CHAPTER – 6

CURRENT TRENDS IN E-COMMERCE IN INDIA

The cutting edge for business today is e-commerce. Most people think e-commerce means online shopping. But web shopping is only a small part of the picture. The term also refers to online stock, bond transactions, buying and downloading software without ever going to a store. In addition, e-commerce includes business to business connections that make purchasing easier for big corporations.

E-commerce is the application of communication and information sharing technology among trading partners to the pursuit of business objectives. It is a modern business methodology that addresses the needs of the organization, merchants and consumers to cut costs while improving the quality of goods and services and speed of service delivery. E-Commerce is associated with the buying and selling of information, products and services via computer networks. A key element of e-commerce is information processing.

The effects of e-commerce are already appearing in all areas of business, from customer service to new product design. It facilitates new types of information based business processes for reaching and interacting with customers online, advertising and marketing, online order taking and online customer service. It can also reduce costs in managing orders and interacting with a wide range of suppliers and trading and trading partners, areas that typically add significant overheads to the cost of products and services.

E-Commerce has increased the speed and ease with which business can be transacted today, resulting in intense competition between enterprises. Hence, companies are at the crossroads, with just two options - either go online or go out of business; they cannot afford to ignore this new business environment. This new digital economy has a major impact on the global economy. National markets, including those in developing countries, have been affected by changes in the global economic environment, and further such changes will continue to affect enterprises and citizens throughout the world. Studies indicate that over the past few years the import and export industries have grown significantly, and, therefore, the impact of e-commerce would be significant.
6.1 E-Commerce in the Indian context

E-Commerce has tremendous growth potential and also generates economic growth in the country. It is important to recognize that e-commerce is going to be the driving force of economic development in countries, especially India. The interaction of such factors will bring about rapid economic growth. Experiences of many countries indicate that the increasing returns and cumulative causation have resulted in high rates of growth.\(^3\)

Since e-commerce already affects the economic relations between and within countries and companies, and will continue to do so in increasing measure, it has to be seen as a matter of key policy consideration.\(^4\) As e-commerce growth becomes more and more significant, countries such as India must not only address and appreciate its potential for the growth of trade and industry but also as a means of survival in the new world of trade and business based on it. Developing countries need to understand and assess carefully from their perspective, the pros and cons of this new business medium. They need to comprehend its possible impact on their economies and work out appropriate strategies and responses to it.

The Government of India has long recognized the need for development of the IT industry and information infrastructure as these are twin engines for growth of the economy. Deeper penetration of IT applications in the economy, and in society as a whole, can help boost the economy. E-Commerce applications can make it easier for the country to better integrate with global markets and the e-marketplace. This has led the government, over the last few years to formulate liberal policies for the development and growth of the IT industry.

The most talked-about and well-endorsed feature of e-commerce is its global character.\(^5\) Evidently, e-commerce has also started to show its true potential in India. While on the one hand, India’s e-commerce solutions are becoming a sought after commodity around the world, even e-commerce based businesses are leaving their distinct marks of technology competitiveness, viable business models and entrepreneurship. E-business can indeed emerge as a major opportunity for India. This acquires twin connotations of e-commerce and e-business transactions from local businesses and a huge opportunity for software exports to other countries by quickly boarding the e-business bandwagon. India’s twin assets (the software industry and rapidly restructuring industry sector) have been taken into consideration.
6.2 India’s Internet scenario – recent past

The Internet has steadily evolved from being a source of instant communication in the early 1990s to a rich source of infotainment and education. This evolution has been driven by growing customer expectations from the content of Internet. Thus newer segments of Internet use have emerged and there lie potential user segments that are still unexplored and may emerge in the future.¹

Five years ago there was limited Internet access, that too only in a few major cities, all in the hands of the government. VSNL, the agency responsible for Internet activities, and DOT (Department of Telecommunications) provided an agonizingly erratic connectivity, with miserly bandwidth and far too few phone lines. Connection rates ran as low as 5% and users were frequently cut off. And the rates for this pathetic level of service were among the highest in the world. By the end of 1998, after three years of government monopoly, there were barely 150,000 Internet connections in India.² Now the government monopoly is largely over. Dozens of small-to-large Internet Services Providers have set up shop, triggering a price war and a dramatic improvement of services. Users were estimated at over 5mn, with a growth predicted to reach more than 50mn in the next five years.

