

# E-Commerce Policy Framework for Bangladesh

Version - 0.01

(Draft)

Submitted to



(Information and Communication Technology Division)

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# E-Commerce Policy Framework for Bangladesh

## Introduction

Bangladesh is on her quest to fast becoming a digital nation. But the country is yet to realize its untapped potential in the e-commerce industry. Unlike the past technology innovations, developing countries has much better opportunities to gain the benefit from internet technologies at an earlier stage. E-commerce can help boost every industry and can thus contribute significantly towards country's GDP.

The benefit of e-commerce comes as enhanced participation in international value chains, greater market access and reach, and improved internal and market efficiency, as well as lower transaction costs. It may spur job creation in the information and communications technology (ICT) sector and in enterprises that become more competitive due to online procurement and sales. A survey in France shows that for every lost job due to operational efficient nature of e-commerce, 2.4 new jobs are created. E-commerce induces the productivity development of firms through higher competition and innovation.

The trend of global shifting towards digital economy will keep continuing according to the emarketer.com. E-commerce retail sales worldwide will be 2.5 Trillion USD by the year 2018. Though USA and European countries are recognized as the early adopters and beneficiaries of e-commerce, rapid rise of China and India will change the outlook according to e-marketer. By 2018, they estimated that 42% of global online buyers will come from Asia and Oceania, which was only around 15% in 2013.

In 2015, Goldman Sachs predicted that by 2030, India's 2.5% of GDP will come from e-commerce which will be around 300 billion USD. This tremendous growth is predicted to happen due to large percentage of young population in their country. As study reveals, Bangladesh currently enters its own era of population dividend which means the percentage of young people will be the highest in nation's history in the next 25 years. And this is a golden opportunity for Bangladesh to tap into e-commerce potential by creating a helpful environment for e-commerce which will change the economic landscape of the country. Another Asian neighbor, China, has already shown that with favorable policy and commitment from government, e-commerce can rapidly become the main drivers of economy. In 2014, internet is estimated to account for 7% of China's GDP, which was even 1% higher than USA. China has been continuously working with their internet infrastructure, cyber security, mobile outreach, legal enforcement, etc. Hence, an accommodating e-commerce policy must be adopted to ensure global standard and competitiveness from domestic components.

Goldman Sachs has realized the potential by naming Bangladesh as one of the "Next Eleven" – a group of countries that have the prerequisites and potential to become major economic players in the twenty-first century.

65% of the total population of 160 million in Bangladesh is under the age of 35. This does not only make the country one of the largest (8th based on population) but also one of the youngest in the world. Every year, an average GDP growth around seven percent and increasing urbanization is contributing to a larger middle class with higher disposable incomes – the ideal target group for e-commercial activities.

## **Definition of E-Commerce**

Wigand (1997) defines e-commerce as “any form of economic activity conducted via electronic connections”. As per OECD (2011), the definition of e-commerce stands as- “the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders.”

The process of purchase and sales include web and electronic data interchange using electronic devices personal computers, laptops, tablets, mobile phones, etc. Companies are classified as ‘brick and mortar’ (traditional commerce), ‘click and mortar’ (partial e-commerce) and ‘virtual companies’ where product, delivery, payment everything is digital. Therefore, the concept of e-commerce incorporates transaction of physical goods as well as digitized products and services.

M-Commerce (Mobile Commerce) and F-Commerce (Facebook Commerce) have become two popular terms in current e-business world. Both are considered under the broader category of e-commerce in this paper.

Some major categories of e-commerce are-

### **B2C (Business to Consumers)**

This is the business model where business sells products or service directly to consumers. Consumers are increasingly going online to shop for and purchase products, arrange financing, arrange shipments or take delivery of digital products such as software, and get services after the sale. B2C e-commerce includes retail sales often called e-retail (or e-tail).

Some of the benefits companies can get by creating B2C platforms are reduced operating costs, bigger outreach, globalization, customer convenience, knowledge management, etc. Bangladesh e-commerce started and revolves to B2C mostly..

### **B2B (Business to Business)**

B2B is the model whereby a company conducts its trading and other commercial activity through the net and the customer is the business itself. This essentially means commercial activity between companies through the internet as a medium. B2B e-commerce (19%) is also projected to increase at a faster rate year-over-year compared to B2C e-commerce (17%), with U.S. B2B e-commerce sales

projected to reach \$1.13 trillion by 2020. China e-commerce is expected to see 2.5 trillion USD B2B sales in 2016.

