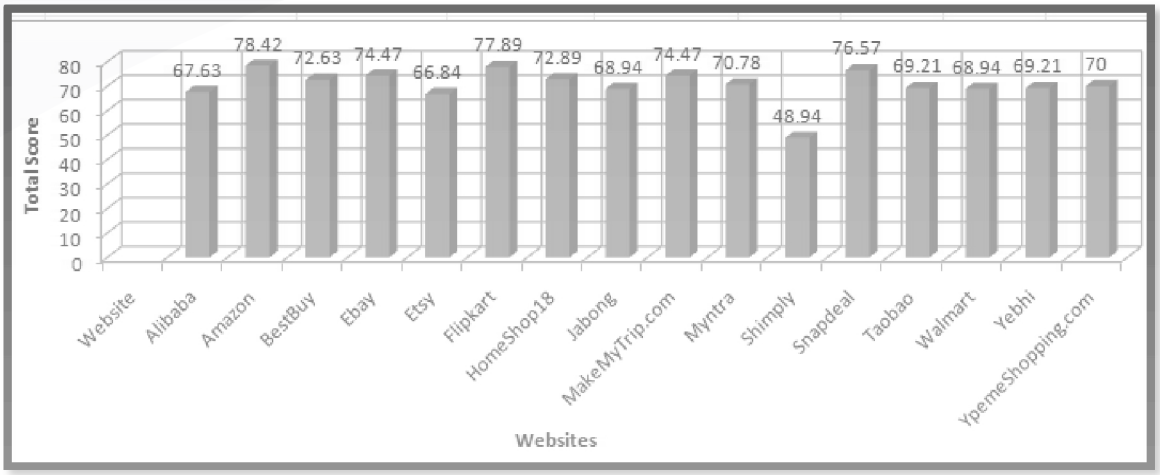
Figure: 2 Percentage Score



Further, in Table – 6 (a) and (b) collective total and percentage score of websites that are hosted by India as well as other countries are presented. As well as its graphicalpresentation is depicted in Figure – 3 (a) and (b).

Table: 6 (a) Total & Percentage Score of India Websites

Sr. No.	Website	Total (out of 380)
1	Flipkart	296
2	HomeShop18	277
3	Jabong	262
4	MakeMyTrip.com	283
5	Myntra	269
6	Shimply	186
7	Snapdeal	291
8	Yebhi	263
9	YepmeShopping.com	266
Total Score		2393
Percentage Score		69.97%

Table: 6 (b) Total & Percentage Score of Non – Indian Websites

Sr. No.	Website	Total (out of 380)
1	Alibaba	257
2	Amazon	298
3	BestBuy	276
4	Ebay	283
5	Etsy	254
6	Taobao	263
7	Walmart	262
Total Score		1893
Percentage Score		71.16%

Figure: 3(a) Total Score of India and Non – Indian Websites

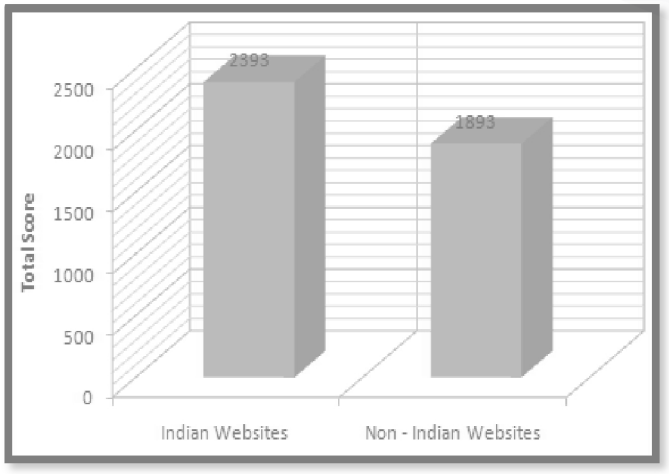
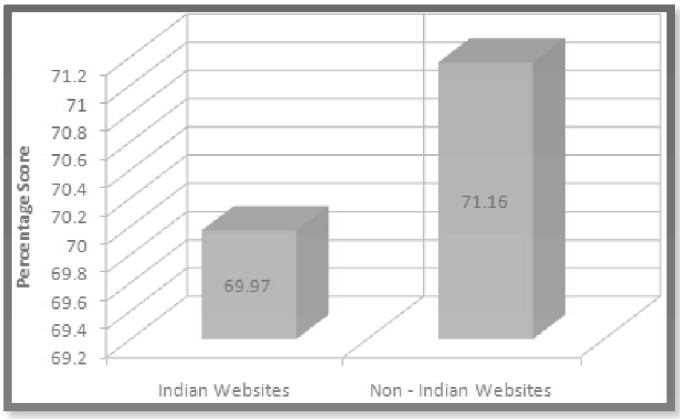


Figure: 3(b) Percentage Score of India and Non – Indian Websites



From Table – 6 (a) and (b) as well as Figure – 3 (a) and (b), we examined that although total score of Indian website was on higher side than Non – Indian websites then also percentage score of Non – Indian websites was larger since many of the features such as Advertisement, Aesthetic attributes, Organization/Presentation, Overall design, Usability are excellently presented in compare to Indian Websites.Proceeding more, in Table – 7 (a) and (b) along with Figure – 4 (a) and (b), we present top two Indian websites as well as top two Non – Indian website that exceptionally present these 36 features.

Table: 7 (a) Top 2 Indian Websites

Sr. No.	Website	Total (out of 380)
1	Flipkart	296
2	Snapdeal	291

Table: 7 (b) Top 2 Non - Indian Websites

Sr. No.	Website	Total (out of 380)
1	Amazon	298
2	Ebay	283

Figure: 4 (a) Top 2 Indian Websites

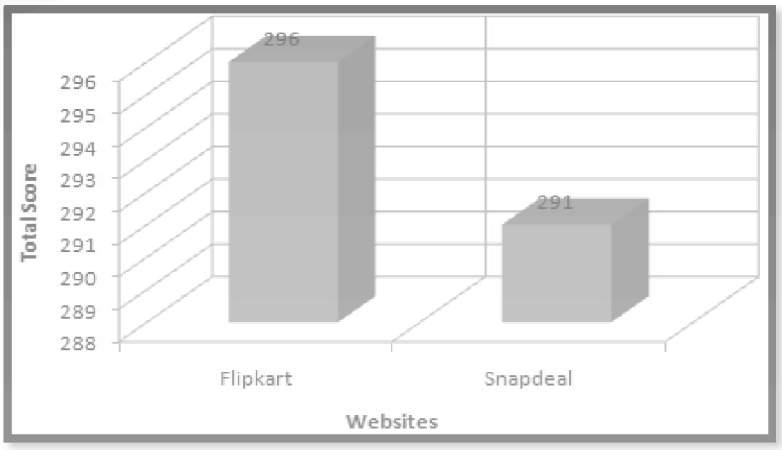
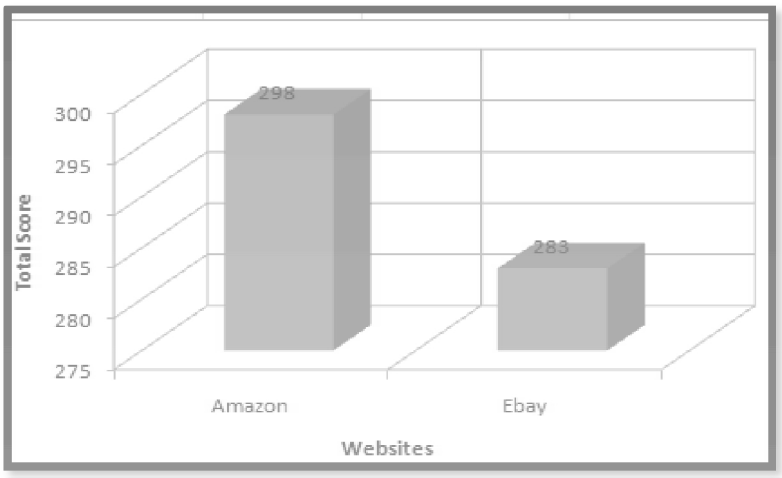


Figure: 4 (b) Top 2 Non - Indian Websites



From Table – 7 (a) and (b) as well as Figure – 4 (a) and (b) is it clear that, if we considered Indian websites thanFlipkart is having maximum score (296) where as Snapdeal found to achieved second highest score (291). Whereas comparing Non – Indian websites, we found that Amazon achieved highest score (298) followed by Ebay, which scored second highest score (283).

5. CONCLUSION

In the present work, we identified 38 features which were considered as a metric for evaluation of 16 e – commerce websites. The list of 38 features is identified and listed based on our evaluation of the feature's appropriateness. Further we do not claimthat this list of these 38 features is exhaustive listing. Also we would like to declare that evaluation of websites was solely based on our opinion. The fundamentalpurpose of assigning score to websites was to presenta subjective assessment of e – commerce websites which may differ from person to person.

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PERCEPTION OF CONSUMERS RELATED TO DEVIANCES IN ONLINE VIEWED PRODUCTS & RECEIVED PRODUCTS

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Abstract

Online shopping provides a good example of the business revolution. In India, E-commerce is currently experiencing a period of rapid development;the large number of Internet users provides a good foundation for the expansion of the online shopping market. In this study, misleading advertisement, Information Asymmetry, Wrong product delivered, defective product, quality of received product, Received order dispeller as per the product specification, partial Order received, not reimbursement of money after the cancellation of order, duplicate/replica product received, packing of the product,Product Appearance, Unsatisfactory post delivery services, shipping and hidden charges areuse for analysis, which create the dissatisfaction in customer after the delivery of the product.The study also includes the effect of customer perception on post delivery problem of online shopping. This research conduct by using the primary data source and the survey method will be employee in the research. Data of 106 respondents were analysis with help of statistical tool like mean, stand deviation and z-test. The result of the study state that age group of 11 to 30 years, Male, Post-Graduate, Graduates and Income slab of 0 - 2, 50, 000 are the highest user of E- commerce website. Study shows that people feel safe in using E-commerce, Amazon Indian and Filpkart lead the in usage of E-commerce website and rarely using E-commerce website. Study also shows that E-commerce firm justify some of the function taken as variables.

Key Words: Online Shopping, Consumer Perception, Perceived Product Quality And Benefits, After-Sales Service, Marketing Mix, Reputation.

1. INTRODUCTION

Online Shopping

The act of purchasing products or servicesover the Internet is called online shopping. Online shopping has grown in recognition over the years, mainly because public find it convenient and easy to get good deal shop from the comfort of their home or place of work. One of the most appealing factor about online shopping, particularly during a holiday season, is it alleviates theneedto wait inloglineso research for a particular item fromstoreto store. A person gets the opportunity to buy wide range of products and also get customized product at their door step.

The concept of E-commerce was first introduce in India in the late 1990's by Rediffhad been trying to capture the Indian market since the year 1999 and that IRCTC was the first company to create a successful E-commerce portal. According to Google India, there were 35 million online shoppers in India in 2014 Quarter 1 and is expected to cross 100 million mark by end of year 2016. According to a study conducted by the Internet and Mobile Association of India, the E-commercesector is estimated to reach Rs. 211005 by December 2016. In India, cash on delivery is the most preferred payment method, accumulating 75% of the E-retail activities.

Customer Perception

Customer perception refers to the process by which acustomer selects, organizes, and interprets information/stimuli inputs to create a meaningful picture of the brand or the product. It is a three stage process that translates raw stimuli into meaningful information. Consumer perception applies the concept of sensory perception through their five senses to marketing and advertising. Consumer perception theory attempts to explain consumer behavior by analyzing motivations for buying -- or not buying -- particular items.

There are three areas of consumer perception theory: Self perception, Price perception and Perception of a benefit to quality of life. 1. Self perception theory attempts to explain how individuals develop an understanding of the motivations behind their own behavior. Self perception by customers relates to values and motivations that drive buying behavior. 2. Researchers at the School of Business Administration at LaSalle University and LeBow College of Business at Drexel University considered several factors, including price perception -- whether consumers believed they were being charged fair prices -- in determining whether online shoppers would make repeat purchases through the same website. The researchers concluded that price perception strongly influenced whether customers were satisfied with their purchases and whether they would make future purchases. Two factors that shaped price perception were the perceived quality of the merchandise or service in question and price comparisons with merchants offering similar merchandise or services. 3. Perception of a benefit to quality of life is perceived by the customer on the basis of the information they get about the product, which the get from the website and it display in online buying of the product.

Deviances in Online Viewed Products and Received Products

There are many large E-commerce website in India like Flipkart, Snapdeal, Amazon India, eBay, Yapme, Paytm and many others. Basically it displays the product on its website andprovides detail information about the product to its audience. The websitedisplays the product category wise and also try to provide minute detail of product and service attract to it. This E-commerce also advertises their product through different mass media.But all the details provided by the company often varies from the actual product and so that post-delivery problem arises. Even many time the customers not able to understand the information provided by the E-commerce websites.

There are various perception of the consumer and the company which they have their different perspective, way of seeing and understanding the information. So there are many times deviation in online viewed products and received products are Leads toWrong product delivered,quality of received product, Received order dissimilar as per the product specification, partial Order received, not reimbursement of money after the cancellation of order, duplicate/replica product received, packing of the product, Product Appearance, Unsatisfactory post delivery services, shipping and hidden charges are some of the different perceptions from company point of view, which create the dissatisfaction in customer after the delivery of the product. Due to improper shipping service defective products delivered.

2. LITERATURE REVIEW

For online shopping, E-service quality was slow by different researchers. Parvenpaa and Todd (1996-97) suggested responsiveness, reliability, tangibility, empathy, and assurance as the factors that affect consumer's attitude. Parasuraman, Zeithaml, and Malhotra (2005) suggested efficiency, system availability, fulfillment, and privacy as the major factors to be considered. Collier and Bienstock (2006) recommend a scale containing the determinativedisplays instead of the reflexive indicators.

Dillon and Reif (2004) Product perception, sometimes called product empathetic or product value and Crisp, Jarvenpaa, and Todd, (1997), consists of price, product quality, and variety. These are the most salient product perceptions mentioned in the E-market literature. Price is the moneymaking payout of the customers and is the cost of purchasing; it is important since pricing strategy can be easily realized over the internet. Quality is generally defined as overall superiority or power of the products, as stated by Parasuraman, Zeithaml and Berry (hereinafter referred to as PZB) (1985) from the consumer's viewpoint. Product quality, which also provide accommodations service quality if the purchasing target is service instead of physical product, should be famous from the service quality which is another construct to be conversed below; product quality has long been discussed in the literature from dissimilarview point (Garvin,1984; Harari, 1993). Product quality perception is a particular product's ability to satisfy the consumers compared to alternative products (Monroe and Krishnan,1985); it is also a consumer evaluation of a product's unresolved value and presentation (PZB, 1988). Thus, perceived product quality can be defined as the customer's perception or the finding about the overall excellence or advantage of the products or service with respect to its projected purpose relative to options (Aaker, 1991; PZB, 1988).

From the consumer perspective, packaging also plays a major role when products are purchased: packaging is crucial, given that it is the first thing that the public sees before making the final decision to buy (VidalesGiovannetti, 1995). This function has increased with the arrival and commercialization of self-service sales systems and E-commerce which have caused packaging to move to the experience in attracting attention and causing a purchase. Prior to this, it had remained behind the counter and only the sales attendant came between the consumer and the product (CerveraFantoni, 2003). Sonsino (1990), self-service has transferred the role of notifying the customer from the sales assistant to advertising and to packaging. This is why packaging has been called the "silent salesman", as it informs us of the qualities and benefits that we are going to obtain if we consume a certain product (VidalesGiovannetti, 1995). In the current self-service economy, packaging provides manufacturers with the last chance to encourage possible buyers before brand selection (McDaniel and Baker, 1977). Therefore, all the packaging elements, including texts, colors, structure, images and people/ personalities have to be individual to provide the consumer with visual sales negotiation when obtaining and using the product (McNeal and Ji, 2003). This becomes even more crucial when the data contributed by Clive Nancarrow et al. (1998) is taken into contemplation: nine out of ten purchasers, at least occasionally, buy on impulse (Welles, 1986) and unforeseen food shopping articles can account for up to 51 percent of purchases (Phillips and Bradshaw, 1993).

A great deal of research has identified product attendance attributes that can be derived from product appearance, as well as from packaging, typefaces or logos (Ellis, 1993; Orth&Malkewitz, 2008, Henderson, Giese, & Cote, 2004). Appearance attributes that are mentioned in the literature include harmony, unity, and symmetry (Ellis, 1993) ;proportion, typicality (Veryzer& Hutchinson, 1998) ;incalculability, naturalness and delicateness (Orth&Malkewitz, 2008). Tools have even been developed to guide originators in representing attributes in their product appearances (Hsiao & Wang,1998). The attributes described in the fiction provide knowledge on what attributes are derived from product appearance. However, a major issue is not covered. Namely, the attributes reflect how designers perceive product appearance and not how the customer perceives it, since the attributes mentioned in the literature are mainly drawn from the visual and manufacturing design literature. For example, Ellis's (1993) initial attribute set consisted of characteristics derived from design literature. Also, Orth and Malkewitz (2008) initially gathered appearance meanings form literature, and then expanded that list with product specific meanings from trade and academic journals and experts. Krippendorf (1989) argues that we cannot just presume that the way a designer objectifies a certain

meaning in the product appearance is the same as the meaning that consumers derive. This often forces companies to interconnect the meaning of the product in high cost marketing campaigns because consumers do not robotically derive the intended meanings from the product appearance (Krippendorf, 1989). In the same fashion, it can be questioned whether consumers will derive the same product attributes from product attendance as designers (Hsu, Chuang, & Chang, 2000). Indeed a possible transformation between designers and consumers can be assumed given the extended literature on differences between inexperienced person and experts in the perception and appraisal of a wide range of stimuli (e.g., Chi, Feltovich, & Glaser, 1981; Tanaka & Taylor, 1991).

3. OBJECTIVES

The main purpose of this study is to identify the perception of consumers related to deviances in online viewed products & received products. In this study, the drivers that influence consumer perception will be examined. The objectives of this research are:

- To examine the level of consumer's perception towards online viewed products & received products.
- To investigate the factors that influence highest in creating deviances in online viewed products & received products.

4. RESEARCH METHODOLOGY

Variables

The Variable use for the study of the perception of consumers related to deviances in online viewed products & received products are misleading advertisement, Information Asymmetry, Wrong product delivered, defective product, quality of received product, Received order dispeller as per the product specification, partial Order received, not reimbursement of money after the cancellation of order, duplicate/replica product received, packing of the product, Product Appearance, Unsatisfactory post delivery services, shipping and hidden charges are use for analysis, which create the dissatisfaction in customer after the delivery of the product..

Research Design and Source

Primary method is used for data collection. Primary sources provide first hand testimony or direct evidence concerning a topic under investigation. They are created by witnesses or recorders who experienced the event or conditions being documented. And descriptive research is done to find out facts. Descriptive research includes surveys and fact-finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present.

Data Collection Method, Instrument and Sampling Plan

Dates are collected by filling online questioner by 106respondents who are aware about E-commerce and non-probability snowball sampling method is used for data collection.The respondents had provided their rating on their perception using a five-point Likert Scale measurement that ranged from 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree. Questioner also include respondents' demographic information such as gender, marital status, age, level of education, occupation, monthly income level, and the location of the respondent.

Hypothesis Development

H1: There is significant relationship between misleading advertisement and variation on product specification and received product.

H2:There is significant relationship between information about products provided by firm and duplicate product received.

H3: There is significant relationship between satisfactory product packaging and product deliver are not as per the order place.

H4: There is significant relationship between duplicate product received and shipping charges clearly indicated for each location and each product on websites.

H5:There is significant relationship between damage product deliver by the firms and difference in quality of product display and received.

5. ANALYSIS AND FINDINGS

A total 106 questionnaires were analysis for study purpose. Table 1 shows the demographic information of the respondents. In this study, it is found that age group of 11 to 30 year is highest user of E-commerce websites and it is followed by age group of 31 to 50 year and then 51 to 70 year. Moreover, it is also found that most of male about 61.3 % are using E-commerce services for purchase and only 38.7 % of female using E-commerce website.

The study shows also present the data that 50 % of respondents are Post Graduate and then it's followed by 33% of Graduates the by 12th pass, Diploma, Ph.D. and other like primary and secondary education. It also indicate that highest number of respondents belonging to the Annual family Income range from 0 to 2,50,000 (42.5% respondents), followed by 2,50,001 to 5,00,000 (34.9% respondents), then 5,00,000 to 10,00,000 (15.1%) and finally by 10,00,001 o r more (7.5%) respondents.

The study shows indicate that 98 respondents are purchasing online product and so they are the customers and 8 respondents are using online purchase products but did not purchase online products, they are just consumer and not the customers.

