

## Electronic Commerce in India: The Untapped Potential

by Subhash Bhatnagar, Indian Institute of Management, India\*

### Abstract

This paper discusses the potential of electronic commerce by reviewing the state of the Internet infrastructure, the skill base, and the potential application areas from which Indian organisations can benefit. It identifies the enabling factors as well as the bottlenecks and projects the future growth of electronic commerce in India.

### Introduction

Availability of graphic browsers has led to a snow balling popularity of the web, both as an interface to all resources on the Internet and as an advertising medium. This growth has a special significance for companies from India who find international advertising in traditional print media totally unaffordable. What is interesting is that even small companies which have something to offer to the international market can now use the web as their bill board and reach an international audience of over 80 million. For the large pool of manpower trained in IT, the Internet offers the opportunity of building enterprises to provide value added services.

The potential for electronic commerce in India will depend on the number of users who have access to the Internet in India, the number of Internet users internationally who could have a prima facie interest in India and the products and services offered by Indian companies, the skills and creativity employed in designing web sites and the band width available for users and service providers. The IT fraternity has already taken note of this potential as is indicated by the coverage in IT media. The interest in corporations is beginning to get aroused and at least 200 companies have already begun to use the advertising opportunity. At least one advertising company has spun off another unit which provides services to corporate clients in

designing, hosting and providing content to web sites.

### International Experience with Commerce on the Internet

The truth is that the Internet pornography industry is the most active and lucrative area of digital commerce in cyberspace. While most corporate home pages tabulate monthly hits in the thousands, top adult sites regularly garner more than 1 million hits per day. That puts them well ahead of such corporate sites as General Electric Co. ([www.ge.com](http://www.ge.com)) or Boeing Co. ([www.boeing.com](http://www.boeing.com)).

But there is one big difference – porn-site visitors are more likely to spend money on the spot. It is estimated that between 80 percent and 90 percent of all electronic commerce on the Internet is conducted on adult sites. There are no official market numbers on the industry from Internet research houses, such as International Data Corp. However, extensive interviews with adult site owners yield a picture of a highly charged market of approximately 10,000 sites generating about \$1 billion in revenue per year, most through electronic credit card transactions (Ziff-Davis Wire 1997).

The beginning of electronic commerce in

*\*Subhash Bhatnagar  
([subhash@iimahd.ernet.in](mailto:subhash@iimahd.ernet.in))  
is CMC Professor of Information  
Technology at the Indian Institute  
of Management at Ahmedabad.  
His current research interests  
include application of decision  
support  
systems, design of computer-  
based management information  
systems and  
IT for development.*

other areas has been small. Worldwide, it is estimated that goods worth only \$200 million are sold through the Internet in 1995-96 (Sharma 1996). A study conducted by Coopers & Lybrand for the Internet advertising bureau reported that more than \$158 million were spent on advertising on the Internet during the first nine months of 1996. Importance of connectivity was illustrated by "Wired" editor Kevin Kelly in Bombay recently (Software Sorrows 1996). He mentioned that the current level of commerce on the Internet stands at just over \$1.1 billion, of which advertising accounts for \$100 million and subscriptions account for \$1 billion. According to him the pyramid will reverse and transactions will total \$10 billion, advertising \$5 billion and subscriptions \$4 billion. Other optimistic estimates suggest that the value of consumer transactions on the Internet will reach \$300 billion by the end of this decade (Trends 1997).

A set of figures quoted by Kelly illustrates the ability of India to leverage this opportunity. To create the first half a million pages, the US took 15 years, South Korea 6 years and India reached this figure in only 1.5 years.

