“FACTORS INFLUECING THAT LEAD TO CUSTOMER’S SATISFACTION ON USING FINANCIAL TECHNOLOGY, A BANGLADESH CASE STUDY”

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This Thesis report has been submitted in fulfillment of the requirements for the

Degree of Bachelor of Science in Software Engineering.

APPROVAL

APPROVAL

This thesis titled on"**Factors Influencing That Lead To Customer's Satisfaction On using Financial Technology, A Bangladesh Case Study",** submitted by **Khadija Akter Nowrin (ID: 191-35-2636)** to the Department of Software Engineering, Daffodil International University has beenaccepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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It hereby declares that this thesis has been completed by me under the supervision of Tapushe Rabaya Toma, Assistant Professor, Department of Software Engineering (SWE), Daffodil International University. It is also declared that neither this work nor any part of this has been submitted elsewhere for award of any degree by me.

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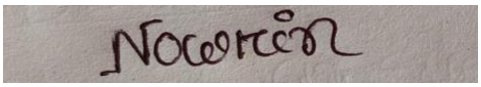

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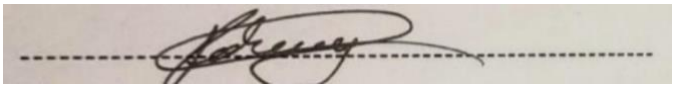

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First and foremost, I would like to give thanks to my Almighty Allah and say Alhamdulillah because I am extremely blessed to have reached it to the final semester. My teachers have taught me a lot about software engineering since I first started at the institution. They also instruct us in morality, ethics, and manners.

In addition, I am incredibly grateful to my parents for always being there for me. My perspective was always valued by them, and they motivated me.

Additionally, I appreciate my supervisor, Tapushe Rabaya Toma mam. Thank you, Toma Ma'am, for letting me collaborate with the topic I selected from the Management Information System area of interest. I regarded the documentation for my thesis as one of the exceptional works of art that I have always aimed to create. My thesis is a review-based thesis documentation that is actually based on the Management Information System. I really hope for the best for my lengthy, labor-intensive thesis documentation because I really want to pursue my higher education from abroad. I also have plans to improve it and publish my paperwork as my research paper on it in a broad area of including and elaborating it later on with many more highly creative approaches for my upcoming degree of master's.

ABSTRACT

This study aims to identify the elements that are most important to consumer satisfaction when utilizing financial technology (Fintech) in Bangladesh. Fintech refers to the e-commerce area in Bangladesh. Perceived usefulness, confirmation, satisfaction, continuance intention, and perceived risk are the five elements taken into consideration in this research.

The society will be impacted by this research work. Bkash, Rocket, Nagad and Upay are the top-used financial services in Bangladesh. There is no previous research on these in Bangladesh. So, I have researched these services to find out about customer satisfaction. 320 Bangladeshis completed online and paper questionnaires and there was a 100% response rate. The ratio between males and females were 211: 109. After completing this research study, We can identify customer satisfaction by using those services.

If anyone want to do work with Fintech, then they will get the idea about it. And also If anyone want to research on users satisfaction, then this research paper will give them a knowledge of the most significant influence factors. This study achieved it's goal and limitations will help in future.

Keywords- Perceived usefulness, confirmation, satisfaction, continuance intention, perceived risk, Fintech.

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Chapter 01
Introduction

1.1 Background

Financial technology (FinTech) is a special fusion of finance and technology that draws on cutting-edge tactics and offers solutions to every day financial issues as they arise (Berg et al., 2020). Financial technology is important in our daily lives and is supported by the development of the Internet, which individuals may access at any time from anywhere. Financial technology's benefits, such as perceived usefulness, confirmation, and continuation intention have been found to boost user satisfaction with using fintech technology (bkash, rocket, nagad and upay) in Bangladesh. Perceived risk, on the other hand, has a negative impact on user satisfaction. People anticipate that using financial technology will boost their connections and productivity in terms of communication and technology.

Fintech technology quickly and securely supplies financial solutions. Every day, financial technology advances, and we are all now accustomed to it. Mobile payments can also be made with smartphones, and using them is relatively simple. A successful financial transaction is ensured through the usage of mobile phones as part of the mobile payment technique. Bangladeshi mobile banking services can make people's lives and banks more efficient. In present, major FinTech service and product providers that deliver well-liked goods to people and corporate businesses are mobile operators and the banking sector (Bömer & Maxin, 2018). [International Journal of Asian Business and Information Management (IJABIM), Copyright: © 2021] FinTech is still extremely young in the Asian market (Eickhoff et al., 2017), but several studies have been conducted that not only look at the advantages and disadvantages

of FinTech but also offer the most recent solutions for the private and public sectors (Juengerkes, 2016).

Investor interest in FinTech has increased in recent years. Big data, cryptocurrencies (Jonker, 2019), mobile networks (Wu & Wang, 2005), cloud computing (sH. Amin, 2009), and banking (Manrai & Manrai, 2007) were all very popular trends that contributed to the market's advancement in financial innovation. Investment in information and communication technology is somehow necessary for the digital revolution of mobile banking.

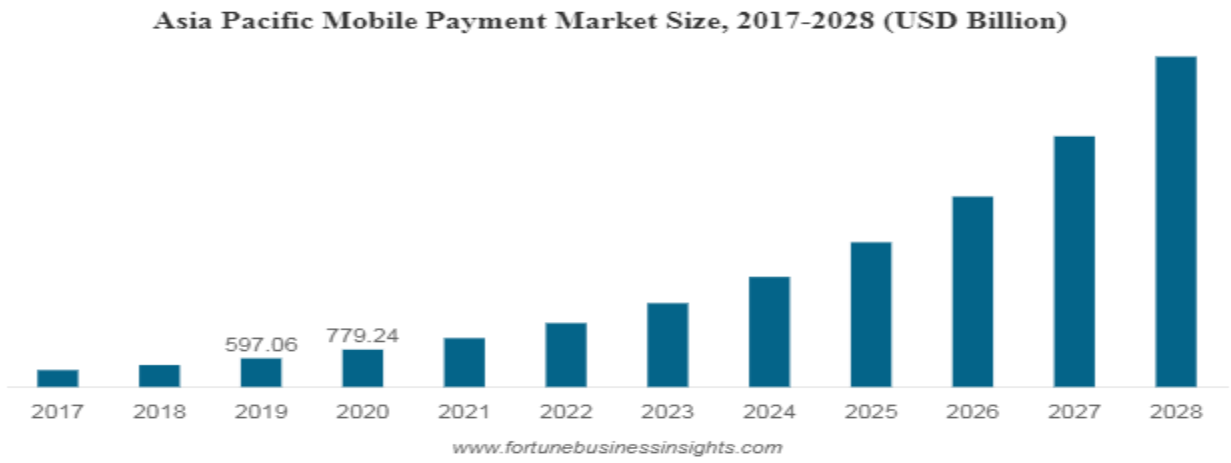


Figure 1.1: Asia Pacific Mobile Payment Market Size,2017-2028 (USD Billion) (Fortune Businessman Insights)

The market for mobile payments was worth USD 1.54 trillion in 2020. The market is anticipated to expand between 2021 and 2028. Those are USD 1.97 trillion in 2021 to USD 11.83 trillion in 2028 between the years 2021 and 2028, at a CAGR of 29.1%. Ten years ago, the idea of financial services being accessible without visiting a bank was not even mentioned. Nobody could have predicted that mobile phones would one day become a major tool for conducting financial transactions when they first gained popularity in the country in the 1990s. Customers

may conduct quick and secure transactions thanks to mobile payments. Mobile payment companies can improve their offerings to keep their standards high and draw in new clients (Fortune Businessman Insights).

