Project Report on

Electronic Banking in Bangladesh

Supervised by

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Letter of Transmittal

To
Nusrat Jahan
Assistant Professor
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Dhaka, Bangladesh

Subject: Submission of Project Report on "Electronic Banking in Bangladesh"

Dear Ma'am,

With due respect, I beg to inform you that, I am a student of BBA, 41th batch at Uttara University. I am very glad to submit you my project report prepared on **"Electronic Banking in Bangladesh"**

I have given my best effort to prepare the project report with relevant information that I have collected from various sources during my project program from 20st June to 26th August 2020.

I pray and hope that the mistake of the report may have, will be kindly excused. So I cordially request to you evaluating this project report & enough kind to receive this project report.

Sincerely yours

Name: Afsana Khan Disa
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Student's Declaration

I declare that the Project Report on **"Electronic Banking in Bangladesh"** includes the results of my own project report works, pursued under the supervision of((mam nam), Assistant Professor, School of Business, Uttara University.

I also declare that this project report is prepared for academic purpose only. This report is not submitted by others.

Name: Afsana Khan Disa

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Supervisor’s Declaration

This is to certify that, Afsana Khan Disa is a student of BBA (Major in Finance) of the Department of Business Administration & ID no. 2163011033 has successfully completed Project report on **“Electronic Banking in Bangladesh” from** 20^{st} June to 26^{th} August 2020. On the basis of her successful completion of Project program, she has prepared the project report under my supervision.

I wish her every success.

Nusrat Jahan

Assistant Professor

Dept. Of Business Administration

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At first, I would like to express my deepest gratitude to almighty Allah for giving me the strength and opportunity to finish the project report within the schedule time.

I would like to express my gratitude to the Dept. Of Business Administration to keep this project work in the curriculum of the graduation program. I am also grateful to my supervisor Nusrat Jahan Assistant Professor, School of Business, Uttara University, for her motivating inspiration, direction, suggestions and advices during my project period.

Table of Contents

Abstract

The banking industry is one of the fastest sectors realizing the developments and changes in the field of technology innovation. This study examines the development of E-banking in Bangladesh. The study also investigates the effectiveness of Bangladesh banking industry. The objective of the project report is to evaluate the significance of electronic system integrated in the banking sector for providing convenience services to their clients and the overall impact cause by electronic services on bank transaction. The project report has applied descriptive methodology to analyze the impact of electronic banking services. On the other hand, when comparing with other samples in the world, using the internet banking in Bangladesh has not reached to required level yet. It is more than important to take some precautions. The comprehension of tendency of using E-banking, will be effective on speeding-up development of E-banking increasingly. In the banking sector, professional training can be given to banking officials, so that they can effectively work on the electronic system. The satisfaction has covertly impact a customer inclination towards electronic banking and electronic banking has positively influenced the banking transaction.

<u>**Section-I**</u>

1.1 Introduction:

Information technology is becoming an important factor in the future development of financial services industry, especially the banking industry. The banking sector is based on sharing of information, which itself heavily relies on information and communication technology in order to acquire, analyze and deliver data to all relevant users. The ICT is crucial not only for information analysis, but also enables the banking sector to differentiate its offer from competitors and thereby make it a market leader. In this context, banking sector are obliged to continuously innovate and update their marketing strategies in order to closely meet the demands and the requirements of the individual customers. It also provides safe and confidential services which best suit customers' needs. The customer wants more flexibility without paying more, and his demands are clear: Make transactions wherever, whenever, and however he wants. Hence, the development of the concept of electronic financial services, more commonly known as E-banking. At present, private & public banks of Bangladesh have taken various steps in E-banking. This work has been conducted from the secondary data maximally. This study has drawn present trend & development of E-banking in Bangladesh and included conclusion & recommendation.

The term of e-banking varies amongst project report es partially because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone. Burr describes that it as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. E-banking is form of banking, where funds are transferred through an exchange of electronic signals between financial institutions, rather than the exchange of cash, checks, or other negotiable instruments. The ownership of funds and transfers of funds between financial institutions are recorded on computer systems connected by telephone lines. Customer's identification is by access code, such as a password or Personal Identification Number (PIN), instead of a signature on a check or other physical document. E-banking involves individual and corporate clients, and includes bank transfers, payments and settlements, documentary collections and credits, corporate and household lending, card business and some others.

Banking has never been more important to our society than it is today. The advance of communication and computer technology and the availability of the Internet have made it possible that one can do most banking transactions from a remote location even without stepping into a physical financial structure - that is, the emerging of e-banking. The traditional bank branch is going to vanish in order to be surrogated by electronic banking which continues to attract new users. The banking industry believes that by adopting new technology, the banks will be able to improve customer service level and tie their customers closer to the bank. Meanwhile, the banking industry has been also looking for new methods to expand its customer base and to counteract the aggressive marketing effort of those non-traditional banking entities. Larger banks that maintain expensive branch networks tend to have the greatest incentive to adopt e-banking services. In comparison, smaller banks have higher startup costs and tend to have a high initial technological cost in developing e-banking services.

