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Electronic Commerce and Banks in India

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ABSTRACT

Continuing advances in IT and its prominent role in commerce leads Financial Institutions towards E-commerce. In this work we have defined E-commerce and tried to identify the driving forces for the phenomenal growth of E-commerce globally. We also discuss critical issues for E-commerce in the country and the role banks can play. We also present initiatives taken by the Government and activities carried out by RBI and IDRBT in this direction.

1 INTRODUCTION

Today "Electronic Commerce" is a buzz word in all the trade, industry and government fora the world over. Some believe it is a mere hype created by some interested parties, while most of the others believe it is a genuine phenomenon which is drastically redefining not only the parameters of Technology and Trade as we know them, but also the very basis of our thinking and the way we lead our life. The Phenomenon of Electronic Commerce has permeated into every aspect of our life today.

Electronic Commerce has been around for the last two decades in some form or the other, but the new force that is driving Electronic Commerce is the Internet, which is revolutionizing the way companies around the globe conduct business. Internet based electronic commerce is playing a critical role in addressing strategic, mission critical business needs of the companies and hence the companies are making it an integral part of their business strategies.

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According to a survey conducted by Nasscom, E-commerce transactions in the country would grow phenomenally to Rs. 2500 crore in 2000-01 and to Rs. 10,000 crore in 2001-02. Globally, according to a survey conducted by IDC, currently the electronic commerce over the Internet is some $26 billion, while it is expected to reach about $1 trillion by 2003-05.

These mind boggling, figures are sufficient for any sane individual, even vaguely connected to industry, trade or commerce, to understand the potentially radical influence that E-commerce is having on human society.

All this is due to the Internet, a simple network of networks of computers across the globe, linked through various means: cable, satellite, telephone lines etc. based on the TCP/IP protocol. This network has not only altered the way we conduct trade and commerce, but also fundamentally altered the way we communicate, the way we live and to some extent, the way we think.

In this work, we shall briefly look at:

- Definition of electronic commerce ,
- Drivers of electronic commerce,
- Critical issues for electronic commerce,
- Role of banks in electronic commerce and
- IDRBT's activities in the arena of electronic commerce.

2. DEFINITION OF ELECTRONIC COMMERCE

Simply put, E-commerce is buying and selling on electronic networks, predominantly the Internet. This could involve trade of tangible goods/services similar to traditional commerce, or intangible items like music, information and involving digital transfer etc.

The World Trade Organization (WTO) distinguishes six main instruments of electronic commerce:

- The Telephone,
- The Fax,
- The Television,
- Electronic payment and money transfer systems,
- Electronic Data Interchange, and
- The Internet

Though the telephone, fax, TV and EDI have been in existence for some time, but when people talk of E-commerce, they usually refer to Internet Business, wherein goods or services are traded on the net.

Fundamentally, there are two types of electronic commerce –

1. Business to Business electronic commerce (B2B), and
2. Business to Consumer electronic commerce (B2C)

B2B E-commerce is today about 80% of total E-commerce in the world, due to its advantages like:

- reduced transaction costs,
- improved product quality,
- improved service,
- minimal investment for global reach,
- reduced inventory costs etc.

B2C or retail E-commerce is nowhere near B2B in terms of size but it is growing phenomenally as far as volumes are concerned. More and more people are taking to shopping on the Internet due to the following factors:

- convenience,
- more choice,
- more range,
- better prices, etc.

In some societies where the information infrastructure is well developed, like the US and some countries of South East Asia, B2C is a way of life. In other areas where the information infrastructure is not fully developed, including most areas of Europe, Asia (except UK and the Nordic countries like Sweden, Finland etc.) and the entire African and South American continents, B2C E-commerce is yet to take off in a big way, though small beginnings have been made.

3. DRIVERS OF E-COMMERCE

The following broad themes have been identified as the driving forces for the phenomenal growth of E-commerce globally:

Electronic Commerce is easy and affordable: E-commerce is easy and Internet access is relatively affordable. A PC, modem, browser, and a phone line are all that is needed to log on. Moreover, Internet technologies are also user-friendly. Point-and-click technology makes for easy use of browsers and search engines, and websites themselves are generally easy to enter and navigate.

