individuals on banks as a means of transacting makes traditional banking services highly vulnerable. A powerful alternative to the mobile financial services sector is provided by transaction

services such debit/credit cards, cheques, bank drafts, money transfers, remittance services, and bank offerings.

- **The Risk of Microfinance:** Urban unbanked individuals and rural residents make up the main target market for mobile financial services. As microfinance seeks to offer small-scale financial loans to individuals living in distant locations, it has the potential to replace mobile financial services.
- **Cross-Border Remittance Service (Moderate):** Some companies, including Western Money Union, are experienced in cross-border remittances. These companies are essential to the mobile financial services industry as a possible replacement for remittance services.

Bargaining Power of Buyers: Moderate

The general people, along with small and large commercial organisations, are the main service providers in the mobile financial services (MFS) industry. These organisations utilise mobile finance to send money or make payments to other businesses and customers.

- **Public Bargaining Power (Low):** The public's bargaining power, particularly in rural areas, is low because banks there are unable to facilitate cross-border remittance flows, and many residents of these areas only have access to bKash because other operators have not yet reached the same level of coverage as bKash. As a result, the absence of alternative mobile financial services prevents the general public, particularly in rural regions, from negotiating.
- **Moderate Business Organisation Bargaining Power:** The Bangladesh Telecommunication Regulatory Commission (BTRC) has fixed the fee at Tk. 5.0 for the fewest transactions in mobile banking and at 2.0% for each transaction for "cash-in" and "cash-out" purposes. Mobile finance providers are unable to turn a profit because of this set transaction fee, but corporate entities have considerable influence over which provider they use for their transactions. Bangladesh Bank standards state that the maximum daily transaction limit for mobile financial service account users is Tk. 10,000, while the maximum monthly transaction limit is Tk. 25,000. There is no maximum on the number of transactions that can occur. Therefore, it will be necessary for any firm with monthly revenue or expenses that exceed Tk 25,000 to pay through mobile banking to maintain

multiple accounts, ideally with one of the three aforementioned carriers, which would raise their switching costs.

Competitive Rivalry: High

The following features of the industry affect how fierce the competition is:

- **Number of firms (fair):** The mobile banking industry is home to a considerable number of businesses. This means that there's a good likelihood the consumer base may split up later on.
- **Market growth (High):** With a growth rate in the double digits, the market growth indicators are quite high. As a result of the growing market, businesses can increase their revenues. As a result, there is less competition among rivals to gain market share.
- **Fixed cost (High):** Because businesses invest a lot of money in technology to give clients better services, capital costs are rather high in this sector. However, in order to deliver the best possible customer service, businesses have to train a number of their staff members. Thus, there is a large total sunk cost.
- **Low switching costs:** Because switching costs in this sector are almost non-existent, customers can move between companies with ease. Consequently, these organizations face difficulties in acquiring and maintaining long-term clients.
- **Product diversification (Low):** There is limited room for product differentiation in the mobile financial services industry, which breeds intense competition. In this instance, the only practical way to limit competitiveness is through brand identification.

4.3 Environmental Analysis

PESTEL Analysis

"Political, Economic, Social, Technological, Legal, and Environmental" analysis, or PESTLE analysis, is a tool used in research reports, market planning, organizational change, business and product development, and strategic and business planning. Organizations can reduce risks and maximize possibilities by comprehending these external environments.

Political:

Political factors impact the industry favourably. In Bangladesh, political stability is rare. While political party internal strife always puts pressure on the economy, stopping the rate of expansion in any area of the Mobile Financial Services (MFS) industry is a constant. Despite the unfavourable situation, the mobile banking system has overcome the obstacle caused by political anomalies and is prepared to make a name for itself in the market by the end of the fourth year of operation. The mobile banking system has advanced significantly over the past few years thanks to the proactive and contemporary attitude taken by the Bangladesh Bank and the Government. The government of Bangladesh wants to create a "digital" nation, so it has adopted technical advancements, promoting the growth of mobile banking systems, and showcasing them as attractive products on the market.

Economical:

Since Bangladesh's economy is now uncertain, economic variables have a positive impact on the business. Bangladesh's economy grew in 2010 and 2011, but this was followed by a declining rate in 2012 and 2013, according to Bangladesh Economy Profile (2013), despite the nation's political instability, poor infrastructure, corruption, insufficient power supplies, and slow implementation of economic reforms. In terms of internal political instability brought on by hartals, blockades, and months of fatal violence, the past year has been among the most difficult for Bangladesh in recent memory. In certain respects, the economy had therefore updated its Vigor. Many experts, including Bangladesh Bank (BB), Planet Bank International Money, and others, have predicted that the GDP for Fiscal Year 2014 will be less than 6.2 percent, or beneath the target. Some even predict it will be less than the fifth. A weak economy results in fewer jobs being created and lower income, both of which have an adverse effect on poverty. Even if the disposal financial gain hit an unparalleled peak of 31079.56 BDT in 2013, if the unfavourable economic conditions persist, the mobile financial services (MFS) industry may become less appealing.

Social:

Social aspects are beneficial to the sector. The fundamental features of mobile financial services will help the unbanked get past obstacles and benefit from financial services. Nearly everyone uses MFS frequently, from anywhere at any time of day or night, which

solves the accessibility issues that traditional banking causes. Furthermore, MFS offers inexpensive secure services. One can use M-banking to access a wide range of services, including shopping, fund transfers, paying utility bills, withdrawing cash from an ATM or money station, and many more thrilling features. People have a strong preference for MFS due to its ability to save time and be reliable, affordable, secure, and trustworthy. The adoption and application of MFS have been explained as being ingrained in social practice. Millions of people in Bangladesh are currently using mobile network coverage to move money within networks, making it a lucrative industry. The positive perception of MFS among the public is a result of its improved operational flexibility and high calibre. The quality, health, and education of the population are improving, and this has a good effect on MFS as well.

Technological:

Technology has a detrimental impact on the sector. Technological breakthroughs that will impact the business's operations and, consequently, the market, either positively or negatively, are considered technological considerations. This speaks to automation, science, and development and, consequently, to how responsive a market is to technological advancements. Mobile banking technology, the newest wave of electronic banking transactions, has emerged as one of the most well-known banking features, providing banks and other financial organisations with new opportunities. Thus, in the banking industry, mobile banking technology has made banking services more accessible, reliable, and adaptable. As is the case with most banks, innovation is necessary to outperform the competition when it comes to implementing mobile banking technology in the most sophisticated way possible. The reason the MFS market is still in its early stages of growth is that the newest vendors are working to stabilize their technology.

Legal:

The industry is positively impacted by legal factors. There are internal and exterior aspects to these issues. While many policies are maintained by corporations for their own benefit, certain laws have an impact on the business climate in a given nation. Each of those viewpoints is taken into account in the legal analysis, which then lays out the course in light of those laws. Take consumer laws, labour laws, safety regulations, etc. as examples.

4.4 Comparative analysis:

Mobile phone user in Bangladesh:

Recently, the Bangladesh Telecommunication Regulatory Commission (BTRC) revealed a groundbreaking surge in mobile phone users in the country. The number of mobile phone users in the country has surpassed an extraordinary milestone in January 2024, reaching a record-breaking 190 million.

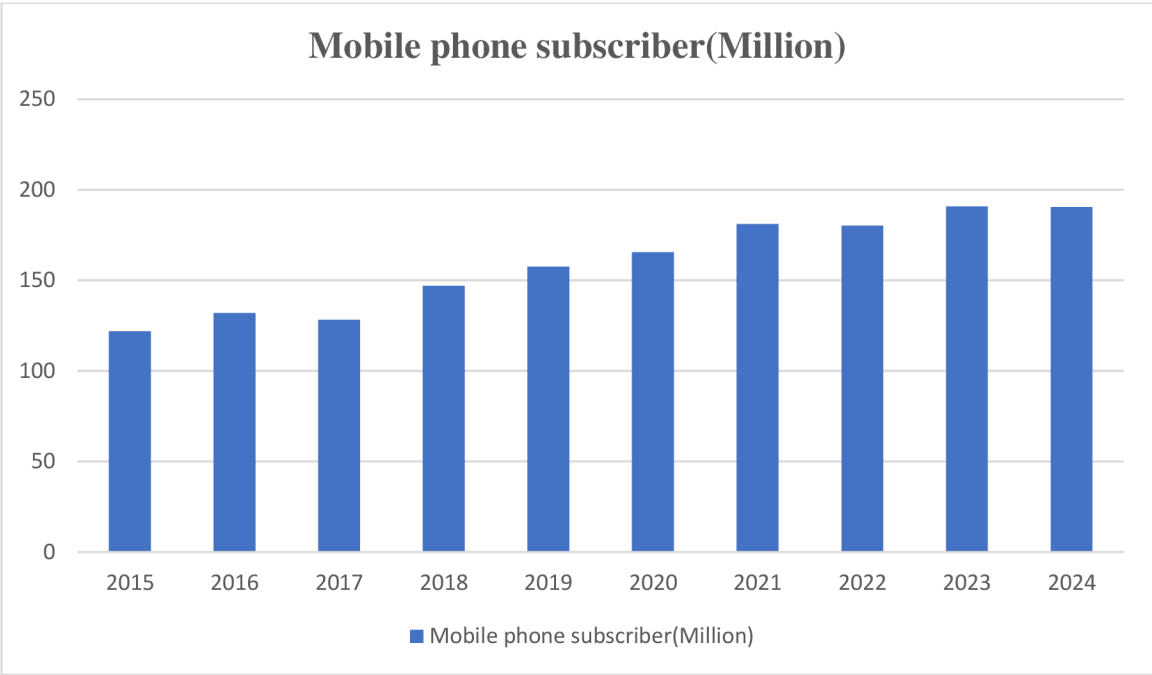


Figure 2 Mobile phone user in Bangladesh.

Source: Own elaboration based on data from BTRC data (2015–2024)

Major mobile companies in Bangladesh:

Three of the four mobile companies in Bangladesh are foreign-backed cell phone operators. The BTRC's data showed that the number of subscribers to mobile operators Grameen Phone, Robi Axiata, Banglalink Digital Communications, and Tele talk Bangladesh stood at 82.14 million, 58.38 million, 43.38 million, and 6.46 million respectively at the end of November.

