CHAPTER 1
INTRODUCTION TO
“IMPACT OF TECHNOLOGY READINESS
AND E-SERVICE QUALITY ON
E-SHOPPING BEHAVIOR”

1.1 Introduction to the study
Online shopping initiatives are increasingly attracting working professionals, women and children. As businesses try to grow their online retail presence, they need to be aware of the preferences and concerns that drive online shoppers. All the studies pertaining to internet adoption for commerce show greater potential for online marketing. To reach their full potential, business owners who use e-commerce as a distribution channel need a clearer understanding of who buys online, what they buy online, why they buy online and how the non-internet buyer can be transformed into an online buyer in order to increase online sales. Thus if the businesses analyze the factors affecting customer’s behavior towards online shopping and the relationship between these factors they can device better marketing strategies to convert off-line buyers into online shoppers. They also can revise the strategies for online shopper’s retentions.

The success of online shopping environment depends on various factors such as technology readiness of customers and the e-service quality of online stores. Customer’s technology readiness refers to their belief about technology usage. E-Service quality of online store refers to overall customer evaluations and judgments regarding the excellence and quality
of e-service delivery in online shopping process. This research summarizes which factors need improvement to increase e-shopping behavior among customers. This study provides a methodology for measuring impact of customer’s technology readiness and their perception about e-service quality on e-shopping behavior.

1.2 Internet as channel for e-retailing

Internet is changing the way consumers shop for goods and services, and has rapidly evolved into a global phenomenon. Previous research on innovation adoption suggests that perceptions of relative advantage, compatibility and ease of use are related to the adoption of Internet related technology (Chen, Gillenson, & Sherrell, 2002). Research indicates that the development of the commercial trade that is carried out through the Internet has surprisingly changed the retail vista in the world economy since 1990 (Chen & Chang, 2003). Online shopping is the process, through which consumers go, to purchase products or services over the Internet. The online community is growing by leaps and bounds as an increasing number of consumers have started transacting online because the initial fears and apprehensions are being laid to rest. Nielson (2008) has published the overall online shopping trends in the late 2000. Notably, over 875 million consumers have shopped online. The number of online shoppers has also increased up to 40% in the last two years. Among Internet users, the highest percentage for online shopping is found in South Korea (99%), UK (97%), Germany (97%), Japan (97%), and US (94%) (Nielsen Customized Research, 2008). The process of growing the Internet in the recent years has been genuinely perceived as an extraordinary event (Krishna & Guru, 2010).
Online retailing is a new retailing medium and online consumer behavior is diverse from traditional consumer behavior. One must identify what influences the online consumer. Analyzing the process that the online consumer goes through, when deciding and making a purchase over the Internet, shows some factors that they consider important for decision making. These factors need to be identified and taken into account by online retailers in order to satisfy consumer demands and compete in the online market.

Online channels are playing an important role of connecting with consumers of unexplored markets. The journey of online spending that started with an increasing number of buyers of travel and holiday plans in the last decade has now extended to an increase in spends on household appliances and luxury products. While segments like apparel and luxury products have registered unprecedented growth in 2011, jewellery, electronic appliances and hardware products have shown promising growth trends as well .(Rahul Dubey, Jan 09, 2012)

The potential to derive more value from shopping, the Internet provides significant impetus for consumers to use this shopping medium. Although the Internet offers considerable potential as a retail format, some consumers may not have the necessary expertise to use it efficiently. If consumers perceive shopping on the Internet as requiring too much cognitive effort, they will be reluctant to purchase online (GVU, 1998; O’Cass & Fenech, 2003). Alternatively, the perceived ease of use of a retailer’s web site is likely to lead to feelings of confidence and, consequently, enhanced online purchasing.
1.3 Significance of online shopping

The Internet plays an increasingly active and important role in facilitating consumer decision-making at each stage of the decision-making process. Consequently, broadly defining adoption of the Internet for shopping as using the Internet as a retail medium to implement one or more steps of the decision-making process makes it possible to examine the various online shopping behaviors of consumers. For example, consumers may search for information and make product choices online, but actually purchase in another retail format in an effort to leverage multi-channel shopping to maximize shopping value.

Current Internet shoppers may discontinue online purchasing and switch to other retail formats if their desired online shopping benefits are not satisfied by their current online shopping experiences; therefore, it is necessary to examine consumers’ intention to continue shopping online to better understand the role of online shopping benefits and risks in predicting future online shopping behaviors.

According to Pastore (2000), despite the significant increase of online shopping in the past, fewer consumers than anticipated actually purchase electronically. In reality, many consumers increasingly use the medium to obtain information but not for purchasing products. Grabner-Krauter and Kaluscha (2003) stated that, as many consumers are still reluctant to shop online due to improper implementations of online technologies and infrastructures, which has often caused much confusion and difficulty in consumer online shopping activities, and therefore has been attributed as factors that mostly lead to the loss of online retail sales. Furthermore, there seem to be inadequate information on how and why certain groups
of consumers engage in online shopping whereas others accept online shopping reluctantly (Kamarulzaman, 2008).

Online marketing is an area where, research pertaining to behavioral issues is lacking and fragmented. Although the number of individuals buying online products and services continues to increase in India, the success of some e-retailers and the failure of some, emphasizes the need for analysis in terms of behavioral issues, apart from issues related to quality and performance. Further, what leads a buyer to shop online is a matter that has evoked a lot of interest although the findings from research are loose, fragmented and disintegrated. A framework is needed to structure the complex system of effects of the demographic, psychographic and situational factors that impact a consumer’s decision to shop online and develop an in-depth understanding of consumers’ attitudes and intentions to shop online.

