

E-commerce: A paradigm drift in business

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Abstract

Information and communication technology has transformed the lives of many people today. Developing country like India has the potential of achieving brisk economic and social development by building an economy based upon an ICT enabled and networked Business sector. Internet penetration in India has been increasing exponentially – in 2006 there were only 21 million active internet users, which rose to 243 million users by June 2014. Simultaneously, the number of active mobile internet users grew to 185 million. Internet dissemination and mobile penetration has brought about a novel revolution in the e-commerce market in India. India's ecommerce market is estimated to have reached about \$10-16 billion last year, with an annual increase of 88% and analysts project that by 2020 it could be worth a whopping \$60-80 billion. E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals. This paper attempts to analyze how ICT has brought about the E-commerce revolution in India. In the process the paper also attempts to examine the Key drivers of growth, benefits and the opportunities and challenges in the growth of E-commerce in India.

Keywords: e-commerce, business transactions, ICT, mobile penetration

1. Introduction

Electronic Commerce is an extension of traditional commerce which is concerned with the activities of business, industry and trade, including the exchange of goods, services, information and money via electronic channels, such as the internet. It is the exchange of goods and services, with the assistance of telecommunications and telecommunication based tools. It uses the web to bring together customers, vendors and suppliers in ways never before possible. The e-commerce technologies are designed to replace traditional paper based workflow with quicker, more efficient and reliable communication between computers. It is on this ICT that businesses expect to piggyback on in the next millennium.

E-Commerce is gaining momentum globally with Asian economies like China, India and Indonesia being the fastest growing e-commerce markets. E-commerce in India is growing at a fast pace with an estimated size of Rs.43, 930 crore in FY13 and a CAGR of 43.8% (FY08-13).

Internet penetration in India has been increasing exponentially – in 2006 there were only 21 million active internet users, which rose to 243 million users by June 2014. Simultaneously, the number of active mobile internet users grew to 185 million. The colossal growth and usage of internet and its users is now the centre of innovations, research and tie-ups in the huge domain of e-commerce. These developments have generated or set the trend for major production organizations to opt for tie-ups which creates a win-win situation. More and more startups are emerging and are calling for innovative attractive and cheap modes of marketing strategies. The E-commerce industry has witnessed a revolutionary trend as a result of emergence of ICT.

2. Objectives of Study

The paper has following objectives:

- To explain the meaning and concept of E-Commerce.
- To study the growth and the key drivers of E-Commerce in India.
- To study the opportunities and challenges of E-Commerce in India.

3. Research Methodology

It is based on secondary data analysis. The secondary data has been availed from various journals, internet and books.

4. Analysis and Findings

4.1 Meaning

Electronic commerce or e-commerce refers to a wide range of online business activities for products and services. It also pertains to “any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact.”

E-commerce is usually associated with buying and selling over the Internet, or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer-mediated network. Though popular, this definition is not comprehensive enough to capture recent developments in this new and revolutionary business phenomenon. A more complete definition is: E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals.

4.2 E-Commerce Models

There are four main types of E-Commerce: B2B, B2C, C2B, and C2C.

- **B2B (Business to Business):** this kind of e-commerce involves companies doing business with each other. One example is manufacturers selling to distributors and wholesalers selling to retailers. B2B e-commerce is simply defined as e-commerce between companies. This is the type of e-commerce that deals with relationships between and among businesses. The more common B2B examples and best practice models are IBM, Hewlett Packard (HP), Cisco and Dell. Cisco, for instance, receives over 90% of its product orders over the Internet. Altra, Free Markets
- **B2C (Business to Consumer):** This is what most people think of when they hear "e-commerce." B2C consists of businesses selling to the general public through shopping cart software, without needing any human interaction. Business-to-consumer e-commerce, or commerce between companies and consumers, involves customers gathering information; purchasing physical goods (i.e., tangibles such as books or consumer products) or information goods (or goods of electronic material or digitized content, such as software, or e-books); and, for information goods, receiving products over an electronic network. An example of this would be Amazon, Myntra online, Jabong, Snapdel, shaadi.com, makemytrip.com, Shopclues, Flipkart etc.
- **C2B (Consumer to Business)** — In this scenario, a consumer would post a project with a set budget online, and companies bid on the project. The consumer reviews the bids and selects the company — Elance is an example of this.
- **C2C (Consumer to Consumer)** — this type of e-commerce is made up of online classifieds or forums where individuals can buy and sell their goods. Examples of this would be eBay, OLX etc.

