MOBILE AIRTIME PAYMENT SERVICE

INTERNSHIP REPORT

ON

MOBILE AIRTIME PAYMENT SERVICE

Submitted to: Submitted by:

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Submission Date: 10th September, 2014

Letter of Transmittal

10th September, 2014

Jabir Al Mursalin

Assistant Professor,

BRAC Business School,

BRAC University.

Subject: Letter of Transmittal

Dear Sir,

With great pleasure I am submitting my Internship Report on "Airtime as a mode of E-commerce Payment" that you have assigned me as an important requirement of BUS-400 course. I found the study to be quite interesting, beneficial & insightful. I tried my level best to prepare an effective & creditable report.

The report contains a detailed study on using mobile airtime as a mode of e-commerce payment, the process, cost analysis, feasibility, and implementation challenge and how it would change the whole idea of e-commerce payment.

Here I have gathered information through different sources such as websites and actual interviews from the employees of different departments of Banglalink Digital Communications Ltd.

I also want to thank you for your support and patience you kept for me and I appreciate the opportunity that you provided through assigning me to work on this thoughtful project.

Sincerely Yours,

_____

Nayan Kumar Nath

ID: 10104116

BRAC Business School

Acknowledgements

First of all, I would like to thank my course instructor, Mr. Jabir Al Mursalin, for giving me the opportunity to make a report on using mobile airtime as a mode of e-commerce payment. I am really grateful to him for his patience, cooperation, help and guidance without which making of this report would not have been possible.

Secondly, I want to express thanks to my line manager, Mr. M. Aminul Haque, Recruitment Assistant Manager, Human Resource and Administration, Banglalink Digital Communications Ltd. for the guidance, help and support she provided me throughout my internship period. Without her help and support the adequate information for making this report could not be gathered. I appreciate her effort regarding my learning as well as my report.

Finally, I want to show my gratitude to each and every employee of Banglalink who gave me their precious time from their busy schedule. Without their help and support the collection of the information would not have been that much easier.

Executive Summary

E-Commerce market is growing very fast, especially within the last 2 years and it is promising to be a very good sector right now. This year the e-commerce market is going to hit 1.5 trillion dollars worldwide, where, asian countries are playing a big role and the share is growing by the minute. The e-commerce sector of Bangladesh is now facing some problems, some of them are delivery services, payment services and so on. Here, in this report a new process is introduced which could actually eliminate the payment service problems. As mobile airtime payment service is simplified system that can be accessed and used remotely without any physical contact. Mobile airtime is the so called "Mobile Balance" which is adjusted after a user recharges. This is why this report is intended to look at the payment process from a different aspect, using this Airtime or Mobile Balance as the payment method for the E-Commerce sites.

Table of Contents

Contents

CHAPTER 1

INTRODUCTION

Nayan Kumar Nath

1.1 Introduction

The telecommunication sector of Bangladesh, after its liberalization began with small steps in 1989 with the insurance to a private operator for the provision of Inter Alias Cellular Mobile Services to compete with the previous monopolistic approach of telecommunication services the BTRC (Bangladesh Telecommunication Regulatory Commission), had to never look back since. Significant changes in the number of mobile services occurred in the late 1990's and the number of the service in operation has subsequently grown exponentially in recent years.

The incentives from both public and private sector have helped to grow this sector and it now one of the biggest sectors of Bangladesh that is only generating huge amount of profit but also developing the social and economic conditions of the people. As a populous country, its huge market has attracted many foreign investors to invest in this sector and Banglalink Digital Communications Ltd. is the fourth telecom operator to step in to the market after Citycell, Grameen Phone and Sheba Telecom. Basically Orascom Telecom took over Sheba Telecom in 2005 and started its journey under the brand name of Banglalink.

1.2 Background of the study

For the successful completion of the Bachelor of Business Administration (BBA) program every student of BRAC University must accomplish a three months of Internship program. The Internship program refers to an attachment with an organization under the observation of a supervisor in the organization. In addition a faculty from the university is also endorsed as an advisor for each of the student who provides guidance, help and support to the student regarding his/her learning process and repot preparation. I got the opportunity to do my internship in an international telecom company which is the second largest telecom service providers in Bangladesh, "Banglalink".

Under the proper guidance of my organizational supervisor, Mr. M Aminul Haque (Recruitment Assistant Manager), I have conducted my study on "Mobile Airtime Payment Service". My faculty supervisor Mr. Jabir Al Mursalin, Senior Lecturer of BRAC University, also approved the topic and authorized me to prepare this report as a part of the fulfillment of my internship requirement and gave me proper guidance and assistance over time.

1.3 Objectives of the Study

The objective of this study is to find out new possibilities regarding e-commerce payment system in Bangladesh.

1.4 Methodology

Sources of Information

- Primary: The primary information is collected through face to face interview with employees of different departments with observation.

- Secondary: The secondary information collected from website, magazine, memorandum, journals, internal database and some other relevant sources. Both primary and secondary data sources were used to generate this report. Primary data sources are scheduled interview among the employees of the different departments of the organization, informal discussion with professionals' and observation while accomplishing day to day jobs. The secondary data sources are website, different published reports, manuals, different publications of "Banglalink"

1.5 Scope of the study

The report deals with the recruitment process in terms of theoretical point of view and the practical use. The study will allow learning about the steps, process and procedures regarding recruitment. The study will also help to learn the practical procedures followed by the leading organizations. Moreover the study will help to differentiate between the practice and the theories that direct to realize how the organization is recruiting. Lastly the report contains many suggestions which will provide the opportunity to find out the ways to make the recruitment process more effective and efficient.

1.6 Limitations of the study

The main limitation of this study was, the method or process described in the study is not yet applicable due to restrictions by the BTRC (Bangladesh Telecommunication Regulatory Commission), which implies, airtime cannot be used for anything else except for purchasing VAS (Value Added Services). So, this study is a basic and theoretical approach to introduce a new process.

Another major limitations was time constraints, as this topic is totally new to me and the employees that I interviewed, it is bound to take some time. As, any process to even formulate it takes a very long time, some time months, years.

