E – COMMERCE ADOPTION BY MICRO SMALL AND MEDIUM Sized ENTERPRISES OF BANGLADESH

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ABSTRACT

The economy of Bangladesh is a rapidly developing market-based economy. The market is heavily dependent upon brick and mortar stores which limit the growth prospects especially that of micro, small and medium sized enterprises to a large extent. At the same time it is a global fact that these enterprises provide lot of employment opportunities for any country and give a strong foundation to maintain steady and fast development of national economy. Adoption of electronic commerce by these enterprises will help expand business and generate more employment. This paper analyzes the problems existing in the electronic commerce set up of micro, small and medium sized enterprises of Bangladesh and also discusses few works related to e-commerce and digital banking in Bangladesh carried out by different researchers. A solution for adoption of electronic commerce by micro, small and medium sized enterprises of Bangladesh is proposed which possibly will be contributing to the positive growth of micro, small and medium sized enterprises of the country.

Keywords: Electronic Commerce; Micro, Small and Medium Sized Enterprises; Problems; Strategies.

INTRODUCTION

E-commerce in simple terms is the capability of doing business with the help of internet, in which the sellers and buyers conduct various business activities without meeting each other. E-commerce combines the resources of information systems with the reach of network connectivity to directly link the key business constituents - Customers and Businesses [1]. The history of e-commerce dates back to the early 1990’s but only in the last few years it has made a strong foothold in the Indian sub-continent.

The micro, small and medium sized enterprises (MSMEs) sector plays a crucial role in both the industrial and economical growth of a country. The major advantage of the MSME sector is its employment potential at a low capital cost. In any developing nation an enormous segment of the working population works in this sector. Globally there are examples of lot of companies which have
increased their business manifold on adopting the e-commerce platform. These companies apart from having traditional brick and mortar stores have diversified to e-commerce platform and have performed well. Also there are lot of successful companies which only have an e-commerce presence.

This paper is organized as follows. In section 1 a discussion about various features of e-commerce is made. In section 2 a discussion about Bangladesh’s economy and industry follows. In section 3 a brief discussion about related work is made. In section 4 strategies to be adopted by MSMEs is pointed out. In section 5 associations between The World Bank and Bangladesh Government is highlighted. Finally in the conclusion the need of electronic commerce for micro, small and medium sized enterprises of Bangladesh which will prove to be highly beneficial for the country’s economic growth is emphasised.

**Section 1: Various features of E-Commerce**

1.1. **Classification**

   Electronic commerce can be broadly classified into the following categories [1]:

   1.1.1 **Business to Business**

   This category of e-commerce helps inter-organizational interaction and transaction. It requires two or more business entities interacting with each other directly or through an intermediary. Business applications of this type can be used to facilitate almost all types of interactions among organizations such as inventory management, channel management, order fulfilment and delivery. This category is further sub divided into supplier-centric, buyer centric and intermediary-centric.

   1.1.2 **Business to Consumer**

   This category of e-commerce helps consumers the capability to browse, select and buy merchandise online from a very wide variety of sellers at better prices. This model has been utilized mainly by on-line internet based stores and small businesses trying to surpass entry barriers. Existing business organizations may use this model by making a web presence and expanding the market space and revenues by utilizing the internet as a new channel to do business with customers.

   1.1.3 **Consumer to Business**

   In this model the consumers get a choice of wide variety of products and services. They also specify the range of prices they are willing to pay for a particular product or service. As a result there is a reduction in bargaining time, increase of flexibility and ease of operation at the point of sale for both the merchant and the consumer.

   1.1.4 **Consumer to Consumer**

   In this model consumers get opportunity of trading products or services among themselves through internet. Products that are sold through this model are mainly small gift items, craft merchandise etc. This model is a platform for consumers to transact goods or services with other consumers present on the internet.