The study shows that mostly respondents prefer to buy from Amazon India (71.7% respondent using) and Flipkart (67.9% respondents using). Respondents also prefer other E-commerce website but not as much as stated above website. Other E-commerce website used by respondentsis Snapdeal (36.8%), eBay (21.7%), Paytm (30.2) and many others (13.2%).

The study shows also indicate that 40.6% respondents are rarely using E-commerce website, 39.6% respondents are frequently using the E-commerce website, 19.8% respondents are mostly using E-commerce website and no respondents alwaysusing E-commerce website.

The study shows indicates 83% of respondents are feeling safe inusing the E-commerce website and remaining 17% respondents are feeling unsafe in using the E-commerce website.

Table 1 Demographic Information of the Respondents

Variable	Frequency	Percentage (%)
Age		
11 – 30	84	79.2
31 – 50	18	17
51 - 70	4	3.8
Gender		
Male	65	61.3
Female	41	38.7
Education		
10^{th} pass	1	0.9
12^{th} pass	6	5.7
Diploma	5	4.7
Graduate	35	33
Post Graduate	53	50
Ph. D.	3	2.8
Others	3	2.8
Annual Family Income		
0 to 2,50,000	45	42.5
2,50,001 to 5,00,000	37	34.9
5,00,000 to 10,00,000	16	15.1
10,00,001 or more	8	7.5
Purchase Product Online		
Yes	98	92.5
No	8	7.5
E-Commerce Website Used		
Amazon India	76	71.7
Flipkart	72	67.9
Snapdeal	39	36.8
eBay	23	21.7
Yepme	6	5.7
Paytm	32	30.2
others	14	13.2
Frequently Do You Purchase from E -Commerce Websites		
Rarely	43	40.6
Frequently	42	39.6
Mostly	21	19.8
Always	0	0
Feel Safe in Online Purchase		
Yes	88	83
No	18	17

Means and standard Deviation Analysis

Table 2 shows the statistics data (i.e., Mean and Standard Deviation) of all the variables which effect perception of consumers related to deviances in online viewed products & received products.The

study of mean value represent that most of the respondents are agree that E-commerce website are involve inMisleadingAdvertisements, Information provided by E-commerce website the about products are incomplete, Difference in quality of product display and received, Variation on product specification and received product, Packaging of product is satisfactory and Shipping charges is clearly indicated for each location and each product on website.

The study of mean value represent that most of the respondents are disagree that E-commerce website are involve inProduct deliver are not as per the order, Damage product deliver by the firms, Incomplete order received, Not reimbursement of money as per the term and condition of purchase, even after cancellation of order, Duplicate product received and Hidden charge in online buying of product

Table 2 Statistics

Sr. No.	Particular	Mean	Std. Deviation
1	Advertisements are misleading	2.94	1.085
2	Information provided about products are not complete	2.63	1.141
3	Product deliver are not as per the order	2.30	1.228
4	Damage product deliver by the firms	2.33	1.248
5	Difference in quality of product display and received	2.83	1.276
6	Variation on product specification and received product	2.61	1.239
7	Incomplete order received	1.98	1.163
8	Not reimbursement of money as per the term and condition of purchase, even after cancellation of order.	2.33	1.307
9	Duplicate product received	2.22	1.227
10	Packaging of product is satisfactory	3.90	1.309
11	Hidden charge in online buying of product	2.28	1.336
12	Shipping charges is clearly indicated for each location and each product on website	3.75	1.308

Z – Test Analysis

Table 3 shows hypothesis test using z-test. Z- Test is applied for hypothesis testing as number of sample size is large (i.e., ⩾30) i.e., 106 and variance is known. Z- Test performed in Excel with 95 % of confidence level.

H1: There is significant relationship between misleading advertisement and variation on product specification and received product. Table 3 shows the z calculated value 2.068 which greater than the critical value 1.96. Thus, H1 not supported by result, thus there is no significant relationship between misleading advertisement and variation on product specification and received product.

H2: There is significant relationship between information about products provided by firm and duplicate product received. Table 3 shows the z calculated value 2.55 which greater than the critical value 1.96. Thus, H2 not supported by result, thus there is no significant relationship between information about products provided by firm and duplicate product received

H3: There is significant relationship between satisfactory product packaging and product deliver are not as per the order place.Table 3 shows the z calculated value -9.146 which less than the critical

value 1.96.Thus, H3supported by result, thus there is significant relationship between satisfactory product packaging and product deliver are not as per the order place.

H4: There is significant relationship between duplicate product received and shipping charges clearly indicated for each location and each product on websites.. Table 3 shows the z calculated value -8.8289 which less than the critical value 1.96. Thus, H4 supported by result, thus there is significant relationship between duplicate product received and shipping charges clearly indicated for each location and each product on websites.

H5:There is significant relationship between damage product deliver by the firms and difference in quality of product display and received.Table 3 shows the z calculated value -2.88 which less than the critical value 1.96. Thus, H5 supported by result, thus there is significant relationship betweendamage product deliver by the firms and difference in quality of product display and received.

Table 3 Hypothesis test using z-test

Hypothesis	Z Calculated value	P two-tail value	z Critical two-tail value	Accepted / Rejected
H1	2.07	0.04	1.96	Rejected
H2	2.55	0.01	1.96	Rejected
H3	-9.15	0	1.96	Accepted
H4	-8.83	0	1.96	Accepted
H5	-2.88	0	1.96	Accepted

6. CONCLUSION

The act of purchasing products or services over the Internet is called online shopping. 106 respondent's responsereview by fill up questionnaires. It is found that there is difference in perception of consumers related to deviances in online viewed products and received products. Hypothesis were studied and found that some are accepted and some are rejected.

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EXAMINING THE ROLE OF SOCIAL MEDIA IN HEALTHCARE PRACTICES: AN INSIGHT INTO NEW AVENUES AND OPPORTUNITIES FOR HEALTHCARE STAKEHOLDERS

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Abstract

The term Digital Marketing has wide applications to business organizations, users, providers and systems and therefore vital to always define the Digital Marketing Eco System of the organization. The uptake of Social Media in medicines has provided new avenues and opportunities for healthcare stakeholders who use social media as a platform to collaborate and share information for both professional education and development of public health. This paper studies the various current and potential uses of social media in healthcare practices from the perspective of care givers on various social media platforms. Content Analysis has been used to know the popular platforms for collaborating and engaging with e-patients and how with the use of Facebook, Twitter and YouTube, Social Media is constructively used. Further what is the digital maturity in healthcare sector and the challenges faced by caregivers is explored over here.

Keywords: Social Media, Digital marketing, Healthcare Marketing, Healthcare, Digital Eco-System, Content Analysis, Digital Maturity

1. INTRODUCTION

The Internet Revolution brought in a new basket of marketing tools. Marketers are overwhelmed by the information sharing and responses from users from borderless customer bases resulting in increased sales and positive feedback and good word of mouth along with reviews for improvement. The ease in setting up these digital tools and running its operations has pulled all industries to its forefront. These efforts unfold and bring forth a massive prospect for gaining remarkable rewards for not just an individual company but also shape the market through the various digital touch points like the websites, smart phones, desktop applications, social media platforms, and its services. Hence the need to understand the various elements of a digital eco system is important to help focus in any business. This eco system broadly defines the borders or periphery the hospitals are working on. Social media and digital marketing are those additional tools being utilised in numerous ways to effectively reach out to all types of people. Since, 2011 more than 60 million people have been

consumers of health resources on the internet[1] globally. New technological advancements have healthcare marketers think about unique ways to reach the people. Thus, the marketers face the challenge of stronger presence on the online platforms through social media networks and other favourable platforms to educate the people, raise funds for the needy or to get across to the people during public campaigns. The people are also more than willing to share information with one another and this opportunity is well utilized by the organizations to listen to their opinions and expectations and simultaneously, provide the people with valuable information on healthcare topics, concerns, issues and controversies.

2. LITERATURE REVIEW

Social Media and digital platforms gave rise to a new eco-system.A biologist, Clapham A.R. first suggested the term eco-system in 1930's which was later defined ascomprising of both physical and biological components (Tansley, 1935; Willis, 1997). On similar lines, the digital ecosystem of a business is definedas the combination of all relevant digital touch points, the people that interact with them, and the business processes and technology environment that support both (Cormac R, 2011).

Recently, the researchers have attempted to explain the digital eco systems as websites and applications that enabled users to create and share content or to participate in social networking (Granter, 2013). It is commonly known that any eco-system can thrive in a conducive habitat.Therefore for better understanding of the concept, they have attempted to explain the concept by drawing a parallel between the natural and the digital eco- system. A natural eco system comprises of the habitat, communities, population, predators, competitors and the other resources. These are compared in the digital eco system individually as the Habitat with the broad and niche platforms which are owned, purchased or obtained, the Communities described as a community of parents in the habitat of MumsNet[2],Population paralleled with the target audience who could be employees or staff,Predators similar to trolls and detractors,Competitors - the other brands,Resources which are either a useful content or with a budget.

The Wall Street Journal (WSJ), also attempted to interpret the digital eco system, mappedas the digital marketing eco –system as shown in Fig. 1. One of the main elements captured in the eco system is the social media buzzing with the latest news from all sectors.
Marketing strategists on Quora(a social networking site) have attempted to define it as the interconnection of social assets of a brand and its ability to manage multiple entries to achieve its goal successfully. Interactions, being the main aim of all brands, social media sites seem to be the centre of all marketing strategies being designed as indicated in Fig 1.

[1]Healthcare and social media: building relationships via social networks, Academy of healthcare management Journal, vol7(2), 2011
[2]Mumsnet is one of the UK's largest websites for parents. It hosts discussion forums where users share peer-to-peer advice and information on parenting, products and many other issues

Fig 1

source: WSJ

- **Social Media**

Social Media is a very important term and needs to be well understood by all. Different definitions of social media are found online. (Thornley, 2008) stated it is an online communication in which individuals could shift fluidly and flexibly between the role of audience and author via the use of software that enables people to post, comment on, share or mashup[3] content, and to form communities around shared interests. In 2010, social media was defined as people having a conversation online (Darlington, 2010). The new media was understoodand it was defined as the democratization of information, transforming people from content readers into publishers (Solis, 2010). This highlighted that the new media is a shift from a broadcast mechanism one-to-many, to a many-to-many model, rooted in conversations between authors, people and peers. (Nations, 2011) notes that social media allows users to provide their input on certain subjects and to interact with those around them in the

[3]Mashups are an exciting genre of interactive Web applications that draw upon content retrieved from external data sources to create entirely new and innovative services. They are a hallmark of the sec ond generation of Web applications informally known as Web 2.0. as explained in http://www.ibm.com/developerworks/library/x-mashups/

way that pleases individuals. Social media is also explainedas akin to a communication channel, a format that delivers a message, and simply a system that disseminates information to others (Hartshorn, 2011).Merriam dictionary'sdefinition and understanding of the social media is as forms of electronic communication (as websites for social networking and microblogging) through users creating online communities to share information, ideas, personal messages and other content (as videos).Hence, we can conclude that social media, a part of the digital communications technologies, which has helped nurture and also examine the simple and complex business relationships in industries with multiple channel partners scattered across the globe is reshaping the working practices. Netnography, is one such research approach which is about gathering of information and data from relevant online communities. The observations of social media networks are gathered as observers of the natural online behaviour and conversations between individuals or groups (Flick, 2014).

Hence we can safely call social media as a web based tool that are used for computer- mediated communication.

- **Healthcare and Social Media**

Social Media and Healthcare industry are not unknown to each other. Healthcare industry and its various stakeholders use this medium for peer to peer communication where the doctors or physicians interact with each other about the various challenges in treating diseases or share latest information (Ventola, 2014).Another major usage is the enhanced interaction speed with the people and the healthcare bearers like the clinicians, hospitals or other healthcare bodies during communicating, evaluating and reporting of flu or other epidemic trend (George et.al, 2013). The other common usage trends noted are in generating, sharing(Jarvenpaaet.al, 2001) or gathering of health related information, institutional branding besides educational resources for people, patients and physicians (Househ, 2013). Social media has also become a comfortable tool for recruitments and clinical trials(Wipro reports, 2010)

The advent of internet in web 2.0, has unfolded new avenues and paved different paths of interaction, creating awareness, liking, preference and persuasion to try the health services when needed by different people from different age groups and from different walks of life. The hospitality industry has been coerced to use this new platform of interaction and communication between family, old friends, new virtual friends and peers.

The general observation of healthcare industry on social media reveals the different levels of social media revolutions in the healthcare industry itself(Valiquette, 2012).WebMD, Wikipedia and other self-diagnosing blogs and sites belonged to the first era of the social media revolutions followed by reading reviews of the healthcare professionals at RateMyMD.ca.[4] Unlike the previous social media revolutions, the new revolution can develop instant associations and acquaintances among new sources; websites created by others or suggested referrals. This revolution besides giving access to their network of friends and acquaintances also broadcasts to their network as when they want or seem appropriate. The paradigm shift in broadcasting is common to all industries. There is a general

[4]RateMyMD.ca-This is a website where one can leave their reviews of any doctor of any particular specialization. A link also leads to the doctor's website and his interest areas, his suggestions or precautions and when would it be a right time to see the doctor.

acceptance that the patient who comes up has already done a self-diagnosis before coming up for the doctor's advice and medication.

The literature review highlights as to how the healthcare providers and professionals use the social media platforms but also questions such as why these healthcare providers and professionals use these platforms and what kind of opportunities are there which helps in better understanding and collaborating information. The extent of assistance of social media is yet to be explored by the people. This paper attempts to fill up this gap.

Hence, an understanding of how the social networking sites were developed and how they are different from each other has been discussed below.

- **SOCIAL NETWORKING SITES (SNS):**

a. Facebook the most popular social networking site has 7.5 billion individuals as per Pew, 2012 research reports. This site was initially designed for college students to share photos, videos and comments from friends, later this opened for everyone with the privacy setting facility which prevented the personal information from the general public. Only on accepting a friend request can you let him see your personal details like birthdays, interests, relationship status. Tagging of friends, writing messages on each other's walls is common. However, ifsomebody desires to send private messages it is possible through facebook. Virtual communities and groups are also encouraged on this SNS which results in endless communications and possibilities to reach to more numbers. The number of likes, number of views and the number of shares determines the successful passing of messages to the target groups as desired. On facebook, the healthcare providers have their own pages where they share about their services, infrastructure and other awareness events and campaigns initiated by the hospitals as part of their marketing activity.

b. Twitter and facebook are both online social networking sites, which encourage people to join their friends, family and the people they know. Twitter allows real time data networking. This SNS which was started in 2006, allows subscribers to send tweets or messages in not more than 140 characters and with 210 characters with video messages. Twitter also known as microblogging makes use of hashtags followed by a word. This helps in easy location of the message through the word. Basically, hashtags are like keywords creating a convenient search. The hashtags should be well thought as a large number of hashtags is not useful. The hashtag should be such that it reaches its target group. For eg. A nursing home can have a hashtag #seniorliving, this indicates that the nursing home caters to the seniors. Similarly, twitter has been successfully used in psychiatry where the potential uses can be tabulated as 1. learning, 2 . advice for patient care 3. data collection for research. 4. recognition and also for better impact.(Peters e.t al, 2015). The success of the tweets is deciphered from the bar at the bottom of your tweet. The numbers of impressions created are counted from the number of shares, likes and retweets. The person who tweets gets the analytics clearly from the bar at the end of the tweet.

c. Linkedin is a social media site for professionals to interact with people in similar and related professions. Hence it is more of a business-oriented social networking site mostly for recruitment. Healthcare providers have given a description of their company and employee strength with latest achievements or activities as updates. On linkedin, the organizations also facilitates custom group community where the industry best practices, latest trends, developments and achievements are freely

discussed by likeminded individuals who collaborate and connect for facilitating better business opportunities.

d. Instagram is a fun and unusual way of sharing, special moments in your life with friends through a string of pictures. This is an online mobile picture and video sharing service. The Co founder and CEO, Kevin Systorm aims to build an experience of one's friends and their life through snaps, photos and pictures clicked. This platform allows one to share their posts publicly and privately. This Social networking site is getting popular in India, it is a mobile friendly app and very popular with teenagers.

e. YouTub e - Another social networking site where information is shared through videos and hence is treated as a one way communication where anyone has the liberty of leaving their opinions as comments and their likes and dislikes are expressed through the buttons provided. The number of views for the video is indicative of the popularity of the content and information put on the medium. This is a content sharing site where information on medical advancements, state of the art facilities and other highlights of the healthcare organization is highlighted through uploaded videos. The categorised definition of the different types of social media and its classifications in terms of its service type is rendered in Table 2 for better understanding.

The interests and the demographics of different social media sites is different and hence the healthcare providers wish to have their presence felt on all platforms, in order to reach out to all types of people planning different and unique campaigns .A study of the research reports (Pew, 2013) has led us to understand that facebook has been the most popular social networking site since the year 2012. However, the annual growth in users is less compared to the other social networking sites.

3. RESEARCH DESIGN

The development of the research paper began in the month of May 2016 and continued through the month of June 2016. During this period, a literature review was carried out and the data collection method was determined. This research paper a descriptive study, attempts to fill the gaps through a qualitative research.

In order to study and observe the content of health care providers on social media, a broad study of the information available on social media was conducted. It was viewed that the hospitals had a good presence on social media compared to the clinics or doctors. The search also revealed that the hospitals with the national presence were more active and diligently made regular posts on their walls and also responded to the customer's queries or complaints. Hence an attempt is made to study the activities of healthcare providers and professionals on social media and their current usage.

4. OBJECTIVES

This paper aims to study

a. why healthcare providers, professionals use popular social media platforms.

b. explore new opportunities which would help in collaborating and sharing information with people on this new communication medium.

c. to understand the outcomes and their effects of collaborating and sharing information.

5. DATA COLLECTION

An exploratory content analysis was selected for the study which was designed to collect data in two steps. The first step was to identify the healthcare providers, professionals and other stakeholders to broadly study their presence through their activities on social media. Later a choice of hospitals were made with NABH[5](National Accreditation Board for Hospitals and Healthcare providers) accreditation based on their activity levels on social media and the use of online campaigns in the recent past for promotional activities both nationally and internationally. The second step was to collect the online posts made during the four week period of June, 2016 on different social networking sites based on its popularity with the people and the healthcare stakeholders.

Out of the 370[6] NABH accredited hospitals the popular hospitals on social networking sites were shortlisted from which three popular hospitals were chosen based on their geographical location. These hospitals are Fortis Healthcare from Northern India, The Apollo Hospitals from Southern India and Mayo Clinic which has an international presence and ranked as number one, on the social networking sites were identified. The content for four weeks ofJune, 2016 was then investigated.

About 452 facebook posts, twitter's tweets, instagram's hashtags (#) and you tube videos were randomly selected and independently analysed to study the content on these social networking sites and its effect on the online population. Besides the content, the number of likes, shares and type of comments were also noted. Content that sparked comments rather than regular content posts was also noted. The kind of responses for posts on Fortis healthcare, Apollo hospital and Mayo clinic was studied on all the social networking sites.

6. ANALYSIS

The exploratory content analysis conducted revealed various interesting facets adopted by healthcare providers and professionals on the popular social platforms such as facebook, twitter, you tube, linkedin and Instagram for the research study. The variance in posts across different social platforms by the healthcare providersisused to get across to different target audiences thereby creating a better chance to study the audience and sense their likes or dislikes as well as know the type of facilities and their different requirements. The number of shares adds to understanding the total impressions made. It also helps in understanding and handling patient queries and complaints through online communities and discussion forums like the Apollo hospitals that had started an online campaign, "Just Ask" and instructed their team of doctors to answer queries for specific diseases like back pain on facebook.

Fortis healthcare has 894,162 likes on their facebook page. There are regular posts being made by the healthcare provider. These posts individually get around 300 likes and for common topics like types of vitamins and hidden nutrients of banana get likes less than a 100. In the month of June, 2016, there was a post "let us serve you better" The tremendous response could be estimated by the 12, 000 likes

[5]NABH is a constituent board of Quality Council of India, set up to establish and operate accreditati on and allied programs for healthcare organizations

[6]http://nabh.co/frmViewAccreditedHosp.aspx accessed on July 2, 2016

for the post. Similarly, posts on #MonsoonMantra, a Fortis initiative for twitter and facebook gave away wonderful and amazing health tips as well as must have's and do not's for the upcoming monsoon season to be able to beat the weather changes more smartly. Such campaigns, along with organ donation updates and self-promotion, have enabled Fortis to get more than 2.6K followers on twitter. The same photos and posts as on facebook are also posted on twitter as well. The likes and shares for these posts are on average 22 in number. However, Twitter is also about real time feed and hence, immediate help and requirement for blood are tweeted for a quicker response. Since, 2009, Fortis has shared 2164 photos and videos. On twitter, as of June, 2016 there has been 7461 tweets, 1710 likes and 57,000 followers.