Electronic Commerce transforms the market place: E-commerce will change the way business is conducted; traditional intermediary functions will be replaced, new products and markets will be developed, new and far closer relationships will be created between

business and consumers. It will change the organization of work; new channels of knowledge diffusion and human interactivity in the workplace will give more flexibility. Adaptability will be needed with worker's functions redefined and skills upgraded.

Electronic Commerce has a catalytic effect: E-commerce will serve to accelerate and diffuse more widely, changes that are already under way in the economy, such as the reform of regulations, the establishment of electronic links between businesses, the globalization of the economy, and the demand for higher skilled workers. Likewise, many sectoral trends already underway, such as electronic banking, direct booking of travel, and one-to-one marketing, will be accelerated.

Enhanced customer service: With enhanced customer service in mind, companies are turning to the internet as a way not only to lower costs but also to increase service quality levels. Internet based communication is seen as a way to strengthen business relationships with suppliers and customers, especially in B-2-B E-commerce.

Electronic commerce over the Internet vastly increases interactivity in the economy: These linkages now extend upto small businesses and households and reach out to the world at large. Access will shift away from the relatively expensive personal computers to cheap and easy to use TVs and telephone devices. People will increasingly have the ability to communicate and transact business anywhere, anytime. This will have a profound impact on the erosion of economic and geographic boundaries.

Improved value chain management: Improved value chain management efforts have sparked a need for collaborative sharing of information about the supply and demand chains of enterprises and their commerce partners.

Openness is the underlying technical and philosophical tenet of the expansion of E-commerce: The widespread adoption of the Internet as a platform for business is due to its non-proprietary standards and open nature as well as to the huge industry that has evolved to support it. The economic power that stems from joining a huge network will help to ensure that new standards will remain open. What is more important, is that openness has emerged as a strategy, with many of the most successful E-commerce ventures granting business partners and consumers unparalleled access to their inner workings, databases, and personnel. This has led to a shift in the role of the consumers, who are increasingly implicated as partners in product design and creation. An expectation of openness is building on the part of the consumers/citizens, which will cause transformations, for better (increased transparency and competition), or for worse (potential invasion of privacy).

Electronic commerce alters the relative importance of time: Many of the routines that help to define the "look and feel" of the economy and the society are a function of time. Mass production is the fastest way of production at the lowest cost. E-commerce is reducing the importance of time by speeding up production cycles, allowing firms to operate in close co-ordination and enabling consumers to conduct transactions around the

clock. As the role of time changes, so will the structure of business and social activities, causing potentially large impacts.

XRP-Electronic commerce eXtended ERP: Several companies and institutions have installed ERP in their organizations. Substantial sums have been spent in this direction, and they are eager to leverage these huge investments. ERP is a driving force because it provides opportunity to improve efficiency by integrating diverse applications.

The "Strategic Focus Report on Retail Banking", a publication on Banking Technology, considers factors that must be looked at, for banks interested in E-commerce. It suggests that apart from building an impressive website, issues such as staff training to ensure that at minimum, staff are more technically literate than the average e-Customer, down to the fact that every piece of marketing literature the bank has ever produced should carry its web address. In terms of technology, the report finds that future technologies such as digital TV and smart cards represent an unforeseeable and thus open-ended commitment.

The trend is towards enabling transactions online, and this will accelerate. Transactional systems should link directly to consumer data systems. E-commerce is all about leveraging the Internet throughout the entire value chain from the customer to the final inter-bank transfers etc. Thus it is a visible expression of the bank's ability to offer leading edge service. Although for many banks, an E-commerce operation is currently a net cost center, but the time is not far ahead when it will become a net profit center.

4. CRITICAL ISSUES FOR E-COMMERCE

There are issues, which are critical for E-commerce to develop. Although there are significant areas of overlap, they can be divided into three groups: financial issues, legal issues and market access issues.