   1.1.5 **Business to Government**

   In this model transaction takes place between business organizations and government. The transactions are guided by much stricter rules and regulations as it should be when dealing with the government.
1.2. Benefits of Electronic Commerce

Any business organization intending to join the e-commerce business must consider the short term and long term benefits that the companies will get on entering the e-commerce territory. The main benefits of e-commerce are considered to be the following [2]:

1.2.1 Web Presence

Web presence or having an own website makes a company visible across geographical boundaries. This for a company is an entry to the virtual marketplace. This offers tremendous advantages to companies of any size and sector. Web sites can help a company by providing timely and relevant information to customers about the products and services that are offered. One of the important benefits that a company gets out of a web presence is image enhancement, larger influence of the brand and expansion of overseas market as well as national market.

1.2.2 Supply Chain

E-commerce helps companies in refining their supply chain to a large extent. A proper supply chain can help in reducing costs while ensuring the customers get right quality of product at the right place and at the right time and at the least cost. Channel partners work together in an environment of trust and results are seen through reduction in costs, proper maintenance of stocks in the inventory and cycle time reduction. Refinement of supply chain can also be possible over traditional route but e-commerce provides far too many benefits over the traditional route.

1.2.3 Enhanced Customer Service

E-commerce also provides lot of opportunities to enhance customer service. As for example a bank customer who has an online access to his account is spared the burden of visiting the bank branch and carrying out transactions in the traditional way. This saves a lot of time and results in improved customer service and satisfaction. Needless to say this is also beneficial for the bank itself.

1.2.4 Competitive Pricing

Buyers and sellers come together in electronic marketplace and it is a win-win situation for both. E-commerce offers the benefit of online ordering of goods and online payment options. Buyers get competitive pricing and sellers do not have to build brick and mortar stores. This results in direct reduction of costs of the products and the companies pass on to this benefit to their customers. MSME segment players can make their bids online. When it comes to bidding or quoting prices of products online in an electronic marketplace constraint of bidding in the traditional way are overcome. This may result in increase in business for many organizations.

1.2.5 Internal Business Processes

E-commerce initiative can be linked with the internal business processes of an enterprise as well. Companies can link the e-commerce initiative with their enterprise resource planning, supply chain management and customer relationship management initiatives through a seamless integration of business processes and providing great value to the end customers. This initiative if taken properly will also help companies to stay ahead of the competition.

1.3. Function of Electronic Commerce

E-commerce allows companies to be available 24 hours a day throughout the year to their prospective and existing customers. So it can be said that e-commerce breaks away from the limitation of time and space when it comes to reaching the customers or for customers looking for prospective suppliers of goods and services. In short which means transactions can be conducted at
any time and at any place. This improves the companies operating efficiency and global competitiveness. Additionally the advantages of being paperless to a large extent and low operating costs make up for the deficiencies of MSMEs in capital, technology, scale and image. This in turn creates more chances for them to develop [3]. One of the major benefits of an e-commerce initiative which is in perfect synchronization with E.R.P, S.C.M and C.R.M initiatives of a company is maintenance of proper inventory levels so that the customer can get the quality product at the least cost. E-commerce has a distinct function in reducing cost of MSMEs. The following are some of the various categories of expenditure of MSMEs that can get reduced [2]:

i. Raw materials procurement cost.
ii. Inventory cost.
iii. Production cost.
iv. Promotion as well as export marketing cost.
v. Cost related to retaining present customers.
vi. Cost related to identifying prospective customers.
vii. Product information dissemination cost.
viii. Communication costs within the enterprise.
ix. Communication costs with external entities.

1.4. Problems of Adopting E-Commerce by MSME

Though there exist lots of benefits of e-commerce there are some areas of concern in the adoption of e-commerce by MSMEs that needs to be addressed. Those areas are mainly [3]:

1.4.1 Security

The security problems still remain the main factor that affects the development and widespread use of e-commerce. To do transactions in the open internet safe transmission of data is the most important factor and this factor plays a major role in popularizing electronic commerce. Surveys about the application prospect of e-commerce clearly point out that the majority of people express their fear of personal information being lost or infringed because of the invasion of hackers. Therefore, security or the lack of it is an area of concern that has become the biggest obstacle to the development of e-commerce in developing countries. The successful operation of e-commerce involves successfully addressing many types of security problems. Some of the security problems are capital security, information security, commodity security and business secrets. The most important among which is information security safeguarding information about business, clients etc. In order to popularize ecommerce it is very important that the security issues are addressed properly.