4.3 Evolution of E-Commerce

E-Commerce was first introduced in the 1960s via electronic data interchange (EDI) through value-added networks (VANs). In the mid-1990s, e-commerce was transformed with the introduction of Amazon and eBay. Amazon started as a book shipping business, out of Jeff Bezos' garage, in 1995. eBay, which enabled consumers to sell things online, introduced online auctions in 1995 and exploded with the 1997 Beanie Babies frenzy.

4.4 Growth of E-Commerce in India

Started in India in the year with the introduction of B2B portals in 1996, now E-Commerce is all set to become one of the successful medium for business transactions.

However, E-Commerce in India got a kick-start in 2004 when eBay started its operations in India by acquiring Avnish's Bajaj's Baazee.com, which was India's largest online auction portal. This was followed by two IIT-Delhi and ex-Amazon employees Sachin Bansal and Binny Bansal starting Flipkart in 2007 by investing 2 lakh rupees each as an online book retailer. In the same year, Mukesh Bansal, Ashutosh Lawania and Vineet Saxena started an online portal to customize goodies called Myntra. With perseverance, these e-commerce portals started winning the trust and confidence of Indian population and people gradually started shopping online. But the game changer that provided the much needed growth steroid was

Cash on Delivery, which made online shopping very accessible in a country like India where the credit and debit card penetration is extremely low. This unique payment collection model even gave birth to startups like Gharpay. In 2010, Snapdeal an online platform started providing daily deals but pivoted into an e-commerce company via the marketplace model. Snapdeal is one of the first online marketplaces in India.

4.4.1 Between 2000 and 2005: The first wave of E-Commerce in India was characterized by a small online shopping user base, low internet penetration, slow internet speed, low consumer acceptance of online shopping and inadequate logistics infrastructure. Thereafter, the IT downturn in 2000 led to the collapse of more than 1,000 E-Commerce businesses in India. Following this, there was muted activity in the space in India between 2000 and 2005.

4.4.2 Between 2005 and 2010: There were basically two major transitions that took place that aided in the build of E-Commerce story in India. They were:

- **Online Travel:** The entry of Low Cost Carriers (LCCs) in the Indian aviation sector in 2005 marked the beginning of the second wave of e-Commerce in India. The decision of LCCs to sell their tickets online and through third parties enabled the development of Online Travel Agents (OTAs). They developed their own websites and partnered with OTAs to distribute their tickets online. The Indian Railways had already implemented the e-ticket booking initiative by the time LCCs started their online ticket booking schemes.
- **Online Retail:** The growth of online retail was partly driven by changing urban consumer lifestyle and the need for convenience of shopping at home. This segment developed in the second wave in 2007 with the launch of multiple online retail websites. New businesses were driven by entrepreneurs who looked to differentiate themselves by enhancing customer experience and establishing a strong market presence.

4.4.3 2010 onwards

- **Group buying:** Starting in 2010, the group buying and daily deals models became a sought after space for entrepreneurs in India, emulating the global trend. Group-buying sites have seen a significant rise in the number of unique visitors and membership.
- **Social Commerce:** It is a key avenue for E-Commerce players to reach out to target customers. Companies have started establishing their presence in the social media space for branding activities, connecting with customers for feedback and advertising new product launches.

4.4.4 The Present Scenario: India's E-Commerce market grew at a staggering 88% in 2013 to \$16 billion, riding on booming online retail trends and defying slower economic growth and spiraling inflation, according to a survey by industry body ASSCHOM.

India's E-Commerce market was about \$2.5 billion in 2009, it went up to \$6.3 billion in 2011, to \$14 billion in 2012 and to \$16 billion in 2013 and is expected to grow huge \$56 billion by 2023 that would be 6.5% of the total retail market.

India has an internet user base of about 250.2 million as on June 2014^[1]. About 75% of this is travel related (airline tickets, railway tickets, hotel bookings, online mobile recharge etc.).

Online Retailing comprises about 12.5% (\$300 Million^[2] as of 2009). India has close to 10 million online shoppers and is growing at an estimated 30%^[3] CAGR vis-à-vis a global growth rate of 8–10%. Electronics and Apparel are the biggest categories in terms of sales.

India's *retail market* is estimated at \$470 billion in 2011 and is expected to grow to \$675 billion by 2016 and \$850 Bn by 2020, – estimated CAGR of 7%. According to Forrester, the e-commerce market in India is set to grow the fastest within the Asia-Pacific Region at a CAGR of over 57% between 2012-16^[4].