1.1.1 Popular Fintech Service:

Banking and payment services continue to be the most popular fintech services worldwide. Over the past ten years or so, Bangladesh has made tremendous strides in the field of digital payments. Around 7.7% of people use mobile wallets to make purchases on the demand side. However, there is still potential for improvement. Numerous fresh chances are on the horizon.

1.1.2 Age Range and growth of Fintech users in Bangladesh:

This research survey has been done with young people and also adult people and the range of ages are less than 20 to more than 40. This research finds out that the age range between 20-30 which are young people uses the fintech services most. There are a lot of Fintech users in Bangladesh and this is growing up day by day.

The internet is a key component of the physical framework of the financial system. Internet usage has climbed by about 40% during this pandemic, while phone calls have decreased by about 20%. Our bandwidth utilization in January was roughly 1,000 Gbps. Currently, Bangladesh has access to 2,100 Gbps of bandwidth. This is a significant advance. In 2014, agent banking first began. Millions of people currently deposit billions of taka into agency banking. Around the nation, there are around 12,000 agent booths. Financial literacy is a field that needs improvement. More education about the functioning of the financial system is required. The trust element, retail and business acceptance methods, and payment methods from the end user's perspective must all function together cohesively. The creation of an enabling environment heavily relies on the government. (The Daily Star, 23 November 2022)

Figure 1.2- Fintech Service Users (LinkedIn: August 26, 2022)

In terms of mobile payments, China is in the lead. Users of mobile payments are growing daily. China is regarded as a global leader when it comes to the varied transaction volume in the user base of mobile payments. Without any doubt, China leads the rest of the world in terms of mobile payments.

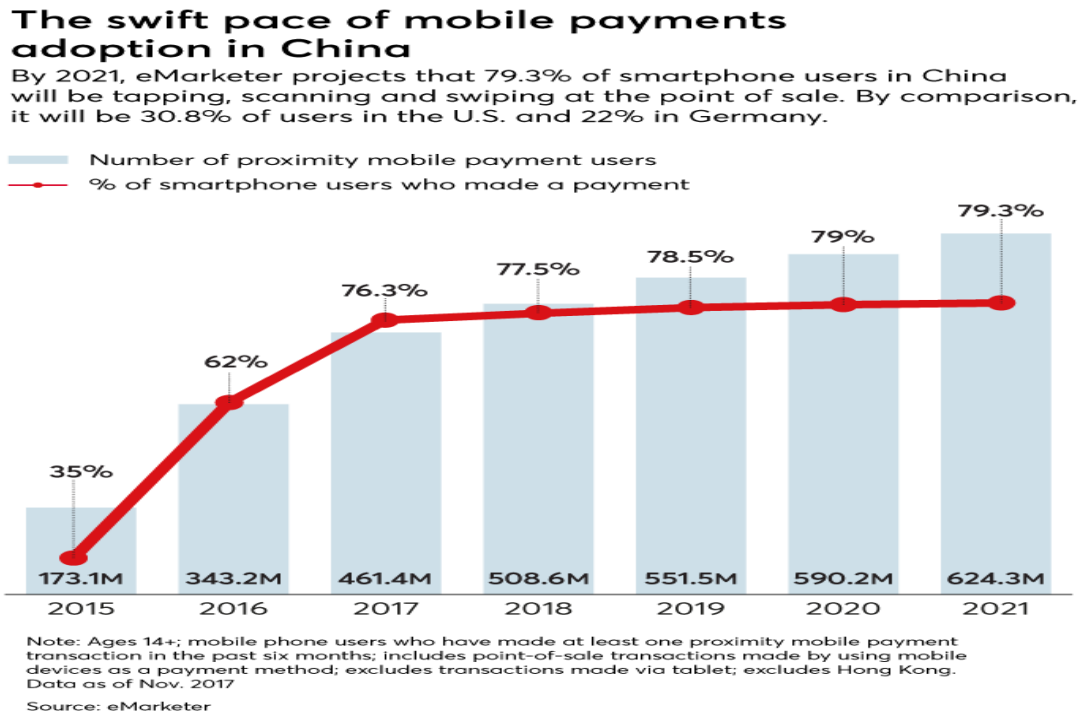


Figure 1.3:China's Mobile Payments adoption (americanbanker.com)

We can see a significant shift in the percentage of mobile payments in China in the graph above. Between 2015 and 2021, the percentage of mobile payments increased. How the second-largest economy in the world moves its money! The red line represents the percentage of smartphone users who made a payment, while the blue color represents the number of proximity mobile payment users. Therefore, it is evident that financial technology is developing daily. This expansion has been enormous and very rapid. The number of people using mobile payments is rising significantly. All of the people have now become accustomed to it. Additionally, this graph includes information from Hong Kong as of November 2017 for mobile phone users aged 14 or older who conducted at least one proximity mobile payment transaction in the previous six months. China has bypassed cards and checks in favor of mobile payments, according to Neil Shah, research director at Counterpoint Research in Mumbai. (americanbanker.com)

Similar to China, Bangladeshis are advancing in their use of financial technology. Now, Bkash, Rocket, Nagad, and Upay are all well-known financial services among Bangladeshis. People are at random scanning QR codes to make payments because it is the simplest method of doing so.

1.1.3 Theoretical foundation

This study's objective is to do a theoretical examination. From a theoretical viewpoint, the results of earlier research show that businesses that offer services or products for digital mobile payments can increase trust in order to increase users' continued intention to adopt and use financial technology for online mobile payments, which is supposed to be positive but could also be unfavorable.

This study's results and findings are similar to the previous study. This research shows the factors which are influencing in order to find out customer satisfaction with using Financial Technology in Bangladesh. This research also shows the negativity such as perceived risk on customers' thoughts about the uncertain result of a transaction. In Bangladesh, there are a lot of people who are using mobile banking randomly and our young generations are using the services more. Financial Technologies were also used more in the Covid-19 situation in Bangladesh. Bangladesh had a long lockdown during the Covid-19 pandemic situation. At that time, everybody used online mobile banking a lot. It saves us time and relieves us from the hassle of standing in long queues.

The goal of this study is to identify the factors that affect consumers' intentions to continue using Financial Technology (Fintech) for mobile payments. The users of the following study are local customers or users, students at schools, colleges, universities, and university teachers, and it focuses on the general knowledge and adoption of fintech services in the Bangladeshi setting. A conceptual model has therefore been suggested to assess how Bangladeshi clients are interacting with and comprehending fintech.

An essential concept in marketing literature and consumer behavior, the expectation confirmation model (ECM), or expectation disconfirmation theory (EDT), explains consumers' satisfaction and post-consumption behavior; (Oliver, 1980). The amount of payment disconfirmation has a significant impact on users' satisfaction (Oliver, 1980). The likelihood that a user will keep using a service increases as more people are happy. However, the likelihood that customers may stop reusing the same goods or services in the future increases as their level of perceived unhappiness increases (Susanto, Chang, & Ha, 2015).