1.4.2 Lacking Strategic Plan

The management in many micro, small and medium-sized enterprises does not understand the power of internet as a means to boost business. The management leaders have a weak sense of using information, not fully recognizing the importance of information in the era of knowledge economy, or only partially understanding how to conduct e-commerce such as considering e-commerce as surfing the internet or simply establishing a website, without having the related management foundation. Thus e-commerce only stays on the surface of website construction. The e-commerce conducted by many micro, small and medium-sized enterprises tends to lack long term planning. E-commerce involves business transformation and different enterprises have different ways to develop e-commerce. In order to reap the benefits of internet the implementation of e-commerce in many micro, small and medium sized enterprises needs to be gradually realized, planned for a long time and implemented step by step. This can be done by making use of the internet to browse, collect and issue information, to establishing enterprise's own website and information platform, conducting
online purchase, and to setting up joint purchase platform of the trade and perfecting the management system of supply chain.

1.4.3 Lack of Talent

The managers of many micro, small and medium sized enterprises have not fully realized the revolutionary changes e-commerce has brought to business development and marketing methods and hence importance hasn't been attached to the cultivation of talents. As a result of which there is a lack of talents in e-commerce. To conduct e-commerce, the small and medium-sized enterprises need both technology and talents, and because of the lack of professional personnel and of innovation in the pattern of e-commerce, the micro, small and medium-sized enterprises are short of network-running experience, and superiority of ecommerce could not be given full play. Consequently many such enterprises engaged in ecommerce are not competent enough. The lack of professional personnel is the most important factor hindering the application of e-commerce in micro, small and medium-sized enterprises.

Section 2: Economy and Industry of Bangladesh

2.1. Economy of Bangladesh

The economy of Bangladesh is a rapidly developing market-based economy. Its per capita income in 2012 was estimated to be US$2,100 (adjusted by purchasing power parity). According to the International Monetary Fund, Bangladesh ranked as the 37th largest economy in the world in 2013 in PPP terms and 36th largest in nominal terms with a gross domestic product of US$419 billion in PPP terms and US$173.8 billion in nominal terms. The economy has grown at the rate of 6-7% per annum over the past few years. The growth potential of the economy has led to Bangladesh's inclusion in the Next Eleven (N-11) of Goldman Sachs and the Global Growth Generators countries. More than half of the GDP is generated by the service sector; while nearly half of Bangladeshis are employed in the agriculture sector. Other goods produced are textiles, jute, fish, vegetables, fruit, leather and leather goods, ceramics, ready-made goods etc [4]. Exports of textiles and garments are the largest source of foreign exchange earnings. Shipbuilding, pharmaceuticals and consumer goods manufacturing are important emerging industries, while the jute sector is re-emerging with increasing global demand for green fibres. Remittances from Bangladeshis working overseas, mainly in the Middle East, are another major source of foreign exchange earnings. Other important export sectors include fish and seafood, ceramics, cement, fertilizer, leather and leather goods, food products, software and IT services. Bangladesh has also made major strides in its human development index [4].

The land is devoted mainly to rice and jute cultivation as well as fruits and other produce, although wheat production has increased in recent years; the country is largely self-sufficient in rice production. The country's tea-growing regions, located in the eastern divisions of Sylhet and Chittagong, are among the major tea producing-areas of the world. Bangladesh's growth of its agricultural industries is due to its fertile deltaic land that depends on its six seasons and multiple harvests [4].

Transportation, communication, water distribution, and energy infrastructure are rapidly developing. Bangladesh is limited in its reserves of oil, but recently there has been huge development in gas and coal mining. The service sector has expanded rapidly during last two decades and the country's industrial base remains very positive. The country's main endowments include its vast human resource base, rich agricultural land, relatively abundant water, substantial reserves of natural gas and coal, major seaports at Chittagong and Mongla, and its central strategic location at the crossroads of the two large burgeoning economic hub groups of SAARC and ASEAN [4]. Goldman Sachs recognized the Bangladeshi economy as one of the Next Eleven Economy.
Citigroup identified Bangladesh as a 3G country with significant potential to generate global growth [5].