### The Slow Spread of the Internet in India

The spread of the Internet in India has been slow, largely because there is only one commercial service provider, i.e. Videsh Sanchar Nigam Ltd. (VSNL). It is expected that by the end of March 1997 VSNL will have 35 thousand dial up subscribers and 71 leased line subscribers in 22 cities - a paltry number, given the 400,000 PCs sold in India in 1996. There are perhaps 150 thousand users on these accounts. The number has been growing at the rate of 10% per month. VSNL provides an Internet connection through a local dial up in 7-8 major cities of India. They have plans to provide the facility in 22 state capitals of India. VSNL was charging US\$ 700 for 250 hours of connect time to corporate clients and US\$ 450 for 500 hours to individual clients for a TCP/IP connection giving the

ability of graphic browsing. They also offer shell account connections at US\$ 140 which permit text browsing. The basis of charging has been revised recently with marginal effects on the total cost to consumers. Given the poor line conditions in some of the cities the data transfer rate is quite restrictive. However in cities like Bombay modem connectivity can provide rates up to 28.8 kilo bits per second. One can also connect to the VSNL city hub via a leased terrestrial line from the Department of Telecommunication or a radio link of 64kbps. Typically rentals for a 64 kilobit line within a 5 km radius would be 3000 dollars a month whereas in the US such rates are 400 dollars a month. A 64 kbps pipe to the Internet from VSNL costs US\$ 340000 per year as access charges and the lease charges for the connection to their hub. These charges are reduced to 33% for educational institutions.

Another service provider is ERNET which restricts its access to education and research institutions. Currently there are 50,000 users on this network. Such institutions access the Internet via a satellite hub in Bangalore. Many users who have opted to establish a VSAT based connection to this hub find the data transfer rates limited to 32 kilobits per second. High capacity terrestrial lines in India are very difficult to lease. T-2 lines with capacities of 2 mega bits required by service providers who may wish to establish websites in India for international access are not easily available.

However, things are likely to change on several fronts. The VSNL monopoly as an Internet service provider is being challenged and it is likely that Internet access will be opened to other service providers. Currently, the installed base of PCs in India is two million. This is growing at the rate of 50 %. The number of PCs installed at homes is quite small. Current annual sales are of the order of 20 thousand PCs for this segment. However, vendors expect a higher growth in sales to this segment in the coming years. India has also deregulated its telecom sector. This means

that there will be competition to DoT the national basic service provider. This is likely to expand the network and add transmission capacity. In fact telecom sector watchers expect an investment of nearly 50 billion dollars over the next 10 years in telecom infrastructure in India. It can therefore be hoped that the number of Internet users may reach 500 thousand in a years time.

#### Current Status of Internet Commerce in India

Given the small number of users on the Internet vis-a-vis the large TV viewership of 250 million and a newspaper readership of 75 million, advertising on the net cannot generate much revenues in India (Sethi 1997). It must however be remembered that the net users are highly educated, high income young males. The Nielson Survey (The Drivers of Change 1996) conducted on US netters says that surfers as a consumer group are richer and younger than most people. They are males, 80% within the age group 24-40, earning more than \$50000 per year, 68% have a college degree. They spend on average five hours per week browsing the net. In contrast a viewer of the most popular TV channel in India views it for just 2.5 hours. The profile of net surfers in India is likely to be similar and such people are likely to be early adopters of new products and services. Product and service offerings to this segment can get the attention of the potential market. Another segment which may be tapped through the Internet is young children.

The total capitalised billing of 150 advertising firms is \$ 1.2 billion and growing at 30%. The top 15 advertising companies handle a billing of \$400 million of which 50% is press, 40% on TV and 10% on other media. English publications reach 1 in 10 Indian readers and corner 55% of money spent on print advertisements (Agency Report Analysis 1996). Even if a small percentage of the total billing could be moved to web pages and some new billing generated to target export markets, the potential for electronic advertising could

immediately touch 100 - 200 million dollars.

Over 200 Indian companies have already established websites. Citibank has put up a site to keep in touch with its 70,000 non-resident Indian customers, as have other financial institutions such as the Reserve Bank of India, Syndicate Bank and ICICI. Roopam and Roopmilan have posted their fashion catalogues in cyberspace, while Chetana has put up its book-list and Air India its flight schedules. Asian Paints and Shaw Wallace have stepped in to popularise their brand names abroad, while Rajshree Films is using the Internet to find English and Spanish distributors for its films. Small companies such as Paper Products Ltd. which is in packaging business spends \$ 3000 per month for Internet advertising.