Many banks quickly realized that there are a momentous number of customers like to do banking electronically. The application of e-banking has been proven as an effective way to reduce the costs of operation for the financial institutions. For instance, e-banking services will allow banks to reduce expenditures on physical structures. It is believed that the e-banking will help banks to cut costs, increase revenue, and become more convenient for customers. Another important benefit from e-banking is a more effective information collection and management. A combination of a low percentage of customers using e-banking services on a consistent basis and a relatively low start-up cost in developing e-banking services in the banking industry will make the impact of e-banking quite limited on financial institutions. On another hand, e-banking services could be highly demanded and desirable to accommodate the sudden, rapid growth that has occurred in other information-intensive industries such as travel and securities brokerage. Finally, the development of e-banking service has encouraged the adoption of a decentralized approach to give banks more needed flexibility to distribute Internet access to a much larger number of employees and potential customers.

1.2 Justification:

- The study was designed to investigate the impact of e-banking in Bangladesh.
- The key necessary of the study is to the see nature, growth and extent of E-banking services on the operational performance and service quality.
- E-banking is totally depended on technology. In this study I also try to highlight the development of IT sector in BD.
- E-banking system becomes more popular to customers. From this report reader knows the reason behind the popularity of E-banking.
- The basic challenge to this report is to develop newer and faster and more secure software to provide the end-user customers.
- This study reviewed which measures have been taken by public and private sector for the development of E-banking.
- In this paper included some problems of E-banking system and give some recommendation, I hoped that these recommendation will help to overcome problems of E-banking.

- This study will provide a solvency so that e-banking can bring fruitful results in the country.
- As BBA Program student and my major area is Finance. In future I want to work in banking sector so this study gives me more knowledge about e-banking and about its system.
- The future project report will get idea about present scenario and prospect of E-banking system which help for their project report work.

Section-II

2. Objective:

- To study the development of e banking in Bangladesh.
- To identify the problem regarding e banking in Bangladesh.
- To reveal the prospects of e banking in Bangladesh.

Section-III

3. Methodology:

The study is basically an extended assignment. The study has relied on the analytical descriptive methodology for achieving the limited objectives of the project report. This methodology aims to analyze and describe the problem in question as well as extract its various aspects and dimensions and the extent of its impact on the level of bank services. The present study is mainly based on secondary data related to E-banking. Secondary data and information have gathered from Books, project report paper and related journals including different publications:

(1) Different seminar papers

(2) Internet

(3) Paper (International and local Publications)

(4) UNCTAD publication

(5) WTO publication

(6) International Standard Working Bank.

In this report information are collected from various article. First of all I select 10 different article related to e-banking. Then I read them very clearly. After collect articles numbering those articles which help me to preparing report appendixes. I also collect data from Google and Google Scholars.

<u>**Section-IV**</u>

4. Discussion:

4.1: To study the development of e banking in Bangladesh:-

Economy of Bangladesh is still underdeveloped and one of the main reasons is banking system is not properly developed. Technology is one part but personnel should be well conversant with their respective desk work and behavior pattern should be improved.

Ali, Mohsin, and Yasmeen(2004) observation may be followed to attain e- banking efforts through information dissemination, knowledge transfer, and technical assistances. However, Bangladesh's global Network Readiness Index should be improved from present situation.

Chandrasekhar and Sonar's(2008) comment should be considered as not only technological progress but efficiency of the banking services are required as on line banking customers' are not still fully satisfied with the services.

Nyangosi, Arora , Singh (2009) as they argued that banking through electronic channels has gained increasing popularity in recent years. However, policy makers should consider Shah and Clarke (2009) observation. Because from the customers' feedback, the study observes that paying attention on human, operational, managerial, and strategic organizational concern in e-banking is required. Moreover, bank personnel should be well conversant about their respective desk work. This is also applicable to other organizations which are implementing e- banking in the country. Otherwise customer relationship management cannot be improved. Buffam's (2000) comment is more practical for the companies of Bangladesh as e-business will lead to attain competitive advantage as will they can outperform their competitors.

The study also done to observe different types of services and use of software's by the banks. From the field level study we observe that Core Banking, Cluster Banking, Phone Banking, SMS Banking, Internet Banking, Various Cards, ATM, SWIF, PC Banking, POS Terminal, Banking KIOSK, Offline Branch Computerization are being provided. From the point of view of on line banking, still foreign banks are providing more on line banking services than private commercial banks. Then nationalized commercial banks and last being on line banking services are being provided by specialized banks.

Ahshan's (2009) observation is important for Bangladesh as it will help to enhance economic development. Creation of appropriate professional can improve the economic condition of the country. As such stress should be given to develop human ware. E- banking can play important role to reduce poverty only when it can be effectively utilized for spreading the business both in rural and urban areas, creation of job opportunities, removing middlemen in the business process and one to one direct selling process and increasing both income and saving.

Governor of Bangladesh Bank Rahman (2010) rightly points out that a holistic approach needs to be taken by all the stakeholders to reach the ICT facilities to the doorstop of the common people. Actually e-technology can be utilized with other computer peripherals to enhance communication, skill ness and understanding and provide a sound basis for implementing e- banking. It can be helpful to accelerate the learning process, including the acceleration of the development and application of knowledge and technology. This includes development of the system and infrastructural development and support where 16 followings are required:

(a) E-procedure,

(b) Browser based system development,

(c) Web enable of legacy and/or client server systems,

(d) Enterprise application integration,

(e) Implementation or use of application server technology.

Ahmed and Islam's (2008) observation should be cautiously taken so that adopting on line banking services for which banks in Bangladesh can develop strategies for expediting not only banking business but also providing customers' satisfaction.