Section 3: Some Related Research

In a study on B2C websites and traditional store of Bangladesh Shahanara Khanam [6] pointed out that though the online stores (B2C websites) which provide services in Bangladesh are user-friendly and have excellent features for selling and buying but the prices are very high compared to the traditional store which may de-motivate customers for online shopping. However appropriate initiative may advance online shopping as well as Ecommerce situation in Bangladesh [6].

Abedin, Mohammad Zoynul, and Md Mahabub Alom [7] in their study examined the extent to which digitalization has affected the organizational structure of Bangladeshi banks. More than 120 banks, those constitute private banks, foreign banks, Islamic banks and nationalized banks, were selected for the study from central city of Bangladesh. Interview was conducted for middle and top level managers and questionnaire was developed and administered to the other staffs using a five-point Likert scale to determine the attitudes and opinions of staffs on the effects of digital revolution on the organizational structure of the banks. The study found that standard operating procedures, policies, culture, surrounding environment and management decisions were all affected by digital revolution. The study concluded that digital revolution has changed the course of history in the banking industry of Bangladesh leaving far reaching effects and implications on both the organizational and industrial structure [7].

They also pointed out that it is very important for banks and their staffs to effect proper restructuring that will facilitate optimal utilization of the benefits provided by the revolution. All banks should influence their customers to use digital banking and should improve existing digital banking process, put concentration on digital banking services more and more. The charge/fees of digital banking services should be kept at reasonable rate or lower than other distribution channels in order to popularize digital banking in Bangladesh [7].

Debnath, Nitai Chandra, and Abdullah Al Mahmud [8] in their assessment of the e-commerce environmental forces of Bangladesh recommended some steps and measures that should be undertaken by the policy makers and business stake holders for the full fledged implementation and development of e-commerce in Bangladesh. Their recommendations are:

- There should be an EFT (Electronic Fund Transfer) Gateway, which will connect all finance and banking institutions, ATMs, POS and related websites. Such Gateway will speed up the transactions among banks, commercial institutions. This sort of infrastructure needs to be implemented on priority basis.
- A CCG (Credit Card Gateway) should be established. A credit card gateway is a server that makes online credit card transactions safe (Skinner, 2005). The software protocols in the CCG use the information provided to check for availability of funds and to make sure the credit card is not expired, lost or stolen. This takes only seconds. When the transaction is approved a receipt is generated for the customer, and the funds are transferred to the vendor's bank account through EFT.
- Unlicensed radio frequencies should be made available on demand and VSAT operating licenses should not limit the bandwidth.
- To improve banking mechanism, Bangladesh government should compel the banking sectors to automate their operation and going online by a specific period. The control of foreign exchange should be liberalized gradually, and easier issuance of International Credit Cards should be allowed, banks should take effective steps here.
Business associations and organizations should be made aware of the benefits of e-commerce. Business organizations like FBCCI, DCCI, MCCI, and BGMEA can play a significant role in promoting e-commerce in Bangladesh.

Political commitment to improve governance and institutional strength is essential for successful application of e-commerce.

Last but not least, National ICT policy, 2002 and enactment of the ICT Act, 2005 is required to enhance the implementation of e-commerce.

They finally observed that only the internet connection is not enough for the development of e-commerce. The whole environment is essential for the development, maintenance and growth of e-commerce. The analysis of the environmental forces reveals that the prevailing situation is encouraging for the implementation of e-commerce in Bangladesh. The macro and micro economic situation is favourable to e-commerce. The synopsis of the legal and regulatory statutes indicates that Bangladesh has made significant progress in facing the challenge of embracing e-commerce in due course of time. ICT infrastructure already meets the criteria for establishing the e-commerce. Bangladesh is rich in ICT human capital and continuously producing graduates to meet the demand of the next century. Even Bangladesh doesn’t require any foreign expert to implement, execute and maintain ecommerce infrastructure. Despite the encouraging state of implementation, e-commerce can never be deployed until and unless an Electronic Fund Transfer (EFT) Gateway and a Credit Card Gateway (CCG) have been established. These two Gateways will eliminate the security issues in ecommerce and enhance the e-transactions. In addition to that, creating awareness among the citizens and the business organizations is essential for the implementation and growth of e-commerce in Bangladesh [8].