Nayan Kumar Nath

CHAPTER 2

ORGANIZATION

Nayan Kumar Nath

2.1 Organizational Overview

Sheba Telecom was one of the pioneers in the telecom industry of Bangladesh. The company which was a joint venture of Bangladesh and Malaysia, received its license in 1989 with the name of Sheba Telecom (Pvt.) Limited to operate its business in rural areas. Later on it attained GSM license in 1996 to extend its operation to cellular mobile and radio telephone services. In 1997 the company launched its operation under the brand name Sheba in Bangladesh.

In July, 2004 An Egyptian company Orascom Telecom Holding also known as Global Telecom Holding took over the Malaysian shares of the Sheba Telecom (Pvt.) Limited. Orascom Telecom Holding is an international telecommunications company operating GSM networks in the Middle East, Africa, Canada, and Asia. By September, 2004, Orascom Telecom Holding purchased 100% shares of Sheba Telecom (Pvt.) Limited and started its operations under the brand name of Banglalink on February, 2005. Matching its parent company name Sheba Telecom (Pvt.) Limited changed its name as Orascom Telecom Bangladesh Limited In March, 2008.

VimpleCom Ltd. a global provider of telecommunication services originated in Russia, registered in Malta, incorporated in Bermuda and headquartered in Amsterdam who has 100% ownership over WIND Telecom. On April, 2011 VimpleCom Ltd. announced that the company holds 51.92% shares of Orascom Telecom (Global Telecom Holding) through WIND Telecom. As a result VimpleCom Ltd. became the sixth largest mobile network operator in the world. VimpelCom Ltd. is providing voice and data services through a range of traditional and broadband mobile and fixed technologies in Russia, Italy, Ukraine, Kazakhstan, Uzbekistan, Tajikistan, Armenia, Georgia, Kyrgyzstan, Laos, Algeria, Bangladesh, Pakistan, Burundi, Zimbabwe, central African republic and Canada. VimpelCom's operations around the globe cover territory with a total population of approximately 753 million people. During the first two quarters of 2013, VimpelCom's 71% operating revenue and 73% EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) were generated from the emerging markets. The company provides services under the "beeline", "kyivstar", "wind", "infostrada" "mobilink", "leo", "banglalink", "telecel", and "djezzy" brands. As of June 30, 2013 VimpelCom had 215 million mobile subscribers on a combined basis.

As Banglalink is a fully owned subsidiary of Global Telecom Holding (Orascom Telecom Holding) and VimpleCom Ltd. holds 51.92% share of Global Telecom Holding through WIND Telecom since 2011 so Banglalink is operating its business under the concentration of VimpleCom Ltd. with a new name Banglalink Digital Communications Ltd. from July, 2013.SinceBanglalink's launch in February 2005, its impact was felt immediately. Overnight mobile telephony became an affordable option for customers across a wide range of market segments.

Banglalink's initial success was based on a simple mission "bringing mobile telephony to the masses" which was the cornerstone of its strategy. This company has changed the mobile phone status from luxury to a necessity, brought mobile telephone to the general people of Bangladesh and made a place in their hearts. The mobile phone has become the symbol for positive change in Bangladesh. The previous slogan of this company "making a difference" or "din bodol" refers the change not only in the telecom industry, but also through its products and services, to the lives of its customers. This corporate stance of "making a difference" has been reflected in

Nayan Kumar Nath

everything Banglalink does. The new slogan "start something new" is in essence derived from Banglalink's promise of empowering people with affordable communication solutions so that they can take new initiatives in life. The company believes that, it is through such new initiatives that positive change will occur for the overall betterment of the nation. This positive change that is quite correctly attributed to Banglalink, has become the corporate positioning of Banglalink and is translated in.

Banglalink attained 1 million subscribers by December 2005 and 3 million subscribers in October 2006. In less than two years which is by December 2007, Banglalink went ahead of aktel to become the second largest operator in Bangladesh with more than 7.1 million customers Banglalink currently has 27.07 million subscribers as of June 2013, representing a market share of 25.7%.

Banglalink's growth over the preceding years have been fuelled with innovative products and services targeting different market segments, aggressive improvement of network quality and dedicated customer care, creating an extensive distribution network across the country, and establishing a strong brand that emotionally connected customers with Banglalink.

2.2 Vision, Mission, Values & Strategies

Vision:

"Banglalink understands people's needs best and will create and deliver appropriate communication services to improve people's life and make it easier".

Mission:

- Achieving a leading position in the Bangladesh wireless market in net additions and ARPM.
- Delivering superior benefits in every phase of the customer experience before, during and after sales.
- Creating optimum shareholder value.

Values:

Banglalink aims to understand people's needs best and develop appropriate communication services to improve and simplify people's lives. All our work is aimed towards meeting our vision. All members of the Banglalink family are highly passionate individuals, fully committed to achieving the Banglalink's vision. Our customers' needs are what matters most to us, and simplifying and improving their lives is all we want. This is why our values include:

- Straight Forward: We say what we do and we do what we say.
- Reliable: A promise made, is a promise kept.
- Innovative: No gimmicks; useful and usable.
- Passionate: If we do not enjoy what we are doing, how can the customer enjoy ours?
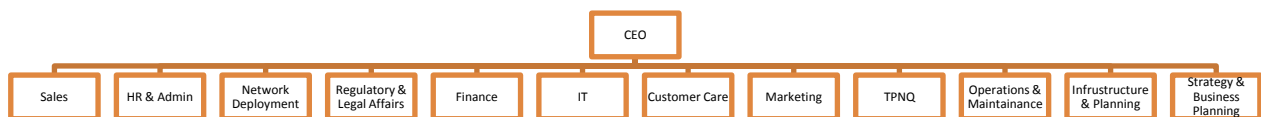
Nayan Kumar Nath

Strategies:

Banglalink follows the following strategies

- Functional Level Strategy: Banglalink focuses on efficiency, quality, innovation, and customer responsiveness.
- Business Level Strategy: Banglalink applies both the cost leadership and differentiation strategies as their business level strategies.