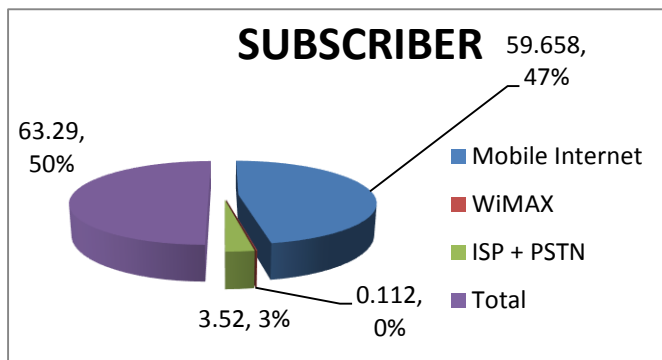
Common Elements for B2B Model	
Element	Benefit
Centralized Market space	Neutral and non-aligned with either sellers or buyers
Standardized Documentation	Users are prequalified and regulated
Price Quotes, Price History, After-the-sale information provided	Pricing mechanism is self-regulating
Confidential transaction between businesses	Cleaning and Settlement services provided

To develop a thriving B2B sector, change management from the legacy system is a crucial thing. Proper B2B market places with secured payment options, auction and bidding facility need to be developed. Government can arrange training, workshops for businesses like MSMEs, SMEs to convert existing system in to a digitized one. This will also create transparency within the organizations and help creation of better taxation monitoring system. Besides government has to put focus how to facilitate B2B transactions by reducing some of the hassles existed in brick and mortar system.

### B2G and G2B

When a business sells its products or services to the government using computer network, it falls into B2G (Business to Government) e-commerce category and the vice versa is G2B (Government to Business). This model is the pathway to create e-government. Bangladesh with introduction of e-tendering and digital information services started its journey for digital governance system.

### Current Outlook of Bangladesh E-Commerce



From the published report of Bangladesh Telecommunication Regulatory Commission (BTRC), it is known that as of June 2016, total internet users in Bangladesh are 63.29 million, a staggering number which is almost equal to the total population of UK. In 2015, 25% of the country's total population was using internet which as per BTRC has

increased to 39% by mid 2016. To compare that with developed countries European Union has 76% internet penetration rate. In terms of mobile usage, Bangladesh sets an example in the world.

According to BTRC report, 131.37 million people are using mobile phone which is roughly about 80% of the population, whereas India has 78% and Pakistan has 66% mobile penetration.

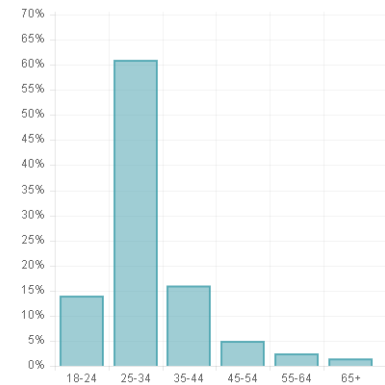
UNCTAD B2C E-commerce index is prepared after examining e-commerce scenario from 130 countries. According to the index, one of the major indicators for a country's readiness for e-commerce is its internet penetration. ITU publishes a report in 2015 saying internet penetration rate for Bangladesh is 14% only which significantly contradicts with report from BTRC's number (39%), and ITU's number is subsequently rejected by the Bangladesh Government officials.

E-commerce activities are rapidly growing in the country. Every month, new sites are coming up. Though there is not much research regarding current status and volume of the industry. Kaymu.com.bd published a report titled 'A Report on e-commerce Trends in Bangladesh' which showed some light on the growing aspect of e-commerce in Bangladesh and some valuable information about the demographics of the users.

E-Commerce Growth Rate			
Year	Q1-Q2	Q2-Q3	Q3-Q4
2014 (Recorded)	27%	39%	51%
2015 (Predicted)	60%	72%	79%
2016 (Predicted)	85%	95%	100%

This shows a high growth rate which keeps continuing in 2015 and 2016. Kaymu's prediction is 10% exponential growth will take place each passing year in terms of e-commerce transactions.

E-commerce buyers remained highly centralized and city based though- 80% of the total visitors come from 3 cities namely Dhaka, Gazipur and Chittagong. Dhaka, the capital city, attracts the highest traffic 35%, Chittagong 29% and Gazipur 15%. Next two cities are Narayanganj, which is also adjacent to Dhaka and Sylhet, another large metropolitan area. 75% of the users are aged from 18 to 34.



The presence of the youth is found in the Google trend analysis. From 2013 to 2015, most sought after items were mobile and electronics. After that, fashion items like dress, watches, etc come. Kaymu estimated that 95% of the consumers still preferred cash on delivery system though mobile and bank options are present with most of the businesses.

## Development Priorities and Policy formulation

The 'Vision 2021' aims at developing Bangladesh into a resourceful and modern economy through efficient use of information and communication technology. The dream of digital Bangladesh has come to a long way. Along with rapid internet adoption, technology conscious young generation, the commitment from the leaders is the most positive sign to build up a successful e-commerce economy.