Mia, Rahman and Debnath(2007) observed that the latest development in marketing financial services by banks is online banking, where banks have now put themselves in the World Wide Web to take advantage of the Internet's power and access to cope with the accelerating pace of change of business environment.

Ahmed and Islam (2008) observed that adopting e-banking services, banks in developing countries are faced with strategic options between the choice of delivery channels and the level of sophistication of services provided by these delivery channels.

The country can be benefited through successful utilization of e-banking .This will help to enhance productivity and customers will be satisfied. Producers will also be benefited and monetary gain can be attained. The help of on line banking can manage economy of Bangladesh in a better way as customers' satisfaction can be increased.

4.1.1: Development of e-banking in Bangladeshi banking sector:-

- **Electronic Banking:** Electronic Banking is transforming the financial services industry through various impossible innovations. The quantity of cross-border trading and other financial activities is increasing geometrically make possible by technology. It has been made possible by technology, particularly information technology to generate, collect and process information about bank operation and bank customers efficiently and effectively. It provides the ability to create more effective systems of controls in individual institutions and in the market themselves. Compared to the paper based operation, Electronic Banking Systems, in its most proficient form, offer instant verification and transfer and reduces the flow of costly paper in the record keeping process. Application of technology in banking offer opportunity for reduction of both paper and people. Banks have developed EBS for three main reasons (Horseman, Michael J. 1979)

➢ To protect and increase market share
➢ To reduce operating cost by substituting physical capital and technology for labor
➢ To generate new revenue

Electronic banking allow banks to expand their markets for traditional deposit taking and credit extension activities, and to offer new products and services or strengthen their competitive position in offering existing payment services. In addition, electronic banking could reduce operating costs for banks. More broadly, the continued development of electronic banking and electronic money may contribute to improving the efficiency of the banking and payment system and to reducing the cost of retail transactions nationally and internationally. Although many financial instrument and systems are now considered as "Electronic Banking" came into the terminology of the financial world in the late 1980s, with the possibility of emergence of true electronic money. All sorts of back-office information management technology and financial services using electronic devices can be included into the term "Electronic Banking". The development in information technology has contributed positively to economic growth through several channels. ICT has led to a productivity growth through the impact on activity processes. Banks have been increasing the ir own size and financial strength and expanding the scope of their products lines to meet the growing demand of on-line real-time financial services.

- **Structure of electronic banking:** E-banking is a general term referring to various computer-based technologies for delivering banking services. Electronic banking systems can be divided into two categories by the functional characteristics, viz. back-office electronic banking, and electronic financial instruments or front-office electronic services. Back-office electronic banking provides information management services, and quick fund transfer facilities both for traditional banking and financial instruments and electronic financial instruments. Science inception of primary forms of electronic banking it has been passed through a comprehensive evolution process. Electronic banking services can be grouped into three generations of evolution.

E-banking services Categorize:

Generation of electronic	**banking**	**Back-office Front-office**
First generation	Ledger Cash management Head office MIS	Cash dispensers
Second generation	Transaction Processing[offline] ACHs Generation of information for record keeping Fund transfer	Telephone bill payment POS systems Check verification ATMs Authorization
Third generation	On-line transaction processing Centralized processing at country level Internet banking Inter bank transaction processing	Automatic Fund Transfers On-line Banking Home Banking electronic Direct Deposit Check Truncation Lock Box Check Truncation Electronic Fund Transfer Internet Banking

Source: Raihan, Ananya. 1998

4.1.2: Electronic facilities given by different bank in Bangladesh:

The following Electronic facilities are providing by different Foreign and Private Commercial banks (PCBs) in Bangladesh:

- **Bank accounts: Savings, Current, FDR, PDS, Term Deposit Scheme**: All these accounts are maintained in electronic way for the sake of customer satisfaction in Bangladesh. People can deposit their money through electronic device and also can withdraw their money such way. These are the common bank accounts which maintained by the bank customer every now and then and bank is also given high priority or facilities in this regards to their customer.

- **Special Services:** Some Banks render special services to the customers attracting other banks.

- **Debit Point-of-Sale:** An advanced payment system which enables consumers to use an ATM Card to pay for goods and services, electronically debiting the cardholders account and crediting the account of the merchant.

- **Cards: Credit/Debit Card:** There are two different types of card. One is debit which designate to withdraw own money from the bank in any time. Another one is a credit system which provided by bank to their customer. Customer can enjoy their credit amount while they are in shopping, withdraw cash etc.

- **Internet Banking:** Customers need an Internet access service to handle this type of banking. As an Internet Banking customer, he/she will be given a specific user ID and a confidential/secret or secured password so that they can access to their own account. Here customer can able to see the ledger balances, transfer his money, request something towards bank, etc.

- **Home Banking:** Home banking frees customers of visiting branches and most transactions will be automated to enable them to check their account activities transfer fund and to open L/C sitting in their own desk with the he lp of a PC and a telephone. For example: HSBC is giving Hexagon facilities to their individual and corporate customer.

- **Automated Teller Machine (ATM):** Full abbreviation of ATM is "Automated Teller Machine" which acts like a teller point in a bank who takes and gives money over the counter. ATM is same as teller point but it run automatically through identity like card and password. It does not need any slip or Cheque but it is very much based on A/C holder's ATM card and it's Password. Those who are entitled for ATM card, bank has provided them a password against every single card. This is like a debit card. People can deposit their money in a bank account and they have entitled withdraw their money through ATM card, which is applicable for 24 hours a day and 365 days in a year. It has different name such as ATM, 24 hours banking card, money link card, e-cash, ready cash etc. In Bangladesh, some multinationals incepted the ATM booth in Dhaka since 1992-93. The Grind lays Bank was the pioneer in Bangladesh then after Standard Chartered Bank, American express Bank, HSBC, Bank Asia and seven others local private banks are the followers.