An Overview of the Department

Previously Banglalink had six different departments with a long hierarchy of eighteen levels. As the company is going through restructuring it has eliminated the previous departmental structure and came up with a new structure of twelve departments. Currently the company is working on its levels based on the decision of the management to minimize its levels and go to a flatter hierarchy. As a result the organization will get a horizontal hierarchy instead of the vertical one. The new departmental structure consists of Customer Care, Marketing, Sales, Technical Programs & Network Quality, Operations & Maintenance, Infrastructure & planning, Network Deployment, Accounting & Finance, Human Resources & Administration, Information Technology, Regulatory & Legal Affairs, and Strategy & Business Planning. The organogram is [1]

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[1] (Shepon, 2014)

Nayan Kumar Nath

CHAPTER 3

INTERNSHIP EXPERIENCE

Nayan Kumar Nath

3.1 Job responsibilities

Banglalink provides the opportunity to explore the real business & professional world to the interns of this organization. As an intern (recruitment trainee) of recruitment division in the HR department I used do jobs that are usually done by any other employees of the organization.

One of the major job is to assist line manager to prepare possible candidate lists for different position through initial CV screening. Then making appointments over the phone with candidates about different tests and interviews. Before making the calls to the candidates I need to schedule the possible date and time with different departments along with the concerned HR personnel for the tests and interviews.

One of the major job of this position is to collect CVs from different sources and maintain the CV archive. Banglalink collects CVs through different sources such as websites, personal references, online job portals, HR consultancy firms & head hunter agencies and social medias (LinkedIn, Facebook) etc. The company maintains a healthy relationship with different organizations which can be a potential CV source for its CV archive. Besides the collection of CVs, the position is also required to maintain the CV archive by sorting those CVs based on different criteria's such as years of experiences, academic background, academic institutions, academic results, areas of expertise and the position that the candidate will be suitable for etc.

Moreover, this position requires coordinating different tests (IQ test, Functional test, and Computer tests), interviews (initial interview, interview with Head Of Unit and interview with Head Of Department) on a regular basis. After completion of the different IQ tests it was my responsibility to check the papers and verify whether the candidate got the pass mark or not. Besides checking of IQ test papers, coordinating different functional tests and computer tests (assigned by the concerned departments) and interviews was another major responsibility of this position. Most of the time the position provides the opportunity to invigilate the IQ test, functional test and computer tests. It also offers the chance to take part in interviews as an interviewer. Apart from those duties the job contained another major accountability which is contract extension. As Banglalink has a large number of contractual employees (known as temporary employees) in different departments, the organization needs to deal with a vast amount of contract extension activities each and every month. Initially a temporary employee is offered with a one year contract in Banglalink. Each and every temporary employee is being offered a contract of another one year after the successful completion of one year contract. As different employees are completing their contract in different months so every month the company needs to offer another new contract to them. Therefore the company prepares a batch of employees every month that will end up with their existing contract and will be signing another contract in next month. The organization offers new contracts to its temporary employees by the way of batch by batch. As an intern of the recruitment department I am liable to prepare the new contract for each and every employee after they complete their existing contracts. Besides I need to prepare head count requisition form, which comes from the concerned departments that needs more employees as current temporary employees are coming to an end with their contracts. Based on the declaration through head count requisition form the HR department offers a new contract to a particular temporary employee for another one year. In addition to the contract paper and head count requisition form

Nayan Kumar Nath

I need to prepare the joining letters too. When an employee is offered a new contract s/he must sign a joining letter addressing to her/his concerned department with a sign of her/his line manager and a sign of the director of HR department. After completion of the contract papers I have to help each and every employee to sign their new contract. I have to make the temporary employees understand every terms and conditions of her/his contract paper before s/he signs it. Every month the contract extension part ends with the filing of the new contracts papers. As Banglalink maintains specific file for each individuals, so those files are need to be updated when an employee signs a new contract. Furthermore I am accountable to make the joining of permanent employees easy and smooth. I need to make the new employees understand all the terms and conditions of her/his agreement paper before s/he signs it. I also need to set up a clear view to the new employees about the documents and papers (photo copy of all the academic certificates, mark sheets, voter identification card, and passport) etc. that s/he needs to submit on her/his joining date. I have to inform the employees that s/he also needs to submit her/his release order and experience letter if s/he has previous work experience.

Additionally, I also required collecting the medical reports and updating the database of every employees of the organization. As Banglalink strictly follows the policy to conduct a medical checkup of every employee before they join in, each employee needs to go to a particular Hospital and go through different tests. It is to be noted that all the expenses of these tests are fulfilled by the company. After successful completion of the tests the concerned hospital delivered the medical reports to me. Besides, I have to coordinate with my line manager when she takes exit interviews of an employee. Exit interview is a process where an employee is interviewed just after s/he submits her/his resignation letter. The basic purpose of this interview is to identify why the employee is leaving, is there anything the organization could do to retain her/him, how the organization can improve its work environment and culture etc. As it is an online interview, I have to sit along with my line manager with the employees who would be leaving, to make each and every point clear to the employees. Last but not the least; I was assigned to deliver important documents and files to different people in different departments regularly.

Nayan Kumar Nath

3.2 Learning Outcome

Being the intern of recruitment department there were some key learning's that would actually help me in the career path in future. Getting a insight view of an MNC is very useful as it provides an intern with all kinds of experiences. The key points are

- How cross-functional departments work together towards one goal
- How an effective recruitment system works
- How to recruit people that are in line with the company
- Professional approach
- How every department plays a big role
- How the whole corporate market works

3.3 Personal Observation

Personally I think an MNC like BANGLALINK could be a pathfinder for the fresh graduates as these companies provide someone with the knowledge of the wide perspective of the corporate world. Banglalink requires its interns to do tasks that are also a part of an employee's task. So, the interns has to do their tasks properly in order to keep the flow going, as the main motto of the whole team is to reach the goal as one.

Nayan Kumar Nath

CHAPTER 4

THE PROJECT

(MOBILE AIRTIME PAYMENT SERVICE)

4.1 Introduction to the project

This project is a theoretical approach to solve a long waited problem in e-commerce sector in Bangladesh. Here, the process explains how mobile airtime balance can be turned into a mode of online payment and also without registering to other mobile money transfer services that are available right now (like, Mcash, Ucash, bKash, Mobicash and so on). The problem with the external money transfer agencies is, both the merchant and the user or consumer has to physically go to an outlet to open an account and then there are some problems that arise when a personal user tries to send money to an agent. This is why mobile airtime payment service could be the biggest solution to this problem as the user and the merchant both can create their accounts just sitting at home and order online without going to an outlet to make payment and call the merchant to ask whether the merchant has got the payment or not. So, this Mobile Airtime Payment service is the one stop solution for all those problems.