The technological aspects of online shopping, in particular, have generated a number of important research issues. For example, what specific service and merchandise attributes form the basis of consumers’ perceptions of quality when shopping online? (Zeithaml, Parasuraman, and Malhotra, 2000) In what way do consumer characteristics, such as a shopper’s predisposition toward e-shopping, affect their perceptions of quality and value regarding shopping online? (Dabholkar, 2000; Parasuraman and Grewal, 2000) How do the technological aspects associated with online shopping alter assessments of satisfaction and loyalty? (Bitner, Brown, and Meuter, 2000) Most importantly, what drives customer loyalty for e-shopping? (Meuter, Ostrom, Roundtree, and Bitner, 2000)
Much research has been conducted on the online shopping in the world. Huge research gaps exist not only between the online buying behavior of developing and developed countries but also differ significantly between countries. The success of online shopping environment depends on various social, cultural, economic, legal and political frameworks, which may differ from one country to another country. Thus there exists a need for closer examination on the online shopping/buying behavior in countries having diversity like India.

The modern Indian customers are technologically aware, often educated and comfortable. Their attempts to shop online are due to an advancing technology as well as customer’s characteristics in terms of demographic, psychographic, as well as situational influences. The lifestyles of urban young Indians which are becoming increasingly hectic day by day, the increasing rise in the number of working women, as well as significant technical developments encourage consumers to go for online buying, primarily for convenience and saving of time and effort. The growth in online travel industry in India may be attributed to the increasing number of internet users mostly comprising college-going students and youth who prefer speed, promptness and overall convenience. Internet users in India have also begun to overcome the apprehensions regarding online payment. According to the IAMAI report (2007) presented by IMRB, 65% to 90% online consumers in India pay through credit cards while the rest prefer payment on delivery or cash cards.

Thus, the growth of online retailing is being driven by ever increasing online buyers and sellers and the changed attitude of internet users who look for speed, promptness, convenience and better bargains. Saving of time and effort, as also the availability of wide range of products at best
prices are the other factors which are responsible for the growth of online retailing. Online sellers can offer best prices as they don’t have to spend on inventory handling and maintenance cost.

1.4 E-Commerce in India

India’s ecommerce industry is on the growth curve and experiencing a spurt in growth. Numbers of Internet users are rapidly increasing. The global revival of e-commerce is having a ripple effect in India too where the B2B (Business to Business), B2C (Business to Consumer), C2C (Consumer to Consumer), G2B (Government to Business) and G2C (Government to Citizens) segments are showing rapidly increasing activity over the past few years. Everyone is excited about e-commerce in India. Also the Industry is promising. Statistics are very good so far. There is a growing awareness among the business community in India about the opportunities offered by e-commerce. Internet being relatively new channel of purchase, consumer perceives risk and electronic commerce is perceived to be more risky than traditional commerce. Ease of Internet access and navigation are the critical factors that will result in rapid adoption of Net commerce. Several factors contributing to the growth of e-commerce in India are increasing internet user base, technology advancements, the emergence of two-way communication for online retailers and consumers, improved fraud prevention technologies, lower marketing and infrastructure costs, longer consumers reach and young tech-savvy population.

India has an internet user base of about 137 million as of June 2012. (Hindustan Times, 31 December 2012, Internet World Stats, Retrieved 2013-07-04). The penetration of e-commerce is low 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. The industry consensus is that growth is at an inflection point (S. Tiwari, P. Singh, August, 2010) with key drivers being: (i) Increasing broadband Internet (growing at 20% MoM) and 3G penetration (IAMAI Report, 2007). (ii) Rising standards of living and a burgeoning, upwardly mobile middle class with high disposable incomes, (iii) Availability of much wider product range compared to what is available at brick and mortar retailers, (iv) Busy lifestyles, urban traffic congestion and lack of time for offline shopping, (v) Lower prices compared to brick and mortar retail driven by disintermediation and reduced inventory and real estate costs, (vi) Increased usage of online classified sites, with more consumers buying and selling second-hand goods (Internet World Stats, Retrieved 2013-07-04), (vii) Evolution of the online marketplace model with sites like ebay, Infibeam, and Tradus.

There are an estimated 80 million Internet users in India as per the report by Avendus Capital (2011), which represents a penetration of 7% of the population (17% of urban population). This is significantly lower than global benchmarks (average 31% of total population).

**GRAPH 1.1: INTERNET PENETRATION (%) – 2011**

Source: Internet world stats, ComScore, 2011.
As per the report by Avendus Capital (2011), time spent online by Indian users at 16.5 hours per month low compared to global benchmarks, projected to reach 21 hours by 2015. Time spent online has a significant relationship with online spending by the consumers. Higher time spent online also increases the chances of online spending by the consumers, thus aiding the growth of the e-commerce industry as well.

**GRAPH 1.2: TIME SPENT ONLINE BY INDIAN USERS**

![Graph showing time spent online by Indian users](image)

Source: BCG – The Internet’s New Billion (September 2010)

As per the report by Avendus Capital (2011), total number of users transacting online in India at 8-10 million, expected to increase to 38 million by 2015. The number which matters most to e-commerce players is the number of users actually transacting online. At present, the total number of such users is estimated at 8-10 million - about 11% of the online universe in India - a large part of this universe are transacting on Travel sites. Number of unique users transacting on travel sites (only) are estimated to be around 6-7 million and for non-travel e-commerce sites is
around 2-3 million today. The total number of unique transacting users is expected to reach 38 million by 2015 (Avendus, 2011).

