

**A Study on Consumer Perceived Risk towards  
Online Shopping  
in Selected Cities of Gujarat State**

A Thesis submitted to Gujarat Technological University

for the Award of

**Doctor of Philosophy**

in

**Management**

by

**Nidhi Sharma**

**Enrolment Nos. 129990992019**

under supervision of  
**Dr. Siddharth Das**



**GUJARAT TECHNOLOGICAL UNIVERSITY  
AHMEDABAD  
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### ABSTRACT

We are living a time of techno-savvy consumers that are connected 24 hrs, 7 days a week, for whom all information is a click away as a result, the consumer's pattern for shopping has changed. Now consumer is moving towards a new platform i.e. online shopping. Online shopping provides various benefits that consumer can derive. First, it saves time and efforts for today's time starved consumer. Second it provides plenty of choices for wide category of items and also the ease of comparing the offerings from different vendors, only at the click of mouse. Another most important benefit is the significant discount provided by the e-retailers to attract the customers. Online shopping also provides global access of products and not bound with the global time differences.

Online shopping opens a new world of opportunities and experiences for consumers. The array of products and services that online shopping offers at different price range makes it an unbelievable market place. Most consumers have open heartedly adapted to online shopping while others have fear of various types of risks. These risks act as deterrent to online shopping.

The main objective of research to study online perceived risk and its impact on consumers' online purchase intentions. The study was also aimed to identify various influencing factors and their impact on online perceived risk. The study was conducted on 610 respondents from select cities of Gujarat namely Ahmedabad, Surat, Rajkot and Vadodra who were approached through both online & offline survey. Various factors of perceived risk were extracted through literature review and exploratory factor analysis. Confirmatory factor analysis was used to verify the factor structure of a set of observed variables. Their impacts were also studied with various types of perceived risk associated with online shopping. The respondents were government and private employees, students and businessmen. Their perceptions of Financial Risk, Performance Risk, Social Risk, Time Risk, Psychological Risk and Privacy Risk for online shopping were assessed using simple regression analysis.

1

# Thesis - A study of Consumer Perceived Risk towards Online Shopping in Selected Cities of Gujarat

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# ABSTRACT

We are living a time of techno-savvy consumers that are connected 24 hrs, 7 days a week, for whom all information is a click away as a result, the consumer's pattern for shopping has changed. Now consumer is moving towards a new platform i.e. online shopping. Online shopping provides various benefits that consumer can derive. First, it saves time and efforts for today's time starved customer. Second it provides plenty of choices for wide category of items and also the ease of comparing the offerings from different vendors, only at the click of mouse. Another most important benefit is the significant discount provided by the e-retailers to attract the customers. Online shopping also provides global access of products and not bound with the global time differences.

Online shopping opens a new world of opportunities and experiences for customers. The array of products and services that online shopping offers at different price range makes it an unbelievable market place. Most consumers have open heartedly adapted to online shopping while others have fear of various types of risks. These risks act as deterrent to online shopping.

The main objective of research to study online perceived risk and its impact on consumers' online purchase intentions. The study was also aimed to identify various influencing factors and their impact on online perceived risk. The study was conducted on 610 respondents from select cities of Gujarat namely Ahmedabad, Surat, Rajkot and Vadodara who were approached through both online & offline survey. Various factors of perceived risk were extracted through literature review and exploratory factor analysis. Confirmatory factor analysis was used to verify the factor structure of a set of observed variables. Their impacts were also studied with various types of perceived risk associated with online shopping. The respondents were government and private employees, students and businessmen. Their perceptions of Financial Risk, Performance Risk, Social Risk, Time Risk, Psychological Risk and Privacy Risk for online shopping were assessed using simple regression analysis.

## **Acknowledgement**

At the outset, I dedicate my doctoral work to my parents - Mrs. Suman Sharma and Mr. Sone Lal Sharma.

I thank God for having given me the perseverance and strength to complete my dissertation.

I thank my present guide Dr. Sidhdharth Das who gave valuable insights during the data collection and analysis process. Special mention to my DPC (Doctoral Progress Committee) members: Dr. Manisha Jalladhar and Dr. Abhinav Singh. Their critical feedback and suggestions made me work better.

My heartfelt thanks to Dr. Rohit Trivedi, who was my guide for the first six semesters. The guidance that he gave at the initiation of doctoral work, helped me frame my research process and gave direction & meaning to my work. My gratitude to my previous DPC members: Dr. Hemant Trivedi and Dr. Kalol Das for giving me multiple perspectives of my topic, which helped me, understand my research work better.

A big thank you to my friend Ms. Daisy Kurien for her support.

Special mention to my mother-in-law Mrs. Maya Devi and my father-in-law Mr. Dhruva Kumar Sharma for their encouragement and blessings.

This work would not have been complete without the two pillars of my life: My husband Mr. Ravi Kant Sharma who believed in my work & provided complete emotional support and my lovely son- Aashman and daughter - Aadrika who inspired me to keep moving ahead during the entire doctoral journey.

Nidhi Sharma

Research Scholar

Gujarat Technological University

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## List of Abbreviation

List of Abbreviation		
Sr. No	Abbreviation	
1	FR	Financial Risk
2	PR	Performance Risk
3	SR	Social Risk
4	TR	Time Risk
5	PSYR	Psychological Risk
6	PRR	Privacy Risk
7	CI	Consumer Innovativeness
8	SA	Consumers' Self-Efficacy
9	HS	Hedonic Shopping Value
10	US	Utilitarian shopping Value
11	IPO	Consumers' Intention to Purchase
12	EFA	Exploratory Factor Analysis
13	CFA	Confirmatory Factor Analysis
14	RMSEA	Root Mean Square Error of Approximation
15	CFI	Comparative Fit Index
16	NFI	Normed Fit Index
17	GFI	Goodness-of-fit
18	AGFI	Adjusted Goodness of Fit Index
19	TLI	Tucker Lewis Index
20	IFI	Incremental Fit Index
21	RFI	Relative Fit Index
22	AVE	Average Variance Extracted
23	CR	Construct Reliability

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# **CHAPTER - 1**

## **INTRODUCTION**

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- 1.17 Terminologies used in Study**
- 1.18 Structure of the Thesis**

## **1.1 Introduction:**

Online shopping opens a new world of opportunities and experiences for customers. The array of products and services that online shopping offers at different price range makes it an unbelievable market place. Most consumers have open heartedly adapted to online shopping while others have fear of various types of risks. These risks act as deterrent to online shopping. In this chapter, researcher has tried to study about the background of the online shopping. It includes internet and its users, growth of online shopping, its pros and cons, current trends in online shopping, challenges of online shopping, and terminology used in the study. This chapter has also gives a brief outline of the overall structure of the study.

## **1.2 Internet:**

Internet is a big network which is formed by connecting many small networks. It works as a platform for all the users which are connected to it. The cyberspace, the information super highway and the net are the other terms used for Internet. According to Camp L. J. (2000), Internet is a set of networks connected using protocols that are open and portable, and that enable the entire research community to share information". Protocols are the set of rules and regulations which are meant for efficient working of Internet. An open protocol refers to those facts that there are no secrets about the working of the software. And a portable protocol associated with the multi functioning of a network with many operating systems.

## **1.3 Internet in India: Users and Usage**

According to a report published by **Statista: The Statistics Portal**, India is the second [largest online market](#), with over 460 million internet users, ranked only behind China. It is estimated that by 2021, there will be about 635.8 million [internet users in India](#). Instead of having large base of internet users in India, only 34.8 percent of the [Indian population accessed the internet](#) in 2015. This is a considerable increase in contrast to the previous years, considering the internet penetration rate in India stood at about 10 percent in 2011. Following table shows year wise data of internet users in India and their penetration rate:



**Table 1.1: Internet Users and Penetration Rate in India**

<b>Internet Users &amp; penetration rate in India</b>					
<b>Year</b>	<b>Internet Users**</b>	<b>Penetration (% of Pop)</b>	<b>Total Population</b>	<b>Non-Users (Internetless)</b>	<b>Population Change</b>
2016*	<b>462,124,989</b>	34.8 %	1,326,801,576	864,676,587	1.2 %
2015*	<b>354,114,747</b>	27 %	1,311,050,527	956,935,780	1.22 %
2014	<b>233,152,478</b>	18 %	1,295,291,543	1,062,139,065	1.23 %
2013	<b>193,204,330</b>	15.1 %	1,279,498,874	1,086,294,544	1.26 %
2012	<b>158,960,346</b>	12.6 %	1,263,589,639	1,104,629,293	1.29 %
2011	<b>125,617,813</b>	10.1 %	1,247,446,011	1,121,828,198	1.34 %
2010	<b>92,323,838</b>	7.5 %	1,230,984,504	1,138,660,666	1.38 %
2009	<b>62,166,128</b>	5.1 %	1,214,182,182	1,152,016,054	1.43 %
2008	<b>52,431,671</b>	4.4 %	1,197,070,109	1,144,638,438	1.47 %
2007	<b>46,597,582</b>	4 %	1,179,685,631	1,133,088,049	1.51 %
2006	<b>32,602,386</b>	2.8 %	1,162,088,305	1,129,485,919	1.55 %
2005	<b>27,327,370</b>	2.4 %	1,144,326,293	1,116,998,923	1.59 %
2004	<b>22,259,583</b>	2 %	1,126,419,321	1,104,159,738	1.63 %
2003	<b>18,692,542</b>	1.7 %	1,108,369,577	1,089,677,035	1.67 %
2002	<b>16,765,756</b>	1.5 %	1,090,189,358	1,073,423,602	1.71 %
2001	<b>7,076,031</b>	0.7 %	1,071,888,190	1,064,812,159	1.75 %

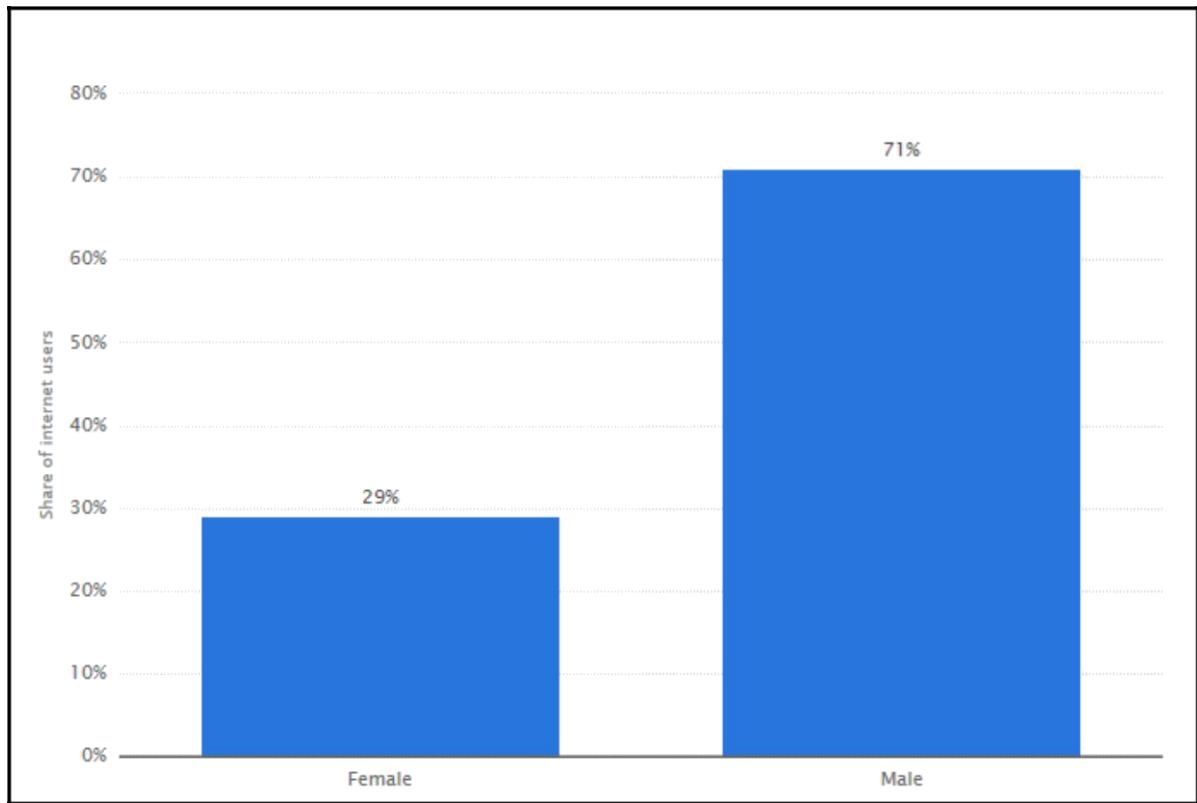
<b>Internet Users &amp; penetration rate in India</b>					
<b>Year</b>	<b>Internet Users**</b>	<b>Penetration (% of Pop)</b>	<b>Total Population</b>	<b>Non-Users (Internetless)</b>	<b>Population Change</b>
2000	5,557,455	0.5 %	1,053,481,072	1,047,923,617	1.79 %

Source: *Internet Live Stats* ([www.InternetLiveStats.com](http://www.InternetLiveStats.com))

\* Estimate for July 1, 2016

\*\* **Internet User** = individual who can access the Internet at home, via any device type and connection. Elaboration of data by *International Telecommunication Union (ITU), World Bank, and United Nations Population Division*.