The whole process is divided into four parts:

1) User Registration
2) Merchant Registration
3) The Payment Process
4) The settlement Process

Nayan Kumar Nath

4.2 THE REGISTRATION PROCESS

Getting users registered is a very important factor as it gives the company a more detailed insight of a user's buying patterns and also to protect against any unlawful activities. Now-a-days each and every online service is following some sort of registration process to keep the users secure.

THE PROCESS:

Here, Mr. Karim is willing to become a registered member of Banglalink Airtime Payment Service.

- Mr. Karim goes to www.banglalink.com/bmaps
- The webpage provide him with the option to login or create a new account to use the service.
- As Mr. Karim is a new user he does not have a login number or password. So, he chooses to create a new account.
- The webpage instructs him to fill out the SAF form which asks him to input his phone number, password, address, photo and some other values and documents to get registered.
- After the form has been filled he must agree to the terms and conditions that are maintained by Banglalink Airtime Payment Service.
- If Mr. Karim agrees to accept the terms and conditions, he is forwarded to the next phase.
- In the next phase an e-mail is sent to the users to verify user's e-mail ID. The user must log into his e-mail ID and click on the link sent by the Banglalink server to activate service.
- After the activation is done. The user is provided with a unique PIN CODE which is generated by the server and tagged with the MSISDN. The PIN CODE is unique, to prevent any kind of fraud.
- An USSD push asks the user to enter the code displayed on the webpage for cross-check.
- After the code is verified by the server the user must remember the unique PIN CODE to carry out any transaction in future.
- After user verification the system collects all the information of the user and creates a new service account against the phone number and saves the information to different databases that are attached to the account.

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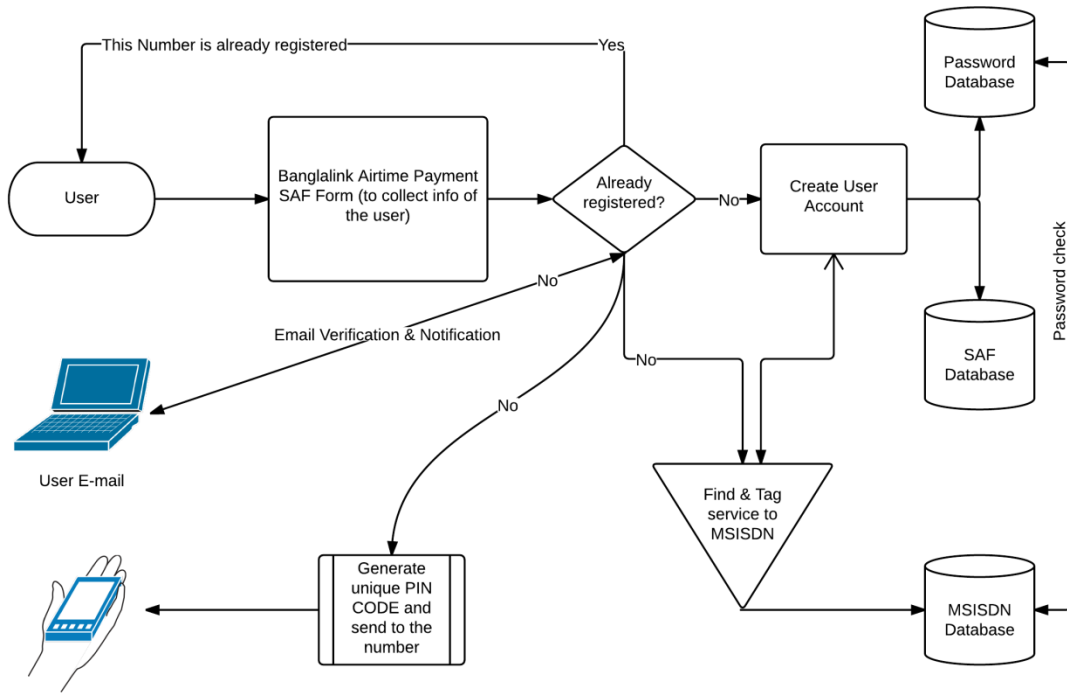
User Registration Process

Nayan Kumar Nath

4.3 THE PAYMENT PROCESS

Introducing a system of this kind takes a reasonable amount of time, effort and the cost may vary depending on the system approach that the system developer wants to develop. As there are many steps to be completed before transactions are successful including some security checks, the process is bound to be critical.

There are two possible ways an operator could set up a system like this:

1. Building their Own system
2. Outsourcing the PSP

These two options, both of them are applicable depending on the operator's intention to invest time & money. If an operator chooses to invest people, time and money- they could go for building their own payment service providing system. Else, they can pair up with a local PSP and outsource the whole task to the PSP and at the end just earn their part of the revenue.

However, in this report outsourcing the PSP is not discussed as it does not go deeper into the process that is needed to complete a transaction using mobile airtime. Here, the process shows the theoretical approach to building a system that would help the mobile operators. As this is a theoretical approach these processes may have much more complexity added to them at the time of implication or application.

Below the whole process broken down and explained with a case to have a better understanding of the system.