The main goal of this theory is to find out the leading factors for user satisfaction focusing on their expectations and trust in using Financial Services.

In this study, an empirical analysis involving Bangladeshi young people as well as adults the aged less than 20 to more than 40 was performed to achieve this research goal.:

In Bangladesh, this research is a unique contribution. To the best authors’ knowledge, there are no previous mobile financial service studies in Bangladesh that explored continuance users' satisfaction during COVID-19 and beyond. There needs to be more research like this in Bangladesh.

1.1.4 Top 5 Most Popular Mobile Banking Services in Bangladesh:

Figure 1.4: Popular Mobile Banking Services in Bangladesh (MyBangla24.com)

We can now use financial services and conduct any transactions while staying at home without going to the bank. Our financial transactions in the modern day already include services like bKash, Rocket, Nagad, and Upay. Account holders of mobile banking services can simply access their accounts with a mobile phone, whether they have internet access or not, and do not need to wait in a long line in front of a bank.

Popular mobile banking services in Bangladesh are listed below:

01. bKash

BRAC Bank, a reputable bank in Bangladesh, offers the bKash mobile banking system. It debuted in July of that year. Despite the fact that Rocket, another well-known mobile banking system, launched before this service, bKash has attained the highest level of acceptance in Bangladesh. The bKash USSD dialing code is *247#.

02. Rocket

Dutch Bangla Bank's mobile banking platform is called Rocket. Two months before bKash's emergence, in May 2011, this service was introduced. The name was never going to be Rocket from the start. It was once known as Dutch Bangla Bank Mobile Banking. Later, Rocket was added to the name. This mobile banking service's dialing code is *322#.

03. Nagad

A cutting-edge and trustworthy mobile banking solution is Nagad. The Bangladesh Post Office launched this service on November 11th, 2018. Nagad started out by offering in-demand services like online mobile recharge and Cash-In, Cash-Out, and Send Money. Customers and partners of Nagad have access to a mobile app from the company's inception. This mobile banking service's dialing code is *167#.

04. Upay

The UCBL offers Upay, a fully functional mobile banking app. UCB was given permission by the Bangladesh Bank to run and offer mobile financial services (MFS). Financial inclusion, or the notion that banking services ought to be accessible to everyone, is something UCB firmly believes in.

05. MCash

MCash is a way to conduct transactions by maintaining an Islami Bank Bangladesh Limited Mobile Bank Account, which you can use to transfer money, make online deposits and withdrawals, recharge or top-up your phone, buy goods and services, and more. In 2019, this service was introduced. This service's dialing code is *259#. (MyBangla24.com)

1.2 Research Problem and Research Questions

1.2.1 Problem Statement

Our youth are using financial technology to conduct transactions due to its rapid expansion and ease of use. The use of mobile banking services has increased in tandem with technology. Even if anyone can’t go outside, they can do transactions at home in a short time. Many people use their cell phones regularly. Utilizing any service on our mobile device is now simple, thanks to technology. Today, using mobile payment services has become increasingly common. Since customer satisfaction is linked to Service usage, there is also a trust issue. Focusing on this issue,

I have taken it my challenge to discover the beneficial elements that contribute to Bangladeshi customers' satisfaction with the usage of financial technology for digital mobile payments. The perceived risk associated with using mobile banking services is also discovered by this study.

1.2.2 Research Questions

1. Does perceived usefulness and confirmation have an impact on user's satisfaction?
2. Does satisfaction and perceived risk have an impact on continuance intention?

1.2.3 Research Objectives

1. To identify the impact of perceived usefulness and confirmation to customer satisfaction.
2. To identify the impact of satisfaction on continuance intention.
3. To identify the impact of perceived risk in customers' continuance intention.

1.3 Significant of the study

This research contributes to finding out customer satisfaction with using Financial Technology (FinTech) of renowned mobile banking services of Bangladesh such as bkash, Rocket, Nagad, and Upay. This research will help to develop customer satisfaction about the most important factors Influencing Users' Continuance Intention to Use Financial Technology (FinTech) for digital mobile payment. Our young generation as well as people of all ages are getting engaged with mobile banking services day by day. So the service providers can improve their service in order to customer satisfaction which improves users' continuance intention to increase the usage of mobile payment. This study finds out customer satisfaction based on service performance, and expectations and then figure out the intention of usage. After that finds out the negative effects

during transactions which are- afraid of an incomplete transaction, uncertain transaction, and feeling unsafe about the service. I have also created a proposed model to clarify our theory.

Firstly, We will concentrate on user satisfaction and those variables which will help to satisfy customers. We will demonstrate users' pre-use beliefs (about the service's perceived usefulness) and expectations (confirmation) about it, which will improve usage performance more rapidly and accurately such as satisfaction. This research establishes a direct association between perceived usefulness and confirmation of user satisfaction. The ability to be satisfied is crucial for developing and maintaining loyalty (Chuah, Rauschnabel, Marimuthu, Thurasamy, & Nguyen, 2017).

Finally, Using the financial technologies bkash, rocket, nagad, and upay, we can determine whether there is any perceived risk. From the research findings, we will be able to know the negative effect of perceived risk on continuance intention.

Chapter 02

Literature Review

2.1 Expectation Disconfirmation Theory (EDT) or ECM abstract Framework

(perceived usefulness, confirmation, satisfaction, continuance intention, perceived risk)

In this study, the Expectancy Disconfirmation Theory (EDT), which is defined as a theory for evaluating consumer satisfaction from the perceived quality of goods or services, is examined. An essential concept in marketing literature and consumer behavior, the expectation confirmation model (ECM), explains consumers' satisfaction and post-consumption behavior; (Oliver, 1980). The amount of payment disconfirmation has a significant impact on users' satisfaction (Oliver, 1980). The chances that a user will keep using a service increase as more people are happy. However, the likelihood that customers may stop reusing the same goods or services in the future increases as their level of perceived unhappiness increases (Susanto, Chang, & Ha, 2015). The model specifically captures the variation between the two points both before and after the transaction. Pre-production (i.e., expectations in basic consumer products) and post-purchase (i.e., confirming, feeling, and intent to repurchase after purchase) are both analyzed in ECT.

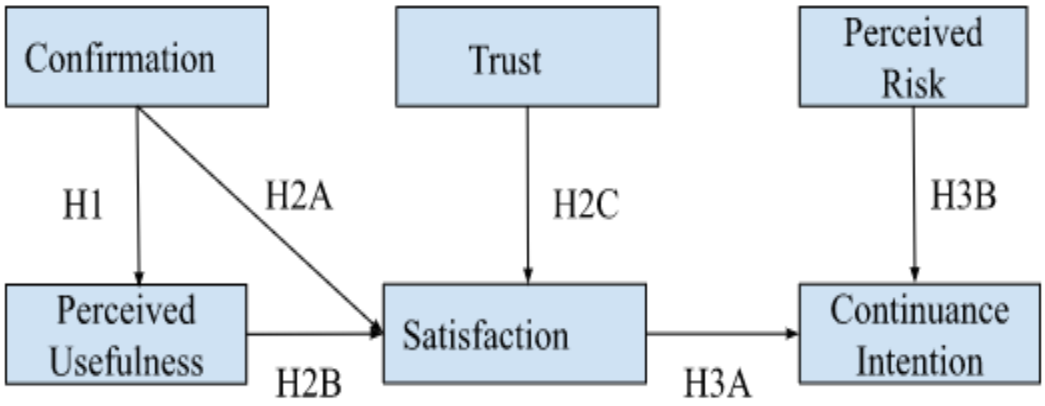


Figure 2.1: Conceptual framework (B Gilitwala, AK Nag - Journal of Content, Community and Communication, 2020)

The conceptual framework responds to shifting requirements and then provides for adjustment. The literature review analysis guideline is recommended to use this Expectation Confirmation Model (ECM) paradigm.