Figure 6.2 Internet use in India
According to the NASSCOM survey⁹ [Table 6.2], the total volume of e-commerce transactions in India was about Rs 450 crore in 1999-2000. Of this, about Rs. 50 crore were contributed by retail Internet or B2C transactions, and about Rs 400 crore by B2B transactions. To some, Rs 450 crore of e-commerce transactions may seem to be negligible. However, given the situation in India, this amount seems impressive against the background of an almost non-existent regulatory framework to support e-commerce. Thus, if e-commerce based businesses can emerge as viable propositions working within the confines of the existing not-so-conducive framework, imagine the potential that would be unleashed once there is a suitable, catalysing framework in place! With the passing of the Information Technology (IT) Bill in both the houses of Parliament, a legal regulatory structure has come into existence. What is now required is its effective enforcement.

### Table 6.2 Total e-commerce transactions in India

<table>
<thead>
<tr>
<th>Year</th>
<th>Total e-commerce transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998-1999</td>
<td>131</td>
</tr>
<tr>
<td>1999-2000</td>
<td>450</td>
</tr>
<tr>
<td>2000-2002</td>
<td>1400</td>
</tr>
<tr>
<td>2006 (expected)</td>
<td>2300</td>
</tr>
</tbody>
</table>

Source: NASSCOM

According to the NASSCOM survey, considering the increasing interest of the government in the growth of the market, e-commerce in India will witness a significant jump over the next three years. Based on these preliminary findings, experts have concluded that the penetration of the Internet and e-commerce transactions in India will increase by leaps and bounds.

Revenue streams will increasingly be aligned with the emerging global model, as anticipated. This means that a major part of the revenues would come from transactions, while a smaller amount would be realized from advertising. The advertisements revenue would amount to about 8% of the total amount spent on advertising by the companies.
6.3 E-Commerce opportunities for industries

Following are some of the areas where e-commerce is witnessing rapid growth in the global markets. Indian software and services companies need to tap into some of these vertical segments to gain maximum advantage in the e-commerce solution sector.

1. **Financial Services**: A large number of users draw on the Internet for some form of financial guidance.

2. **Stock trading**: Online stock trading is nowadays one of the most demanding e-commerce utilities. The ability to offer market access at a competitive price is a key advantage of online stock broking companies and this is slowly happening in India too.

3. **Banking**: Internet banking is now growing. Many banks like ICICI and HDFC are making inroads into this area.

4. **Legal and professional services**: Opportunities also exist for Indian companies in legal and other professional services. There are significant legal and regulatory implications of implementing and Internet business or of migrating from a traditional off-line business. In terms of opportunities for Indian legal services providers, the requirement for professional, legal and regulatory advice is expected to increase as the number of e-commerce users increases.

5. **Tour and Travel**: The travel industry has readily adapted to e-commerce. There has been a growing emphasis on the search for alternative distribution channels within the sector, particularly with the railways and the airlines, as they seek to reduce costs. These sectors have adapted well because of their online reservation systems.

6. **Healthcare**: Healthcare represents one of the biggest expenditures of governments worldwide. The Internet has the potential to enhance communications, streamline processes and create new business opportunities by providing high quality administrative and diagnostic services and integrating information systems.
6.4 E-commerce in India today

Today e-commerce is a byword in Indian society and it has become an integral part of our daily life. There are websites providing any number of goods and services. Then there are those which provide a specific product along with its allied services.

A) Multi-product e-commerce:

These Indian E-commerce portals provide goods and services in a variety of categories. To name a few:

1. Apparel and accessories for men and women
2. Health and beauty products
3. Books and magazines
4. Computers and peripherals
5. Vehicles
6. Collectibles
7. Software
8. Consumer electronics
9. Household appliances
10. Jewellery
11. Audio/video entertainment goods
12. Gift articles
13. Real estate and services
14. Business opportunities
15. Employment
16. Travel tickets
17. Matrimony
18. Pets...and more.
B) Single-product e-commerce:

Some Indian portals/websites deal in specialized fields, for example

1) AUTOMOBILES:

On these sites we can buy and sell four-wheelers and two-wheelers, new as well as used vehicles, online. Some of the services they provide are:

- Car research and reviews
- Online evaluation
- Technical specifications
- Vehicle Insurance
- Vehicle Finance
- Dealer Locator
- Regional Transport Office regulations
- Expertspak
- Message board...and more.

