

E-Governance In Banking Sector – A Revolution in Commercial Transactions

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Abstract

Electronic Commerce is a process – It uses Information and Communication Technology – Along with development of society, technology also develop – Computers began to transmit the information beyond geographical boundaries without any barriers and limitations – E-Commerce has also become part of this revolution.

E-Commerce is commercial transaction of goods and services in electronics format – E-Commerce is production, distribution, marketing, sales and delivery of goods – Payment is also done under Electronic Data Interface systems – E-Commerce is categorized into four ways – Payment mechanism is also now reached a developed stage.

E-Commerce is regulated under Information Technology Act in India – It originated in European Union Directives on E-Commerce – It involves contracts also- Consequently, contracts also turned into e-contracts – Online contracts are now accepted as legally binding.

E-Commerce is wrapped under E-Governance – Commercial Transactions are governed electronically –At present there are certain limitations to E-Commerce – In future we can have a further developed system of E-Commerce.

KEYWORDS:E-Commerce, E-Governance, Electronic Data Interface, Online Contracts, International Trade, Information Technology, European Union Directives.

Introduction:

Electronic commerce is a process, which is happening with the help of Information and Communication Technologies. In order to see its evolution it is important to see how commerce itself evolved over a period of time.

As the society evolved the commercial practices also evolved. The barriers to trade were broken chiefly by the language and later by transport. The barter trade gave way to acceptance of bullion as the trading currency. With the passage of time nation states emerged as new political units and with new technological developments, like telegraph and telephone further facilitated the trade. For over a century these telecommunication devices became an integral part of the commercial enterprises all over the world.

Later, in the early 1960s, computers were increasingly used to disseminate information across geographical space. Though telegraph, telephones, telex and facsimile were still the relied upon options, nevertheless the big corporations opted for Electronic Data Interchange (EDI). The early adopters of EDI were companies running complex operations in the airlines, shipping, railways and retail sectors.

Thus e-commerce means doing business electronically across the extended enterprise. It covers any form of business or administrative transaction or information exchange that is executed using any information and communications technology.

E-Commerce:

Conducting business electronically using networks and internet is known as electronic commerce. Electronic commerce (EC) is an emerging concept that describes the buying and selling of products, services and information via computer networks, including the internet. EC applications began in early seventies with innovations, such as, electronic transfer of funds. Electronic Data Interchange (EDI)¹, which expanded EC from financial transactions to other kinds of transaction processing and extended the types of participating companies from financial institutions to manufacturers, retailers and other forms of business. Today, EC is rapidly outgrowing its limited operational sphere to everywhere in the entire globe. Intranet, Extranet and requisite computer hardware and software are used in processing EC transactions.

As the Internet makes way for new business transactions via its complex tele communications network, it is difficult to provide a single all encompassing definition of e-commerce. It means different to different people. Thus it would be prudent to look into various definitions of e-commerce to comprehend e-commerce and its different characteristics:

Commercial Transactions:

E-commerce defined simply, is the commercial transaction of services in an electronic format. In general terms, e-commerce is a business methodology that addresses the needs of organizations, traders and consumers to reduce costs while improving the quality of goods and services and increasing the speed of service delivery. A broad definition of e-commerce is: "The marketing, promoting, buying & selling of goods electronically, particularly via the Internet",

Interestingly, the World Trade Organization (WTO) Ministerial Declaration² on E-commerce

defines e-commerce as "the production, distribution, marketing, sales or delivery of goods and services by electronic means". The six main instruments of e-commerce that have been recognized by WTO are telephone, fax, TV, electronic payment & money transfer systems, EDI and Internet.

E-commerce can be categorized in four ways: (1) business to business (B2B); (2) business to consumer (B2C); (3) consumer to business (C2B); and (4) consumer to consumer (C2C). These models represent 'online' commercial transactions and are comparable to their 'offline' counterparts.

E-commerce is growing. It is a reality and part of everyday life. Economies of scale and scope are also easier to obtain online than offline. The biggest boost of e-commerce over the next few years will come not from snazzier websites or snappier marketing but from the proliferation of broadband Internet connections. Mobile phones and a host of other electronic devices are now being hooked to the web. As desktop (PC) access will increasingly migrate to the mobile environment, it would be more of m-commerce (mobile commerce) than e-commerce.

