



**Internship Report**

**On**

**Prospects and challenges of E-pharmacy in Bangladesh:**

**A perspective on Dhaka City**

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**Prospects and challenges of E-pharmacy in  
Bangladesh:  
A perspective on Dhaka City**

**Letter of Transmittal**

7<sup>th</sup> December, 2017

Md. Hasan Maksud Chowdhury

Assistant Professor

BRAC Business School

BRAC University

Subject: Submission of Internship Report.

Dear Sir,

With great pleasure I want to submit this research paper that was assigned to me as an important requirement of the BBS program at BRAC University. My topic was on the ‘Prospects and Challenges of E-pharmacy in Bangladesh: A Perspective on Dhaka City. The research paper has been completed with the knowledge that I have gathered from my 3 months internship at RENATA LIMITED, Marketing Pharma Division. I have found the study to be quite interesting, beneficial & insightful. I have tried my level best to prepare an effective & credible report.

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

Yours sincerely,

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Maliha Mehzabin Mim

(ID#13204066)

**Letter of Endorsements by the Supervisor faculty:**

This is to certify that Maliha Mehzabin Mim, ID-13204066, Student of Bachelors of Business Administration (BBA) under BRAC Business School, BRAC University has successfully completed her assigned Internship Report on ‘Prospects and Challenges of E-Pharmacy in Bangladesh: A perspective on Dhaka city.’

She was placed in RENATA Limited for 3 months for completing her Internship which is a requirement for the completion of the Bachelors of Business Administration (BBA).

The BBA Internship Report that she has submitted on the topic is up to the mark in terms of the quality and the organization.

I wish her every success in life.

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Faculty Supervisor

Md. Hasan Maksud Chowdhury

Assistant Professor

BRAC Business School

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## **Acknowledgment**

First of all, I would like to express my sincere gratitude to my faculty advisor - **Md. Hasan Maksud Chowdhury**, Assistant Professor, BRAC Business School, BRAC University for providing me detailed guidelines and advices on this research paper. He gave me clear guidelines to make this study as flawless as possible. His guidance and discussion helped me to understand the research activity and analyze it properly. He successfully made me realize the importance of this report in my future endeavors which helped me to get more motivated.

I am also thankful and acknowledged to my company supervisor of RENATA LIMITED, Md. Abu Zafor Sadek, Senior Product Manager, Mr. Monowarul Islam, Head of Marketing and Mr. Khayrul Islam, Group Product Manager as without their direct help, suggestion, and assistance it was impossible for me to complete this report.

I would also like to thank the authority of RENATA LIMITED for helping me by giving an opportunity to work with them.

## **Executive Summary:**

In order to complete my BBA program, I have been instructed to complete my internship report on “Prospects and Challenges of E-Pharmacy in Bangladesh: A Perspective on Dhaka City” under the guidance of Md. Hasan Maksud Chowdhury.

Both Pharmaceutical companies and E-commerce are at a booming stage and doing tremendous business in Bangladesh so combination of them in the form of E-pharmacy will be a revolutionary step. E-pharmacy refers to the existence of an online pharmacy that offers medicines and over-the-counter (OTC) products to the customers. There is a need as well as demand for E-pharmacy especially in a mega city like Dhaka where this will be a huge relief to the people by saving their time, money and energy. This market of E-Pharmacy is not fully explored and it has a lot of potential for growth in the future for this business. Thus, the study aims to explore both the prospects and challenges of E-pharmacy.

The study is done on a sample of 76 respondents (medicine purchasers) in some areas of Dhaka (Dhanmondi, Gulshan, Mohammadpur and Mirpur) was reached through online survey (Google Form) and face-to-face interview.

After the data analysis it can be said that the variables being Working people, Price, Convenience, Delivery Time, Quality Assurance, Payment options, Privacy and Ease of Use have a somewhat relationship with Consumer’s Purchase decision of online medicine. Whereas the variables Age, Income level, Family members and Rate of medicines purchase have a relation with the purchase decision of consumers of buying medicines online but they are not significant enough.

As it is a new concept and is not that established right now but has a great future ahead if planned properly. There are challenges too like making people believe on the authenticity of medicines and convincing them to buy from these online stores. If correct people and proper planning is involved then these obstacles can be handled too.

This study recognizes the need for further research in this field.

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## **Introduction:**

### **Background of the Industry:**

One of the most dynamic and technologically advanced industries in Bangladesh is the pharmaceuticals industry. At present there are estimated 150 active pharmaceuticals companies in operation while the top 20 companies generate 85% of the revenue. In Bangladesh 85% of the drugs sold are generic and 15% are patented drugs. Mostly, generic drugs being produced are of high quality and available at affordable prices. About 450 generic drugs for 5,300 registered brands are manufactured in our country which has 8,300 different forms of dosages and strengths. At the global stage healthcare providers are increasingly endorsing generic drugs and Bangladesh can also capitalize on the trend to penetrate the markets in the US, Germany, France, the UK and Japan. In 2013, the global generics were valued at \$168 billion and are expected to reach \$380 billion by 2021.