2) STOCKS AND SHARES AND E-COMMERCE:
In India today, we can even deal in stocks and shares through e-commerce. Some of the sites are: http://www.equitymaster.com/ and www.5paisa.com/.

Some of the services offered to registered members are:

- Online buying/selling of stocks and shares:
- Market analysis and research
- Company information
- Comparison of companies
- Research on Equity and Mutual Funds
- Tracking Market Trends
- Hotline for advice on Risk Management
- 24-Hour helpdesk....and more.
3) REAL ESTATE AND E-COMMERCE:
Portals like http://www.indiaproperties.com/ facilitate online dealing in real estate. They offer either outright purchase or lease of a property through their portal. They provide information on new properties as well as properties for resale. One can deal directly with developers/builders or through consultant/brokers. The allied services on offer are

- Housing Finance
- Insurance companies
- Architects & Interior Designers
- NRI services
- Property Management Consultants
- Packers & Movers
- Security & Maintenance Services
- Vaastu or Feng Shui Consultants...and more.

4) TRAVEL & TOURISM AND E-COMMERCE:
India has a rich history and heritage and e-commerce is instrumental, to a large extent, in selling India as a tourist destination, encouraging Indians as well as foreigners to see its multifaceted culture and beauty. A major Government of India portal, http://www.tourisminindia.com/, has a vast variety of information for a potential tourist.

The tourist destination sites are categorized according to themes such as

- Adventure - trekking, mountain climbing etc
- Eco-Themes pertains to jungles, flora and fauna
- Beaches
- Architectural attractions
- Forts and Palaces
- Buddhist attractions
- Hill resorts
- Desert treks
- Pilgrimage sites

Allied services and information offered are:

1. Passport & visa
2. Travel & accommodation information
3. Weather information
4. Festival & fair dates
5. Shopping
6. Tour Operators
7. Information on Cuisine & Restaurants
8. Car rental services...and more.

There are also sites that highlight the tourist destinations of a specific region in India, like http://www.incredibleindia.org/ which covers North East India.

5) GIFTS AND E-COMMERCE:
In the past, one had to plan what to gift a loved one, trudge across to one's favourite shop, and browse for hours before purchasing a gift. Today there are specific Indian websites making the act of gifting quick and easy to suit one's lifestyle. One such site is http://www.indiangufitsportal.com/.

The gifts are categorized as:
1. Collectibles like paintings and sculptures
2. Luxury items like leather goods, perfumes, jewellery boxes, etc
3. Household curios and carpets, etc
4. Toys & games
5. Chocolates
6. Flowers
7. Wood-craft & metal-craft
8. Idols for worship...and more.

Also the items can be searched by different regions of India, as every region has a special style in making handicrafts.

6) HOBBIES AND E-COMMERCE:
The most popular hobbies from time immemorial are reading, music and films. On the Indian website http://www.firstandsecond.com/ one can buy more than 300,000 titles of books, cassettes, VCDs and DVDs.

The books cover a wide range of topics like Business, Art, Cookery, Engineering, Children's Stories, Health, Medicine, Biographies, Horror, Home & Garden, etc.
As for music and videos, they are available in English as well as in Indian languages to cater to the varied tastes and the topics range from devotional songs, old-time favourites and retro and jazz to the latest pop, rap, etc.

7) MATRIMONY AND E-COMMERCE:
It is said that marriages are made in heaven, but in the world of E-commerce they are made on marriage portals like http://www.jeevansathi.com/ (meaning life-partner.com in Hindi) and http://www.shaadi.com/ (meaning marriage.com in Hindi).