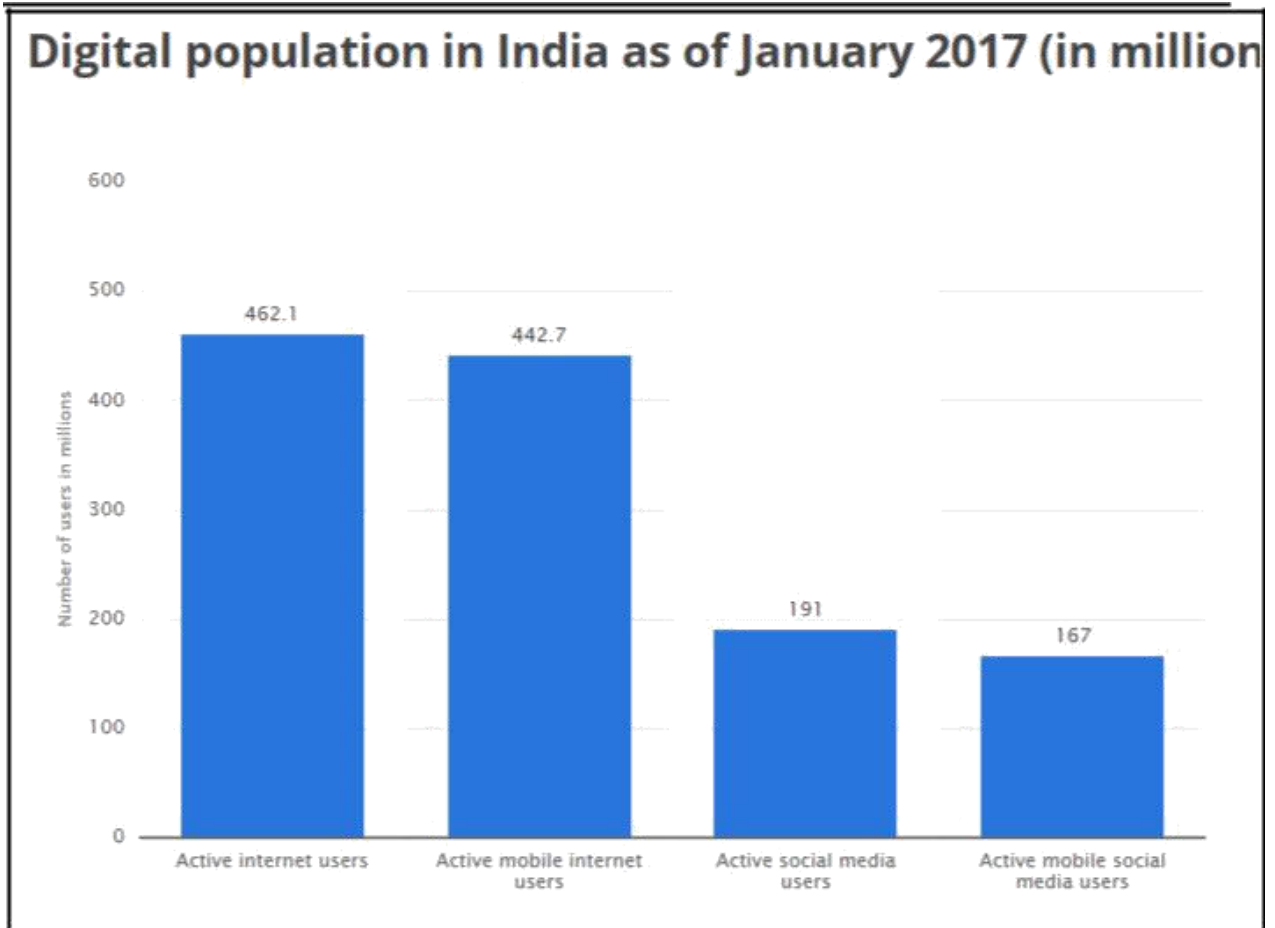
It is revealed in the report on online shopping in India published by Statista-2017 that Indian internet world is dominated by male internet users with 71 percent internet usage. Females are only sharing 29 percent of the internet usages. Gradually females are also taking interest in online shopping but this could be a challenge for e-marketers to attract female internet users as a potential market.



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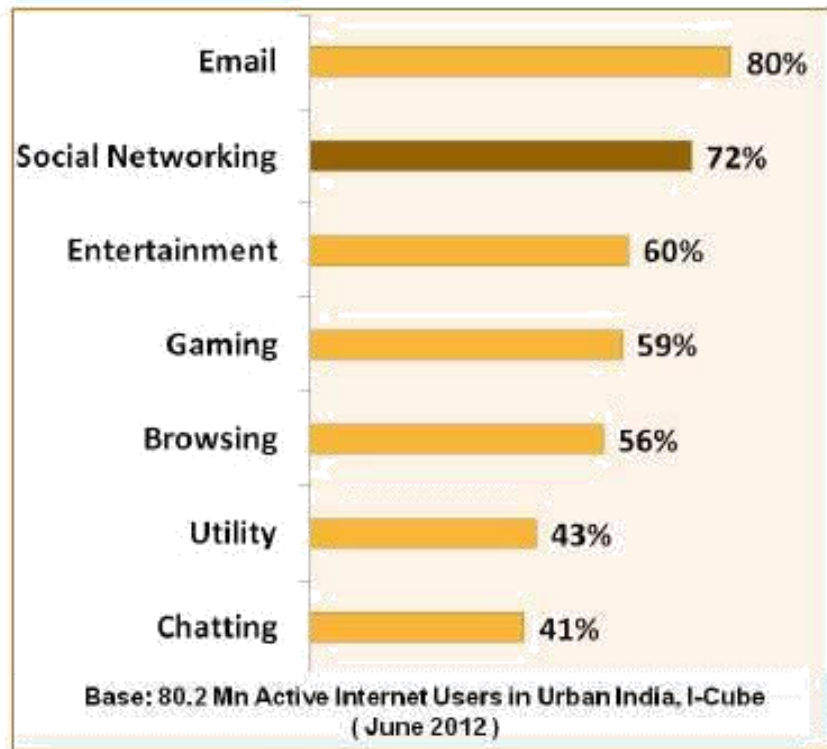
**Figure 1.1: Gender Distribution of Internet usage**

the same report also agreed that mobile Internet is also trending in India. Statistics shows that majority of internet population in India belongs to mobile internet users category. In 2016, number of internet population was about 462 million people and out of them about 323 million people were accessed internet through their mobiles and smart phones with the penetration rate of 24.3 %. Mobile internet users were distributed and 262 million belongs to urban region and 109 million belongs to rural region. Following chart shows the digital population in India as of January 2017.



© Statista 2017 **Figure 1.2: Digital Population in India**

In 2012, a report published by I-cube, a research and analytics organization, disclosed about the major activities performed by internet users in India. It was shown that e-mailing and social networking is the main activities performed by internet users with 80 % and 72% of share, followed by entertainment, gaming, browsing and others.



Source: Report by i-cube.in

**Figure 1.3: Major activities performed by Internet users**

### **1.4 Online Shopping and Internet Marketing:**

Internet is used for several purposes including information search, information sharing, interactive communication, and shopping. Internet is also a medium through which businesses can economically and effectively perform their marketing activities. Online shopping and online marketing are the two terminologies used in online environment. Both are related to the same concept but a different perspective.

According to Susan Ward, Internet Marketing could be defined as “the art and science of selling products and/or services over digital networks, such as internet and cellular phone networks”. Internet marketing is basically discovery of appropriate online marketing mix of strategies through which potential customers could be attracted and converted into the consumers for long time. These strategies should be selected through an appropriate research and analysis.

On the other hand, online shopping is the act of purchasing products or services over the internet. The popularity of online shopping has grown over the years and the reasons are the convenience, comfort and a shop accessible from home and office (BusinessDictionary.com). As it is a form of e-commerce, the sale and purchase activities are completely done electronically and interactivity in real time.

## 1.5 History of Online Shopping:

An illustrative list of activities occurred during the growth of online shopping is given below:

**Table 1.2: History of online shopping**

Year	Activities in online Market
1979	Michael Aldrich invented online shopping in UK <sup>3</sup>
1981	Thomson Holidays, UK is first B2B online shopping
1982	Minitel was introduced nationwide in France by France Telecom and used for online ordering.
1984	Tesco is first B2C online shopping and Mrs. Snowball, 72, is the first online home shopper
1985	Nissan UK sells cars and finance with credit checking to customers online from dealers' lots.
1987	Swreg, an online payment processor that is the best Paypal alternative for global businesses begins to provide software
1990	Tim Berners-Lee writes the first web browser, WorldWideWeb, using a NeXT computer in UK.
1992	Terry Brownell launches first fully graphical, iconic navigated Bulletin board system online shopping using RoboBOARD
1994	Netscape, US Computer Services Company releases the Navigator browser in October under the code name Mozilla. Pizza Hut offers online ordering on its Web page. Netscape 1.0 is introduced in late 1994 SSL encryption that made transactions secure.
1995	Jeff Bezos, CEO of Amazon Inc., USA launches Amazon.com and the first commercial-free 24 hour. Internet-only radio stations, Radio HK and NetRadio in US start broadcasting. EBay is founded by computer programmer Pierre Omidyar as AuctionWeb in US.

1998	Electronic postal stamps for people residing in US can be purchased and downloaded for printing from the Web.
1998	Alibaba Group is established in China. Alibaba Group is a family of Internet-based businesses which makes it easy for anyone to buy or sell online anywhere in the world
1999	Business.com sold for US \$7.5 million to e-Companies, which was purchased in 1997 for US \$149,000. Business.com helps small-to-medium enterprises discover, compare and purchase products and services to run their businesses.
2000	The dot-com bust.
2001	Alibaba.com achieved profitability in December 2001.
2002	EBay acquires PayPal for \$1.5 billion. <sup>4</sup> PayPal is the faster, safer way to send money, make an online payment, receive money or set up a merchant account.
2003	Amazon.com posts first yearly profit.
2004	DHgate.com, China's first online b2b transaction platform is established, forcing other b2b sites to move away from the "yellow pages" model.
2007	Business.com acquired by R.H. Donnelley for \$345 million. <sup>6</sup>
2009	Zappos.com, an online shoe and apparel store acquired by Amazon.com for \$928 million. <sup>7</sup> Retail Convergence, operator of private sale website RueLaLa.com, acquired by GSI Commerce for \$180 million, plus up to \$170 million in earn-out payments based on performance through 2012. <sup>8</sup> GSI Commerce is an eBay company specializing in creating, developing and running online shopping sites for brick and mortar brands and retailers.
2010	Groupon reportedly rejects a \$6 billion offer from Google. Instead, the group buying websites plans to go ahead with an IPO in mid-2011. <sup>9</sup> Groupon, is a deal-of-the-day website that features discounted gift certificates or discount coupons usable at local or national companies.
2011	US ecommerce and Online Retail sales projected to reach \$197 billion, an increase of 12 percent over 2010. <sup>10</sup> Quidsi.com, parent company of Diapers.com, acquired by Amazon.com for \$500 million in cash plus \$45 million in debt and other obligations. <sup>11</sup> GSI Commerce, a company specializing in creating, developing and running online shopping sites for brick and mortar businesses, acquired by eBay for \$2.4 billion. <sup>12</sup>

Source: R.B. Faldu (2013)

## **1.6 Online Shopping and Traditional Shopping:**

Liang and Lai (2000) describe online consumer behavior as a process of purchasing goods and services via internet. Further he explains that both online and traditional shopping process has similar steps. They have five steps including recognition of need, information search on internet, evaluation of alternatives, and selection of best one which fits into the criteria and finally, a transaction conducted.

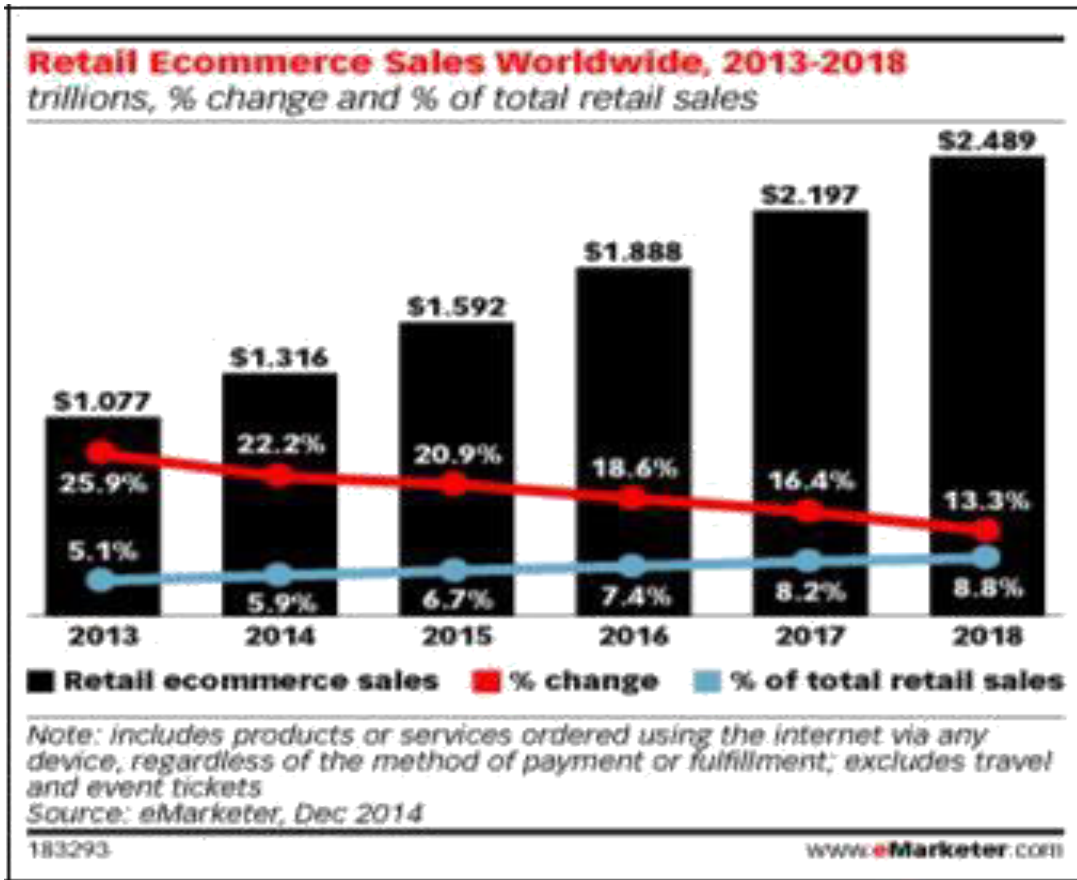
If we give a close look to the online and offline consumer behavior, it could be identified that there are atleast two types of concerns that distinguish online consumers from offline consumers. First; Technology, online consumers have to interact with the technology for purchasing any product or service. The brick and mortar environment is replaced by online shopping environment. This gives rise in technical problems (O’Keefe et al., 2000). Second major concern is the level of trust, online shopping environment required high level of trust among the consumers in comparison to traditional shopping. Trust mitigates the feelings of uncertainty that arise when the shop is unknown, the quality of product is unknown and settlement performance is unknown (Tan and Thoen, 2001).