Financial Issues

- customs and taxation
- electronic payments

Legal Issues

- uniform commercial code
- intellectual property protection
- privacy

Market Access Issues

- communications infrastructure
- technical standards
- security

4.1 Financial Issues

4.1.1. Customs and Taxation: Internet lacks the clear and fixed geographic lines of transit that historically have characterized the physical trade of goods. Thus, while it remains possible to administer tariffs for products ordered over the Internet but ultimately delivered via surface or air transport, the structure of the Internet makes it difficult to do so when the product or service is delivered electronically. Nevertheless, many nations are looking for new sources of revenue, and may seek to levy tariffs on global electronic commerce.

The present taxation laws, based either on business connection or permanent establishment are difficult to apply as the physical location of given transactions looses its importance, making it difficult to determine their revenue jurisdiction. Furthermore, E-commerce through the Internet, by and large, results in a distinct change in the pattern of intermediation by banks and other institutions, limiting the ability of authorities to rely on them to collect withholding tax.

Taxes could be source-based or destination based. While source-based taxes applied to E-commerce have clear compliance and administrative cost advantages over destination-based counterparts, problems of evasion still remain. Special types of taxation such as the "bit-tax" on data transmission have been proposed. However, tax administration would need to strike a balance between maximizing the potential "efficiency gains" out of technology and protecting the revenue base.

In Indian context, there has been no real effort to spell out a clear-cut taxation policy. Though the WTO has ruled that there cannot be additional taxation on E-commerce till 2001, this issue needs to be resolved for a healthy growth of E-commerce. Countries like the US are arguing for a tax less Internet economy, but other countries like Australia, India, etc. would like to impose some tariff on electronic commerce. They argue that as most of the Internet traffic is routed through the US, it has an unfair share of the revenues.

4.1.2. Electronic Payment Systems: New technology has made it possible to pay for goods and services over the Internet. Some of the methods would link existing electronic banking and payment systems, including credit and debit card networks, with new retail interfaces via the Internet. Electronic money, based on stored-value, smart card, or other technologies, is also under development. Substantial private sector investment and competition is spurring an intense period of innovation that should benefit consumers and businesses wishing to engage in global electronic commerce.

At this early stage in the development of electronic payment systems, when the environment is changing rapidly, it would be hard to develop policy that is both timely and appropriate. For these reasons, inflexible and highly prescriptive regulations and rules in the banking and financial sectors are inappropriate and incompetent. Rather, in the near term, case-by-case monitoring of electronic payment experiments is preferred.

As electronic payment systems develop, governments should work closely with the private sector to inform policy development, and ensure that governmental activities flexibly accommodate the needs of the emerging marketplace.

The Vasudevan Committee on the Technological Upgradation of the Banking Sector recommended that " ---the RBI may promote amendment to the RBI Act 1934, and assume the regulatory and supervisory powers on payment and settlement systems. Simultaneously, the RBI may promote a new legislation on Electronic Funds Transfer (EFT), to facilitate multiple payment systems, to be set up for banks and financial institutions."

The proposed IT Act deals with this, wherein, in the Reserve Bank of India Act, 1934, after Chapter IIIC, the Chapter III D -of the IT Act 1999 is to be inserted, to deal with electronic fund transfer systems. Notification of Regulation for Electronic Fund Transfer System is done under Section 58 of Reserve Bank of India Act, 1934 (2 of 1934).

4.2 Legal Issues

4.2.1. Uniform Commercial Code: In general, parties involved should be able to do business with each other on the Internet under whatever terms and conditions they agree upon.

To encourage electronic commerce, the governments should support the development of both a domestic and global uniform commercial legal framework that recognizes, facilitates, and enforces electronic transactions worldwide. Fully informed buyers and sellers could voluntarily agree to form a contract subject to this uniform legal framework, just as parties currently choose the body of law that will be used to interpret their contract.

The expansion of global electronic commerce also depends upon the participants' ability to achieve a reasonable degree of certainty regarding their exposure to liability for any damage or injury that might result from their actions. Inconsistent local laws, coupled with uncertainties regarding jurisdiction, could substantially increase litigation and create unnecessary costs that ultimately will be born by consumers. All countries should work closely with other nations to clarify applicable jurisdictional rules and to generally favor and enforce contract provisions that allow parties to select substantive rules governing liability.

Thus, the development of global electronic commerce provides an opportunity to create legal rules that allow business and consumers to take advantage of new technology to streamline and automate functions now accomplished manually.