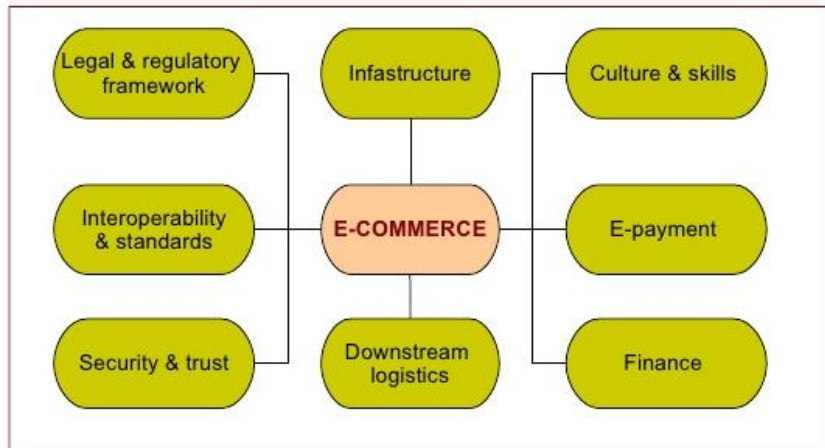


Figure: E-commerce ecosystem

As researches shows, many of the market forces work together for efficient implementation of e-commerce. According to the UNCTAD, there are eight pillars of a successful e-commerce policy framework- ICT Infrastructure, E-Payment, E-Commerce Platform, Skill Development, Awareness Raising Program, E-Security, E-Procurement and Trade and Logistics facilitation. In their Information Economy Report 2015- 'Unlocking the potential of E-commerce for Developing Countries', UNCTAD added that for B2C e-commerce, a country's readiness can be judged by 4 parameters- i) Internet use  
 ii) Secure servers      iii) credit card penetration and iv) postal delivery services

## ICT Infrastructure

Inadequate ICT infrastructure and use, unreliable and costly power supply, higher price of bandwidth, lack to access to mobile phone and computers can hinder the growth of e-commerce. Fortunately, current scenario of Bangladesh is rapidly developing day by day. The vision of 'internet everywhere, for every one' is fast becoming a reality.

## Electricity

Electricity is the core component for a digital economy. Current government has taken electricity generation as a primary concern. By 2016 July, 12725 MW electricity generations becomes possible and according to vision 2021, electricity productions will cross at least 20,000 MW by 2021. While electricity price keeps rising in the recent past, necessary steps must be taken in terms of plant overhauling, efficient production, distribution and maintenance to keep the cost of electricity consumption at a very affordable rate to bring rural people in the e-commerce world.



## Internet Infrastructure

When the electricity is ensured, access to affordable and quality internet is the next priority sector. Many of the government projects are currently in progress which will connect country wide people over internet by next few years. Broadband connection has already been reached 64 districts. Optical fiber based network implementation are in progress and by 2018 it is to be implemented in all 4,553 unions in the country. The price of 1 Mbps bandwidth reduced from 76000 taka (2007) to 2800 taka (2014). The price is still on the higher side for the rural people, which have to come lower for greater participation. Marketing of successful e-commerce companies worldwide have shifted from static material to video promotion, high end image of the product, which needs more internet bandwidth at the user end. Proper bandwidth planning needs to be conducted for high end internet use for at least 100 million people.

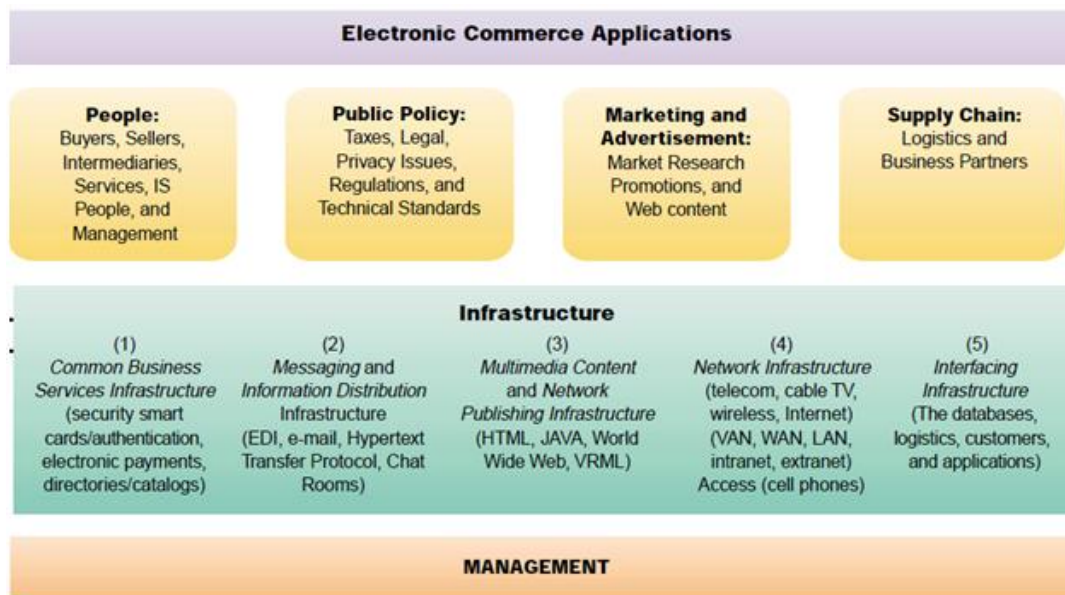


Figure: A framework for e-commerce.

[Source: Modified from R. Kalakota and A. B. Winston, *Electronic Commerce: A Manager's Guide* (Reading, MA: Addison-Wesley, 1997), p. 12; and from a list provided by V. Zwass, "Electronic Commerce: Structures and Issues," *International Journal of Electronic Commerce*, Fall 1996, p. 6.]