Nayan Kumar Nath

The Payment Process

Nayan Kumar Nath
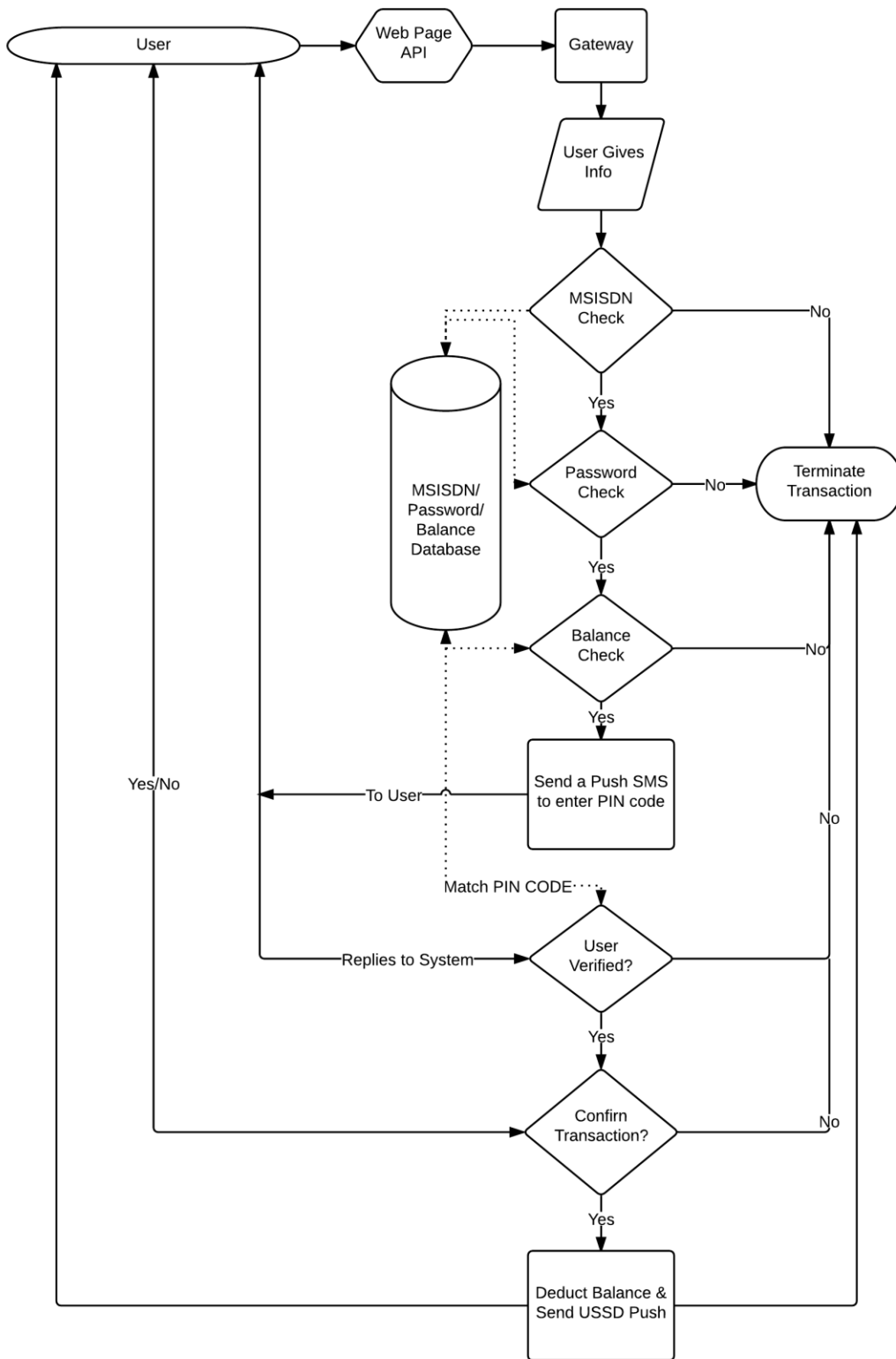
The Scenario:

- Mr. Karim is a subscriber at the online store named the-cool-store.com.
- The online store is a subscriber of Banglalink's airtime payment service.
- Now, Mr. Karim is checking out an order of 1000 BDT.
- Banglalink charges 1% of the total amount or 10 taka whichever is higher.

The Process:

Mr. Karim goes to www.the-cool-store.com. He chooses his desired product and adds the product to the cart. In the next step he requests for a checkout. While checking out he is requested to make the payment using his desired method using their payment API which lists the number of the payment options available.

Next, Mr. Karim Selects Banglalink Airtime as his desired payment option and commands the API to proceed. The API then requests Banglalink Airtime payment server to respond.

Then, Banglalink Airtime Payment server receives the amount that is to be deducted and sends the payment gateway as the response to get the customer information and start the security check. If the user did not registered to use this service before, they may get registered on spot following a link given on the gateway interface.

Transaction fee: This is a very important part of the whole process as it will be the main source of revenue from this system. The transaction fees will be set right on the Gateway Page through an integrated transaction fee calculator, so the user knows what is the actual amount that will be deducted from their balance account.

When the gateway appears and shows the details of his purchase, then, Mr. Karim is requested to provide his phone number and password to login to the system. If there is any problem regarding the purchase Mr. Karim can cancel the transaction and go back to the web store. Otherwise, Mr. Karim provides the Phone number and tells the gateway to proceed.

MSISDN check: Mobile Station International Subscriber Directory Number or MSISDN is a unique number through which a mobile subscriber is identified. So, when Mr. Karim inserts his phone number, the system looks for the MSISDN number that is tagged to the phone number of Mr. Karim. If the number is not a Banglalink number, the system will show an error message and ask for a Banglalink number. Mr. Karim now enters a Banglalink number. The system goes through the database and checks for the MSISDN. The system finds out that the MSISDN number is blocked or not accessible or not registered, it will give an error message to Mr. Karim and ask him to provide a valid number.

Key reasons to fail MSISDN check:

- The phone number provided is of other operators.
- The phone number provided is stolen/ lost and blocked by the user that has not been replaced.

Nayan Kumar Nath

- The phone number provided is not registered with the Airtime Payment Service

Now, Mr. Karim provides his number that he registered with the Airtime Payment Service and proceeds. This time the system scans through the database again and finds out that the MSISDN number tagged to the phone number is registered and valid. The system then opens the port for the next check.

Password Check: After checking the MSISDN the system then looks for the first line of defense to protect the user from any kind of fraudulent activities. The MSISDN has a path of the password tagged to it, to check find and match the password. If the system fails to locate the path or the password is not matching the pre-stored password, the system will reject the login and ask the user to provide a valid password. After some try outs Mr. Karim enters his password and the system finds a match to the pre-stored values and lets Mr. Karim to log into his account.

Balance Check: After the MSISDN and password is verified, the system looks for the next and most important part without which the transaction cannot be completed, the mobile airtime balance. Now the system looks for the balance database that is associated to the MSISDN number. Then the billing system runs a query to find out whether the balance is sufficient enough to deduct the requested amount by the API or not. If the answer is yes, the system moves to the next phase. If the answer is no, the system shows an error message to the user "Insufficient Balance / Balance date expired. Please recharge and try again." and terminates the transaction.