In the Indian context, the current Indian laws require a quick change. It is high time that we change the vintage Telegraph act of 1885, so that the Indian people and telecom

companies can freely breathe the electronic air. It is also essential to introduce laws against computer crimes and such other cyber laws that would help to build the Information Infrastructure of the country. The laws should also consider the emerging use of Electronic Data Interchange (EDI), Electronic Commerce, Electronic Funds Transfer, Electronic Cash, Copyright and Digital Intellectual Property rights etc. For example, one may require changing the Evidence Act to recognize Digital signatures. Changes in Evidence Act, 1872; Indian Penal Code 1860; and Indian Patents Act General Clauses/Act should be undertaken to recognize emerging technologies, keeping in view the following:

- Prevention of computer crimes
- Digital Signatures especially as related to Electronic Funds Transfer
- Copyright and Digital Intellectual Property Rights especially with regard to Internet and World Wide Web
- Electronic Governance
- Computerization of Land Records
- Bar Coding of all consumer goods and related amendments in the Weights and Measures Act
- Cryptography and Encryption
- Privacy of data

The IT Act 1999 seeks to address some of these issues, related especially to cyber crimes and digital signatures, but several issues are still left un-addressed.

For activities like E-commerce, digital economy, spread of Internet, new laws to be created at WTO could have wider impact on our economy. India needs to understand these laws quickly, create national debates and get favorable response at WTO. The Services component of the IT industry is a strong area of skill in the context of demonstrated Indian competency. This is a subject of intense debate in the GATS forum and hence suitable laws and practices need to be put in place so as to maximize benefits for Indian skills and avoid pitfalls in International policy matters on the issue.

4.2.2. Intellectual Property Protection: Commerce on the Internet often will involve the sale and licensing of intellectual property. To promote this commerce, sellers must know that their intellectual property will not be stolen and buyers must know that they are obtaining authentic products.

International agreements that establish clear and effective copyright, patent, and trademark protection are therefore necessary to prevent piracy and fraud. While technology, such as encryption, can help to combat piracy, an adequate and effective legal framework is also necessary to deter fraud and theft of intellectual property, and to provide effective legal recourse when these crimes occur. Increased public education about intellectual property in the information age will also contribute to the successful implementation and growth of the Global Information Infrastructure.

In India, the IPR Cell in MIT (earlier DOE) is a facilitator for creation, ownership and protection of IPR in Electronics & Information Technology. This IPR Cell has initiated a project on development of Electronic Copyright Management System for Indian environment. Market oriented consensus based approach is being followed so that the developed technology meets the requirements. Accordingly a feasibility study report is being prepared in the first phase, before taking up the development in the second phase.

4.2.3. Privacy: Privacy concerns are being raised in many countries around the world, and some countries have enacted laws, implemented industry self-regulation, or instituted administrative solutions designed to safeguard their citizens' privacy. Disparate policies could emerge that might disrupt trans-border data flows. To ensure that differing privacy policies around the world do not impede the flow of data on the Internet, trading partners and policymakers from various countries should discuss and try to build support for industry-developed solutions to privacy problems.

The GII (Global Information Infrastructure) facilitates the collection, re-use, and instantaneous transmissions of information. If this is not managed carefully, it can diminish personal privacy and people may feel uncomfortable doing business in the networked environment. Commerce on the GII will thrive only if the privacy rights of individuals are balanced with the benefits associated with the free flow of information. Technology will offer solutions to many privacy concerns in the online environment, including the appropriate use of anonymity. The goal is to find a way to balance the competing values of personal privacy and the free flow of information in a digital democratic society.

The scenario in the country is in the development stage. Few organizations particularly in the defense sector are engaged exclusively for the development of cryptography techniques, protocols and the products to enable privacy and security. IDRBT is also working on solutions required by the Banking and Financial Sector of the country.

Department of Telecommunications does not permit the encrypted signal on their network and this is one of the reasons why extensive development in this area has not taken place. Secondly, the cryptographic products worldwide are licensed items and the license to the country is not easily available for products of key length of more than 56 bits. Indian industry largely assembles PCs and therefore the cryptographic product has been limited to the PC market whereas higher end systems are not produced in the country and therefore the progress of the work in this direction is slow, as the know-how of the system is generally not available.