Internet penetration is possible when majority of the population has the access to internet through electronic device. With 80% mobile density, Bangladesh gets ahead of its neighbor countries like India and Pakistan and is working to achieve 90% teledensity by 2021. 100% of the country has come under mobile coverage and successful implementation for shifting from 2G to 3G service is almost completed. In future, new technologies like 4G and more will keep coming. To keep pace with modern world, Bangladesh needs to deploy modern mobile technologies as soon as it deploys in other countries, not after a couple of years.

## Government projects

ICT investment infrastructure has been the priority of the government. Many projects are ongoing to create nationwide industrial parks. In Gazipur, the Kalikair high-tech park is located in 231 acre area.

Software Technology Park at Jessore, Janata Tower Software Technology Park in Dhaka project is ongoing. Division wise high-tech park establishment proposal is under way. 4547 Union Digital Centers have been established. E-service center in 64 districts have been established. Computer labs are set up in more than 3500 educational institutions. ICT division can put some resources to establish an e-commerce research and development center.

### **National Data Center**

BCC has set up a Tier-3 National Data Center at BCC building to carry forward the e-Government initiatives. With the advancement of Digitization, the government is going to set up a Tier-4 National Data Center at Kaliakoir Hi-Tech Park in addition to the existing Tier-3 National Data Center at BCC. The Tier-4 Data Center will host the data and information of Hi-tech Park companies alongside the data and information of government and private sector.

### **Transportation Infrastructure**

Transportation infrastructure is a must for inclusive e-commerce with rural people. E-commerce can make the total country as one large market with each house a distribution center. For that to happen, transport facilities need to be developed many folds. Number of roads, length of roads, mode of transports, etc need to be prepared. ICT division needs to start discussion with other relevant ministries like ministry of road and bridges, ministry of railways, ministry of planning, ministry of shipping to create proper preparedness across all sectors.

### **Logistics and Trade Facilitation**

An effective, competitive national and international trade logistics environment is vital for achieving e-commerce success. Notwithstanding the “e” in “e-Trade”, goods still need to be delivered physically. Readiness of Bangladesh for e-commerce proliferation depends on how successfully it can implement product distribution service. Unfortunately logistics support in product distribution remains a nightmare for most of e-commerce vendors and customers.

Companies like food panda have created motorbike based own delivery channel. But Bangladesh e-commerce industry revolves around not only big websites but also many vibrant face book pages which are run by mostly a few numbers of people. It is not possible for these e-commerce SMEs to develop their own logistics and delivery system.

One of the major selling points of e-commerce is convenience. Customers want to buy the product from home and get the product at home as quickly as possible. It will provide more value to the customers if they know product shipment time, can track the product on its way to delivery using tracking number and delivery time is accurate as promised. Local domestic courier services are yet to be modernized to facilitate such efficiency. As a result, there remains a huge gap between the

promise vendor make and the service customers get and ultimately it leads to customer dissatisfaction.

A solution to such problem can be mitigated by making Bangladesh Postal Services more e-commerce friendly as they already have necessary physical infrastructure and have 8,500 rural post offices. The vision 2021 addressed the issue and takes a project to make all these 8,500 rural post office to convert as “Post E-Center”. E-Commerce Association of Bangladesh (ECAB) has also addressing this issue and is working on how the current infrastructure can accommodate the huge upcoming demand from e-commerce. One of the popular thoughts has been the postal services would have suffered most due to e-commerce as many products will become digitalized. But with time it is evident from developed countries that postal service provides a pivotal role and their capacity and revenue also increased.

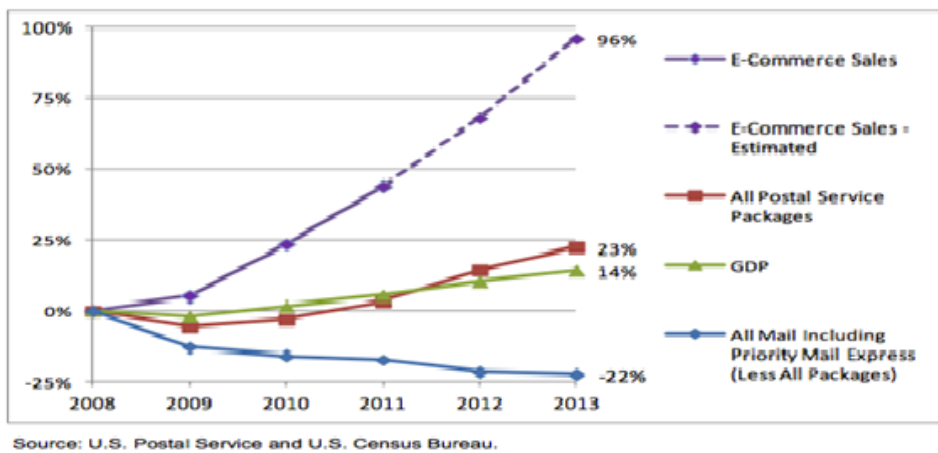


Figure: E-commerce growth complements postal services growth in USA

As evident from the USA market, from 2009 onwards, continuous boost from e-commerce sales drive to 23% growth for all postal service packages. China has developed a postal service equipped to serve not only domestic demand but also foreign orders coming through internet. National and international trade logistics well as cross-border facilitation measures remain a key for any international e-commerce transaction related to goods. In April, 2016 State Post Bureau from China stated that 76.9 billion USD revenue was earned in 2015 from postal service alone which accounts for 0.6% of the GDP. In 2016, China is expecting to create a network delivery system of agricultural product via setting up agricultural e-commerce platform. From these case studies, it is understood that modernization of postal service is absolutely imperative to facilitate local and foreign e-commerce trade. Investment in transport sector, more efficiency in traffic management, and other ICT infrastructure is also need to be prioritized.