- **Tele Banking:** Tele-Banking permit customers to get access into their respective banking information 24 hours a day. Subscribers can update themselves by making a phone call. They can transfer any amount of deposit to other accounts irrespective of location either from home or office.

- **SWIFT:** SWIFT is a bank owned non-profit co-operative based in Belgium servicing the financial community worldwide. It ensures secure messaging having a global reach of 6,495 Banks and Financial Institutions in 178 countries, 24 hours a day. SWIFT global network carries an average 4 million message daily and estimated average value of payment messages is USD 2 trillion. SWIFT is a highly secured messaging network enables Banks to send and receive Fund Transfer, L/C related and other free format messages to and from any banks active in the network. Having SWIFT facility, Bank will be able to serve its customers more profitable by providing L/C, Payment and other messages efficiently and with utmost security. Especially it will be of great help for our client dealing with Imports, Exports and Remittances etc.

- **Easy Pay Machine:** It is a mechanical device which can accepted utilities bill like land phone bills, cell phone bills, Gas bills, WASA-DESA bills etc. The day after tomorrow bank will report to the particular authority to give acknowledgement on behalf of their customer.

- **Others:** There are some other electronic services like TV Banking, Mobile Banking; SMS Banking through cellular phone, Mail Banking etc is practicing ignorable way. But banks are trying hard to develop new products which can be done through electronic device like internet, telephone including cellular and mechanical devices.

4.1.3: Advantages of E-banking in Bangladesh:

There are a substantial number of educated unemployed youth forces, with ability to read and write English exist in the country. They can be trained within a required skill in a short time.

- **Short term Benefits:** E-banking reduces extra time of making a transaction. It increases productivity and efficiency of bankers. It eliminates duplication and wastage of documents; minimize maintenance cost, shortage cost and curtail security cost.

- **Long-term benefits:**

➢ **Create new opportunities of jobs for unemployment people:** The issue of computers eliminating jobs of people is quite emotional and painfully real. But it has two sides that automation will eliminate certain types of job like record keeper and also create jobs like administrator, system analyst, programmer, operator etc. and help to reduce unemployment problem.

➢ **Participate in the country's economic health:** Banks with a national economy, work towards building national capital, increasing national savings and mobilizing investments in trade and industry.

➢ **Proper planning and monitoring:** Proper monitoring is possible by the management in e-banking without visiting the branch. Proper use of resources will be ensured by planning and monitoring.

- **Advantages of e-banking can also be categorized into the following two types:**

➢ **From the banks' view point:** From the bank's point of view the first benefits for the banks offering e-banking services is better branding and better responsiveness to the market. The other benefits are possible to measure in monetary terms. The main goal of every company is to maximize profits for its owners and banks are not any exception. As e-banking minimize operating costs of bank transactions so it will offer a perfect opportunity for maximizing profits.

➢ **Benefits from the customers' point of view:** The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main benefits of e-banking are as follows:

i. Increased comfort and timesaving-transactions can be made 24 hours a day, without requiring the physical interaction with the bank.

ii. Quick and continuous access to information. Corporations will have easier access to information as, they can check on multiple accounts at the click of a button. iii.

iii. Better cash management. E-banking facilities speed up cash cycle and increases efficiency of business processes as large variety of cash management instruments is available on Internet sites of banks.
iv. Private customers seek slightly different kind of benefits from e-banking.
v. Reduced costs: This is in terms of the cost of availing and using the various banking products and services.
vi. Convenience: All the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to Speed.
vii. The response of the medium is very fast; therefore customers can actually wait till the last minute before concluding a fund transfer.
viii. Fund's management. Customers can download their history of different accounts and do ix. "what-if" analysis on their own PC before affecting any transaction on the web.

4.2: To identify the problem regarding e banking in Bangladesh:

Today's world is service oriented in every sector. Those who are giving much more services rather than others are giving; he will be well ahead of competition because of getting better competitive advantages. Online Banking largely depends on the country overall ICT infrastructure, legal environment and skilled human resources.

Lustsik (2004) defines E-Banking services as a variety of e-channels for doing banking transactions through Internet, telephone, TV, mobile, and computer. Banking customers' desires and expectations with regard to service are expanding, as technology advances and improves.

Ali(2003) argued that Bangladeshi companies, organizations have several problems to start full swing e-banking. These include limited resources, backwardness in technology, managerial inefficiency, socio-infrastructural problem such as corruption, default culture law and order situation, rampant corruption, strike etc. which penetrate for long time.

In Bangladesh decision makers are generally reluctant about advancement of technology. It is difficult for people who do not have much technical knowledge to understand the necessity of adoption of new technology. So the pace of computerization in various offices, business enterprises and sectors are low. Another problem of initiating E- business is that in our country policy makers, managements are generally reluctant to accept something new. As such management prefers to maintain current business model and that's why they are reluctant to introduce something new.

4.2.1: The common features of electronic banking in Bangladesh are as follows: -

Electronic banking idea developed in Bangladesh since 1992 through several multinational banks. But most of the local and foreign banks are maintained electronic banking in their all branches. Here the project report er fined some common features of electronic banking in Bangladesh.