**GRAPH 1.3: NO. OF USERS TRANSACTING ONLINE (IN MILLIONS)**

India's e-commerce market was worth about $2.5 billion in 2009, it went up to $6.3 billion in 2011 and to $14 billion in 2012 (Hindustan Times, 31 December 2012). 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) as of 2009. (Economictimes.indiatimes.com. Retrieved 2013-07-04) India has close to 10 million online shoppers and is growing at an estimated 30% CAGR vis-à-vis a global growth rate of 8–10% (Desinerd.com, 2012-08-29, Retrieved 2013-07-04). 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 Bn by 2016 and $850 Bn by 2020, estimated CAGR of 7% (Retailopia.com. Retrieved 2013-07-04). 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 (Asia Pacific Online Retail Forecast, 2011 To 2016).

For Indians, the idea of credit isn’t second nature (yet) and the adoption of electronic payments has been slow. India remains a cash-driven economy with over 95% of retail transactions still carried out through cash (Avendus, 2011). The “carded” population is significantly lower than the global benchmarks, creating challenges for e-commerce players.

**GRAPH 1.4: NUMBER OF PAYMENT CARDS PER PERSON**

![Bar chart showing number of payment cards per person](image)


Despite the low penetration of credit cards, the payment gateway space in India has seen significant development. In recent years, several local payment gateways have emerged, and a few of them have been able to offer reliable services and appropriate solutions to the Indian e-commerce
players. CC Avenues, EBS which is now acquired by Ogone and BillDesk have led the way, while the bank payment gateways - ICICI Bank’s Payseal, HDFC Bank and Citibank have not been far behind. Recently, Nasper (MIH) Group’s PayU has rolled-out its India services. Global leader PayPal’s India presence has been restricted on account of regulatory issues. The presence of multiple players and increase in e-commerce volumes has helped rationalize payment gateway charges to 2.5-3.0% that used to hover around 4-7% (Report by Avendus Capital, 2011).

Some of the aspects of Indian e-commerce that are unique to India (and potentially to other developing countries) are: (i) Cash on Delivery as 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. (ii) Direct Imports constitute a large component of online sales. Demand for international consumer products (including long-tail) is growing much faster than in-country supply from authorized distributors and e-commerce offerings.

Indian players are accepting cash-on-delivery (COD) as the best solution for payment problems. Almost all of India’s leading e-commerce companies have begun pushing COD. Across categories, players are reporting between 40-60% of their overall transactions coming through COD. However, as noted previously, COD also has its own set of issues. First, it comes with a cost - which is often higher than that of an online credit card payment (due to the collection charge of Rs 35-65 per transaction and a delayed cyclical settlement period that stretches from 2-3 weeks). Secondly, it adds another level of complexity to the supply chain in the form of cash handling. Third, and perhaps most important, it
often is indicative of lower buyer commitment - and causes a higher level of returns. Notwithstanding these issues, COD is a “necessary evil” that is playing a significant role in making consumer comfortable with transacting online.

Today, most of the Indian e-commerce portals offer multiple payment options - credit, debit and cash cards, net banking and cash-on-delivery (COD). Some portals also offer Cheque/Demand Draft facility and EMI options (especially for electronic goods that have a higher purchase value).

A recent report by the Internet and Mobile Association of India (IAMAI) highlights the growth in the Indian e-commerce space. This report, based on the data collected from many different websites, has some very interesting findings: (i) the online sales volume of branded apparels have seen almost a 100% annual growth with sites registering 5 million visits in April 2012 as against 2.54 million visits in April 2011. Some of the major players in this industry are Fashion & You, Myntra, Yebhi, Jabong etc., (ii) the online footwear sales rose from 1.86 million units in April 2011 to 3.91 million units in April 2012., (iii) As compared to brand apparel and footwear, there’s been a marginal growth in online sales of jewellery and designer labels. Online jewellery sales increased to 1.11 million in April 2012 from 1.06 million in April 2011. Whereas, the number of online sales of Designer labels increased from 1.19 million in April 2011 to 1.46 million in April 2012., (iv) The online recruitment portals have seen an increase of 0.23 million resumes with 2.05 million uploads in April 2012, as compared to 1.82 million uploads in April 2011., (v) In the case of matrimonial websites, the number of profile uploads has increased to 2.74 million during April 2012 as against 1.35 million in April 2011., (vi) There’s been a tremendous growth in the e -
ticketing industry too. The Indian Railways online portal irctc.com recorded 5.56 million bookings in April, 2012 as against 2.26 million bookings in April 2011. As for the airline industry, the number of online airline bookings rose to 1.92 million in April 2012, as against 1.01 million in April 2011 (IAMAI report 2012).

1.5 Customer’s Technology Readiness

In today’s world, technological advancement has diminished the boundaries of the market parse. Customers are becoming more knowledgeable and techno-savvy. They require everything at their end, at their convenience, with their own preferences. On-line shopping has acted as an answer to their quest for convenience. It not only takes into consideration the timely delivery but also shows the change in consumer purchase behavior, preferences and attitude. These competitive pressures are forcing organizations to deliver the services differently.