## **1.7 Global Scenario of Online Shopping:**

According to a study conducted by [global retail by eMarketer](#), the worldwide retail sales – including both in-store and internet purchases reached approximately \$22.492 trillion in 2014. It is estimated that by 2018, worldwide retail sales will increase 5.5 percent to reach \$28.300 trillion.

The following chart shows the world-wide retail e-commerce sale of 2013-2018:





**Figure 1.4: Worldwide Retail e-commerce sales**

It is estimated that China and the US together contributes 55 percent of global internet retail sales in 2014. The study speculates that in next five years China will grow significantly and the gap between the two leading countries become wider and the Chinese market will exceed by \$1 trillion in retail e-commerce sales by 2018. This would cover more than 40 percent of the total worldwide. In a distant third, the UK is estimated for about one-quarter of that figure. The following chart shows the list of top 10 countries as per the retail e-commerce sale world-wide, 2013-2018:

<b>Top 10 Countries, Ranked by Retail Ecommerce Sales Worldwide, 2013-2018</b>						
<i>billions and % change</i>						
	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>1. China*</b>	<b>\$315.75</b>	<b>\$426.26</b>	<b>\$562.66</b>	<b>\$714.58</b>	<b>\$871.79</b>	<b>\$1,011.28</b>
—% change	47.0%	35.0%	32.0%	27.0%	22.0%	16.0%
<b>2. US**</b>	<b>\$264.28</b>	<b>\$305.65</b>	<b>\$349.06</b>	<b>\$394.43</b>	<b>\$442.55</b>	<b>\$493.89</b>
—% change	16.5%	15.7%	14.2%	13.0%	12.2%	11.6%
<b>3. UK**</b>	<b>\$70.39</b>	<b>\$82.00</b>	<b>\$93.89</b>	<b>\$104.22</b>	<b>\$114.64</b>	<b>\$124.96</b>
—% change	17.0%	16.5%	14.5%	11.0%	10.0%	9.0%
<b>4. Japan</b>	<b>\$62.13</b>	<b>\$70.83</b>	<b>\$79.33</b>	<b>\$88.06</b>	<b>\$96.87</b>	<b>\$106.07</b>
—% change	17.9%	14.0%	12.0%	11.0%	10.0%	9.5%
<b>5. Germany</b>	<b>\$51.91</b>	<b>\$63.38</b>	<b>\$73.46</b>	<b>\$82.93</b>	<b>\$91.97</b>	<b>\$99.33</b>
—% change	21.7%	22.1%	15.9%	12.9%	10.9%	8.0%
<b>6. France</b>	<b>\$34.21</b>	<b>\$38.36</b>	<b>\$42.62</b>	<b>\$46.13</b>	<b>\$49.71</b>	<b>\$53.26</b>
—% change	13.2%	12.1%	11.1%	8.2%	7.8%	7.1%
<b>7. South Korea</b>	<b>\$29.30</b>	<b>\$33.11</b>	<b>\$36.76</b>	<b>\$40.43</b>	<b>\$44.07</b>	<b>\$47.82</b>
—% change	12.6%	13.0%	11.0%	10.0%	9.0%	8.5%
<b>8. Canada</b>	<b>\$20.98</b>	<b>\$24.63</b>	<b>\$28.77</b>	<b>\$33.05</b>	<b>\$37.61</b>	<b>\$42.67</b>
—% change	17.7%	17.4%	16.8%	14.9%	13.8%	13.5%
<b>9. Russia</b>	<b>\$15.06</b>	<b>\$17.47</b>	<b>\$20.30</b>	<b>\$23.40</b>	<b>\$26.88</b>	<b>\$30.91</b>
—% change	27.4%	16.0%	16.2%	15.3%	14.9%	15.0%
<b>10. Brazil</b>	<b>\$13.34</b>	<b>\$16.28</b>	<b>\$18.80</b>	<b>\$21.34</b>	<b>\$23.79</b>	<b>\$26.17</b>
—% change	28.0%	22.0%	15.5%	13.5%	11.5%	10.0%
<i>Note: includes products or services ordered using the internet via any device, regardless of the method of payment or fulfillment; excludes travel and event tickets; *excludes Hong Kong; **forecast from Sep 2014</i>						
<i>Source: eMarketer, Dec 2014</i>						
183295				www.eMarketer.com		

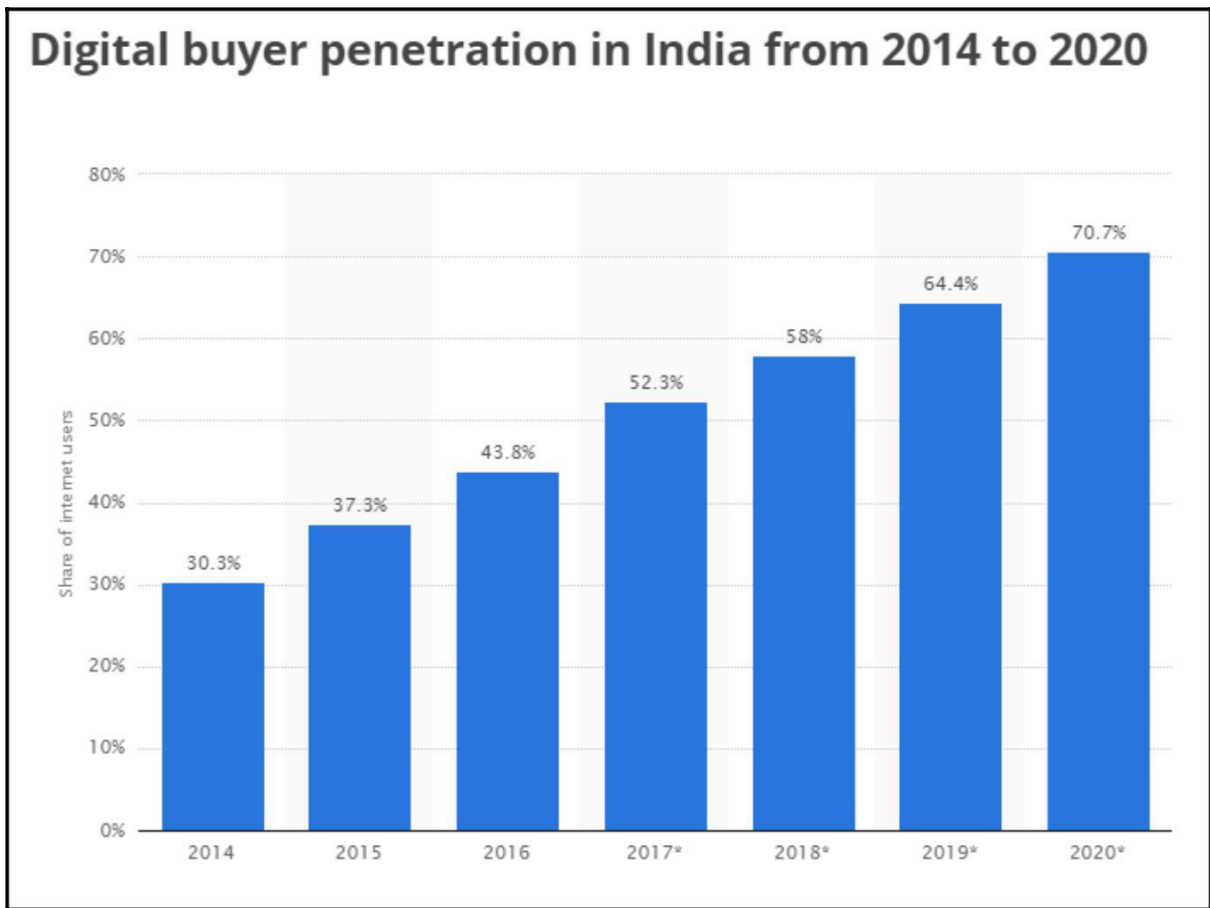
**Figure 1.5: Top 10 Countries for E-commerce sales worldwide**

### **1.8 Growth of Online Shopping in India:**

E-commerce was first introduced in India by Government of India in 2002, when they introduced IRCTC online passenger reservation system. It allowed booking of ticket online from anywhere and at any time.

Online shopping is proved to one of the popular online activity among Indian internet users. It is estimated that 43.8% of internet users had shop online in 2016 and online shopping sales

amounted to about 16 billion U.S. dollars (statista.com). Following chart shows the online shoppers penetration in India:



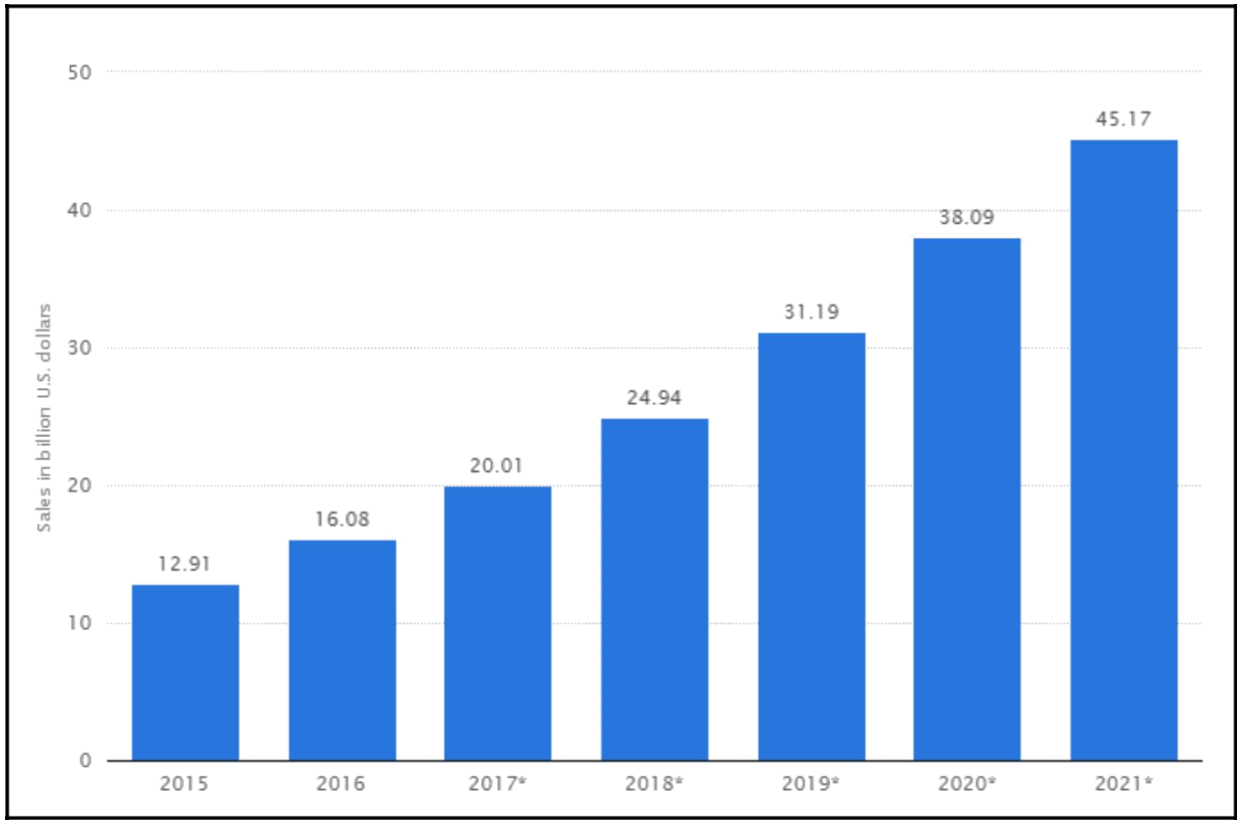
© Statista 2017

**Figure 1.6: Digital buyer penetration in India**

India is a country of billion people, had finished 2015 by exceeding the USA with 239 million smart phone users. In recent years, smart phones become the first or in many case the only way to access internet. Around 49% of the Indian internet users are using their mobiles for purchasing goods and services (statista.com). E-commerce industry of India also has evolving themselves. In a recent study published by DezInfo, reveals that Indian online shoppers show a major shift in preference to the mobile app.