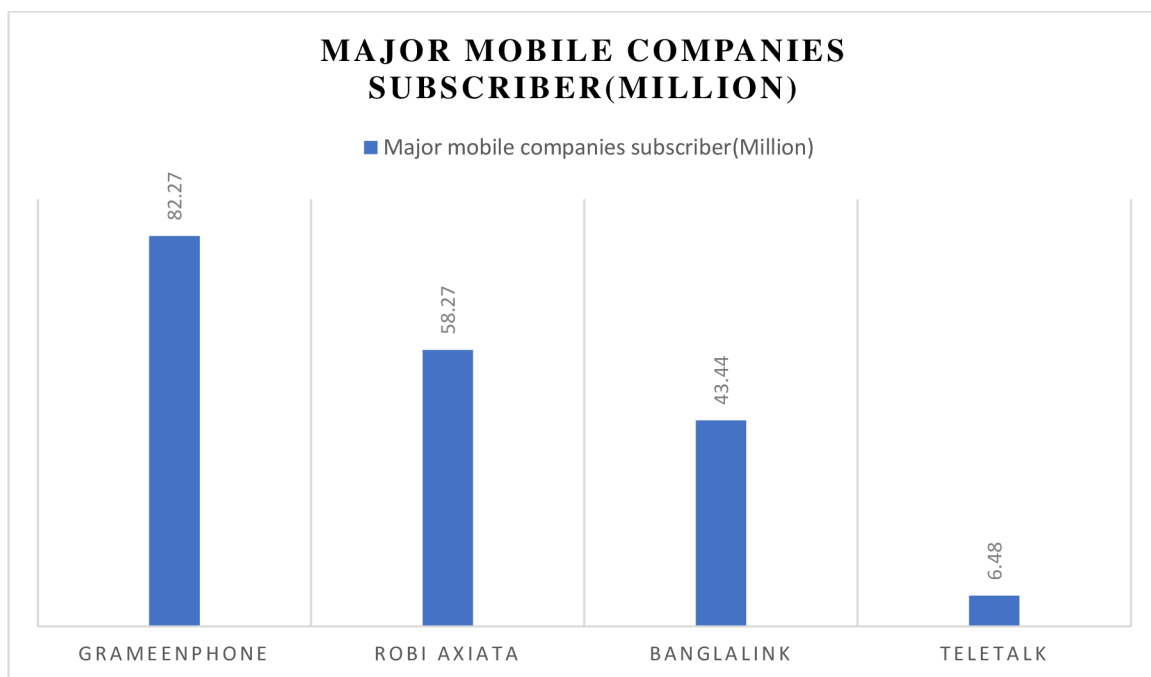


Figure 3 Major mobile companies in Bangladesh.

Source: Own elaboration based on data from BTRC data (2015–2024)

Centralized role:

- Delivering mobile-based services to the target market is bKash's primary goal. Rather of making a profit from the parent bank's services, this subsidiary company has its own identity and is only focused on establishing and advancing the trend of cashless transactions.
- Dutch Bangla Bank Limited owns Rocket. Its ultimate objective is to make the parent bank's banking services easier to access. It does not place a high priority on establishing a presence in the mobile financial services sector, despite being the second-largest position holder in the market.
- Nagad is going to play a major role in Bangladesh's financial system. In collaboration with the whole financial services sector, Nagad aims to serve as a one-stop digital banking destination that caters to the demands of the populace and the government of Bangladesh's development objectives.

bKash is effectively leading the industry by a significant margin of market share difference since it began its adventure as an independent subsidiary company and is more

motivated to hold a prime position in the market than being a complimentary service giving unit like Rocket and Nagad.

Structure of organization:

- As a subsidiary company, bKash has an impeccable organisational structure that starts at the top and descends hierarchically inside the company. In addition, it has divisions that are operationally independent.
- Rocket is a division of Dutch Bangla Bank Limited's banking Inclusion Division that offers mobile banking services. The Deputy Managing Director is in charge of Rocket's operations.
- In February 2019, third Wave Technologies Ltd changed their name to Nagad Ltd, purportedly without notifying BPO. Beginning as the Bangladesh Post Office's (BPO) mobile financial service (MFS) under the "Nagad" name in March 2019, Nagad Ltd.

The ultimate goal of bKash's team of committed workers and comprehensive organisational structure is to realise bKash Limited's clearly stated mission and vision. Conversely, Rocket is a service or product that the parent bank offers to improve the ease of use and accessibility of its basic banking services. Their main interest is not E-Money, even though it is created throughout the process of providing mobile banking facilities. Rocket lacks devoted staff members and multiple divisions. In reality, it is run and overseen by a number of workers from Dutch Bangla Bank Limited. On the other hand, Nagad get huge success within a shorter time. Before starting their activities, Nagad had recognised the issues facing the market and had the necessary remedies. Digital KYC was one of their audacious and inventive products. Customers who do not have a Nagad account can now access money through a service they instituted. A sustainable business approach combined with innovation is one of the key ingredients to Nagad's success. On deposits made by customers into their accounts, Nagad is also giving them a significant interest rate.

Market share:

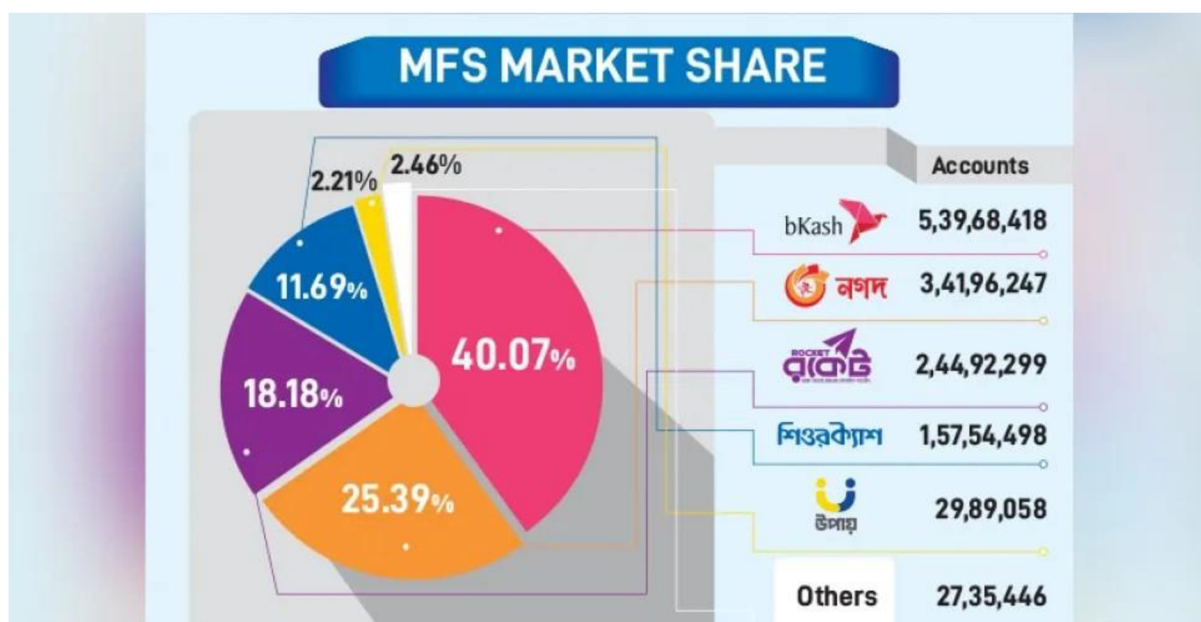


Figure 4 Market share of MFS.

Source: Bangladesh Competition Commission

As per a survey, bKash, the operator of mobile financial services (MFS), is exhibiting complete dominance in the market with the biggest market share, whilst Nagad is showing quick growth. In the MFS sector, bKash, a BRAC Bank affiliate, holds the largest market share with 5,39,68,418 account holders, or 40.07 percent. According to Bangladesh Competition Commission research, Nagad, the official digital financial service provider of the Bangladesh Post Office, came in second. With 3,41,96,247 account holders, or 25.39 percent of the overall market share, is Nagad's share of the market. Rocket accounts for 18.18 percent or 2,44,92,299 account holders.

The top three MFS providers, bKash, Nagad and Rocket, account for 84.27 percent of the total market share when it comes to account holders, 66.52 percent when it comes to MFS agents, 95.35 percent when it comes to average daily transactions, and 95.85 percent when it comes to monthly cash-out transactions.

As a joint venture between BRAC Bank and Money in Motion LLC, USA, bKash began operations in 2010. In terms of average daily transactions, 78.08 percent in terms of

monthly cash-out transactions, and 22.70 percent in terms of MFS agent count, it holds a 66.46 percent market share.

On March 26, 2019, Bangladesh Post Office and Third Wave Technologies Limited officially inaugurated their joint venture, Nagad. According to the research, it has 13.35 percent of the market share in terms of average daily transactions, 9.59 percent in terms of monthly cash-out transactions, and 13.54 percent in terms of agents.

Rocket enjoys the biggest market share in the industry with 23.29 percent when it comes to the number of agents, and 19.27 percent when it comes to average daily transactions. The research was compiled by the Bangladesh Competition Commission, which gathered information from MFS operators as of June of last year.

Brand image:

To strengthen its brand image and raise awareness of its brand, bKash has spent money on marketing efforts. These advertisements frequently stress the advantages of utilizing bKash for routine financial transactions and emphasize how it is changing how individuals handle their finances. In Bangladesh, bKash is a reputable and well-liked option for mobile financial services because to its brand image of dependability, convenience, accessibility, and innovation. It's important to remember, though, that customer preferences, competition, and market dynamics can all have an impact on how people perceive a brand over time.

Nagad placed a strong emphasis on innovation in its offerings, consistently rolling out new features and technological advancements to improve consumer satisfaction. Its current brand image and ability to stand out from more established financial service providers are both results of this innovation-focused approach. For Nagad, gaining users' trust was essential. In order to provide users, trust in the security of their transactions and personal data, it placed a strong emphasis on security protocols and dependability. In Bangladesh, ease, accessibility, innovation, reliability, dedication to financial inclusion, marketing initiatives, and a customer-focused mindset typified Nagad's brand image.

Because of its reputation for dependability and security, consumers of Rocket mobile banking feel confident using it. Strong security protocols and a history of consistent service quality help to establish its reputation as a reliable financial partner. Rocket places a high priority on meeting the demands of its clients, working hard to provide tailored

experiences and prompt customer service. Features aimed at improving the user experience and addressing particular customer pain points are indicative of its customer-centric strategy. By constantly interacting with its user base and seeking feedback, Rocket Mobile Banking cultivates a feeling of community among its clientele. The relationship between the brand and its customers is strengthened by this interaction, which promotes brand loyalty. Generally, Rocket mobile banking's brand image centers on the essential qualities of innovation, ease, accessibility, reliability, customer-centricity, modernity, and community involvement, establishing the company as a major force in the field of digital banking.

Technology:

- bKash uses Huawei solutions.
- Rocket uses Sybase 365 solutions.
- Nagad uses HTML5.

Huawei is the third-largest information and communications technology (ICT) and smart device provider in the world. The majority of telecom businesses in Bangladesh utilise Huawei products, and bKash has chosen Huawei as its primary platform supplier in order to run its mobile services efficiently. In the instance of Sybase, it is no longer in existence. Today, Sybase is a component of SAP. SAP is a well-known software and solution provider. Although a considerable number of Bangladeshi companies employ SAP solutions, the country has comparatively less expertise in the telco and mobile industries. In Bangladesh, SAP isn't directly present. While it works in Bangladesh through a few local partners, Huawei maintains an office there that enables it to be more productive and efficient when providing and monitoring technology. Additionally, Huawei is heavily involved in the current government's efforts to digitalize Bangladesh. Huawei is undoubtedly a greater value creator when taking into account the previously mentioned factors. Consequently, bKash is in a better position.

Application:

- There is a mobile application specifically for bKash. All of the bKash services can be accessed through the application. It is capable of barcode scanning and automatically producing the required data.