2.1.1 Perceived usefulness

According to the paper IMPACT ASSESSMENT OF FACTORS INFLUENCING USER'S CONTINUANCE INTENTION TO USE NEAR FIELD COMMUNICATION (NFC), [6 December 2020]-

"The extent to which a person believes that employing a given technology would boost his or her job performance" is defined as perceived usefulness (Davis, 1989). In studies on the adoption of mobile-based banking, perceived usefulness is a frequently utilized variable (Shaikh and Karjaluoto, 2014), and it has a significant role in the use of mobile-based payments (Dahlberg et al., 2015). Additionally, it has been suggested that users build opinions regarding a new IS's utility in the early stages following adoption (Guo et al., 2018). An efficient information system can guarantee advantages like increased accuracy, efficiency, and speed in work completion (Yang, Motohashi, & Chen, 2009). In their study, (Weng, Zailani, Iranmanesh, & Hyun, 2017) found a direct correlation between perceived usefulness and user happiness as well as between perceived usefulness and intention to continue using the service.

2.1.2 Confirmation

According to the paper IMPACT ASSESSMENT OF FACTORS INFLUENCING USER'S CONTINUANCE INTENTION TO USE NEAR FIELD COMMUNICATION (NFC)-

Confirmation refers to consumers' prior and subsequent expectations as well as performance outcomes with financial technology. According to Bhattacherjee (2001), cognitive dissonance and dissatisfaction arise when pre-expected perceptions and post-usage experiences don't match. Users subsequently adjust their acuities to reduce this dissonance. When the perceived performance is on par with or better than projected performance, there is a higher level of customer satisfaction and loyalty (Patterson,Johnson, & Spreng, 1997).

2.1.3 Satisfaction

According to this paper IMPACT ASSESSMENT OF FACTORS INFLUENCING USER'S

CONTINUANCE INTENTION TO USE NEAR FIELD COMMUNICATION (NFC)

The term "satisfaction" refers to the enjoyment or sentiments that customers feel after interacting with service providers or retailers (Oliver, 1980). Gaining more insight into the future of mobile-based payment solutions is facilitated by satisfaction. The ability to be satisfied is crucial for developing and maintaining loyalty (Chuah, Rauschnabel, Marimuthu,Thurasamy, & Nguyen, 2017). Satisfaction is a better predictor of future usage intention than perceived utility. In their Taiwanese research, Liao et al. (2009) found a substantial positive correlation between perceived usefulness and user satisfaction and between perceived usefulness and the intention to continue using the service.

2.1.4 Continuance intention

According to IMPACT ASSESSMENT OF FACTORS INFLUENCING USER'S

CONTINUANCE INTENTION TO USE NEAR FIELD COMMUNICATION (NFC) paper-

The repeated use of a good or service is referred to as continuation intention. A user's intention to continue using or reusing a system is referred to as a continuation intention. It reveals consumers' propensity to use or consume a specific product (Bhattacharjee, 2001). The idea of ongoing intention is supported by the crucial connection between confirmation and user delight (Veeramootoo, Nunkoo,& Dwivedi, 2018). Customer satisfaction has a good or negative impact on the intention to continue.

2.1.5 Perceived risk

According to the paper IMPACT ASSESSMENT OF FACTORS INFLUENCING USER'S CONTINUANCE INTENTION TO USE NEAR FIELD COMMUNICATION (NFC)-

The term "perceived risks" refers to the emotional cost entailed with customers' purchase decisions, which stands for a certain amount of future uncertainty. The consumers' intent to buy will be directly impacted by this uncertainty (Wei et al., 2018). According to Bauer (1960), perceived risk is the risk that consumers actively perceive as a result of their inability to comprehend product information. The idea of ongoing intention is supported by the crucial connection between confirmation and user delight (Veeramootoo, Nunkoo,& Dwivedi, 2018).

2.2 Hypothesis development and research model

2.2.1 Consequence of perceived usefulness to satisfaction

Perceived usefulness are one of the fundamental factors for user satisfaction by using Financial Technology (FinTech) services. Perceived usefulness directly affects mobile banking users' satisfaction. Satisfaction carries one's feelings and happiness about mobile banking

performance. This belief of users helps to establish a positive relationship between perceived usefulness and satisfaction. This positive relationship will maintain the Financial Technology service quality. Based on the discussion my first hypothesis is-

Hypothesis 1: Perceived usefulness has an influence on users' satisfaction on using Financial Technology for mobile payment.

2.2.2 Consequence of Confirmation to satisfaction

Confirmation is another important factor to satisfy customers. Confirmation directly impacts users' satisfaction with using Financial Technology. Confirmation indicates the pre-usage expectation of mobile banking technology, which confirms mobile banking performance. Since online mobile banking users are many, so there must be high expectations of customer's. This factor indicates the customer's before and after expectations of using the financial services. When a customer's expectations result in a positive, then it fulfills the satisfactory level. So it is clear that confirmation is related to satisfaction. Based on the discussion my second hypothesis is-

Hypothesis 2: Confirmation has an influence on user satisfaction on using Financial Technology for mobile payment.

2.2.3 Consequence of satisfaction to continuance intention.

We already know that-Satisfaction refers to one's feelings and happiness about mobile banking performance. Satisfaction is associated with the user's continuance intention. If customers are satisfied, then customers will intend to reuse the online mobile banking services in Bangladesh.

We might assume that more satisfaction is always better to catch the customers for a long time. Satisfaction and perceived usefulness are the fundamental factors that affect continuance intention and are agreed upon by the ECM (expectation confirmation model). Based on the discussion my third hypothesis is-

Hypothesis 3: User satisfaction has an influence on continuance intention on Financial Technology for mobile payment.

2.2.4 Consequence of perceived risk to continuance intention.

Perceived risk effects negatively on continuance usage intention. If customers find out any risk while using the online mobile banking service, then there is a chance to decrease the use of financial services. It is a threat to both users and the founder of the service. The customer becomes afraid of incomplete, uncertain transactions which are performed by the online service. Then customers will feel unsafe using the mobile banking service again. All these things will destroy users' continuance intention on using Financial Technology services. Based on the discussion my fourth hypothesis is-

Hypothesis 4: Perceived risk has an influence on the continuance intention of Financial Technology for mobile payment.

2.3 List of all Hypothesis

Table 2.1: List of Hypothesis Description

SL No.	Hypothesis Description
H1	Perceived usefulness has an influence on user satisfaction using Financial Technology for mobile payment.
H2	Confirmation has an influence on user's satisfaction on using Financial Technology for mobile payment
H3	User's satisfaction has an influence on continuance intention of Financial Technology for mobile payment
H4	Perceived risk has an influence on continuance intention of Financial Technology for mobile payment.