The following chart shows the statistics for internet retail sale in India:

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© Statista 2017

**Figure 1.7: Internet retail sales in India**

Here is a chart displayed the most preferred online stores among Indian online shoppers:



**Figure 1.8: Most preferred e-stores in India**

## 1.9 Advantage of Online Shopping:

There are many advantages of online shopping and this is the cause why online shops are a flourishing business today. Yang, Zhao and Wan (2010) have discussed various advantages and disadvantages of online shopping. Listed below are several online shopping advantages:

- **Save Time** – Online shopping is considered as most convenient and time saving mode of shopping. If you have a specific list of what you want to purchase, just by clicking mouse, a purchase can be made. This time saved by the consumers can be utilized for other vital tasks and hobbies.
- **Save Fuel** – The fuel cost is fluctuating every day, but no matter how much the cost of fuel are it does not influence your shopping motives. One of the advantages of shopping online is that a purchase can be made from your house or office so there is no need for vehicles and fuel cost doesn't bother consumers.
- **Save Energy** – shopping from a local market or from physical stores are a tiresome job. It requires movement from one location to another location. In online shopping, consumers need not to waste their precious energy when buying.
- **Comparison of Prices** – Another important advantage of online shopping is consumer can compare prices of various brands. The advanced innovation of search engine allows consumers to check prices and compare with just a few clicks. The comparison of prices is very straightforward from one online shopping website to another. This gives consumers the freedom to decide which online offers are the most affordable and relevant.
- **24/7 Availability** – Internet is a platform available round the clock of 24/7, 7 days a week and 365 days. It is very rare to find any traditional retail stores that are open 24/7. The 24/7 availability of online stores give consumers the freedom to shop at their pace and convenience.

- **Hate Waiting in Lines** – When buying online; there are no long waiting lines consumers have to tolerate, just to buy any product. Every online store is designed with unique individual ordering features to purchase the product.
  
- **Too Ashamed to Buy** – There are situations when consumer feels embarrassing while purchase some specific products in front of others. Consumer doesn't want to be seen by other people. In online shopping, consumers need not to be ashamed; online transactions are basically done privately.
  
- **Easy to Search Merchandise**– consumers are able to search for specific product that includes model number, style, size, and color that consumers want to purchase. In online shopping, consumer can also determine whether the products are available or out of stock.

### **1.10 Disadvantage of Online Shopping:**

If there are advantages associated with online shopping, most likely there will be disadvantages. Despite the success of purchasing through online shopping stores, there are still some disadvantages that most people complain about. These are:

- **Personally Check the Item** – Online shopping is not for those consumers who want to touch, see, and test the product personally, at online shopping, you are not able to do so. Online stores only show product description and photos, which can be a disadvantage for many online shoppers.
  
- **Diminished Instant Satisfaction** – Online shopping requires patience to wait for the product to arrive at your door step about 2 to 3 days or even longer depending on the location you've ordered it. But from traditional retail stores, consumers are able to use the product instantly after buy, which can be satisfying.

## 1.11 Popular Shopping Websites in India:

Online shopping websites completely change the way of shopping. Open the shopping websites locate the great deals and place the order. If product is not as per requirement then return it. The process makes shopping simple and also time saving. Here is the illustrative list of shopping websites available in India:

- **Flipkart:** This leading Indian company was founded in 2004. Flipkart sells everything from gift vouchers to electronics to home appliances.
- **Amazon:** Amazon is a world's leading company. It provides wide range of products includes fashion, electronics, mobile gadgets, home appliances along with the grocery items. In India, Flipkart gives tough competition to Amazon. Wide variety of products, best customer service, standard product return period of 30 days and free shipping on an order above Rs 499 are the key features of Amazon.
- **Paytm:** This website started just as mobile recharge app, now Paytm become the Indian Alibaba. Paytm provides a number of services like mobile recharges, bill payments, ticket and hotel booking along with wide range of generic products. Paytm offers cash back along with the discounts, which make it different from the shopping site. Sometime such cash back make a big difference and save your extra money.
- **Snapdeal:** Another Indian website, Snapdeal is at the fourth position. Consumers can find great deals on the Snapdeal that make it popular. But if you ask about its customer service then the answer is it gives one of the worst customer services.
- **Shopclues:** Shopclues is like a roadside shopping website that offer inferior products at cheap rates. It is popular due to its discounted and cheap price. The quality of products is good as per its price. If you are looking for extreme quality product then Shopclues will not meet your requirements.
- **Infibeam:** Another India originated company Infibeam is at the 6th position. An online marketplace where you can buy mobile gadgets, electronics and fashion products. Company sells more than 15 million products across 40 product categories. In April 2016, company issued its first IPO and it was successful.
- **Homeshop18:** Homeshop18 is one of the oldest Indian online shopping website. It is a venture of network18 group managed by reliance. Homeshop18 launched India's first

24 hour shopping TV channel. It became popular from there. It offers a wide range of products includes home appliances, electronics, mobiles and apparel.

- **Myntra:** Myntra is at the first position in the list of fashion online sites. It offers a wide range of clothes along with the accessories. Consumer can find clothes of every brand on the Myntra. Although Flipkart acquires Myntra, yet it is a separate online site.
- **Jabong:** Jabong is an Indian fashion and lifestyle ecommerce company. it's product range is wider than the Myntra. It includes apparel, footwear, handbags and other accessories.

The other important websites available in India are Voonik, Yepme, Yebhi, Peperfry, Bigbasket, Urbanclap, Firstcry and many mores.

### 1.12 Product Categories available Online:

Consumers are purchasing all types of products online, but statistics shows that there are certain product categories, such as consumer electronics, books and clothing are purchased by more than half of online shoppers. A survey conducted by Walker Sands (2014) on Future of Retail Study, shows online shoppers' purchase trend. The following chart shows the categories of products purchased by online consumers:



**Figure 1.9: Market share of product categories**



As per the survey report, consumer electronics leads with 69%, followed by books and apparels with 67% and 63% market share respectively. Consumer electronics, books and apparel are the most purchased and favorite product categories by the online consumers. Electronic products and gadgets are seems to be most favorite among online consumers. Books maintain their position in leading favorite product category.

### **1.13 Payment Options in Online Shopping:**

Majority of online shoppers use a credit card to make payments, on the other hand there are some systems allow users to create accounts and pay by alternative means, such as:

- Cash on delivery (C.O.D., offered by almost all online stores)
- Online Cheques (e-cheques)
- Debit card
- E-wallet
- Electronic money
- Gift cards
- Net banking

Some web sites does not accept international credit cards, some require both the shopper's billing address and shipping address to be in the same country in which web site does its business, and still other websites allow customers to send gifts from anywhere to anywhere. The financial part of a transaction might be processed in real time or might be done later as part of the fulfillment process.

### **1.14 Recent Trends in Online Shopping:**

Flipkart, India's largest online retailer had launched its first flagship Big Billion Day sale two years ago. But things did not work as they planned. The founders of Flipkart had apologized for the discomfort faced by consumers due to the heavy traffic. The company was not able to handle the extraordinary traffic. Since then, a lot of change has been seen by online shopping industry. Now India is buying intensely. Now shoppers feel comfortable in buying online and they are buying an expensive LED to the grocery items. The new trends in Indian online shopping environment are listed below:

- After putting a lot of efforts, online retailers moving into smaller cities in India. Now consumers from small cities are also want to take benefits of online shopping. It is important for e-retailers to sustain this interest of consumers from small cities. The country head of India, Mr. Amit Agarwal shares that during 'Great Indian Festival: 2016' 15 million units was sold and interestingly orders came from 90% of India's pin codes. The numbers of new customers increased by five times over last Diwali. 70% of new shoppers belongs to tier II and tier III town (timesofindia.indiatimes.com, Oct 9, 2016, 10.28 AM IST).
  
- Among the product categories purchased by online consumers, mobile phones are the most favorite one. But for e-retailers, white goods and large appliances have been another category with the obvious focus. Vu television is the brand which sells more than 60% of its product online at an average price of Rs. 25,000. Devita Saraf (CEO of Vu television) says that there is an emergence of a new kind of customer for whom online is the prior shopping behavior. Amazon has seen a trend among the online shoppers that they were looking for deals on everyday use products like grocery, detergents, diapers and household products, which means that consumer, did not forget their daily purchases while shopping for other deals. (timesofindia.indiatimes.com, Oct 9, 2016, 10.28 AM IST)
  
- In March 2016, Indian Government has introduced new policy guidelines which banned e-retailers to offer discount directly on online marketplaces. This act of government reduced promotional campaigns in online market. Although companies did eventually find a way to get around the regulation, this year's sales have not offered same kind of high discounts as previous years. But despite that, volumes are up. The co-founder of ShopClues, Radhika Aggarwal finds this situation as a sign of the maturing Indian e-commerce market. She added, "E-commerce was built on discounts to change consumer behavior as there were no other hooks at the time. But now people wait for the sales because of the kind of selection of products they find online". For understanding that what exactly is happens, it is crucial to analyze post-sale month

condition. If the overall market has grown generate new online buyers or the growth was just seasonal. (timesofindia.indiatimes.com, Oct 9, 2016, 10.28 AM IST)

### **1.15 Challenges in Online Shopping:**

In spite of the opportunities of online shopping, it also has poses certain challenges which are sometimes too much to handle for online consumers:

- Indian online shoppers are still not become comfortable with debit or credit card payments for their online purchase. Consumers are still lacking in trust. According to KPMG, an audit firm and Internet and Mobile Association of India (IMAI), cash on delivery (COD) is the most opted payment option by Indian online consumers with 60% of the transactions. Cash on delivery (COD) has a drawback that it leads additional transactional cost of 3%.
- Another major issue is security with online transactions. A lot of customers are still not feeling very comfortable while sharing their personal and account details with e-marketers.
- Intangibility is also one of the challenges for e-marketers. As one cannot see, touch or feel the product, it become difficult for online shoppers to determine the quality of product before placing an order. So lots of people still avoid shopping online.
- Logistic failure in online shopping can deteriorate the image of e-stores and damage its future. A guaranteed return policy could be a better option to get rid of this challenge.
- In a country like India, where all sectors have a different tax rate, accounting problems are also one of the major challenges for Indian Online Market. A uniform tax rate is better solution to get rid of this challenge.

## **1.16 Background of the Research**

India is one of the fastest growing e-commerce markets. Its e-commerce growth rate in 2015 was 129.5 per cent. The growing number of Internet users in the country helped e-marketers in controlling the consumers' skepticism about buying goods and services online. Being one of the fastest growing states in India, Gujarat also shows a significant increase in e-commerce. With only 6 per cent of India's land mass and barely 5 per cent of its population, Gujarat has managed to account for 7.6 per cent of the India's GDP and 22 per cent of its exports. Its annual Gross State Domestic Product (GSDP) growth from 2001 to 2013 averaged nearly 10 percent.

According to a report released by Forrester Consultancy & tech giant in 2014, 100 million Indians will shop online by the year 2016. Snapdeal also claims that their 5 million customers are from Gujarat state. In the past one year, the numbers have gone up by 10 times for Snapdeal. Popular categories of product among Gujaratis include smartphones, computers and apparels.

While the Indian e-commerce industry is growing, e-retailers say that a large number of their customers come from Gujarat and the buyers from the state have been increasing tremendously. An Amazon India spokesperson comments on Gujarat, "Ahmedabad is amongst the top ten cities in terms of sales of Amazon. Moreover the e-commerce adoption is 20 percent higher than India average and m-commerce is the fastest growing segment for Amazon India."

Online shopping offers a new world of opportunities and amazing experiences for customers. The assortment of products and services that online shopping offers at different price range makes it an unbelievable market place. Most of the consumers have open heartedly adapted to online shopping while others have fear of uncertainties and of not fulfilling their expectations. These uncertainties are basically perceived risk. Schiffman et. al. (2007) explains perceived risk as an uncertainty that consumer faces when he cannot foresee the consequences of his purchase decisions. Risks perceived by consumer can become a hurdle in performing internet transactions (Gerrard and Cunningham, 2003).

In this study, researcher has focused on consumer perceived risk towards online shopping, its dimensions and various factors affecting consumer perceived risk.

## **Statement of the problem:**

There are many benefits associated with online shopping. Men and women of all ages visit the e-commerce websites regularly and buy the necessities of life. People, from all geographical areas visit online marketplaces to buy and sell goods. The most striking feature in online market is that it is free of crowd and noise. A person can visit the online shopping site during his free time and place orders to buy an item. Despite of having so many benefits, still people are not stepping towards online shopping mode completely.

According to ASSOCHAM, in 2015 around 55 million consumers purchased online and Internetlivestates shows that in 2015, the number of internet users in India was 354 million. Statistics also reveals a huge gap between number of internet users and number of online shoppers. There is a need to fill this gap. This gap shows the potential of the online market. E-marketers have to focus on this opportunity and try to convert internet users into the online buyers.

The purpose of the study is to help e-marketers in Gujarat to better understand the consumer perceived risk and its influencing factors so that they may frame marketing strategies accordingly. This would lead to better customer satisfaction and strengthen their intention to buy. This study provides suggestions to researchers and practitioners in the industry.