Many service providers have adopted a wide range of technologies in the process of service delivery. Although consumers are increasingly sophisticated in their technological interactions, they may avoid certain technology uses if uncomfortable, even when benefits are obvious (Meuter et al., 2003). E-Shopping is a predominantly voluntary technology. There are few situations where a user will feel forced into using the technology. The motivation, therefore, will tend to be more intrinsic than extrinsic. Additionally the act of shopping involves the exchange of personal information. As such, perceptions of privacy and privacy protection will be more important than uses of technology in e-shopping.
Today’s online sales come from early technology adopters, only a small minority of the total population (Rogers, 1995). Research indicates that 81% of those who browse web sites for goods and services do not actually make an online purchase (Gupta, 1996; Klein, 1998; Westland & Clark, 1999; Shim et.al., 2001). A browser is defined as an individual who searches and examines web site for product to get more information with the possible intention of purchasing using the internet (Lee & Johnson, 2002).

Without proper research highlighting customer’s technology readiness as one of the relevant and valid constructs, e-shopping adoption cannot be easily explained, predicated, or improved. With valid information, industry can better develop e-shopping environment with the appropriate features & benefits and target online shopping systems to the appropriate e-shoppers. Utilization of e-shopping portals differs based on individual psychographic characteristics such as Technology Readiness (TR).

Technology Readiness (TR) refers to people’s propensity to embrace and use new technologies for accomplishing goals in home life and at work (Parasuraman, 2000). The TR construct includes variables Optimism, Innovativeness, Discomfort and Insecurity. The study defined these variables as follows: Optimism - A positive view of technology and a belief that it offers people increased control, flexibility, and efficiency in their lives. Innovativeness - A tendency to be a technology pioneer and thought leader. Discomfort - A perceived lack of control over technology and a feeling of being overwhelmed by it. Insecurity - Distrust of technology and skepticism about its ability to work properly.
Technology Readiness is the overall psychological situation that includes positive (optimism and innovativeness) and negative (discomfort and insecurity) feelings when customers interact with technology based services, which were found to influence satisfaction (Butcher et al., 2001). Customers’ technology readiness (TR) should be taken into account in order to accurately predict the perception and behavior of customers (Parasuraman, 2000). Zeithaml et al. (2002) proposed that TR has a positive impact on e-shopping behavior. Thus TR plays an important role in customer and online shopping portal interactions.

Technology Readiness, acquired from studies dealing with people-technology interactions, imply that customer evaluation of new technologies is a distinct process. Another major qualitative study by the same authors (Mick and Fournier 1998), focusing on people’s reactions to technology, suggests that technology may trigger positive and negative feelings simultaneously. Moreover, other research involving both qualitative and empirical components demonstrates that customers’ propensity to embrace new technologies (i.e., their technology readiness) depends on the relative dominance of positive and negative feelings in their overall technology beliefs (Parasuraman 2000). Acceptance and usage of technologies across customers depending on their technology beliefs suggest that similar differences might exist in the evaluative processes used in judging e-SQ. In other words, customer-specific attributes (e.g., technology readiness) might influence, for instance, the attributes that customers desire an ideal Web site and the performance levels that would signal superior e-SQ.

Therefore firms deploying technology in their services need to understand their customers’ readiness to use such online shopping options. Currently,
there has been modest research examining consumers’ readiness to adopt, willingness to use, or evaluation of e-shopping and any consequent influence on behavior. Thus, there is vast scope for further research and this work is a small step in this direction.

1.6 The role of E-Service Quality

E-service quality can be defined as overall customer evaluations and judgments regarding the excellence and quality of e-service delivery in the virtual marketplace (Santos, 2003). E-service quality and e-satisfaction are critical components in the globalization of e-commerce. Electronic service quality is not one-dimensional but instead is multifaceted. Market research has indicated that service quality has a significant impact on customer satisfaction, loyalty, and retention and purchase decisions and even on company’s financial performance. Thus, to build customer trust and loyalty, and keep customer retention, e-retailers must shift the focus to e-service quality before, during and after the transactions. High quality e-service is the key to success for any e-retailers doing business in this competitive global e-commerce environment.

The fundamental philosophy of e-service is the focus on customers meeting their needs precisely and thereby growing the markets and revenue. Technology is an enabler in e-service, but not an end in itself. As businesses use the opportunity provided by the technological advances to gain competitive advantage, it opens up new forms of e-service providing greater conveniences and support services to customers. Increasing customer expectations, in turn, fuel the need for greater efficiency and effectiveness in customer contact areas and service components leading to a greater emphasis on e-service within
organizations, both in private and public sectors (Rust and Kannan, 2003).

Order winning e-service features apparently become qualifiers suddenly. While understanding e-service quality is highly relevant to the strategic and tactical planning, it is necessary to identify which e-service dimensions serve as determinants of e-service quality. With the phenomenal growth of e-services, one must aim to better understand the dimensions, divers, and consequences of quality and customer behavior in the online domain across various industry sectors.

The most experienced and successful e-commerce companies are beginning to realize that key determinants of success or failure are not merely web presence or low price but delivering high quality of e-services (e-SQ). Understanding the determinants of service quality, customer satisfaction and purchase intentions for online shopping is important for marketing researchers and online store managers. Few studies have revealed that service quality in online environments is an important determinant of the effectiveness of e-commerce (Yang, 2001; Janda et al., 2002). Acceptance and usage of technology across customers depending on their technology beliefs and suggest that similar differences might exist in the evaluative processes used in judging e-SQ. TR has been indicated as the antecedent of e-service quality (Zeithaml et al., 2002). It is necessary to understand how customers perceive and evaluate e-service. Evaluation process involves defining e-service quality (e-SQ), identifying its underlying dimensions and determining how it can conceptualize and measured.
Online stores can devote valuable corporate resources to the important e-service quality dimensions. Furthermore, for online customers, high standard e-service quality is the means by which the potential benefits of the internet can be realized (Yang, 2001). Thus online customers expect equal or higher levels of service quality than traditional channels customers. Many previous studies revealed that e-service quality is a major determinant of the effectiveness of e-commerce. However, only few studies have examined the relationship among various dimensions of e-service quality in predicting overall service quality, customer satisfaction and online shopping behavior.

