

Economic Policy Paper on E-Commerce a Business Link

1. Introduction

E-Commerce is generally used to cover the marketing, sales, distribution, and delivery of goods and services by electronic means. Though use of electronic means was in vogue for sometime, spread of Internet has boosted this mode of transactions significantly. Commercial transactions can be divided into three main stages; (i) searching/advertising, (ii) order placement and payment, and (iii) delivery. Usually first two stages are performed electronically and delivery, except in cases of digitized information/data-base or computer software etc, is done through physical means.

Business to Business (B2B) and Business to Consumer (B2C) are the usual commercial transactions, though there is increasing use of this business process in Government today.

	Government	Business	Consumer
Government	G2G (coordination)	G2B (information)	G2C (information)
Business	B2G (procurement)	B2B (e-commerce)	B2C (e-commerce)
Consumer	C2G (taxation)	C2B (price comparison)	C2C (auction)

Table: E-Commerce and broader application of Internet

2. Potential and Benefits

E-Commerce is growing at a fast pace in the developing countries and estimates of total worldwide e-commerce transaction in 2003 vary between 1000 to 4000 billion US Dollars. At present over 70% of e-commerce transactions are of B2B category. Most B2B transactions involve big firms setting up online exchanges to buy and sell industrial inputs like steel, chemicals, components, etc. Large banks and financial houses had been using electronic data exchange for their transactions for quite sometime. Industries, which have largest share of B2C e-commerce transactions, are:-

- (a) Financial Services/Brokerage: these services are easily digitized, delivered online and transaction costs are low.
- (b) Computer Hardware and Software: customers are Internet savvy, detail specs are worked out and transaction processing systems are in place for most vendors.
- (c) Event Tickets: consumers are able to log on to the sites, make purchases and payments, and the delivery system is also easy.
- (d) Retailing: traditional retailers and catalogue companies have created websites. Most popular items are consumer electronics, books, music, video, and toys.
- (e) Travel: consumers are buying tickets directly making significant savings.

In Bangladesh, there is a great deal of interest in e-business; however, due to various economic, infrastructural and legal reasons it has not spread. Most important companies, associations, chambers and some government offices have set up websites. These sites mainly provide information about the organization, and its products and services. There are very few sites where financial transactions can be completed. Main reasons for low e-commerce transactions are absence of legal framework for completing an electronic business or financial payment system, low Internet usage due to lack of adequate telecom facilities, and overall lack of confidence in the security and reliability of e-commerce transactions.

E-Commerce has changed dramatically the way business is conducted through total volume of business done in this new way is very small percentage wise. Business organizations and consumers are both realizing that future business will be heavily dependent on the Internet. Business organizations can promote their goods and services to a worldwide customer base at a very low cost. Details about their offerings can be brought to the attention of potential buyers.

Research into potential markets, special needs of the market, prices, quality etc. can be conducted exhaustively at relatively lower cost.

Smart design of website, registering the website with popular search engines are some of the techniques that help a particular website to be noticed by potential consumers. A good website enhances the credibility of the company by projecting a professional image. The creation of website and offering to conduct business electronically must be an integral part of the overall business strategy of the company. Management of the company must have clear understanding of the company's reasons for conducting business on the Internet, its competitive advantages, changes in the business process, and investment required to be successful in e-business.

Websites, which provide information on companies' products and are promotional in nature all require that the information is correct and current. Many websites project a negative image as these are essentially forgotten after their enthusiastic launching and are not updated regularly.

Transactional websites must consider in detail procedures for taking orders, mode of payment, confirmation of payment, methods of delivery, etc. The business system has to become more prompt-responding and the business process will change in many areas. That would require organizational structure changes in the skillset of the employees. Several factors are important in the online marketing compared to traditional method:-

- ❑ Pricing is an important consideration for standard products. Customers compare products available on the Internet and usually buy the lowest total price offerings. It is also necessary to offer prices lower than the traditional outlets to encourage buyers to shop online.
- ❑ Mass-produced regularly purchased uniform products are easier to sell online than custom-produced items. Well known brands have an advantage as customers are aware of the product quality and specifications.