Security check via PIN CODE: The registered user is given a PIN CODE when the user applies for registration. This is to protect the users against fraud and theft and used as the second line of defense. After the balance check is done, the system forwards the request to the security checking module to verify the user. The system instantly sends a push notification to the phone number and asks the user to enter the pin code that is associated with the MSISDN.

Here, Mr. Karim provides the PIN CODE and sends a reply to precede the transaction. The system then receives the reply SMS and checks the code against the code stored in the database already. If the query is not true, the system shows an error message to the user to provide valid PIN CODE. If the user fails to provide the correct PIN CODE for three consecutive times, the transaction is terminated. If the query is true then the system sends a push notification through the gateway asking the user to continue or not.

Confirm Transaction: After all the data has been verified the gateway shows the amount to be deducted, from which number is being deducted, the product being purchased, the transaction fee and everything that is related to the transaction is shown. The user is given two options, to continue and pay or cancel the transaction. If the user chooses to continue the system sends a request to the billing system.

Deducting balance: The request sent by the gateway to deduct balance is forwarded to the billing system which will check the balance amount. We suppose Mr. Karim had 3523 BDT in his account. He is checking out his order of 1000 BDT. Now, the billing system deducts Mr. Karim's balance account by 1010 BDT (including the transaction fee which is pre-declared amount) and saves the remaining value to the database. If a merchant is paying their monthly subscription fee, there will be no transaction fee, just the monthly subscription amount.

<u>Transaction Fee Deduction</u>: After the balance is deducted, the billing system calculates the transaction fee that is to be deducted from the total balance that the transaction is handling. In this case, for example, Banglalink charges 10 BDT for every transaction of 1000BDT. This 10 taka balance is sent to Banglalink's revenue database and the remaining 1000 BDT is then sent to the Merchants account via the MFS (Mobile financial service) system to keep record of the revenues from the transaction fee.

<u>Sending Notification:</u> When these procedures are over, the billing system sends a USSD (Unstructured Supplementary Service Data) push notification which notifies the user, how much has been deducted and how much is remaining. In our case Mr. Karim sees a USSD push notification which says "Congratulations! Transaction of 1010 BDT has been successfully completed. Your Balance is 2513 BDT. Transaction ID# 1026563.THANK YOU for using Banglalink Airtime Payment Service." The same message is shown on the gateway and the user is redirected to the website or online shop that will be receiving the payment.

<u>Saving the Transaction Log:</u> After the transaction has been completed, a log is saved to the merchant's database on the Banglalink Airtime Payment Server with detailed information about the transaction. This helps the operator to solve any problem that may rise in the future.

<u>Terminate Transaction and Notify user:</u> After everything is finished successfully the system responds to the gateway to respond to the API that the transaction has been successful and to complete the checkout process. The API then receives the service token given by the gateway and finishes the checkout process and sends an e-mail to user's e-mail ID and to the backend of the store to keep record of the transaction.

Nayan Kumar Nath

4.4 MERCHANT REGISTRATION

Unlike the user, the merchant also needs to become a registered user of the system. Merchant registration is also needed to stop fraudulent activities like sending a different product to the consumer than requested originally, in this case, if there is a very big issue the PSP can act as the middle man. Transaction fees are deducted from the users who use the service but merchants are to pay in a monthly basis or annually. This is so, because there are various kinds of merchants. For this the merchants will be divided into 5 categories:

- The merchant must go to www.banglalink.com/baps/merchant
- Then the merchant should click on register.
- The webpage will take the merchant to the SAF form that the merchant needs to fill out.
- Then the merchant should agree with the term and conditions and proceed on.
- Then the merchant is asked to choose one of the following packages:

    1. Basic: This package is for those who are looking to start up an online business with a low investment and have a very low amount of transactions. The limit for this package will be less than 200 transactions a month and the monthly payment is 500 BDT.

    2. Starter: This is the package for the web-store that has a moderate amount of investment and has a moderate amount of transaction. This package limit is less than 500 transactions a month and 800 BDT/month.

    3. Heavy: This package is for the heavy users who have a sizeable amount of investment and transactions over 1500 per month. The monthly fee is 1200 BDT/month.

    4. Premium: This package is for the merchants who are looking for transactions over 2500/month. The monthly subscription charge will be 1800 BDT/month.

    5. Corporate: This package does not limit any kind of transactions and does not have a fixed monthly rate. This a very customized package for the corporate giants who will be looking forward to open up an online store. The pricing of this package will be determined discussing with the corporate client.

*subscribers can switch between the packages anytime they want except for the corporate package. Every time the merchants switch between the packages they will have to pay the monthly subscription fee again.

Nayan Kumar Nath

- After the package has been chosen, the merchant is asked to select the desired method for payment for monthly subscriptions. Here they can choose to pay the subscription fees annually with a subsidized rate. The merchant will have three ways to pay the subscription fee:
  - Wire Transfer: Here, the merchants' bank will automatically pay to service provider's bank every month via the ACH. Any acquiring cost will be borne by the merchant.
  - Cash: The merchant can make payments directly to the service provider's bank with no additional cost.
  - Banglalink Airtime Payment Service: If a merchant chooses to pay via the BAPS, the merchant will have to register for a merchant SIM available at the Customer Care centers free of charge and will be eligible for discounts throughout the year and there will be no transaction fee.