1.7 E-Shopping behaviour of Customer

Analyzing consumer behavior is very old phenomenon. Consumer behaviour is the study of the processes involved when an individual selects, purchases, uses or disposes of products, services, ideas, or experiences to satisfy needs and desires (Solomon, 1998). The renowned marketing expert Philip Kotler (2006, 2007) has published several works on the topic of consumer behavior theories. These theories have been used for many years not only to understand the customers, but also create a marketing strategy that will attract the customer efficiently. Hence understanding and identifying the customer is closely related to the company’s marketing strategies. These theories can also be applied to identify the online shopping behavior and to create certain customer segments. However, some distinctions must still be made when considering traditional consumer behavior and e-shopping behavior.

Analyzing the process that the online customer goes through when deciding and making a purchase over the Internet, shows some factors that customers consider. These factors need to be identified and taken into
account by online retailers in order to satisfy customer demands and compete in the online market.

In order to expand Internet as a retail channel, it is important to understand the consumer’s attitude, intent and behaviour in light of the online buying experience: i.e., why they use or hesitate to use it for purchasing? The online customer’s characteristics that have an effect on the online customer are referred as Consumer Traits and the way they uses the internet is referred as online behavior. In order to understand what is important for the online customer, we need to identify the online customer’s personal, social and psychological characteristics. These characteristics reveal the customers’ lifestyle and identify who the customer is and what attitudes he has towards online shopping. Consumer attitudes seem to have a significant influence on purchase decision (Schiffman, Scherman, & Long, 2003), yet individual attitudes do not, by themselves, influence one’s intention and/or behavior. Instead that intention or behavior is a result of a variety of attitudes that the consumer has about a variety of issues relevant to the situation at hand, in this case online buying.

From the customer’s point of view, the Internet (Mehta & Sivadas, 1995) offered the potential advantages of reducing shopping time and money spent. It allowed twenty-four hours a day access, provided perhaps better service, and gave the consumer a perception of control over the shopping experience (Alba et. al., 1997; Benjamin & Wigand, 1999; Cronin, 1996; Hoffman & Novak, 1996; Hoffman, Novak & Chatterjee, 1996; Maignan & Lukas, 1997; Poel & Leunis, 1999; Then & DeLong, 1999).
This study evaluates whether the customer’s technology readiness and their perception of e-service quality of online store along with the benefit factors have influence on customer decision of using online channel as their preferred shopping mode.

1.8 Need for the study
The advent of e-commerce, however, has stimulated intensified interest in understanding the nature of relationship among overall service quality and real value which consumer expect when they choose to shop online. There are various key factors affecting e-service quality dimensions. Using those dimensions, one can examine the relationship among overall service quality and consumer purchase intentions.

This study will accumulate the findings about the customer’s technology readiness and e-service quality of online stores on e-shopping behavior. This study will help in knowing the customer’s perceptions on e-service quality with respect to shopping behavior. This study also intends to understand the impact of technology readiness on e-shopping behavior. Researchers will also understand the role of TR components like Optimism, Innovativeness, Discomfort and Insecurity on e-shopping behavior. The researcher will also evaluate whether TR act as constraint for e-shopping behavior even if the e-service quality is good enough.

1.9 Benefits of the study
An organization’s ability to use technology effectively in marketing products and serving customers critically depends on the technology readiness of its customers and employees. Technology Readiness (TR) refers to people’s tendency to learn and use new technologies for accomplishing goals in day-to-day life. Given the best quality e-service, if people are not intending to use technology, it may affect the e-shopping
behavior. Thus area of research needs to be taken up with interrelationships among technology readiness, e-service quality and e-shopping behavior.

This research will help the organizations involved in e-commerce activity to understand their target group. This study will help the customers to get better e-service quality in e-shopping activity, which will lead to consumer satisfaction. Thus overall effect will be to understand the Indian e-shopping behavior as well as the understanding of e-business model.

1.10 Statement of problem
The problem worded as given below:

“Understanding interrelationships among technology readiness, e-service quality and e-shopping behavior to evaluate the overall effect on e-shopping behavior in Indian context”

1.11 Variables of the study
A problem statement of the present study suggests three major variables to be considered which are as follows:

Customer’s E-shopping behavior is considered as dependent variable
Customer’s Technology Readiness and E-Service quality of online stores these are considered as independent variables.

Technology Readiness of customers is measured through four dimensions – Optimism, Innovativeness, Discomfort and Insecurity.

Following eleven dimensions are considered to measure e-service quality of online store: Reliability, Responsiveness, Access, Flexibility, Ease of
use, Efficiency, Assurance & Trust, Security/Privacy, Price Knowledge, Site Aesthetics, and Personalization.

Customer’s behavioral intentions and their satisfaction decide e-shopping behavior and satisfaction. i.e. **E-shopping behavior and Satisfaction**.