## **Scope of the study**

The study has been done to study consumer perceived risk towards online shopping, its impact on customer purchase intentions and factors influencing perceived risk. Data was collected from 4 major cities of Gujarat – Ahmedabad, Vadodara, Surat and Rajkot. Six types of perceived risk were analyzed by the researcher. The perceived risk were financial risk, social risk, performance risk, time risk, psychological risk and privacy risk Four major influencing factors were studied. The factors were consumer innovativeness, consumer self-efficacy, consumer hedonic shopping values and utilitarian shopping values. Respondents were internet users who have shopped online atleast once in the past six months.

## **Objective of study**

The research was focused on the following objectives:

- 1) To identify various types of perceived risk associated with online shopping.
- 2) To analyze impact of various perceived risk on consumers' online purchase intentions.
- 3) To identify factors influencing consumer perceived risk for online shopping.
- 4) To analyze impact of identified factors on each type of perceived risk. (Factors are consumer innovativeness, internet self-efficacy, hedonic and utilitarian shopping value)

### **1.17 Terminologies used in Study:**

#### **Online Shopping:**

Online shopping is the act of purchasing products or services over the internet. The popularity of online shopping has grown over the years and the reasons are the convenience, comfort and a shop accessible from home and office (BusinessDictionary.com).

#### **Perceived Risk:**

Perceived risk is defined as “the nature and amount of uncertainty perceived by consumers in completing particular purchase decision (Cox and Rich, 1964). Two elements, uncertainty and consequences may play a significant role in perceived risk (Park and Stoel, 2005).

#### **Perceived Financial Risk:**

According to Pires, Stanton & Eckford (2004) define perceived financial risk as concern over any financial loss that might be incurred because of online shopping. There may be financial loss due to hidden costs, maintenance costs or lack of warranty in case of fault.

#### **Perceived Performance Risk:**

Perceived performance risk is defined as concern over the functionality of the communication channel i.e. Internet (Hassan et al., 2006).

#### **Perceived Social Risk:**

Perceived social risk involves the likelihood that online shopping will affect the way others think of the online prospective shopper (Ibid).

#### **Perceived Time Risk:**

Time risk is explained in Ibid, as online shoppers concern over the amount of time required to receive the product. Time risk involves the waiting time for the product or any time lost due to technological difficulty encountered in browsing through the web site or time lost in returning or exchanging the product (Sunita Guru, 2011).

**Perceived Psychological Risk:**

Perceived psychological reflects concern about the psychological discomfort and tension that may arise because of online shopping (Sunita Guru, 2011).

**Perceived Privacy Risk:**

Perceived privacy risk refers to concern over the loss of sensitive and proprietary information (Sunita Guru, 2011).

**Consumer Innovativeness:**

Consumers who are the first to adopt an innovation are described as innovators. This personality construct of individuals reflects their degree of adoption of new products and ideas which they never experienced (Hirschman, 1980).

**Consumer Self-efficacy:**

In 1986, Bandura had identified the concept of consumer self – efficacy as a new computing domain which is basically refers as an individual’s self-confidence in her or his ability to perform a behavior.

**Consumers’ Hedonic Shopping Values:**

Hedonic shopping value is described as an overall measurement of experimental benefits and scarifies. A hedonic shopping value basically focuses on entertaining emotional benefits bringed by online shopping environment (Overby and Lee, 2006).

**Consumers’ Utilitarian Shopping Values:**

Utilitarian shopping value is described as an overall measurement of functional benefits and sacrifices. It is related to how consumer perceive about a purchase activity. Weather they find purchase activity efficient and deliberant and weather this purchase of product fulfills consumers’ need or not (Overby and Lee, 2006).

## **1.18 Structure of the Thesis:**

This thesis contains various chapters, and the chapters will be settled as follows:

### *Chapter 2: Literature Review*

In the chapter of literature review, researcher has made an attempt to analyze prior research work which has been done in the field of online shopping, specifically on consumers' online perceived risk. Researcher has tried to cover all major aspects of consumers' perceived risk. Finally, on the basis of literature review, a framework of the study has been discussed in this chapter.

### *Chapter 3: Research Methodology*

This chapter comprises the research design. Research design includes objectives of the study, hypothesis based on objectives, sampling technique, questionnaire structure, and procedure of data collection. This chapter has discussed pilot study of the research.

### *Chapter 4: Analysis and Interpretation*

This chapter provides the detailed result of the statistical analysis. SPSS and AMOS software packages are used & based on the research objectives as well as hypothesis appropriate statistical tools are selected.

### *Chapter 5: Findings of the Study*

This chapter provides the summary of the whole study. Major findings of the study have also been discussed.

### *Chapter 6: Conclusion, contribution and Limitations of the study*

This chapter discussed the conclusion of the study. It also provides a theoretical & practical implication and limitations, and suggesting future prospects for further research.



# **CHAPTER – 2**

## **LITERATURE REVIEW**

- 2.1 Introduction**
- 2.2 Literature Review**
- 2.3 Perceived risk**
- 2.4 Types of Perceived risk**
  - 2.4.1 Perceived Risk in Traditional Market**
  - 2.4.2 Perceived Risk in Online Market**
  - 2.4.3 Financial Risk**
  - 2.4.4 Performance Risk**
  - 2.4.5 Social Risk**
  - 2.4.6 Time Risk**
  - 2.4.7 Psychological risk**
  - 2.4.8 Privacy Risk**
- 2.5 Consumer Innovativeness**
- 2.6 Consumer Self-Efficacy**
- 2.7 Consumer Hedonic Shopping Value**
- 2.8 Consumer Utilitarian Shopping Value**
- 2.9 Summary of Literature Review**
- 2.10 Research Gap**
- 2.11 Conceptual Framework**

## **2.1 Introduction:**

A literature review is an important and essential part of any research study. Literature review of any study is not a cup of tea; it involves scholarly maturity. A good literature review shows researcher's hold on the particular field, researcher's methodological superiority in criticizing other's research work, an indication of professional maturity of researcher and breadth and depth of researcher's reading (Krathwohl, 1988). Once outside sources are assembled, researcher can evaluate, synthesize, concentrate and rephrase the gist of outside sources in researcher's words. Through this researcher could be able to explain the relevance of research topic. The review of literature helps in comparing and contrasting what researcher are doing in the historical context of the research as well as how this work is original or different from what others have done. It helps to downsize why this research is need to do. Literature review helps researcher in avoiding repetition of research work and researcher can tailor and tweak research work in such a way that it is not a simple revising of someone else's old or original idea. Most important literature review has provided a direction and foundation to the new researcher. The process of reviewing literature helps researcher in identifying current state of research on the topic, experts on a particular topic, key questions about the topic that require in future research, most appropriate research design and research methods, sometimes an innovative approach too, which become an important pillar of the whole research.

It is important to have an awareness of the prior work done in the particular area of the research being undertaken for study. To notify with the research work already done and the subject, it was motivating to refer to research work in the form of research papers, articles, magazines, news, white papers and books of referential importance. These references also helped in bringing about consistency in the overall understanding of the study.

In this context, an attempt has been made by researcher to gather various kinds of data and information from the available research journals, books, business newspapers and reports published by various agencies. The researcher has also downloaded information from online resources like e-libraries, e-books, e-journals and many websites.

## **2.2 Literature Review:**

In recent years world has seen a phenomenal growth of internet and users base. In 2014, almost 75% (2.1 billion) of all internet users in the world (2.8 billion) live in the top 20 countries. And the remaining 25% (0.7 billion) is distributed among the other 178 countries, each representing less than 1% of total users ([Internetlvestates.com](http://Internetlvestates.com)). China, the country with most users (642 million in 2014), represents nearly 22% of total, and has more users than the next three countries combined (United States, India, and Japan). Among the top 20 countries, India is the one with the lowest penetration: 19% and the highest yearly growth rate. On the other hand of the range, United States, Germany, France, U.K., and Canada have the highest penetration: over 80% of population in these countries has an internet connection ([Internetliveatates.com](http://Internetliveatates.com)).

According to annual FICCI-KPMG Indian Media and Entertainment Industry Report 2015, the penetration rate of internet users in India is 19 % which is very slow but in future it would be growing and India is close to replace US as the second largest enabled market with number of internet users. In 2016, statistics shown by [Internetlvestates.com](http://Internetlvestates.com) also justifies the above report. United State was replaced by India as the second country having largest number of internet users. The penetration rate is also reached by 27% and 34.8% in 2015 and 2016 respectively. But still the gap of internet users and internet non-users is high comparatively.

The phenomenal growth of internet and its user base influenced each area of economy. It influenced consumers shopping pattern also. Internet provides a new platform for shopping in the form of online shopping. Online shopping opens a new world of opportunities and experiences for customers. The array of products and services that online shopping offers at different price range makes it an unbelievable market place. Most consumers have open heartedly adapted to online shopping while others have fear of various types of risks. These risks act as deterrent to online shopping. According to ASSOCHAM the average online purchases are expected to increase from 66% in 2015 to 78% in 2016. Around 55 million consumers purchased online in the year 2015. Despite of the explosive growth in internet user base, a clear gap between number of internet users and number of online shoppers can be seen, which could be a challenge for marketers.

Literature analysis has made it clear that a barrier to online shopping has been largely examined in terms of risk perception.

### **2.3 Perceived risk:**

The basic concept of perceived risk was first time introduced as a subjective and psychological construct to elucidate phenomena of information seeking and brand loyalty (Bauer, 1967). Perceived risk is considered as a fundamental notion of consumer behavior and is frequently used to explain consumers' risk perceptions and risk reduction methods (Shin, 2010). Schiffman et al. (2007) defines consumers' online perceived risk as the uncertainty that consumers face when they cannot anticipate the consequences of their purchase decision. It shows the consumers' subjective faith about the probability of a non-desirable outcome from any purchase decisions in terms of perceived risk. It is also proved by many researchers that perceived risk develops from consumer uncertainty, especially in the case of Internet shopping (Bakos, 1997; Martin and Camarero, 2008). Cunningham (1967) advised that perceived risk contains two dimensions of risk: uncertainty and consequences. Consequences may involve performance goals (e.g. will the product function according to my anticipation?), psychosocial goals (e.g. what would be the impact of others thinking towards me?), or resources such as money, time and attempt spent to accomplish those goals. Risks perceived by consumer can become a hurdle to performing internet transactions (Gerrard and Cunningham, 2003). Jahankhani (2009) verified that when consumer is engaged with any kind of buying situation, they always perceive a certain level of risk. He also define that risk perceived by consumer is a function of two variables i.e. the amount of consequences and individuals feeling of prejudiced certainty of failure and success. Park and Stoel (2005) have identified that the amount or extent of perceived risk depends and basically varies on the consumer's 'subjective elucidation' of the uncertainty associated with online shopping environment.

Dowling and Staelin (1995), describes consumer behavior towards online shopping. According him, if a consumer perceived risk during an online purchase, they starts employing strategies to reduce risk until it become acceptable, otherwise they will withdraw their purchase decision. Bettman (1973) differentiate perceived risk in two types: inherent and handled risk. Inherent risk is referred as risk before consumer applied risk reduction strategies and handled risk is defined as the risk after the consumer has applied risk reduction strategies. According to Lu et al. (2005), online technology and applications have to expose to security threats like viruses, worms, crackers, password sniffing and spoofing, breaches of personal privacy, theft of fund and hackers attacks.

Perceived risk proves as one of the main reason which stops consumer to shop online. Perceived risk derives from consumer uncertainty, especially in the case of Internet shopping (Bakos, 1997; Martin and Camarero, 2008). Li Guo (2011), conducted a research on influencing factors of consumer purchasing behavior in cyberspace in china and the result of study shows that security of online shopping, prices and commercial credits are the prime factors affecting consumers' shopping behavior and designs of store and genders education levels of consumers are the secondary influencing factors. A Study on attitudes towards online shopping and the internet was conducted by Teo in 2002 has analyzed various factors including consumers' perceived risk and he identify perceived risk as a critical determinant of consumers' willingness to buy online. He said both experts and non-experts individuals differ in their perceptions of risk depending on the nature of the product purchased.

Perceived risk has been examined in surplus of research studies and they all identified a negative association with consumers' online purchase intentions. In addition, perceived risk has a characteristic to generate a restrain aspect of consumers' willingness to participate in online shopping because it has been perceived to increase susceptibilities of online shopping (Pavlou, 2003). In 2013, Khaled Faqih has conducted a research in Jordon, and confirmed that consumer perceived risk is a powerful indicator for explaining consumers' behavior when consumers are more tend to avoid mistakes than to increase utility in online purchasing. He said that it become very important to understand consumers' risk perception and how this risk can be reduced by implanting risk – reduction techniques within online shopping medium. Theodosios Tsiakis (2012) has analyzed consumers' perceived security risk. According to him, the primary factor or reason behind decreasing consumers' willingness on e-business is perceived security risks associated with online transactions. Nepomuceno et al. (2012) have conducted a research on Relationship between intangibility and perceived risk in North America and also investigate the moderating effects of privacy, system security and general security concerns for online shopping environment. The result shows that consumers' perception of risk is increased when two negative pieces of information are processed simultaneously like product intangibility and privacy concern. Besides that, system security is identified as the most relevant concern in online shopping environment.