Payment Mechanisms:

Payment mechanism in cyberspace is all about paying for goods and/or services ordered or consumed using modern means of information technology. Such payment mechanism in order to be accepted must have all the attributes of a widely accepted offline payment system.

Electronic Fund Transfer means transferring money from one bank account to another in the same (intra bank) or different bank branches (inter bank). EFT has been in use since 1960s when banks first started using proprietary EDI network to share banking information. This was later converted into automated clearing houses. At a global level, to facilitate faster fund transfer between the remitter and beneficiary, the payment instructions are sent through telex, SWIFT³(Society for Worldwide Interbank Financial Telecommunications), Wire Transfer, CHIPS⁴(Clearing House Interbank Payment System) etc.

Plastic money, i.e. credit cards and debit cards has already made a presence in India and is fast becoming online shoppers' choice. Credit and debit cards have registered a slow but steady growth in India. All the major banks, both public and private sectors, use the major international brand names like VISA and MASTERCARD. The most recent trend is to issue multipurpose cards which function as credit cards, debit cards or Automatic Teller Machines (ATM) cards. This is essentially to enable the holder to exercise a choice of payment option.

E-cash is a pre-paid system. Consumers buy electronic tokens and build up electronic funds for use over the Internet. It is stored in an electronic device such as a chip card or computer memory. The person who has purchased such cash can use it online for making payments. It is also known as cyber cash⁵.

E-wallets can be useful for making a series of micro payments online for example, downloading MP3 music file, paying for an online article etc. A mechanism is necessary that ensures that the transaction costs of collecting payment for such items do not exceed the value of the transaction. A software wallet requires a user to set up an online account to which heads an amount of money. When transactions are undertaken, the wallet is debited⁶.

Smart cards use a micro controller chip embedded in the card. The cards can be purchased and reloaded again and again. It works as an electronic purse storing digital money, which could be used over public terminals (Websites, ATMs, Telephone lines) etc. Another example of smart card is the Stored Value Cards (pre-paid SIM cards for mobile phones).

It is a cheque in the electronic form. Here, the consumer uses his digital signatures to sign an e-cheque. The consumer fills in the cheque online and then sends it via a secure server to the recipient. The amount specified on the cheque is electronically withdrawn from the sender's account and deposited in the recipient's account.

It is a mechanism to ensure authenticity, message integrity, non-repudiation and confidentiality of an electronic record. It is based on asymmetric crypto-system, which uses a private key to encrypt, and a public key to decrypt messages. A digital signature regime requires a trusted third party – Certifying Authority (CA) to verify and

authenticate the identity of a subscriber (a person in whose name the Digital Signature Certificate is issued). These days, even smart cards may contain digital signatures of a subscriber.

E-Commerce and Information Technology Act:

The Information Technology Act, 2000 is a facilitating as well as an enabling Act. It facilitates e-commerce by enabling a digital signature regime. It is important to note that a digital signature regime not only authenticates electronic records but also plays an important role in electronic fund transfer.

When the Information Technology Act, 2000 came into effect on October 17, 2000 it was non-applicable to the negotiable instruments, like promissory note, cheque and bill of exchange but subsequently to facilitate e-commerce related transactions, the Central Government amended the Negotiable Instruments Act, 1881 and brought in forth the Negotiable Instruments (Amendment and Miscellaneous Provisions) Act, 2002 to recognize “a cheque in the electronic form” (e-cheque) and “a truncated cheque”. Therefore, to facilitate e-commerce related transactions, creation and acceptability of ‘e-cheque’ (a signer uses his digital signatures to sign an e-cheque) and payment or receipt on the basis of an electronic image of a ‘truncated cheque’ are now legally valid. Still, the negotiable instruments, like promissory note and bill of exchange are considered non-applicable under the Act.