2.4 Proposed Model

Based on the above hypothesis my proposed model is-

Figure 2.2: Proposed Thesis Model

Chapter 03

Research Methodology

3.1 Quantitative research

There are many definitions of quantitative research and many researchers, and educators have given different definitions of “Quantitative Research.” Some of them are given below:

The numerical representation and manipulation of observations with the purpose of describing and analyzing the phenomena those observations reflect are known as quantitative research. This includes physics, biology, psychology, sociology, and geology, among many other scientific and social fields of study.

In addition, Cohen (1980) defined quantitative research as social research that makes use of empirical techniques and statements. According to him, an empirical statement is one that describes what "is" the situation in the "actual world," in contrast to what "ought" to be the situation. Empirical claims are frequently expressed in numerical terms, and applying empirical evaluations is another aspect of quantitative research. The phrase "empirical evaluation" refers to a process used to assess how well or badly a given program or policy actually complies with a given standard or norm.

Additionally, Creswell (1994) provided a precise description of quantitative research as a field of study that "explains events by gathering numerical data that are examined using mathematically based methodologies (in particular statistics)."

This method allows us to analyze nearly any behavior, which gives quantitative research a lot of flexibility. But not all events lend themselves well to quantitative analysis. Quantitative

approaches contain drawbacks in addition to some clear benefits. This implies that qualitative research techniques are suitable for studying particular phenomena.

In other words, the main goal of quantitative research is to measure social reality. In order to develop study quantitatively, quantitative research and/or questions look for values in things. Strong guidelines in the process of data gathering and analysis are essential because quantitative researchers perceive the world as an objective reality.

3.1.1 Different Types of Quantitative Research

It comes in a variety of forms, each of which has a set of defining qualities. These are-

- Descriptive research - This study mainly seeks to provide an overview of the investigated factors
- Correlational research - It looks for connections between the variables under examination.
- Survey research- Through the participants' responses to survey questions, a sample of each participant's information is gathered.
- Experimental research- It determines whether there is a cause-and-effect relationship between the variables.
- Causal-comparative research- It can be described as a group of research methodologies used to investigate potential reasons for observed variations.

3.2 Research Process

This research generally followed a research procedure, as do all studies with a scientific foundation. The problem, hypothesis, research design, measurement, data collecting, data analysis, and generalization are the seven main stages. Each level influences theory and is influenced by it (Frankfort-Nachmias and Nachmias 1992).

Finding gaps in the literature allowed for the development of the problem or research questions, which was the first step in the research process. The research objectives and findings were described in detail in the theoretical foundation in Chapter one. The study's significance is also outlined in Chapter One.

Following a review of the literature, it was possible to identify a suitable theory, which acted as a foundation for the creation of the research's theoretical framework and hypotheses. The theoretical foundation and theoretically supported hypotheses of this study are described in Chapter 2.

The best research design for this study needed to be determined in the following phase. As mentioned in the previous portion of this chapter, the researcher first needs to decide on the best study strategy. The proper study design was then used after selecting the research paradigm.

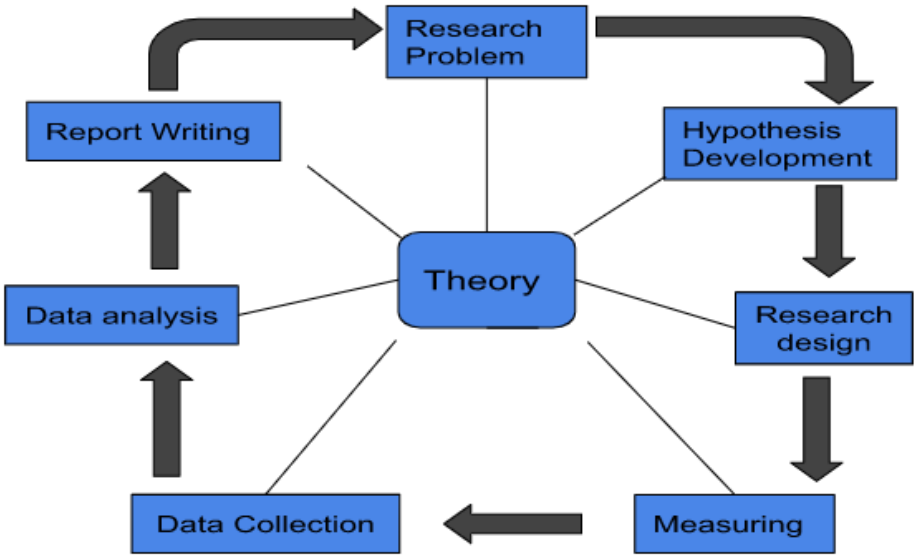


Figure 3.1: The Main Stages of the Research Process

In chapter 3, the development of the survey questionnaire was given the best consideration during the measuring phase. A pilot study was performed as the last step of this phase to determine the validity and reliability of the survey questionnaire. The abovementioned phase's findings were used to modify the survey questionnaires as needed. The survey questionnaire was reviewed and polished before being employed to gather information from the sample.

Two subsequent phases were followed by data analysis. To begin with, preliminary data analysis was used to purify the data and obtain a broad perspective of the respondents. Structural modeling was used in the second phase. In Chapter 4, the data analysis is explained.

The analysis of the results was the last step, and chapter 5 has a full discussion of their implications. The researcher should consult with more additional theories and literature in order to provide a detailed explanation and discussion of the findings.

3.3 The Survey Method

Inquiring about the respondents' use of fintech in Bangladesh and their involvement with the technology throughout time. And also ask some questions to find out the user's satisfaction with using financial technology in Bangladesh. Applying self-administered online and offline questionnaire survey methods were determined to be the most effective approach as a consequence. The questions were adapted for this research by taking inspiration from previous research.

A survey could be a reliable method for evaluating data about the sample and allow the researcher to make generalizations about implementing the results from a sample of responses to a population (Chisnall 1992; Creswell 1994).

Finally, a survey is appropriate for gathering information on respondents' beliefs, opinions, and intentions as well as their thoughts, judgments, and feelings (Shaughnessy and Zechmeister 1997), (Burns and Bush 2000).

3.4 Survey Questionnaire Development

The target people for this study were Bangladeshis who had engaged in fintech technology for mobile payments. The instrument for this study was created using a combination of already-validated parameters based on a thorough literature assessment. The chosen verified parameters were then slightly modified to fit the research sample. This approach is frequently used when creating survey instruments because it has two major benefits: first, the validity and reliability of the existing instruments have already been determined; second, by using the existing instruments, it allows comparison of the new results with the previous results from other studies

(Kitchenhamand Pfleeger 2002). The survey used measurements that had already been constructed and confirmed in the literature.

The phrasing and sequencing of the questions were carefully considered when constructing the instrument. Surveys should be brief, to the point, and straightforward to read (Frazer and Lawley 2000). Additionally, to reduce eye strain, the questions were logically spaced and neatly structured.

Two parts formed the questionnaire: the first portion concentrated on demographic inquiries like age, gender, education, profession, which financial technology they use, and how many times they use it. The second part focus on measurement items for dimensions of Satisfaction. Revisit intention and thought about perceived risk. Questionnaires for perceived usefulness, satisfaction, and continuance intention were adapted from the research of Talwar, S., Dhir, A., Khalil, A., Mohan, G., & Islam, A. N. (2020). Confirmation and perceived risk were adapted from the research of Dr. Bhumiphat Gilitwala and Dr. Amit Kumar Nag 2020.