- There isn't a specific mobile application for Rocket. It is accessible via the mobile application for DBBL called NEXUSPAY. Access to every DBBL card and account is possible through it.
- There is a dedicated mobile application for Bangladesh Post Office's digital financial service, Nagad. To meet customer's everyday financial transaction demands, there is the Nagad App, a dynamic and secure digital financial service app.

The bKash application can effectively provide all bKash services because it is solely focused on bKash. It features a fairly slick user experience that is exclusive to bKash. There are no mobile banking options available from the Brac bank. Conversely, Nexuspay is a multifunctional programme. Although it contains a dedicated module for Rocket, the Rocket services are not well defined or organised. It merely provides generalised fundamental services. It is linked to more DBBL services. It has the benefit of being "All in one." Above all, in terms of mobile financial services, the bKash application is more capable. on the other hand, by utilizing the broad availability of smartphones and mobile internet access, the Nagad app is intended to offer consumers throughout Bangladesh easy and safe financial services.

Fees and charges:

Name	Cash in	Send money	Cash out	Recharge	Account to bank
Bkash(USD)	Free	5TK/10TK Below 100: Free Priyo Number: Free	1.85% ATM: 1.49%	Free	According to agreement
Bkash(App)	Free	5TK/10TK Below 100: Free Below 100: Free	1.75% ATM: 1.49%	Free	According to agreement
Nagad(USD)	Free	5 TK	1.494%	Free	

Nagad(App)	Free	Free	1.149%	Free	
Rocket(US SD)	Free	to same product: Free to another product: 0.9%	Agent: 1.8% ATM: 0.9% Branch: 0.9%	Free	According to agreement
Rocket(App)	Free	to same product: Free to another product: 0.9%	Agent: 1.8% ATM: 0.9% Branch: 0.9%	Free	According to agreement

Table 1 Fees and charges

Sources: <https://www.howtobd.com/bkash-nagad-rocket-charges/>

Parent company:

bKash

- Brac Bank Limited
- Ant Financial
- Bill & Melinda Gates Foundation
- Money in Motion LLC
- International Finance Corporation

Rocket

- DBBL
- Sybase 365 or SAP (Strategic alliance for technology)

Nagad

- Third Wave Technology Ltd
- Bangladesh Post Office (BPO)

bKash's parents are incredibly diverse. Due to the fact that its parents are a number of globally renowned financial institutions and social welfare foundations, bKash is able to

expand its reach abroad and establish a strong global brand. A strategic partnership with Alipay, one of the most well-known companies, offers bKash a significant competitive advantage. Having a varied development emphasis combined with a diversified investor portfolio allows bKash to grow even faster than its closest rivals. The only foreign parent company for Rocket is Sybase, which mostly provides technical assistance. Rocket's only real parent is DBBL. Rocket's prospective growth is perhaps impeded by its single parent status and considerable international exposure. Nagad is owned by Third Wave Technologies, a private company and the government. Third Wave Technologies will hold the remaining 49% of the company, with the postal service owning 51% of it.

Core competencies:

Core competencies of bKash-

- Strong brand reputation
- The parent company, BRAC, is a reputable and well-known NGO.
- Broad Market Coverage
- Strong Agent Network

Core competencies of Rocket-

- Large ATM network
- Huge parent bank support
- Robust Connected Banking Services
- Strong agent network

Core competencies of Nagad-

- Extensive Agent Network
- Integration with Government Services
- Strong Integration with Government Services
- Nagad is backed up by the government.

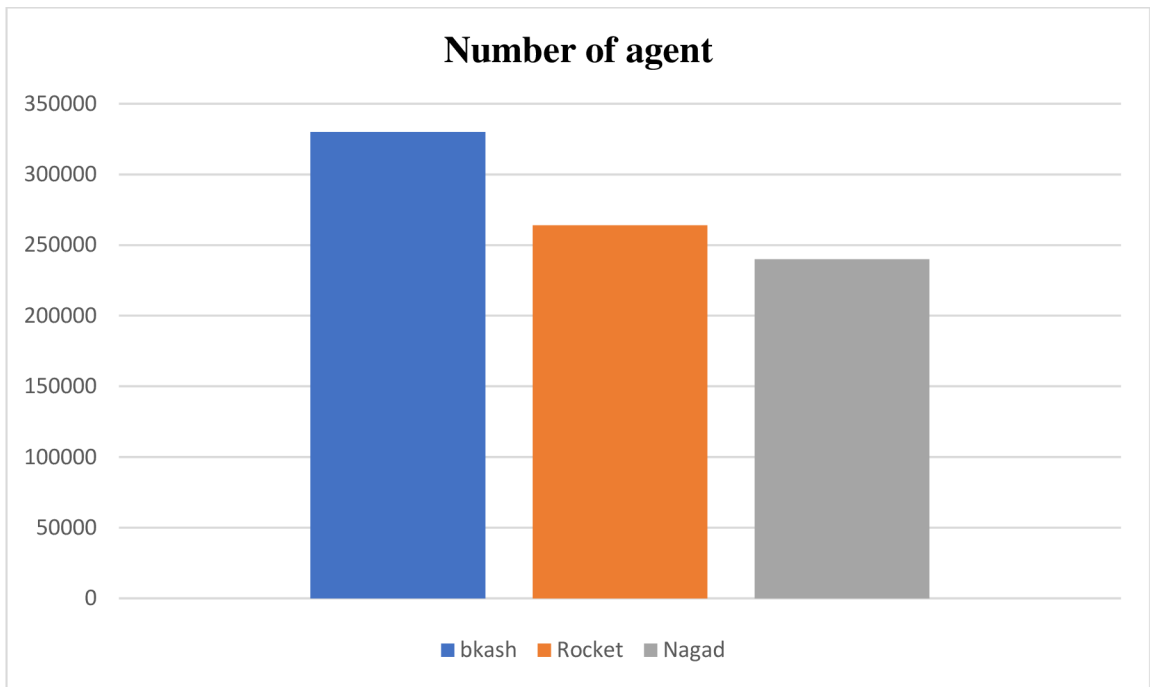


Figure 5 Number of agents for three company.

Source: <https://www.bkash.com/en/business/agent> From their official website

The brand image of bKash is remarkably strong. It is a common mistake for people to mention every MFS service offered by every MFS provider except bKash. Its advantage comes from having a larger agent network rather than an agent banking structure. bKash advocates for the goal of helping prospective bank customers from isolated locations that have good connections to social welfare. Its acceptability is therefore further influenced by having Brac, the greatest and largest, as the parent. Despite not having Rocket agents everywhere, DBBL has a better agent banking record. When it comes to ATM availability, it has a huge edge. A large number of ATMs are available, which aids in Rocket's expansion. Rocket has a close relationship with other DBBL services. It therefore receives sufficient encouragement to develop further. On the other side, Unlike the private sector participants, Nagad is supported by the government, which permits them to operate with less regulatory limitations. Nagad has a larger transaction limit since it is exempt from central bank regulation by the Postal Act, which gives the postal department the authority to independently offer financial services. With agents all over Bangladesh, it has a huge network.

Interest on Savings:

In addition to receiving secure money storage, your bKash Account offers up to 3% annual interest on savings. Only customer accounts with bKash are eligible for interest.

Interest Rate:

Balance/Slab	Rate p.a.
5,000.00 - 50,000.99	0.50%
50,001.00 - 150,000.99	1.00%
150,001.00 - 250,000.99	2.00%
250,000.99 +	3.00%

Table 2 Interest Rate of bKash

Sources: <https://www.bkash.com/en/help/interest-on-savings>

Beginning on February 1, 2023, customers will receive a profit based on the amount of money deposited into their Nagad account, as shown in the table below:

Balance/Slab (in BDT)	Profit Rate (p.a.)
0 – 4,999.99	0%
5,000 – 49,999.99	1.50%
50,000 – 99,999.99	2.50%
100,000 – 199,999.99	3.50%
200,000 and above*	7.50%

Table 3 Interest Rate Nagad

Sources: <https://nagad.com.bd/profit/>

Rocket does not offer interest on savings depending on wallets.

Special Deals for Clients:

bKash’s special offers for customers are-

- Best Mobile Recharge Offers
- New bKash account offer
- Amazing Offers with bKash Payment at the Greatest Hotels.
- bKash payment for health check-ups at Universal Hospital
- Foodpanda offers discounts on bKash.
- bKash offers 1pc extra cash bonus on remittance.
- bKash offers cashback on shopping.



Figure 6 Advert of bKash.

Source: www.bKash.com/advert.

Rocket's special offers for customers are-

- Rocket New Account Offer
- Merchant payment offer.
- Mobile Recharge Offer
- Bill pays offer
- 10% Discount on Flight Booking & up to 65% Discount on Hotel Booking

PLAN A VACATION
TO YOUR
Favorite Destination



WITH UP TO **10%**
DISCOUNT
ON FLIGHT BOOKING

WITH UP TO **65%**
DISCOUNT
ON HOTEL BOOKING

 16216



Validity till 31st
October, 2023
*T&Cs Apply

Figure 7 Advert Rocket.

Source: <https://www.dutchbanglabank.com/electronic-banking/rocket.html>

Nagad's special offers for customers are-

- Nagad offers up to 35% cashback and discounts on Eid shopping.
- Nagad offers up to 16% discount, cashback over 126 brands.
- 16% cashback on Nagad payments in Daraz
- Nagad offers up to Tk400 cashback on Mastercard credit card bill payments.



Figure 8 Advert of Nagad

Source: <https://nagad.com.bd/>

When we take into account the offers from bKash, Nagad, and Rocket, we can see that each of them has worked very hard to draw customers with unique promotions. Upon examining bKash's and Nagad's offerings, it is evident that they have addressed every conceivable industry, sector, and individual inside those industries. bKash and Nagad has thus realized every profit that can be anticipated from a specific industry. Rocket's special offerings, however, are somewhat rare and exclusive. Instead of concentrating on the business as a whole, Rocket concentrates on one or two key players, which has gradually limited its exposure.

4.4.1 SWOT Analysis of bKash, Nagad, and Rocket

A strategic planning tool called a SWOT analysis is used to assess a project's or company's strengths, weaknesses, opportunities, and threats.

SWOT Analysis of bKash

Strength:

- **Leader of the Market:** With a sizeable market share, bKash is the top mobile financial service provider in Bangladesh.
- **Broad Network:** It is easily accessible to a significant percentage of the population due to its vast nationwide network of agents and service sites.
- **Brand Recognition:** Among its users, bKash has developed a strong sense of brand loyalty as a reliable brand in the mobile financial services sector.
- **Advanced technology and straightforward banking:** bKash introduced advanced technology in MFS service in Bangladesh. Their apps are easily accessible to their customer.
- **Stronger customer care service:** bKash has 24-hour customer call centers.
- **Strong backup:** The parent company, BRAC, is a reputable and well-known NGO.

Weakness:

- **High service charge:** bKash service charges are comparatively higher than other MFS services in the market.
- **Limited-Service Offerings:** bKash provides a lot of services. However, there might be some that aren't as good as those provided by traditional banks.
- **Limited transaction amount:** A customer's monthly transfer limit is 200,000 TK, with a maximum of 25,000 TK for each transaction. They can send money anywhere from 10 times per day to 100 times per month.
- **Security worries:** Although security has worked to prevent fraud, cyberattacks can still affect mobile financial services, leaving users with doubts.