Hossain, Md Akbor, et al [9] observed that in the future e-commerce may become totally mobile based. In Bangladesh E-commerce may also become a very powerful business mechanism but Bangladesh will have to overcome the problems with poor network connectivity and electronic payment issues. The problems identified by them are:

- Security problem
- Confusing checkout process
- Customers can’t find products
- Customers can’t touch and fill a product
- No sales staff means any chance of up-selling
- Language barrier.

Regarding the identified problems the following solutions were proposed [9]:

- Merchant needs to ensure the platform employs strong encryption for payment processing and customer data retention.
- E-commerce platform should always have a visible running total of purchases prominently displayed during the customer experience.
- E-commerce platform must support the ability to present the customer with nested categories as well as a search box.
- An e-commerce platform should also support the ability to attach multiple pictures to a product catalogue page, allowing the consumer to view the product from multiple angles.
- E-commerce platform needs to be able to associate products with related and complimentary products. The system should allow all translation to be done centrally.
Section 4: Strategies to Adopt E-Commerce by MSME

E-commerce is a highly complicated and systematic project, which can be best done in phases. To be successful in the e-commerce business in the long run, it is extremely necessary for organizations to make proper plans and policies. Reference [10] states that before entering e-commerce managers must be able to answer some very important questions related to e-commerce implementation strategy. The government also has an important role to play. The government should bring advanced technology and platform of developed countries to strengthen the construction of technology infrastructure. The government should help in all possible ways to encourage the developing environment of e-commerce [3]. The following are some issues that need to be addressed:

4.1 Security

The security problem of e-commerce needs to be addressed effectively. Securing ecommerce must occur on four fronts:

i. Securing the web clients.
ii. Securing the data transaction.
iii. Securing the web server.
iv. Securing the network server operating system

Organizations need to be proactive in protecting their resources linked to the network. It is reasonable to tolerate a flaw that will hardly occur. It is also reasonable to assume that logically independent failures will be statistically independent and not happen in concert. In contrast, security vulnerability, once discovered, will be rapidly disseminated among the growing community of hackers and will be exploited on a regular basis until it is fixed [1].

4.2 Promote Online Concept by Top Management

The top management of micro, small and medium-sized enterprises should promote ecommerce, applying modern technology to the management of the enterprises, and making them succeed in the competition. At present, in case of many micro, small and medium-sized enterprises, e-commerce is only limited to maintaining a web site which gives information about the enterprises and their products. But the various other advantageous avenues of ecommerce have been overlooked. The top management of MSMEs should come forward whole heartedly to reap the full benefits of e-commerce. Since conducting business over internet also requires a change in mentality the top management should also train employees so that there is no resistance from the employees to carry business over the internet. In order to have a successful e-commerce development it is necessary to have board level commitment and support from all stakeholders. Projects have been known to fail without such commitment [10].

4.3 Infrastructure Improvement

Bangladesh has already achieved initial achievement in the construction of information infrastructure but compared with the information highway of developed countries, it is still in the initial stage. Bangladesh has got a low personal computer penetration and consequently internet usage is also low as compared to the developed nations. But it can be expected that more and more people will get connected with the internet in the near future. E-commerce infrastructure should be highly usable and reliable, and at the same time, it should be extremely safe. The e-commerce site should be easily accessible 24/7. Any time a visitor tries to reach the site, it must be available
instantly. Non availability of the site will cause serious negative impact on the buyers. Speed of internet is another crucial factor. The speed of content downloading is of great importance [11].