The Apollo Hospitals page on facebook has been liked by 2,17,6007 people so far. (June, 2016). The study reveals that there is a post every single day. The posts are photos of the latest equipment acquired and how it contributes to solve complex surgeries. The post could also talk about the health benefits of consuming milk or green tea. Surprisingly, the number of likes for understanding health benefits of milk is much higher than the discussion of the acquisition details of the latest machine and its benefits and impact (the number of likes are less than 100 in this case.). However people's comments for such posts are very minimal. The page is also used by some patients and others as a place to put up their grievances and dissatisfaction. Immediate solving of the dissatisfaction can be converted to happy and loyal customers. This healthcare provider is on Twitter since 2009. Just like Fortis healthcare, similar posts are made on Twitter and Facebook. It has in all 31,100 tweets, 610 likes and 90,600 followers.

On the contrary, the pioneer in healthcare on social media, Mayo Clinic, has 870, 879 likes on its facebookpage. The number of shares for their posts on the facebook page is higher than Apollo and Fortis healthcare. Mayo Clinic has been on twitter since 2008. The total number of tweets so far are 30, 700 tweets with 1676 likes and 1.29 million followers. The information shared by this healthcare provider is done through detailed and elaborative videos. Animated videos are also used. Mayo Clinic posts reverberates a positive feeling of happiness through the mention of the latest posts of recovery of patients, programs arranged for them celebrating their birthdays or other major festivities and conferences.

On Instagram- My search for Healthcare led me to some important healthcare posts by a.) Academy of surgeons - a professional content sharing site (here injured legs, ligaments, profusely bleeding and badly damaged body parts were shown for their professional friends.) and b.) Medical pictures where they are pictorial representation of medical issues and hence are shared in general for all.

The social media active companies like Fortis healthcare is still groping its way on Instagram, an upcoming platform in India. There is no post on this account yet. The Apollo Hospitals socially active healthcare providers on Facebook and Twitter has only 3 posts to date (June, 2016), No. of Followers was 1,565. Mayo Clinic on the other hand, the most active healthcare institute on social media has already made about 129posts (as on 29 June, 2016) and has 15,600 followers.Mayo Clinic brings a very positive vibe about the healthcare organization where they post pictures of the latest facilities, new machinery, paramedic teams, and children celebrating on the hospital campus, seminars or talks conducted on the campus.

Fortis Healthcare, is also splashed across you tube which throws up more than 15,300 results and has similar content as on facebook and twitter.Apollo Hospitals on you tube comes up with 2,030 results. Besides the regular content sharing, also showcases their doctors and his friends and colleagues speak

about him to bring the picture of a successful doctor and person both in his professional and domestic life besides the professional achievements.
Mayo Clinic on the other hand throws 9,08,000 results on search. It gives information on a variety of topics and also gives solutions to day to day problems for eg. A video demonstrating the correct way to remove a tick(a bug/insect) from your body without side effects and how to dispose it is narrated by a doctor.

Table 1 below compares the social media presence of the national and international healthcare providers:

Table 1

	Facebook (no. of likes)	Twitter (no. of tweets/ no. of likes/ no. of followers)	Instagram (no. of Posts/ no. of followers)	You Tube (no. of results/posts)
Fortis Healthcare	894,162	7461 / 1710 / 57,000	00 / 12	15,300
The Apollo Hospital	2,17,6007	31,100 / 610/ 90,600	03/ 1,565	2,030
Mayo Clinic	870, 879	30, 700 / 1676 / 1.29 m	129 / 15,600	9,08,000

7. MANAGERIAL IMPLICATIONS

Social media is being used by some major healthcare operators on popular SNS like facebook, twitter and you tube. Though healthcare is slow to adapt to social media, the number of articles on healthcare has increased. The campaigns conducted by the healthcare providers to create awareness have a better success rate and has an emotional connect with the people. This can be better understood with the case at the cardiac care in India, 'Asian Hearts Institute' which had launched a Fit2Run campaign.It highlighted the normal condition of the people after receiving treatment at the hospital. This brought forward personal comments from the participants and increased the brand visibility and also helped in creating brand reputation for the healthcare provider. The healthcare providers in order to reach out to all types of people with different requirements post their success stories in various ways on the social media. In another case,Rartian Bay Medical Centre, New Jersey, performed a successful knee surgery. The details of the surgery was posted on twitter, for information and the video of the surgery was uploaded on you tube with the aim of educating medical students explaining the minute details related to the surgery.Besides the professional education, it is also a popular platform for professional networking, for patient care where the patient are given access to a platform called web view which facilitates the current patients to interact with their doctors for doubt clearing or prescription refills. Social media also stands contributory to have been able to spread awareness and health related information much faster and to a large number of people to facilitate progress. One can therefore see how social media can act as a powerful tool to educate people and advice on public health issues. During disasters, the public health organizations use the keyword content on Twitter and other social networks along with the manual and other location tracking technologies to respond to public cries for help and also to monitor and share outbreaks. During natural disasters, public health organization like Red Cross, track twitter to gather information about the worst hit areas and respond accordingly to the

needs. Hospitals also monitor citizen- report blogs for information on mass causality events. This kind of use actually focuses the need for real time feed to cope with natural disaster and public health emergencies through better preparedness for responses. The widespread use of social media sites provides greater effect on public health behaviour. This can be better understood from the example- Facebook decided to allow users to post their organ-donor status in their profile. People generally get influenced by friends, family and friends of friends. Donate Life America noted this trait and how the online state organ registry went up by 23-fold in pledging for organ –donor.

The flip side of this brand visibility and reputation is that it becomes an open platform for people to share grievances and may choose it as a complaint register about facilities and badmouth about the services. Hence the healthcare providers are open to getting dents in their clean image and reputation. The healthcare providers and professionals are at risk of damaging their professional image if unprofessional or sub standard content is posted. Content on social media is an image of the personal values, personality and priorities and these create a lasting image of the professionals and the healthcare providers. In the process of sharing the healthcare providers may also stand the risk of violation of HIPAA[7]and state privacy laws of the patient bound physicians are also restricted in giving away detailed prescriptions and are advised to general approach in order to avoid legal issues.Due to these privacy laws, physicians are expected to maintain their privacy settings strictly and even if they have friended a patient, they should be aware and know his patient –doctor relationship boundary in case of the personal medical discussion on social media, even if the discussion had beeninitiated by the patient. Another major concern to the healthcare professionals is the revoking of their licenses in case of misuse of social media, breaches of patient privacy and for misrepresentation of credentials.Similarly, legal cases should never be discussed on social media as a number of constitutional rights may become applicable and the professionals may be exposed to lawsuits.

Digital Maturity: Categorizing the level of responses

The slow changes observed in the healthcare deliveries raises a question on the readiness of the healthcare organizations to adapt this revolutionary change in terms of two main factors: 1) intensity of the digital initiatives taken and 2) the intensity measuresby transformation management (Transformation management intensity discusses the capability of the senior managers to drive these changes in the organization). These two factors on the X and Y axis respectively, results in segmentation explaining the level of digital maturity as given below:

Figure: 2

		DIGITAL INITIATIVES	
		High	Low
TRANSFORMATION	High	**Digirati**	**Conservatives**

[7]HIPAA provides the federal privacy standards for the protection of the patient information to be followed by patient by covered entities such as health care professionals, hospitals and health plans.

	Low	**Fashionistas**	**Beginners**

Source: Digital maturity in healthcare: CapGemini consulting

The resulting four segmentation classes are described as:
a). Digirati, the first class has highly digital-literate organizations which are high on both digital initiatives and culture and have a strong vision to accomplish it. The second class is of
b). Fashionistas: have high digital intensity and lower transformational management intensity. The third class c.) Conservatives haslow digital intensity or low digital initiatives and low digital vision but high transformational management intensity.The fourth class d.) Beginners are those organizations with weak or low digital initiativesandlow transformational management intensity. The senior management fail to understand the importance of digital initiatives.[8]

The above classification of divisions is clear indicative that the health care providers especially hospitals fall under the digirati class, this organization stands apart because of its usage of social media and other digital mediums like mobile phones to facilitate personalized care.

This is a clear indication that the healthcare providers especially hospitals are capable of accomplishing their social media goals in comparison to its other stakeholders like the clinicians, professionals, colleges and ministries of health.

8. CONCLUSION

The internet has come a long way where earlier in 1990's static web pages created was the norm. This gave way to interaction with the users, engaging and exchanging notes or information as desired. This environment thereby slowly became dynamic and collaborative. The people are already hooked to the social media sites and therefore taking benefit of their presence, healthcare providers can engage people for better visibility, brand building and reputation management. Though the platforms are only a decade old, they are already treated as important grounds for researching content and user behaviour. It has also become an education tool for the researchers in the field of public health, health communication and in human as well as veterinary medicine.

Table 2:Categorical definitions of social media

Service type	Definition	Example
Blog	Short for "web log": a blog is an easy-to-publish website where bloggers (authors of blogs) post information and essays in sequential order	WordPress, Blogger
Microblog	A tiny blog service that allows networks of users to send short updates to each other in less than 140 characters. Microblogs are considered a platform for information dissemination, social networking, and real-time	Twitter, Identi

[8] Report by Cap Gemini Consulting titled, 'The Digital Health of Healthcare'

Service type	Definition	Example
	communication	
Social networking site	A social networking site is an online service, platform, or site that focuses on building and visualizing social networks or social relations among people, who, for example, share interests and/or activities. A social network service essentially consists of a representation of each user (often a profile), their social links, and a variety of additional services	Facebook, MySpace
Professional networking site	A professional networking site is a type of social network service that is focused solely on interactions and relationships related to business or a person's professional career	LinkedIn, Sermo, Asklepios, Ozmosis, Drs Hangout, Doc2Doc
Thematic networking sites	Social networking sites centered on a particular theme; for example disaster response, nursing, etc. These share many aspects of, and operate as a community of practice.	Telehelp, Innocentive, 23andMe, PatientsLikeMeCure Together
Wiki	Wikis are used to denote communal websites where content can be quickly and easily edited. Wikis support collaboration and information sharing; feature multimedia, such as video, slides, photographs; and allow anyone to edit or are password protected	Wikipedia, Fluwiki
Mashups	A website that combines data and functionality from two or more services to create a new, value-added, service	HealthMap, Google FluTrends
Collaborative filtering sites	A website where information is filtered or collected according to patterns. Techniques involving collaboration among multiple agents, viewpoints, and data sources are often used. These agents engage through a variety of sites, through a process called crowdsourcing, where the crowds join forces for a common purpose	Digg, Delicious
Media sharing sites	A hosting service that allows individuals to upload and create galleries of photos, videos, and other digital media (eg, slide presentations). The host will then store them on a server and make them either publicly or privately available.	SlideShare, YouTube, Flickr

Source: Social Media: A Review and Tutorial of Applications in Medicine and Health Care, Journal of Medical Internet Research

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FRAMEWORK OF ONLINE MEDICAL RETAILING IN INDIA: ISSUES & CHALLENGES

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Abstract

The Pharmaceutical industry of India ranks 3rd in terms of volume and 14th in terms of value. It's an $18 billion market set to grow to $55 billion by 2020. With this there is growth even in online pharmacies business. According to start-up data tracker Tracxn, so far, the sector has attracted $92.6 million funding with over $70 million coming only in 2015. As many as 60 online pharmacy delivery startups have thrived over the past two years in India. With rapid increase in online consumer base and rising spends on healthcare, online medical retailing is likely to grow in India. The major issue hindering growth of the sector is absence of clear guidelines and rules. At present, online pharmacies are relying on various interpretations of the Drug and Cosmetics Act 1940, Drugs and Cosmetic Rules 1945 and the Information Technology Act, 2000 to conduct business. This paper examines framework of online medical retailing in India and in other developed markets and suggests the appropriate actions for policymakers and online medical retailers in India. The paper also enlists pros & cons and future scope of online medical retailing in India.

Keywords: Online medical retailing, E-Pharmacy, online pharmacy, internet pharmacy, mail-order pharmacy

1. INTRODUCTION

Online medical retailing is a concept in which a pharmacy operates over the internet and sends medicines to customers through the mail or shipping companies. Through this patients will receive prescription based medicines directly to their home after buying them online. It's a great convenience for medications which are taken on an ongoing basis, such as those used to treat chronic conditions like high blood pressure or diabetes.

Before internet there were Mail-order Pharmacies present in America since late 1800s. Later, the mail order business transformed into first Internet-based pharmacy called "soma.com" in January 1999. The Internet has facilitated a major proliferation of mail-order pharmacy operations. Once the online pharmacies began operating in the mid to late 1990s, they quickly became a subject of concern for federal regulators and Congress due to dangerous and illicit practices.Drugstore.com, which launched its website in 1999, was considered a first-mover in the industry and an example of a safe online pharmacy without a bricks-and-mortar presence. It required a valid prescription and dispensed medication from a licensed pharmacy.Since then, most major chain pharmacies are doing business online by taking new and refill prescription orders, and mailing them across the country.

The number of online pharmacies currently present cannot be exactly estimated, however, based on a search, around 3000 online pharmacies were found, and half of them were based in the USA and 19% in UK and the balance in other countries like India, Canada, etc. In another finding, B-2-B companies also offered online pharmaceuticals of which 19% are from India.

In India Online availability of prescription medication has been discussed in a big way lately. Online pharma space currently has well-heeled players like Apollo Pharmacy, 1.MG, formerly Healthkart Plus, PM Healthcare and few others. Netmeds.com, the first-to-market pan-India, fully licensed and compliant E-pharmacies, is a recent entrant in the space.

The total revenue generated by the online sales of Healthcare products in India was INR 5,075.9 million in FY'2015 which has increased from INR 771.0 million in FY'2012 at a CAGR of 87.4 during the period FY'2012-FY'2015. The Online healthcare products market has showcased a remarkable growth during the span of last five years on the grounds of expansion in product range as well as surge in online market places. In line with the Industry revenues, the average order size has also widely enhanced which has been registered at INR 1,762.0 during FY'2015. India's online healthcare products market is at a very nascent stage and is growing year on year as people have switched their preferences towards shopping online. The industry is likely to be driven by surge in internet penetration, rising personal disposable income, lower prices relative to brick and mortar stores, stupendous growth of Indian online retail market and a large number of online players entering the online healthcare product segment. The Indian Online Healthcare Product Industry is projected to grow rapidly in the future and form a major part of the Indian E-commerce industry by FY'2020. With new companies coming up in the segment, the product range offered by the companies will increase different product options for customers.

1.1 Types of Online Pharmacies

Online pharmacies can be divided into different types according to services provided by them:

1. Pharmacies that provide medicine based on a prescription from an in-person examination with the doctor.
2. Pharmacies that ask patients to fill a questionnaire online and provide medicines according to them.
3. Pharmacies that offer online consultation with help of physicians, who review a patient's self-reported medical history and then write a prescription if deemed appropriate.
4. Pharmacies that do not require prescription to sell medicines. Such pharmacies are not trustworthy and ordering from such sites can be risky for patient's health.

2. REGULATORY FRAMEWORK IN INDIA

At present there are no dedicated laws for online medical retailing in India. The laws for Indian pharmaceutical industry are defined by Drug and Cosmetics Act 1940, Drugs and Cosmetic Rules 1945, Pharmacy Act 1948 and Indian Medical Act 1956. While the laws related to Internet are defined under the Information Technology Act, 2000. The Drugs and Cosmetics Act, 1940, and the Drugs and Cosmetics Rules, 1945 contains provisions for classification of drugs under given schedules and there are guidelines for the storage, sale, display and prescription of each schedule. There are clear guidelines on the sale of Schedule H and Schedule X drugs, which are "restrictive drugs" and can be sold only on the prescription of a registered medication practitioner. Also, there are specific rules of labeling and barcoding. A company has to comply with government rules and regulations to get success with online pharmacy.
According to Mohammed Abubakr, Founder & CEO of BookMEDS, online pharmacies in India can be divided into different zones. Below, GREEN ZONE refers to activities that are legal under Indian Laws, GREY ZONE refers to activities that are uncertain under current legal system and RED ZONE refers to activities that are illegal. An online pharmacy must operate under GREEN ZONE.

a. Green Zone:

Following items are allowed as per Indian Laws:

- Medicines can be sold only by a registered pharmacy that has retail license. The pharmacy should have a registered pharmacist on payroll.

- It is mandatory for the customer to have a prescription for the medicines he/she is ordering. Over the Counter Products (OTC) can be sold without prescription.
- Orders can be taken from the customer either over the phone or internet only from the areas where the pharmacy retail license applies. For example, if the pharmacy has license which is issued by the Telangana State Government, orders can be taken over phone or internet only in Telangana State.
- All the medicines that go out for delivery has to be verified and certified by the registered pharmacist.

b. Grey Zone:

- Rules related to shipping medicines from one state of India to another aren't clear. Every state has a Drug Department that grants license for certain medicines to be sold within a state. There is a possibility that, certain medicines valid in one state might not have license in another. Hence, there is ambiguity regarding shipping of medicines from one state to another.
- There is ambiguity in the Indian law whether a pharmacy is allowed to take money prior to delivery of medicines. Certain provisions of the law mandate, money to be collected from the customer only after medicines are physically handed over to the customer.

c. Red Zone:

- Exporting medicines outside of India directly to the customers (patients) is highly regulated. There is no provision in the Indian law to recognize the prescription written by the foreign doctor. (Note: India is one of the largest exporter of medicines but these exports happen to authorized agencies with the approval from the Drug departments of respective countries)
- Selling Schedule X medicines to customer without prescription is a crime. Proper customer record including name of the patient, doctor and address needs to be maintained for every Schedule H and Schedule X medicines sold by the pharmacy.
- Selling medicines to minors (under age 18).
- Selling banned drugs/medicines i.e. selling any medicine that is not approved by the State's Drug Department.
- Selling medicines at cost higher than MRP unless customer is upfront told about delivery or service charges.

3. CURRENT SCENARIO OF ONLINE MEDICAL RETAILING IN INDIA

On 1st May 2015 the drug regulator in Maharashtra filed a police complaint against online marketplaceSnapdeal for listing prescription medicine on its site. Also after analysing a series of representations received from individuals, organizations, trade bodies etc. Office of Drugs Controller General has revealed that serious concerns have been raised on issues impacting public health such as gross violation of the provisions under Drugs and Cosmetic Act and Rules, endangering human lives, rendering Pharma companies vigilance machinery ineffective, rendering drugs recall impossible, compromise of storage conditions, danger of online sale of controlled substance, encouragement of drug addiction among youth, etc.

The Drugs Consultative Committee, a statutory body under Drugs and Cosmetics Act, 1940, in its 48th meeting, examined the issue of sale of medicines over internet and constituted a sub-committee lead byDr. Harshadeep Kamble, Commissioner, FDA, Maharashtra, to examine issue of such sales via internet, its impact on public health and also look into the provisions of Drugs and Cosmetics Act, 1940 and Rules, 1945.

The sub-committee is currently in the process of consultation with all the stakeholders. In the above background currently there is strict watch put on online sale of medicines in violation of the Drugs and Cosmetics Act and Rules thereunder, in the interest of public health.

Here is list of some of the Indian websites which are offering prescription Drugs as well as OTC medicines:

- mChemist.com
- Netmeds.com
- Merapharmacy.com
- Medidart.com
- Medplusmart.com
- ApolloPharmacy.in

4. GLOBAL SCENARIO

In United States of America (USA), activities of online pharmacies are regulated by The Ryan Haight Online Pharmacy Consumer Protection Act of 2008. This act states that "No controlled substance that is a prescription drug as determined under the Federal Food, Drug, and Cosmetic Act may be delivered, distributed, or dispensed by means of the Internet without a valid prescription."Further it gives a definition for valid prescription as following: "The term *valid prescription* means a prescription that is issued for a legitimate medical purpose in the usual course of professional practice by - (i) a practitioner who has conducted at least 1 in-person medical evaluation of the patient; or (ii) a covering practitioner."

The National Association of Boards of Pharmacy (NABP) is an independent, international and impartial association that assists its member boards and jurisdictions for the purpose of protecting the public health.NABP's member boards of pharmacy are grouped into eight districts that includes all 50 United States, the District of Columbia, Guam, Puerto Rico, the Virgin Islands, Australia, Bahamas, nine Canadian provinces, and New Zealand.

Bearing in mind the risks that fraud online pharmacies illegally selling prescription drugsimpose on consumers,there are two verification programs recognized by the NABP (National Association of Boards of Pharmacy). 1) VIPPS 2) LegitScript

1) VIPPS - The Verified Internet Pharmacy Practice Sites (VIPPS) program accredits online pharmacies that dispense prescription drugs. VIPPS requires an Internet pharmacy to comply with the licensing and survey requirements of its state and each state to which it dispenses pharmaceuticals. VIPPS-accredited pharmacies meet nationally endorsed standards of pharmacy practice, and they demonstrate compliance with standards of privacy and authentication and security of prescriptions, adhere to quality assurance policy, and provide meaningful consultation between patients and pharmacists. With thousands of rogue sites illegally selling prescription drugs, VIPPS offers a way for legitimate sites to set themselves apart. VIPPS pharmacy sites display the VIPPS Seal on their websites. The Seal is a key benchmark for consumers to measure the quality of a pharmacy's practice, and by clicking on the VIPPS Seal, they are able to access verified information about the pharmacy.