Opportunity:

- **Market Expansion:** bKash has a great chance to reach out to other developing nations with comparable populations and requirements in order to extend its services outside Bangladesh.
- **Huge market:** Bangladesh is the most populated country in the world. It has a vast population of mobile users. The market is open for bKash to expand their business.
- **Growing online purchases:** The popularity of online shopping is rising quickly, and bKash is linked to the majority of well-known online retailers.
- **Dependency on the Internet of a new generation:** In every aspect of payments and transactions, the current generation mostly relies on the Internet.

Threats:

- **Hacking:** Hacking, fraud, and abuse of the service
- **Competitors in the market:** huge competition in the market now. New competitors are growing day by day.
- **Rules change frequently:** MFS is a new concept in Bangladesh. So, changing banking rules for MFS by the central bank frequently is hazardous.
- **Lack of E-banking knowledge:** People living in rural areas tend to lack information regarding online transaction systems.

SWOT Analysis of Rocket

Strength:

- **Strong backup:** Strong backup from the parent company. Rocket gets lots of cooperation and advantages from its parent bank, DBBL.
- **Strong agent network:** They have a strong agent network all over the country.
- **Most ATM network:** DBBL has the largest ATM booth network all over the country, and Rocket customers can use that ATM to cash out their money.
- **Easy transfer system:** Allow money transfers from parent bank accounts to Rocket accounts or from Rocket accounts to bank accounts.
- **Trust and dependability:** Rocket has a high degree of trust and dependability among users because it is run by Dutch-Bangla Bank, one of the most respected banks in Bangladesh.

Weakness:

- Dependency on parent bank: Rocket mostly relies on his parent bank DBBL, so freedom is less to do something new. Bound by consent of parent bank.
- No saving interest: There is no saving interest if the customer saves money on a Rocket account.
- Unable to operate as a separate entity: Rocket linked with DBBL, that's why customers know Rocket as a DBBL product.

Opportunity:

- Big number of potential customers: Bangladesh is a populous country so there is a large number of potential clients who may be more interested in availing of this service.
- Collaborations and Partnerships: Rocket can expand its service offering and improve its value proposition for clients by working with other companies, including financial startups, utility providers, and e-commerce platforms.
- Technological developments: By utilising cutting-edge technologies like biometrics, blockchain, and artificial intelligence, Rocket can improve the scalability, security, and efficiency of its services while also gaining a competitive advantage.
- Quick increase in app users: This could bring in more customers for MFS services in Bangladesh.

Threats:

- Fierce competition: Losing market share could occur if another service provider provides services that are superior to Rocket's.
- Possible market threat: The market share that is currently held could be threatened by the government initiated "NAGAD" MFS service.
- Financial Difficulties: Rocket's business performance and income streams may be impacted by economic downturns, inflation, and shifts in consumer behaviour. This emphasises the significance of agility and resilience in navigating unpredictable market situations.

SWOT Analysis of Nagad

Strength:

- **Government Support:** Nagad has the support of the Bangladesh Post Office, which gives it a solid base and legitimacy and increases user trust.
- **Broad Reach:** By utilizing Bangladesh's vast post office network, Nagad can reach a large audience, particularly in rural areas with restricted access to banking services.
- **Brand awareness:** Nagad benefits from a degree of trust and brand recognition among the public due to its government backing, which can be helpful in expanding its market share.
- **Convenient service charge:** Nagad charges less service charge than the other market-leading service providers.

Weakness:

- **Significantly fewer agent than competitor:** Far lower number of merchants and agents than competitor Bkash.
- **Time consumes customer service:** Nagad doesn't have a wide range of customer service centres like Bkash and Nagad. So sometimes it takes a long time to answer any queries, and customer service is not up to par.
- **Incompetent Agents:** A lack of professionalism among certain Nagad agents results in unhappy customers.

Opportunity:

- **Increasing Digital Transactions:** Nagad has a chance to grow its clientele as a result of the COVID-19-related spike in digital transactions.
- **Inclusion in Finance:** Nagad can keep concentrating on reaching unbanked people and offering necessary financial services.
- **Trends in Digitalisation:** As Bangladesh continues to embrace digitalisation, Nagad has a chance to take advantage of these developments and expand its user base and market share.

Threats:

- **High level of Competition:** Established firms like bKash and other up-and-coming fintech companies are fighting for market share in Bangladesh's mobile financial services industry.
- **Technical Dangers:** The fact that Nagad is technology dependent causes it to be highly vulnerable; Nagad may face issues like data breaches, cyberattacks and system breakdowns, all of this may interrupt services or ruin its reputation.
- **Financial aspect:** Nagad's income sources and business success may be impacted by inflation, shifting customer buying habits, and economic instability.
- **Infrastructure challenges:** Besides lack of internet connectivity and weak electricity supply, there is also other basic infrastructure problems in remote areas and rural areas. An inadequate infrastructure system may hinder NAGAD in extending service delivery to existing poorly accessed locations.

Interpretation and data analysis:

Consumers are the most important factor in any business, and in the case of MFS, the platform is entirely focused on meeting the needs of its clientele. Additionally, digital platform services are being designed in a method that will win over the target customer base's complete trust and highest level of satisfaction. Given this, a study has been conducted to learn more about each specific MFS company's clientele. The survey results for this paper will display the information for Rocket, Nagad, and bKash.

The majority of the 300 responses to this research—which were collected from questionnaires means a pilot research methodology and the results from questionnaires from the original one. Our responses were housewives, business owners, employees, farmers, and students. Finding out about the three organizations' performance and competitiveness is the goal of the survey.

Data interpretation:

This section of the report provides an interpretation of the questionnaire, which consists of a few standard questions that represent the demographics and interests of the

respondents. Furthermore, a few specific elements that could affect the MFS industries were taken into consideration when creating the poll.

The survey results are explained in the part that follows, and both SPSS and Excel work were used to arrive at the results:

Total respondent:

Total Respondent	300
Missing	0

Q1. What is your gender?

	Frequency	Percent	Valid Percent	Cumulative %
Male	200	66.67	66.67	66.67
Female	100	33.33	33.33	100.0
Total	300	100.0	100.0	

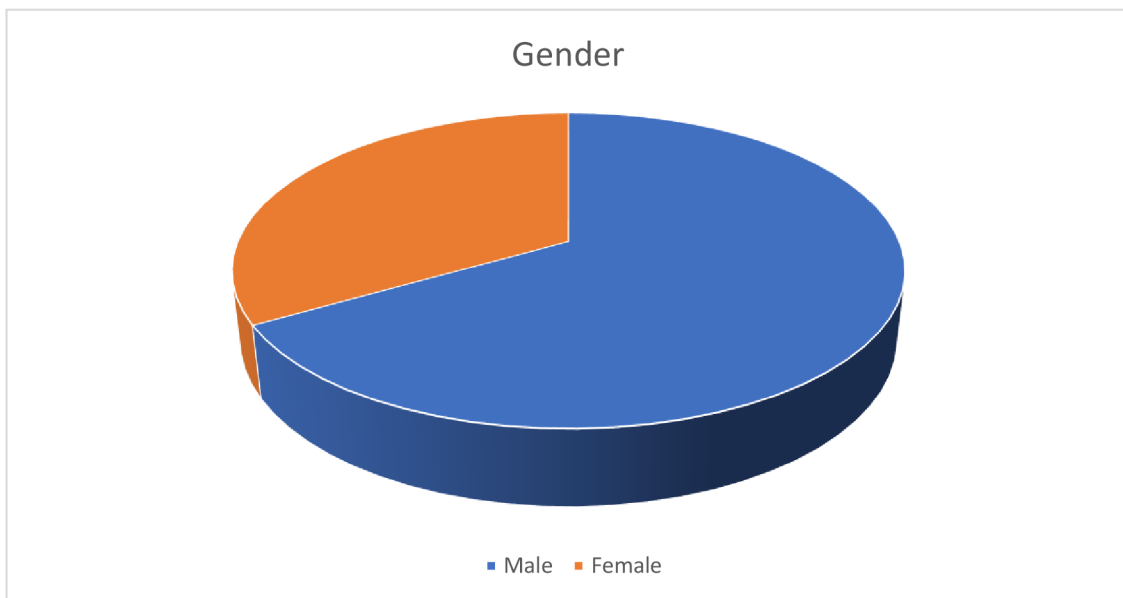


Figure 9 Gender

Source: Own elaboration based on data from questionnaire.

This question was included in the survey poll to find out the gender ratio. Out of the 300 survey participants, 200 identified as male and 100 as female. This information is supported by the table and figure. 33.33% of the percentage is female and 66.67% is male. The outcome demonstrates that MFS are utilised by both genders, with significant ratio difference between them.

Q2: What is the Age range?

Age range

	Frequency	Percent	Valid Percent	Cumulative %
18-25	150	50	50	50
26-32	100	33.33	33.33	83.33
33-41	30	10	10	93.33
42- above	20	6.67	6.67	100.0
Total	300	100.0	100.0	

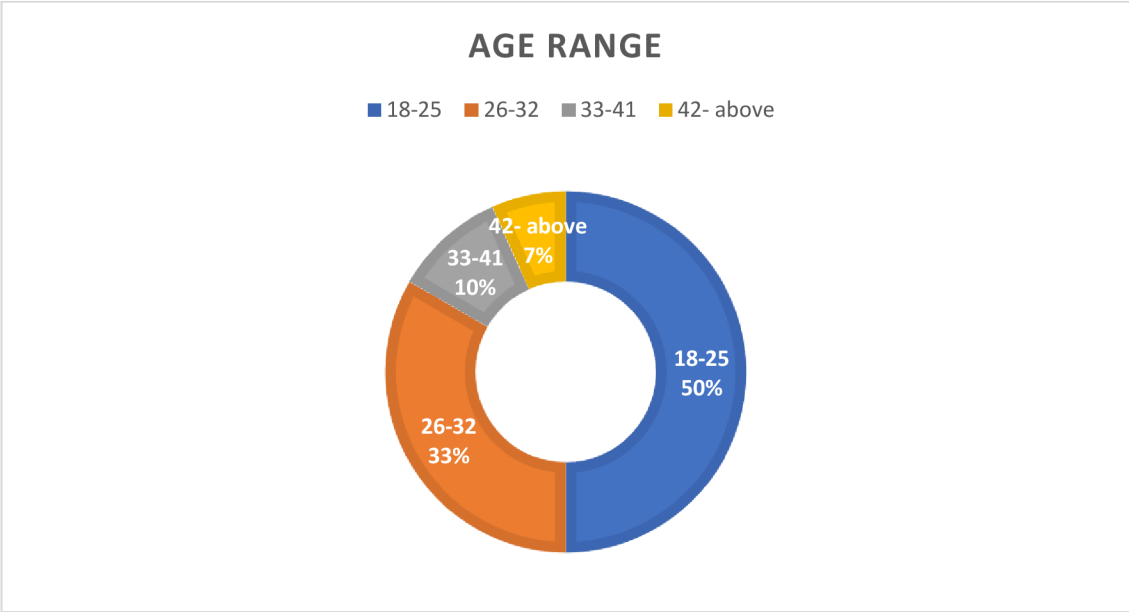


Figure 10 Age Range

Source: Own elaboration based on data from questionnaire.