4.3. Market Access Issues

4.3.1. Telecommunications Infrastructure and Information Technology: Global electronic commerce depends upon a modern, seamless, global telecommunications network and upon the computers and information appliances that connect to it. Unfortunately, in many countries including ours, telecommunications policies are

hindering the development of advanced digital networks. Customers find that telecommunications services often are too expensive, bandwidth is limited, and services for mission and time critical applications are unavailable or unreliable. Likewise, many countries maintain trade barriers for imported information technology, making it hard for both merchants and customers to purchase the computers and information systems they need to participate in electronic commerce.

There are various constraints in the present network that may impede the evolution of services requiring higher bandwidth. The goal should be to ensure that online service providers can reach end-users on reasonable and nondiscriminatory terms and conditions. Genuine market opening will lead to increased competition, improved telecommunications infrastructures, more customer choice, lower prices and increased and improved services.

Interface: The issue is the extent to which the relative complexity of getting on, and using, the Internet acts as a deterrent to many consumers. A critical and frequently underestimated factor in consumer purchasing decisions is "ease of buying". Currently, the buying interface over the Internet is discouraging to most consumers. The interface metrics of a TV style device (turn it on and change channels) are easier to use as compared to existing computers.

Another important interface aspect is that the Internet's reliance on *representation* (both visual and auditory) of goods and services offered for sale is somewhat similar to mail order catalogue shopping. While such shopping has significant advantages for sellers, in reduction of transport and storage costs at possibly high-rent locations, the benefits for buyers are much less marked.

Bandwidth: In simple terms, bandwidth is the carrying capacity of a network, or how much data can be transferred in a given time. The importance of bandwidth is that it determines the extent to which Internet *delivery* of digital products is feasible. Immediate delivery via the Internet may be more attractive to consumers than deferred delivery via the ordinary mail system. In addition, certain kinds of entertainment, which appeal to consumers, rely on higher bandwidth.

Infrastructure issues to be considered for bandwidth are: -

1. Leased lines,
2. Local loops pricing,
3. Interconnection,
4. Attaching equipment to the network,
5. Multimedia over Internet.

In addition, countries have different levels of telecommunications infrastructure, which may hinder the global provision and use of some Internet-based services.

India has also recognized this agent of Technological Change as a key source of industrial competitiveness and economic growth. It has realized that in times to come, progress in information technology would have the greatest influence on the global economy, making it possible to collect, process and transmit information at lightning speed at lesser cost, thereby increasing productivity, returns on capital, quality and efficiency in all sectors of the economy. The Indian IT industry would be worth at least US $ 120 billion by the year 2010, which could include a US $ 80 billion of software industry and US $ 40 billion of other IT industry.

In order to achieve the above target, thrust should be accorded to many areas including development of infrastructure, manpower development, education, software exports, employment, low-cost computers, chip manufacturing, internet proliferation, new legislation and quick response to convergence of technologies.

The last few years have witnessed a large amount of liberalization in government procedures and policies. This has attracted a large number of companies from overseas as well as India to set up operations in country. However, growth and development of infrastructure has not kept pace with the growth of the industry and for this every Indian state should have its own Silicon Valley. Such a move would require policy motivation as well as creation of Silicon infrastructure around the existing and new universities and development of international and domestic air links. This essentially means that a Software Super-Corridor be set up across the country and for this IT would need to be declared as an Infrastructure Industry, with focus on:

1. Physical designing of IT infrastructure:
2. Institutional Framework
3. Internet proliferation and development of India as major internet hub
4. Human resource development
5. Hardware development

Supporting the broadest possible free flow of information across international borders is essential. This includes most informational material now accessible and transmitted through the Internet, including World Wide Web pages, news and other information services, virtual shopping malls, and entertainment features, such as audio, video products, and the arts. This principle extends to information created by commercial enterprises as well as by schools, libraries, governments and other nonprofit entities.