On-Line Contracts:

The Indian Contract Act, 1872 lays down that for a contract to exist there has to be a proposal, and an assent to the proposal, which transforms into a promise. A promise supported by consideration becomes an agreement and an agreement enforceable by law is a contract. Likewise, an online contract follows the same pre-requisite as being followed in offline (physical) contract. At a basic level, online contract formation requires online offer/proposal by one party and its online acceptance by the other party.

E-markets are technological extensions of physical markets in the cyberspace. Everything that exists in the physical world now exists in cyberspace. E-markets are functioning like physical markets and have their respective set of e-buyers and e-sellers. These buyers and sellers are fulfilling all the legal pre-requisites to have binding relationship between them. Online contract is one such relationship that binds the buyer with the seller.

An online contract is formed over the Internet when an offer is made and an acceptance is received. The offer could be made by a seller (service provider) using an e-mail or a website. The buyer on receipt of an offer, places an order and the seller confirms receipt of the order. But there needs to be a clear statement as to how offers and acceptance are to be communicated and received. In fact, it was the United Nations Commission on International Trade Law (**UNCITRAL**) Model Law on Electronic Commerce, which for the first time articulated about the nature of online contract mechanism in terms of its formation and validity. It was adopted by the General Assembly of the United Nations on 30th January 1997 by its Resolution A/RES/51/162. It deals not only with the issue of contract formation but also with the form in which an offer and an acceptance may be expressed.

In India, there is no specific law pertaining to online contracts. Nevertheless, the Indian Parliament has enacted an Act called the Information Technology Act, 2000. This Act is based on the UNCITRAL’s Model Law on Electronic Commerce. The Indian

Information Technology Act, 2000 has made the following instruments/documents (contracts) non-applicable under section 1(4) of the Act:

- (a) A negotiable instrument (other than a cheque) as defined in section 13 of the Negotiable Instruments Act, 1881.
- (b) A power-of-attorney as defined in section 1A of the Powers-of-Attorney Act, 1882.
- (c) A trust as defined in section 3 of the Indian Trusts Act, 1882.
- (d) A will as defined in clause (h) of section 2 of the Indian Succession Act, 1925 including any other testamentary disposition by whatever name called.
- (e) Any contract for the sale or conveyance of immovable property or any interest in such property;
- (f) Any such class of documents or transactions as may be notified by the Central Government in the Official Gazette. Reasons of making aforesaid instruments/documents (contracts) non-applicable result not only from lack of proper IT infrastructure to support legal requirements of such instruments but also issues related to payment of stamp duty under the State or Central Stamp Duty enactments and so far there is no technology, which would facilitate payment of statutory stamp duty payable on such instruments.

Online contracts cover the gamut of online business behaviour, whether it is business-to-business (B2B) or business-to-consumer (B2C). These contracts may exist in various forms, like EDI contracts, access contracts, click-wrap contracts and web-wrap contracts. All these contracts may deal with tangible (physical) as well as intangible (digital) goods depending upon the nature and type of transaction. **EDI contract** predominantly deals with tangible goods in B2B space¹, whereas '**access contract**' deal with intangibles. A **click-wrap** contract deals with both tangible and intangible goods. A **web-wrap** contract predominantly deals with intangible goods only.

The Information Technology Act came into effect from October 17, 2000. The Act identifies three parties to the electronic transmission process: the originator [section 2(1)(za)], the intermediary [section 2(1)(w)] and the addressee [section 2(1)(b)].

The Information Technology Act grants legal recognition to communication process involving computer, computer system and computer network by identifying attribution, acknowledgement, dispatch and receipt of electronic records as key statutory provisions.

A chain of successive events – e-offer, e-acceptance, consideration etc., combination of which may lead to electronic contract formation. E-contract formation has not only given rise to many complexities but also raised certain critical legal issues. It is thus imperative to look into the following issues in view of the emerging law.