Pharmaceutical companies are expanding their business with the aim to explore the export market and at present the pharmaceutical industry of Bangladesh meets 98 percent of the local demand and exports to more than 125 countries. Not only tablets, capsules, and syrups but specialized products like HFA inhalers, CFC inhalers, suppositories, nasal sprays, and injectable IV infusions are also exported from this industry.

From the beginning of the decade, the pharmaceutical industry of our country has experienced double-digit growth driven by large consumer base, improved health consciousness and a supportive regulatory framework. There are two regulatory bodies in Bangladesh which controls the pharmaceuticals industry- Pharmacy Council of Bangladesh (PCB) and Directorate General of Drug Administration (DGDA).

The Directorate General of Drug Administration (DGDA) is the national drug regulatory authority which is under the Ministry of Health and Family Welfare. It regulates all activities related to import and export of raw materials, packaging materials, production, sale, pricing, licensing, registration of all kinds of medicine including those of Ayurvedic, Unani, herbal and homeopathic systems.

The Pharmacy Council of Bangladesh (PCB) was established under the Pharmacy Ordinance Act in 1976 to control the pharmacy practice in Bangladesh. The Bangladesh Pharmaceutical Society is affiliated with the International Pharmaceutical Federation and Commonwealth Pharmaceutical Association.

The Drug Control Ordinance 1982 had banned foreign companies from selling imported pharmaceutical products in the country and along with this there was a relaxation of the World Trade Organization's agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) that actually permitted Bangladesh to reverse engineer patented generic drugs. The good news is that this relaxation of TRIPS for least-developed countries has been extended to 2032.

According to a report published by LR Global, an asset management firm, the annual sales of pharmaceutical products stood at Tk 15,600 crore in the fiscal 2015-16. The pharmaceutical industry of Bangladesh is dominated by the local players- Square Pharmaceuticals is leading the charge, with a market share of 18.8 %, followed by Incepta at 10.2%, Beximco 8.5 %, Opsonin 5.6 %, Renata 5.1 % and Eskayef 4.5 %. While the other multinational companies such as GSK, Sanofi Aventis and Novo Nordisk enjoy a 10.5 percent market share.

The pharmaceuticals companies are very much dependent on Active Pharmaceutical Ingredient (API) exported from foreign countries like more than 90 % of Tk 4,700 crore worth of API are imported each year. As a result, the industry is susceptible to external shocks. In order to address the issue, the government has started the process of constructing an Active Pharmaceutical Ingredient (API) industrial park in Munshiganj. Almost half of the companies that got plots in the API Park are expected to commence their operation by 2018. Once the API Park is completed, it will assist Bangladeshi companies to source at least half of their raw materials from the complex, reducing the dependency on imports.

### **Brief Profile of the Organization:**

Renata Limited (formerly Pfizer Limited) is one of the prominent and rapidly growing pharmaceutical and animal health product companies in Bangladesh. It is the 4th largest pharmaceutical company and the market leader in animal health products. They have eight manufacturing facilities spread over three manufacturing sites. Product distribution is carried out by 19 depots across the country. The company employs 4,334 people. The products are exported to Afghanistan, Nepal, Philippines, Ethiopia, Kenya, Malaysia, Guyana, Honduras, Hong Kong, Belize, Cambodia, Myanmar, Sri Lanka, Thailand, United Kingdom, and Vietnam.

Renata has three subsidiaries- Renata Agro Industries Limited, Purnava Limited, and Renata Oncology Limited. Purnava Limited endorses non-medicated healthcare products. Renata Agro Industries Limited is an integrated poultry farm engaged in commercial broiler operations. Renata Oncology Limited is a private limited company incorporated on the 12th August 2012 under the Companies Act 1913. The main activity is to carry out manufacturing of oncological medicines.

For Renata, corporate social responsibility (CSR) means assisting disadvantaged members of the society, caring for the employees, and building a sustainable environment. Their values include focusing on long-term growth, going the extra mile for employees and health activism through promoting innovation and partnerships.

Renata has eight manufacturing facilities on three separate sites. The original 12-acre site is located in Mirpur, Dhaka, while the new 19-acre site located in Rajendrapur, Gazipur which began its operations in 2009.

### **Rationale of the study:**

Bangladesh is one of the developing countries in the world and had witnessed huge changes both socially and economically in the last few decades. One such example is the emergence of E-commerce. When E-commerce had covered almost all the sectors like food, clothings, banking, tourism, electronics, real-estate then how the pharmaceutical industry could be left behind as medicine is also one of the basic needs of human beings. E-pharmacy refers to the existence of an online pharmacy that offers medicines and over-the-counter (OTC) products to the customers.