In order to realize the commercial and cultural potential of the Internet, consumers must have confidence that the goods and services offered are fairly represented, that they will get what they pay for, and that recourse or redress will be available if they do not. This is an area where government's appropriate action is required.

The most important aspect is Internet content development in the country. i.e. to bring Internet traffic to Indian web sites which are focussed on our culture, heritage etc. This can be of immense use to spread the message of our culture and heritage to Indians and

others all over the world. Therefore, policy initiative should be taken for the proliferation of Internet and development of Indian content in the INTERNET while ensuring adequate regulation on the type of content.

4.3.2. Technical Standards: Standards are critical to the long-term commercial success of the Internet as they not only allow products and services from different vendors to work together, but also encourage competition and reduce uncertainty in the global marketplace. Premature standardization, however, can "lock in" outdated technology. Standards can also be employed as de facto non-tariff trade barriers, to "lock out" non-indigenous businesses from a particular national market.

To ensure the growth of global electronic commerce over the Internet, standards will be needed to assure reliability, interoperability, ease of use and scalability in areas such as:

- electronic payments;
- security (confidentiality, authentication, data integrity, access control, non-repudiation);
- security services infrastructure (e.g., public key certificate authorities);
- electronic copyright management systems;
- video and tele-conferencing;
- high-speed network technologies (e.g., Asynchronous Transfer Mode, Synchronous Digital Hierarchy); and
- digital object and data interchange.

In the current context, countries like USA and EU create standards for E-commerce, which developing countries like India have to respond. It is important for India to develop our own standards in line with our business models yet compatible with international standards.

All the above issues highlighted- are critical to have an effective framework for electronic commerce to thrive. The success of electronic commerce will require an effective partnership between the private and public sectors avoiding the contradictions and confusions that can sometimes arise when different agencies individually operate without coordination.

There is a great opportunity for commercial activity on the Internet. If the private sector and governments act in close coordination, this opportunity can be realized for the benefit of all people, bringing India out from its perpetual state of hibernation- as a nation that always had the potential to rise up but never did - to a well-developed country, which can effectively take care of all sections of people residing in it.

4.3.3. Security: If Internet users do not have confidence that their communications and data are safe from unauthorized access or modification, they will be unlikely to use the Internet on a routine basis for commerce. So the requirements are:

- secure and reliable telecommunications networks;
- effective means for protecting the information systems attached to those networks;
- effective means for authenticating and ensuring confidentiality of electronic information to protect data from unauthorized use; and
- users who understand how to protect their systems and their data.

There is no single "magic" technology or technique that can ensure security and reliability. Accomplishing that goal requires a range of technologies (encryption, authentication, password controls, firewalls, etc.) and effective, consistent use of those technologies, all supported globally by trustworthy key and security management infrastructures.

A beginning has been made in the use Electronic Commerce (EC) and Electronic Data Interchange (EDI) by a number of agencies in the country. The EC and EDI would involve communication of information pertaining to trade, finance and would result in transaction between private and public sector, in both domestic and international communities. It is expected that by the turn of the century, there will be significant growth in the use of EDI both in the country and around the world. The success and growth of EC and EDI, however, would depend upon how the issues concerning legal (such as tampering with data, message etc.), security and performance of hardware, software and communication are resolved. Therefore, as dependence on computer technology grows in the country, it is important to plan for security, examine the issues and promote crime prevention programs on a national level. As mentioned earlier, adequate laws in this regard need to be framed and enacted.

Legislation is to be enacted that would facilitate development of voluntary key management infrastructures and would govern the release of recovery information to law enforcement officials pursuant to lawful authority.

In addition to use of laws as a preventive measure, it is necessary to develop concepts/guidelines and manuals for computer security and implement the guidelines in a serious manner at all levels and within different types of entities and organizations. Such guidelines/manuals are fundamentally important and hold greater prospects of success than to enact new laws for protection.

5. ROLE OF BANKS IN ELECTRONIC COMMERCE

Electronic banking is one of the truly widespread avatars of E-commerce the world over. One of the benefits of e-banking is that it allows the customers to deal with monetary transactions without being physically present at the bank.

There are three modes of e-banking:

- ATM networks,
- Internet Banking – transferring transactions on the internet,
- Smart cards – where Internet banking is taken further with a swipe of the smart card taking care of security in the transactions and eliminating physical processes.