To rely on an electronic message, the parties should take steps to make sure the contract is binding, e.g., that the essential terms of the contract are manifested, agreed upon, and that the persons who are parties to the electronic "contract" have the legal competence and capacity to enter into an agreement. Under the Indian Contract Act, 1872, one of the pre-requisites of a valid contract is that the parties must be competent to contract [sections 10, 11 & 12]. Contracts entered into by individuals, who are not competent to contract are void. Section 11 of the Indian Contract Act, states "...every person is competent to contract who is of the age of majority according to the law to which he is subject, and who is of sound mind, and is not disqualified from contracting by any law to which he is subject". Also, under section 3 of the Indian Majority Act, 1875, the age of majority is eighteen years. In other words, reading of sections 10 & 11 of the Indian

Contract Act together with section 3 of the Indian Majority Act will make a person below the age of eighteen years, incompetent to contract. However, no section in the Indian Contract Act makes it clear whether, such an agreement if entered into, would be voidable or altogether void. Nevertheless, in **Mohori Bibeev. Dharmodas Ghose**[(1903) 30IA 114], it was settled by the Privy Council that “it is essential that all contracting parties should be competent to contract and a person who by reason of infancy is incompetent to contract cannot make a contract within the meaning of the Act. Thus, it is imperative that the service provider needs to incorporate the following clause on Membership Eligibility in its Standard Terms and Conditions: “Use of the Site is available only to persons who can form legally binding contracts under applicable law.

The common law of contract has evolved over a period of many centuries. It has crystallized the concept of “pen-paper-and-signature” as physical means of authenticating a contract. Now, in the online medium electronic authentication has to be seen from the point of “electronic records and digital signatures”.. The Information Technology Act, 2000 advocates the use of digital signatures to authenticate electronic records. It accepts ‘digital signature’ [section 2 (1)(p)] as an authentication standard. Section 3 of the Act enumerates the whole process of digital signature creation and its verification. It is based on UNCITRAL’s Model Law on E-commerce, which adopts ‘functional equivalent approach’ advocating a shift from paper-based environment to a computer-based equivalent.

Advantages of E-Governance in E-Commerce:

Few innovations in human history encompass as many benefits as electronic commerce. The global nature of technology, low cost, opportunity to reach millions of people, interactive nature, variety of interaction possibilities and resourcefulness and rapid growth of the supporting infrastructure, especially the internet, result in many benefits to organizations, individuals and society. These benefits are just starting to materialise, but they will increase significantly as EC expands.

The benefits of EC in terms of:

□□□Organizations,2)Consumers; and 3)Society

EC expands the market place to national and international markets. With minimal capital outlay, a company can easily and quickly locate more customers, best suppliers and most suitable business partners worldwide. In addition, it:

- decreases the cost of creating, processing, distributing, storing and retrieving paper based information; allows reduced inventories and overhead by facilitating ‘pull-type supply chain management’.
- In a pull-type system, the process starts from customer order and uses just-in-time processing.
- This allows product customization and lower inventory cost.
- reduces the time between the outlay of capital and receipt of products and services.
- supports Business Re-engineering Process efforts. When processes are changed, productivity of salespeople, knowledge workers, and administrators can increase by cent percent or more.
- lowers telecommunications cost; internet is much cheaper than value-added networks(VAN).
- helps small businesses to compete with large companies

- enables organizations to reach customers outside their immediate area at a minimum cost.
- allows organizations to reach a wide range of suppliers, thereby reducing the cost of supplies and services;
- permits the creation of efficient markets in an industry in which buyers and sellers can share benefits; allows companies to auction surpluses or obsolete products quickly with little expenses; and facilitates global trade, allowing companies to penetrate foreign markets.

EC:

- provides customers with more choices; they can select from many vendors and from more products;
- frequently provides customers with less expensive products and services by allowing them to shop in many places and conduct quick comparisons;
- allows quick delivery of products and services;
- enables customers to shop or do other transactions 24 hours a day, year round, from almost any location;
- permits customers to receive relevant and detailed information in seconds, rather than in days or weeks;
- enables consumers to get customized products from PCs to cars at competitive prices;
- makes it possible to participate in virtual auctions;
- allows customers to interact with other customers in electronic communities and to exchange ideas as well as compare experiences; and capitalizes on the general movement from a market-centric to a customer-centric environment.