1. 24- hours cash deposit & withdrawal facility.

2. Quick cash withdrawal without having queue.

3. Account activities enquiry in any moment.

4. Statement request through ATM/Debit/Credit Card.

5. Transfer own funds to other account number in same bank.

6. Present Balance enquiry.

7. More than16-hours shopping facilities.

8. Deposit or Mail cash or cheque(s) (Cross cheque) through mechanical device.

9. Changing Personal Identity Number.

10. Cash deposit which will originally deposit very next day of deposit that means do not need to go to the branch for every occasion.

11. Mini statement which contain 8-10 previous transaction records.

12. Can able to pay utilities bill.

13. Withdraw money by using VISA, PLUS, MASTER, MAESTRO and other credit card.

14. Withdraw money from dollar account which gives taka by converting foreign currency.

4.2.2: Required Physical Infrastructure for E-Banking:

- **Internet:** The Internet is a global system of interconnected computer networks that use the standard Internet Protocol Suite (TCP/IP) to serve billions of users worldwide. It is a network of networks that consists of millions of private, public, academic, business, and government networks of local to global scope that are linked by a broad array of electronic and optical networking technologies. The Internet carries a vast array of information resources and services, most notably the inter-linked hypertext documents of the World Wide Web (WWW) and the infrastructure to support electronic mail.

- **Intranet:** An intranet is a private computer network that uses Internet Protocol technologies to securely share any part of an organization's information or network operating system within that organization. The term is used in contrast to internet, a network between organizations, and instead refers to a network within an organization. Sometimes the term refers only to the organization's internal website, but may be a more extensive part of the organization's information technology infrastructure. It may host multiple private websites and constitute an important component and focal point of internal communication and collaboration.

- **Hardware:** The essential hardware required to build a complete online banking system includes: Personal Computers

- Servers
- Routers
- Firewalls
- Modems
- POS (Point of Sale) Terminals
- ATM (Automated Teller Machines) booths

- **Software:** For conducting online banking operations several software are now available such as FLEXCUBE, a banking software which enables banks to process and store banking transaction data and making payments through a dedicated client-server network. Another type of statistical software E-Views (Econometric Views) is a statistical package for Windows, used mainly for time-series oriented econometric analysis. Different banks use different types of software depending on the cost and other factors.

- **Electronic Money (E-Money):** Electronic money (also known as e-currency, e-money, electronic cash, electronic currency, digital money, digital cash or digital currency) refers to money or scrip which is only exchanged electronically. Typically, this involves the use of computer networks, the internet and digital stored value systems. Electronic Funds Transfer (EFT) and direct deposit are all examples of electronic money. Also, it is a collective term for financial cryptography and technologies enabling it.

- **Plastic Money:** Plastic money is a plastic card issued by banks or financial institutions with a magnetic stripe or chip that holds machine readable identification code (account number, customer personal identification number, and other such information readable by

ATMs). Bank cards are used for electronic commerce (with magnetic stripe readers or via Internet) and for banking transactions through Automated Teller Machines (ATMs). Types of plastic money include:

- **Credit Cards:** Credit Card can be called as an equivalent of a loan sanctioned by the bank to its customers. Credit card facilitates and makes it possible to "Use First and Pay Later" the specified amount of credit as per the agreed terms of sanction. This card facilitates the cardholder to purchase goods and services from the merchant establishments and shops through the collaborating credit card companies like VISA, MasterCard, Maestro.

- **Debit Cards:** A Debit Card provides for online electronic payment like Credit Card but from savings or current accounts of the cardholder for purchases. This card is a deposit access product where cardholder uses his own money in his bank account through the debit card on the principle of "Pay First and Use Later". Debit card contains the symbol or hologram of collaborating company such as VISA, MasterCard, Maestro and Cirrus etc. ¬

- **ATM Cards:** ATM Card can be used to withdraw money, deposit money, balance enquires, deposit bills in the account. The cardholder must maintain a savings bank account or current account with the bank. On issuance of card, the cardholder is intimated a four digit secret Personal Identification Number (PIN). The cardholder is always required to maintain safely the PIN to prevent fraudulent activity.

- **ATM Card-cum-Debit Card**: ATM Card-cum-Debit Card can be used both as an ATM card and Debit card as a method of payment when purchasing goods and services in Bangladesh and Overseas. The cardholder is responsible for all transaction made by the use of the card. In Bangladesh most of the debit cards issued by banks are also ATM cards. For example, Dhaka Bank Limited, DBBL, SCB, HSBC, BRAC Bank and other banks operating in Bangladesh provides ATM Card-cum-Debit Card.

- **Smart Card:** The smart card is an amazing piece of technology. It is the size of a regular ATM card but is capable of storing over a 1000 times more data. The data can be encrypted and hence the card is completely temper-proof. The card can also be personalized to the holder by printing personal and other details on the card face..

- **Electronic Funds Transfer:** Electronic funds transfer or EFT refers to the computer-based systems used to perform financial transactions electronically. An EFT is the electronic exchange or transfer of money from one account to another, either within the same financial institution or across multiple institutions.

- **Electronic Payment System:** Electronic payment is an integral part of electronic commerce. Broadly de-fined, electronic payment is a financial exchange that takes place online between buyers and sellers. The content of this exchange is usually some form of digital financial instrument (such as encrypted credit card numbers, electronic checks, or digital cash) that is backed by a bank or an intermediary, or by legal tender.