The graph indicates that the majority of MFS users in this study were between the ages of 18 and 25, with a frequency of 150 out of 300 and a percentage of 50. And 6.67% represents the lowest age group proportion.

Q3: what is your Occupation:

Occupation

	Frequency	Percent	Valid Percent	Cumulative %
Student	150	50	50	50
Service holder	70	23.33	23.33	73.33
Businessmen	40	13.33	13.33	86.66
Farmer	15	5	5	91.66
Housewife	20	6.67	6.67	98.33
Others	5	1.67	1.67	100.0
Total	300	100.0	100.0	

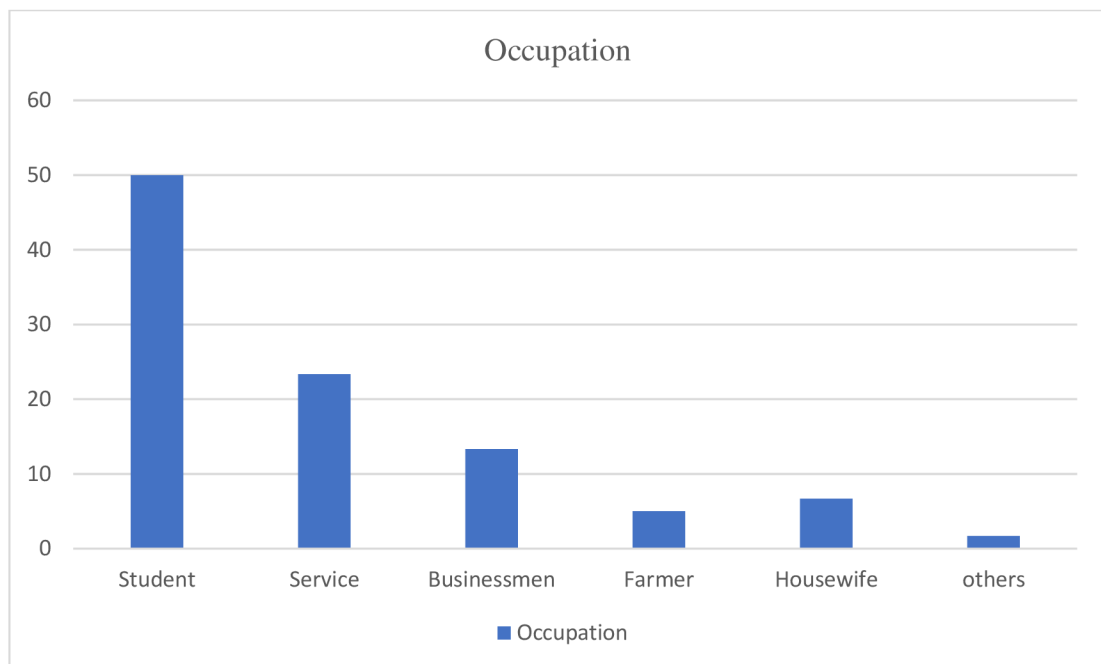


Figure 11 Occupation

Source: Own elaboration based on data from questionnaire.

According to the frequency table, students accounted for the largest percentage of respondents (50%). In contrast, 23.33% of workers were in service, 13.33% were in business, 6.67% were housewives, 5% were farmers, and 1.67% held other occupations.

Q4: Income limit

Income limit

	Frequency	Percent	Valid Percent	Cumulative %
5000-8000	120	40	40	40
9000-15000	80	26.67	26.67	66.67
16000-24000	40	13.33	13.33	80
25000-35000	25	8.33	8.33	88.33
36000-45000	20	6.67	6.67	95
46000-59000	10	3.33	3.33	98.33
60000+	5	1.67	1.67	100.0
Total	300	100.0	100.0	

The graph indicates that 40% is the greatest monthly income band, which is between BDT 5000 and BDT 8000. Conversely, the BDT over 60,000 income range with the lowest income range is 1.67%. According to the chart, 120 out of 300 individuals fall between the BDT 5000 and BDT 8000 salary bracket.

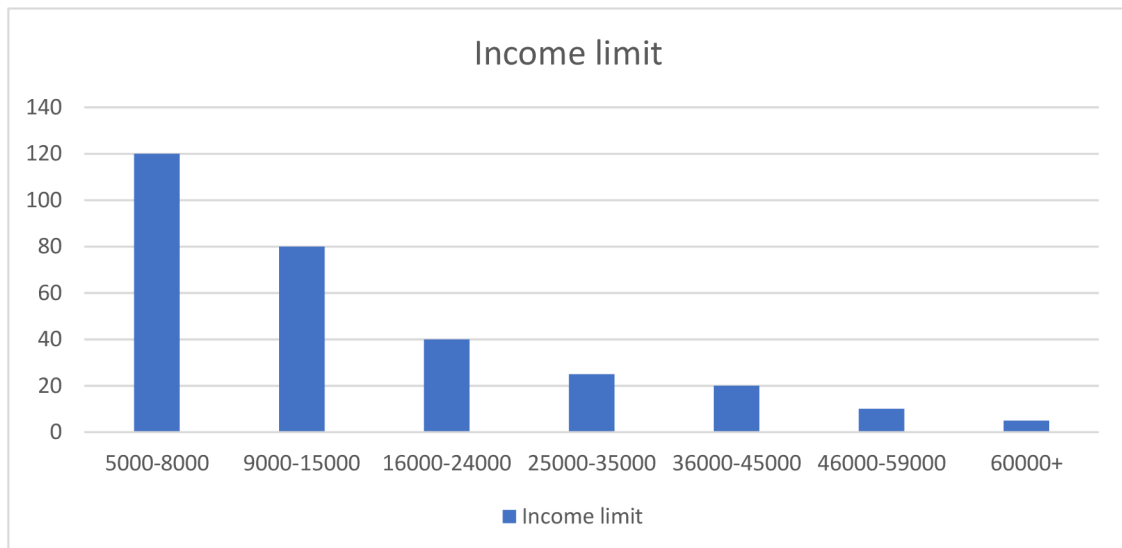


Figure 12 Income limit.

Source: Own elaboration based on data from questionnaire.

Q5. MFS users in Bangladesh

Do you use any MFS service?

	Frequency	Percent	Valid Percent	Cumulative %
Yes	270	90	90	90
No	30	10	10	100.0
Total	300	100.0	100.0	

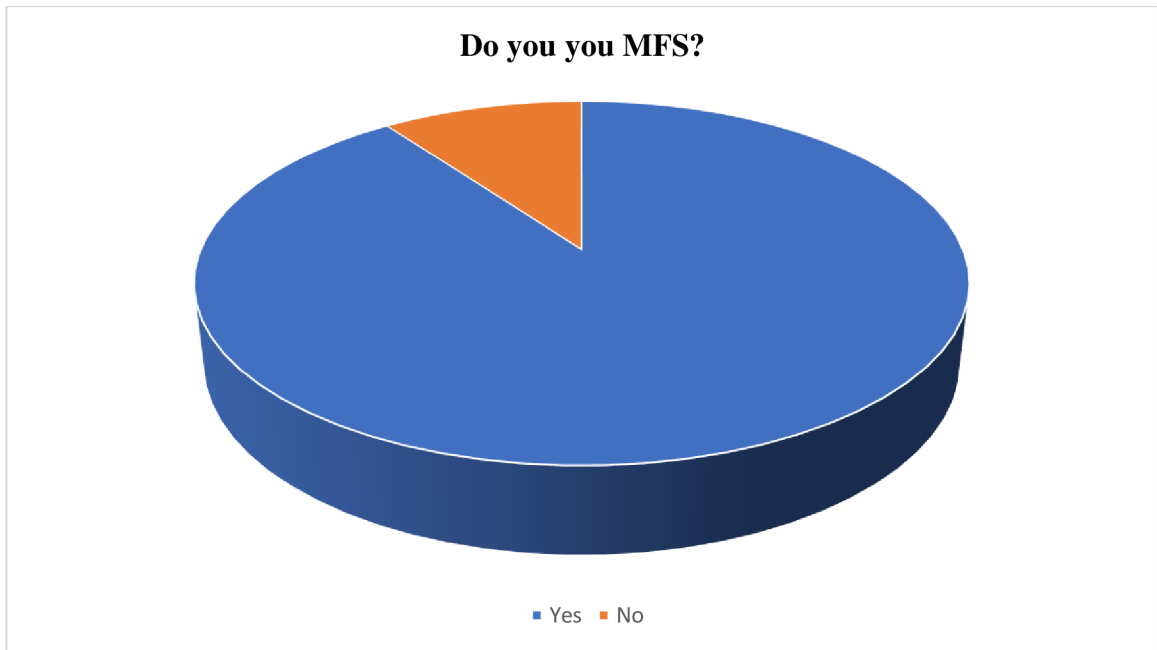


Figure 12 uses of MFS.

Source: Own elaboration based on data from questionnaire.

90% of respondents claimed they use MFS wallets, which makes up the majority. This suggests that a certain group of MFS users was the intended audience for the poll.

Q6. Mostly uses MFS.

Which MFS service do you use?

	Frequency	Percent	Valid Percent	Cumulative %
Bkash	120	40	40	40
Nagad	75	25	25	65
Rocket	55	18.33	18.33	83.33
Others	50	16.67	16.67	100.0
Total	300	100.0	100.0	

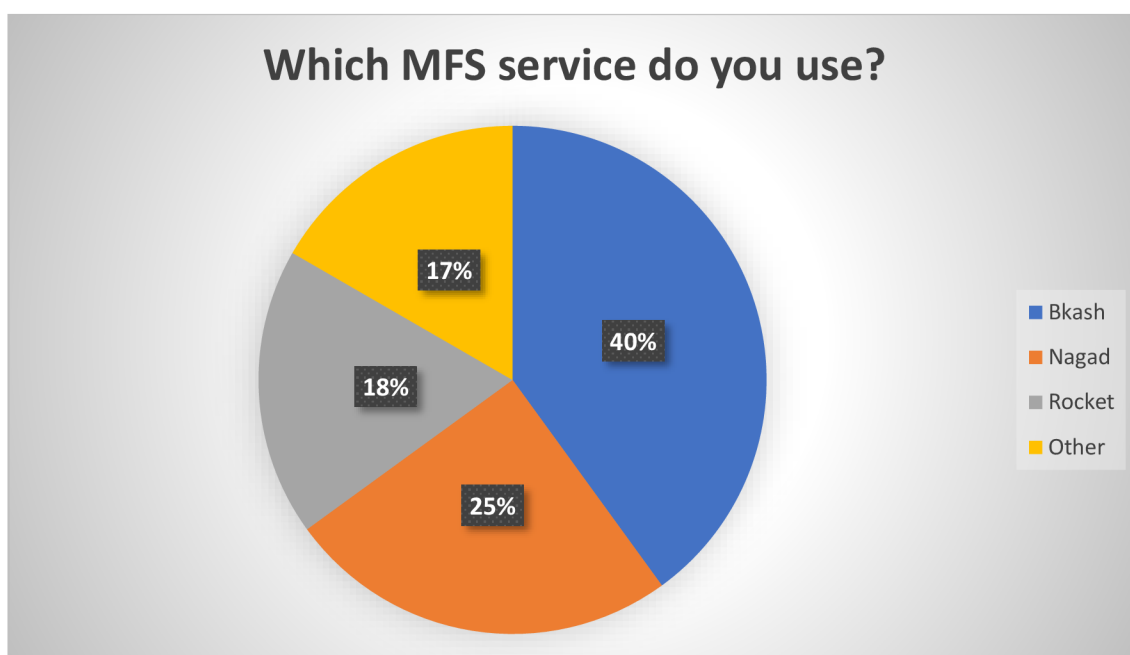


Figure 13 most used MFS.