2) LegitScript –Its website working similarly to the VIPPS program. It accredits Internet pharmacy. Pharmacies with the LegitScript seal of approval have agreed to adhere to laws and regulations of the Boards of Pharmacy, Drug Enforcement Administration (DEA) and Food and Drug Administration (FDA). As on April 2016, the home page of LegitScript

announces that there are 35,589 active Internet pharmacies, of which 260 (0.7%) are legitimate, 2080 (5.8%) are potentially legitimateand 33,249 (93.4%) are not legitimate.

The US regulatory structure creates conflict between individual states and the federal government. While individual US states can regulate pharmacies, pharmacists and medical practice, statelegislators have limited powers toregulate activities which impact on interstate commerce. The Commerce Clause of the United States Constitution,gives the federal government the power to regulate interstate trade, and therefore makes any state legislation which affects interstate commerce unconstitutional. This creates difficulty for US States to effectively control some activities related to Internet Pharmacies.

In the US, FDA allows personal importation under very strict conditions. Under the FDA's 'personalimportation' policy, a patient or his doctor is allowed to import a small amount of an unapproved drug into the US, from another country, under certain conditions. The conditions are that:

- The patient must have a serious condition for which an effective treatment is not available in the US;
- The drug must not present an unreasonable risk;
- The drug must not have been commercially promoted to US residents;
- The patient seeking to import the product must affirm in writing that it is for his/her own use (not more than 3months supply);
- The patient must give the name and address of the US doctor responsible for treatment with the unapproved drug or show evidence that the unapproved drug is used to continue a treatment started in a foreign country.

In United Kingdom (UK), the internet pharmacies need to register themselves with General Pharmaceutical Council (GPhC) and online doctors should be GMC registered and as such comply with the Good Medical Practice Guidelines. Internet pharmacies need to prove that they will comply with the distance-selling rules in addition to the regulations governing all pharmacies to secure an **NHS** (National Health Service) contract. They can also provide patients with enhanced and advanced services on the premises, but cannot provide essential services on, or in the vicinity of, the premises.From 1 July 2015 anyone in the UK selling medicines to the public via a website needs to be registered with the Medicines and Healthcare products Regulatory Agency (MHRA) and to be on the MHRA's list of UK registered online retail sellers.

The registered pharmacies have to display the GPhC voluntary internet pharmacy logo and the EU common logo. The EU common logo is a legal requirement across Europe that applies to all retailers of medicines, including general sales list medicines like paracetamol. On the other hand, the GPhC internet pharmacy logo is a voluntary scheme that applies only to registered pharmacies in Great Britain. Anybody buying medicines online can check if the website is legitimately registered by clicking on the logo which will take them through to a list of approved sellers on the MHRA website.

An online pharmacy must receive a legally valid prescription before dispensing medicines. This means patients need either a paper prescription or an electronic prescription via the Electronic Prescription Service (EPS). EPSlets a GP practice send patient's prescription electronically to the place he/she chooses to get their medication or appliance from – without the need for paper in some cases. For this the patient has to choose or nominate a place to receive the electronic prescriptions. This could be a pharmacy, dispensing appliance contractor or a GP practice if patients are entitled to collect medication from there. Nomination works in a similar way to a prescription collection service where the pharmacy collects the prescription directly instead of having the patient collect it from the GP practice.

The UK import policies allows individuals to import medicinal products (except controlled drugs)for personal or family use(MA, Section 13) without needing authorization ora license. Controlled drugs are listed in the Misuse of Drugs Act 1971 (as amended) and includes some prescription drugs. However, not all prescription drugs are on the controlled drugs list.

5. PROPOSED REGULATORY FRAMEWORK FOR INDIA

Online sale of prescribed medicine can create several health risks for the patients if safety measures are not taken properly. Hence it is advisable for the government to create a robust regulatory framework which online medical retailers should follow to curb the misuse of e-commerce. The authors here suggest some of the guidelines that can be followed by the regulators.

1. In India, schedule X and schedule H drugs are prescription based drugs which can only be sold based on valid prescription by a doctor. List of such drugs with their generic names should be listed on regulator's website for the ready reference of consumers.
2. The prescription based drugs should only be sold by online pharmacies on basis of either paper or electronic prescription. The paper subscription can either be mailed or a scan copy of the same can be uploaded online.
3. It should be made mandatory for online pharmacies to register themselves withrespective state government(s) in which they wish to operate. List of such registered online pharmacies should be displayed on regulator's website.
4. In case of marketplace, it should be ensured that they deal only with registered pharmacies having qualified pharmacist. List of pharmacies which are having tie-up with marketplace should be approved by regulator.
5. A common logo/trademark should be developeda requirement to be displayed on the website of the approved pharmacies. For example, there is GPhC voluntary internet pharmacy logo and the EU common logo in UK & VIPPS Seal in USA. Consumer shall be in position to verify the list of such authentic online pharmacies on the regulator's website.
6. Only those online pharmacies that has a registered pharmacist working with them should be allowed to sell medicines through online marketplace.
7. Online Pharmacies should be allowed to have tie-up with doctors where doctors can directly upload the prescription and patients will get medicines according to it. The doctor should be certified by Medical Council of India and should have examined patient face-to-face at least once.
8. Regulators should continuously monitor online pharmacies to cease the sale of illegal drugs online.
9. Some type of identity proofs, like Voter Card / Adhar Card / PAN Card/ Passport shall be used to authenticate the identity proof of the online consumer and sell of restricted medicines can be tracked or quota limit per user can be set to avoid unnecessary use of restricted drugs.

6. PROS OF ONLINE MEDICAL RETAILING

1. Online pharmacies provides a convenient platform for aged, disabled people or people suffering from severe illness. It is also less time consuming hence prove useful for working people.
2. People having chronic diseases like diabetes, hypertension or heart diseases needs to buy medicines on regular basis. Online pharmacies can make arrangements to provide them medicines on regular interval as per their requirements.
3. It can provide hassle-free way to buy medicines to people living in rural areas where medicines are not easily available through for traditional retailers.
4. It is easy to keep a track of medicines sold and details of patients, henceself-medication can be prevented. Also history of medicines consumed by patients can be easily available.

5. Patients can check details regarding medicines like manufacturing company, date, contents and price before buying it online. This will make whole process of buying more transparent to consumers.
6. Patients can find various cheaper alternatives equivalent to their medicine and can discuss them with their doctors.

7. CONS OF ONLINE MEDICAL RETAILING

1. The main issue with online medical retailing is the laws related to pharmaceutical industry are quite old (Drug and Cosmetics Act 1940, Drugs and Cosmetic Rules 1945, Pharmacy Act 1948 and Indian Medical Act 1956). They do not cover selling of drugs on internet. Hence there are many rogue online pharmacies selling illegal medicines.
2. Patients may get confused between brands having similar names and may purchase wrong medicine without looking at doctor's prescription.
3. Some medicines require special storage and transport facilities which may cost extra for the online pharmacies. It might not be possible to sell it with a door to door model such as online grocery retailing, due to special type of storage conditions required to store the medicines.
4. It will take time for delivery of medicines so customers cannot order medicines which are required on urgent basis. Some medicines which are required on urgent basis after consulting to the doctor cannot be purchased through online mode. Moreover, majority of the hospitals have their own Pharmacies in the hospitals, which provides the medicines prescribed by the doctors in their hospital itself. Sometimes it's very difficult for patient to find such medicines in other drug stores.
5. Online payment fraud are also hindering the growth of e-commerce as an industry.
6. If incorrect medicines are delivered then whole process of returning and getting new medicines can be time consuming.
7. For emergency diseases like cough, cold, fever, blood pressure, etc. sometimes it's next to impossible for customers to wait for the home delivery of medicines.

8. CONCLUSION

As a researcher we strongly believe that if fresh vegetables and fruits can be delivered successfully though online mode, it's also possible to deliver the medicines at doorsteps. In near future, there will come a day, when, such type of hybrid sites will appear which will collect order of your monthly basket; including your daily intake of mineral water, milk, veggies, fruits, medicines, shampoo, etc. and the company shall deliver the same throughout the month as per the schedule given in the monthly basket order. Moreover, researchers strongly believe that online medical retailing industry in India has a huge potential for growth in coming years. Some critics claim that online medical retailing will cause a threat to the neighborhood drug stores, but as a researcher, we are of the opinion that looking at the nature of this industry, actually it will be a win win situation for both. Local neighborhood drug stores will serve as a C&F agents of online drug retailers as some of the medicines requires special storage and transport conditions. Recently, due to innovations in the online cab booking services the job of private cabs have actually improved, they can operate their business remotely. In India, we have also learned that some e-commerce companies are tying up with city based cab services to deliver the mobiles in 3 hours after receiving the order online. We hope that in future city cab services might also be used to provide urgent delivery of medicines at customer's door-step. Logistics innovations will really help sustain the online medical industry. We strongly recommend that all stakeholders such as online retailers, state governments, national governments, hospitals, doctors, national and local pharmacy boards, etc. have to work in hand to hand to solve the legal complexities present in the existing model. Certain innovations such as EPS (Electronic Prescription Services) available in UK can be implemented in Indian

environment to check the authenticity of the prescription. But it might create a risk of revenue sharing with doctors based on their prescription of suggested medicines. Whereas for Pharma Companies it will work as a robust model, because now they don't have to pile up their inventories in local neighborhood drug stores, instead doctors will send prescriptions directly through EPS and online marketplace shall deliver the course of medicines in 24 hours at the customers door steps. It will reduce the warehouse / inventory / transportations costs of medicines. We are already aware about the online hotel booking models such as oyorooms.com, trivago.in, makemytrip.com, goibibo.com, etc. all such retailers tie up with city based hotels and provide online bookings of the same on their portal. This type of association can be created between doctors and online pharma retailers, where doctors can upload the patient's details once and can prescribe the medicines after face to face examination of patient, later the repeat course of medicines can be recommended by doctors after hearing from patients through online / telephone / physical interaction. It will require a lot of efforts from all stake holders to develop a holistic and robust framework of online medical retailing in India in coming years.

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EMERGING ISSUES OF CYBER SECURITY IN E-COMMERCE

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Abstract

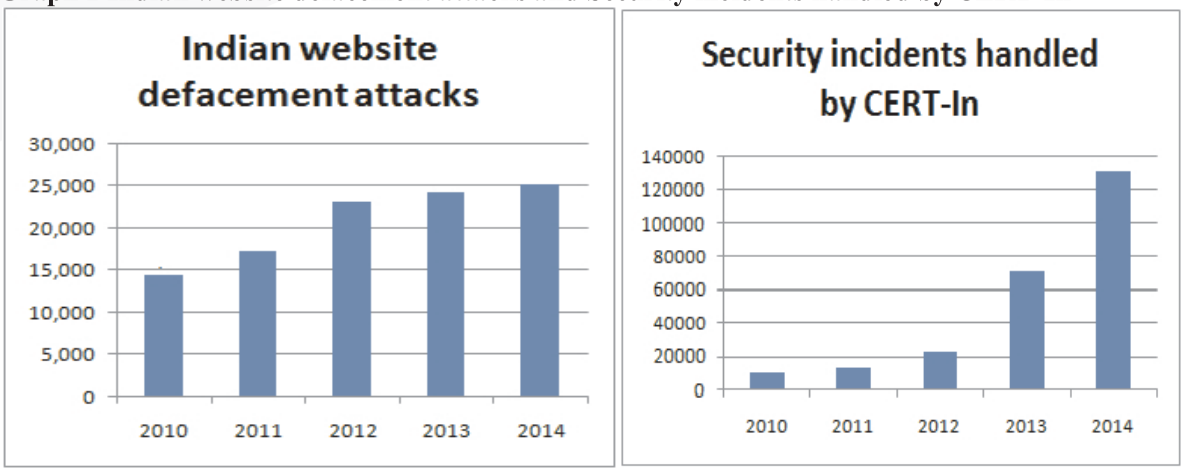
In today's digital environment of hyperinterconnected world, a broad spectrum of activities executed via the various available IoT devices using internet. The rapid evolution of online and mobile channels has carved out new markets with lots of transactions between businesses and their consumers by sharing information contains sensitive information such as banking records or health care. In 21st centuries, every day billions of sensitive and personal information transactions take place on the web which act as individual's digital footprint. Sometimes, these interconnected and anonymous nature of spectrum channels leads towards the development of malicious threats which act as a disruption to ecommerce payment processes and systems. These types of threats directly effects the ecommerce industry and retail services firms with their people including customers. Worldwide, regulators concerning these threats as e-crime and digital fraud threats as they are continue to evolve rapidly with increasingly sophisticated techniques to target vulnerability in people, processes and technologies.
In this paper, we attempt to showcase the current state of cyber security in e-commerce and we broadly discuss about the effective mechanism of security for crucial information , personal privacy and data protection.

Key Words: Cyber threats, Internet fraud,e-crime, e-contract, cyberspace security, e-consumer protection.

1. INTRODUCTION

With the advancement of technology in each field, E-commerce and its applications becoming popular day by day as they are acting as a virtual platform. Theseplatforms continue to emerge in order to facilitate trustworthy transactional relationships between buyers and sellers. This relationship is executing the business through information and communication technologies. The main advantage of E-commerce is it reduce cost, have large market scope, easy interaction with different clients etc. However, internet act as a main role for the e-commerce which have lots of vulnerability used by the attackers for profit gain and control known as Cyber-attacks on E-commerce. As the sophistication of the e-commerce environment increases, the risks associated with transacting online also increase which posses a challenge for customers to freely transact online. From the beginning of the E-commerce, security is the major concern and provided at different layers accordingly. But, with time cyber-attacks continue to escalate in frequency, severity and impact. Prevention and detection methods have proved largely ineffective against the increasingly adept assaults, and many organizations don't know what to do, or don't have the resources to combat today's highly skilled and aggressive cybercriminals.[1]
The agenda of committing cybercrimes to intercept or modify the information, degrade performance of assets, gain unauthorized access to systems and maintaining it for future purpose, get information for personal gain or bring harm to an organization.

Graph 1 Indian website defacement attacks and Security incidents handled by CERT-In



Source:CERT-In

E-Commerce applications are categorized into different types:
B2B - Business to Business
B2C- Business to Consumer
C2C- Consumer to Consumer
B2E- Business to Employee
C2B - Consumer to Business
G2G - Government to Government

2. BIGGEST DATA BREACHES OF E -COMMERCE COMPANIES

The issue of cyber attacks on e-commerce are not new but with the series of super-sized data breaches that have taken place since the early 2000s. Huge number of private corporations, acedemic institutions and government agencies all around the globe are the victim of cyberattacks.[2]
Table: 1 Biggest data breaches on e-commerce companies

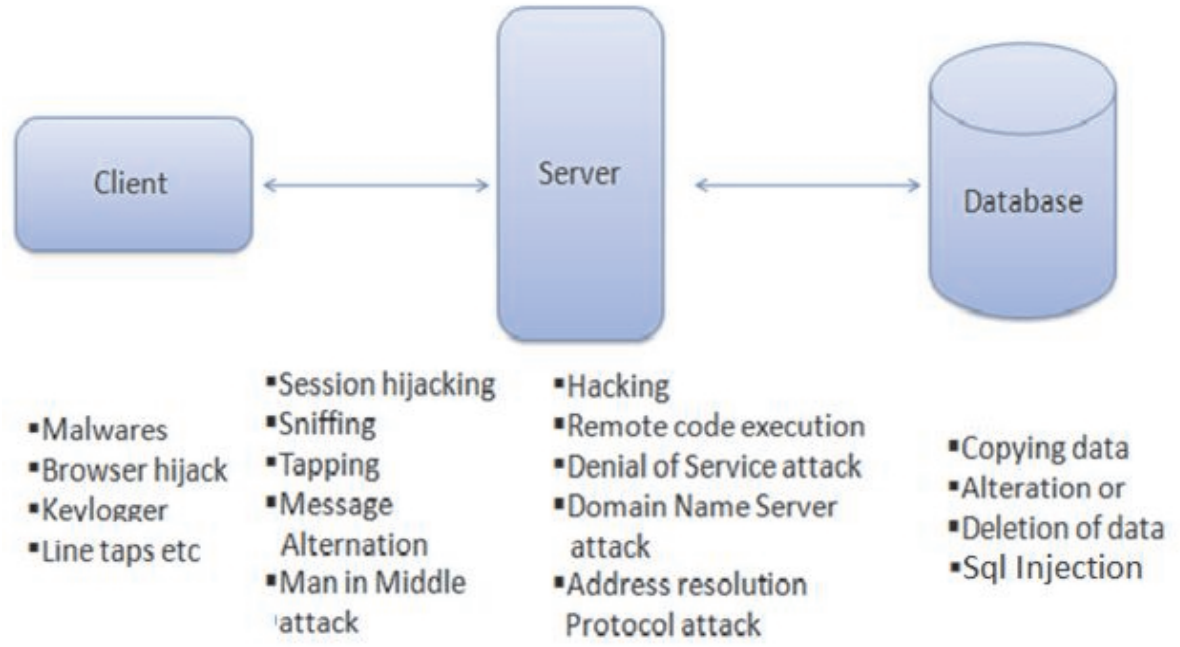
S. No.	Organisation	Sector	Year	Record Stolen/ debit or credit cards
1	The Home Depot	Government	2014	56 million
2	Target	Retailer	2013	70 million
3	JP Morgan Chase	Financial/ Bank	2014	76 million
4	Sony PSN	Playstation	2011	77 million
5	Anthem	Health	2015	80 million
6	TJX	Retailer	2003	94 million
7	Heartland	Online Payment processing	2006-08	130 million
8	eBay	e-commerce gaint	2014	145 million
9	American business hack	Companies, banks, Nasdaq	2005-12	160 million

3. SECURITY THREATS IN E -COMMERCE

There are several types of security issues in any e-commerce type application:

1. Malicious code / Malware :
2. Unwanted or fake programs (browser hijacker, adware, spyware etc.)
3. Sniffing / Phishing:

4. Session hijacking
5. Man in middle attack
6. Remote code execution
7. Denial of Service / Distributed Denial of Service attack
8. Domain Name Server attack
9. Address Resolution Protocol attack
10. Sql Injection
11. Deletion / Alteration of data



Different types of cyber attacks

4. SECURITY LOOPHOLES IN E-COMMERCE APPLICATIONS

According to Retail & eCommmerce Security Report 2015, from SecurityScorecard R&D department,[3] large scale attacks are targeting customers credit card information. In several cases, third party vendors are used as these attacks as name brand organisations. They find out the industries are suffering from web application weaknesses from legacy systems and proliferation of malware. According to their report they studied 200 companies,collect and divide security risk data into ten categoies. Top performmers have less total issues across all ten categories than bottom performers in aggregate.

E-commerce companies uses web application technologies in large scale on large networks with many of these still having checkout processes facilitated by ColdFusion, Classic ASP and PHP etc. The attack ers well know the vulnerabilities present in these technologies which causes the cyber attacks on these ecommerce companies.

There are several factors which cause cyber attacks on legacy systems of e-commerce companies which are using outdated applications as listed below:

- Security support in form security patches for these products ends.
- Weaknesses of aged application are widely open to act as malicious .
- Vulnerable application code is often reused in development of new application
- Security patches are often not implemented as required

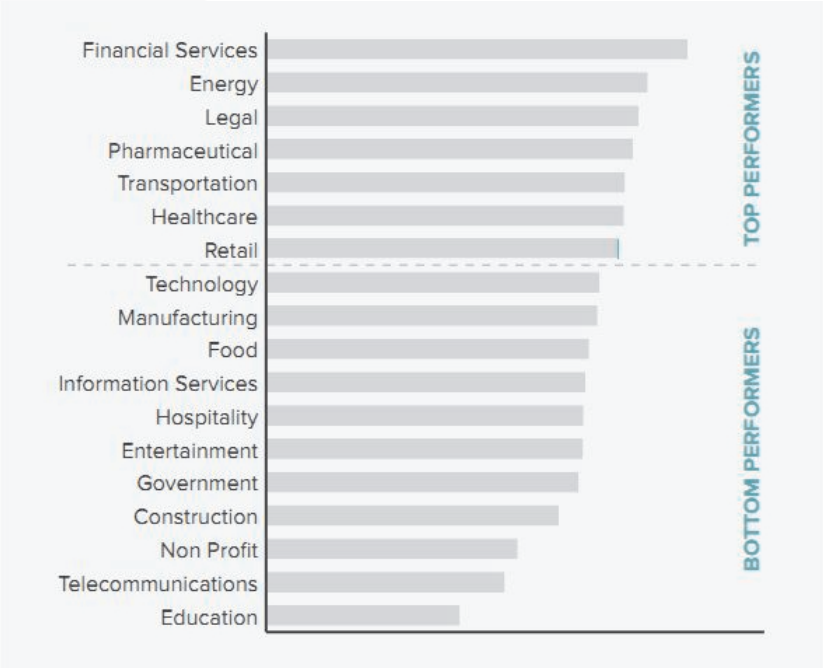


Fig 2. Various industry have web application security issues[3].