Chang and Wu (2012) have analyzed the moderating effect of decision making style on consumers' perceived risk and its consequences on online purchase intentions. The finding

indicates that consumer perceived risk toward the web site and product affects online purchasing intention through cognition- and affect-based attitudes. Result shows that lower perceived risk can increase higher cognition-based attitude, affect-based attitude, and online purchasing intention. It is being confirmed that perceived risk is associated with the selection of decision-making styles, including involvement and heuristics. In 2006, Lin and Fang examined the effects of perceived risk of word-of-mouth (WOM) communications by the sender and receiver. The result of the study found that people will avoid WOM communications when they perceive product risky, as the consequences of shopping that product may be more serious than when a product is not risky and individual can be feel regretful and guilty because he/she has suggested the same product.

Perceived risk influences the consumers' possibility of trying new products or services. Perceived risk also influenced both attitude towards online shopping and consumers' intention to purchase online (Vijayarathy and Jones, 2000). On the other hand, Miyazaki and Fernandez (2001), reveals that perceived risk could be reduced as consumers' experience increases. In simple words, initially online consumers perceive higher level of risk and gradually this intensity of risk goes down for every act of online purchase because of experience.

Perceived information quality has been proposed as an important factor of consumers' perceived risk and trusting belief. Consumers' perceived risk and trusting belief have a direct influence on online purchase intentions. Perceived information quality also has two antecedents: control transparency and outcome feedback. Online consumers' perceptions of information quality are significantly higher when control transparency is high. If during initial interactions information cues are available to online shoppers, it can help in building trusting belief and reducing perceived exchange risk (A. Nicolaou and D. Mcknight, 2006). In 2008, Chang and Chen, discovered that website quality plays an important role and affect consumer perceived risk. They discuss that website quality in terms of display of products, availability of information, user friendly web pages, payment options and privacy concern can alter consumers' level of perceived risk. Tsai and Chao Yeh (2010), also investigate effect of website quality on perceived risk of information security and privacy, specifically focused on product quality information, efficiency service quality, website design style, and transaction

and delivery capabilities. They also analyze perceived risk relationship with purchase intentions. The result of their study shows that those consumers who have purchase environmentally sustainable products pays more attention to the quality of website from where they made a purchase. They mainly focused on information security with the website.

Huang, Schrank and Dubinsky (2004) have conducted their research to analyze the relationship between brand names and consumers' perceived risk for both online shoppers and non-shoppers. Result of the study indicates that brand name does influence online shoppers' perceived risk. It was found that online shoppers perceives less risk in comparison to non – shoppers. Online users of age group (18-29) are found more sensitive towards brand name in comparison to other age group consumers. C. Boshoff et al (2011) have conducted a study and found that Performance risk and Social risk have a strong negative influence on Intentions to purchase on a branded web site. On the other hand, personal risk does not have an impact on Intentions to purchase on a branded web site. It is also revealed that brand knowledge does act as a dominating variable between Performance risk and Intentions to buy on a branded web site.

Marine A-Simonian et al. (2012) identified the impact of product brand image and online store image on various types of perceived risk associated with online shopping. Finding shows that product brand image affects online shoppers' purchase intentions by reducing perceived risk directly or indirectly. On the other hand, online store image influences consumers' purchase intentions indirectly by reducing risk perceptions. The various types of risk were analyzed: Financial risk, product risk and time risk. It was also found that financial risk and time risk have significant relationship with consumers purchase intentions.

D'Alessandro et al. (2012) identified the impact of consumer perceived risk and trust on online shopping behavior for a high risk and expensive product such as gemstone. They have identified the three determinants of perceived risk. Theses determinants are privacy concern, types of marketing strategy used by the seller and security practices. They have found that privacy concern, types of marketing strategy used by the seller and security practices influences consumers' perceived risk while they purchase gemstones online. It is also found that perceived risk reduces trust and online purchase intentions.

Bhatnagar et. al. (2000) have found a relationship between perceived risk and their choice of product purchasing from the channel. They explain that level of perceived risk varies as choice

of product category is changed. It has been proved that mode of shopping also plays an important role. If consumer is opting non- store purchasing i.e. online shopping over traditional store shopping, than perceived risk tend to be higher (Dollin et. al., 2005). Bhatnagar et. al. also suggested a negative correlation between knowledge and risk aversion though their study has focus financial risk, product risk as well as security risk. Consumer perceives risk when they start searching and choosing information of their needed products and services before purchasing decisions. If consumers' actual purchasing experience varies from their purchasing goals, they will perceive more risk (Pires, Stanton and Dubinsky, 2004). In 2005, Cunningham et al. investigated that the use of online reservation system is perceived riskier than the traditional airline reservation shopping by consumers. They also have investigated types of perceived risk that affect the consumer during the stage of consumer buying process of airline reservation via online or traditionally. It is being investigated that perceived risk occurred at each stage of consumer buying process. Thaw, Mahmood and Domonic (2009) have conducted a research to investigate relationship between perceived risk, consumers' trust in online transaction, institutional trust and economic incentives provided by e-vendors. The result shows that consumers' trust in online transaction is inversely related to consumer perceived risk. On the other hand, institutional trust and economic incentives does not able to reduce risk perception of consumers.

Martin, Camarero and Jose (2011), have conducted a research study in Spain to provide a model reflecting the mediating role of risk in the transaction as well as the social risk between the channel and repeat purchase intention and also to test the moderating role of the country on that model. They have identified that online risk has a multidimensional structure. It is the combination of risk in the channel, social risk and risk in transaction. It was found that risk in the channel has a positive effect on the other two types of risk. As a cross-cultural effect, they found that Spain shows a lower level of influence of risk on purchase intention than in the case of Japan. Martin and Camarero (2008), has investigated in their another research study that Internet users who buy online more frequently can trust a website only based on their prior satisfaction, whereas users who perceive more risks need to perceive that the firm has a good reputation and bricks-and-mortar experience apart from other signals such the quality of the service.



Guilherme Pires, John Stanton & Andrew Eckford have analyzed in their research study that the consumers' perceived risk for online purchase varies with the frequency of previous purchases, satisfaction with previous purchase experiences, the good service and the level of purchase decision involvement required. The result shows that there is no association between frequency of online shopping and perceived risk, but the satisfaction from the previous online shopping experiences is negatively associated with the consumer perceived risk. It is revealed that good service does matter for online consumer and it decreases the perceived risk whether it was a high or low involvement product.

In 2006, Buttner et al. have conducted a study on online pharmacies to analyze consumer behavior towards them. In this experiment, the impact of product class risk and retailer class risk on consumers' willingness towards retailers' choice in an online shopping decision has been investigated. It is found that when retailer class risk is high, the chance of negative outcome is judged to be higher. On the other hand, product class risk negatively influences the judgments of online consumers. Korgaonkar and Karson (2007) have conducted a research to analyze influence of perceived product risk on consumers' e-tailor shopping preferences in Northeast and southeast USA. The result shows an interaction between perceived product risk and e-store format. It is found that multichannel retailing is beneficiary and has less risk perception. On the other hand, Pure play e-tailors always have high level of risk perception and less trust among the online shoppers.

Crespo et al. (2009) have conducted a study to analyze the influence that perceived risk in online shopping has on the process of e-commerce adoption by online consumers. They have defined many dimensions of perceived risk as financial risk, performance risk, social risk, time risk, psychological risk and privacy risk. They have used Technology Acceptance Model to analyze the relationship between all variables. Research has been conducted on both online shoppers and non-shoppers who did not have experience of shopping. Result of the study confirms that the intention to shop through the Internet is positively affected by general attitude of consumers toward the system and negatively affected by the risk perceived by the consumers associated with the Web.

In the previous study, lots of researchers have used Theory of Perceived Risk (TPR) and Technology Acceptance Model (TAM) to discuss the relationship between perceived risks, perceived ease of use, perceived usefulness, behavior intention and actual online purchase behavior (Gefen, D., and D. Straub, 2000). TAM is most widely used models in e-commerce. Li and Huang (2009), has suggested in their research work that perceived risk is negatively related with perceived usefulness and perceived ease of use. Zhu et al. (2011) have also used Technology Acceptance Model (TAM) to identify the relationship between consumers' purchase intention, perceived trust and perceived risk to websites of specific e-vendors. The results of the study indicates that perceived ease of use, perceived usefulness, trust and perceived risk have impact significantly on consumers' online purchase intentions both directly and indirectly. In addition, it was also found that trust has reduced online consumer perceived risk during online shopping significantly. Pavlou (2003) had also used Technology Acceptance Model (TAM) to analyze consumers' acceptance of e-commerce and role of trust and perceived risk. He found that trust and perceived risks are the direct antecedents of online purchase intentions and suggested that uncertainty reduction is a key component in consumer acceptance in e-commerce.

Jan Svorc (2012) has identified main determinant of consumers' intentions to shop medicaments online in Czech Republic market by using Technology Acceptance Model. He used Theory of Planned Behavior and theory of Reasoned Action as a base model. The result of the study shows that there is a significant relationship between consumers' intentions to shop online and consumer attitude and consumers' perceived risk.

Tan (1999), has worked on risk reduction strategies on Singapore consumers. The finding reveals that Singaporean consumers who have high degree of risk aversion tend to find online shopping a more risky activity than others. It is found that reference group and expert users are proved to be more reliable for reducing consumers' perceived risk. Their references and positive reviews plays important role in reducing risk perception. Moreover, marketer's reputation, brand image and warranty strategies are also proved as effective risk relievers for the potential online shoppers.

In 2011, Abhigyan Sarkar has conducted a study to investigate that how the individual buyer's perceived risks and benefits in online shopping are influenced by his/ her perceived utilitarian or hedonic shopping values. The findings of the study show that consumers with high hedonic

shopping values tend to avoid online shopping. They perceive more risks and lesser benefits in online shopping. They are likely to avoid online shopping, as they cannot touch the product or interact with the salespeople directly while shopping online.

Chaudhuri (1998) has made an interesting analysis where he compared perceived risk by categorizing products into necessities and luxuries. He considered the role of emotion in explaining the relationship between perceived risk and product type. The author analyzed 89 products and found that, if a product belongs to necessity category, then the risk is perceived to be lower in terms of choosing a brand from a product category. However, when it's a matter of controlling of product importance and negative emotion, there is evidence of a positive connection between necessities and perceived risk. This means that there are products categorized as necessities which can produce serious consequences if the right brand is not selected. As far as luxuries are concerned, the relationship with perceived risk is positive; hence, a luxury product will increase the level of perceived risk.

P. Berteau and A Zait (2013) have investigated the moderator variables which could change the relationship between consumers' intention to buy online and risk perception. By using three observable variables: gender, internet experience and online shopping experience and three latent variables: fear of uncertainty, trust and materialism. In results, no moderation effect was found between perceived risk and consumers' intention to buy online which means that they both have inverse relationship. Although, trust and fear of uncertainty was found as antecedents of consumers' perceived risk.

This research purposes six important perceived risk variables such as (financial risk, performance risk, social risk, time risk, psychological risk, and privacy risk), affecting purchasing behavior of online consumers were chosen in this research model according to traditional literature on them, and the empirical evidence obtained from online stores experts and customers.

## **2.4 Types of Perceived risk:**

### **2.4.1 Perceived Risk in Traditional Market:**

Bobbit & Dabhlokar (2001) explained perceived risk as a comprehensive concept and it could not be captured by a single concept. There are various kinds of risk have been suggested, including financial risk, performance risk, physical risk, social risk, convenience risk,

psychological risk, source and privacy risk. According to Phillip Kotler, consumers may perceive functional risk, physical risk, financial risk, social risk, psychological risk and time risk in buying and consuming a product.

**Table 2.1: Perceived Risk in Traditional Market**

<b>Categories</b>	<b>Definition</b>
Functional risk	The product does not perform up to expectations
Physical risk	The product poses a threat to the physical well being or health of the users or others.
Financial risk	The product is not worth the price paid
Social risk	The product results in embarrassment from others
Psychological risk	The product affects the mental well-being of the user

Source: Philip Kotler and Kelvin Lane Keller (2009), Marketing Management, 13th edition

### **2.4.2 Perceived Risk in Online Market:**

Due to the presence on countless online vendors, the importance of perceived risk increases. Perceived risk is likely to become a crucial factor in influencing consumers' behavior. This is because consumer perceives higher level of risk towards online shopping when they believe security to be insufficient.

Nena Lim (2003) examined the phenomena of consumer perceived risk by conducting a focus group and the result reveals that there are three sources of consumer perceived risk. These sources are: technology, vendor and product. Technology makes online shopping process easy and efficient. E-vendors can provide trustworthy products and products should be user-friendly. YE Naiyi (2004) conducted a research on dimensions of consumers' perceived risk in online shopping. The result of the study explains seven factors of perceived risk. These factors were Fraud risk, Delivery risk, financial risk, process & time risk, product risk, privacy risk and information risk. In 2003, Forsythe and Shi have analyzed the effect that performance risk, financial risk, time risk and privacy risk have on online shopping adoption and they observe that the first three facets affect the purchase frequency, while expenditure is only influenced by the economic component. Based on C. Boshoff et al. (2011) research study,

consumer have three types of risk perceptions associated with online shopping intentions, namely performance risk, social risk and personal risk.

A Research study has been conducted in Taiwan by Pi and Sangruang (2011) and defines seven parameters of perceived risk. These are convenience risk, financial risk, performance risk, physical risk, psychological risk, social risk and time risk. The results shows that perceived risk factors like convenience risk, physical risk, performance risk, and social risk have the greatest influence on the attitude toward online shopping in Taiwan. C. Bianchi and L. Andrews (2011) have conducted a research study in Chile to find out relationship between Consumers' perceived risk, attitude and online purchase behavior. The result reveals that consumers' online perceived risk has an inverse relationship consumers' attitude and that attitude has a positive relationship with consumers' intention to continue online purchase.