4.4 Talent Hunt

Lack of employable engineers is an area of serious concern. Top companies attract talent owing to a number of factors. The most important being the salary package that they offer. Apart from this the learning environment and the growth potential that an employee gets while working in a big company are the other advantages that lure young and experienced engineers alike to join top companies. However, MSMEs should recruit new talents and devise ways to retain old talents [2]. Developing e-commerce setup from scratch is a highly demanding, innovative and resourceful mission which requires the involvement of highly motivated goal oriented individuals having the right amount of skills.

4.5 Good Client Base

In business good relation with clients is always beneficial for any enterprise irrespective of the size and sector to which the enterprise might belong to. MSMEs do not have a huge client base as compared to the large multinational companies. After adopting e-commerce the MSMEs can get feedback in real time from their clients for their existing products and thus can have a very clear idea about the likes and dislikes of their customers. This will help them to understand the market trends. In order to survive these enterprises also have to go further and customize products according to the requirements and demands of their customers as per the market trends. In the process some existing products may be totally withdrawn, some new products may have to be launched and some extra functionality may be attached with some of the existing products and then launched. This strategy of product management and customisation is true for companies of any size and sector. After going online the MSMEs can also provide their customers with enhanced after-sales service. But they have to fulfil their customer demands promptly. Speed of execution of customer orders is very important. Otherwise those customers may switch loyalty and move to other business competitors. Customer response and queries have to be dealt with extreme care. These will definitely prove to be of great help in expanding the client base [2].

4.6 Continuous Evaluation

E-commerce implementation involves various stages. Each and every stage of ecommerce implementation should be carried out after planning meticulously. Problems if any should be removed. Business processes involved in the proper functioning of e-commerce have to be closely monitored and modified as per the customer requirements. Thus a continuous supervision and evaluation of the e-commerce initiative by the top management is necessary otherwise the results will not be fruitful [2].

4.7 Community Building

A strong community building exercise is also required for an e-commerce enterprise to be a success. Frequent online visits by individuals or by persons representing business organizations having a sense of belonging or feeling a part of community that the e-commerce venture represents is very helpful. This community building exercise goes a long way in making the e-commerce venture a success [11].
Section 5: Digital Bangladesh

According to media reports (citation) The World Bank in recognition of the promotion of IT industry of Bangladesh has sanctioned a loan of 7 crore dollars (USD). During the last 6 years or so Bangladesh has made great progress in the use of ICT. Internet usage has increased manifold and the cost of getting connected to the internet has decreased over the years. Even students of some rural schools are getting introduced to computer.

In a report on Bangladesh the World Bank has mentioned that Bangladesh has the potential to earn a lot of foreign exchange in the field of Information Technology. At present, Bangladesh earns a lot of foreign exchange through the selling of garments which is a flourishing industry of the country. The World Bank has given guidelines to Bangladesh for implementing the following:

1. Industry oriented training which will enable people to develop international standard software and other IT products.
2. Branding of Bangladeshi IT products.

The government of Bangladesh is very keen to implement the World Bank guidelines because apart from bringing multinational IT companies to Bangladesh, the skilled IT professionals of the country will have the opportunity to earn foreign currency. Under the project of World Bank in the coming two and a half years around 38,000 Bangladeshi nationals will be given IT training. Bangladesh Government is very keen to bring companies like Microsoft, Google etc. for opening offices in Bangladesh So Bangladesh is all set to become a hot destination for major IT companies in the coming years.

CONCLUSION

E-commerce makes use of the internet and mobile communications network to conduct various business activities. E-commerce as a concept basically involves the applications of high end technologies and as stated earlier it has got lot of benefits. So it will continue helping the human society in ways too many. The micro, small and medium sized enterprises of a developing nation like Bangladesh must fully recognize the trend and explore different ways to carry out e-commerce activities to remain competitive in the information age of today as well as in the years to come. Though it must not be overlooked that setting up an ecommerce venture or shifting from doing business in the traditional way to an e-commerce organization has got lot of challenges but e-commerce is poised to become an important driving force for the development of enterprises as long as there is a highly professional and proper management and commitment, clear goal and deep knowledge of all stake holders [2]. Bangladesh with the help of The World Bank is definitely poised to become a country on the much needed right growth track.

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