4.2.3: The Technological Acceptance Model (TAM):

The Technological Acceptance model has widely been used to help predict and explain user acceptance of information technologies. According to Davis [4], this model helps project report ers and practitioners to identify why a particular system is unacceptable. He suggested that use of an information system is directly determined by the behave intention to use it, which is in turn influenced by the users' attitudes toward using the system and the perceived usefulness of the system. According to this model, attitude and perceived usefulness are also affected by the perceived ease of use. Thus, the use of technology is determined by greater perceived usefulness and the perceived ease of use of an information system. This theory was born out of an effort to understand the relationship between attitudes and behave. The theory of reasoned action is based on the assumption that human beings are rational and make systematic use of available information. This theory attempts to explain the relationship between beliefs, attitudes, intention and behave. Thus, attitudes towards performing the behaving and the subjective norm are the direct determinants of people's behave intention.

4.3: To reveal the prospects of e banking in Bangladesh:

All types of Electronic Banking operations require a well-established ICT infrastructure throughout the country. Online Banking largely depends on the country overall ICT infrastructure, legal environment and skilled human resources. At present the infrastructure for Online Banking is not satisfactory because of high cost and low penetration rate. This is one of the reasons for which the entire banking sector is still out of online system.

Rahman (2001-2002) observed that issues relating to electronic fund transfer require security, availability, authenticity and audibility. He suggested for appropriate control and efficient security measures and also for proper utilization of audit trail in the e-commerce system.

4.3.1: Supported Infrastructure:

There is also lack of technically skilled human resources. Computer and Internet is still out of reach of general people of the country. The following statistics will provide a detailed synopsis of the overall situation of the supported infrastructure for implementing Online Banking.

The infrastructure of a country is very important for implementing online banking. For online banking major cost is to setup backbone network. Fortunately Bangladesh Railway has a high-speed optical fiber network parallel to the railway path owned by Bangladesh Railway. Its total capacity is about 2.5 gigabits per second. This fiber optic network covers almost every important parts of the country. Bangladesh has been connected with the information superhighway on the 20th May, 2006. It is a landmark of ICT sector of Bangladesh. The cable network covering some 786 miles across the country from the Bay of Bengal will provide a fiber-optic link with a data transfer capacity of 10 gigabits per second compared to the 150 megabits per second bandwidth now used by the state owned BTTB and dozens of private Internet Providers.

After connecting with the information superhighway, the total country will be connected by fiber optic backbone; certainly it will be a milestone for infrastructure of implementing online banking in Bangladesh. In Bangladesh most of the banking hardware are available. The hardware available for online banking is entirely procured from foreign origins with a local distributor. Online banking operation hardware includes; servers, workstation, printers, scanner ATM, POS terminal and networking hardware includes switch, Router, VSAT connectivity etc. The software support for internet banking, i.e. FLEXCUBE is available in Bangladesh. Again Bangladesh Government is working on the copyright law and the preservation of intellectual property act. After the successful implementation of all these policies and strategies we are expecting that large number of the banks will be offering internet banking facilities.

4.3.2: Finding:

Various impacts of e-banking are obtained from present study.

- **Impact on Consumers:** Various impacts are generated from e-banking to its customer of consumer products, such as: Choosing from a variety of options such as size and color, viewing any or all of product specifications and photographs; purchases will be delivered directly to their door; ordering products without leaving their home; security knowing every transaction is secure; and checking how much they have “spent” before committing to purchase.

- **Impact on Traders**: There are high impacts are generated from e-banking to traders; such as:
  - Overhead costs of an e-banking web site is generally much less than the cost of traditional banking.
  - Seller has the ability to reach customers all over the world rather than being limit to a certain geographical location
  - Increase in sales volume by taking the help of e-banking.
  - Everything is maintained through secure software so in no longer required of human intervention.

- **Impact on Social Life:** Peoples who have an online bank account, gets some extra benefits of e-banking activities. Without any cash handling risk, people get the following services from e-banking which facilitate him from many points: Railway Ticket, BRTA Payment, Bus Ticket, Airline Ticket, Airtime Purchase, Daily Deal Site, Hotel Booking, Internet Bill Payment, Education, Lifestyle Shops, Gift Item, Grocery, House Hold Products, E-shop, Book Store, Job Site etc. They can check balance through e-mail and can collect money when necessary.

- **Other major findings relating to impacts of e-banking are given below:**

- **Speedy Transaction:** It is expanded that internet connection in Bangladesh is good. So it will take very short time to complete a transaction by e-banking. As a result, e-banking saves important time of both customers and bankers.
- **Avoidance Cash Handling Risk**: Almost all recognized shopping center has started online shopping and services were digitalized. Customers can purchase product without carrying cash with them. ATM booths are available in all renowned markets. So without carrying any cash customers can complete their shopping credit card and debit card.
- **Low Operating Cost:** Operating costs are minimized in e-banking. E-banking requires minimum documents. So documentation, transportation and other operating costs are minimized by e-banking.
- **Minimization of Man Power:** One man can receive and pay large number of customers within very short time in e-banking, which was not possible under traditional banking.
- **Twenty Four Hours Access**: Money is available 24 hours a day in e-banking. Traditional banks provide money from 10 a.m. to 3: 30 p.m. In case of emergency traditional banks unable to provide money to their customers.
- **Avoidance of Huge Documents:** All traditional banking documentations are not essential in ebanking. Only a few vouchers are maintained.
- **Minimize Errors:** As e-banking reduces documentations to make a transaction so the possibilities of mistake will be reduced in minimum limit.
- **Reducing of Gathering in Bank:** E-banking means non-branch banking. Customers can withdraw and deposit money by using ATM booths and also possible to make purchase or sale. So customers need not make gathering in bank counter.
- **Reducing Financial Security:** It is obtained from Table 3 that 30.83% respondents feel there has security gap in e-banking system weather only 7.5% of them feel same in traditional banking.
- **Increasing Unemployment Problem:** Unemployment problem is a big problem in Bangladesh. Population density in Bangladesh is comparatively high than any other countries in world and employment opportunity is not enough. As e-banking minimize manpower to operate banking transactions so it is increasing unemployment problem in Bangladesh.