There are also or server misconfigurations presents such as:

- Use of WordPress/Joomla/Drupal which have publicly accessible admin portals.
- Maximum of plugins/themes of these portals are vulnerable
- Network administrative portals are connected to public internet
- Web application administrative portals are also connected to public internet
- They are generally vulnerable to OWASP top 10 web application vulnerabilities
- Use of unpatched web application software and host them on the public subdomain
- Default files left on server from initial installation of software packages

Common vulnerabilities found in E-commerce applications

- Unprotected Services
- Broken trust manager for SSL
- Broken hostnameverifier for SSL
- Insufficient transport layer protection
- Remote code execution through Javascript interface

5. HOW TO KEEP E-COMMERCE WEBSITE SECURE

With the advancement of technologies in mobile devices and Internet of Things, everything is hyperconnected that means more opportunities for online businesses. It also means that there are more opportunities than ever for online criminals for cyber attacks. There are some focus point which must be implemented to make secure transaction over e-commerce websites[4][5]:

- *Implement https*: HTTPS and a valid SSL certificate is very important for e-commerce sites. It ensures for secure online transaction of any type.
- *Selection of secure e-commerce platform*: Various number of e-commerce plateforms are available today is daunting . It is very important to select the safety over flash. Many e-commerce packages interface with PCI-compliant payment processors and can enforce strong password. It must have a secured checkout page and site-wide security using SSL.
- *Two factor authentication and CAPTCHA:* Use such application which discourages password guessing by features like CAPTCHA and two-factor security

- *Safe and secure web hosting:* Like secure e-commerce platform, safe and secure web hosting is equally important which integrates security features such as backups and SSL certificates. Beside it select a host which offers reliable and competent 24 hour technical support.
- *DDoS protection and mitigation:* It is the most sophisticated attack which shutdown a website by overloading it with traffic. There are DDoS mitigation services as "gatekeeper" which ensure the traffic is generated by human only not automated DDoS .
- *Use multiple layers of security:* Single solution is not enough. Redundancy is absolute key to ensuring security for e-commerce websites. Make backup of all point of entry.
  *Don't store sensitive billing information":*It is very required that none amount of customer billing information is stored in application. Even if some thing is required to keep then it must be encrypted .

6. CONCLUSION

In general, today's e-commerce businesses always strive to create the next best thing that the consumer will want but security is also a major concern which concern to be better, faster and cheaper.So, for ensuring secure e-commerce the basic first step is establishing trust and for it successfully integration of security technologies is use full. Using different advance and updated technologies can decrease the risk of cyber attacks on e-commerce.

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A SURVEY ON THE AWARENESS AS WELL AS TO KNOW THE LEVEL OF SATISFACTION OF THE ONLINE SHOPPING AMONG THE PEOPLE OF AHMADABAD CITY.

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Abstract

India is a land of religion, customs and traditions. But we Indians have moved ahead in the online shopping leaving the entire world behind. Inspite of being well known as the land of Snake charmers and blind faiths we have an approximate 100 crores internet users out of which atleast half of them are shopping online and this number is increasing tremendously. Online selling has opened up immense opportunities for business and trade. Not only that customers also get a chance to compare the product specifications and price among various brands prevailing in the market. Few more advantages that a customer gets are low price, service at the door step, product as per need and much more. There is no matter of question that we Indians have become too much workaholic, but then too we take out time for shopping. No matter the style of shopping has changed but we still have the mentality of purchasing at a cheaper rates and that too when it comes to the people of Gujarat and Ahmadabad there is no room for doubt. So here in this research paper an attempt is made to know the perception of the people of Ahmadabad towards online shopping. An attempt is made to show the factors that the people of Ahmadabad take into account while purchasing a product online. In short a primary survey is done to know the exact perception of the online shopping customers staying at Ahmadabad, Gujarat.

Key Words: India, Religion, Custom, Tradition, Brand, Online Shopping, Customer.

1. INTRODUCTION

Now a day the use of internet is not only for connecting each other, but has become the medium of transaction for the online shoppers. Online shopping has changed the way customers were shopping goods. India, where more than half of the population is young and is used to surf on internet, there has been an additional rise in number of online shoppers. Online shoppers use internet not only to buy product online, but also to compare the feature of the product with similar product available under different brands as well as to see what additional they get on purchasing from web store. Many experts having broad prospect for the online shopping. In addition to that there is an ample of opportunities with companies for reaching their existing as well as potential clients. It is the fact that more income in online shopping comes from B2B sector, but then too those online retailers who are targeting direct customers i.e. B2C should not lose hope in online market. The B2C E-commerce has been into the trend since a decade scholars and researchers of E-commerce market try to get maximum customer/consumer satisfaction as well as an improve consumer behavior in the cyberspace. Along with the development of the E-commerce market the expert of the E-commerce market study consumer behavior from various perspectives and communicate them to E-retailers.

There is a fast development in the telecommunication technology in the past few decades which has affected us in many aspects like searching information, booking tickets as well as shopping goods. In the traditional retailing world, the customers are moving forward towards the online shopping of products and services. There are many companies supporting business to business selling such as Indiamart, E bay etc. Some of them are also from B2C market i.e Amazon, Snapdeal, Shopclues etc. This has improved not only the services of the service provider but also the level of satisfaction among the consumers.

2. OBJECTIVES OF THE STUDY

The main objective of our research study is to judge the online consumer behavior, which further can be used by the E-retailers for framing strategies and designing various schemes.

1. To study the consumer awareness about the products and services those are available online.
2. To know the factors that motivates the consumer to purchase the products online.
3. To know the level of satisfaction among online shoppers.
4. To identify various problems that consumer face while shopping online.

3. HYPOTHESIS

H01:There is no significant relationship between Gender and preference to online shopping it is only by chance
H1: There is significant relationship between Gender and preference to online shopping

H02: There is no significant relationship between Occupation and preference to online shopping, it is only by chance
H2: There is significant relationship between Occupation and preference to online shopping

H03: There is no significant relationship between satisfaction Level and Motivating factor for shop online it is only by chance
H3: There is significant relationship between satisfaction Level and Motivating factor for shop online.

H04: There is no significant relationship between Category of goods and Satisfaction level from online purchase it is only by chance
H4: There is significant relationship between Category of goods and Satisfaction level from online purchase

H05: There is no significant relationship between Salary and Preference to online shopping it is only by chance.
H5: There is significant relationship between Salary and Preference to online shopping.

4. RESEARCH METHODOLOGY

4.1 Research Design

The research study aims to judge the consumer awareness and perception towards the Online Shopping. The study is carried out through a structured format of questionnaire.

4.2 Data Collection Technique

The data has been collected by both primary and secondary data. Primary data has been collected with the help of structured questionnaire by personally meeting the respondents. Secondary has been collected from the websites, focused group interviews, newsletters and journals mainly highlighting conceptual framework of online shopping.

4.3 Designing the Questionnaire

The questionnaire has been designed by considering the objectives of the study. The first part of the questionnaire includes the demographical factors of the respondents, usage of internet. The second part of the questionnaire includes the category of goods purchased online and frequency of online shopping. The third part judges the level of satisfaction among online shoppers. The fourth part looks into motivating factors and problems faced by the consumer shopping online.

4.4 Sampling Design

The sampling techniques which is used in the convenience sampling method. Convenience sampling is non probability sampling techniques where subjects are selected because of their convenient accessibility proximity to the researcher. These type of studies are very much useful for detecting the relationships among different factors.

4.5 Sample Design of the study

The sample size that is selected is 250. The respondents are selected from the Ahmadabad city which is divided into the divisions where the online delivery is possible.

5. LITERATURE REVIEW

As per Kargaonkar and wolin (1991) factors that contribute to online shopping includes social escapism, transaction based security and privacy concern, information seeking interactive control, socialization, non transactional privacy concerns and economic concern. One of the other research er named Zhouetal(2007) expressed that shopping motivation, innovativeness, perceived outcome, shopping orientation and normative beliefs are the factors contributing to online shopping. One of the study by XtraMSN (2002) concluded that the important factors to drive online shoppers to make shopping decisions include time saving, convenience, user friendly interface, price comparison, availability, abundance of information and selections. Shergill and chen (2005), Kim and Lee (2002) and Than and Grandon's (2002) identified website design characteristics as the dominant factor which influences the consumer perception towards online shopping. Ranganthan and Ganapathy (2002) found four key dimensions of online shopping namely websites and its information content, design and security as well as privacy.

According to Pooja Sardeshmukh, Akahaya Kumar Dash and Mattis Hallberg (2016) specifies that Rakuten in Japan has a very steady and concrete business model for Ecommerce which can be distinguished from the other Ecommerce competitors. They have recommended that Indian Ecommerce companies pick up some of the business model strengths like Ecommerce Merchant Counselors aka Ecommerce consultant who can help merchants adopt the e commerce model. And build trust in selling over internet, encouraging customers to use most form of electronic payment instead of cash on delivery, building an ecosystem of internet based services which customers can trust and rely on quality and on time delivery. In addition e-retailers can develop in house knowledge base and research laboratory as well as do the needful training to customers. Online retailers can benefit with some learning from Ruketan's examples and enrich their online presence and revenue.

6. DATA ANALYSIS

Table 1 Demographics and General details

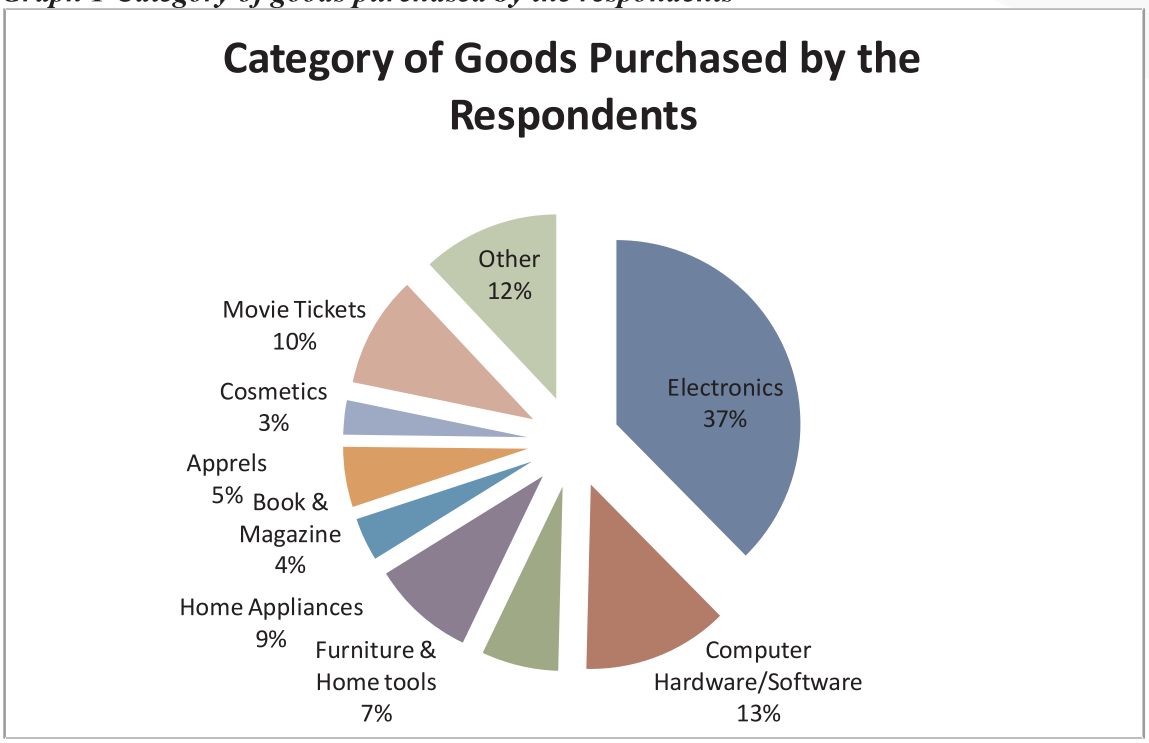
1. Gender	
Male	155
Female	95
Total	**250**
2. Age Group	
Below 18 Years	10
18 - 25 Years	102
25 - 35 Years	79
35 - 50 Years	51
Above 50 Year	8
Total	**250**
3. Educational Qualification	
Under Graduate	39
Graduation	109
Post Graduate	96
PHD Doctorate	6
Total	**250**
4. Occupation	
Student	91
Salaried Class	119
Business Class	37
Other	3
Total	**250**
5. Monthly Income	
Less Than 5000	44
6000 - 10000	59
11000 - 25000	51
26000 - 50000	77
Above 50000	19
Total	**250**
6. Usage of Internet	
YES	203
NO	47
Total	**250**
7. How long are you using Internet?	
Less Than 1 Year	16
1 - 3 Year	49
3 - 5 Year	97

5 Year and Above	41
Total	**203**
8. Where do you browse internet?	
College	35
Office	47
Home	80
Cyber Café	32
Other	9
Total	**203**

9. Kindly select your weekly usage of internet.	
Below 1 Hour	21
1 - 3 Hour	82
3 - 5 Hour	59
5 - 10 Hour	35
Above 10 Hour	6
Total	**203**
10. Select your preference towards online shopping.	
YES	147
NO	41
May Be	15
Total	**203**
11. Do you have any past experience of online Shopping?	
YES	133
NO	14
Total	**147**
12. When did you shopped online for the first time?	
In Last 6 Months	37
Between 6 Months - 1 Year	34
Before 1 Year - 3 Years	32
Before 3 Year - 5 Year	19
Before 5 Years or More	11
Total	**133**
13. How many times did you shopped online in last 1 Year?	
Only Once	6
2 -4 times	56
4 - 8 times	40
More than 8 times	31
Total	**133**

Source: Survey Data

Graph 1 Category of goods purchased by the respondents

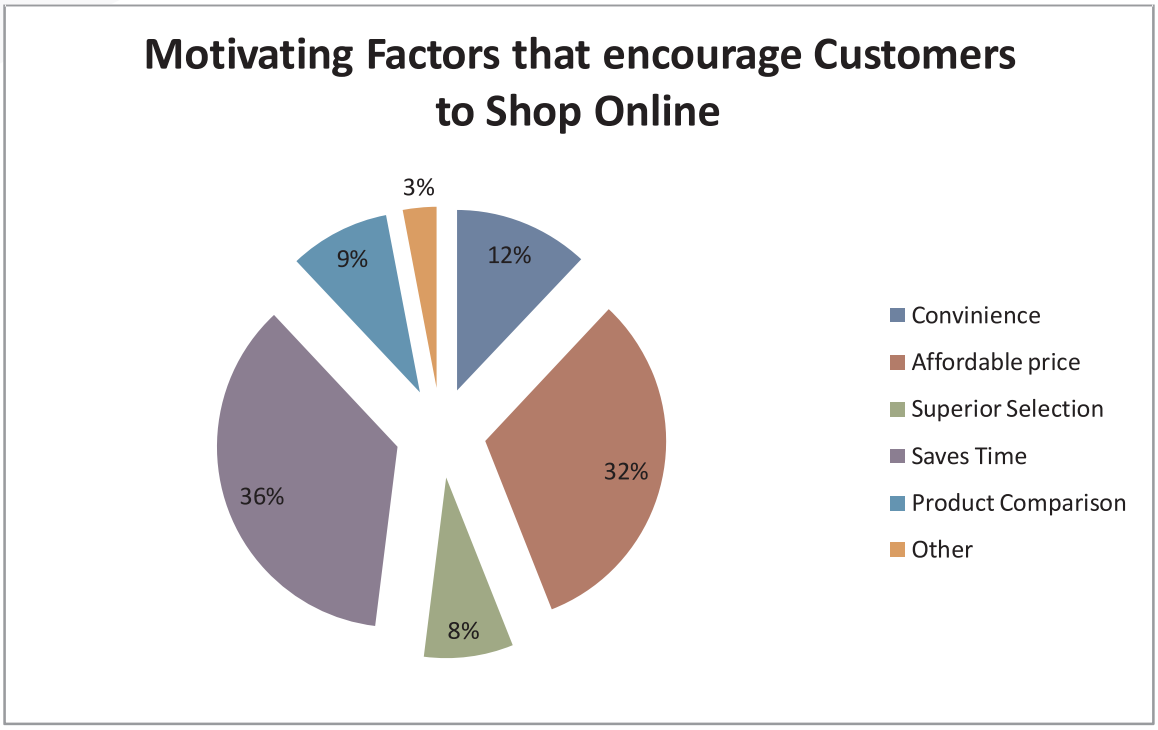


Source: Survey data

Graph 2 Level of satisfaction of online shopping customers

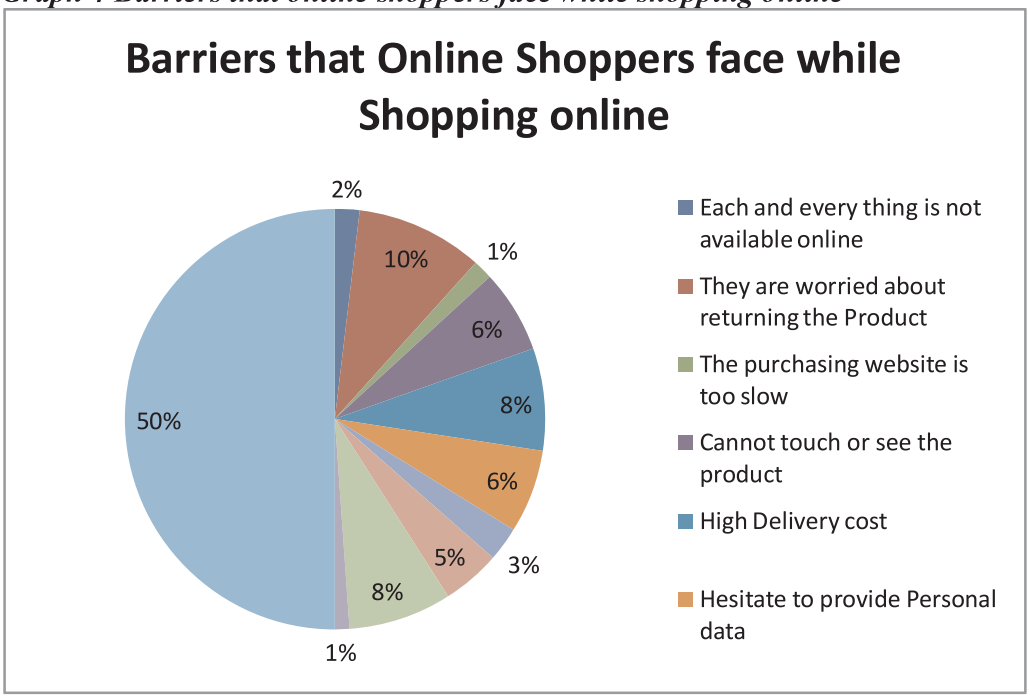
Source: Survey data

Graph 3 Motivating Factors that encourage consumers to shop online



Source: Survey data

Graph 4 Barriers that online shoppers face while shopping online



Source: Survey data

Table 2 Factors influencing online shopping behavior

Sr. No	Factors	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
1	Shopping products online saves my time	56	42	2	0	0
2	I can shop online at any time and its good for me	52	45	3	0	0
3	I prefer traditional or conventional shopping	24	18	48	7	3
4	online shopping has more risk than traditional shopping	4	6	28	36	26
5	Delivery of goods takes more than in online purchase	4	6	28	36	26
6	Wide varieties of goods is available in online shopping	28	38	20	10	4
7	Online display of goods is very accurate	51	33	4	12	0
8	Sufficient Information	52	45	3	0	0
9	Online shopping is as accurate as conventional shopping	36	40	14	8	2
10	Insecurity for giving credit card Details	36	32	14	10	8
11	it is cost saving as compared to traditional shopping	62	32	6	0	0
12	Diffulty in unavailablity of credit and debit card	18	15	23	28	16
13	Preference for Cash on Delivery than online payment	40	42	9	5	4
14	Shopping online if and only if home delivery is available	32	28	22	11	7
15	Servicable areas and facilities of Logistics is lacking in India	4	5	13	32	46

Source: Survey Data

HYPOTHESIS TESTING (CHI-SQUARE & CO-RELATION)

H01 :	There is no relationship between Gender and preference to online shopping, its only by chance
H1 :	There is significant relationship between Gender and preference to online shopping

Table 3.1 :Gender * Preference to Online Shopping Cross tabulation

Gender	Preference to online shopping			Total
	Yes	No	May be	
Male	147	08	0	155
Female	0	66	30	96
Total	**147**	**74**	**30**	**251**

Source: SPSS Software Data Analysis

As per shown above in the table there are total 147 Males who prefer to shop online and 66 women who don't prefer to shop online out of which 30 women are such who are not aware whether they want to shop online or not. Out of 155 males only 08 males refuse to prefer online shopping. The data is not evenly distributed among males and females. Now to determine the relationships let's move to Chi-Square test:

Table 3.2 Chi-Square Tests

	Value	df	Asymp. Sig. (2 sided)
Pearson Chi-Square	220.790 a	2	0.000
Likelihood Ratio	283.265	2	0.000
Linear by Linear Association	192.406	1	0.000
N of Valid Cases	251		

a. 0 cells (0%) have expected Count less than 5. The minimum expected count is 11.47
Now here the SPSS uses the term significance instead of Probability. More specifically the Asymp. Sig (2 sided) column lists the probability of interest. The Probability is 0.000 in this column for the Pearson chi square static.