Many enterprising Indians have set up "infotainment sites". The Law Information Centre, for example, allows petitioners to examine their lawyers' past records and provides details about Supreme Court cases. The Mumbai port trust and customs list their rules and regulations online, while the Bharatiya Hockey Andolan posts the CVs of hockey players in the hope of winning them foreign contracts. The Punjab police's website encourages visitors to send in secret information (Minwalla and Khan 1997).

Several Indian companies have reportedly profited from advertising on the Internet. Almost as soon as Hindustan Lever's debut in cyberspace, its website began to receive 20 to 25 job applications a month from prestigious educational institutions such as the Indian Institute of Technology, Indian Institute of Management and Indian students studying in other countries. Senior managers interviewed these applicants and 25 cyber-recruits from foreign universities will be joining them this summer.

In a survey by Arthur D. Little, 30% of the respondents (corporations) credited the Internet with increasing sales of products

and services (Weaving your own web site 1997). According to the survey, 90% of respondents stated that current sales from their company's web site account for less than 20% of firm's total sales. However this percentage is expected to increase. For example Malhotra industries gets orders worth a daily average of \$300 for its laser blades through the Internet.

**Indian companies can benefit from a Website in the following ways:**

1. To advertise an exportable product or service to a specific group of potential customers in other countries. For example textiles, handicrafts, hotels, tourism industry, travel agencies can exploit the potential of information dissemination. Any service which can justify on-line reservation systems - hotel bookings, airline reservations and exhibition space booking - can also benefit.
2. To advertise a product or service to customers in India. Perhaps the potential to advertise locally exists only in Bombay and Delhi where there are a few thousand users of the Internet. However, with a large number of companies opting for Internet access advertising industrial products on information servers may yield results. A significant number of enquiries can be generated and it may be possible to send preliminary quotations through electronic means.
3. Another potential area is to build a corporate image and carry out an important corporate function such as recruitment.
4. Perhaps the largest potential for Indian companies exists in selling software products and services through the Web.

Electronic publishing or other services which could have been sold through subscription services in India are handicapped

because of problems of organising electronic payments. Although the population of credit card holders in India is increasing, it is still not as pervasive as to become the primary means of collecting payments for a product/service offered through the web. At the end of 1995-96 there were roughly 2.5 million rupee denominated (can not pay in dollars) payment cards in India. Citibank is servicing 0.85 million Mastercard, Visa & Diner's card holders and 62% of India's aggregate card spending, which is equal to US\$ one billion (Rai 1996).

Pornography, which is the hottest selling service in the US, will not be permitted in India because of the local laws and sensi-

bilities. Many free sites in the US do not carry any lewd content at all. They are simply links to hundreds of other adult pages around the Net. But where eyeballs congregate, the pay-site banner ads follow. Link site owners could earn revenues of \$1 million per year. Similar link site services could be created in other areas by Indian companies. Similarly popular sites can be created on current fads such as spiritualism.

Preparation of websites can be fairly expensive. Companies providing this service charge from \$ 3000 to \$ 100,000 for concept, project analysis and content development. Web authoring may cost between US \$50 to 80 per hour. There are many small shops offering these services across the country but few who can be termed as professionals. One company which has leveraged its skills in advertising and is now a leader in this business is Rediff. They have already created more than 70 websites for a large number of corporations across the globe. Their own website is based in the US and receives 7 million hits annually.

Creating a website is only one part of this story. In order for people to visit such web pages, these pages must show up in a key word search of web data bases maintained at several sites such as YAHOO. If India wants to exploit the opportunity offered by the Internet, it will have to adopt promotive pricing of Internet services, and convert its information footpaths into wide band highways. Some initiatives in establishing a backbone to build such a highway has been reported recently in the press (DoE, DoT to Set up Network Backbone 1997). Infrastructure such as T2/T3 lines running at 2.45 megabits per second should be available to the potential service providers.

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