4.3.3: The Security in E-Banking:

The banking industry has faced cyber threats due to Internet connectivity. The main challenge for the e-banking sector is the intensive use of information technology applications related to the e-banking. This leads to threats of electronic security, cyber-attacks on the profile of customers, embezzlement, fraud in terms of data messages, the confidentiality of anti-theft customers, the secret of financial transaction. Many statistical reports provide examples on the dimension and the effects of security breaches in e-Banking. According to the **SANS** survey of 2016, which measures the state of risk and security in the financial sector, the financial services industry is under the deluge of ransom and hacking attacks, which are increasing dramatically.

Section-V

5. Future Forward:

In Bangladesh banks are still reluctant to use full internet base banking activities. Compared to private and foreign banks, nationalized commercial banks are far behind implementing internet banking system in banking transactions. Despite being a least developed country, selected segments of the Bangladeshi banking community has embraced technology with reasonable success. Personal computers and the internet are also emerging as day-to-day banking tools. These positive indicators are favoring the prospects of online banking in Bangladesh. Most of our bank has not any marketing or sales forces to execute the raw and cold business of online banking for their own organization. In our country customers are not properly conscious about the advantage of the modern technology. Many multinational banks have already introduced new marketing activities to their targeted customers for specialized services which are found very effective. Although online banking has a few risk in this field but it has much advantage than negative aspects.

All types of Electronic Banking operations require a well-established ICT infrastructure throughout the country. Online Banking largely depends on the country's overall ICT infrastructure, legal environment and skilled human resources. At present the infrastructure for Online Banking is not satisfactory because of high cost and low penetration rate. This is one of the reasons for which the entire banking sector is still out of online system.

There is also lack of technically skilled human resources. Computer and Internet is still out of reach of general people of the country. The following statistics will provide a detailed synopsis of the overall situation of the supported infrastructure for implementing Online Banking.

The infrastructure of a country is very important for implementing online banking. For online banking major cost is to setup backbone network. Again Bangladesh Government is working on the copyright law and the preservation of intellectual property act. After the successful implementation of all these policies and strategies we are expecting that more than 50% of the banks will be offering internet banking facilities which is now 12% only.

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Appendix:

Appendix I
Introducing Consulted Articles

SL. No.	Article Title	Author(s)	Journal Name	Volume & Issue	Year	Publisher
1	Development of Internet Banking as the Innovative Distribution Channel and Turkey Example	Bahar Sanli	International Journal of Economics, Finance and Management Sciences	3(2)	2015	
2	Impact of Electronic Banking Services on Bank Transactions	Najah Hassan Salamah	International Journal of Economics and Finance	1(1)	2017	Canadian Center of Science and Education
3	Scholar Journal of Applied Sciences and Project report	Saviour Lusaya Bornwell Kalumba	International Journal of Scientific and Project report Publications	3(1)	2018	
4	Effect of E-Banking on Banking Sector of Bangladesh	Mohammad Shamsus Sadekin & Md. Abdul Hannan Shaikh	International Journal of Economics, Finance and Management Sciences	4(3)	2016	Science Publishing Group
5	Impact of E-Banking on Traditional Banking Services	Shilpan Vyas	Indian Journal of Business Management	4(1)	2010	
6	The Impact of E-Banking Service Quality on Customer Satisfaction: Evidence From the	Jamil Hammoud , Rima M. Bizri , Ibrahim El Baba	International Journal of Enterprise Computing and Business Systems	6(4)	2018	

	Lebanese Banking Sector					
7	Trend and Development of E-Banking: A Study on Bangladesh.	Md. Mohiuddin	Journal of Business and Management	6(5)	2017	
8	Electronic Banking in Bangladesh	Mohammad Shamsuddoha	*Journal of Business Solutions*	4(2)	2008	
9	E-Banking Offences and Interrelated Laws in Bangladesh	Md. Shakhawat Hossain & Md. Arif Hossain	European Journal of Business and Management	4(11)	2012	
10	On internet Banking	Jeffrey E. Jarrett	Journal of Internet Banking and Commerce	1(2)	2015	

Appendix II

Complication of Objectives/ Purposes/ Questions/Hypotheses

Article	Objectives/ Purposes/ Questions/Hypotheses
1	➢ The key necessary of the study is to growth and extent of E-banking services on the operational performance and service quality.