As per SPSS the probability is 0.000 which actually shows that it is something lower than 0.005 (SPSS rounds off to three decimal places). Thus, while the actual probability may not be exactly zero, it is certainly less than the cut-off value 0.05. So since the probability is less than 0.05 we reject the null hypothesis of chance as an explanation and conclude that there is statistical significant relationship between gender and preference to online shopping.

The relation is a kind of social stereotype where the gender of a respondents matter a lot while preferring to the online shopping. As seen in the above table if a respondent is male he has much more chance of preferring to online shopping than females. It might be the reason that females are uncomfortable with the process of online shopping or the process of online payment. There must also be the reason that females don't trust the online payment system. But there is a significant social stereotype among the two variables i.e. Gender and Preferring to shop online.

H02 :	There is no relationship between Occupation and preference to online shopping, its only by chance
H2 :	There is significant relationship between Occupation and preference to online shopping

Table 4.1 Occupation * Preference to Online Shopping Cross tabulation				
Occupation	**Preference to online shopping**			**Total**
	Yes	No	May be	
Student	91	0	0	91
Service Class	56	74	30	160
Total	**147**	**74**	**30**	**251**

Source: SPSS Software Data Analysis

As per shown in the table there are total 147 respondents who prefer to purchase online out of which 91 respondents are from students and 56 are from the service class. There are 74 respondents who refuse to prefer online shopping and 30 respondents are not sure whether they want to purchase online or not. Almost 63% of respondents are from service class out of total 251 respondents and rest 36% are students, but than too all student respondents prefer to shop online than service class.

Table 4.2 Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2 sided)**
Pearson Chi-Square	100.998 a	2	0.000
Likelihood Ratio	133.374	2	0.000
Linear by Linear Association	83.061	1	0.000
N of Valid Cases	251		

a. 0 cells (0%) have expected Count less than 5. The minimum expected count is 10.88
Now here the SPSS uses the term significance instead of Probability. More specifically the Asymp. Sig (2 sided) column lists the probability of interest. The Probability is 0.000 in this column for the Pearson chi square static.

As per SPSS the probability is 0.000 which actually shows that it is something lower than 0.005 (SPSS rounds off to three decimal places). Thus, while the actual probability may not be exactly zero, it is certainly less than the cut-off value 0.05. So since the probability is less than 0.05 we reject the null hypothesis of chance as an explanation and conclude that there is statistical significant relationship between Occupation and preference to online shopping.

The relation is a kind of rigid relationship where the occupation of the respondents matter a lot while preferring to the online shopping. As we can see that young blood i.e. students are more preferring online shopping than any other occupation of respondents. They are much more online creatures than service class, business class or house wife. Secondly, service class respondents prefer to shop online more as may be they don't have time to move out for shopping. We don't find any other people preferring to shop online.

H03 :	There is no relationship between satisfaction level and motivating factor for shop online, its only by chance
H3 :	There is significant relationship between satisfaction Level and Motivating factor for shop online.

Table 5.1: Satisfaction level * Motivating factors to purchase online							
Satisfaction Level	**Motivating Factors to Purchase online**						**Total**
	Convenience	Affordable price	Superior Selection	Saves Time	Product Comparison	Other Factors	
Highly Satisfied	16	12	0	0	0	0	28
Satisfied	0	31	10	40	0	0	81
Neither Satisfied nor Dissatisfied	0	0	0	8	4	0	12
Dissatisfied	0	0	0	0	8	0	8
Highly Dissatisfied	0	0	0	0	0	4	4
Total	**16**	**43**	**10**	**48**	**12**	**4**	**133**

Source: SPSS Software Data Analysis

As Shown in the table there are total 28 respondents who are highly satisfied from the online purchase out of which 16 respondents are motivated by the convenience factor of online purchasing and 12 respondents are motivated because online selling provides products at affordable prices. Moving ahead, 81 respondents are satisfied out of which 31 respondents feel it provides affordable price, 10 respondents feel it provides superior selection and 40 respondents which are highest feel that it saves time. Only 12 respondents fall under neutral level, whereas 12 fall under dissatisfied level motivated neither by service nor price.

Table 5.2 Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2 sided)**
Pearson Chi-Square	317.978 a	20	0.000
Likelihood Ratio	188.881	20	0.000
Linear by Linear Association	83.778	1	0.000
N of Valid Cases	133		

a. 23 cells (76.7%) have expected Count less than 5. The minimum expected count is 0.12

Table 5.3 Co-Relation Test		
Pearson's R	0.797	R > 0.5
Significance	0.000	P < 0.5

Source: SPSS Software Data Analysis

Now here the SPSS uses the term significance instead of Probability. More specifically the Asymp. Sig (2 sided) column lists the probability of interest. The Probability is 0.000 in this column for the Pearson chi square static.

As per SPSS the probability is 0.000 which actually shows that it is something lower than 0.005 (SPSS rounds off to three decimal places). Thus, while the actual probability may not be exactly zero, it is certainly less than the cut-off value 0.05. So since the probability is less than 0.05 we reject the null hypothesis of chance as an explanation and conclude that there is statistical significant relationship between satisfaction Level and Motivating factor to purchase online.

Let us take one more test i.e. co-relation the R value of Pearson is greater than 0.5 hence the relationship is strong. And the probability is less than 0.5. Hence we see a Strong bonding between the motivating factor and the satisfaction level of the respondents. The relationship is stronger on the grounds that purchasing online saves time. It has rejected the null hypothesis which also depicts that both the variables have statistically significant relationship between level of satisfaction and motivating factors to purchase online.

The relation is a kind of unbending relationship where the satisfaction level of the respondents and the motivating factors relating to online purchase. The most of respondents feel that purchasing online saves time and it provides us all things at affordable prices. Hence we conclude that the relationship is not by chance.

H04 :	There is no relationship between Category of goods and Level of Satisfaction from online Purchase, its only by chance
H4 :	There is significant relationship between Category of goods and Satisfaction level from online purchase

Table 6.1 Category of goods * Level of Satisfaction

Category of Goods	**Satisfaction Level**					**Total**
	Highly Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Highly Dissatisfied	
Electronics	28	22	0	0	0	**50**
Computer Hardware & Software	0	17	0	0	0	**17**
Furniture & Home tools	0	9	0	0	0	**9**
Home Appliances	0	12	0	0	0	**12**
Books & Magazines	0	5	0	0	0	**5**
Apparels	0	7	0	0	0	**7**
Cosmetics	0	3	0	0	0	**3**
Movie tickets	0	6	8	0	0	**14**
Tours and Travel Tickets	0	0	4	8	4	**16**
Total	**28**	**81**	**12**	**8**	**4**	**133**

Source: SPSS Software Data Analysis

Let us have a look at the table. Here as we can see there are 50 respondents out of 133 who prefer to purchase electronic items online and out of which 28 i.e. nearly 56% are highly satisfied and rest 43% are satisfied by the purchase they made. Next highest is the online purchase of computer software and hardware which has 17 respondents and all are satisfied. The dissatisfaction is seen in the tours and travel tickets with 16 respondents all under neutral, dissatisfied or highly dissatisfied.

Table 6.2 Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2 sided)**
Pearson Chi-Square	210.121 a	32	0.000
Likelihood Ratio	177.344	32	0.000
Linear by Linear Association	79.555	1	0.000
N of Valid Cases	133		

a. 38 cells (84.4%) have expected Count less than 5. The minimum expected count is 0.09

Table 6.3 Co-Relation Test		
Pearson's R	0.776	R > 0.5
Significance	0.000	P < 0.5

Source: SPSS Software Data Analysis

Now here the SPSS uses the term significance instead of Probability. More specifically the Asymp. Sig (2 sided) column lists the probability of interest. The Probability is 0.000 in this column for the Pearson chi square static.

As per SPSS the probability is 0.000 which actually shows that it is something lower than 0.005 (SPSS rounds off to three decimal places). Thus, while the actual probability may not be exactly zero, it is certainly less than the cut-off value 0.05. So since the probability is less than 0.05 we reject the null hypothesis of chance as an explanation and conclude that there is statistical significant relationship between category of goods and level of satisfaction.

Let us take one more test i.e. co-relation the R value of Pearson is greater than 0.5 hence the relationship is strong. And the probability is less than 0.5. Hence we see a Strong bonding or a highly positive relationship between the satisfaction level of the respondents and the category of goods sold online. The relationship is stronger on the grounds that electronics goods purchased online provides more satisfaction than any other category of goods. It has rejected the null hypothesis which also depicts that both the variables have statistically significant relationship between the category of goods sold online and level of satisfaction.

Hence it is made clear that if a person or businessmen who want to succeed in an online business he needs to select either electronics or computer hardware and software. But he also has to be prompt in the services that he provides to the customers.

H05 :	There is no relationship between salary and Preference to online shopping, its only by chance
H5 :	There is significant relationship between Salary and Preference to online shopping.

Table 7.1 Salary * Preference to Online Shopping Cross tabulation				
Salary (in Rs./Month)	**Preference to online shopping**			**Total**
	Yes	No	May be	
8000 – 10000	44	0	0	44
11000 – 25000	59	0	0	59
26000 – 50000	44	7	0	51
Above 50000	0	67	30	97
Total	**147**	**74**	**30**	**251**

Source: SPSS Software Data Analysis

We can see from the above mentioned table that out of 251 respondents nearly 58% respondents prefer to shop online and out of which 40% fall under the salary of 11000 to 25000 which is quite surprising. But on the other hand it is noticed that 97 respondents are from above 50000 salary but are not preferring to shop online which is quite shocking results. Now let us take the tests:

Table 7.2 Chi-Square Tests

	Value	df	Asymp. Sig. (2 sided)
Pearson Chi-Square	227.547 a	6	0.000
Likelihood Ratio	304.729	6	0.000
Linear by Linear Association	149.740	1	0.000
N of Valid Cases	251		

a. 0 cells (0.00%) have expected Count less than 5. The minimum expected count is 5.26

Table 7.3 Co-Relation Test

Pearson's R	0.774	R > 0.5
Significance	0.000	P < 0.5

Source: SPSS Software Data Analysis

Now here the SPSS uses the term significance instead of Probability. More specifically the Asymp. Sig (2 sided) column lists the probability of interest. The Probability is 0.000 in this column for the Pearson chi square static.

As per SPSS the probability is 0.000 which actually shows that it is something lower than 0.005 (SPSS rounds off to three decimal places). Thus, while the actual probability may not be exactly zero, it is certainly less than the cut-off value 0.05. So since the probability is less than 0.05 we reject the null hypothesis of chance as an explanation and conclude that there is statistical significant relationship between salary and preference to shop online.

Let us take one more test i.e. co-relation the R value of Pearson is greater than 0.5 hence the relationship is strong. And the probability is less than 0.5. Hence we see a Strong bonding or a highly positive relationship between the salary of respondent and the preference to shop online. The relationship is stronger on the grounds that higher the salary more the people refuse to purchase online. It has rejected the null hypothesis which also depicts that both the variables have statistically significant relationship between the salary of a person and the preference to purchase online.

Thus from a businessmen point of view a person who wants to do the business online should target the middle class whose salary is within Rs. 25000 and he also has to design his pricing policy accordingly. Because again higher priced products will not be preferred by these middle class people.

7. FINDINGS

- Respondents of Age group 18-25 and 25-35 prefer more to shop online in Ahmadabad
- There is a yearly rise in the percentage of online shopping in last 5 years
- 43% of respondents are doing online shopping 2-4 times in a year
- 61% of respondents are satisfied with the online shopping services
- 37% of respondents prefer to shop electronics online
- Time saving and affordable price are the main motivating factors that consumers think while online shopping
- 56% of the respondents strongly agreed that online shopping saves time
- 32% of respondents agreed to prefer online shopping if there is provision of home delivery

8. CONCLUSION

Online shopping is one of the greatest thing that has taken the business world to the new heights. It has given birth to a new and more developed economy and has changed the way in which the businesses and trading were done. This wind of e-business will surely become a huge industry one day and online shopping has become a more significant part of the shoppers in their day to day life to satisfy their never ending needs in the most comfortable way. The number of online shoppers have increased as seen in the research due to comfortableness, 24X7 shopping, home delivery, a huge product selection and the ever expanding range of unique and unusual gift ideas as well as the consumers feel safe to shop online. This study has provided an idea of what consumers prefer while doing online shopping and those consumers who prefer off line shopping. The main motivating factor that has been in the research js the affordable price and time saving, as a result of which we see people booking tickets, purchasing books, home appliances and and electronics goods shopping online by just logging into the account and making online payment. The research suggests the internet providers to increase the bandwidths and the speed of internet as more number of people are shopping online. This will have a huge impact on their businesses as well as on e-retailers. But it has been seen that majority of males are indulge in the online shopping than females.

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CASH OR E-CASH ISSUES ON DELIVERY SYSTEM IN JUNAGADH AREA

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Abstract

Online contracts are classified as distance contracts, which means that the trader (service provider,seller) and the consumer (natural person who is acting for purposes which are outside his trade, business orprofession), in lack of their simultaneous, actual and physical presence enter into contract not by meeting inperson, but only in an electronic way. This paper contains issues on delivery system of online purchasing in small towns. And for that I have selected area of Junagadh city as it is hometown as well as I am facing many of same problems related to cash payments. In the new age of the Internet and online payment solution systems, individuals are often concerned with the issue of how to beware of online payment security issues. These issues can be tough to understand as well as absorb in a short amount of time. Many individuals sometimes do not know where to start when it comes to handling the issue of how to beware of online payment security issues. Many people do not know what would be the right questions to ask, where to find the correct information, and even how to access the correct information. The biggest problem is with E-cash and COD. I have researched some problems and issues in small cities like Junagadh such as, Privacy issues, Return of products, obliged notes in equivalent products, service issues of technological products, Do not touch problems, Multi currency payments, Unreliable internet payment gateways, Threat of fraud, Misuse of card data, etc. My study will base on primary and secondary data both.

Key Words: E-cash Issues, COD issues, obliged notes, Delivery system, security issues

1. INTRODUCTION

Purchasing items from own living room certainly is more convenient than actually driving to a store. They are offering a virtually unlimited array of choices and the ability to compare prices. While online payment and security technology have come a long way, people still may experience problems with online shopping from time to time. This article covers some of the more common issues.An online shop evokes the physical analogy of buying products or services at a shopping center; the process is called business-to-consumer (B2C) online shopping. Online customers must have access to the Internet and a valid method of payment in order to complete a transaction.Generally, higher levels of education and personal income correspond to more favorable perceptions of shopping online. Increased exposure to technology also increases the probability of developing favorable attitudes towards new shopping channels. Some E-Commerce portals do not accept all debit and credit cards, which often forces consumers who did want to pay online to opt for the CoD payment. To encourage online payment, they should increase the available online payment options to include wallets, mobile banking, SMS payments and service providers like PayPal. E-commerce players are introducing card on delivery payment method which does away with some of the issues of the cash on delivery and also provides benefits of the online payment methods. The info graphic below gives us a snapshot of why CoD payment method is popular, and where we stand in terms of mobile wallet and mobile banking.

1.1 PAYMENT METHODS:

Online shoppers commonly use a credit card or a PayPal account in order to make payments. However, some systems enable users to create accounts and pay by alternative means, such as:

CASH ON DELIVERY	CHEQUE	DEBIT CARD
GIFT CARD	POSTAL MONEY ORDER	CREDIT CARD

1.2 TOP 10 WEBSITES FOR ONLINE SHOPPING:

Online shopping offers fast, easy, money saving and interesting shopping experience, it has many advantages like 24 hours shopping, shopping with coupon to get discount, shopping from Home, rich product availability and specifications etc. Also now many sites like Shopclues, Ebay, PayTm offers some great deals every day or week. Top 10 websites for online purchasing in India according to one survey are as mentioned below:

Amazon	Flipkart	Snapdeal	Paytm	Ebay.in
Jabong.com	Myntra	Shopclues	Pepperfry	Homeshop18

1.3 DELIVERY ISSUES:

If the item you received is not the item listed as purchased, the seller is responsible for either correcting the error (at no extra charge) or refunding your money, but online retailers may have different approaches. There may be information about resolving this type of dispute in the "disclaimers" or "legal terms" portion of the customer contract or you can usually call or email the company for details.Most online vendors understand that customer service can make or break their business and will try to fix the problem quickly. Some will reimburse you for the cost of return shipping if it is the company's fault; but you may still have to pay for shipping upfront, since they must confirm the error first. However, with online auction sites, the process is less clear because these sites typically only serve to connect buyers and sellers. Sometimes auction sites create an online process for resolving disputes over delivery of goods and may serve as an intermediary in the process.

a. Buyers receiving goods late, or not at all
b. Sellers not receiving payment
c. Buyers receiving goods that are either less valuable than those advertised or significantly different from the original description
d. Failure to disclose relevant information about a product or the terms of sale.

For consumers, an optimal online shopping experience extends after the purchase and typically entails the following basic elements:

- Accurate and timely delivery after payment is made.
- For subscriptions and installment payments, accurate and timely billing and deductions.
- In cases of returns, visible tracking of returns and prompt refunds.

Concurrently, online merchants have to balance these expectations against business risks:

- Accurate reconciliation of fund receipts against deliveries made.
- Credit risk of consumers (e.g. installment payments) and of buying firms (e.g. selling on credit terms).
- Receipt of returns prior to disbursing refunds.

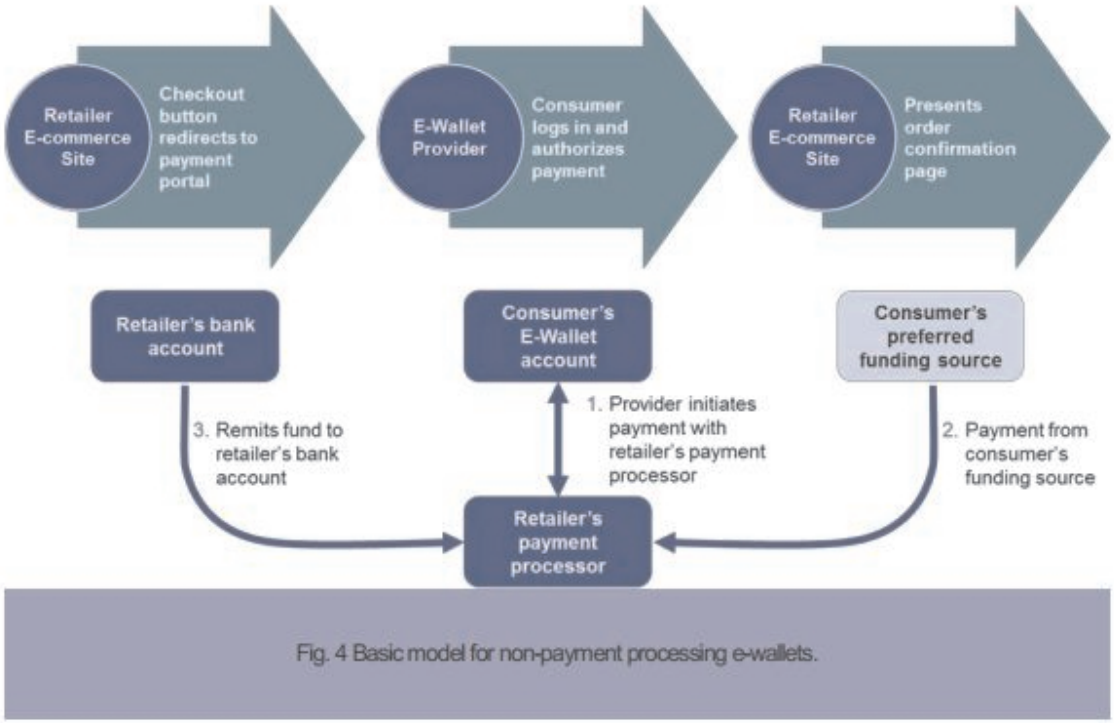

Fig. 4 Basic model for non-payment processing e-wallets.

2. OBJECTIVES

2.1: PRIMARY OBJECTIVE:

- To analyze the key issues related to cash and e-cash payment at the time of delivery in Junagadh.