The amount of both diseases and patients are massive and alarming in our country. Therefore there is a need as well as demand for E-pharmacy especially in a mega city like Dhaka where this will be a huge relief to the people by saving their time, money and energy. E-pharmacy has started its operation in Bangladesh but very few in numbers which means the market is not fully explored and it has a lot of potential for growth in the future for this business. Therefore, this study aims to find out the prospects and challenges of this highly potential market of E-pharmacy. Being a business graduate this study is extremely important for me because E-pharmacy has the potential to become one of the leading businesses in our country and it is still unexplored so this study will enlighten me about the future opportunities and hurdles about this business sector providing a competitive edge to me if I want to make my career in this sector in future. This study will also facilitate BRAC BUSINESS SCHOOL of BRAC University to learn about the market potential of this emerging business sector which will assist in preparing students for this promising sector. Both pharmaceutical industry and E-commerce sector are flourishing sectors so combination of them in the form of E-pharmacy will be a revolutionary step if planned and executed properly for which this study will be a good help as it aims to explore both the prospects and challenges of E-pharmacy. This study will also help Renata Limited to measure the profitability of making investments in this emerging business.

### **Statement of the Problem:**

This study aims to find out that though E-commerce is booming in Bangladesh at a remarkable rate and had covered almost all sectors then why E-pharmacy has not developed yet in our country and whether there is a future for this business sector or not.

### **Scope and Delimitation of the Study:**

This study aims to find out the prospects and challenges of E-pharmacy for which the specific respondents are buyers who purchase medicines. Due to time limitation the scope of this study is restricted within the respondents of Dhaka (Dhanmondi, Gulshan, Mohammadpur and Mirpur). Another reason is that a big portion of the sales in pharma industry comes from Dhaka so solid information regarding the purchase intention of buyers can be collected. Besides primary data collection; secondary sources will also be used to collect relevant information.

## **Objectives of the study:**

### **Broad Objective:**

The general objective of this study is to understand the opportunities and obstacles of E-pharmacy in Bangladesh.

### **Specific Objectives:**

- To analyze the present trend and opportunities of E-pharmacy in Bangladesh.
- To examine the barriers of E-pharmacy in Bangladesh.
- To find out the perception of people about E-pharmacy.
- To study the regulations and limitations of E-pharmacy in Bangladesh.
- To find the essential growth factors of E-pharmacy in Bangladesh.

## **Literature Review:**

Online pharmacies have emerged as part of a general increase in reliance on the Internet for health information and treatment. The majority of industry leaders agree that Internet pharmacy brings potential value to the consumer and justifies its place in the market. Pharmaceuticals being a large industry and the overall cost of prescription drugs spiraling upwards, these pharmacies seemed like an ideal niche for an e-health venture. Their Web servers could quietly provide cheap drugs to millions at any time of the day or night. (Ferdous and Ishtiaque, 2013).

Now a day's buying a medicine online is common practice across the globe, because buyers are used to order medicines through a click of a button rather than taking a trip to a drug store. Such online websites sell everything from prescription drugs to health related products. Most of such stores are legal outlets that safeguard all traditional procedures related to drug prescription. That is why most buyers are confident about dealing with these stores. (Jain, Tadvi and Pawar, 2017).

Online pharmacies today are the need of the hour. The economy is growing at a very fast pace and with it is growing the prosperity of the country. Hand in hand is also growing changing lifestyles, changing disease patterns and a growing ageing population. In the growing hoard of technocrats and professionals, we also have growing diseases like obesity, diabetes and heart disease. The income levels are going up and the health scores are coming down. An inverse relationship is observed between the two in most cases. Apart from this chronic diseases are also on the rise. For sustainable growth and development of the country, a healthy population is the need of the hour.( Basu and Shenbagaraman, 2016).

The biggest advantage of online pharmacies is obviously, the convenience factor. These pharmacies allow one to buy all the medications one wants, pay for these online and have them delivered to one's home. These packages can be delivered to any convenient location. Payments can be made by credit card or several other payment options. Besides, an online pharmacy allows consumers to purchase drugs that they would have been embarrassed to purchase otherwise. Also, online pharmacies tend to offer their customers fabulous discounts and special offers on purchases. For example, those who purchase bulk quantities of a single drug may get some free medicines. Another important factor that attracts consumers to online pharmacies is the privacy and confidentiality in the acquisition (and ensuing consumption) of pharmaceutical products. Pharmaceutical products that may inculcate consumer anxiety, such as personal quality-of-life pharmaceuticals (e.g., Viagra or birth control pills), may be purchased via online sites from the privacy of one's home, reducing the anxiety or embarrassment of using traditional pharmaceutical channels (Erdem and Chandra, 2003).

Being a completely new concept, the online pharmacy has been facing many challenges. Firstly the cost of delivery had to be absorbed or added to every sale. Since quantities of prescription drugs are usually not large, little efficiency was possible for home deliveries. In addition, many people obtain prescription drugs only when they become ill, and need medication right away. For these customers, even overnight delivery represents an intolerable delay. The regulatory challenges that arise from the online practice of pharmacy and from the practice of medicine facilitated by the online pharmacies include professional practice standards and consumer protection concerns, as well as health care fraud and abuse issues. ( Ferdous and Ishtiaque, 2013).

With e-commerce growing at a very fast pace in the country, it is high time we should be able to promote easy, affordable and timely healthcare to various corners of the country. With the government working in tandem with the players in the industry, we hope to have a prospective growing industry in days to come. ( Basu and Shenbagaraman, 2016).