### 1.12 Conceptual and operational definition of the terms

**E-commerce:** Electronic commerce (E-commerce) as the sharing of business information, maintaining business relationships and conducting business transactions by means of telecommunication networks. (Zwass Vladimir, 1996) The main elements of electronic commerce include: Consumer shopping on the web, often called business-to-consumer (or B2C); Transaction conducted between businesses on the web, often called business-to-business (or B2B); Transactions and business processes that companies, governments, and other organizations undertake on Internet to support selling and purchasing activities. (Schneider Gary P., 2004)

**E-customer:** A person, who interacts with the business website with the possible intention to conduct some transaction. (Pather et al. 2003)

**Online shopping:** Online shopping is the process consumers go through when they decide to shop on the internet. Using the internet to shop online has become one of the primary reasons to use the internet, combined with searching for products and finding information about them. (Joines et al, 2003)

**E-Retailing / Online-retailing:** E-Retailing has been defined in terms of the internet market as, “a virtual realm where products and services exist as digital information and can be delivered through information-based
channels”. One may define online-retailing as use of an electronic media through which the customer and the marketer may enter into a transaction for sale and purchase, so as to benefit both the parties in the long run. (Meuter et al., 2000)

**Internet Purchase**: Obtaining a product or service by paying money or using credit card using the Internet. (Lee & Johnson, 2002)

**Internet Browsing**: Examining, searching for, and looking at a product to get more information with the possible intention of purchasing using the Internet. (Lee & Johnson, 2002)

**E-services**: E-Services are defined here as services that are produced, provided or consumed through the use of ICT-networks such as Internet-based systems and mobile solutions. E-services can be produced by consumers, businesses, and governments and can be accessed via a wide range of information appliances. (Hoffman, 2003)

**E-Service Quality**: E-service quality can be defined as overall customer evaluations and judgments regarding the excellence and quality of e-service delivery in the virtual marketplace. (Santos, 2003)

**Technology Readiness**: Technology Readiness (TR) refers to people’s propensity to embrace and use new technologies for accomplishing goals in home life and at work. (Parasuraman, 2000)

**1.13 Aims and Objectives of the study**

The growth of online shopping in India is enormously rising and is getting better and stronger day by day. The growth in the e-commerce
sales is a clear indicator of the growing number of people using Internet to make purchases. However again, the online purchases are limited to a certain category of products like travel purchases, electronic items, online classifieds, buying movie tickets, food delivery, gaming subscriptions, etc.

This study aims at making meaningful investigation in understanding interrelationships among technology readiness, e-service quality and e-shopping behavior. Study involve, measuring impact of customer’s technology readiness and their perception about e-service quality on e-shopping behavior.

Aims and objectives of the study are narrated as follows:

1. **To know the customer’s product category preferences for online shopping.**
   This is to understand which product category customers prefer more to purchase through online shopping method.

2. **To know the customer’s online stores preferences.**
   This gives information about which online store/ site is most popular among the customers.

3. **Identifying the favourable and unfavourable attributes of e-shopping behaviour, e-service quality and technology readiness in the context of online shopping.**
   Considering e-shopping behavior inclusive of variables such as search for the product, buys product, recommending online shopping to others and satisfaction of online shopping experience which customers have positive view about online shopping. In the context of online shopping, e-service
quality dimensions such as Reliability, Responsiveness, Access, Flexibility, Ease of use, Efficiency, Assurance & Trust, Security / Privacy, Price Knowledge, Site Aesthetics and Personalization; which dimensions customers have affirmative certainty. Understanding Customer’s technology readiness in the context of online shopping based on their belief of Optimism, Innovativeness, Discomfort and Insecurity.

4. **To understand the perception of the customers for all the attributes of E-Shopping Behaviour, E-Service quality and Technology readiness with respect to gender.**

This objective is to make sure whether there is any gender biased for attributes of e-shopping behavior, e-service quality and technology readiness.

5. **To understand the perception of the customers for all the attributes of E-Shopping Behaviour, E-Service quality and Technology readiness with respect to marital status.**

This objective is to understand whether the perception of the customers for all the attributes of E-Shopping Behavior, E-Service Quality and Technology Readiness differ between married and single customers.

6. **To identify the perception of the customers for all the attributes of E-Shopping Behaviour, E-Service quality and Technology readiness with respect to the income per annum of the customer.**

The aim of this objective is to understand whether the perception of the customers for all the attributes of E-Shopping Behavior, E-Service Quality and Technology Readiness differ between different level of income.
7. To categorize the perception of the customers for all the attributes of E-Shopping Behaviour, E-Service quality and Technology readiness with respect to the age of the customer.
This objective is used to validate whether the perception of the customers for all the attributes of E-Shopping Behavior, E-Service Quality and Technology Readiness is dissimilar for younger, middle and older age group customers.

8. To find out the perception of the customers for all the attributes of E-Shopping Behaviour, E-Service quality and Technology readiness with respect to the type of customers using internet for online shopping.
This objective is to understand whether the perception of the customers for all the attributes of E-Shopping Behavior, E-Service Quality and Technology Readiness is different among non-web users, visitors, browsers and internet buyers.

9. To certify the relationship between different attributes of E-Service Quality and Technology Readiness with E-Shopping Behaviour.
This is to confirm is there any relationship between E-Service quality and customers shopping behavior also customer’s technology readiness and their shopping behavior. Knowing this will help e-retailer to understand the importance of e-service quality dimensions in online shopping context. Success on online store depends on acceptance of technology for shopping by customers. This will help online stores to understand technology usage belief in e-shopping.
10. To find out impact of E Service Quality (E-SQ) and Technology readiness (TR) on E-Shopping Behaviour (E-SB).

This is to observe which E-service quality attributes and technology readiness attributes have impact on E-Shopping behavior and satisfaction. It will help researchers to identify the e-service quality attributes which are significant in influencing shopping behavior. It will help researchers to identify which technology readiness attributes act as contributors and inhibitors for online shopping behavior.