Source: Own elaboration based on data from questionnaire.

According to the survey, bKash is the most popular payment method among respondents. With 120 frequencies and 40% of users, bKash continues to lead the pack. Nagad has 25% and 75 frequencies, making it the second highest MFS. The Rocket had the third most responses 18.33% out of the 55 frequencies that the poll was able to locate. And other MFS had a 16.67% share.

Q7. Degree of Satisfaction with Safety Concerns

MFS is safer than other financial banking system.

	Frequency	Percent	Valid Percent	Cumulative %
Strongly agree	25	8.33	8.33	8.33
Agree	85	28.33	28.33	36.66
Neutral	60	20	20	56.66
Disagree Strongly	80	26.67	26.67	83.33
disagree	50	16.67	16.67	100.0
Total	300	100.0	100.0	

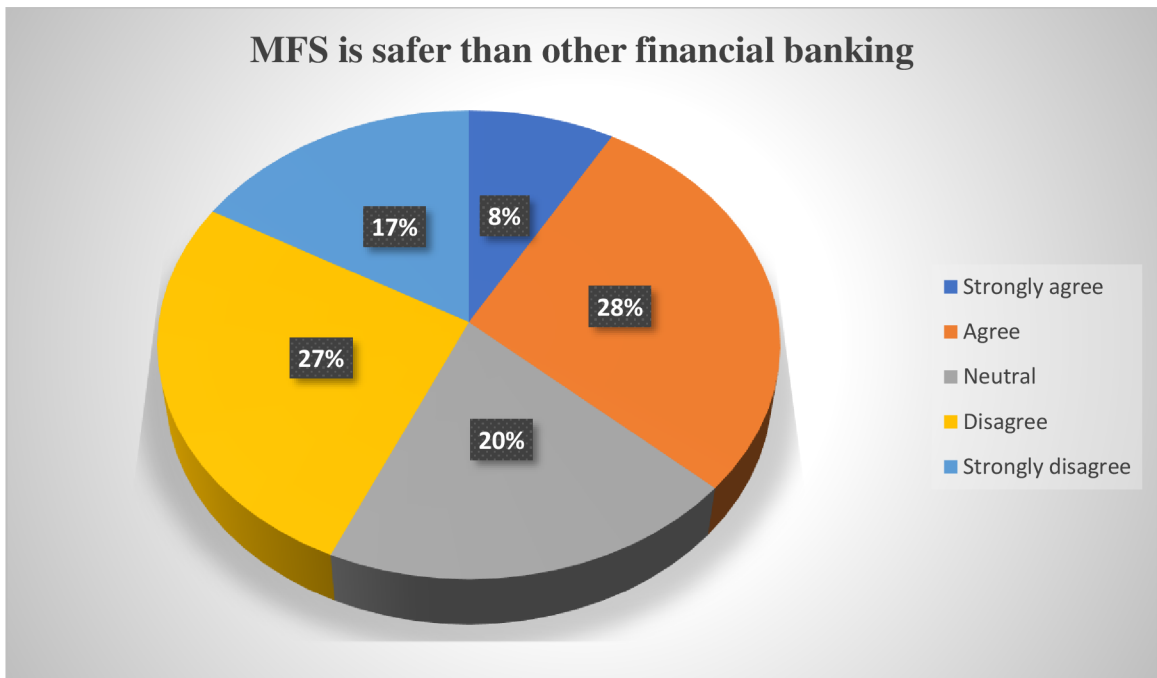


Figure 14 safety measure.

Source: Own elaboration based on data from questionnaire.

On a 5-point Likert scale, 28.33% of participants agreed that MFS is more secure than other financial banking systems. Nonetheless, 26.67% of respondents disagree with the assertion. 20%, however, had a neutral opinion on this remark. We can conclude that, with regard to this statement, a larger proportion of respondents strongly disagreed and disagreed than strongly agreed and agreed.

Q8. Degree of Satisfaction with MFS Convenience

MFS platforms offer greater convenience.

	Frequency	Percent	Valid Percent	Cumulative %
Strongly agree	75	25	25	25
Agree	95	31.67	31.67	56.67
Neutral	30	10	10	66.67
Disagree	60	20	20	86.67
Strongly disagree	40	13.33	13.33	100.0
Total	300	100.0	100.0	

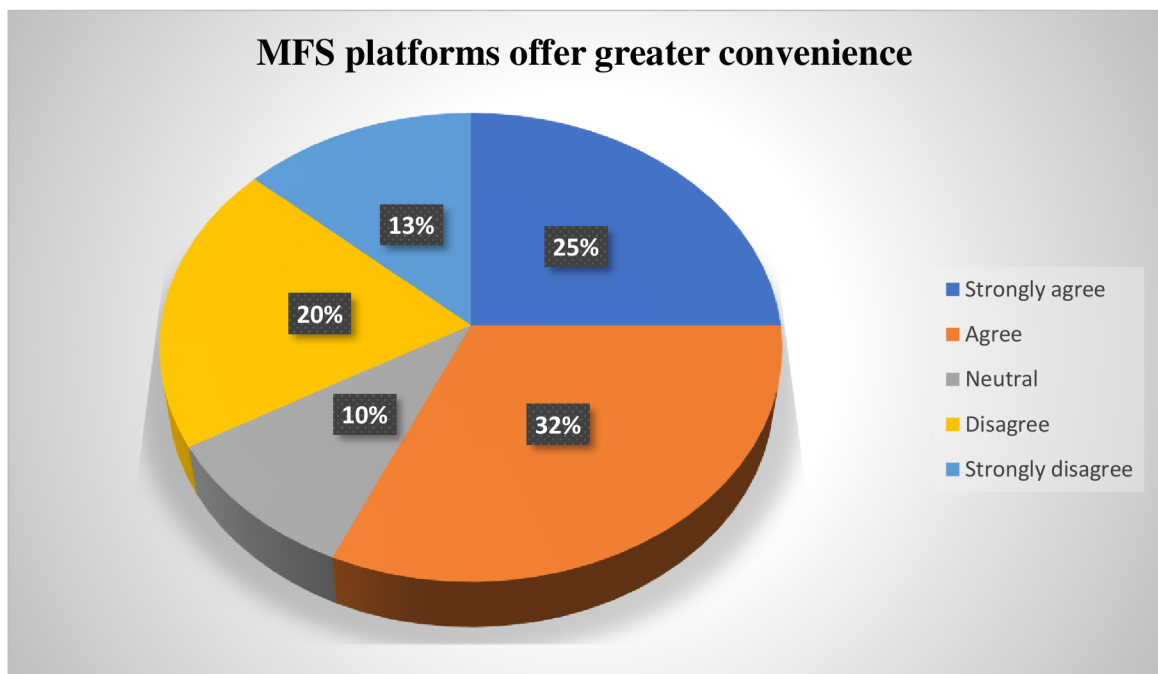


Figure 15 convenience MFS.

Source: Own elaboration based on data from questionnaire.

Another Likert scale question like this, 31.67% and 25% of respondents showed agree and strongly agree that the investor platforms of the MFS can offer greater convenience. On the opposite side of the spectrum, the remaining 10% responded neutrally as clearly as 20% and 13.33% did not agree and very strongly refused the given position. Hence, the conclusion derived from the result shows higher percentage among the respondents who strongly agree and agree as well.

Q9. An indication of fraud

MFS platforms have a lower rate of fraudulence.

	Frequency	Percent	Valid Percent	Cumulative %
Strongly agree	40	13.33	13.33	13.33
Agree	85	28.33	28.33	41.66
Neutral	65	21.67	21.67	63.33
Disagree	75	25	25	88.33
Strongly disagree	35	11.67	11.67	100.0
Total	300	100.0	100.0	

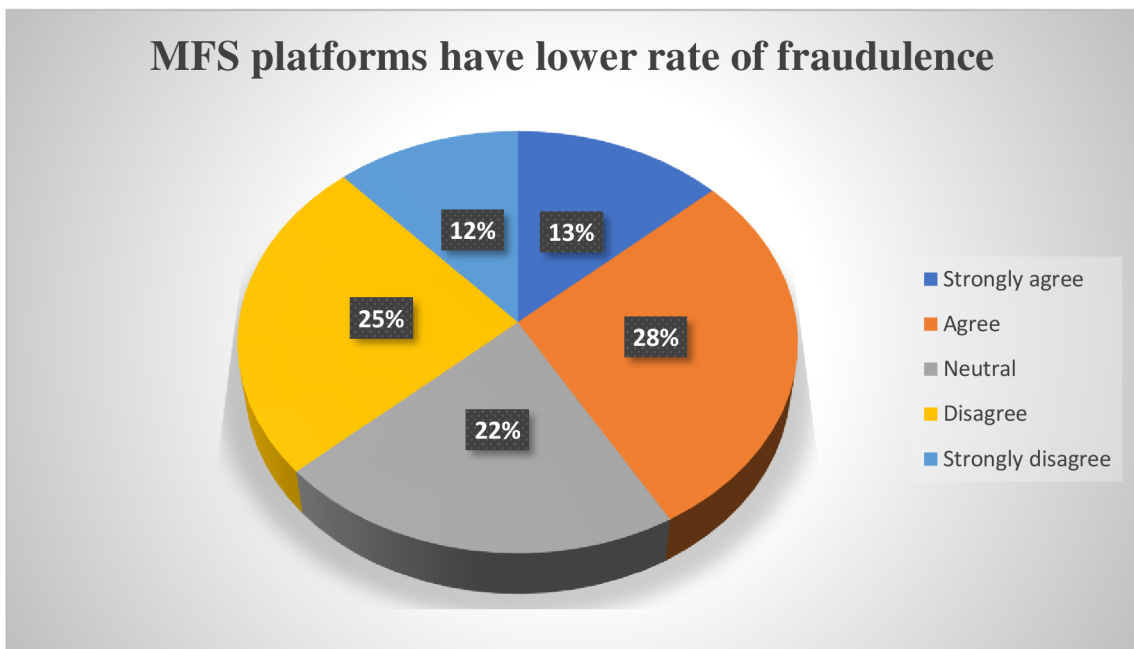


Figure 16 MFS platforms have lower rate of fraudulence.

Source: Own elaboration based on data from questionnaire.