Table 3.1: Questionnaires Adaption

Antecedents	Adapted from
Perceived Usefulness	IT Continuance Model
Continuance Intention	
Satisfaction	
Confirmation	Conceptual Framework
Perceived Risk	

3.5 Questionnaire

A questionnaire is "a reformulated written series of questions to which respondents record their responses typically, within very strictly specified options," according to one definition (Sekaran 2003 p,233). Questionnaires were used to collect the data for this study. This approach is the most often used for collecting data because it has been shown to be effective when using large samples (McCelland, 1994). (Clarke 1999).

There are two sections to the questionnaire. Questions on demographic information are asked in the first section, and customer satisfaction-related questions are asked in the last quarters.

Section A

This section includes the demographic information of every participant. They are- age range, gender, educational qualification, profession, which Fintech technology they use, and how many times they use it.

Section B

This section consists of 15 questions that ask responders to support our claim.

The participant was required to respond by marking on the following Likert scale:

Strongly Disagree	**Disagree**	**Moderately Disagree**	**Undecided**	**Moderately Agree**	**Agree**	**Strongly Agree**
1	**2**	**3**	**4**	**5**	**6**	**7**

3.6 Sample size

We created a survey to test our hypotheses and collect experimental data to support the study model. A sample of 320 people was used to test the model. A standardized set of questionnaires were used to conduct the survey of the Samples.

An effective way to manage statistical power before a study is done is through a priori analysis (Hager, 2006, Faul et al. 2007).

By using the software, G*Power 3, with input parameters: medium effect size, probability of Type I error $\alpha = 0.05$, probability of Type II error $\beta = 0.05$ which means $(1-\beta) = 0.95$ and number of predictors = 5, the estimated sample size was minimum 138 with the actual power of 95%. Still, we distributed 320 questionnaires and among that, we received 320 (100% response rate).

3.7 Data collection Procedure

The data for this study were collected using a self-administered questionnaire. "A data collection technique in which the respondents reads the survey questions and records his or her responses without the presence of a trained interviewer," is known as a self-administered questionnaire (Hair, Bush, and Ortinau 2003, p. 265). Significant evidence, according to Dillman (2007, p. 38), "suggests that people are more likely to offer honest responses to self-administered than to interview questions." Additionally, a self-administered survey reduces the likelihood that social desirability bias would arise whenever sensitive data are sought (Dillman 2007).

In this study, a drop-off and collect methodology was used. With this strategy, a researcher representative goes to the respondents' location and personally hands survey forms to each

individual. After the respondents had finished, the representative then gathered the completed surveys (Hair, Bush, and Ortinau 2003; Zikmund 2003).

With this method, respondents can answer the survey whenever it is suitable for them. Respondents also can take their time to examine their answers and look up additional information if needed (Aaker and Day 1990; Emory and Cooper 1991). As questionnaires were handed by hand by the representative who works for the same company as the respondents, this method ensures that a person is available to respond to queries. Through interaction between the representatives and respondents, this technique also helped in picking the respondents' interest in completing the questionnaire (Hair, Bush, and Ortinau 2003).

3.8 Demographic Information

We have done our research survey with different types of people. Among 320 individuals 282 (87.9%) were aged between 20-25; 17 (5.3%) were less than 20; aged between 30-40: 14 (4.4%) and the rest 7 (2.2%) were more than 40. In the case of gender, 211 (65.7%) were male and 109 (34.0%) were female. About 158 (49.2%) people were bkash users, 5 people (1.6%) used rocket, 10 (3.1%) people used nagad, no single people (0%) used upay and about 163 (45.8%) people were mixed users of those services. 52.3% of individuals had experienced 1 time of using FinTech in a day, 16.5% had 2 times a day, 17.8% used more than 4 times, 9.7% used 2-4 times a day, 0.3% used 3-4 times a month, 0.6% used 4 times a month, 1.9% people used 1 time+2 times a day, 0.3% used 1 time+more than 4 times, 0.6% used in few times in a month and finally, 0.3% people used not every day, only when needed. Additionally, we requested that our respondents write their professions, and we found teachers, students, engineers, entrepreneurs, job holders, police,

businessman, and many other professions. Since fintech users are high in Bangladesh, so the survey was conducted among various types of people.

The demographic breakdown of our respondents is provided in Table 3.

Table 3.2: Demographic Information

	Frequency	**Percentage**
Age		
Less than 20	17	5.3
20-30	282	87.9
30-40 &	14	4.4
More than 40	7	2.2
Gender		
Male	109	34.0
Female	211	65.7
Which Fintech technology do you use?		
Bkash	158	49.2
Rocket	5	1.6
Nagad	10	3.1
Upay	0	0
Mixed Users	163	45.8
How many times do they use Fintech technology?		
1 time	168	52.3
2 times a day	53	16.5
2-4 times a day	31	9.7
More than 4 times	57	17.8
Mixed usage/others	11	3.4

We measured Composite Reliability (CR) and Effect Size to examine our model.

Composite reliability (CR): Usually calculated in conjunction with structural equation modeling is composite reliability. Latent Variable (LV) dependability is an assessment of the connection between an LV and its items, and "correlations smaller than 0.7" neglect measurement error. Square the total factor loadings (call this SSI). the sum of each indicator's error variances (call this SEV).

CR = SSI/ (SSI+SEV)

F^2: To determine the effects of an independent variable, use the F^2 measure. According to Cohen (1988), the thresholds of 0.02, 0.15, and 0.35 represent the minor, medium, and large effects, respectively.

Chapter 4
Result and Discussion

4.1 Data analysis technique

This study is quantitative and is based on data collecting and analysis. I analyzed the data using IBM SPSS software and created and assessed the measurement and structural model using SmartPLS4 software. And after analyzing the data we obtained all positive data.

4.2 Structural Model

Now we will use path coefficients and the significance level of each path coefficient to analyze the structural model. If the p-value is less than 0.05, then it will support the variable. Otherwise, it will not support the study variable.

The relevance level of each path co-efficient serves as a measurement for the significance of a hypothesis. Now we will describe each path coefficient and justify our hypothesis from the table below:

Table 4.1: Tested Path Coefficient Value

	Orginal sample (O)	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P values**
Cf ➔Sf	0.462	0.462	0.045	10.290	0.000
PR ➔ CI	0.129	0.143	0.059	2.195	0.028
Pu➔ Sf	0.152	0.159	0.048	3.169	0.002
Sf ➔ CI	0.439	0.445	0.059	7.398	0.000

We can see, H1 Confirmation (cf) has an influence on user Satisfaction (Sf). Because we found that Cf ($\beta = 0.452$, $p < 0.05$) has a significant positive impact on Sf.Because the p-value is less than 0.05. So our H1 is significantly positive.

We can also observe that H2, Perceived Risk (PR) has an impact on Continuance Intention (CI). We can see the impact on CI of PR is CI (($\beta = 0.129$, $p < 0.05$), which is a supported value. Our H2 is therefore supported.

Then H3, the Perceived usefulness (Pu) has effects on Satisfaction (Sf) results positive. Because we have found that ($\beta = 0.152$, $p < 0.05$). So our H3 hypothesis has the value of positivity.