- After selecting payment option, an e-mail notification is sent to the merchant and to the phone number that the merchant provided.
- The merchant is given a 24 hour time period before activation. This time is to verify the merchant and create a new account for the merchant, as the merchant account is a bit complex to create.
- After 24 hours the merchant will be notified again that the account has been successfully created and activation of service.
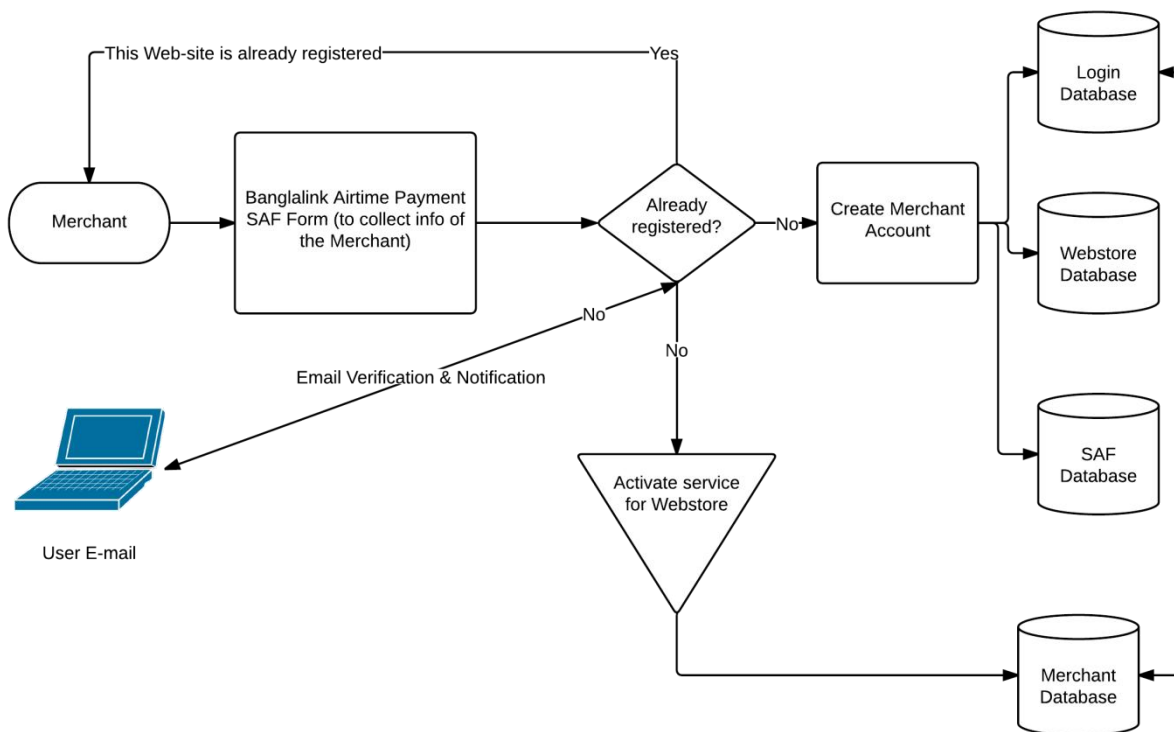
Merchant Registration Process

Nayan Kumar Nath

4.5 THE SETTLEMENT PROCESS

This is another important step because this is the step where the merchant gets the payment from the operators end. It's a very delicate process because even small amounts of errors can make the whole system come to a total halt.

Settlement End: This part of the billing system looks after the settlement process. After deducting the balance from the users account the billing system prepares a transaction log that has detailed information about the transaction and saves them to the transaction log database. Then the billing system sends request to the ACH (Automated Clearing House) with a part of the transaction log to accept the request of the transfer of payment from the issuing bank to acquiring bank / merchant bank. At the same time a request is sent to the issuing bank to process the payment of 1000BDT taka that Mr. Karim paid when he checked out his order.

ACH (Automated Clearing House): ACH is a big player in e-payment systems. The billing system sends a request to the ACH to clear out the total payments within a day. So, the ACH keeps record of the transactions that occurs within a single day 24 hours and then sends request to the issuing bank to pay the total amount to the acquiring bank / merchant bank. We suppose that the-cool-store.com had a total of 10 incoming transactions totaling 10,000 BDT. Now, the ACH adds the 11th transaction, which is Mr. Karim's 1000 BDT, the total amount for the day is 11,000 BDT. At the end of the day the ACH will send a request to the issuing bank to pay 11,000 BDT to the acquiring bank / merchant bank and send another request to the acquiring bank / merchant bank, which is being used by the-cool-store.com to receive 11,000 BDT from issuing bank.

At the end of the day, the money does not need to be transferred physically but the ACH keeps record of the balance and does the adjustment thus eliminating the hassle to transfer the money physically.

Issuing Bank: After Receiving each transaction log the system of the bank keeps record of all the transaction and adds them up. After 24 hours the grand total is calculated. The moment ACH sends a clearing request the issuing bank deducts the grand total, in this case 11,000 BDT, from the total amount of the operators account and sends it to the acquiring bank / merchant banks account via the ACH. After the disbursement the issuing bank saves a detailed log of the transaction to the operator's accounts' database.

Acquiring bank / Merchant bank: This is the bank that the-cool-store.com uses to collect their revenue. The acquiring bank receives a request from the ACH to receive a payment of 11,000 BDT from the issuing bank. When the acquiring bank receives the money transfer confirmation notification from the ACH it increases the-cool-store.com's account by 11,000 BDT. Then it saves a transaction log to the database and e-mail notification is sent to the account owner and to the web store that the money transfer has been successfully completed.