A number of domestic courier companies are currently operating mainly within Dhaka city. Their role, in terms of e-commerce, can be described as the channel distribution partner of micro and medium sized e-commerce businesses. An inclusive discussion should take place including businesses, courier

service operators, Courier Service Association of Bangladesh (CSAB), ECAB, ICT ministry and all other stake holders to create a service benchmark for our courier industry.

## Legal and Regulatory Framework for E-Commerce

Security and trust are fundamental for creating an environment conducive to e-commerce. Ideally, this would involve, among other things, legal and regulatory frameworks that facilitate paperless trade in goods and services, consumer protection, data protection, measures countering cybercrime and market access.

These must strike a balance between trade facilitation and compliance as well as consistency between relevant international, regional and domestic legal frameworks. Frameworks need to provide standard definitions of common keywords used in e-commerce, agreed-upon mechanisms of contract, finance and dispute resolution and should enable collaboration between different regulatory authorities.

The components for legal and regulatory framework for e-commerce strategy are described here-

Components	Work to do
<p><b>Self Regulation</b></p>	<ul style="list-style-type: none"> <li>• Code of Conduct for the businesses and customers need to be defined. Any form of digital communication must not violate traditional social and business etiquette.</li> <li>• Consumer Protection law is essential build trust for consumers. A holding fund mechanism mentioned in the 'E-Payment' section can be established in merchant's bank account; Consumers also need to use true identification for the transaction purposes.</li> <li>• Privacy of consumer's communication, preference, visit information, personal and financial data must be maintained by the relevant merchant.</li> <li>• There has to be a clear definition of what form of communication, intention or promise between merchant and consumer will be counted as service agreement; violation of which would face legal consequences in the justice system.</li> <li>• Community Conscious Driven Policy needs to be established. The socio-economic scenario differs from country to country. Expectation from businesses and consumers need to weight in our existing standard.</li> </ul>

	<ul style="list-style-type: none"> <li>• Dispute Resolution Mechanism should be clearly stated and communicated properly to the stakeholders. A cyber court can be established for quick resolution of such cases.</li> </ul>
<p><b>Law and Regulation</b></p>	<ul style="list-style-type: none"> <li>• ICT Act is in the process of reformation. As cyber world changes very quickly, there should be a legal committee to revisit the law and propose necessary changes every 6 months. Case studies from other countries can be a great assistance to improve on such law.</li> <li>• Many acts on e-commerce are a combination of a number of digital action and traditional business processes. ICT Act must ensure there is suitable conformity with existing law and ecommerce regulations.</li> <li>• Though e-commerce ensures easy access to entrepreneurship, some form of regulations has to be imposed for the new entrants for identification, authentication, taxation and monitoring purpose. Easy registration process using e-tin, address, etc can be incorporated to ensure the transactions under a legal umbrella.</li> <li>• Insurance policy can be formulated to protect businesses and consumers from larger accident and fraud incidents.</li> <li>• Bilateral Agreement (Treaties) with countries is a must to boost international e-commerce. Legal framework to facilitate easy customs, vat and other payments, quick release of the product and improved delivery channel will encourage international business transactions.</li> </ul>
	<ul style="list-style-type: none"> <li>• Awareness and Training Program need to be conducted regularly among government and non government officials, e-entrepreneurs and consumers on secure information management- how to take back up of the data, how to ensure data integrity, how to authenticate a person to use the system, how frequently data backup must be taken, etc.</li> <li>• Data backup and recovery is an essential issue for e-commerce. Data Center establishment is currently underway which need to be integrated not only with the big companies but also micro and small e-commerce businesses for regular back up of essential and big volume data.</li> </ul>