Finally, H4 Satisfaction (Sf) has an influence on users' Continuance Intention (CI) also supported. Because we find out that ($\beta = 0.439$, $p < 0.05$). This further supports the validity of our H4 concept.

The figure presents the results of our final study model validation utilizing survey data.

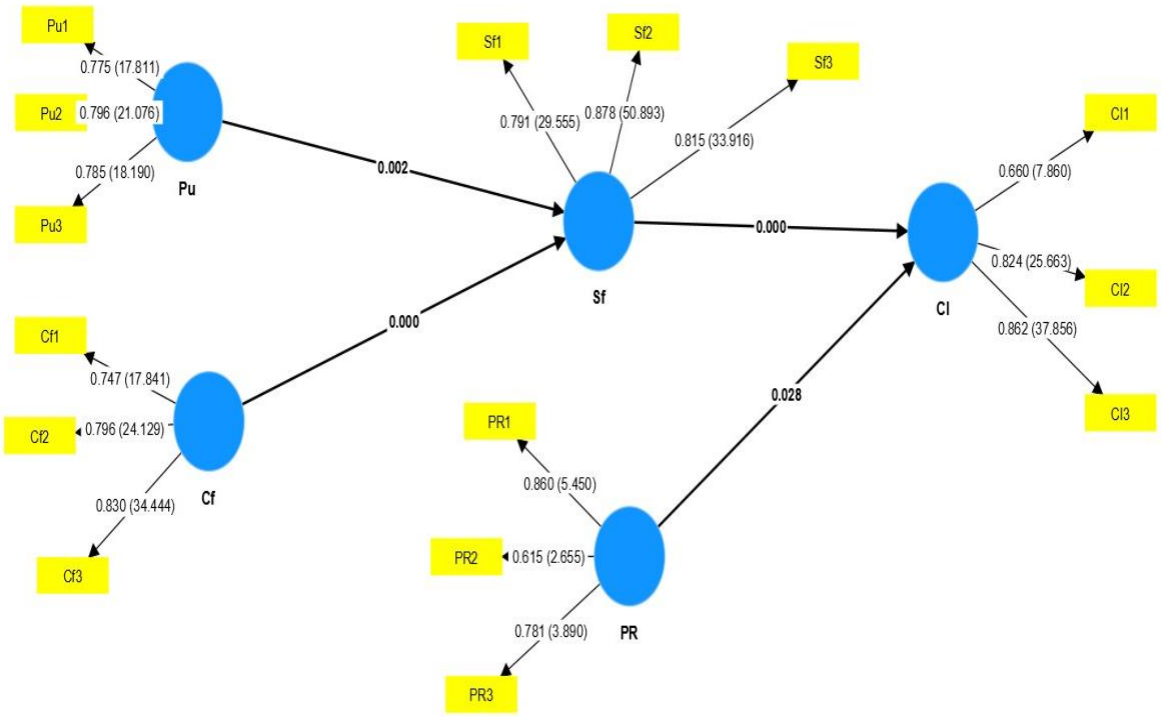


Figure 4.1:Tested Model With Result

4.3 Discussion

Satisfaction is the most significant factor in determining the intention to continue using financial services, which reveals that functional value is crucial to continuing the use of Fintech services. The findings show that customer satisfaction has a substantial impact on consumers' willingness to continue using fintech services because these services allow users to rapidly see offers, recharge options, and transfer money wherever they are and whenever they want.

Perceived usefulness value is the second-most significant consumption value, according to the research findings. Because it gives customers trust about the individual system will give the best performance by using them. Users may therefore consider that Fintech Technology is very valuable to enrich their expectations.

Confirmation is also found an important variable in ensuring service quality performance. It creates a great relationship with satisfaction to reach the demand.

This result finds out that Confirmation and Perceived Usefulness will increase user usage and will make their influence to reuse of services which are users' Continuance Intention.

Finally, users are afraid of uncertainty and unsuccessful transactions, Which is Perceived Risk. This problem can be overcome by building trust in the service.

This study aimed to prove a positive relationship between perceived usefulness, confirmation, and continuance intention with satisfaction and also figure out whether the negative relation of perceived risk on continuance intention will affect people’s trust. So, risk must be reduced to increase the reuse.

Chapter 5

Conclusion & Recommendations

5.1 Implication

In chapter 2, we have already told that we have chosen an ECM Conceptual Framework model. We wanted to prove user satisfaction is affected by the factors- perceived usefulness, confirmation, continuance intention, and perceived risk by using Bangladeshi mobile banking services (Bkash, Rocket, Nagad, and Upay). According to our study, the first four variables impacted positively user satisfaction with using Fintech services in Bangladesh.

By analyzing our data we have proved that our all data is supported by the calculation of SmartPLS4 software. It means our all data got positive results from the Fintech users by responding to the survey.

We can state that the Financial Technology service provider needs to increase their service quality to hold to the customer's satisfaction. By ensuring quality, the usage of Fintech service will be increased randomly. It will positively affect our society. It will improve our daily life and also the online banks. So their profit will be more.

Since my study results in positive, it will impact society and the researchers. End of the day, if anyone wants to use Financial Technology, they will be affected by following this research theory. It will give them knowledge about what to do or not do. This research scope will be helpful to them. If we build up the "Trust" and "Customer Loyalty" factors in future research work, then customers will be satisfied more and the service provider of Bangladesh will be benefited also.

5.2 Research Limitation and future directions

Limitations: Firstly, this research work has been done with some limiting factors. There were so many perspectives to solve this research problem. But we can't cover all the area. If we could have covered all the areas, we would have gotten better results than the present.

Secondly, we have collected 320 data by our survey. If we could collect more data, then we will found more targeted people.

From my perspective, these are the limitations of this research work. To overcome these limitations, future researchers should increase the work area and increase more collection of data.

Future work: The limitations of the research are discussed above. I'll work to get overcome my limitations in the future. I'll continue this theoretical investigation. And also examine the gap criterion as well. I will work on user trust and user loyalty in the future to develop my research. This will make it easier for my research to reach all Bangladeshi Fintech users.

5.3 Conclusion

The discovery of the key characteristics that influence customer satisfaction when utilizing financial technology in Bangladesh, in my opinion, was this study's greatest contribution. Future research may provide other solutions to the drawbacks of financial technology if it takes into consideration the wide range of variables suggested in the descriptions of the study's limitations. Even though perceived risk issues in financial technology may not be major difficulties in Bangladesh, they are important to research because if they arise in real life, they may have a serious impact on people’s satisfaction.

REFERENCES:

Arner, D. W., Barberis, J., & Buckley, R. P. (2017). *FinTech and RegTech in a Nutshell, and the Future in a Sandbox*. CFA Institute Research Foundation.

Chen, X., & Li, S. (2017). Understanding continuance intention of mobile payment services: an empirical study. *Journal of Computer Information Systems*, *57*(4), 287-298.

Foroughi, B., Iranmanesh, M., & Hyun, S. S. (2019). Understanding the determinants of mobile banking continuance usage intention. *Journal of Enterprise Information Management*.

Gao, L., & Waechter, K. A. (2017). Examining the role of initial trust in user adoption of mobile payment services: an empirical investigation. *Information Systems Frontiers*, *19*(3), 525-548.