One can search for a suitable match on websites by region of residence (India or abroad), religion or caste. Once registered with them, one has email facility and chat rooms too, so that the couple gets to know more about each other before making the biggest decision of their lives.

Allied services for registered members:
1. Astrological services
2. Information on Customs and Rituals
3. Legal issues
4. Health & Beauty
5. Fashion & Style
6. Wedding Planners
7. Honeymoon Destinations...and more.

8) EMPLOYMENT AND E-COMMERCE:
Two major portals like www.Monsterindia.com and www.naukri.com (meaning job.com in Hindi) are instrumental in providing job seekers with suitable employment at the click of a mouse. They have directories categorized under the headings Employers and Job Seekers. The service for job seekers is free and for Employers they charge a nominal fee. Jobs are available online in fields ranging from secretarial to software development, and from real estate to education. The opportunities offered are unlimited.

According to IAMAI\textsuperscript{13} the low cost of broadband has helped increase Internet use in India. E-commerce and high demand for ".in" domain registrations are also factors for the increase in online users. The ".in" domain registrations surpassed 150,000. Indians go online for a
number of activities including e-mail and IM (98%); job search (51%); banking (32%); bill payment (18%); stock trading (15%); and matrimonial search (15%).

Broadband policy and other initiatives by the IT and Telecom Ministry encourage increased adoption. A monthly broadband subscription costs as little as Rs. 199 (USD 4.50). A second factor is the Ministry’s initiative to make computers available for purchase under Rs. 10,000 (USD 226). In addition to working with hardware manufacturers to remove the financial barrier for households in India, the organization continues to push development of language fonts to address issues of language and localization of content.

9) ONLINE TRAVEL AND BANKING SECTOR – CONTRIBUTING A MAJOR SHARE IN INDIAN E-COMMERCE.
Globally, e-commerce growth has been led by the popularity of online shopping portals like amazon.com and ebay.com, but in India that has not been the case. It is mainly driven by the online travel industry and banking sector. For instance, 29% of Indian Internet users book airline tickets online and the figure is expected to touch 46% next year. Online rail ticket booking stands at 39% of total bookings. As far as banking is concerned there are 4.6 mn online banking users in India.¹⁴

E-commerce has helped drive down the cost of operation in the aviation industry by reducing staff requirements. Apart from time and cost saving, e-commerce also offers a competitive edge to a company because if one airline does not employ e-commerce, the chances are that the competitors will.

One sector that adopted e-commerce earlier than most in India is banking. E-commerce has provided the platform that enables the implementation of core banking solutions (CBS). Today all the major banks have gone on to implement CBS. And with time at a premium among customers, banks have been ideating and developing newer modes of delivering banking services. Today there is a plethora of such utilities available ranging from the ATM to the mobile.
6.5 E-Commerce growth

The earlier expectations of value creation through pure-play dot-coms, large online market sizes, and businesses reducing their procurement and inventory costs through B2B have been belied. The euphoria of the Internet revolution is over. But there is a deeper realization that the opportunities and threats of the Internet are very real. Organizations that have understood the power of the Internet and have implemented well thought out business strategies have leveraged B2B and B2C e-commerce to create significant gains in their business. LG Electronics India Ltd. is a case in point. It expects to realize margins up to 1.5-2% through B2B supply chain initiatives on information sharing and procurement efficiencies. Amul, a milk cooperative, is successfully using e-commerce to deepen its brand loyalty. Likewise, corporates in the automotive sector are improving their customer relations through this medium.

Some of the new names that are rediscovering e-commerce through new portals at relatively low capital cost, without venture capital funding include KEY2CROREPATI, MUSICABSOLUTE, GATE2BIZ, GRIHRACHNA and SHAADIONLINE. Business strategy on the Net is the key to these new portals. The new entrepreneurs are very clear in what they offer. Since they are not setting up websites with a view to sell them later, unlike the first wave of dot-coms, they put in their best efforts to check offerings and their processes before inviting customers.15

Domain names can now be registered in Indian languages too. Vishwaibharat.com offers domain names using Indian language alphabets. These will be valid like other domain names and are expected to help non-English speaking people take advantage of the benefits of Internet. Currently, one can register in Hindi or Kannada scripts.