While 25% disagreed with the assertion, 28.33% agreed that fraud is less common on DFS platforms. 11.67% strongly disagreed with the assertion, whereas 13.33% strongly agreed that fraudulence is less common on DFS platforms. The outcome is therefore favourable.

Q10. Level of satisfaction on MFS feature

Satisfied with on MFS wallet or apps that you are using.

	Frequency	Percent	Valid Percent	Cumulative %
Strongly agree	70	23.33	23.33	23.33
Agree	110	36.67	36.67	60
Neutral	40	13.33	13.33	73.33
Disagree	35	11.67	11.67	85
Strongly disagree	45	15	15	100.0
Total	300	100.0	100.0	

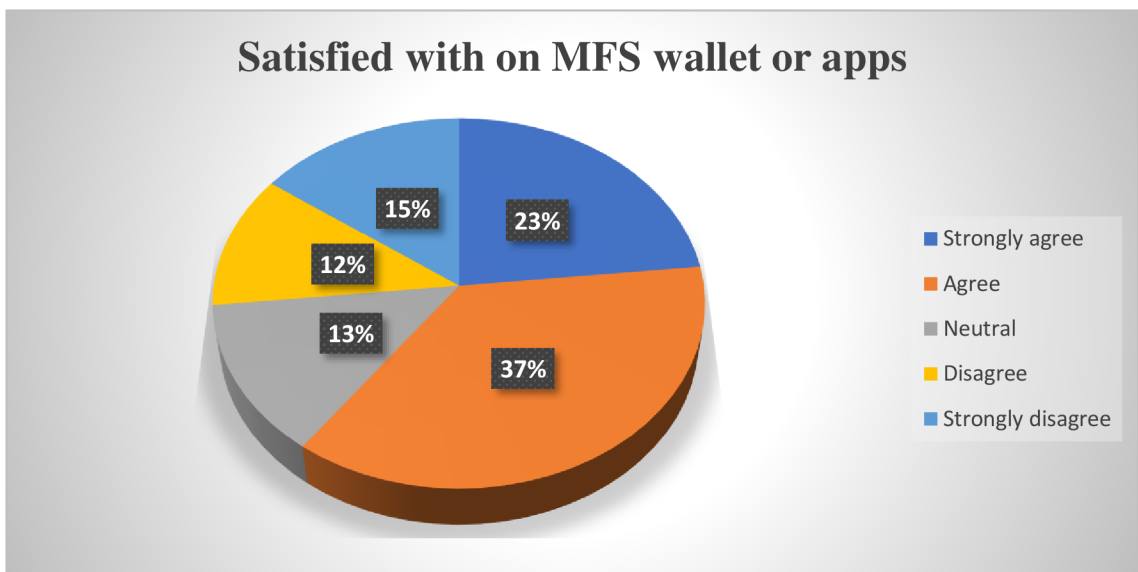


Figure 17 Satisfaction level on MFS wallet.

Source: Own elaboration based on data from questionnaire.

The majority of users here concur, and they agree and strongly agree, that they are happy with every function or choice in their MFS app, therefore the outcome is favourable.

Q11. Payment Type Most Often Used

Which kind of payments do you make using the MFS app?

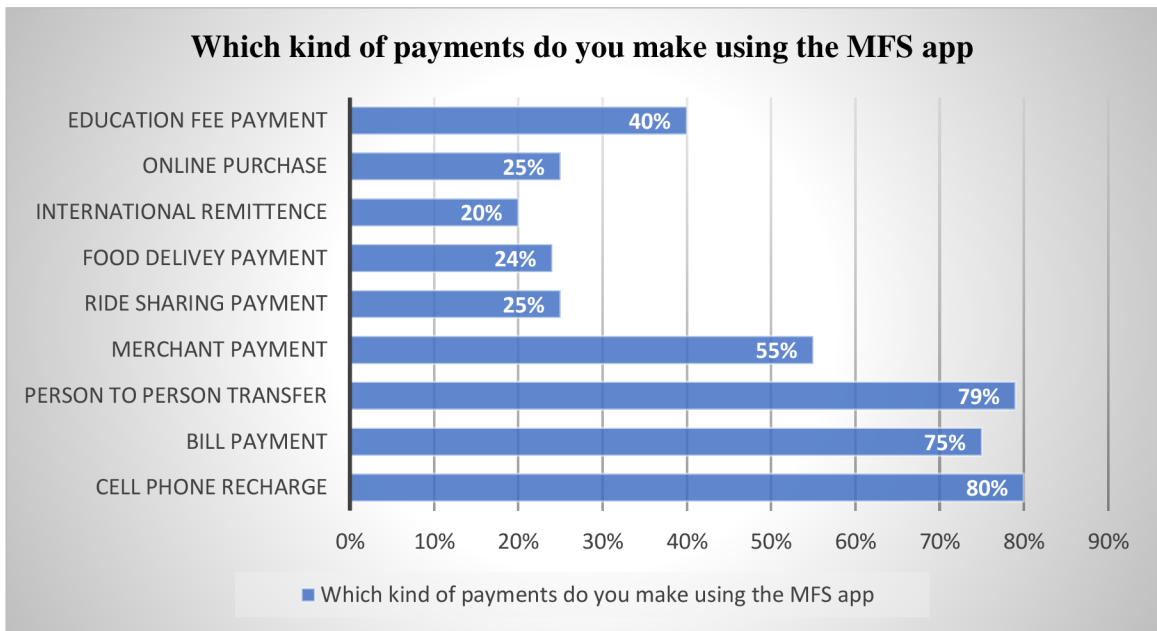


Figure 18 MFS mostly used for

Source: Own elaboration based on data from the questionnaire.

The graph demonstrates that, out of all the options available, 80% of consumers mostly utilize their MFS for cell phone recharge. Second, 79% of respondents said they use it to transmit money to one another. 25% of people use their MFS to pay for online purchases and ridesharing, 55% to pay merchants, 25% to pay bills, 20% to send money home from overseas, and 75% of people use their MFS to pay for bills.

Q12. Rating your personal MFS service out of 5

On a 5-point scale, how much would you like to give to your own MFS wallet?

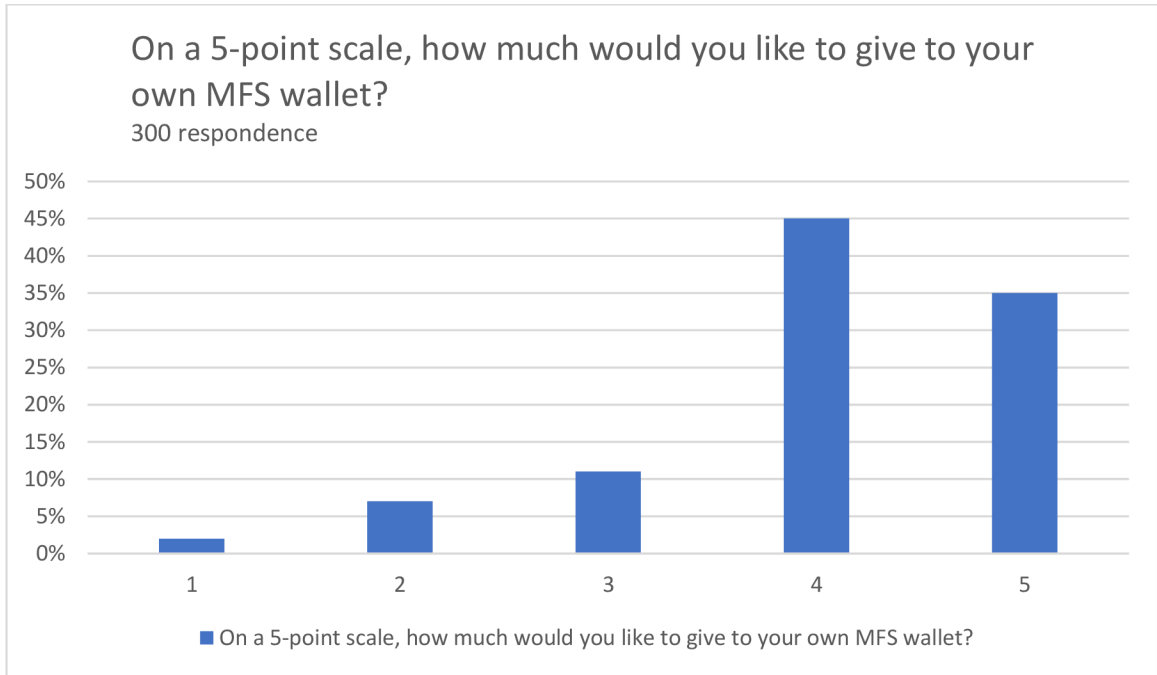


Figure 19 rating on personal wallet.

Source: Own elaboration based on data from questionnaire.

One in three respondents rated their wallet's performance as a 5 out of 5, with almost half of them rating performance at 4 out of 5. Nevertheless, while 11% gave the ratings of 3, 7% gave the rating of 2, the least rating was 1 which was given by only 2% of the participants. This issue, therefore, draws from the large satisfaction pockets for these individuals' MFS wallets.

Reliability analysis using SPSS:

SCALE: all variable

Case processing summary

	N	%
Cases	300	100
Excluded	0	.0
Total	300	100

Reliability test

Cronbach's Alpha	N of items
.725	4

The purpose of the reliability testing was to evaluate the survey questionnaire's or the research instrument's internal consistency or variability. The significance and Cronbach's Alpha scale are provided below to help you better comprehend the result:

- $\alpha \geq 1$ (Excellent)
- $\alpha \geq 0.9$ (Very Good)
- $\alpha \geq 0.8$ (Good)
- $\alpha \geq 0.7$ (Acceptable)

The Cronbach's Alpha for surveys Q7, Q8, Q9, and Q10 items is 0.725, which is Acceptable, based on the SPSS table.

5. Result and Discussion

Based on the findings of the investigation, it can be concluded that the existing MFS system is broadly accepted by individuals of all ranges. However, these shortcomings have been identified, and what remains to be addressed is carrying them out.

Industry Basis: We have identified several areas of concern, both optimistic and pessimistic, after examining several facets of the mobile financial services sector. The conclusions pertaining to the industry taken together are:

Optimistic perspective:

- In Bangladesh, the use of mobile financial services is already increasing quickly. The sector will achieve new heights if operators' interoperability and compliance are guaranteed, the cost of the service is reduced, and there is an even playing field. It's growing and gaining more and more traction with customers.
- The inward remittance consumer responded enormously. The number of remittances received through MFS has increased by 3,569% in the last four years. Bangladesh has just achieved the first instantaneous cross-border remittance service based on a blockchain.
- The number of salaries disbursed via MFS systems also rose. The MFS platform has gained the trust of an increasing number of enterprises as the finest option for salary disbursement.
- The e-commerce industry has expanded beyond all predictions, coinciding with the growth of digital payments. Because of the MFS platform's easy digital payment gateway and increased internet penetration, retail e-commerce has grown at an average rate of 72% per month since January 2020 and is expected to surpass Tk 25,500 crore by 2023.
- The implementation of MFS has helped Bangladesh become less reliant on cash, which has improved the country's financial system's efficiency and transparency. Cash-related crimes and money laundering can be prevented by reducing the amount of actual cash in circulation as more transactions are done digitally.
- MFS has been a major factor in Bangladesh's digital economy's expansion. MFS platforms create an atmosphere that is favourable for the growth of the nation's digital ecosystem by supporting e-commerce, digital entrepreneurship, and innovation through the facilitation of digital payments.