- ❑ Urgently required items are unlikely to be ordered online due to waiting period for delivery. Some of the products are of such nature that the customers desire to touch, see or try out prior to purchase. Therefore, these products may require to be displayed in convenient retail outlets for customers to visit and make up their minds.
- ❑ B2B businesses occupy a very large share of e-commerce transactions and are likely to grow faster than consumer purchases. Businesses are more familiar with specifications of the products they need, are more comfortable to using the net to place large orders.
- ❑ If the product and service are described in unique terms or combination of terms the searchers are likely to use the search engines which will find that offering more easily and present it to potential customers.
- ❑ Service business is particularly suited to the Internet as their products can be more easily produced and delivered with digital process. Digital information can be collected and disseminated over the Internet at lowest cost. The following services are being marketed successfully over the Internet –

Advertising, Auction, Accounting, Computer Software and Services, Insurance, Travel, Ticketing, Financial Services, Brokerage, Personnel Search, Training, WebPage Design and Maintenance, Print and Graphic Design, Writing Services, Education Services (admission, school search, aids and scholarships), Health (telemedicine), etc.

Most common method of payment used in B2C transaction is credit cards. Consumers are familiar with it; it is easy, fast, and reasonably secure. To ensure security of credit purchases over net as a standard called 'Secure Electronic Transaction (SET)' has been adopted by MasterCard and Visa that involves the use of digital certificates to verify the identity of all parties in a transaction. The SET protocol also ensures the integrity and confidentiality of information over the net.

Some companies accept payment on delivery, which allows quick shipments though payment is received late.

Most B2B transactions use traditional billing systems but these are on the verge of changing to electronic modes.

Advance payments are ideal system for sellers though most buyers may not agree to it. Internet escrow services can receive payment on behalf of a seller and seller ships after the payment has been verified and upon the buyer receiving the goods and acceptance, the payment is released.

Majorities of the B2B transactions are invoice payment between companies who deal with each other regularly. Sellers receive orders through the Internet and invoice is issued through electronic means.

With initial search and order placement completed over the web, letter of credit can be opened by businesses to complete the transaction and is widely used in exports.

Protection of intellectual property assumes a new dimension, specially when they can be digitized and can be delivered electronically over the Internet. Specific items can be music, videos, database, graphic designs, computer software, etc. Uniform code for protection of these intellectual assets over all countries is the desire of owners of these properties.

3. Infrastructure

Key physical infrastructure for implementation of e-business is telecommunication network. In the developed countries faster and reliable communication network infrastructure, associated with new ways of pricing both for individual users as well as leased lines has led to faster growth of e-commerce. High speed, competitive international broadband access coupled with high density of local telecommunication facility is essential for growth of e-commerce. In developing country like Bangladesh where telephone density is only 5 per 1000 people, other options like mobile phones, wireless communication, nationwide IP backbone, etc. must be seriously considered for growth of this sector. The big gap between the requirement and availability can only be met by opening up this sector fully to the private sector. During the period while the infrastructure is being built cyber cafes, kiosks, telecenters, etc. can be set up all over the country to provide some access to this technology at a reasonable cost.

International broadband accesses through use of fiber-optic connection or satellite linkages need not to be sole domain of government as in many developing countries. Unless broadband access is available at low cost most of Internet use will be confined to e-mail use only. Presently over 80% of Bangladesh's Internet use is only for e-mail.

4. Legislation and Regulations

Institutional and policy changes are essential to create an environment on which the consumers and sellers have confidence that is conducive to e-commerce. E-commerce requires legal norms and standards covering contract enforcement, consumer protection, liability assignment, privacy protection, intellectual property rights, and process and technical standards regarding the way payment are accepted in the Internet and products are delivered to the consumers, security, authentication, encryption, digital signatures, connectivity protocols, etc. Since Internet is a worldwide network interoperable standards are key to maximizing its benefits. It is assumed that internationally accepted standards will be implemented in the most of countries and there is a need to modify the existing laws of commerce and evidence.

Trust is the most important factor for the use of the electronic settlements. Traditional paper-about based rules and regulations may create uncertainties the validity and legality of e-commerce transactions. Modern laws adopted and impartiality implemented in the electronic transactions form the basis of trust in the developed world. Where legal and judicial systems are not developed e-commerce based transactions are at a disadvantage because of lack of security whether real or perceived. In many developing countries even today cash on delivery is the most accepted system, even cheques and credit cards are not readily accepted.

Bangladesh government has made some efforts in establishing a regulatory framework for transactions over electronic media. A committee has been set up to draft cyber law about a year back but no appreciable progress has been made. Drafting such a law is a major task and is unlikely to be successful if done by parttimers on voluntary basis as attempted by the government. Though there are no specific legal framework of international or national laws for e-commerce, additional laws have been enacted or are in the process in many countries. Moreover, UNCITRAL in 1996 has adopted a model law on electronic commerce and some of our neighboring countries like India has also enacted laws recognizing evidence and validity of electronic signature and contracts. This can be used as a basis for development of

local laws and regulations. Absence of such laws does not provide validity to transactions of e-commerce and as such are not likely to be used by business organizations.