Most of India’s banks and financial institutions have set up websites. Online stock trading has also taken off with the Securities and Exchange Board of India (SEBI) making efforts to standardize message formats and address issues pertaining to technology, connectivity, security, surveillance and monitoring. Companies such as <indiabulls.com> and <5paisa.com> actively promote online trading on their websites. A number of websites cater exclusively to the expatriate Indians and offer valuable information on investment decisions, real estate etc. Online portals have been set up for e-commerce exchanges in the areas of automobiles, steel industry, construction, insurance, shipping and pharmaceuticals. A number
of sites also deal in auctions. Most of the sites are in B2B segment, while there are some in the B2C segment too. Vortals which cater to specific information needs and provide services across areas as diverse as cooking, women, online worship, specific sports (e.g. cricket), matrimonials, jobs, and travel and tourism in India have also appeared in large numbers. Entertainment and games too have moved online and a number of portals catering to these areas are already in business.

A number of e-payment gateways have sprung up for B2B and B2C e-commerce financial transactions. There are four payment gateways operated by ICICI Bank, Citibank, HDFC Bank, and Global Trust Bank. But all these are closed user groups. There are no real time settlement systems available to let the users of one gateway settle their accounts with users of another group. No inter-bank settlement is possible as of now. This delays e-commerce transactions. The B2C transactions can, however, be enabled by credit cards which are growing in number, adding up today to 5.1 mn, with total spending of Rs 81 bn.16

The industry is alive to the need of being active players in the Internet world. It has aggressively participated in the recent round of appointment of the Internet Corporation for Assigned Names and Numbers (ICANN) of new registrars in this region. Two companies have been accredited as registrars in the .com domain. While registration of websites for .com, .org and .net could earlier only be done through Network Solutions Inc., a number of new websites such as <123registry.com> and <planet4domains.com> now offer this service in India.

It may be added here that the software industry, which is the greatest strength of India, grew at a CAGR of nearly 50% during the last decade. A majority of the Fortune 500 companies have outsourced their software requirements to India. Software solutions from India have been moving up the value chain and are engaging more and more e-commerce and web based technologies. Many of the software companies are specializing in supply chain and distribution management solutions which are the key drivers of the global e-commerce solutions market. The Indian IT-ITES sector (including the domestic and exports segments) has now reached USD 37.4 bn and is expected to exceed USD 47.8 bn in annual revenue in FY07, an increase of nearly 28% in the current fiscal.17 This Indian success story and its paradigm changing impact on global service delivery has become a well acknowledged fact.
6.6 Some Indian Players

TELCO - Managing supply chain on Internet
In 1999 India’s largest commercial vehicle manufacturer, Tata Engineering and Locomotive Company (TELCO) started connecting its then 130-strong dealer network online with the company’s Internet-based systems. It also plans to bring all its dealers for commercial vehicles and passenger cars on the company’s network. Group Company Tata Technologies Limited is developing interfaces with its back-end ERP systems. The Internet-based system currently covers the company’s major manufacturing locations in Pune, Jamshedpur and Lucknow, and its headquarters in Mumbai. It is also negotiating with a few banks to establish payment gateways between the value chain at the company-end and the banks.

The effort has taken Rs 3 crore worth of investment in infrastructure and eight man-years of system development and implementation, and is expected to help TELCO cut down conventional delays in transactions. The company expects to reduced the present transaction time at the dealer end by 50%. The initiative will also result in more accurate and secured information, and eliminate chaos and confusion. The dealers will be able to book according to their requirements and receive supplies much faster. The initiative will help both the company and the dealers to keep inventories under control. TELCO will also be in a better position to customize products at short notice according to specific dealer requirements.