<p><b>Secure Information Management</b></p>	<ul style="list-style-type: none"> <li>• Cryptography is the worldwide practice to keep information secure. Government must allow only those payment gateways to operate who are using proper security precautions to keep information confidential and full proof. Also, confidential information and documentation, government policies should maintain proper security procedure.</li> </ul>
<p><b>Authentication</b></p>	<ul style="list-style-type: none"> <li>• To ensure the trust of the internet company, digital certification is a common practice worldwide. Bangladesh government has approved Information Technology (Certification Authority) Act in 2010 under which six private companies and Bangladesh Computer Council (BCC) have been given authority to issue digital certificate. Digital certification with digital signature need to be prioritized for doing e-commerce transactions and agreements. For proper filing of important documents, 20,000 government officials have been given digital certificate with digital signatures as a part of government project.</li> <li>• Biometric registration of mobile sims has been completed recently which along with national ID can be used as authentication of true identity of the merchant and consumer.</li> <li>• Smart card can be introduced holding a person's all information which will make e-commerce transactions more trustworthy. It can also be used as e-wallet for the consumer.</li> </ul>
<p><b>Cyber Crime and Protection of Intellectual Property Right</b></p>	<ul style="list-style-type: none"> <li>• District wise Cyber tribunal has been formed and a common helpline is created. Our law enforcement has to have a special taskforce who can understand and deal with different e-commerce security issues.</li> <li>• To fight with conflict management, many e-commerce legal advisors will be needed in future. For that suitable curriculum and training program has to be developed.</li> <li>• Intellectual properties for e-commerce have to be clearly identified and must be protected- <ul style="list-style-type: none"> <li>Copyright- Original expression of ideas</li> <li>Trademark- Words, names, symbols or devices that identify a source</li> <li>Patents- New, useful, and non-obvious ideas</li> <li>Business intelligence can also fall into this criteria</li> <li>Business torts- Misappropriation, unfair competition, tortuous reference</li> </ul> </li> </ul>

	<p>Trade secrets- Formulas, patterns, or compilation of information kept secret</p> <p>Contracts- Private agreements between parties</p> <ul style="list-style-type: none"> <li>• Implementation of Copy Right law has to be very organized to protect digital intellectual assets. Many of the e-commerce sectors like movie, songs, books, etc will not flourish if we fail to properly monitor and impose copy right law.</li> </ul>
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## Skill & Knowledge Development

### Strengthen training and awareness raising programs

To understand e-commerce and its implications nationwide awareness programs need to be organized across general people, mature business organizations, start ups as well as government officials. Many training programs have been conducted by the ICT ministry in the recent years. These training programs can broadly be categorized in three parts-

- i) Creating ICT conscious population under which school teachers, students, government official are receiving basic IT training. Under the Basic ICT Skill Transfer Up to Upazila Level Project of BCC, computer labs are established in 192 educational institutions where many government officials received training. A total of 7,890 teachers were given training and developed them as master trainers and 112,189 students were given basic ICT training.
- ii) Creating ICT professionals - Bangladesh Hi-tech Park authority has provided training to 3000 young people among which 835 are freelancers. A project to establish a training center in Natore for freelancers has been taken.
- iii) Creating E-commerce entrepreneurs- More than 4000 peoples are trained who are now running the Union Digital Centers. ICT division program, 'Learning and Earning' 1st phase saw 14,000 freelancers trained and in the 2nd phase ICT division is targeting to train 55,000 freelancers including 20,000 women.

The continuous effort of ICT division to sensitize and train people with Information technology is very commendable. Due to changing nature of technology, a continuous effort is required for regular update of the training materials and manuals. To be a successful e-commerce nation, Bangladesh will need thousands of skilled professionals – computer programmer, web developer, graphics designer, digital marketing specialist, e-security specialist, supply chain management specialist, etc. An assessment should be conducted on how many skilled professionals will be required in this sector for next 10 years and steps must be taken to ensure the supply side accordingly. E-commerce should be a part of academic syllabus for all business and IT students in the University level. Also, diploma

courses on various aspects of e-commerce like e-security, web design, digital marketing, etc should be emphasized in the polytechnic institutes.

### ICT Incubator Development

ICT incubator is the concept of promoting startup brilliant ideas by providing necessary infrastructure, skilled human resources and even seed capital some times. To form an ICT Incubator/ Software Technology Park (STP) has been established in BDBL Bhaban, Karwanbazar with an area of 68,563 square feet. 41 organizations have been running their business here. Besides, the work on establishing an IT Business Incubator in Chittagong Engineering and Technology University (CUET) is progressing. E-shop project by ICT ministry is currently ongoing under which agricultural, small cottage and handicrafts created by rural people will be shown and marketed in the domestic market and to the world. This is an initiative where private sector must come ahead along with government. Donors, local and international investors must be encouraged through proper legal facilitation and investment structure. Events like road shows, proposal presentation competition will foster such growth.

### E-commerce research center

To promote and continuous develop; a national e-commerce research center is a must. In Bangladesh, sectoral research on e-commerce is almost absent. The task of this center will be to understand market variables, readiness, market changing components, technology feasibility, product feasibility, sector wise growth, exploring market opportunities and threats, create market analytics etc. ICT division can connect universities to such initiative to bridge the gap between academics and practitioners.

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- *No e-commerce:* not connected to the Internet, no e-mail.
  - *Connected e-commerce:* connected to the Internet with e-mail but no web site.
  - *Static e-commerce:* publishing basic company information on the web without any interactivity.
  - *Interactive e-commerce:* accepting queries, e-mail; and form entry from users.
  - *Transactive e-commerce:* online selling and purchasing of products including customer service.
  - *Integrated e-commerce:* integration with suppliers and other back office systems allowing transactions to be conducted electronically.
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Figure: Level of e-commerce adoption (Molla and Kicker- 2005)

### Promote Bangla Content

Emphasis on Bangla content needs to be placed for greater outreach of e-commerce. Educational courses can have bangla version. Many of the current e-commerce sites have all the contents in English which may have a bangla version as well. Seamless use of bangla font acceptance across all browsers and platforms is still a challenge. ICT division, through its national e-commerce research and development center, can look in to such issues.