EC:

- enables more individuals to work at home and to do less travelling, resulting in less traffic on the roads and lower air pollution;
- allows some merchandise to be sold at lower prices, so less affluent people can buy more and increase their standard of living;
- enables people in third world countries and rural areas to enjoy products and services that otherwise are not available to them. This includes opportunities to learn professions and earn college degrees; and facilitates delivery of public services, such as government entitlements, by reducing the cost of distribution and increasing the quality of the distributing system.

Limitations of E-Commerce:

There are technical and non-technical limitations in the successful implementation of EC in the country. We will discuss the technical and non-technical limitations separately.

The technical limitations are as below mentioned:

- there is lack of system security, reliability, standards and communication protocols;
- there is insufficient telecommunication bandwidth;
- software development tools are still evolving and changing rapidly;
- there are difficulties in integrating the internet and EC software with some existing applications and databases;
- there is need for special web servers, in addition, to the network servers (additional cost);

- there is possible problem of interoperability, meaning that some EC software do not fit with some hardware or is incompatible with some operating systems or other components; and
- accessibility to the internet is still expensive and/or inconvenient for many potential customers.

However, these limitations can be overcome with time. Appropriate planning can help in minimizing them.

Other than technical issues, there are non-technical issues that centres EC. These issues are given below:

- many legal issues are yet unresolved;
- government regulations and standards are not refined enough for many circumstances;
- benefits of EC, such as, web advertisements are difficult to measure. In addition, the methodologies for justifying EC are still in the developmental stage;
- EC is still evolving and changing rapidly. Many people are looking for the situation to stabilize before they enter EC operation;
- customers resist change. To switch from a real to a virtual store may be difficult for many people. It seems that people do not yet sufficiently trust paperless, faceless transactions;
- there are not enough support services. For example, copyright clearance centers do not exist and quality evaluators or qualified EC tax experts are rare;
- there is a perception that EC is expensive and unsecured, so many do not want to use it yet;
- □there is not yet sufficiently large number (critical mass) of sellers and buyers that is needed for profitable EC operations; and
- EC could result in breakdown of human relations. Despite these limitations, rapid progress is occurring in EC. As experience accumulates and technology improves, the ratio of EC benefits to cost will increase, resulting in a greater rate of EC adoption.

ICTs have created paradigm shift in the securities market operations through electronic trading system. Stock exchanges all over the world have realized the potential of the new technologies and have moved on to electronic trading systems. The major changes that have swept the international financial markets since 1975 have been accelerated by the use of computers. Enormous strides were taken towards the computerization of trading systems in both financial markets and brokerage office. In the late 1980s and in the 1990s the developing countries also moved towards liberalization of stock markets as part of their reform programmes and attempted to attract foreign capital. The electronic trading system (ETS) pioneered by US plays a critical role in stock trading. ETS is a set of computer terminals connected via high-speed communication lines to a central host computer. It involves the use of the internet as the medium to communicate orders to the stock exchange through a broker's website. Bids (buying), offers (selling) and trade requests can be entered from even remote terminals. Once a trade is done, confirmation is almost instantaneous and reported immediately to the investor. Computerized order routing and trading has not only enhanced the efficiency of order execution but has also led to the development of new products and trading techniques. ETS has been employed in some instances to replace and in others to complement traditional physical open outcry markets.

Electronic markets are rapidly emerging as a tool for conducting business and commercial transactions. A market is a network of interactions and relationships where information, products, services and payments are exchanged. When the marketplace is electronic, the business centre is not a physical one but a network-based location where business interactions occur. In electronic markets, the principal participants-transaction handlers, buyers, brokers and sellers-not only are at different locations but seldom even know one another. They meet online or through the web and all necessary transactions including transfer of money are handled electronically through the net.

Conclusion:

There is a profound impact of ICTs on the functioning of vital sectors of the economy today. Commerce, trade, agriculture, banking, rural development is affected by the electronic transformation being brought about by various technologies like internet and web. Financial and commercial transactions have been facilitated through electronic mode of payments, electronic trading system, electronic markets and electronic banking. Infrastructure in the form of institutions for software development, more resources in terms of finances and professionals and security is very much required to make e-economy more viable.

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