1.14 Hypothesis of the study

In confirmation of the each of the objectives mentioned before, the associated hypotheses were proposed. These all hypotheses were tested under inferential statistics. To test the assumptions, we had used 95% level of significance to take the decision whether the hypothesis were accepted or rejected.

1.14.1 Hypothesis H1

The objective of this hypothesis is to identify the favorable and unfavorable attributes of e-shopping behavior, e-service quality and technology readiness in the context of online shopping. The sub-hypothesis $H1_a$ to $H1_c$ has been listed below:

$H1_{0a}$: Customer perception for all the attributes of e-shopping behaviour is equal to 2.0 i.e. neutral ($H_0: \mu = 2$)

$H1_{1a}$: Customer perception for all the attributes of e-shopping behavior is different from 2.0 i.e. neutral ($H_1 : \mu \neq 2$)
H1_{ob} : Customer perception for all the attributes of e-service quality is equal to 2.0 i.e. neutral (H_0: \mu = 2)

H_{1b} : Customer perception for all the attributes of e-service quality is different from 2.0 i.e. neutral (H_1: \mu \neq 2)

H_{0c} : Customer perception for all the attributes of technology readiness is equal to 2.0 i.e. neutral (H_0: \mu = 2)

H_{1c} : Customer perception for all the attributes of technology readiness is different from 2.0 i.e. neutral (H_1: \mu \neq 2)

1.14.2 Hypothesis H2

The objective of the hypothesis is to understand the perception of the customers for all the attributes of E- Shopping Behavior, E- Service Quality and Technology Readiness with respect to gender. The sub-hypothesis H2_a to H2_c has been listed below:

H_{0a} : There is no significant difference in the perception of male and female customers for all the attributes E- Shopping behavior

(\ H_0 : \mu_m = \mu_f \ )

H_{1a} : There is significant difference in the perception of male and female customers for all the attributes E- Shopping behavior

(\ H_1 : \mu_m \neq \mu_f \ )

H_{0b} : There is no significant difference in the perception of male and female customers for all the attributes E- Service Quality

(\ H_0 : \mu_m = \mu_f \ )
H_{1b} : There is significant difference in the perception of male and female customers for all the attributes E- Service Quality
\( ( H_1 : \mu_m \neq \mu_f ) \)

H_{0c} : There is no significant difference in the perception of male and female customers for all the attributes Technology Readiness
\( ( H_0 : \mu_m = \mu_f ) \)

H_{1c} : There is significant difference in the perception of male and female customers for all the attributes Technology Readiness
\( ( H_1 : \mu_m \neq \mu_f ) \)

1.14.3 Hypothesis H3

The objective of the hypothesis is to understand the perception of the customers for all the attributes of E-Shopping Behavior, E-Service Quality and Technology Readiness with respect to marital status. The sub-hypothesis H3a to H3c has been listed below:

H_{0a} : There is no significant difference in the perception of married and single customers for all the attributes of E-Shopping Behavior \( ( H_0 : \mu_m = \mu_s ) \)

H_{1a} : There is significant difference in the perception of married and single customers for all the attributes of E-Shopping Behavior \( ( H_1 : \mu_m \neq \mu_s ) \)

H_{0b} : There is no significant difference in the perception of married and single customers for all the attributes of E-Service Quality \( ( H_0 : \mu_m = \mu_s ) \)
$H_{1b}$: There is significant difference in the perception of married and single customers for all the attributes of E-Service Quality ($H_1: \mu_m \neq \mu_s$)

$H_{0c}$: There is no significant difference in the perception of married and single customers for all the attributes of Technology Readiness ($H_0: \mu_m = \mu_s$)

$H_{1c}$: There is significant difference in the perception of married and single customers for all the attributes of Technology Readiness ($H_1: \mu_m \neq \mu_s$)

1.14.4 Hypothesis H4

The objective of the hypothesis is to understand the perception of the customers for all the attributes of E-Shopping Behavior, E-Service Quality and Technology Readiness with respect to income per annum of the customer. The sub-hypothesis $H_{4a}$ to $H_{4c}$ has been listed below:

$H_{0a}$: All the attributes of E-shopping behavior i.e. shopping behavior and satisfaction is independent of the income per annum of the customer.

($H_0: \mu_{lower} = \mu_{Middle} = \mu_{Higher}$)

$H_{1a}$: All the attributes of E-shopping behavior i.e. shopping behavior and satisfaction is dependent of the income per annum of the customer.

($H_1: \mu_{lower} \neq \mu_{Middle} \neq \mu_{Higher}$)
\( H_{0b} \): All the attributes of E-Service Quality is independent of the income per annum of the customer. (\( H_0:\mu_{\text{lower}} = \mu_{\text{Middle}} = \mu_{\text{Higher}} \))

\( H_{1b} \): All the attributes of E-Service Quality is dependent of the income per annum of the customer. (\( H_1:\mu_{\text{lower}} \neq \mu_{\text{Middle}} \neq \mu_{\text{Higher}} \))

\( H_{0c} \): All the attributes of Technology Readiness is independent of the income per annum of the customer.

(\( H_0:\mu_{\text{lower}} = \mu_{\text{Middle}} = \mu_{\text{Higher}} \))

\( H_{1c} \): All the attributes of Technology Readiness is dependent of the income per annum of the customer.