## Awareness Raising Events

To create awareness, ICT division along with Computer Jagat has started organizing E-commerce fair since 2012. The e-commerce fair has been organized in main cities of the country as well as in London twice. A regular scheduling of such events at district level is necessary to sensitize people for e-commerce. Incentive based participation from the hosting district can encourage local entrepreneurs to come to e-commerce. To promote cross border e-commerce, regional e-commerce connectivity can be a good access point. Government can subsidize and encourage local e-commerce entrepreneurs to participate in e-commerce fairs taking place in south Asia and central Asia.

Regular seminars and workshops are an excellent tool to raise awareness about e-commerce. To motivate younger generation to become e-commerce entrepreneurs, iconic e-commerce entrepreneurs like Jack Ma (Alibaba.com), Jeff Bezos (Amazon.com), Mark Zuckerberg (Facebook.com), etc should be invited to come and give motivational talks. Regional e-commerce leaders can also come and share their success stories.

## Issue of finance

Due continuous technological change, an e-commerce project has to evolve every time. It is very difficult for start-ups to estimate a project budget which keeps changing with times. Easy access to finance therefore is very important for a company to sustain. Generally banking sector is reluctant to provide finance to companies with less than 3 to 5 years experience backed up by physical asset. E-commerce companies are unique in this nature and they need finance in starting years of the initiatives and all most all the assets are logical or intellectual assets. Government can see e-commerce as a thrust sector and make policy arrangement to issue subsidized loan for start-up e-commerce companies.

A policy committee can be set regarding this matter that will set criteria for proper valuation of logical assets owned by an e-commerce company. A separate body can do industry ranking based on visitors, customer's trust and loyalty, engagement time, etc. The financing company can have the support of these valuation reports and ranking to understand the true nature of business of that particular company. These valuations and ranking will also attract domestic and international investors, hedge fund, investment fund, mutual fund, etc for potential investment.

Finance ministry of Bangladesh need to provide a clear guideline for the issues of tax, VAT and customs duty, etc. Many traditional brick and mortar businesses are creating new sales channel in internet with existing physical facilities. In those cases, taxation, VAT exemption policy, etc need to be clearly defined. Tax subsidy policy for online sale of the same traditional product will encourage more and more traditional businesses to come to the internet.

## E-Payment

The growth of e-commerce is dependent among other factors, on the existence of secure, user-friendly and cost-effective payment systems. The importance of payment function lies in the fact that it could encourage convergence between sectors with disparate objectives since payment systems are the common denominator of all e-commerce transactions.

## Digital Payment Standard

The following criteria must be present in our online payment system to have trustworthy e-commerce industry in Bangladesh.

<b>Digital Payment Standards that needs to be achieved</b>	
<b>Acceptability</b>	<b>Payment instrument needs to be widely accepted.</b>
<b>Anonymity</b>	<b>Identity of the customer must be protected</b>
<b>Convertibility</b>	<b>Digital money should be able to be converted to any type of fund</b>
<b>Efficiency</b>	<b>Cost per transaction should be as minimum as possible</b>
<b>Integration</b>	<b>Interfaces should be created to support the existing system</b>
<b>Scalability</b>	<b>Infrastructure should not breakdown if new customers and merchants (businesses) join</b>
<b>Security</b>	<b>Financial transactions must be secure along with identity and other information</b>
<b>Reliability</b>	<b>System must be fault free</b>
<b>Usability</b>	<b>Payment should be as easy as in the real world</b>

Secured payment technologies are so much important to create trust among the consumers. Four banks have got payment gateway. Currently the e-commerce volume is Tk 200 crore per year. But transactions in e-commerce are happening mostly on cash on delivery basis. Still around 90% of e-commerce orders are done by cash on delivery. An audit of existing payment platforms need to be conducted regularly and they must conform to certain regulation and performance guidelines to operate. Faster initiative is required to bring globally recognized secure system like PayPal.

To encourage consumers to pay online, policy can be made so that when consumers pay to merchant in the web, the fund will be held in merchant's account. If the consumer does not receive the product in promised time or find any fault at the time of delivery, he/she can readily complain and get back the money from the holding account. In that way consumers will feel more comfortable paying online.

According to a recent daily star report, in the current payment ecosystem, almost 8 Lac transactions happen through EFT (Electronic Fund Transfer) per month, amounting to Tk. 5,780 Cr. In Bangladesh, cards

came into being in late 80s and credit card was launched in 1997. The total number of debit card in Bangladesh is 8.3 million whereas the number of account holders is 40m.