2	➢ The main purpose of this study is development of e banking in Bangladesh. ➢ Select the number of problem related to e-banking in Bangladesh. ➢ Finally overcome from the problem of e banking in Bangladesh.
3	➢ The object of the study is find out the impact of e-banking in Bangladesh**.**
4	➢ The basic challenge to this report is to develop newer and faster and more secure software to provide the end-user customers.
5	➢ The study explain the present scenario of banking sectors in Bangladesh.
6	➢ All types of Electronic Banking operations require a well-established ICT infrastructure throughout the country. ➢ Computer and Internet is still out of reach of general people of the country.
7	➢ This project report paper has included some problems of E-banking system and give some recommendation.
8	➢ To manage economy of Bangladesh in a better way as customers' satisfaction can be increased. ➢ To enhance productivity and and monetary gain can be attained.
9	➢ E-banking can play important role to reduce poverty only when it can be effectively utilized for spreading the business both in rural and urban area.
10	➢ This project report paper will provide a solvency so that e-banking can bring fruitful results in the country.

Appendix III

Complication of Methods

Article	Methods
1	The present study is mainly based on secondary data related to E-banking. This methodology aims to analyze and describe the problem in question as

	well as extract its various aspects and dimensions and the extent of its impact on the level of bank services.
2	➢ The study covered many different Multinational, private commercial banks, which mainly situated in the capital city of Bangladesh. ➢ Some of the respondents were in the capital city of Dhaka. Data have been collected through a structured questionnaire. ➢ In addition, the websites of relevant institutions has been review for updated information.
3	In this report information are collected from various article. First of all I select 10 different article related to e-banking. I also collect data from Google and Google Scholars.
4	➢ The project report design adopted for this study was a descriptive study because of the nature of the expected data and the project report objectives. ➢ Both Quantitative and Qualitative data was collected. ➢ The Quantitative and Qualitative data was collected through primary and secondary sources and was especially used in establishing the relationship between the variables through descriptive analysis.
5	The study based on secondary data related to E-banking. Secondary data and information have gathered from Books, Journals, project report paper etc. Primary data and information also have collected through using observation and interview method.
6	➢ This project report has been done through desk study and primary survey. ➢ Desk study made through finding out different books, journals, and articles in the libraries. ➢ Data has been equipped through relevant statistical methods.
7	For collecting primary data, questionnaire technique was employed for obtaining primary data and for testing assumptions. In the design of the questionnaire, preciseness and relation between the problem, objectives and assumptions were carefully taken into account.
8	➢ The study collect 10 different Multinational, private commercial banks information from their official website.

	➢ Survey questionnaire was administered to empirically assess the level of adoption of e-banking in Bangladesh.
9	Regarding the applied studies, the project report er has depended on the data collected via questionnaire, which was distributed among the sample members to know their opinion concerning the impact of electronic services on bank services
10	➢ The project report has been conducted mainly on the basis of secondary information. ➢ Bank specialists have also been personally interviewed in order to collect some primary information used in this study. ➢ Internet has been used as another source of information.

Appendix IV

Complication of Conclusions

Article	**Conclusions**
1	E-Banking is a new concept in banking sector of Bangladesh. It is becoming popular in Bangladesh; thus almost all Bangladeshi banks offer many facilities of e-banking. E-banking is growing in Bangladesh day by day.
2	In Bangladesh banks are still reluctant to use full internet base banking activities. Compared to private and foreign banks, nationalized commercial banks are far behind implementing internet banking system in banking transactions. Despite being a least developed country, selected segments of the Bangladeshi banking community has embraced technology with reasonable success. Personal computers and the internet are also emerging as day-to-day banking tools. These positive indicators are favoring the prospects of online banking in Bangladesh.
3	Economy of Bangladesh is still underdeveloped and one of the main reasons is banking system is not properly developed. Technology is one

	part but personnel should be well conversant with their respective desk work and behavior pattern should be improved.
4	Government as well as different international organizations have also identified that underdeveloped banking causes some costly obstacles on the way of even economic progress of the country. Investors are frequently scared in invest because of its sluggish banking system. Hence the task of making the banking system of Bangladesh at per international standard deserves the highest priority. Business processes should be reengineered.
5	The latest generation of electronic banking transactions, has opened up new window of opportunity to the existing banks and financial institutions. With banking customers growing increasingly comfortable with the digital lifestyle, but Bangladeshi customers are not aware about e-banking in Bangladesh. They are not fully understand the power of technology and seek to leverage it to enjoy better control over their banking operations.
6	Global financial system has getting stronger day by day and it is strengthening by the e-banking. Around the globe, consumer market has greater potentialities and producers must be active otherwise they may lose their share in the marketing strategies.
7	The basic challenge to the internet banking and commerce industry is to develop newer and faster and more secure software to provide the end-user customers the ability to accomplish the applications they wish to achieve. Hence, the internet banking and commerce industry must demand new products from hardware and software producers to predict the problems associated with this growing and profitable industry.
8	Technology developed so far is inadequate at these installations. No doubt that the internet industries will grow but the demand for newer and better technology need to grow first. We must use our scientific methods better.
9	Customers can withdraw and deposit money any time within 24 hours of a day. All types of e-banking services are being appreciated and applied by people of different walks as this eases the activities. So, if an attractive offer package provided by the government e-banking will be popular everywhere very soon.
10	If necessary initiative can be taken like improvement of quality of e-banking service, reducing financial insecurities, reducing unemployment problem by creating IT base job for technical experts, reducing tax on e-banking equipment, close monitoring, legal provisions for controlling

	frauds and malpractices etc. e-banking practices will increase and more positive impact will go on the banking sector in Bangladesh. As a result, economy of Bangladesh will be benefitted immensely.