2.2: SECONDARY OBJECTIVES:

- To determine whether replace and return issues are different for males as compared to females in sampled data.
- To check the relation between consumers preference and problems duringE-purchasing.
- To analyze the fraud and scams in the delivery system.
- To determine the mean threat of fraud with purchase frequency in sampled respondents.
- To determine the mean of getting less valuable products than they appeared in sampled respondents.
- To determine the mean security issues among various purchase frequency in sampled respondents.
- To determine the mean threat of various e-cash and cash payment gateways with purchase frequency in sampled respondents.

3. RESEARCH METHODOLOGY:

RESEARCH DESIGN:	EXPLORATORY RESEARCH DESIGN
POPULATION:	JUNAGADH CITY
SOURCES OF DATA COLLECTION:	PRIMARY AND SECONDARY BOTH
SAMPLING METHOD:	RANDOM SAMPLING
TOOLS FOR DATA COLLECTION:	QUESTIONNAIRE AND PAST SURVEYS' DETAILS
SAMPLE SIZE	50 Respondents
TECHNIQUES USED FOR ANALYSIS	COMPARED MEANS & T-TEST

4. LITERATURE REVIEW

4.1 Thae Nu Nge (2013)

"SECURITY ANALYSIS OF FAIR E -CASH PAYMENT SYSTEM"
International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Volume 2, No 5, May 2013 ISSN: 2278 – 1323
In e-commerce, e-payment is one of the most essential research areas. Properly combining the payment protocol with a fair exchange procedure, the payment system allows the consumer and the merchant to fairly exchange their money and merchandise. This paper analysis and addresses the security flaws in a fair e-cash payment system which is based on DSA signature with message recovery and proposes a solution that would ensure user authentication and data integrity. The improved system also defences against threats and misbehaviours related to unfairness and repudiation coming from insiders parties of the transaction.

4.2 Princewill Aigbe & Jackson Akpojaro (2014)

"ANALYSIS OF SECURITY ISSUES IN ELECTRONIC PAYMENT SYSTEMS"
International Journal of Computer Applications (0975 – 8887) Volume 108 – No. 10, December 2014

The emergence of e-commerce has created new financial needs that in many cases cannot be effectively fulfilled by the traditional payment systems. Recognizing this, virtually all interested parties are exploring various types of electronic payment systems, issues surrounding electronic payment system and digital currency. Broadly, electronic payment systems can be classified into four categories: online electronic cash system, electronic cheque system, online credit card payment system, and smart cards based electronic payment system. Each payment system has its advantages and disadvantages for the customers and merchants. We highlight the analysis of the

security levels in relationship with fraud vulnerability, and determine how this relationship affects or boosts the confidence of the users.

4.3 Anil K. Rajvanshi, (2016)

"HOW ONLINE SHOPPING IS CHANGING RURAL INDIA"

This research view by a resident of rural region in Maharashtra says thatthis online shopping is fuelling consumerism in rural areas and is the engine which is helping it to urbanize. It is happening because it produces a win-win situation. For example, one can get quality goods at substantial savings as they are usually much cheaper than what one would pay in a shop in Pune or other big cities.Besides, most of the time the goods are shipped free and cash-on-delivery basis. Also, the time and energy used in actual shopping and going to the big city are saved.This is the reason why e-commerce has spread so rapidly all over the world and rural India is only now getting the benefits of this revolution.

4.4 Lara Srivastava And Robin Mansell (1998)

"ELECTRONIC CASH AND THE INNOVATIONPROCESS: A USER PARADIGM"

This paper looks at the innovation process in an emerging service product in the financial sector. The role of banks in the development and diffusion of electronic cash is addressed in the context of their role as 'lead users'. Since the introduction of Electronic Funds Transfer (EFT), banks have been learning how to manage large amounts of detailed information about money. Merchants, consumers and banks transact mainly through the use of various information and communication technology systems. One of the most important developments in this area has been the advent of the Internet and the opportunity for direct electronic ordering and delivery. Electronic commerce, however, has yet to overcome a major obstacle to its proliferation, that is, a suitable and instantaneous means of payment. This paper examines electronic cash and its generation, diffusion and take-up in the economy. Electronic cash is a store of monetary value, held in digital form, which is available for immediate exchange in transactions. The paper considers electronic cash in terms of its suitability to the Internet and as an off-line payment method and analyses the sources of investment in electronic cash and the willingness and capability of the financial services industry to pave the way for its deployment. The results show that banks have the know-how and the need to innovate in this field. They are user initiators as well as suppliers of electronic cash and play the role of a need-forecasting laboratory. The obstacles they face in terms of the lock-in of traditional operations are not very significant.

5. ANALYSIS:

Report

Purchase Frequency		Threat of fraud	Less valued products as per quality	Security issues	Payment issues
once in week	Mean	2.00	2.50	2.50	1.67
	N	6	6	6	6
	Std. Deviation	.894	.837	.548	.516
	Variance	.800	.700	.300	.267
once in month	Mean	1.70	2.30	2.10	1.90
	N	10	10	10	10
	Std. Deviation	.675	1.059	.316	.738
	Variance	.456	1.122	.100	.544
once in quarter	Mean	2.00	3.00	2.56	1.78

	N	9	9	9	9
	Std. Deviation	1.118	.866	.882	.833
	Variance	1.250	.750	.778	.694
holidays	Mean	1.55	2.45	2.73	1.55
	N	11	11	11	11
	Std. Deviation	.820	1.128	.647	.820
	Variance	.673	1.273	.418	.673
festive or discount seasons	Mean	2.07	2.43	2.64	1.71
	N	14	14	14	14
	Std. Deviation	.997	1.089	.842	.994
	Variance	.995	1.187	.709	.989
Total	Mean	1.86	2.52	2.52	1.72
	N	50	50	50	50
	Std. Deviation	.904	1.015	.707	.809
	Variance	.817	1.030	.500	.655

T-Test

```
[DataSet2] C:\Users\Gaurav\Downloads\kajal research analysis.sav
```

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Replace/return	male	24	2.00	.885	.181
	female	26	1.69	.788	.155

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Replace/return	Equal variances assumed	.263	.610	1.300	48	.200	.308	.237	-.168	.783
	Equal variances not assumed			1.294	46.227	.202	.308	.238	-.171	.786

Interpretation:
The above report shows the mean and variance analysis between purchase frequency and some other major issues related to online purchasing in Junagadh region. And this research paper also contains compared means for male and female with reference to threat of fraud. The analysis shows tabulated value which accepts the assumptions that the mean comparison for threat of fraud in males and females are equal. Analysis also shows that purchase frequency of purchaser has different mean and variances with some major issues. The least variance can found in security issues and purchase frequency it shows that these two variables are not much related to each other.

6. FINDINGS

- The unusually high number of legitimate order confirmation and shipping notification emails make it that much easier to inject fake malicious messages and trick victims into sharing sensitive data, or inadvertently downloading malware in shopping seasons.
- One research also found that phishing continues to be a successful attack vector, especially around the holidays because the attackers are able to take advantage of people's impulsive nature more easily during this time of year.
- Purchaser should understand that do not open file attachments and click links at the time of shipping or confirming mail.
- If you do receive a message about a problem with an order or shipment, don't click any links or open any files. If it appears legitimate, open a new browser window and visit the vendor's website yourself to check on order status, or just pick up the phone to clarify any potential issues without risking compromising your PC.
- Many a times the purchaser get genuine fraud from product is less qualitative than they priced and at that time return issues are occurred.
- When obliged note with product seen by purchaser it makes no sense to their purchasing and if it is gifted product for someone else than creates more problems and return of products become time consuming.

7. CONCLUSION

This paper addresses the security issue of e-cash system during purchase and delivery. The improved scheme encrypts the e-cash using public key cryptosystem during the exchange phase that prevents the effects of existential forgery attack and overcomes the weakness. Mostly purchasers do not follow the simple rules given in visit websites. The main reason behind fraud and e-cash issues are clicking on wrong websites and not trekking out their order from official sites. At the end of the research work I can believe that delivery issues are seen more time in small towns because delivery period for a product is 5 to 6 working days and if purchaser wants to replace the product it will take more time. After returning product cash back ways creates more difficulties. To avoid this type of fraud purchaser should go through official sites if he/she doesn't found it secure go for cash on delivery and ask for return or replace policy before purchasing. This paper has research gap of small sample size from a large population so further research can be done on that basis.

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8. ANNEXURE

QUESTIONNAIRE
CASH OR E-CASH ISSUES ON DELIVERY SYSTEM IN JUNAGADH AREA
NAME: _____
AGE: 20-30 30-40 40-50 50 & ABOVE☐ ☐ ☐ ☐
FAMILY INCOME PER MONTH :
BELOW 40000 40000 TO 100000 100000 TO 300000☐ ☐ ☐
300000 TO 500000 MORE THAN 500000

QUESTIONNAIRE
CASH OR E-CASH ISSUES ON DELIVERY SYSTEM IN JUNAGADH AREA

NAME: _____

AGE: ☐ **2030** ☐ **3040** ☐ **4050** ☐ **50 & ABOVE**

FAMILY INCOME PER MONTH:
☐ **BELOW 40000** ☐ **40000TO 100000** ☐ **100000 TO 300000**
☐ **300000 TO 500000** ☐ **MORE THAN 500000**

Q-1: ARE YOU INTERESTED IN ONLINE PURCHASING?
☐ **Yes** ☐ **No**

Q-2: HOW FREQUENTLY YOU PURCHASE FROM ONLINE STORES?

☐ Once In A Week ☐ Once In A Month ☐ Once In A Quarter
☐ At The Time Of Holidays ☐ Only On Festive Or Discount

Q-3: WHICH PAYMENT METHOD DO YOU PREFER FOR ONLINE PURCHASING?

☐ Credit Card/Debit Card ☐ EMI ☐ Internet Banking
☐ Mobile Wallet ☐ Cash On Delivery ☐ Cheque/DD

Q-4: HOW LONG WILL YOUR ORDER TAKE?

☐ 2 To 3 Days ☐ 4 To 6 Days ☐ More Than 6 Days

Q-5: WHAT IS THE COST OF DELIVERY?

☐ Rs. 30 To 40 ☐ Rs. 40 To 70 ☐ More Than 70

Q-6: WILL YOU RECEIVE AN EMAIL NOTIFACATION A ND TAX INVOICE WHEN YOU PLACE AN ORDER?

☐ Yes ☐ No

Q-7: E-CASH PAYMENT BEFORE DELIVERY,

☐ Secured ☐ Not Secured

Q-8: WHAT IS THE MOST EFFECTIVE WAY TO PROCESS A COMPLAINT FOR MISSED, INCOMPLETE OR LATE DELIVERY?

☐ Before Delivery Deadline ☐ After Delivery By Automated Machine

Q-9: WHICH TYPE OF DELIVERY ISSU ES YOU GENERALLY FOUND,

1. **PRIVACY ISSUES :**
   ☐ Most Frequently ☐ Frequently ☐ Few Times ☐ Never
2. **RETURN OF PRODUCTS:**
   ☐ Most Frequently ☐ Frequently ☐ Few Times ☐ Never
3. **OBLIGED NOTES IN EQUIVALENT PRODUCTS:**
   ☐ Most Frequently ☐ Frequently ☐ Few Times ☐ Never
4. **PRODUCT IS LESS VALUER THAN PRICED**
   ☐ Most Frequently ☐ Frequently ☐ Few Times ☐ Never
5. **SERVICE ISSUES OF TECHNOLOGICAL PRODUCTS:**
   ☐ Most Frequently ☐ Frequently ☐ Few Times ☐ Never
6. **UNRELIABLE INTERNET PAYMENT GATEWAYS:**
   ☐ Most Frequently ☐ Frequently ☐ Few Times ☐ Never
7. **THREAT OF FRAUD:**
   ☐ Most Frequently ☐ Frequently ☐ Few Times ☐ Never
8. **TIME CONSUMING PROCESS OF REPLACEMENT OF PRODUCTS**
   ☐ Most Frequently ☐ Frequently ☐ Few Times ☐ Never

Q-10: SUGGESTIONS: _____

A STUDY OF CUSTOMER'S PERCEPTION OF SECURITY AND TRUST IN E-PAYMENT SYSTEMS

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Abstract

Indian digital commerce space is fast growing. During the dawn of ecommerce industry in India, people were not comfortable using their credit/debit card data online for payments and were often shying away from purchasing online. User's acceptance is a pivotal factor determining the success or failure of any new technology. Customers' perceptions of the security of e-payment systems have become a major factor in the evolution of electronic commerce in markets. It is of prime importance for e-payment service providers to develop systems that are deemed as secure and trustworthy. Thus, this study examines issues related to e-payment security from the viewpoint of customers. This study proposes a conceptual model describing the determinants of consumers' adoption of e-payment system. This research provides a theoretical foundation for academics and also practical guidelines for service providers in dealing with the security aspects of e-payment systems.

Key Words: E-payment System, Security, Trust.

1. INTRODUCTION

Cash remains the most readily available and widely used form of payment in India. Indian payment system has been criticized for being cash-intensive (The Fletcher School, 2014). According to one estimate, the value of notes and coins in circulation as a percentage of GDP in India is 12.04%, compared to 3.93% in Brazil, 5.32% in Mexico and 3.72% is South Africa (International Monetary Fund, 2013). However, the process of digitization of payments in India has been converted into a ***catch up effect*** (the property whereby countries that start off poor tend to grow more rapidly than countries that start off rich). According to a recent report launched by Google and BCG - ***Digital Payments 2020*** - India ranks #2 in the world with over 1 billion mobile subscriptions and projected to be $500 billion digital payment industry by 2020, contributing 15% to India's GDP. Further, it has been projecte d that non cash transactions would exceed cash transactions by 2023.

Digital payment or e-payment refers to the transfer of electronic value of payment from a payer to payee using web-based user interfaces (Kim et al. 2010, Weir et al. 2006, Lim, 2008). The total value of global retail payments transactions was estimated at USD 16 trillion in 2015 and is estimated to increase to USD 21 trillion by 2020. To support digital India movement, the Reserve Bank of India – the central bank of the country – has envisioned *building best of class payment and settlement system for a 'less-cash' India.* The major initiatives taken by RBI for e-payment services include facilities like *Electronic Clearing Services (ECS), National Electronic Fund Transfer (NEFT) and Real Time Gross Settlement (RTGS).* The exponential growth in e-commerce business is also fueled by the business initiatives of telecom companies, private and public sector banks and wallet companies. According to a recent study by industry body ASSOCHAM(Mody, 2016), e-commerce market in India might touch $38 billion mark in 2016, a 67% increase over the $23 billion revenues in 2015.

In this scenario, it becomes necessity to study factors affecting adoption of e-payment system, as User's acceptance is a pivotal factor determining the success or failure of any new technology. Daniand Krishna (2001, p. 91) claim: "one of the main bottlenecks in the growth of e-commerce is lack of suitable payment instrument and corresponding Electronic Payment System." Previous research suggests factors related to lack of trust, security, and perceived risk are deemed to be important to provide customers with the confidence to switch to an online payment system. Moreover, customers will stop engaging in online activities if these prerequisites are not facilitated in the payment systems, thus causing merchants to lose on potential online sales (Abrazhevich, 2004). The risk of losing personal information and credit card details going to the hands of hackers are still a major anxiety for users. Customers' perceptions of the security of e-payment systems have become a major factor in the evolution of electronic commerce in markets. It is of prime importance for e-payment service providers to develop systems that are deemed as secure and trustworthy.

Thus, this paper studies the existing literature on trust and security in e-payment domain, and identifies factors affecting consumer trust and perceived security. Further, it proposes a conceptual model describing the determinants of consumers' adoption of e-payment system.The relationships in the model are tested based on data collected by survey and results are analyzed and discussed. The results of the study have vital insights for designers of the e-payment system as to what factors they can keep in mind in order to develop favorable user perceptions towards e-payment systems.

2. REVIEW OF LITERATURE

As E-Commerce becomes a major component of business operationsfor many companies, e-payment has become one of the most criticalissues for successful business and financial services. To increase the adoption rate of EPS, the factorsthat affect consumer adoption should be better managed (Montazemi, &Qahri-Saremi, 2015).Linck et al. (2006) focused on the security measures influencing customers' participation in a mobile payment procedure,such as technical protections, transaction procedures, and security statements.Based on this review of the literature, we can categorize the factorsthat influence consumers' perceptions of security and trust inthe use of EPS into three areas: security statements; transactionprocedures; and technical protections. These three factorsare directly responsible for determining whether or not a consumerwould consider an e-payment system to be secure andwhether or not a consumer would have trust in EPS.

2.1 Technical protections in EPS

Technicalprotections refer to specific and technical mechanisms toprotect consumers' transaction security. Technical protections, includingprivacy, integrity, and stability affects perceived security and perceivedtrust(Chellappaand Pavlou,2002).The technical infrastructure supporting EPS must be resistant to security attacks.To enhance consumer trust, Technical protections to reduce security riskneed to be considered. Consumers' perceived security and perceived trust in EPScan be improved when they have assurance of privacy, integrity, and stability. (Romdhane 2005, Hwang et al. 2007). Also, as per Hanzaee&Alinejad(2012) technical protections is one of the significant factors for improving consumers' perceived security. Accordingly, we hypothesize that technicalprotections are likely to exert a positive impact on consumers'perceptions of both security and trust.

2.2 Transaction procedures in EPS

EPS procedures are one of the requisites in fulfilling consumers' securityrequirements. Laudon and Traver(2001) argue that sophisticated procedures and process interactionsshould be developed in EPS to deal with securityrequirements. Further, well-designed processes eliminate fears in the mind of consumers' which can lead to increased use of EPS (Lawrence et al. 2002). As per Tsiakis&Sthephanides

(2005) andHwanget al. (2007) three procedures are deployedduring the transaction process: (1) authenticating each participantprior to the transaction; (2) providing consumers withseveral separate steps toward the completion of the e-paymenttransaction; and (3) sending an acknowledgement after each transactionto assure consumers that the e-payment system has successfullyexecuted the task. An online system withgood design provides consumers with more convenience, reliability, and fasterresponses, which enhances system usage (Hausman&Siekpe, 2009). Also, as per Hanzaee&Alinejad(2012)transaction procedures is one of the significant factors for improving consumers' perceived security. We hypothesize that transaction procedures exert a positiveeffect on both perceived security and perceived trust in EPS.

2.3 Security statements in EPS

Security statements refer to the information provided to consumersin association with EPS operation and security solutions.Statementsof security features, statements of data protection and privacy,security-policy statements provides crucial information to customers needed to reduce anxiety and make decision. Informing and reassuring consumersabout security of their payment options, positively affects consumers' perceptions of security and trustin EPS (Lim, 2008).

2.4 Trust

Stories about ECsecurity threats from the media or interpersonal networks canundermine trust in EPS and cause people to fall back on the interpersonaltrust that arises in human-to-human interactions Customers of EPS fear higher risk inusing the web for financial transactions (Aladwani, 2001). In the context of EC, trust is defined as the 'willingness of a party to be vulnerable to the actions of another party based on the expectations that the other one will perform particular actions important to the trustor, irrespective of the ability to monitor or control the other party' (Mayer et al, 1995). Trust is a set of beliefs held by a consumer as to certain characteristics of the supplier, as well as the possible behavior of the supplier in the future (Ganesan, 1994; Coulter and Coulter, 2002).

The issue of trust ariseswhen risk is involved. Therefore, trust and security can be considered as the mostimportant factors affecting customer satisfaction in the use of EPS. Also, it is shown that trust will be positively influenced when perceptions ofsecurity increase (Chellappa and Pavlou 2002).The extent to which online businesses can build trust significantly influences thewillingness of concern to make e-payment purchases (MacInnes, 2005). To attract and retain e-payment users, it is vital to enhance consumers' perceptions of security andmaintain customers' trust during e-payment transactions. Consumers' perceivedsecurity is positively related to consumers' perceived trust and EPS use. Finally, consumers' perceived trust also has a positive impact on EPS use (Hanzaee&Alinejad, 2012). Similarly,Kniberg (2002) showed that that iftrustworthiness is there, adoption of EPS is credible.

2.5 Security

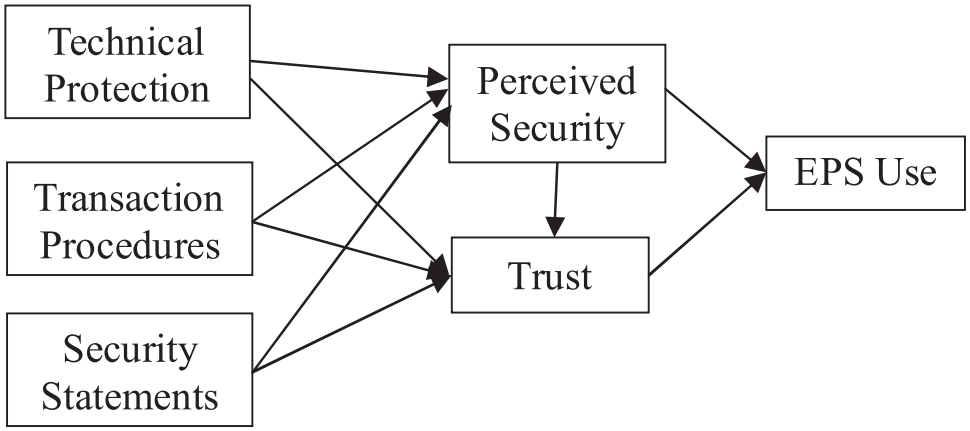
One of the major concerns with regard to e-payments is noted to be security. It is agreed that online salesare not as safe as conventional sales; people are suspicious since there is no humanfactor involved in the sale and it is done in a virtual setting (Whiteley, 2000).This isbecause money and information are exchanged online without any direct engagementwith the recipients.