As per "India Goes Digital",^[5] a report by Avendus Capital, a leading Indian Investment Bank specializing in digital media and technology sector, the Indian e-commerce market is estimated at Rs 28,500 Crore (\$6.3 billion) for the year 2011. Online travel constitutes a sizable portion (87%) of this market today. Online travel market in India is expected to grow at a rate of 22% over the next 4 years and reach Rs 54,800 Crore (\$12.2 billion) in size by 2015. Indian e-tailing industry is estimated at Rs 3,600 crore (US\$800 mn) in 2011 and estimated to grow to Rs 53,000 Crore (\$11.8 billion) in 2015. On March 7, 2014 e-tailer Flipkart claimed it has hit \$1 billion in sales, a feat it has managed to achieve before its own target (2015)^[6].

Overall e-commerce market is expected to reach Rs 1,07,800 crores (US\$24 billion) by the year 2015 with both online travel and e-tailing contributing equally. Another big segment in e-commerce is mobile/DTH recharge with nearly 1 million transactions daily by operator websites. However, the penetration of e-commerce is low in India as compared to markets like the United States and the United Kingdom but is growing at a much faster rate with a large number of new entrants.

4.5 Key drivers in Indian E-commerce

Right after Flipkart announced its \$1 billion funding, US based Amazon.com Inc (NASDAQ:AMZN) topped it with its CEO Jeff Bezos announcing an investment of \$2 billion in Amazon India. These billion dollar investments are set to fuel the growth of e-commerce industry in India, which eventually is said to reach the \$56 billion mark by 2023. In the last five years e-commerce industry in India has witnessed an unprecedented growth, growing from \$2.5 billion in 2009, to \$6.3 billion in 2011 and further to \$16 billion in 2013. The ecommerce giant of India Flipkart, started with only a base amount of Rs. 400,000 in 2007, has now grabbed a whopping \$1 billion by its existing investors in a fresh round of investment. The company has over 15 million product ranges with over 70 categories and 22 million registered users as of now. With the fresh injection of \$1 billion Flipkart valuation has soared to \$7 billion apparently. On the other side, Amazon and SnapDeal, other leading ecommerce players in India, have upped the ante to counter Flipkart by bringing in more investment. Consequently, the dollar-war between these major ecommerce players is helping consumers to collect shopping benefits from both the hands.

These huge investments are accelerating the growth of online shopping industry in India, which is now picking up its pace rapidly. The growing internet and mobile penetration is attracting more number of players in India, which has 243 million internet users accounting to 19% of the total population. There were an estimated 91 million smartphone

users in India by the end March 2014. The mobile audience in India is growing with 78% of shoppers preferring to shop on mobiles. In another 5 years there will be a big paradigm shift in the e-commerce industry as more retailers look for profits through selling their products online.

The following are the Major milestones in the Indian e-commerce ecosystem that have led to multi-billion dollar investments:

- Increasing broadband Internet (growing at 20%^[7] MoM) and 3G penetration.^[8]
- Rising standards of living and a burgeoning, upwardly mobile middle class with high disposable incomes
- Availability of much wider product range (including long tail and Direct Imports) compared to what is available at brick and mortar retailers
- Busy lifestyles, urban traffic congestion and lack of time for offline shopping
- Lower prices compared to brick and mortar retail driven by disintermediation and reduced inventory and real estate costs
- Increased usage of online classified sites, with more consumer buying and selling second-hand goods
- Evolution of the online marketplace model with sites like Jabong.com, Flipkart, Snapdeal, and Infibeam

4.6 Benefits of E-commerce

E-commerce has many advantages that create the buzz that surrounds 'e-commerce' these days. It allows people to make completely new business models. Both Companies and buyers can reap benefits of e-commerce. These are:

For Companies

- Increases profits
- Increases sales
- Advertising can reach potential customers in every country in the world
- A virtual community is formed on the internet
- Reduced search and transaction cost: Cisco systems sold 72 percent of its computer equipments via the web, thereby avoiding handling 5,00,000 calls per month, for an annual saving of over \$500 million.
- Reduced process lead-time and faster time to market

For Consumers

- Increases purchasing opportunities
- A wider range of choice is available
- Reduces costs and saves time
- Environmentally sound and reduces pollution
- Improved customer interaction
- Quick comparison shopping
- Increased customer service
- Improved convenience and shopping experience
- Increased information transparency
- Knowledge generation
- Novel products and services

4.7 Road ahead: Opportunities and Challenges

4.7.1 Opportunities

The colossal growth and usage of internet and its users is now the centre of innovations, research and tie-ups in the huge domain of e-commerce. These developments have generated or set the trend for major production organizations to opt for tie-

ups which creates a win-win situation. More and more startups are emerging and are calling for innovative attractive and cheap modes of marketing strategies. Online retailers are now looking ahead to provide customized local language provision of their website. IAMAI reports that there will be a 24% increase in internet usage by local language websites. Snapdeal offers its customers the language of Hindi and Tamil, and by the end of the year is supposed to provide Kannada, Telugu, Marathi, Bengali and Gujarati versions.