Bangladeshi health sector does not have a strict system for prescription drugs like antibiotics or specialized medicines. So it is going to be very difficult for an online drugstore to operate if it is based on these drugs. It will be wise for the pharmacies if they start their E-business by selling over the counter medicines like pain killers, Antacids etc. that are sold in a large scale all over the country. Expensive and exclusive drugs like that used in cancer treatments can be another sector that can be profitable for E-commerce. These medicines require to be kept in certain temperature and can be delivered when needed by the customers if they order online. Products other than medicines that are sold by big pharmacies like health and beauty products, disposable diapers, health equipment and machines like wheel chairs, nebulizing machine for serious asthma patients, blood pressure checking machines and also birth control goods and equipment can be sold online, too. The rules and regulations on E-commerce and E-markets in Bangladesh are still on construction and need a lot of change and improvements to build up a favorable infrastructure for successful E-commerce implementation here. Therefore, extensive work and research need to be done in this sector. Proper market research and an extensive campaign promoting E-pharmacies are necessary for the initial success of an online drugstore. ( Ferdous and Ishtiaque, 2013).

### **List of Variables and Hypothesis:**

#### 1. Convenience:

Online stores offer greater convenience because these are one stop shops for a variety of products. The access to written product information at these sites is way easier to obtain than in traditional storefront pharmacies. If consumer find it physically difficult to make it to the pharmacy, live in a remote rural area, or have a busy schedule, online and mail-order pharmacies enable them to avoid travel and can save their time. Many online pharmacies will also remind consumers when they can order a refill to help them to maintain their regimen. Hence consumers prescription can be submitted at any time, there is no need to rush to the pharmacy during

business hours, they do not have to wait in any long lines, and refills can be set up to be sent automatically. ( Jain, Tadvi and Pawar, 2017).

**H1:** *If E-pharmacies act as a one-stop solution for all healthcare needs then it is likely to have a positive impact on the customer's purchase decision of online medicines.*

## 2. Privacy:

Consumers privately and conveniently order for medicines from online chemist stores as well as get to avail free delivery. Consumers may feel more comfortable purchasing their medication online, or simply want to speak to someone about prescriptions and their health online or over the phone rather than in person. However, to prevent the use of buyer's personal information for unauthorized purposes, it is required to make sure the pharmacy has an appropriate privacy policy. (Jain, Tadvi and Pawar, 2017).

**H2:** *If E-pharmacy has strong privacy policies then it is likely to have a positive impact on the customer's purchase decision of online medicines.*

## 3. Age:

According to industry expert's opinion obtained from Renata Limited employees when it is the matter of accessing internet age plays a big role especially in our country where most of the internet users are from 18 – 65 years and sometimes beyond it. But when it comes to online purchasing then mostly young and middle age individuals prefer that.

**H3:** *Young and middle age customers are more likely to purchase medicines online.*

## 4. Working People:

With rising education levels and growing workforce of the country, time is a very important factor for individuals in today's world. E-commerce allows the customers to shop from the comfort of home or office and save quite some amount of time, energy and money. With the advent of mobile internet, this has become even easier. Ecommerce is growing at a very fast pace

in the country. Online pharmacies today have emerged as a result of the same as have the other formats of online retailing. ( Basu and Shenbagaraman, 2016).

**H4:** *Working individuals are more likely to purchase medicines online.*

5. Price:

Drug shopping on the internet helps a buyer to save money. Several surveys conducted by research bodies have shown that as much as one third the price can be saved on prescribed medicines if they are bought online. Buyers are also able to find the best prices only at these stores. Hence, one of the primary benefits people cite for using an online pharmacy is price. (Jain, Tadvi and Pawar, 2017).

**H5:** *If medicines are found at a lower price at E-pharmacy then people are more likely to purchase medicines online.*

6. Delivery Time:

While ordering routines can technically be handled via the Internet, the issue of physical delivery remains. There are two concerns. One is that delivery does not take place immediately - online pharmacies must also invest in delivery points to be able to guarantee delivery on time. The second concern is safety of delivery whereby packages are sent to homes by mail or by express delivery without the certainty that the customer is actually there and without being able to control exactly what happens to the package at delivery. Regular mail delivery does not ensure that packages of pharmaceuticals will arrive undamaged, and in some countries either hot or extremely cold weather may cause changes to the product. (Basu and Shenbagaraman, 2016).

**H6:** *E-pharmacy with 24 hours fast delivery service is likely to have a positive impact on the customer's purchase decision of online medicine.*

7. Family members:

According to the industry expert's opinion obtained from Renata Limited employees it is seen that in Dhaka city mostly people live in nuclear families where almost all are very busy in their daily routine lives and often do not get the time to even buy necessary items for themselves.

**H7**: *People with limited family members are more likely to purchase medicines online.*

8. Quality assurance:

By failing to require a prescription, one could take medication that is not appropriate for her. It could make sick or kill you. Some illegal online drug stores deal in dangerous contaminated, counterfeit or outdated drugs that can lead to dangerous drug interactions.