5. Human Resources

E-commerce is a major change in the business process for marketing, delivering, and payment for products and services. This new way not only requires business process changes but knowledge and skills in use of Internet, protection of database, security and confidentiality, etc. in computer-based system that is significantly different from traditional way of doing business. In the knowledge-based businesses people need to acquire knowledge and skills. In many cases new people with requisite background will need to be recruited in addition to training existing manpower.

In the national perspective human resource development plans are necessary to meet immediate needs of the business and industry and long term plan for incorporating IT education in all phases of education and training. Use of IT is not limited to e-commerce or e-government areas only, it will affect all spheres of human activities in the coming years. Moreover, Bangladesh hopes to develop adequate skills and competence in this area with an aim to market such expertise to the developing countries. There is a huge potential in software development and IT enabled services area and Bangladesh can take lessons from the successful countries in IT use and marketing. Most important input in this knowledge industry is trained and skilled manpower.

We need to develop innovative ideas to train our youth in IT use in view of lack of resources and infrastructure inadequacy. Government has taken some steps like special grants to five Universities to convert existing qualified (sixteen years education) manpower to IT professionals through intensive one year program. Government had also decided to fund 30 private sector training institutes to conduct similar program, but did not fund the project finally. Most private institutes are offering degree, diploma and other short courses, as there is a great demand for such courses. Many of these courses are not conducted with qualified teachers. Computer literacy programs in the colleges also suffer from lack of facility and trained instructors. Present salary structure of government colleges and schools can not attract any IT professional. Though there is declared ambition to become an IT-driven nation and earn two billion US dollars in exports by 2006, there are no real efforts to develop centers of excellence in IT learning in the country. Existing university system is expected to have an intake capacity of 2200 students per year in 2002, which in no way can meet our objectives in IT area. To earn USD 2 billion in 2006 from export; at least 100,000 IT professionals will have to be engaged. Training and retraining in IT will have to be introduced for all employees in the government and private sector to attain competitive advantage, economic development and progress in future.

6. International Support

IT is now considered an essential element of the development process of a nation. Most developing nations and international agencies are willing to support IT-related development and efforts to reduce the digital divide. Specially, Japan and European Commission has shown interest in helping developing countries in the infrastructure enhancement and human resources development areas.

International trade bodies and agencies usually provide support through business associations and chambers. In the area of e-commerce ITC has several programs.

- ❑ For small and medium enterprises it provides technical assistance to impart knowledge on how to set up and manage a website effectively, install hardware and software, ensure security of transactions, etc. It also assists in launching e-commerce by recommending strategies.
- ❑ ITC experts hold awareness sessions and promotional events on e-commerce.
- ❑ Publishes training materials, guides on cyber marketing, public procurement, offshore back office operations, etc. and also holds training programs in these areas.
- ❑ ITC also holds special events like executive forum for senior public officials and business leaders, set up cyber cafes during special trade events.

Most ITC databases and publications are available on-line (www.intracen.org). In addition, index to trade information sources on the Internet is available, which covers 3000+ website containing trade-related information in various categories.

United Nations Commission on International Trade Law (UNCITRAL) has published the model law on e-commerce, which can be a guideline for development of national law in this area.

International Chamber of Commerce (ICC) has published a guideline on advertising and marketing on the Internet incorporating the best practice of on-line advertising to increase government and consumer trust on e-commerce.

ICC has formed World Chambers Network (www.worldchamber.com), which puts chambers all over the world on the net. The networks forge links between chambers and promotes business opportunities through its on-line Global Business Exchange Service.

International Telecommunication Union (ITU) EC-DC projects short term objective is to enable developing countries use their existing infrastructure and services to the fullest to benefit from e-commerce technologies. Its long-term goal is to facilitate the development of ITC infrastructure. Some of elements of ITU's action plan are:

- ❑ Infrastructure development to secure payments, transactions and trust services.
- ❑ Capacity building and technology transfer and reduce setup and operating costs.
- ❑ Raising awareness for decision-makers to adopt appropriate policies and regulations for development of e-commerce.

United Nations Conference on Trade and Development (UNCTAD) has a trade point program, which provides for trade facilitation centers to reduce transaction costs and provide SME's with better access to trade related information services and global network. At present 50+ trade points are operational and 120 countries are involved.

World Intellectual Property Organization (WIPO, www.wipo.org) provides technical assistance and cooperates with LDC to establish or modernize intellectual property laws.