Flipkart and Jabong are working their way to offer this to their local customers. This provides customers a sense of trust and to clean shopping experience. While One-Day-Delivery is the new strategy to grab impatient customers, the additional cost associated is a bit of disappointment. Amazon intends to compete in a very clever manner. It is using the neighborhood grocery stores, petrol pumps (BPCL), as online market place for its expansion (for product pick-ups).

Although e-commerce in India is still at infancy when compared to developed nations, there is only one way ahead for India- Up. India's e-commerce industry is where US was in 2003 and China in 2007. Currently, India's internet penetration is approximately 1/3th of China and the size of the industry is approx 1/60th of China indicating that future growth is going to come from increased internet penetration and mobile users. *The number of users making online transactions in India is expected to grow from 11 million in 2011 to 38 million in 2015 and that the current set of 25 million online buyers is slated to touch over 100 million by 2020.*

On the payment side, mobile as a preferred medium for online transactions is expected to emerge. Unique to India, cash on delivery is a preferred payment method. India has a vibrant cash economy as a result of which 80% of Indian e-commerce tends to be Cash on Delivery. However, COD may harm e-commerce business in India in the long run^[9] and there is a need to make a shift towards online payment mechanisms. Similarly, direct imports constitute a large component of online sales. Demand for international consumer products (including long-tail items) is growing much faster than in-country supply from authorized distributors and e-commerce offerings. As the banking sector expands its financial inclusion program, Cash on Delivery (COD) might disappear.

The next wave of growth in India is expected to come from online brands that are focused on selling primarily online. A very recent example of this is Motorola's success in the Indian market. Motorola was one of the first global brands to exclusively leverage the internet as a sales channel (with an exclusive tie-up with Flipkart) to reduce cost and time to market. India has emerged as one of the most successful countries for Motorola, with the company selling one million phones in less than six months. At the same time, few local home-grown brands like Done By None, Fab Alley among others are using the online channel to quickly ramp-up their scale.

As far as business models likely to exist are concerned, experts are of the opinion that both marketplace and inventory led models will co-exist.

Execution will be a key factor to sustainability. New models are definitely in the pipeline such as eStores - where a customer can shop online in case they lack any infrastructure themselves such as payment option or internet. So the opportunities could be summed up as:

- Annual disposable income per household to grow by two-and-a-half times by 2015, thereby increasing the purchasing power of people.
- Discretionary spending expected to form a major portion of expenditure in India
- Explosion expected in the sales of PCs, tablets and smart phones
- More Indians increasing time spent online
- Probability of growth in internet user base
- Increase in the number of payment options

4.7.2 Challenges for E-Commerce in India

India now has more than 200 million Internet users, with 89 million users visiting online shopping sites. The challenge though is that the number of people actually shopping is a fraction of that, at 14-15 million. That is because in developed markets, infrastructure was quite developed by the time e-commerce came in. People had credit cards, the market had gone through TV shopping, catalogue shopping etc. In India, all that is new.

The exploded growth in Internet industry in India has forced eStores to indulge in cut-throat competition. The triggered price war and commission to eStores are forcing traditional retailers to setup an in-house online shopping portal. Retail giants such as Reliance, Future Group, ITC are eyeing for their own e-commerce websites.

With so much development and opportunity, e-Commerce industry in India is now a battle of brands of various eStores with the consumer satisfaction as their goal. However, the ongoing price-war is turning evil for small and new ventures which neither have deep pockets nor hoard of cash to challenge bigwigs of the industry. For consumers, all it matters which eStore is able to offer him the best deal on desired products.