**H8**: *Fear of fake products is likely to have a negative impact on the customer's purchase decision of online medicine.*

9. Purchase rate of medicine:

As per industry expert's opinion obtained from Renata Limited employees, the people who buy medicines more frequently are more in need of E-pharmacy because they need to buy medicines more often but it happens that they do not get ample time to do that.

**H9**: *Frequent medicine purchasers are more likely to purchase medicines online.*

10. Ease of use:

Ease of use refers to the measurement of how easy the finished product is to be used by its intended users. According (Lim, Osman, Salahuddin, Romle, & Abdullah, 2016), Online purchase intention significantly positively influence online shopping behavior. (Ahmed, Islam, & Qaom, 2015) Found that 'Accuracy of delivered product as described in web' is considered important by 94% of the sample customers. Also, 'order processing time' is considered crucial by 84% of respondents. Both of these factors can be considered part of Ease of use. As the point of contact for customers with the E- medical store is through the official website so it is crucial that it has a user-friendly interface so that the customers find it effortless to place their order and tend to come back for more service.

**H10**: *User-friendly website is likely to have a positive impact on the customer's purchase decision of online medicines.*

11. Income level:

According to the industry expert's opinion obtained from Renata Limited employees it can be seen that in Dhaka city mostly upper middle class and upper class people tend to buy things online. Income level plays a big role in consumer's purchase decision.

**H11:** *Middle class and Upper class people are more likely to purchase medicines online.*

12. Payment options:

As per the industry expert's opinion obtained from Renata Limited employees it is seen that normally online stores of other products have flexible payment options like cash on delivery and credit card payment facilities too which acts as a lucrative approach to attract customers.

**H12:** *Flexible payment options are likely to have a positive impact on the customer's purchase decision of online medicines.*

### **Mathematical Model:**

$$Y = \alpha + \beta X_1 + \beta X_2 + \beta X_3 + \beta X_4 + \beta X_5 + \beta X_6 + \beta X_7 + \beta X_8 + \beta X_9 + \beta X_{10} + \beta X_{11} + \beta X_{12} + e_i$$

Where Y = Consumer's purchase decision of online medicine.