Stone and Gronhaug (1993) have defined various dimensions of perceived risk (financial risk, psychological risk, time risk, performance risk and physical risk). They have suggested that the financial and psychosocial risks covered the majority of the overall risk perceptions in comparison to others. Korgaonkar, (1982) has selected the two types of perceived product risk most likely to affect consumer behavior in online environment i.e. economic risk and psychosocial risk for his study. In 2004, Gupta et al. risk perception of consumers related to online shopping environment. They have use a composite measure of four different types of risks and on overall risk. Four types of risks are: financial risk, performance risk, psychological risk and social risk. All these types of risk show diverse nature in online environment and reported a very less reliability co-efficient. It was also found that all types of perceived risk have negative impact on consumers purchase intentions.

Zhang et al. (2011) have identified eight dimensions of perceived risk associated with online shopping: social risk, economic risk, privacy risk, time risk, quality risk, health risk, delivery risk and after-sale risk.

On the basis of literature review researcher has identified six dimensions of consumers' perceived risk associated with online shopping as describe below:

**Table 2.2: Perceived Risk in Online Market**

Sr. No.	TYPES OF PERCEIVED RISK	DEFINITIONS	REFERENCES
1	Financial Risk	The potential monetary outlay associated with the initial purchase price as well as the subsequent maintenance cost of the product, and the potential financial loss due to fraud. In other words, The likelihood of suffering a financial loss due to hidden costs, maintenance costs or lack of warranty in case of faults.	Cunningham (1967), Jacoby & Kalpan(1972), Peter & Ryan (1976), Ingene & Hughes(1985), Stone & Gronhughes(1993), Roselius(1971), W. Huang, H. Schrank and A. J. Dubinsky (2004), Sonia San Marti ´n, Carmen Camarero and Rebeca San Jose, 2007, Bhatnagar et al.(2000) and Pradeep A. Korgaonkar and Eric J. Karson (2007)
2	Performance Risk	Describes as a probability that a product purchased results in failure to function as expected. In other words, the possibility of the product malfunctioning and not performing as it was designed and advertised and therefore failing to deliver the desired benefits.	Cunningham (1967), Jacoby and Kaplan (1972), Peter and Ryan (1976), Ingene and Hughes (1985), Stone and Gronhaug (1993)W. Huang, H. Schrank and A. J. Dubinsky (2004) and Biswas & Burman (2009)
3	Social Risk	Describes the fear that a product or service will lead to a loss of status in one's social group. In other words, Potential loss of status in one's social group as a result of adopting a product or service, looking foolish or untrendy.	Cunningham (1967), Jacoby & Kalpan(1972), Peter & Ryan (1976), Sheth (1981), Ingene & Hughes(1985), Stone & Gronhughes(1993), Roselious(1971), W. Huang, H. Schrank and A. J. Dubinsky (2004), Sonia San Marti ´n, Carmen Camarero and Rebeca San Jose, 2007
4	Psychological Risk	It is the possibility that use of a product will result in inconsistency with consumer's self-image/ how purchase decision will affect the opinions other people hold of the shopper. In other words, Potential loss of self-esteem (ego loss) from the frustration of not achieving a buying goal.	Cunningham (1967), Jacoby & Kalpan(1972), Peter & Ryan (1976), Stone & Gronhughes(1993), Roselious(1971), W. Huang, H. Schrank and A. J. Dubinsky (2004) and Pradeep A. KorgaonkarÆ Eric J. Karson (2007) and Sonia San Marti ´n, Carmen Camarero and Rebeca San Jose (2007)

5	Time Risk	It is the probability that a purchase results in loss of time when making a bad purchasing decision by wasting time researching and making the purchase	Cunningham (1967), Peter & Ryan (1976), Ingene & Hughes(1985), Stone & Gronhughes(1993), Roselious(1971), Chen & He (2003), Forsythe and shi (2003) and Littler and Melanthiou (2006)
6	Privacy Risk	Describes as consumer disappointment and frustration at violations of consumer privacy. In other words, potential loss of control over personal information, such as when information about you is used without your knowledge or permission.	Jarvenpaa and Todd (1997), Featherman and Pavlou (2003), J. A. Manzano, C. L. Navarre, C. R. Mafe & S.S. Blas (2009), G. R. Milne, A. J. Rohm and S. Bahl (2004)

### 2.4.2.1 Financial Risk:

Korgaonkar (1982) defines economic/financial risk as how the choice of a product will affect the individual shopper's ability to make other purchases. Hence, it varies with the financial considerations of price in relation to factors such as the shopper's income, ability to pay, and alternative uses of money. Forsythe and Shi (2003) describe financial risk as a potential loss of money. It includes conflicts related to misuses of one's credit card information and refunds. It is found from the research that financial risk comes from trust on online store/retailer and it could be reduced when consumers have strong and positive online store image. Financial risk is defined as the probability of monetary loss associated with purchasing a product by Huang, Shrank & Dubinsky (2004).

### 2.4.2.2 Performance Risk:

Performance risk (also known as functional risk) is defined as the uncertainty and the consequence of a product not functioning at some expected level (Huang, Shrank & Dubinsky, 2004).

Biswas & Burman (2009) examine the mediated effect of consumer perceived risk between consumer search intentions across online and offline shopping medium due to product digitalization. It was found that transaction risk and performance risk influence differentially

search intentions across the online and offline shopping interface. Performance risk was found to be less for digitalized product than for non-digitalized product. It was also found that if performance risk is higher than it leads to higher search behavior. For online airline investigation, performance risk was found most effective (Cunningham et al., 2005).

#### **2.4.2.3 Social Risk:**

Social Risk is associated with the opinions of friends, family and near and dear ones when consumer is purchasing online. Jacoby and Kaplan (1972), explains that social risk involves that at the time of shopping consumers are immediately thinking about the group where they belongs to – generally either family or friends. The importance of social risk has begun to notice after the work of Sheth (1981), who established that social risk can make the consumers' doubt whether to accept their shopping from internet as an innovative medium. Social risk could make consumer to purchase online if they start considering the importance of online buying because their reference groups like friends and family consider online buying fashionable and appropriate and one reason is that most of their reference group members are using this medium of shopping.

According to Ueltschy, Krampf & Yannopoulos (2004), Social risk reflects the disappointment in the individual by friends and family in case of a poor product choice, e-store choice and service choice.

#### **2.4.2.4 Time Risk:**

Time risk describe as the probability that a purchase outcome reflects in loss of time to purchase or retain the product (Chen & He, 2003). In addition Hassan, Kunz, Pearson & Mohamed (2006) explain time risk as the time and effort loss in returning or exchanging the product, and any technological problems such as a slow website server.

Forsythe and shi (2003) describe perceived time risk as a time loss due to the complications in website navigation, product order submission and waiting time for product delivery. In 2006, Littler and Melanthiou have found more reasons for time risk like unfavorable website design. They elaborated that a non-user friendly website design causes difficulty in navigation and product order submission. Thus, a more and positive store image can reduce perceived time



risk by increasing biasness among the online consumers. So it is relieving that effect of store image may reduce time risk in the online shopping environment.

#### **2.4.2.5 Psychological Risk:**

Korgaonkar (1982), explain psychosocial risk as how the purchase decision will affect the opinions of other people hold of the online shopper. Hence, it varies with such factors as the social conspicuousness and social relevance of the product. According to Ueltschy, Krampf & Yannopoulos (2004), psychological risk reflects an individual's disappointment in oneself in case of a poor product choice, e-store choice and service choice.

Zhou, Dai, & Zhang (2007) have discussed that women tend to shop more than the male population in traditional way. But the internet shopping reflects a slight difference in this gender pattern as male population shop more as online shopping provided them convenience and ease. Women found the online shopping as a weak social activity compared with shopping in traditional stores. This is because of lack of face-to-face interaction with sales associates online. Rodgers & M. (2003) had already been identified that women did not find online shopping as convenient as compared to the male population.

#### **2.4.2.6 Privacy Risk:**

According to Aquisti and Grossklags (2005), uncertainty plays an important role in individual decision making when consumer has a condition of privacy risk. Privacy risk is a relevant concept in online shopping in context to online information security.

In 2011, Tsai et. al. examine the role of privacy protection concerns and privacy policy visibility in online shopping decisions. In their experiment, they found that online consumers value privacy concerns and ready to pay a premium for privacy protection. Privacy risk can be reduced by lowering uncertainty and providing detailed information to the consumer because consumer judgment of online phishing risks and intention to purchase differ systematically with the uncertainty conditions of their risk knowledge (Ping An Wang, 2011). Youn (2009), in his study also explained that privacy and information security, both are related to the uncertainty associated with personal information. According to them, privacy risk depends upon that how online vendors handled their personal information. Although, most of the consumers are unaware of how their personal information is being used by online vendors.

Online vendors have to build trust level among their consumers that their private information is in safe hand and not going to be used by anyone else (Rapp et al, 2009). In 1999, Sheehan and Hoy also reveals that consumers avoid websites that require personal data for registration, leading some people to falsify or provide incomplete details.

Of the many previous researches done, this research includes only the following four influencing factors:

## **2.5 Consumer Innovativeness:**

Online shopping is a new medium of purchasing products from internet by an individual. When consumers prefer internet for shopping, they are actually using and accepting technology and innovation. Consumers who buy new products are termed as innovators and the product which they buy are termed as innovations (Manzano, Navarre, Mafe and Blas, 2009). Concept of innovativeness is related to the new product adaptation process. Rogers (1995) establishes a classification with five groups of adopters. Consumers who are the first to adopt an innovation are described as innovators. This personality construct of individuals reflects their degree of adoption of new products and ideas which they never experienced (Hirschman, 1980). Researchers have used many techniques to measure consumer innovativeness; two main approaches to the concept can be distinguished: general innovativeness and innovativeness applied to a specific domain. General innovativeness reflects openness and an individual's search for new experiences and it is a significant predictor of shopping intention (Joseph and Vyas, 1984). According to Citrin et al. (2000) domain specific innovation has a stronger construct of innovativeness. It is of more specific and shows the tendency to adopt and learn innovation in a specific domain. Hirunyawipada and Paswan (2006) also confirm that domain-specific innovativeness envisage more accurately of consumers' actual adoption and attainment of information regarding new products, since it has a narrowest level in the hierarchy of innovativeness. Midgley and Dowling (1978) confirmed this perspective in their study that time of adoption is not a relatively persisting individual characteristic, but rather, it can fluctuate across innovations due to the effect of individual interest in products, environmental and situational factors; and communication process.

Online shoppers have characteristics like they are more innovative, more variety seeking, more impulsive and less risk adverse than Internet Non-shoppers. According to Goldsmith (2000) online innovators tend to exhibit a higher level of self confidence which means that

online shoppers have higher level of knowledge about online shopping process. A research conducted by Nakata and Sivakumar (1996) shows that risk-taking behavior is a typical characteristic of innovative managers. Within the context of online shopping, an individual innovative personality is related to risk-taking tendencies, since an innovative behavior such as online banking use involves unavoidable risk and uncertainty (Gerrard and Cunningham, 2003). Gatignon and Robertson (1992) have conducted a research study on innovation in decision processes where they found that innovators have more favorable attitudes towards risk. They have characteristics like highly educated, higher income level, greater social mobility, higher self esteem and opinion leadership. They are less sensitive for risk associated with online process. Individuals who are highly innovative are more willing to handle uncertainty associated with innovative technologies (Rogers 1995). It is observed that the personality of online shoppers have innovative and risk taking characteristics and both the characteristics are related to each other.

Manzano et al. (2009) revealed in their study that perceived risk is a key inhibitor in online banking. They evaluate impact of consumer innovativeness on various dimensions of perceived risk instead of treating it as a whole concept. They found security risk, performance risk, social risk and privacy risk more influential rather than time risk.

## **2.6 Consumer Self-Efficacy:**

There has been a substantial amount of study on self-efficacy that deals with work-related performance. In 1986, Bandura had identified the concept of consumer self – efficacy as a new computing domain which is basically refers as an individual’s self-confidence in her or his ability to perform a behavior. Individuals who viewed themselves as highly efficacious tend to put an adequate effort that may generate successful outcomes, while those who viewed low self-efficacy are likely to stop their efforts prematurely and fail on the task. On the other hand, Eastine & Larose (2000) has claimed that consumer self – efficacy is not a measure of skill but it is a concept which deals with the degree to which people perceive themselves capable enough to perform a certain task or behavior by employing their own skills. Eastine (2002) has conducted another research on Diffusion of e-commerce: An analysis of the adoption of four e-commerce activities, and has found that self – efficacy is not a new concept; it was there since the Internet is used as a platform for online shopping. He further explain that

individuals' Internet self – efficacy influences their behavioral intentions towards online shopping. Gist and Mitchell (1992) pointed out that self-efficacy has three facets. First, self-efficacy indicates an individuals' comprehensive judgment on whether they are capable enough of implementing a particular task. Second, the judgment on self-efficacy depends on information and experience. Self-efficacy changes as the individual collect information and experiences. Third, a self-efficacy judgment indulges a motivational factor which directly activates individuals' behaviors.

Kim and Kim (2005) have conducted a research study to explore self-efficacy. It was revealed in the study that consumers' self-efficacy has significant impact on consumers' risk perception. It means that when an individual has a higher online transaction self-efficacy then they perceives less risk in comparison to those who have low online transaction self-efficacy. Kim & Hwang (2009) also have supported the fact that online transaction self-efficacy has a negative impact on consumer perceived risk for online shopping.