Gilitwala, B., & Nag, A. K. (2020). IMPACT ASSESSMENT OF FACTORS INFLUENCING USER'S CONTINUANCE INTENTION TO USE NEAR FIELD COMMUNICATION (NFC). *Journal of Content, Community and Communication*, *12*, 219-226.

NGUYEN, D. D., NGUYEN, T. D., NGUYEN, T. D., & NGUYEN, H. V. (2021). Impacts of Perceived Security and Knowledge on Continuous Intention to Use Mobile Fintech Payment Services: An Empirical Study in Vietnam. *The Journal of Asian Finance, Economics and Business*, *8*(8), 287-296.

Saima, F. N., Rahman, M. H. A., & Ghosh, R. (2022). MFS usage intention during COVID-19 and beyond: an integration of health belief and expectation confirmation model. *Journal of Economic and Administrative Sciences*.

Talwar, S., Dhir, A., Khalil, A., Mohan, G., & Islam, A. N. (2020). Point of adoption and beyond. Initial trust and mobile-payment continuation intention. *Journal of Retailing and Consumer Services*, *55*, 102086.

Zhou, T. (2011). The effect of initial trust on user adoption of mobile payment. *Information development*, *27*(4), 290-300.

Zhou, T. (2013). An empirical examination of continuance intention of mobile payment services. *Decision support systems*, *54*(2), 1085-1091.

Zhou, T. (2014). An empirical examination of initial trust in mobile payment. *Wireless personal communications*, *77*(2), 1519-1531.

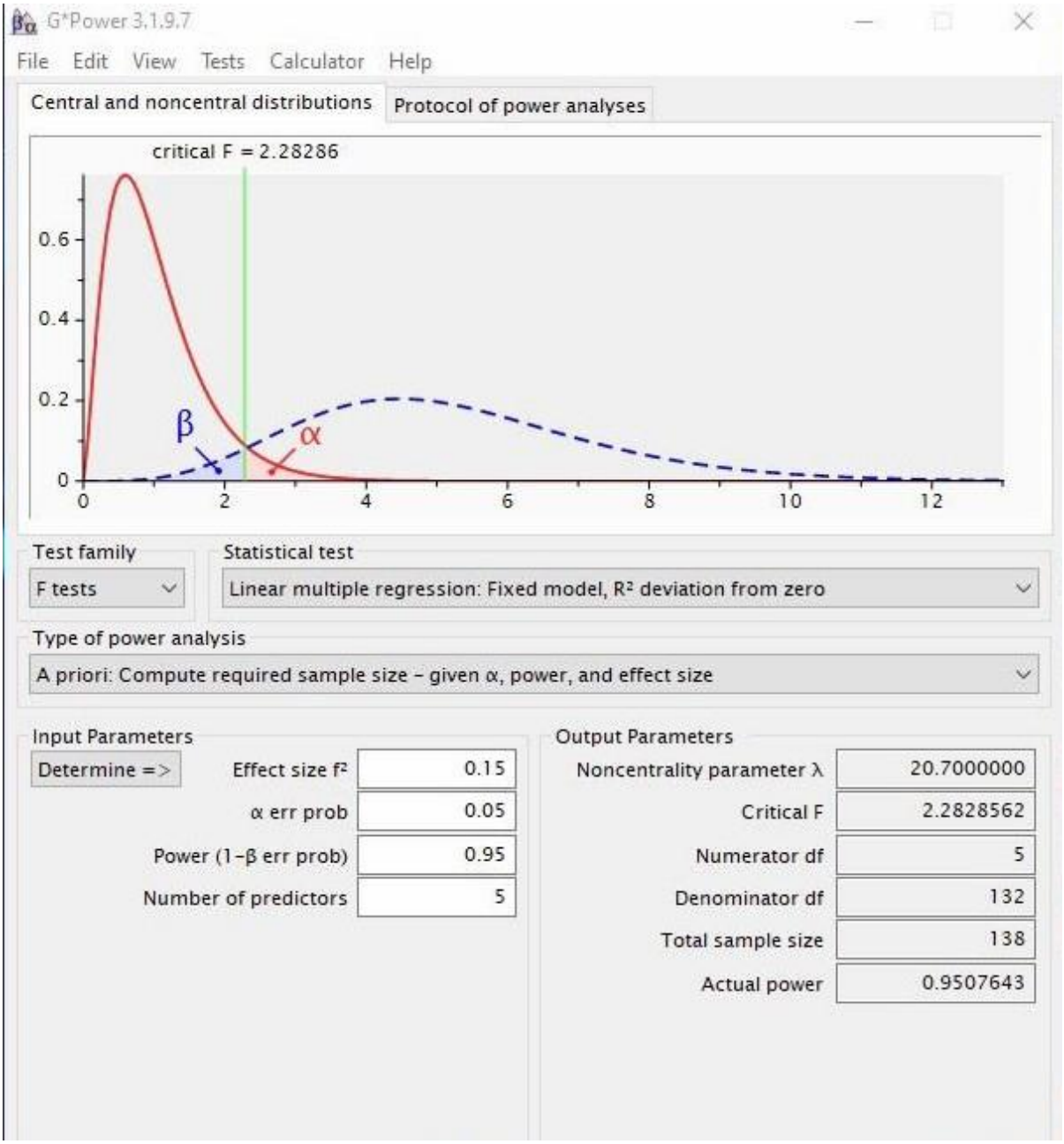
(https://www.americanbanker.com/news/why-chinas-mobile-payments-revolution-matters-for-us-bankers)

(https://www.fortunebusinessinsights.com/industry-reports/mobile-payment-market-10

(https://mybangla24.com/mobile-banking-bangladesh).

Appendix A

G* Power



Appendix B

Survey Questionnaires

Demographic Information

Age Range:	**less than 20** ☐ **20-30** ☐ **30-40** ☐ **more than 40** ☐
Gender:	**Male** ☐ **Female** ☐
Educational Qualification:	**SSC** ☐ **HSC** ☐ **Hons.** ☐ **Others** ☐
Profession:	
How many times do you use Fintech?	**1 time** ☐ **2 times a day** ☐ **2-4 times a day** ☐ **more than 4 times** ☐
Which Fintech technology do you use?	**Bkash** ☐ **Rocket** ☐ **Nagad** ☐ **Upay** ☐

Strongly Disagree	Disagree	Moderately Disagree	Undecided	Moderately Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

Research-Based Question:

		1	2	3	4	5	6	7
Perceived Usefulness (PU)								
PU1	Fintech allows me to save time during mobile payment.							
PU2	Fintech makes my mobile payment less time-consuming.							
PU3	Fintech is a handy way to do mobile payments.							
Confirmation (Cf)								
Cf1	Most of my expectations have been confirmed by using Fintech.							
Cf2	My expectations that I had about mobile payment service were correct							
Cf3	The service level provided by the mobile Fintech service was better than what I expected.							
Satisfaction (Sf)								
Sf1	Overall, I am satisfied with the fintech service.							
Sf2	Fintech provides satisfactory service.							
Sf3	I am satisfied with the quality of the fintech service.							
Continuance Intention (CI)								
CI1	I intend to reuse fintech.							
CI2	I will always try to use fintech.							
CI3	I plan to use fintech frequently.							
Perceived Risk (PR)								
PR1	I feel using mobile payment still has the risk of incomplete transactions.							
PR2	I am afraid about the uncertain transaction.							
PR3	I am feeling unsafe about using financial technology.							