- Significant funding and support are being provided for technical advancement and digitization by both the government and Bangladesh Bank. As a result, MFS companies based on financial technology are experiencing tremendous growth.

Pessimistic perspective:

- The darkest aspect of MFS is its high bargaining power with suppliers, such as (Mobile network operator) MNOs and IT vendors. For MFS platforms, MNOs frequently supply the infrastructure. Few leading MNOs have the power to set terms, which might impact the prices and offerings of MFS providers. Critical software, hardware, and technical support are provided by IT vendors. IT providers have the power to affect availability, quality, and cost if MFS enterprises depend significantly on them.

- Companies often resort to pricing wars and aggressive marketing strategies in order to acquire market share in highly competitive industries. MFS suppliers face significant challenges since, to thrive in the ever-changing market context, they must constantly adapt and set themselves apart.

- Insufficient technological understanding and a lack of awareness among users are creating a fraudulent and privacy crisis in this sector.

- The generation gap is a difficulty or challenge for MFS companies because many of its members lack technical sophistication and awareness of contemporary technological applications. Despite this, businesses are working to find different solutions to this issue so that everyone can utilize it without difficulty.

- Scams and other fraudulent operations that prey on gullible consumers have increased as a result of MFS's widespread adoption. The use of social engineering techniques or system vulnerabilities by fraudsters can cause financial losses and harm to the reputations of MFS providers as well as users.

Company basis:

bKash:

- bKash is a subsidiary whose sole line of business is the production of electronic money. As a joint venture between BRAC Bank and Money in Motion LLC, USA, it was incorporated in 2010.

- bKash has a superior department head and organizational structure. Employees at bKash are given almost daily opportunities to innovate and contribute to the satisfaction of a sizable consumer base.
- bKash has made large investments to establish a wide network of agents throughout Bangladesh. These representatives serve as clients' main points of contact for transactions, cash deposits and withdrawals, and other bKash services.
- Among Bangladeshi customers, bKash has a high level of brand recognition and trust.
- bKash has millions of registered users nationwide, and its membership base is both vast and expanding quickly.
- Due to the inadequate ATM network of BRAC Bank Limited, bKash is not using this option.

Nagad:

- Since Nagad is supported by the government and the Bangladesh Post Office, users are more likely to trust and believe in it. A greater uptake and utilization of Nagad services may result from this government funding.
- Using the vast network of the Bangladesh Post Office, Nagad can potentially reach outlying and rural areas where there are limited options for traditional financial services.
- Nagad provides reasonable prices for its services, together with user-friendly incentives and minimal transaction costs.
- The world's fastest-growing mobile financial services (MFS) company, Nagad, has revolutionized Bangladesh's financial sector. It is impossible to dispute Nagad's influence since the company has amassed 80 million registered users and averages daily transactions of over \$112 million.
- Bangladesh has issues with its infrastructure, such as erratic electricity supplies and inadequate internet access in rural regions. The adoption and use of Nagad services may be hampered by these infrastructure constraints, especially in underserved areas.
- Similar to other digital financial service providers, Nagad is vulnerable to fraud, data breaches, and cyber-attacks.

Rocket:

- Dutch Bangla Bank Limited's Strategic Business Unit is called Rocket. Although it has a new name and is now known as a single-focused E-money developer, its primary goal is to provide regular clients and potential consumers from remote areas with the standard banking services offered by DBBL.
- As one of the biggest private commercial banks in Bangladesh, Dutch-Bangla Bank Limited, has a solid reputation and credibility, which helps Rocket achieve high brand awareness in the market.
- Customers of Rocket can utilize the nation's largest network of ATMs, owned by DBBL, to cash out their money.
- In the nation, Rocket was the first to use technology for banking. Rocket has more technological experience as a result. Rocket has had relatively few complaints regarding fraud.

6. Recommendation

The mobile financial services platform has seen tremendous success in a short amount of time thanks to user feedback. But there are still a lot of things in this alluring and expanding sector that may use improvement.

For the MFS sector:

- In order to maintain fair and competitive pricing, the sector need an increasing number of competitors. and each service provider ought to be given an equal chance to compete with one another.
- The majority of MFS suppliers offer the same services. To attract customers, they can devise distinct services. To better meet the demands of various clientele, differentiation should be prioritized.
- One of the main drivers of the nation's economy is remittances, and during the past five years, MFS has already seen a considerable amount of involvement with inward remittances. Therefore, a specific emphasis on inward remittance, regular discounts for remittance senders, and distinct fees for inward remittance service users could be a winning combination.
- Expand agent networks further to increase user accessibility and convenience, especially in rural and isolated locations. It is possible to guarantee that agents offer top-notch services and successfully advertise MFS platforms in local communities by funding agent training and support initiatives.
- Make cybersecurity a top priority and put strong security measures in place to safeguard users' money and personal data. This includes multi-factor authentication, encryption technology, and routine security audits to find and fix any weaknesses.
- A responsible body should regulate and oversee supplier bargaining power to enable industry participants to provide services at reduced costs.

For bKash:

- Since bKash has a small ATM network across the nation, they ought to focus more on ATM-based operations.
- Strategic alliance with micro finance, google, Microsoft and others will open more opportunity for bKash.

- bKash should focus more on its charging strategy. Their service charge is little bit higher than the other competitors. To be a market leader they should focus on cost leadership as well.
- bKash has a monthly transaction limit. Therefore, SME business holders are not happy to use bKash service. So, they should come out with special services for them.
- There was an utmost need for bKash to continue to spend in marketing and brand campaigns to maintain its good image among Bangladeshis and continue to be a reliable financial provider.

For Nagad:

- Nagad should focus on the development of the agent network, which will make accessibility and reachable to those who are not served and who live in rural places. They can also skill their agent counts to ensure that they cater to more customers as they are the fastest growing MFS company.
- Nagad needs to keep its focus on building a better technology infrastructure so that the online platforms will be not only reliable but are also secure and do the work right.
- Increase the variety of financial services and products that Nagad offers to better serve users' changing needs.
- In order to promote seamless movement between different platforms take efforts in creating similarity to other MFS providers thus can easily transition from one provider to another. As a single network of networks, interoperability leads to more diverse financial ecosystem, fosters competition, innovation, and in the end, consumers get to make the choice.

For Rocket:

- They should work on to create their own brand value. Everyone known Rocket for their parent company DBBL. So, they have to create their own image in the market to create loyal brand value.
- Rocket could start distinguishing its services and offering unique offers with an eye toward ATM usage, as it has a significant number of regular ATM customers and a competitive edge in the ATM network.
- Providing interest on savings of a significant amount might significantly increase the number of Rocket transactions.

- Rocket goes above and beyond bKash in terms of subscribers; by reaching out to the unreached population and bKash customers, it should swiftly grow the number by providing superior service and lower costs.

7. Conclusion

Mobile financial services (MFS) have become a life-changing fuel in the Bangladesh economy, and disruptions in the financial world are the decisive factor that is boosting financial inclusion, digital transformation, and economic empowerment. MFS players, such as bKash, Rocket and Nagad, cannot be doubted having created expanded opportunities in accessing formal financial services particularly for poor and disadvantaged people who inhabit in the remote districts of the country.

It is the existence of the government that has the power to push the digital payments market forward, the people's increasing desire to use digital payments and our country's high mobile telephone proportion has made the MFS industry boom in Bangladesh. Causes MFS platforms to respond to a variety of consumer demands and tastes by giving services that address multiple areas of life, such as savings accounts, paying utility bills, and merchant payments.

One of the MFS's main drawbacks is that the service fees are high. However, the security of the transactions is a concern. Also, the services have fewer features, and a large number of hacking incidents are reported. Despite this, the brands or companies determine the limitations. bkash is in the lead since it is the oldest operator compared to its competitors and has the highest level of satisfactory service. However, Nagad has accomplished a lot in a comparatively short amount of time. In only around four years, Nagad has become the MFS with the highest rate of growth worldwide. On the other hand, Rocket is also a strong competitor in the market. They have a strong ATM network and technological support.

bkash, Nagad and Rocket, are the three major MFS providers, they are all different and have unique strengths and weaknesses, but they work very hard to fulfil their specific goals and then the industry will be lifted to a new level. Of all the sectors, the mobile financial services industry may come out as the main dimension of the national economy.

Further study:

Thus, the investigation is based on the 300 persons for whom a very small number of samples constitute the analysis. On the other hand, MFS is a large enough issue to examine its entire business. The majority of responders lived in Dhaka and Comilla and were internet users. As a result, in this instance, the correct response might not be found.

Furthermore, many significant facts have not been provided by the listed companies because of secrecy. Therefore, additional in-depth research is needed on this topic to understand the true state of the MFS sector.

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9. Appendix

Questions used for analysis of thesis.

- 1) What is your Gender?
(Male/Female)
- 2) What is your Age range?
18 to 25/ 26 to 32/ 33 to 41/ 42 above
- 3) What is your Occupation?
(Student/Service holder/Businessman/Farmer/ Housewife/ Other)
- 4) What is your monthly Income range?
(In BDT) (5000 to 8000/ 9000 to 15000/ 16000 to 24000/ 25000 to 35000/
36000 to 45000/ 46000 to 59000/ 60000+)
- 5) Do you use Mobile Financial Services (MFS)?
(Yes/ No)
- 6) Which MFS service do you use?
(bKash/ Nagad/Rocket/other)
- 7) Mobile financial service is safer than other financial banking system?
(Strongly agree/ Agree/ Neutral/ Disagree/ Strongly disagree)
- 8) Mobile financial service offers greater convenient.
(Strongly agree/ Agree/ Neutral/ Disagree/ Strongly disagree)
- 9) Mobile financial service has lower rate of fraudulence.
(Strongly agree/ Agree/ Neutral/ Disagree/ Strongly disagree)
- 10) Satisfied with on MFS wallet or apps that you are using.
(Strongly agree/ Agree/ Neutral/ Disagree/ Strongly disagree)

- 11) Which kind of payment do you make using the MFS apps?
(Cell phone recharge/ Bill payment/ Person to person transfer/ Merchant payment/ Education fee payment/ Ride share payment/ Food delivery payment/ Online purchase/ International remittance)
- 12) On a 5-point scale, how much would you like to give to your own MFS wallet?
(Like/Dislike) (1/2/3/4/5)

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4.4.5 List of abbreviations

MFS-Mobile financial service

SWOT-Strength, Weakness, Opportunity, Threat

P2P-Person to Person

EMTS-Electronic Money Transfer System

MNOs - Mobile network operators

BTRC-Bangladesh Telecommunication Regulatory Commission

DBBL-Dutch Bangla Bank Limited

ATM-Any time money

SAP- Strategic alliance for technology

BPO-Bangladesh Post Office

SME- Small and medium enterprises