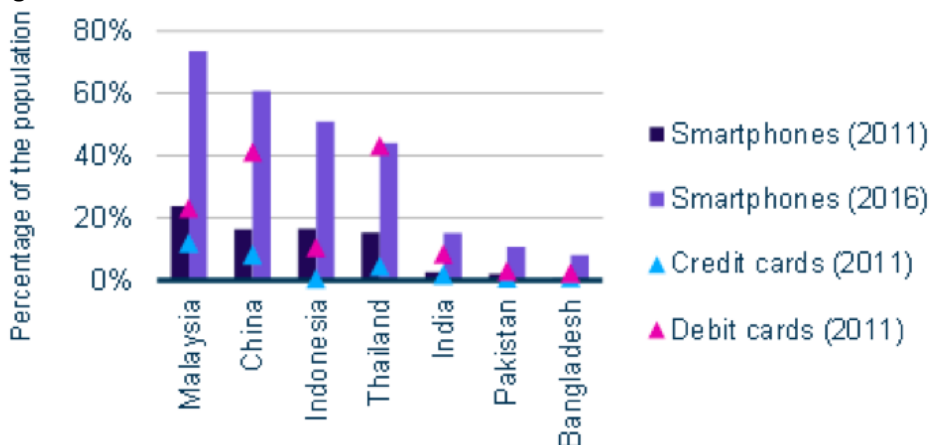


Figure: Smart Phone and Card Penetration by Asian Countries

(Source: www.qz.com)

Compared to other Asian countries, Bangladesh is still considerably behind in terms of credit card penetration. There is a huge opportunity for cards to prosper if a card is issued against every savings account. Currently the card industry is growing about 2%. Total number of daily card transactions is around 3.8 Lac which amounts to Tk. 274 Crore. Internet banking is another recent phenomenon in the payment ecosystem. As on October 31, 2015, number of internet banking customers was 1,550,101 and the number of daily transaction stood at more than 19,000 amounting to Tk. 59 crore. As per BTCL data the total number of mobile subscribers has exceeded the figure of 12 crore, which is almost 80% of the total population. Now, the total number of internet users in Bangladesh stands at around 5 Crore. So the internet banking has a huge expansion opportunity.

Mobile banking has also made a good starting. Many banks have introduced mobile apps. Mobile transactions have been increasing rapidly. Payment system must be interoperable among the banks, credit card companies, clearing house and even with fraud detection center of law and enforcement agency so that a stolen or theft card can be readily identified. To accelerate inter-bank electronic payments the government has established NPSB (National Payment Switch Bangladesh).

### Possible Online Payment Methods

As much as convenience online payment method brings, it must not burden to much additional pressure on the consumer or the merchant. This will only possible with operational and system efficiency in place.

Transaction Size	Preferred transaction Cost	Payment Options
Up to 100 BDT (Micro Payments)	0%	Mobile Money

100 BDT to 10,000 BDT (Small Consumer Payments)	Not more than 0.5%	Mobile Money, Gift Card, Debit Card, Credit Card
10,000 BDT to 500,000 BDT (Consumer/Business Payments)	Not more than 0.75%	Debit Card, Credit Card with Invoices (Preferred)
Any amount above 500,000 BDT (Business Payments)	Not more than 1%	Debit Card with Invoices (Mandatory)

## Key Policy Recommendations

**Affordable Broadband price, higher bandwidth:** A bandwidth forecasting need to be prepared for for next 10 years for at least 100 million internet users who will be able to use high definition image and video content.

**Work in collaboration with all transport related ministry:** To create the whole country a single market place where every house is a destination, combined effort is needed to improve transportation of goods.

**To strengthen Postal service:** modernize the government postal service as well as other courier services, create service benchmark, introduce real time shipment tracking, RFID and other technologies.

**Make banking and mobile payment interoperable:** All kind of payment system must be interoperable for real time fund transfer.

**Introduce secured payment gateway:** Payment system must be monitored very carefully to create and retain customer's trust.

**Promote growth of E-commerce SMEs:** Access to easy and subsidized finance, Tax subsidies, VAT exemption, training and awareness program, organization localized event and fair.

**Encourage Domestic and Foreign Investors:** Legal structure formation for the start up, road shows for investors, easy investment and dividend repatriation policy

**Emphasis of E-commerce in Education:** Introduce e-commerce course as a part of mandatory academic curriculum for all university business and cse students. Management aspects of e-commerce need to be focused in government polytechnic institutes.

**Promote innovation in e-payment options:** a bank card against each savings account within next 10 years. E-wallet, smart card, etc need to be developed.

**Make digital certification mandatory:** to ensure quality e-commerce environment, certain aspect of a company must be verified carefully and should be ensured by issuing digital certificate. Electronic agreement must contain digital signature.

**Cyber Security:** modernization of cyber act, quick dispute resolution, protection against cyber harassment, consumer protection law, protection of intellectual property

**Research and development:** establishment of a national e-commerce research and development center, introduce valuation system of logical assets, ranking of sector wise e-commerce companies.

## **Concluding Remarks- Continuation of Policy Dialogue**

To facilitate the public–private dialogue, it is needed to organize regular meetings, focus group discussions to identify gaps and challenges and propose development solutions to bridge gap and unlock new e-commerce opportunities. This can be a platform for inclusive discussion from all sectors like merchants, consumers, government policy makers, technology specialist, researchers, ad agencies, supply chain agents, payment gateway companies, financing companies, etc; In that way, practitioners’ views, ideas, experiences, hurdles and forecasting will be readily documented and shared with the policy makers to ensure quick recognition of opportunities and problems.

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