World Trade Organization (WTO, www.wto.org) is a forum of governments. The mandate was given to WTO bodies on Councils on Goods, Services and Trade Related Aspects of Property Rights (TRIPS) and Committee on Trade and Development (CTD). CTD investigates policy issues related to e-commerce and produces reports and working papers for use by governments and trade organizations.

7. Recommendations for Development of E-commerce in Bangladesh

7.1 Government of Bangladesh

7.1.1 Infrastructure

Telecommunication is the path used by e-commerce. Telephone density is needed to increase very fast (from present 5 per thousand), and telecom cost also should be reduced substantially. The government alone can not do this. All areas of telecommunication both local and international should be opened to the private sector immediately. Private sector should be allowed to choose the technology to be used and all options – fiber optics, high tension lines, VOIP, landlines, wireless, mobile, etc. – should be available with no restrictions.

ISP licenses should be available at nominal cost in place of present level of USD 3500 paid to BTTB.

Submarine fiber optic connection to the international gateway should be established quickly. Private firms should be allowed to invest in this sector.

7.1.2 Human Resources Development

- ❑ Technical manpower development should be expedited through increase in capacity of the government universities and colleges.
- ❑ Special one-year intensive IT courses should be offered by technical universities to convert existing educated youth to IT professionals and teachers.
- ❑ All educational programs should have enough IT component to enable educated people to be adequately aware of this technology and be able to use it in their workplace with minimum retraining. English language teaching also needs to be stressed.
- ❑ Special salary and compensation should be offered to IT teachers and professionals employed in the public sector.
- ❑ All existing officials are to be trained in IT to enable them to use IT in their regular work. Acquiring required IT knowledge and using the same should be part of annual evaluation (ACR) of government officials.
- ❑ Some standard tests may be conducted by a national body to provide certification to the IT professionals, these certificate should be recognized by the government for recruitment and promotion.

7.1.3 Legal and Regulatory Framework

E-commerce can not happen in the absence of legal and regulatory system to give confidence and trust in this mode of transaction. Necessary cyber laws need to be framed and enacted as soon as possible for:

- security and encryption,
- consumer protection and privacy,
- certification, authentication and recognition of electronic signatures,
- current statutes to be applicable for E-media,
- acceptability of electronic records as evidence,
- corporate and competition laws,

- trade marks and domain name,
- tariffs and taxation, etc.

Bangladesh government can use model laws and agreements developed by various agencies of United Nations, and also learn from the laws and regulations developed by other countries in framing such laws quickly. However, this work has to be taken up in earnest and concerned professionals are needed to be employed to complete the job in reasonable period.

7.1.4 Fiscal

- Financial policies and banking regulations will require adjustments to the requirements of the e-commerce transactions.
- To promote and develop e-commerce and e-governance, develop national skills through experience, Government activities that are most suited to electronic service and delivery system should be converted to electronic mode. Initial target of 1% of GDP should be earmarked for IT projects in govt. sector.
- Private sector expenditure in hardware and software in IT should be allowed full tax write-off in the year the expenditure is increased. Special tax incentive plans may be introduced for development of human resources.
- Special loans may be granted to educate youth and purchase computers at low rate of interest.
- Financial institutions should actively consider venture capital investment in IT.
- Business organizations in the software and IT enabled services sector should be given low interest loans and special considerations in view of very large investment in human resource development. Unique nature of low investment in physical assets and very high expenditure on people in this knowledge-based industry need to be recognized in all funding decisions.

7.1.5 National Strategy

Overall national strategy should be development of e-commerce considering its own strength. Special consideration should be given to its impact on balance of payment and financial policies in addition to Bangladesh's desire to become provider of software and services related to e-business at competitive rates.

Moreover, it should be understood that many developing countries are working on the potential offered by e-business and as a nation we need to move fast and in a coordinated manner to implement recommendations in infrastructure and human resource development, fiscal and legal policies. Implementation in one or two areas will not bear the expected fruits. In the knowledge based industry investment is required well before the benefit can be reaped.

Chambers and business associations can play a lead role in creating awareness in business community and assist the individual member become participant in the emerging and fast growing ebusiness revolution. Mostly SMEs in the developing countries do not have the expertise or the financial ability to enter the e-commerce made of conducting business. National organizations and trade bodies can help its members by –

- conducting training program on e-commerce,
- provide online monitoring services,
- help launch websites and provide review feedback,

- offer programs, through its own website, of matching exporters with importers,
- identifying and bringing to notice successful e-commerce strategies,
- providing linkage to international organizations and other national organizations regarding up-to-date information on events, developments and business opportunities.
- establish and maintain linkages to international agencies and use their programs to develop e-commerce capability for the business community and national development.