Since personal and financial information can be intercepted and used for fraudulent purposes, online investing involves greater security concerns than conventional trading; users need a sense of security when conducting financial transactions, and it is still one of the major barriers to e-commerce growth (Jarvenpaa et al., 1999; Gefen, 2000). Security is a set of procedures, mechanisms, and computerprograms for authenticating the source of information and guaranteeingthe process (Tsiakis&Sthephanides(2005). Theexisting literature recognizes the security concerns of users and the effect they have onthe adoption of electronic payment systems (Kurnia and Benjamin, 2007).A keyfactor for the success of EPS is security, a

requirement that isbecoming even more crucial in the current global EC environment(Herzberg,2003;Stroborn et al. 2004;Peha and Khamitov 2004;Cotteleeret al.2007). According to Efraim, Michael and Jae (2006), thesecurity requirements ofE-Commerce can be categorized as authentication of the partner, confidentiality of the transactionsdata, integrity of the transactions data, and reliability of the E-Commercesystem.

Based on the literature review following conceptual model is proposed.

Fig. 1 Proposed Model



3. RESEARCH METHODOLOGY

The main objective of the our research work is to analyze the impact of perceived security and trust on usage of electronic payment services which are again influenced by technical protection, transaction procedures, and security statements. To test the proposed the model, first, we develop a survey questionnaire that captures consumers' perceptions of security and trust in E-payment system. The measures for technical protection, transaction procedures and security statements were adapted from previous studies (Chellappa&Pavlou, 2002;Kim et al. 2010;Linck et al. 2006). The questionnaire was divided into three parts: the first part captured perception towards Electronic payment system; the second part focused on extent of usage of e-payment system and third was for demographic details.
Data for the study were collected from respondents between the age group of 15 to 40 years using convenience sampling. Thequestionnaire was distributed to 600 respondents. The data were collected through email, personal visit and Google forms. Altogether, 300 questionnaires were collected. Finally, 243 questionnaires were considered valid and used for empirical analysis (a response rate of 40.5%). The data were analyzed using SPSS and AMOS to test the proposed model. Table 1 represents the sample profile.

3.1 Reliability

To determine Reliability of the constructs used in the study, Cronbach's alpha, is used. Nunnally (1 978) suggests that a reliability score or alpha that is 0.60 or above is sufficient. As shown in Table 2, the reliability scores of all the constructs were found to exceed this threshold. All construct demonstrated good levels of reliability.

Table 1: Sample Profile

		Frequency	Percent
Gender	Male	123	50.6
	Female	120	49.4
Education Level:	Undergraduate	8	3.3
	Graduate	152	62.6
	Post-graduate	83	34.2
Employment status	self-Employed	15	6.2
	Service	36	14.8
	Unemployed	7	2.9
	Student	185	76.1
	Total	243	100.0

Source: SPSS Output

Table 2: Reliability Statistics

	Reliability Statistics	
	Cronbach's Alpha	N of Items
Technical Protection	.680	5
Transaction Procedures	.619	3
Security Statement	.653	3
Perceived Security	.662	3
Trust	.785	4
EPS Use	.742	3

Source : SPSS Output

4. ANALYSIS

To test the proposed model, Structural Equation Modeling (SEM) is used. SEM is the statistical modeling technique widely used in the behavioral sciences which is a combination of principles of factor analysis and multiple regression analysis so as to explain the relationship among multiple variables considered in the study. The model fit is assessed with goodness-of-fit statistics like CMIN/DF (ratio of chi-square value to its degrees of freedom), RMSEA (Root Mean Square Error of Approximation), GFI (Goodness-of-Fit Index), AGFI (Adjusted Goodness-of-Fit Index), CFI(Comparative Fit Index),NFI (Normed Fit Index), and IFI (Incremental Fit Index). The proposed model was tested using AMOS. As shown in Table 3, for most of the indices the values are at acceptable level, indicating thatthe model provides a valid framework for the studying the relation among the variables included in the study.

Table 3: Model Fit Indices

Index	Value	Interpretation
CMIN/DF	1.704	Good fit (should be less than 3)
GFI (Goodness of Fit Index)	0.896	Not a good fit (should be greater than 0.90)
AGFI (Adjusted GFI)	0.864	Good fit (should be greater than 0.80)
NFI (Normed Fit Index)	0.8	Not a good fit (should be greater than 0.90)
IFI (Incremental Fit Index)	0.906	Good fit (should be greater than 0.90)
CFI (Comparative Fit Index)	0.904	Good fit (should be greater than 0.90)
RMSEA (Room Mean Square Error Approximation)	0.054	Good fit (should be less than 0.08)

Source: AMOS Output

To test the proposed relationship among the variables, regression weights are to be analyzed. Table4 shows the AMOS output and result of the proposed relationships.
As shown in the Table 4, the effects of Technical Protections ($\beta = .511$, $t = 4.921$, $p < .01$) and Transaction Procedures ($\beta = .544$, $t = 4.345$, $p < .01$) and Security Statements ($\beta = .169$, $t = 1.722$, $p < .1$) on consumers' perceived security are significant. Further, Security Statements significantly affect Trust (($\beta = .284$, $t = 2.307$, $p < .05$) but Technical Protection and Transaction Procedures don't have significant effect on Trust in EPS. Results supports the relationship between Perceived Security and Trust as hypothesized (($\beta = .862$, $t = 2.461$, $p < .05$) and the relationship between Trust and Use of E-payment System (($\beta = .504$, $t = 3.743$, $p < .01$). However, Perceived Security does not have significant direct effect on E-payment System Use.

Table 4: Relationship among Variables

Hypothesized Relationship	Estimate	S.E.	C.R.	P
Technical protections --> Perceived security	0.511	0.104	4.921	***
Transaction procedures--> Perceived security	0.544	0.125	4.345	***
Security statements--> Perceived security	0.169	0.098	1.722	0.085*
Perceived security --> Trust	0.862	0.35	2.461	0.014**
Technical protections--> Trust	-0.212	0.203	-1.046	0.296
Transaction procedures--> Trust	-0.03	0.222	-0.136	0.891
Security statements--> Trust	0.284	0.123	2.307	0.021
Trust in EPS -->EPS use	0.504	0.135	3.743	***
Perceived Security --> EPS use	0.112	0.127	0.878	0.38
*** - p<.01 , ** - p < .05 , * - p < .1				

Source: AMOS Output

To check, indirect effect of Perceived Security on E-payment System, Direct effects, Indirect effects and Total effects of Trust and Perceived Security on EPS Use are analyzed. As shown in Table 5, Perceived Security has indirect effect on Use of EPS (.465) and it has direct effect of .585 on Use of E-payment System. Whereas, Trust has direct effect on Use and Perceived Security has direct effect on Trust as shown above. The table shows standardized direct, indirect and Total effects.

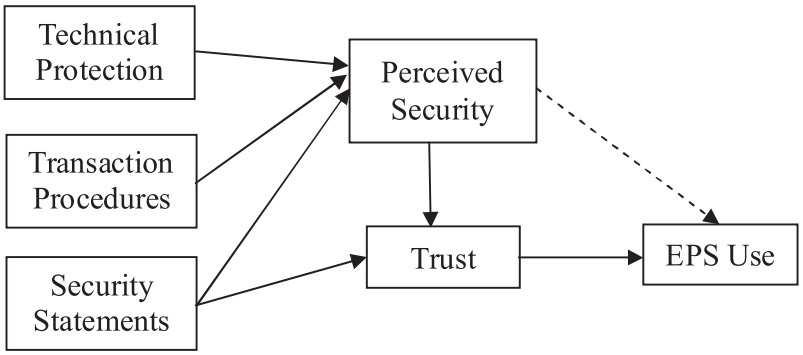
Table 5:Dircet, Indirect and Total Effects

		Perceived Security	Trust
Use	Direct	0.12	0.565
	Indirect	0.465	0
	Total	**0.585**	**0.565**
Trust	Direct	0.823	0
	Indirect	0	0
	Total	**0.823**	**0**

Source: AMOS Output

Summary of our results for each hypothesis in the research model are shown in the Fig.2.

Fig. 2 Output Diagram



Shows direct effects
Shows indirect effects

5. DISCUSSION

Findings of SEM show that Technical Protections, Transaction Procedures and Security Statements are significant factors for improving consumers' perceived security for E-payment system. Further, Consumers' perceived security is positively related to consumers' Trust. And, Trust also has a positive impact on EPS use.Though Perceived Security does not directly affect Use of E-payment system, it has indirect effect on e-payment system through Trust.

Technical Protection and Transaction Procedures are important from consumers' perspective as they affect perceived security which further leads to trust and Use of e-payment system.Thus, in order to increase adoption of e-payment system, system administrators should pay attention to features related to technical protection like authentication and verification, communicating the confirmation of transaction. Error-prone transaction procedures, maintaining privacy and confidentiality of consumer information during e-payment transactions are also important for favorable consumer perception of security. Security statements on security-policy, contact information under emergency, technical descriptions and functionalities of EPS also helps in improving consumer perception about security of the system. The results also indicate that simply improving technical protection of the e-payment system is not sufficient and it is also important to state the security policies of the system and communicate it to consumers throughout the transaction so as to make him feel secure.Management needs to focuson the promotion of security beliefs among consumers when designingsecurity systems.

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CONSUMER PERCEPTION TOWERD E-COMMERCE - A STUDY OF GUJARAT

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Abstract

There is a continuation of the impressive growth of retail e-commerce across the world. E-commerce sector in country like India is rapidly growing and changes can be seen over a year. The growing use of Internet in India provides a developing prospect for online shopping.
Consumer perception is said to be an applied discipline as some decisions are significantly affected by their perception. Customers use the Internet not only to buy the product online, but also to compare prices, product features and after sale service facilities they will receive if they purchased the product online.
This research paper attempt to examine how consumer perceives online shopping and which factors online buyers keep in mind while doing shopping online. This research also focuses on the factors like perceived usefulness; quality of the product and security/privacy which influence consumer's perceptions on online purchasing. This paper may also help online retailers/shoppers to understand the chances that attract and retain customers.

Key Words: Online Shopping, e-commerce, Consumer Perceptions, Attitude, Risk

1. INTRODUCTION

Electronic commerce is experiencing rapid growth in India. The most commercial use of internet is the development of e-commerce. E-commerce has become an integral part of our daily life. The internet based economy is the most established virtual reality of the world today. Small retailing to heavy industrial all kinds of business are now growing in the form of e-commerce.
Japan, China and India are the most significant e-commerce based economies in the Asian and Pacific area, with an average yearly growing rate of e-commerce turnover of 143 per cent all over the last five years (RoniBhowmik, 2012). E-commerce is growing in India significantly though still it is in childhood period. Hundreds of e-commerce websites are operating their business in India.

The Internet explosion has opened the doors to a new electronic world. Consumers are now able to use the Internet for a variety of purposes such as research, communication, online banking, and even shopping. With such advantages, the Internet is rapidly becoming the main method of communication and of conducting business conveniently. With a growing number of households turning towards the Internet and the world of e-commerce to shop, invest, make payments, and do online banking, new technological advancements will have to come about to make these transactions secure.

To develop this economically potential industry in the country from the appropriate dimensions of customer's perceptions and requirements, some salient aspects have to be understood quite thoroughly. Because, to make the any offerings accepted to customers, they should be tailored to the needs of customers' preference.

Classification of E-commerce
E-commerce has been classified into various categories based upon the entities involved in a transaction. They include business-to-business (B2B), business-to-consumer (B2C), consumer-to-business (C2B), consumer-to-consumer (C2C) and business-to-government (B2G) e-commerce

(Bhasker, 2009). B2B is e-commerce carried out between businesses such as between a manufacturer and a wholesaler, or between a wholesaler and a retailer. This is the exchange of products, services, or information between businesses rather than between businesses and consumers. Global B2B transactions comprise 90 per cent of all e-commerce (WTO, 2013). B2C e-commerce entails businesses selling to the general public, typically through catalogues that make use of shopping cart software. Although B2C e-commerce receives a lot of attention, B2B transactions far exceed B2C transactions (WTO, 2013). Consumer-to-business (C2B) can be described as a form of electronic commerce where, the transaction, originated by the customer has a set of requirements specifications and specific price for the commodity, service or item. It is upon the e-commerce entity to match the requirements of the customer to the best possible extent. On the other hand, consumer-to-consumer (C2C) is the e-commerce activity that provides the opportunity for trading of products and/or services amongst consumers who are connected through the internet. This is where individuals transact with each other with the help of an e-commerce platform (Bhasker, 2009). Last but not least, business-to-government (B2G) commerce is generally defined as e-commerce between companies and the public sector. It refers to the use of the internet for public procurement, licensing procedures, and other government related operations (WTO, 2013).

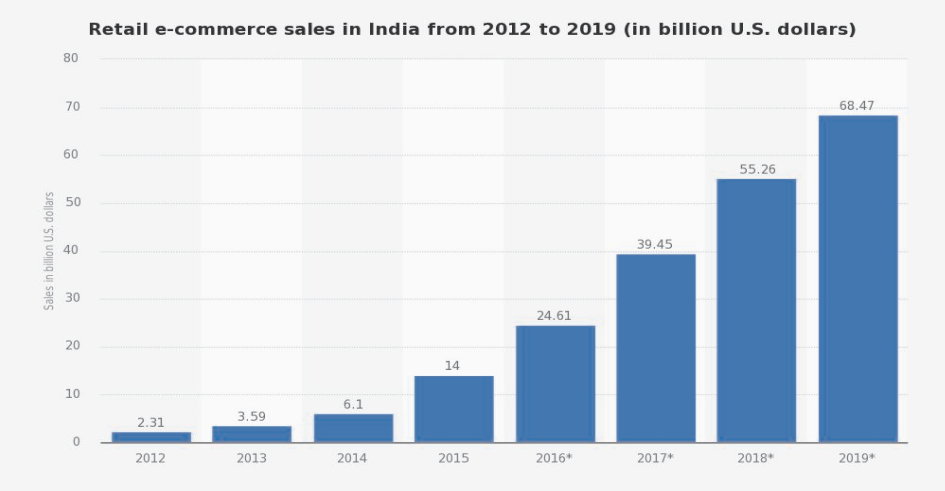
Benefits of E-commerce

The introduction of e-commerce has offered numerous opportunities to businesses, including reduced transaction and search costs, closer relationships with customers, increased profit and customer loyalty. E-commerce also allows businesses to tailor goods and services to fit the needs of smaller, less affluent consumer bases such as those in developing countries (Mann, Eckert & Knight, 2000). Moreover, e-commerce provides the customer with more choices and customization options by better integrating the design and production processes with the delivery of products and services (Richardson, 2007). The consumer also enjoys a wider choice of products and services at lower prices, as well as certain convenience (no unnecessary trips, no restricted business hours). Because of the interactive nature of e-commerce, an advantage for business produces an advantage for consumers and vice versa, thus contributing to the growth and development of this revolutionary means of exchange.

Online Shopping in India

India is one of the world's emerging markets in terms of e-commerce. Online shopping has joyous journey in India, it has not picked up as much as it should have primarily due to the fact that internet penetration itself is quite low and secondly the online shopping experience has been bad to say the least. Although there are grass root problems, Online Shopping in India is evolving fast and has the potential to grow exponentially in the times to come, as the internet penetration reaches far and wide across the rural area. Traditionally, Indians are conservative in their approach to shopping. They want to touch and feel the products and test its features before buying anything. Most of us are also a witness to the recent mall culture where all the products are available under a single roof and at competitive price points. Little needs to be analysed about it over here as most of you might have visited a mall at least for once as a past time on a weekend, if not for shopping precisely.
Business-to-consumer (B2C) is a form of e-commerce whereby a transaction is conducted directly between a company and a consumer.

Figure 1 Retail E commerce Sales in India



Source: E Marketer Statistics 2016

This statistic gives information on retail e-commerce sales in India between 2012 and 2015 and provides a prediction until 2019. In above chart we can see retail e commerce sales is the 2.31 billion US dollar in 2012 and it progressively increases over the period of years. In 2015, retail e-commerce sales amounted to 14 billion US dollars and are projected to grow to 24.61 billion US dollars in 2016 and 55.26 billion US dollars in 2018.

The largest top five online retailing corporations are Amazon.com, FlipKart , Snap deal, Paytm, eBay.in as per the economic times of India. There are many advantages of online shopping; this is the reason why online stores are a booming business today. Online shopping includes buying clothes, gadgets, shoes, appliances, or even daily groceries etc.

Advantages of Online Shopping
1. Save Time
2. Save Fuel
3. Save Energy
4. Comparison of Prices
5. 24/7 Availability
6. Hate Waiting in Lines
7. Too Ashamed to Buy
8. Easy to Search Merchandise You Want to Buy

Disadvantages of Online Shopping
1. Personally Check the Item
2. Diminished Instant Satisfaction
3. Fear of Security
4. Quality of product.
5. Method of Payment

2. LITERATURE REVIEW

Choi, J. & Lee, K. (2003) studied the perception of risk associated with a company and their online presence can also be affected by previous encounters and also affect their decisions to complete purchases without sensory perceptions available in traditional brick-and-mortar stores. Consumers' previous experiences with online purchases, or lack thereof, can be a significant influence of levels of risk perception by consumers and their purchasing decisions.

Boyer, K. K., &Hult, G. T. M. (2005) have find out that Negative experiences increase levels of risk perception with online purchasing and hamper not only a business's likelihood of retaining customers but can make it more difficult for other online businesses to gain initial customers.

Owens and Sarov (2010) conducted a research on Determinants of Consumer Attitudes towards E-commerce where they investigated the influences of various perceived risk, demographic, socioeconomic, and experience factors on consumer behaviour online. The findings strongly demonstrate the importance of various socioeconomic and behavioural factors and their significant influence on consumer attitudes towards shopping online.

A research initiative was taken by **Ashish Bhatt (2014)** on the Indian consumers' perception on e-commerce website entitled 'Consumer Attitude towards Online Shopping in Selected Regions of Gujarat' which focused on factors which online Indian buyers keep in mind while shopping online that research found that information; perceived usefulness, perceived enjoyment and security/privacy are the five dominant factors which influence consumer perceptions on Online purchasing.
Attitude theories illustrate that consumer attitudes towards a product or service will affect consumer behaviour or action against these products or services, marketers need to know the attitude of consumers towards the products it markets, and then formulate strategies to influence consumer attitudes. (**Ramdhani, et al, 2012**).

Leonard N. K. Lori (2012) conducted a research on consumer attitude on C2C e-commerce to find out the influencing factors of attitude. He examined the risk and trust of buyers and sellers by developing two attitudinal models — attitude towards purchasing (for buyers) and attitude towards selling (for sellers). Collecting 248 survey responses from undergraduate students, the results indicate that both trust of the seller and risk of the seller influence the buyer's attitude towards purchasing, but the model changes for seller's attitude towards selling, trust and attitude are combined into one variable and risk is not found to be an influence.
NamitaBhandari and Preeti Kaushal (2013) in their study on online consumer behaviourusing factor analysis and found the reasons for using online shopping like trust, informationabout the product and services, convenience, effortless shopping

Online shopping or marketing is the use of technology (i.e., computer, internet) for better marketing performance. And retailers are mixing strategies to meet the demand of online shoppers; they are busy in studying consumer in the field of online shopping, to see the consumer attitudes towards online shopping and specifically studying the factors influencing consumers to shop online. Consumers' attitude in this regard is influenced by the knowledge about ecommerce sites, perceived reputation and perceived ease of use and the perceived risks regarding security of payment and refund. **(Akbar Saad and James J.T. Paul, 2014)**

VaishalliNikalje (2014) tried to explore show socio-demographic (age, income and occupation), pattern of online buying (types of goods, e-commerce experience and hours use on internet) and purchase perception (product perception, customers' service and consumers' risk) affect co nsumers' attitude towards online shopping Pune city India and found that five factors among the nine affect consumers' attitude

3. RESEARCH METHDOLOGY

Objectives

- To study overall perception towards Online Shopping/E commerce
- To study the satisfaction towards Online Shopping
- To examine consumersperception for online shopping and which factors online buyers keep in mind while doing shopping online

Research Design

As the research is based on the concerned conditions, relationships that exist, opinion that would be held, processes that are going on, effects that are evident and trends that are developing, the research design will be descriptive research design.