Some of the world's leading banks are investing heavily in e-banking services. Citibank is considered to be the leader in e-banking. But, globally, as per a survey conducted by Ernst & Young (www.ey.uk) many banks are also blindly investing huge sums with no clear justification for their moves.

In India, though several banks have ATM facility, only four banks have e-banking facility: ICICI Bank, CitiBank, IndusInd Bank, and Times Bank. However, others like Global Trust Bank and IDBI Bank are quickly setting up the required facilities. They offer a range of services including ATM, Debit cards, fund transfers etc. through electronic channels.

Banks need to buck up and absorb the technology fast as estimates go, about 20-30 cents per dollar of E-commerce transactions are income to banks. Going by Nasscom's estimates of E-commerce in India, this would mean about Rs. 3000 crore of income for banks by 2001-02.

6. IDRBT'S ACTIVITIES IN THE ARENA OF E-COMMERCE

A capable and fully automated banking infrastructure is an absolute requirement for healthy E-commerce. Among the various other technological needs of the Banking and Financial sector, this was one of the goals for which IDRBT was set up by the Reserve Bank of India -- to act as a think tank for the Promotion of Technology solutions. The Institute has already undertaken several research projects in the area of Computer Based Training, Digital Certificate Management, Data Mining, Analysis of Credit Card Transactions etc.

Work is also going on various aspects related to E-commerce. The Institute is working on a sponsored project from Ministry of Information Technology, along with CMC Limited on "Technologies for E-commerce". Under this project, IDRBT will procure and develop various tools that will enable quicker building of E-commerce applications in the country. The project envisages creation of a test bed for Internet security and Internet commerce. By developing tools, building prototypes and field implementing applications the test bed will be used for E-commerce.

IDRBT is in the process of establishing a "Center of Secure Technologies". This center will study the existing Public Key Infrastructure and procure/develop necessary software tools. It will help in setting up Public Key Infrastructure. The center will also take up Research & Development and Consultancy on Security Systems, Security Standards and

Electronic Payment Systems specific to the Indian environment, and will also assist in investigation of Cyber crimes.

IDRBT was also involved in a project with IITB, Mumbai and other Institutions, to develop a SMART card solution that can be used in India. The outcome of this pilot project is smart card standards, which has been submitted to RBI for consideration as national standard. This Project is of great importance because Security Validation and Authentication will become easy once this Card is operational. Since individual computers are expected to have Smart card readers in the near future, this opens a vast range of opportunities to the Banking and Business segments.

7. CONCLUSION

In the post liberalization era, competition and changes in technology and lifestyles have changed the face of banking but we in India have a long way to go, before it can claim its rightful place in the world. On its part, the government has taken many good 'first steps' in setting up the IT Task Force, the Group on Telecom (GoT) and various committees to look into different IT related issues. A draft New Telecom Policy 1999 (NTP-99) was put up on the Internet for discussion in January 1999. The Union Cabinet subsequently approved this on March 26, 1999. There is also a lot of interaction with the Indian Diaspora in the West, to find 'India specific' solutions in merging and exploiting information and its related technologies into the mainstream of life in India. With traditional branch based banking on the decline in major metros on one side, and banking yet to reach some remote corners of the country still, banks have an unprecedented diversity in the challenge to provide better service to maximum number of people. Electronic commerce is a delivery channel that can help banks to overcome several limitations in terms of “Reach” and “Range” of services.

More significant than the value of the actual transactions, is the value of the savings and alternate modes of earnings spawned by the Internet. Also significant is the rapid rate at which these alternate avenues are growing.

India is on the threshold of an information revolution. It is well poised to be an economic superpower in the 21st century due to the availability of top notch talent in Information Technology, a thriving democracy with minimum censorship on the use of information and communication technologies and the widespread use of the English language. There is a view that, 'Information Technology is to India, what oil is to the Gulf'.

There are 122 ISP license holders in India offering more than 2,50,000 Internet connection, and an estimated 20,00,000 people have access to the Internet.