Hindustan Lever - Getting the E-advantages
As part of the Internet initiative, Hindustan Lever has put in place a network connecting all its suppliers and has launched a pilot project to wire up its 7,500 distributors. In the second phase, it will attempt the mammoth task of connecting its top retailers. Finally, it also wants to use the Internet for transactions. Lever sees the e-tailing opportunity not only for its own product categories but also for a larger universe of products. With its formidable distribution system covering nearly 2 mn retail outlets, Lever already has in place the back-end infrastructure that other e-tailers would envy, and is uniquely positioned to create India’s most widespread, robust and efficient clicks and bricks company. Lever’s e-game plan is to build a number of markets leading B2B and B2C businesses in high potential areas. In doing this it will leverage its strong consumer and supplier relationships and its cache of human talent.
Asian Paints - E-transforming organization:
Asian Paints, India's largest paint company is reaping the benefits of its investments in Internet enabling its organization. It has been used for efficient data collection, demand forecasting, reduction in working capital and online information about material flows across factories and other locations. Given the complexity of the demand chain and the logistics and the seasonal nature of demand, the use of internet in connecting 15,000 dealers and 55 branch offices had improved the efficiency of the supply chain. It has also increased service levels and has cut down working capital in the chain. The company is planning to do bulk transactions in products through its website by making it a one-stop virtual store front. The use of a comprehensive database of customers for e-relationship management is also being mooted.

CRISIL - Cost effective Distribution Channels:
CRISIL, the largest credit rating agency in India, has already made its presence felt in the new economy sector for online dissemination of its research products. It has built up a large database on Indian corporates and research products over the years and is currently using the web to enhance its reach as well as establish a cost-effective distribution channel. It plans to use its website for quick delivery of quality research products to its customers as well as develop interactive tools based on <WHAT-IF> if scenarios.

ICICI Bank - Comprehensive Transactions
ICICI Bank is using the internet to acquire more customers by offering them a host of services. Its idea is to become a one-stop site where account holders can do all their money transactions. On other sites one can trade online but all other transactions still have to be done physically. ICICI offers the entire chain, from the demat account in which a customer's shares are credited to the savings account from which the money is debited to settle the transaction.

The bank has also launched an electric bill payment service through its Internet Banking Service. The new payment system will do away with any paperwork since bills will be presented to customers through the bank's website, and the customer will pay through Internet. For this, the customer will have to register for an internet banking account with the bank. Thus the bank will be able to target both the B2B and B2C markets.
Petrosilicon.com

Petrosilicon.com is the comprehensive digital marketplace for the petroleum industry. It is promoted by the Petrosil Group of Companies, a leader in the industry whose senior personnel have played pivotal roles in the successful establishment of various multinational petroleum companies operating in India.

Petrosilicon provides a comprehensive real time information base and facilitates transactions related to the petroleum industry. The site enables all aspects of buying, selling and trading of crude oil, petroleum, and specialty products on-line. While this is an Asia based site it has global reach and potential.

According to Mr. Riaz Lawyer, CEO, Petrosilicon.com "Our primary objective is to take Physical Petroleum trading to the Web, making the process efficient, real time and collaborative. We recognized that the internet's ability to distribute the information securely and globally, in real time could enhance what had previously been labour-intensive, disjointed, and inefficient process. We are building comprehensive communications gateway on the web for petroleum trading."

In addition to the information services offered, many business opportunities are to be found at Petrosilicon.com. The site features a Petrolog section for petroleum companies and allied services to create a catalogue to display their products and services. They can also communicate efficiently with other members by sending requests for products, information and quotes through the B2B Exchange. This gives organizations tremendous access and online exposure to a vast network of petroleum and allied services companies from all over the world.

The destination also provides numerous value-added services and products such as career services, industry reports (Indian and global), newsletters, logistic solutions, petroleum trading, petroleum books and publications, demand aggregation of petroleum products, petroleum tenders and online updates. Consulting and technical support is also being offered in an attempt to build a meaningful petroleum community online. Expansion Plans include forging alliances with major industry players and smaller niche companies worldwide to ensure industry participations and support. Also ties up with content and technology providers in order to deploy new technologies to expand and upgrade the site functionality.