X1 =Age

X2 =Number of family members

X3 =Working people

X4 =Purchase rate of medicine

X5 =Price

X6 =Income Level

X7 =Convenience

X8 =Delivery Time

X9 =Quality assurance

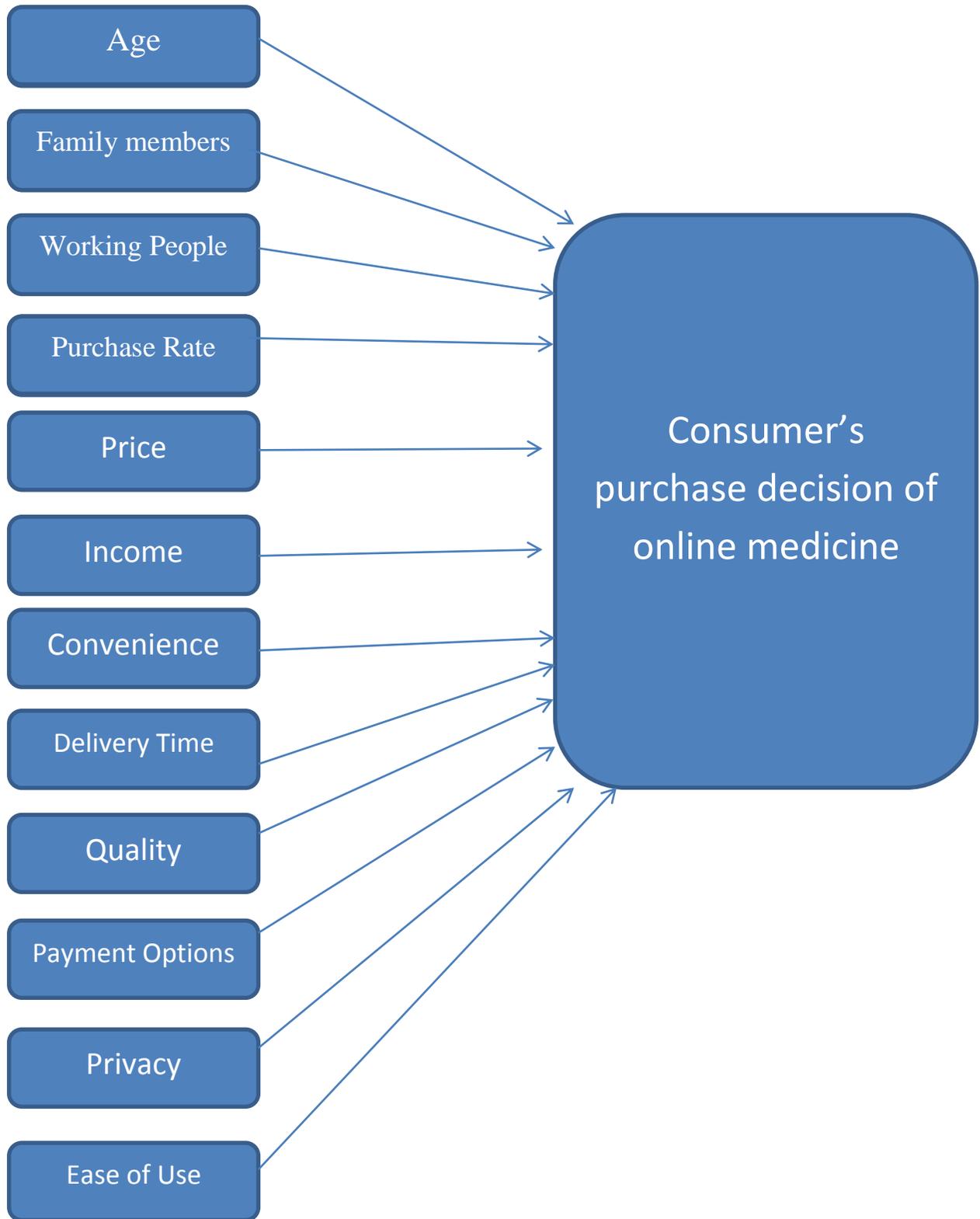
X10 =Payment Options

X11 =Privacy

X12 =Ease of Use

$e_i$  = Error

**Graphical model:**



## **Methodology:**

This study is an exploratory research and a sample of 76 respondents (medicine purchasers) in some areas of Dhaka (Dhanmondi, Gulshan, Mohammadpur and Mirpur) was reached through online survey (Google Form) and face-to-face interview. These respondents were chosen through simple random sampling. Among those respondents 89.5% was between 18-28 years old and others were between 29-60 years. Most of the respondents were students (78.4%) of various universities while the rest were from several other professions. A sample of varying age and occupation groups were taken to maintain a versatile model. Of the total respondents 65.8% were female, 34.2% being male.

## **Analysis and Results:**

A Linear Regression analysis is done to find the relation between the hypothesis and consumer's purchase decisions of online medicine. The R Square value determines the overall strength of the Regression model. As it is seen in the table, the R Square value is above (0.5) which means that the model is moderately strong.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.814 <sup>a</sup>	.663	.374	.541

a. Predictors: (Constant), EU, Price, Privacy, Payment, FM, Income, Convenience, Age, WP, TQ, DT, MP

As shown in Table below, it can be seen that only eight of the hypotheses have met a confidence level of 95% and above. These variables being working people, Price, Convenience, Delivery Time, Quality Assurance, Payment options, Privacy and Ease of Use have a somewhat relationship with Consumer's Purchase decision of online medicine.

It can be seen that working people has a direct relation to consumer's purchase decision with a coefficient of .021 meaning working people are more likely to buy medicines online.

It is also seen that price has a direct relation to consumer's purchase decision with a coefficient of .028, meaning that if prices are low then people are more likely to buy medicines online.

It can be seen that convenience has a direct relation to consumer's purchase decision with a coefficient of .032, meaning if E-pharmacies act as a one-stop solution for all healthcare needs then it is likely that people will buy medicines online.

It is seen that delivery time has an inverse relation to purchase decision with a coefficient of .018, meaning that if the delivery time of ordered medicines are less then more people are likely to purchase medicines online.

It can be seen that quality assurance is inversely related to purchase decision of online medicines with a coefficient of .044 meaning the more people will be afraid of fake products then it will have a negative impact of purchase decision.

It can also be seen that flexible payment options is directly related to purchase decisions with a coefficient of .025 meaning that the more flexible the payment options are, the more likely it is that people will buy medicines online.

It is also seen that privacy policy has a direct relation to purchase decision with a coefficient of .016 meaning that the stronger the privacy policy of E-pharmacies the more likely it is that people will buy medicines online.

It can also be seen that ease of use has a direct relation to purchase decision with a coefficient of .012 meaning that the more likely it is that people will buy medicines online if the websites for the E-pharmacies are user-friendly.

The rest of the variables have a confidence level below 95% making them unreliable. These variables do have a relation with consumer's purchase decision of online medicines but it's not quite as significant.

The variables Age, Income level, Family members and rate of medicines purchase have a relation with the purchase decision of consumers of buying medicines online but they are not significant enough.