The government has finally liberalised the ISP Policy. There is negligible censorship on the Internet and an abundance of top-notch talent in India. VSNL has also commissioned a larger bandwidth for Internet services in India and has started leasing lines to private ISPs.

In order to build confidence of the common man, in electronic commerce transactions over the net it is necessary to have a legal framework supporting Digital transactions, in place. Without these safeguards, transactions over the Net are not secure. It is heartening to note that the Indian parliament is working on passing these cyber laws. Once cyber laws are in place and business over the Net takes off, India will be in an excellent position to be an Asian Internet superpower.

Many important steps need to be taken if India is to make full use of the opportunities thrown up by the information revolution. Information infrastructure needs to be put in place, cyber laws which will legalize the transaction of money over the Internet need to be enacted and information security needs to be ensured to guard against the negative effects of the information revolution. Efforts have to be made to ensure optimum utilization of information technologies and to encourage financial institutions, multinational corporations and entrepreneurs to put their money in building this information infrastructure and resolving all pending disputes like the sharing of the frequency spectrum, the license fee tangle etc.

The electronic commerce environment in India is clouded. There are a lot of players claiming to be into E-commerce and several others waiting in the wings. Till the early 90's , we in India had been cribbing about the closed economy. But the initial kick-start in the early 90's has managed to keep the economic reforms going till date. The Internet Connectivity and Electronic commerce scenario is somewhat similar. There is a plethora of problems and difficulties and a host of issues that still need to be addressed and once the Government takes a clear and well defined stand, then things will fall in place.

The Policy makers, Government, and Public Sector entities like the DoT and VSNL have yet to really take the leap forward – to integrate our economy with the digital economy. However, on the other extreme are working examples that prove that things can be done – and done well, if desired.

The Indian Customs Department has taken a pioneering step towards electronic commerce in International trade. Indian Customs EDI System (ICES) was the name given to the project. It is a system to integrate EDI applications into the customs procedures and bring in an environment of participation and co-operation of all the agencies and partners who have a role to play in the international movement of goods, containers and passengers.

The other agencies involved in the customs clearance through NICNET value added networks are:

- Directorate General of Foreign Trade (DGFT); for processing import/export licensces
- Banks; for introducing EDI into normal Banking transactions like Duty payment etc.
- International Airport Authority of India;

- Apparel Export Promotion Agency and other Quota agencies;
- RBI
- Port Authorities
- Container Corporation of India,
- Railways and
- Other trade related agencies like ECGC etc.

The ICES has been extended since January 1997 to twenty nine centers. By the end of the year 2000, it is proposed to start EDI operations at all major ports/airports/inland container depots and land customs stations, recognizing the importance of electronic commerce, due to its cost effectiveness.

A supporting framework in terms of Laws, Regulations and Policies is sorely inadequate. But the IT Bill –1999 is a comprehensive step in this direction; once the Bill is cleared by the Parliament, we have a Cyber law framework in place. This is expected to give E-commerce in India a much needed boost.

The relevant Acts like The Indian Evidence Act, the Indian Penal Code, Customs Act, The Banker's Book Evidence Act, etc. will have to be amended. The Ministry of Commerce had set up an expert group to examine the commercial laws and to draft E-commerce Laws. The RBI has also set up an expert committee (The Shere Committee) to study the legal issues related to the introduction of EFT in our country. It has recommended both short and long-term measures taking into account the legal and technology position of India. The recommendations include:

- Introduction of EFT through the regulations to be made by the Central Board of the Reserve Bank u/s 58 of the RBI Act, 1934.
- The model customer contract, which will govern the banker – customer relationship in regard to EFT.
- Amendment of the RBI Act by introduction of a separate chapter dealing with EFT systems and power to RBI to draft necessary regulations.
- Enactment of the EFT Act.
- Amendment to the Banker's Book Evidence Act. 1891.

Infrastructure - rather the lack of it - is a major bottleneck. The Telecom policy –1999 and the recent ISP Policy are major steps towards meeting the needs of the required National Information Infrastructure (NII) for E-commerce.

Hence with an open, absorptive and dynamic e-enabled Banking sector, a proactive government and appropriate initiatives from various industry players, India can soon acquire its rightful place in the global E-commerce scenario.

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