Nayan Kumar Nath

The Settlement Process

Nayan Kumar Nath
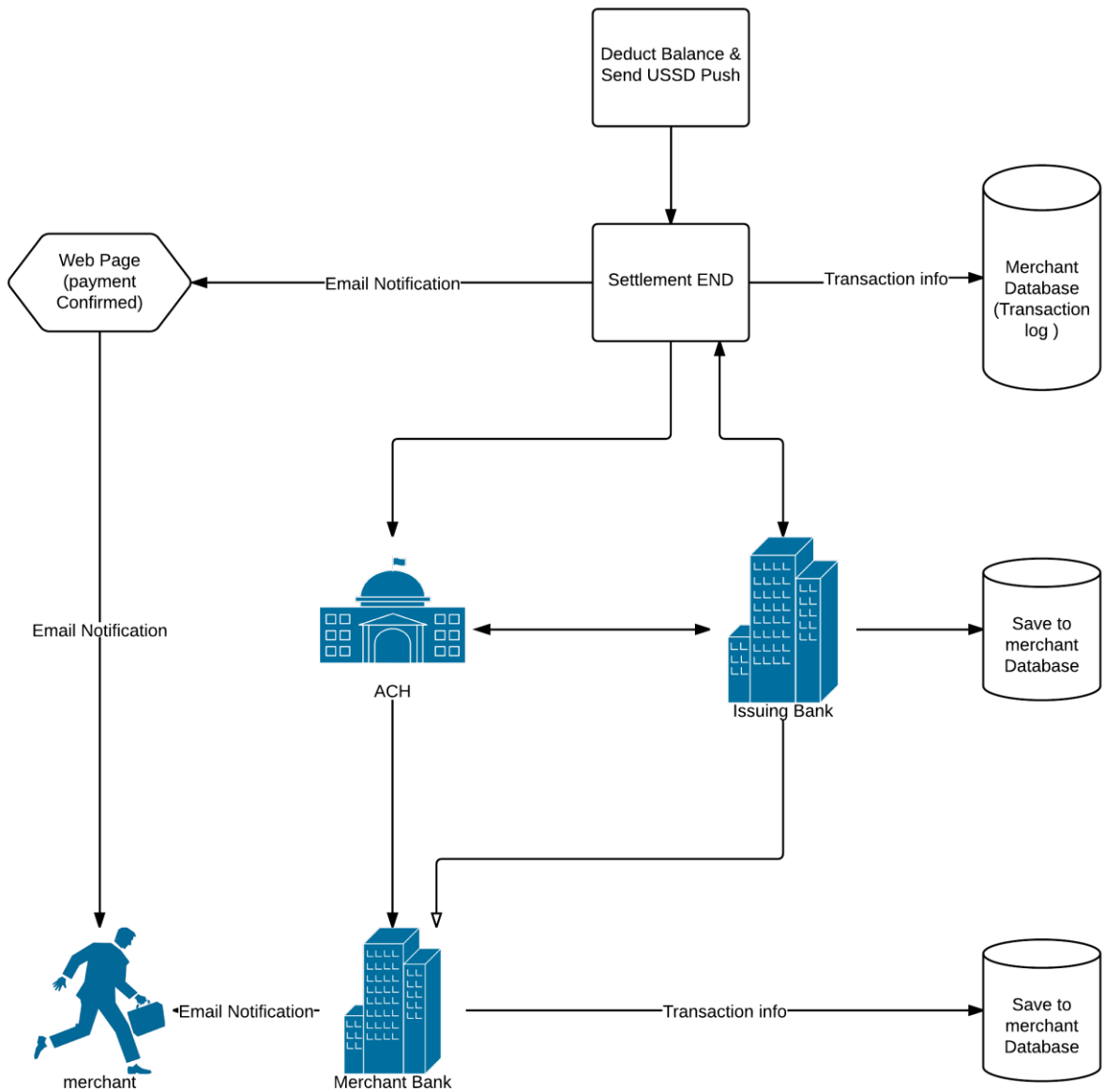
4.6 COST

To build up a system like this it would require several categories of cost. As this system is for the mobile operators, some of the costs can be reduced or merged with existing system. After consulting with the professionals, it is clear that the actual cost cannot be calculated as there are many factors related to the process. Though they pointed out some cost heads that to be considered carefully:

- Technical cost
    o Server building
    o Accessories
    o New software or software expansion

- Operational Cost
    o Space needed for the establishment of the server and the employees
    o Salary of the employee and the support staff
    o Maintenance and utility costs

- Opportunity Cost
    o Less investment for other less time consuming projects to increase ROI

Nayan Kumar Nath

CHAPTER 5

FINDINGS & RECOMMENDATIONS

Nayan Kumar Nath

5.1 SWOT ANALYSIS OF THE SYSTEM

Unlike any other systems this system also has some strengths and weaknesses. Here, in this report the SWOT analysis will be based on Bangladeshi perspective.

Strengths: This is a more simplified system than many other mobile money transfer services like, bKash, Ucash, mobicash and so on. The edge this system has over the other systems is that it does not require the user to have any kind of wallet or anything. The balance is being deducted directly from the user's mobile balance account, so, no need to open another account.

Weaknesses: As the payment processing software and hardware has to be built in-house, it will need a hefty investment of people and time and money together which most companies try to avoid and would like to address as a waste of time. But if a company invests well enough, the possibilities are that, the company will be the market leader with in a very short amount of time.

Opportunities: In Bangladesh there is a huge scope for e-commerce business, as this sector requires a low investment and planning. Someone with a few thousand taka can set up an online store and start their business. If this system comes into play, this number of entrepreneurs might rise drastically. As the government is not interested to give permission to any foreign PSP, this could be the next best solution. As Banglalink has a nationwide coverage, there will be no need for new setup.

Threats: The existing PSP's might take actions as it will make the process much easier and much more convenient and affordable for general people. On the other hand, if government changes mind to give permission to foreign PSP's, the competition could be very dangerous. For example, PayPal is accepted by almost all the e-store platforms, so, if PayPal comes into play, everybody will go for it as it is a world renowned Payment Service Provider.

Nayan Kumar Nath

5.2 RECOMMENDATIONS

As the world wide E-Commerce growth is projected to hit around 1.5 trillion dollars and the biggest shares are from Asia, the first and foremost recommendation to BTRC will be to open up to new ideas of introducing systems like mobile airtime payment service. If they do so, there will be a very tough competition between the competitors of every kind and it will open up a new era in the history of e-commerce in Bangladesh.

Secondly, I would suggest that the mobile operators open up their minds too and look forward to promoting e-commerce in Bangladesh via adapting mobile payment service. This service will give any operator an edge over regular e-commerce payment systems in Bangladesh that is currently available.

The final recommendation will be towards the government to support E-Business sector with full effort and this could open up a whole new possibilities for Bangladesh. In addition, the government is holding up foreign Payment Service Providers to enter into Bangladeshi market, which is a good thing, driving citizens towards using domestic products or services but they should also not make laws or policies that actually hampers domestic products or services.

Nayan Kumar Nath

Conclusion

To conclude, it can be said that the E-Commerce sector is proving to be very promising as the continuous need for online shopping is increasing among the Bangladeshi youth population. If we fail to meet this need now, we will be lagging behind while the whole world is moving forward. It is also an irony that some of the under privileged countries also have strong payment systems like PayPal. But being a developing country we still do not have any kind of strong payment services. There are some service providers in Bangladesh who are trying to cut into the market but is not being enough responsive to meet the needs of the root level entrepreneurs, this is the most important level because most of the consumers are of this level. Catching this market will be the main target of Banglalink Mobile Airtime Payment Service or B-MAPS.

Nayan Kumar Nath

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Nayan Kumar Nath