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.184	1.277		.144	.084	-2.554	2.923
	Age	.520	.329	.463	1.578	.137	-.186	1.226
	FM	-.092	.147	-.132	-.629	.539	-.407	.222
	WP	.275	.176	.362	1.561	.021	-.103	.653
	MP	.063	.190	.096	.332	.745	-.345	.471
	Price	.038	.146	.056	.263	.028	-.274	.350
	Income	.068	.151	.105	.452	.658	-.255	.392
	Convenience	.187	.210	.215	.891	.032	-.263	.638
	DT	.068	.213	.092	.321	.018	-.388	.524
	TQ	-.041	.206	-.054	-.201	.044	-.482	.400
	Payment	-.086	.204	-.113	-.424	.025	-.523	.351
	Privacy	-.002	.130	-.004	-.019	.016	-.281	.276
	EU	.416	.317	.315	1.312	.012	-.264	1.095

a. Dependent Variable: CP\_Mean

## **Findings:**

### Prospects of E-pharmacy:

Bangladesh is a developing nation and is has turned a digital oriented country in a very short time. The economy of the country has improved more or less in the past decade giving more disposal income to the population. As a result it is seen that almost everyone has a mobile phone and especially in the Dhaka city the use of smartphones and internet is massive and with the emergence of 3G and 4G network facility in our country the use of internet has increased in a rapid way making it a daily necessity rather than a luxury. Therefore, it is seen that every aspect of daily routines of people is somehow influenced by the internet. Whether it is buying clothes, electronics, shoes or even groceries all can be bought through online stores. Similarly, purchasing airplane, train or bus tickets to hotel reservations and banking procedures are done through online process. So it is the correct time for the development of E-pharmacy as medicines are too an important necessity of daily life. Moreover, the number of working people both male

and female are quite high in Dhaka and it is quite obvious that they have to lead very busy life so E-pharmacy will be a huge relief for them especially who needs to buy medicines more frequently. Another trend that has emerged in the last few years is the bloom of start-ups especially by the young entrepreneurs giving a huge opportunity for some innovative and dynamic people who can be the reason of establishment of E-pharmacy in Bangladesh especially in Dhaka city. The consumers of Dhaka are quite price sensitive and the rate of diseases are even high too in the city so if they can find medicines at a lower price then it is very likely that a huge number of people will buy medicines from online drug stores. Another blessing at present is the use of social media. Almost everyone has social media account be it Facebook, Instagram, Twitter or any other so it becomes very easy and affordable to do promotions on these social media platforms which reaches thousands of people. People are more service-oriented now days so if these online pharmacies offer the best service then they are likely to get more loyal customers which will add up to their sustainability. There are huge possibilities and opportunities for E-pharmacy to bloom especially in Dhaka but it will take some time as it is a new concept and the consumers will adapt to it slowly like they have to other E-commerce businesses.

#### Challenges of E-pharmacy:

There is a perception in people's mind that these online stores do not have any processes of medical supervision or physical evaluation in place so there is a lack of physical evaluation and also fear that if at all there is any such process, these are not performed by a licensed health professional. According to them online pharmacies do not have the personal touch that a physical pharmacy has. One can not talk to the pharmacist face-to-face to get advice about the side effects on the drug interactions thus many feel inhibitions to buy medicines online.

Many of the benefits to using a local pharmacy reflect the disadvantages found in an online pharmacy. Some of these include being sure a person is watching for any negative drug interactions, access to someone if one has questions about a medication, and the ability to get medications the same day they are prescribed.

It is seen that there are many websites that operate legally and offer convenience, privacy, and are safe for purchasing medicines. But there are also a lot of "rogue websites" that offer to sell potentially dangerous drugs which have not been checked for safety or effectiveness. Even if a

rogue site may look professional and legal, it could actually be an illegal operation. These rogue sites often sell unapproved drugs, fake drugs that contain the wrong active ingredient and dangerous ingredients. Counterfeit drugs may be copy products that can be difficult to even identify. This deliberate and fraudulent practice of counterfeiting can apply to both brand name and generic products, where the identity of the source is often mislabeled in a way that suggests it is the authentic and approved product.

According to the drug policies of Bangladesh the medicines are sold at a similar price everywhere and if the E-pharmacies want to charge less then the regulatory body needs to modify some of the laws and bring some new ones for the efficient run of the E-pharmacies.

Delivery time is one of the common problems that almost all E-commerce business in the country needs to face. Being a heavily populated there is a lot of traffic jam and it is quite impossible to reach somewhere at the designated time but the bigger challenge for E-pharmacies to deliver the drugs properly because many medicines are sensitive to weather and needs to be carried in a special way which increases the costing. Moreover, there may be times when the orders are quite urgent it is a matter of life and death and at that time doing proper delivery will be a task.

Privacy is also an issue that makes people thinks online pharmacies are not safe. They assume that these online stores might leak their personal information or facts related to their health issues that are very confidential.

Another problem is making a user-friendly website because often these websites do not work properly so more IT people should be involved in maintaining them. Most of the medicines can not be sold without prescriptions so it becomes a hassle for the customers to upload the prescription which is then checked by a pharmacist and after that the order is confirmed which makes the whole process time consuming.

Another challenge is medicines are not allowed to be advertised in the traditional way like television, billboards, magazine and newspaper so the only way these e-pharmacies can do promotion is by using social media which makes the target market constricted.

## **Recommendation:**

E-commerce is at a blooming stage in our country and E-pharmacy specifically has not been explored much so there is a huge opportunity for growth and development in this sector as the market has great potential. The internet users are also huge and online shopping is trend right now so the E-pharmacies should plan wisely to capitalize on this lucrative group of customers. Even the rate of diseases are quite high in our country so the chances of the business becoming successful is very and people should start investing in it because as more people will be involved the industry will become more innovative and dynamic in nature. As it is a new concept and is not that established right now but has a great future ahead if the people planning to get involved handles it carefully.