These players indicate the fact that E-Commerce is increasingly being adopted by Indian companies. It has been realized that this new medium cannot be ignored any more.
6.7 Barriers to growth of E-commerce in India

The CII\textsuperscript{22} and NASSCOM\textsuperscript{23} reports and many businesses have observed that there are some difficulties associated with online contracts in the present formulation of the IT Act. It is argued that legal enforceability of electronic contracts is open to challenge and legal jurisdiction of contracts involving international parties is not defined. The Act is also silent on issues regarding taxation of electronic transactions. Customs duty for cross border taxation, sales tax (indirect taxation) for goods and services delivered electronically are not clearly spelt out. The jurisdiction of e-commerce transactions is also not clarified. They have also pointed out that there is no provision for dual-key pairs for individuals and businesses, which can create some difficulties for confidentiality of e-transactions.

Other difficulties associated with the IT Act relate to cyber crimes, which are not fully covered and are an area of concern for the growth of e-commerce. In this context it is also argued that Law Enforcement Agencies are not fully equipped and trained to deal in cyber crimes. Safeguards to protect privacy of personal and business data collected over the Internet are not covered under the Act. It is also silent on the issue of protection of IPRs (patents, trademarks, copyrights) including domain names. Finally, payment gateways have to evolve to a level that enables inter-bank settlement through Real Time Gross Settlement (RTGS).

It has been seen that while the websites and E-Commerce portals are set up by technically-oriented entrepreneurs, they have no experience of the logistics of delivering products to distant areas. These factors are likely to constrain the growth of B2C e-Commerce. In fact, when the e-tailing market grows, high delivery costs, logistical bottlenecks and regulatory requirements will act as major barriers. Coupled with this are cultural barriers which inhibit most shoppers from buying items they cannot see or touch. Consumer protection is also not very effective. If goods are not delivered after electronic placement of orders, the consumers may have to follow a long process for redress of their grievances. These are some of the limiting factors for B2C E-Commerce.

Issues before India\textsuperscript{24}

The IT Act, 2000 does not cover the following legal issues:

\begin{itemize}
\item Taxation issues that arise out of e-commerce, Internet and m-commerce transactions.
\item IPRs such as Digital Copyright Issues, Trade Marks, Patents.
\end{itemize}
The last-mentioned issue is very relevant to the present discussion. The boom in Internet business across the country made the government enact the IT Act, but experts feel that it offers little or no protection to millions of e-commerce consumers. Will these new consumers be protected under the Consumer Protection Act (CPA) 1986, is the question weighing heavily on the minds of cyber experts. The IT Act does not have any clause that ensures security and protection to the online consumer, even though it is quite clear that consumers will play a very important role in the success of e-commerce. The question that evades a definite answer is how the rights of online consumers will be protected when they have been touted as an integral part of this whole pyramid. What is needed is a new holistic approach in the development of e-commerce. Service on Net has not been defined. It is not clear whether online trading business amounts to providing service, as defined under CPA and whether it would include services promised online and delivered offline.

Some other barriers to e-commerce adoption in India include the following:

- Limited Internet access among customers and SMEs (current level of Internet use is low among businesses and users).
- Poor telecom and infrastructure for reliable connectivity (Internet connectivity is slow, access costs are high and connections are unreliable).
- Multiple gaps in the current legal and regulatory framework.
- Multiple issues of trust and lack of payment gateways (privacy of personal and business data over the Internet not assured; mechanisms to ensure security and confidentiality of data not in place)

These are some of the barriers that have been identified, which must be overcome, in addition to achieving higher Internet and PC penetration, for the growth of e-commerce in India.

There is a need to generate much greater awareness about e-commerce and its benefits. An appropriate communication strategy needs to be formulated to spread e-commerce awareness among enterprises by underscoring its benefits and dispelling misconceptions. The apex industry bodies such as CII should coordinate among themselves and with the Government to
educate people in decision-making positions in Indian organizations.

IT education would be a major driving force towards the development, adoption and growth of e-commerce in India. Since most of the content and applications of the Internet are in English or other foreign languages, a large proportion of them is not accessible to a majority of India's population. Creative solutions are needed to overcome this challenge. While, on the one hand, local language content and applications need to be developed, on the other hand, voice applications on Internet accessible through normal touch-tone telephones need to be developed. Society as a whole needs to guard itself against the emergence of a digital divide, where the section of the population with access to Internet gains significant advantage over the others.
REFERENCES
CHAPTER 6

17. Indian IT Industry: NASSCOM Analysis, 2006