The phenomenal growth of the e-commerce sector is accompanied by certain challenges:

- **Indian customers return much of the merchandise they purchase online.** Ecommerce in India has many first time buyers. This means that they have not yet made up their mind about what to expect from ecommerce websites. As a result, buyers sometimes fall prey to hard sell. By the time the product is delivered, they demonstrate remorse and return the goods. Though consumer remorse is a global problem, it is all the more prevalent in a country like India, where much of the growth comes from new buyers. Returns are expensive for ecommerce players, as reverse logistics presents unique challenges.
- **Infrastructure:** There are many hosting companies working in India but most of them are not suitable for eCommerce hosting purpose, because they are providing much less secure and threat protected shared hosting. E-Commerce demands highly secure, stable and protected hosting. Cyber security issues of e-commerce business in India would be required to be managed by Indian e-commerce stakeholders in the near future.^[10] In fact, Indian government is planning to introduce cyber security breach disclosure norms in India very soon.^[11] Recently Target Corporation suffered a cyber attack that has put it under litigation threat in multiple jurisdictions.^[12] Trends are changing with some of eCommerce companies starting to offer SaaS for hosting web stores with minimal onetime costs. India got its own version of the so called Cyber

Monday known as Great Online Shopping Festival in December 2012, when Google India partnered with e-commerce companies

including Flipkart, HomeShop18, Snapdeal, Indiatimes shopping and Makemytrip.

- **Payment mode.** India continues to be cash-based societies due to limited banking and credit card penetration. This, combined with a lack of consumer trust in online merchants, has prompted several leading e-commerce firms such as Flipkart in India, 360buy and Taobao Mall (Tmall) in China, and Rakuten in Indonesia, to offer cash collection on delivery (COD). While COD solves these challenges, it imposes significant financial cost for firms. Unlike electronic payments, manual cash collection is laborious, risky, and expensive. COD may harm e-commerce business in India in the long run^[9] and there is a need to make a shift towards online payment mechanisms.
- **Payment gateways having a high failure rate.** Indian payment gateways have an abnormally high failure rate by global standards. Ecommerce companies using Indian payment gateways are losing out on business, as several customers do not reattempt payment after a transaction failure.
- **Feature phones being used by majority of people.** Though the total number of mobile phone users in India is very high, yet a significant majority still use feature phones, not smart phones, especially in the rural India. So, this consumer group is unable to make ecommerce purchases on the move.
- **Postal addresses are not standardized.** If you place an online order in India, you will quite likely get a call from the logistics company to ask you about your exact location. Clearly your address is not enough. This is because there is little standardization in the way postal addresses are written. Last mile issues add to ecommerce logistics problems.
- **Logistics remains a challenge in India.** Logistics plays an important role in establishing and sustaining e-commerce. But the logistics infrastructure is not robust in India, specially the rural one. There are so many towns and villages that are not easily accessible. The problem with logistics is compounded by the fact that cash on delivery is the preferred payment option in India. International logistics providers, private Indian companies, and the government-owned postal services are making a valiant effort to solve the logistics problem.
- **Security & Data Integrity Issues.** Another challenge is that of security and lack of trust. 60% of the users do not trust the web as a payment channel. Web transaction takes place with credit card, but credit card itself is not safe. Anyone who transfers the data of the credit card on the web is not sure about the salesman identity. Buyer is also not sure that his credit card is not used for some malicious purposes. Customers have to feel confident about the integrity of e-dealers and the payment process before they indulge in any e-commerce activity. Risk of hacking and cybercrime has added on to this challenge.
- **Customer Relation Management:** E-commerce being an impersonal way of dealing with the people. Retaining and finding new customers and maintaining the brand loyalty remains an uphill task. Cost of obtaining a new customer is

always higher than the cost of maintaining the existing customer.

- **High startup costs:** To start a web shop requires personal computer, modem and a subscription to a Value Added Network (VAN). It also requires updating of current technology and networks. These are costly affairs.
- **Computer illiteracy.** According to some estimates, computer literacy in India is just 6.5%. We still have less than 10% Internet penetration. To make E-commerce success in India, a huge digital literacy penetration has to be achieved.
- **Legal issues.** Legal issues such as validity of an electronic signature, non-reputability of some shops on the web, legal aspect of electronic contract, copyright violations, hinders the growth of e-commerce. Internet laws are confusing and conflicting too. On the whole, it appears that safety and security are generally greater causes for concern in India. Procedures therefore need to be put into place to resolve the problem.

5. Conclusion

E-commerce is an emerging trend in Indian economy. The revolution in the IT sector in the recent past has led to the development of e-commerce. There have been many key drivers of the same like increasing internet and 3G penetration, improvement in standards of living, higher disposable income, less time for offline shopping and many more. At present there are several challenges and stumbling blocks in the development of e-commerce such as higher initial investment, technological issues, computer ill-literacy, legal and security issues, logistics and infrastructure problems. However, these stumbling blocks in e-commerce shall be taken care of in due course and hence e-commerce has bright prospects in India. We need to adapt to the changing technology, tap on the opportunities and reap the benefits of e-commerce.

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