Whenever a new something is being started then it is bound to face challenges so similarly E-pharmacies has a quite a few obstacles too. The main problem is to reach the target audience as the traditional way of marketing is not possible and only social media is not enough and as per the survey not many people are aware of the concept of E-pharmacy so they need to come up with more innovative ideas and promotional plans. Another problem is making people take service from online pharmacies rather than the local ones because they are so much habituated to these physical pharmacies that they feel hesitant in using this virtual medical store. Even they are many people who are afraid of buying medicines online because they think that these E-pharmacies are more likely to sell fake or harmful medicines which can be dangerous. So the people of E-pharmacy needs to articulate such plans that will help in breaking this false mindset of people and bring them out from the habit of using local pharmacies only. Not everyone is going to buy medicines online but there is a nice target market which is very profitable if explored correctly.

## **Conclusion:**

This study was aimed to find out the prospects and challenges of E-pharmacy in Bangladesh especially in Dhaka city and after the completion of the research it can be concluded that Bangladesh is a developing country and has a huge number of internet users who are already involved in many other E-commerce businesses and the amount of diseases and patients are quite a lot so the concept of E-pharmacy is very adaptable for the present time and can be one of the successful businesses because both the pharmaceuticals and E-commerce are flourishing sectors. Even in the survey it has been found that people do think that there is a huge need of E-pharmacy in Dhaka especially due to the hectic life of the citizens. Among all the variables working people, price, convenience, delivery time, quality of medicines, payment options, privacy and ease of use are the ones which highly influence the purchase decision of online medicines. This purchase decision helped to determine the prospects and challenges of this sector like the opportunity of E-pharmacy is quite a lot and if proper planning is executed then it will a huge success in the long run. However there are some challenges too like influencing their purchase decision and making them trust the service but again if correct people and planning is involved then these obstacles can be overcome too. Therefore, more people should invest in this rising sector of E-pharmacy.

## **Limitation and Further Research:**

This research paper has some limitations. As the survey on most of the respondents was done online, it was a great challenge to ensure the validity of the responses. It was also very difficult for us to make the respondents understand what we were actually trying to find out, as we were not physically present while surveying. The biggest limitation of this study is time for which the coverage area has been limited to Dhaka. As this E-pharmacy business is very new in Bangladesh and has not been explored much so another constraint for this study is reliable resources and sufficient amount of secondary data. Again, the sample size was only 76 respondents, which is not that much significant in terms of all medicine purchasers in Dhaka city who could be potential buyers of E-pharmacy and might not give proper representation of the actual situation. This research paper is done on the topic- 'Prospects and challenges of E-pharmacy in Bangladesh: A perspective on Dhaka City'. This topic simply identifies the

opportunities and challenges that E-pharmacy will be facing in the near future. This study will also help companies who are interested to measure the profitability of making investments in this emerging business. This study is also important from the academic perspective. This study recognizes the need for further research in this field. So, further research is needed for better understanding.

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## **Appendix:**

### **Questionnaire for Survey**

1. What is your age?

- 18-28
- 29-39
- 40-50
- 51-61
- 62-above

2. What is your gender?

- Male
- Female

3. What is your occupation?

- Student
- Service Holder
- Businessman
- Other

4. How many members are there in your family?

- Two
- Three
- Four
- More

5. How familiar are you with the term 'online medical store' (E-Pharmacy)?

- Extremely familiar
- Very familiar
- Somewhat familiar
- Not so familiar
- Not at all familiar

6. Do you think E-pharmacy is something people of Dhaka need right now?

- Definitely need
- Probably need
- Neutral
- Probably don't need
- Definitely don't need

7. People with limited family members are more likely to purchase medicines online.

- Extremely likely
- Very likely
- Somewhat likely
- Not so likely
- Not at all likely

8. Only middle class and upper class people are likely to buy medicines online.

- Extremely likely
- Very likely
- Somewhat likely

- Not so likely
- Not at all likely

9. Online medical stores are a great relief for working people.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

10. Frequent medicine purchasers are more likely to purchase medicines online.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

11. Online pharmacies should charge less than market price.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

12. E-pharmacies must act as a one-stop solution for all healthcare needs.

- Strongly agree

- Agree
- Neutral
- Disagree
- Strongly disagree

13. E-pharmacies should have 24-hours ordering and delivery service.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

14. Online pharmacies are likely to sell fake or harmful products.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

15. E-pharmacies should have both cash on delivery and credit card payment options.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

16. E-pharmacies are likely to leak personal or financial information.

- Extremely likely
- Very likely
- Somewhat likely
- Not so likely
- Not at all likely

17. Having user-friendly websites for placing order is likely to attract more customers.

- Extremely likely
- Very likely
- Somewhat likely
- Not so likely
- Not at all likely

18. How likely are you to recommend E-pharmacy service to others?

- Extremely likely
- Very likely
- Moderately likely
- Slightly likely
- Not at all likely