(\( H_1:\mu_{\text{lower}} \neq \mu_{\text{Middle}} \neq \mu_{\text{Higher}} \))

1.14.5 Hypothesis H5

The objective of the hypothesis is to understand the perception of the customers for all the attributes of E-Shopping Behavior, E-Service Quality and Technology Readiness with respect to age of the customer.

The sub-hypothesis \( H_{5a} \) to \( H_{5c} \) has been listed below:

\( H_{0a} \): All the attributes of E-shopping behavior i.e. shopping behavior and satisfaction is independent of the age of the customer. (\( H_0:\mu_{\text{younger}} = \mu_{\text{Middle}} = \mu_{\text{older}} \))

\( H_{1a} \): All the attributes of E-shopping behavior i.e. shopping behavior and satisfaction is dependent of the age of the customer.

(\( H_1:\mu_{\text{younger}} \neq \mu_{\text{Middle}} \neq \mu_{\text{older}} \))
H₀ᵇ: All the attributes of E- Service Quality is independent of the age of the customer. (H₀ : μ_younger = μ_middle = μ_older)

H₁ᵇ: All the attributes of E- Service Quality is dependent of the age of the customer. (H₁ : μ_younger ≠ μ_middle ≠ μ_older)

H₀ᶜ: All the attributes of Technology Readiness is independent of the age of the customer. (H₀ : μ_younger = μ_middle = μ_older)

H₁ᶜ: All the attributes of Technology Readiness is dependent of the age of the customer. (H₁ : μ_younger ≠ μ_middle ≠ μ_older)

1.14.6 Hypothesis H6
The objective of the hypothesis is to understand the perception of the customers for all the attributes of E- Shopping Behavior, E- Service Quality and Technology Readiness with respect to the type of customers using internet. The sub-hypothesis H₆ₐ to H₆ₖ has been listed below:

H₀ₐ: All the attributes of E-shopping behavior i.e. shopping behavior and satisfaction is independent of the type of customers using internet. (H₀ : μ_non-web users = μ_visitors = μ_browser = μ_internet buyer)

H₁ₐ: All the attributes of E-shopping behavior i.e. shopping behavior and satisfaction is dependent of the type of customers using internet. (H₁ : μ_non-web users ≠ μ_visitors ≠ μ_browser ≠ μ_internet buyer)

H₀ᵦ: All the attributes of E- Service Quality is independent of the type of customers using internet.
(H₀ : μ_non-web users = μ_visitors = μ_browser = μ_internet buyer)
$H_{1b}$: All the attributes of E-Service Quality is dependent of the type of customers using internet.

($H_1: \mu_{\text{Non-Web Users}} \neq \mu_{\text{Visitors}} \neq \mu_{\text{Browser}} \neq \mu_{\text{Internet Buyer}}$)

$H_{0c}$: All the attributes of Technology Readiness is independent of the type of customers using internet.

($H_0: \mu_{\text{Non-Web Users}} = \mu_{\text{Visitors}} = \mu_{\text{Browser}} = \mu_{\text{Internet Buyer}}$)

$H_{1c}$: All the attributes of Technology Readiness is dependent of the type of customers using internet.

($H_1: \mu_{\text{Non-Web Users}} \neq \mu_{\text{Visitors}} \neq \mu_{\text{Browser}} \neq \mu_{\text{Internet Buyer}}$)

1.14.7 Hypothesis H7

The objective of the hypothesis is to confirm is there any relationship between E-Service quality, Technology readiness and customer’s shopping behavior. The sub-hypothesis $H_{7a}$ to $H_{7b}$ has been listed below:

$H_{0a}$: There is no significant relationship between all the attribute of E-Service quality and customer’s E-Shopping behaviour.

$H_{1a}$: There is significant relationship between all the attribute of E-Service quality and customer’s E-Shopping behavior.

$H_{0b}$: There is no significant relationship between all the attribute of Technology Readiness and customer’s E-Shopping behaviour.

$H_{1b}$: There is significant relationship between all the attribute of Technology Readiness and customer’s E-Shopping behaviour.
1.14.8 Hypothesis H8

The objective of the hypothesis is to verify the impact of the different attributes of E Service Quality (E-SQ) and Technology readiness (TR) on all the attribute of E-Shopping Behavior (E-SB). The sub-hypothesis \( H_{8a} \) to \( H_{8b} \) has been listed below:

- \( H_{8a} \): Impact of E Service Quality on E shopping Behavior
- \( H_{8b} \): Impact of Technology Readiness on E shopping Behavior

1.15 Scope and limitations of the study

Study covers unfolding of interrelationships among technology readiness, e-service quality and e-shopping behavior. Scope of the study includes closer examination of online shopping/buying behavior in countries having diversity like India. Post pilot study and its findings it was decided to select four major cities of India namely Bangalore, Pune, Mumbai and Hyderabad for collecting response through questionnaire. Sample size covered all buyers namely online buyers and others. Response received was analyzed on shopping behavior, e-service quality and technology readiness.

It is important to remember at this stage that all research suffers from limitations, thus this section narrates the limitations of the present study. For more conclusive results, more cities of India should have been studied. However, this was not possible due to time and financial constraints. It was not possible to cover a larger number of buyers because getting them required considerable time, resources and other logistics. Data collection was not targeted at equal number of samples for male and female customers. Study was not able to conclude difference in e-shopping behavior perceptions with respect to gender. Data collection
was done vide survey method using questionnaire. There are limitations like low response rate, complex and confusing questions and long surveys. Data collection was done from customers with varied age groups, gender, income levels and frequency of online shopping. This might have led to differences in perception on various dimensions. Thus to confirm the results each group must be analyzed independently.