## **2.7 Hedonic Shopping Value:**

Holbrook and Hirschman (1982) identified a difference in traditional buying decision model (Utilitarian) and modern experiential model (Hedonic) in four substantive areas, which were mental construct, product uses, product classes and individual differences. It was found that in most of the instances emotional desires which come under hedonic motives dominate the utilitarian motives. The intensity of emotional stimulation mainly depends on the desire and capacity for spending emotional resources on for the buyer and these parameters varies within one consumer over the time. They have also stated that any product, how much ordinary it might be, holds some symbolic meanings. The findings of study suggest that for most of the products or brands, the total consumer attitude is poised with at least two dimensions: utilitarian and hedonic. Online shopping is a style of shopping where both utilitarianism and hedonism are likely to occur.

Childers et al., (2001) observed factors like usefulness, ease of use, and enjoyment in estimating consumers' attitude toward online shopping. Consumers prefer enjoyment, flexibility and interactivity in online media. The findings of the study suggested that hedonic and instrumental aspects are important in online purchases. They have also found that web site

design characteristics are important in providing intrinsic enjoyment to the customers. Overby and Lee (2006) describe hedonic value as an overall measurement of experimental benefits and scarifies. A hedonic shopping value basically focuses on entertaining emotional benefits experienced by online shopping environment.

Khare & Rakesh (2011) has conducted a research on Indian students to examine their intentions to purchase. The result of study indicates that Indian students' intention to purchase online is influenced by hedonic value, utilitarian value, attitude toward online shopping and availability of information. It was found that male students have a more positive attitude toward online shopping compared to female students.

In 2009, Ha and Stoel (2009) analyzed online shopping with factors like website quality, enjoyment and trust with respect to customer attitude towards online shopping. They found that consumers' online shopping behavior is also influenced by website appearance, website features, display of images and pictures not only on product experiences. In online shopping environment, Interactivity and enjoyment are important in influencing customers' perception towards shopping websites.

Abhigyan Sarkar (2011) has conducted a research study to find out the relationship between hedonic and utilitarian shopping values of consumers with their perceived risk and perceived benefits. The findings of the study show that consumers with high hedonic shopping values tend to avoid online shopping. They perceive high risk and less benefit in online shopping. They used to avoid online shopping, as they cannot touch the product or interact with the salespeople directly during shopping online. A customer with high hedonic shopping values tends to prefer direct interaction with the product or salespeople, which become stimuli in creating the hedonic arousal. A hedonic customer, therefore, is likely to make most of the purchases by visiting traditional rather than online stores.

## **2.8 Utilitarian Shopping Value:**

The utilitarian values are related to ease of use, display quality, availability of information and transaction convenience. In 2008, Liu, Gao, and Xie found that website design, information quality, product information, convenience in transaction facility and payment mode, security, privacy, delivery and service were important attributes to online shopping. Lee (2006) has found in his study that utilitarian values were more important in online shopping context in

comparison to hedonic shopping values. Overby and Lee (2006) describe utilitarian value as an overall measurement of functional benefits and sacrifices. It is related to how consumer perceive about a purchase activity. Weather they find purchase activity efficient and deliberant and weather this purchase of product fulfills consumers' need or not.

Bridges and Florsheim (2008) propose that increasing hedonic aspects on Web sites does not essentially indicate that customers would purchase online. If e-vendors are making the shopping Web sites experience interactive and entertaining does not guarantee online shopping happens either. Web sites should be easy to navigate and informative enough. Online shoppers look for hedonic, value through stimulation/excitement and playfulness. They get utilitarian value if the Web sites are goal-oriented, convenient, accessible, and provide information easily. Hedonic and utilitarian shopping values are associated with perceived ease of use, freedom, and control (Bridges and Florsheim 2008). Research conducted by Evanschitzky et al. (2004) explains that online shoppers search convenience and product information, which are the components of utilitarian shopping values. According to this research, online shoppers are highly concern for utilitarian aspects.

As we have already seen that Abhigyan Sarkar (2011) has conducted a research study to find out the relationship between hedonic and utilitarian shopping values of consumers with their perceived risk and perceived benefits. The results of the study also support the fact that the customers with high utilitarian shopping values perceive greater benefits in online shopping. Most of the online stores provide the utilitarian benefits to their customers by saving their time and costs. Customers primarily make online purchase in order to get greater convenience. Another finding of this study is that a customer with high utilitarian shopping value is also likely to perceive greater risks in online shopping because their expectation with online shopping is very high. And they have a fear that their expectation could be fulfilled by e-stores or not.

## 2.9 Summary of Literature Review:

**Table 2.3: Summary of Literature review**

SUMMARY OF LITERATURE REVIEW					
Sr. No.	Author	Year	Journal	Title of the Research	Key Findings
<b>Perceived Risk</b>					
1	Martin and Camarero	2008	Journal of psychological behavior	Consumer trust to a web site: moderating effect of attitudes toward online shopping	Perceived risk proves as one of the main reason which stops consumer to shop online. Perceived risk derives from consumer uncertainty, especially in the case of Internet shopping
2	Cunningham, L.F., Gerlach, J.H., Harper, M.D. and Young	2005	International Journal of Service Industry Management	Perceived risk and the consumer buying process: internet airline reservations	Result shows that the use of online reservation system is perceived riskier than the traditional airline reservation shopping by consumers. They also have investigated types of perceived risk that affect the consumer during the stage of consumer buying process of airline reservation via online or traditionally and it is being investigated that perceived risk occurred at each stage of consumer buying process

3	A.Bhatnagar, S. Mishra and H. R. Rao	2000	Communication of the ACM	on risk, convenience and internet shopping behavior association for computing machinery	They have found a relationship between perceived risk and their choice of product purchasing from the channel. They explain that level of perceived risk varies as choice of product category is changed. It has been proved that mode of shopping also plays an important role. If consumer is opting non-store purchasing i.e. online shopping over traditional store shopping, than perceived risk tend to be higher
4	L. R. Vijayasathya and J. M. Jones	2000	Internet Research	Print and Internet catalog shopping: assessing attitude and intentions	Perceived risk influences the consumers' possibility of trying new products or services. Perceived risk also influenced both attitude towards online shopping and consumers' intention to purchase online
5	H. H. Chang & S. W. Chen	2008	Online Information Review	The impact of online store environment cues on purchase intentions: Trust and Perceived Risk as a mediator	Result shows that website quality plays an important role and affect consumer perceived risk. They discuss that website quality in terms of display of products, availability of information, user friendly web pages, payment options and privacy concern can alter consumers' level of perceived risk



6	Martin SS, Camarero C	2008	Journal of psychological behavior	Consumer trust to a web site: moderating effect of attitudes toward online shopping	Result provides a model reflecting the mediating role of risk in the transaction as well as the social risk between the channel and repeat purchase intention. They have identified that online risk has a multidimensional structure. It is the combination of risk in the channel, social risk and risk in transaction. As a cross-cultural effect, they found that Spain shows a lower level of influence of risk on purchase intention than in the case of Japan.
7	Khaled M. S. Faqih	2013	International Management Review	Exploring the Influence of Perceived Risk and Internet Self-efficacy on Consumer Online Shopping Intentions: Perspective of Technology Acceptance Model	Consumer perceived risk is a powerful indicator for explaining consumers' behavior when consumers are more tend to avoid mistakes than to increase utility in online purchasing. He said that it become very important to understand consumers' risk perception and how this risk can be reduced by implanting risk – reduction techniques within online shopping medium. Interestingly he did not found any relationship between self-efficacy and perceived risk.

8	Guilherme Pires, John Stanton & Andrew Eckford		Journal of Consumer Behavior	Influences on the perceived risk of purchasing online	The result shows that there is no association between frequency of online shopping and perceived risk, but the satisfaction from the previous online shopping experiences is negatively associated with the consumer perceived risk. It is revealed that good service does matter for online consumer and it decreases the perceived risk whether it was a high or low involvement product.
9	Dauw Song Zhu, Zui Chih (Rick) Lee, Gwendolyn S. O'Neal & Yen Hsun Chen	2011	Journal of Internet Banking and Commerce	Mr. Risk! Please Trust Me: Trust Antecedents that Increase Online Consumer Purchase Intention	Technology Acceptance Model (TAM) has been used to identify the relationship between consumers' purchase intention, perceived trust and perceived risk to websites of specific e-vendors. The results of the study indicates that perceived ease of use, perceived usefulness, trust and perceived risk have impact significantly on consumers' online purchase intentions both directly and indirectly.
10	Marcelo Vinhal Nepomuceno, Michel Laroche and Marie-Odile Richard, Axel Eggert	2012	Journal of Consumer Marketing	Relationship between intangibility and perceived risk: moderating effect of privacy, system security and general security concerns	The result shows that consumers' perception of risk is increased when two negative pieces of information are processed simultaneously like product intangibility and privacy concern. Besides that, system security is identified as the most relevant concern in online shopping environment.

11	Soo Juan Tan	1999	Journal of Consumer Marketing	Strategies for reducing consumers' risk aversion in Internet shopping	It is found that reference group and expert users are proved to be more reliable for reducing consumers' perceived risk. Their references and positive reviews plays important role in reducing risk perception. Moreover, marketer's reputation, brand image and warranty strategies are also proved as effective risk relievers for the potential online shoppers.
12	A. H. Crespo, I. R. Bosque and M.M. Garcí a de los Salmones Sa ´ nchez	2009	Journal of Risk Research	The influence of perceived risk on Internet shopping behavior: a multidimensional perspective	Research is based on TAM. They have defined many dimensions of perceived risk as financial risk, performance risk, social risk, time risk, psychological risk and privacy risk. Result of the study confirms that the intention to shop through the Internet is positively affected by general attitude of consumers toward the system and negatively affected by the risk perceived by the consumers associated with the Web.
13	Wen-yeh Huang, Holly Schrank & Alan J. Dubinsky	2004	Journal of Consumer Behavior	Effect of brand name on consumers' risk perceptions of online shopping	Result of the study indicates that brand name does influence online shoppers' perceived risk. It was found that online shoppers perceives less risk in comparison to non – shoppers. Online users of age group (18-29) are found more sensitive towards brand name in comparison to other age group consumers.

14	Pradeep A. Korgaonkar and Eric J. Karson	2007	Journal of Business Psychology	The Influence of Perceived Product Risk on Consumers' e-Tailer Shopping Preference	The result reveals that consumers' perceived risk varies with types of e-tailer. Multichannel retailers face less risk and pure play e-tailer faces higher level of risk by online shoppers.
15	Shih-Ming Pi and Jirapa Sangruang	2011	Social Behavior and Personality	The Perceived Risks of Online Shopping in Taiwan	Study defines seven parameters of perceived risk: convenience risk, financial risk, performance risk, physical risk, psychological risk, social risk and time risk. The results shows that perceived risk factors like convenience risk, physical risk, performance risk, and social risk have the greatest influence on the attitude toward online shopping in Taiwan.
16	Lin, T. M. Y., & Fang, C. H.	2006	Social Behavior and Personality: An international journal	The effects of perceived risk on the word-of-mouth communication dyad	The result of the study found that people will avoid WOM communications when they perceive product risky, as the consequences of shopping that product may be more serious than when a product is not risky and individual can be feel regretful and guilty because he/she has suggested the same product.
17	Marine' Aghekyan-Simoniana, Sandra Forsythe, Wi Suk Kwon & Veena Chattaraman	2012	Journal of Retailing and Consumer Services	The role of product brand image and online store image on perceived risks and online purchase intentions for apparel	The study identified the impact of product brand image and online store image on various types of perceived risk associated with online shopping. Finding shows that product brand image affects online shoppers' purchase intentions by reducing perceived risk directly or indirectly. On the other hand, online store image influences consumers' purchase intentions indirectly by reducing risk perceptions.

18	Constanza Bianchi and Lynda Andrews	2012	International Marketing Review	Risk, trust, and consumer online purchasing behavior: a Chilean perspective	Study is conducted in Chile. Result portray that consumers' online perceived risk has an inverse relationship consumers' attitude and that attitude has a positive relationship with consumers' intention to continue online purchase.
19	Sheth, J.N.	1981	Research in Marketing	Psychology of innovation resistance: the less developed concept (LCD) in diffusion research	Study established that social risk can make the consumers' doubt whether to accept their shopping from internet as an innovative medium. Social risk could make consumer to purchase online if they start considering the importance of online buying because their reference groups like friends and family consider online buying fashionable and appropriate
20	Bandura, A. Englewood Cliffs. NJ: Prentice Hall.	1986	Englewood Cliffs. NJ: Prentice Hall.	Social foundations of thought and action: A social cognitive theory.	The result of the study has identified the concept of consumer self – efficacy as a new computing domain which is basically refers as an individual's self-confidence in her or his ability to perform a behavior.
21	Eastin, M. S.	2002	Telematics and Informatics	Diffusion of e-commerce: An analysis of the adoption of four e-commerce activities.	consumer self – efficacy is not a measure of skill but it is a concept which deals with the degree to which people perceive themselves capable enough to perform a certain task or behavior by employing their own skills.
22	Manzano, Navarre, Mafe and Blas	2009	International Journal of Bank Marketing	The role of consumer innovativeness and perceived risk in online banking usage	Results reveals consumer innovativeness as a key construct to improve e-banking adoption both directly and by its effective role in reducing consumer risk perception of using internet channel in the financial services

					context.
23	Overby JW, Lee EJ.	2006	Journal of Business Research	The effects of utilitarian and hedonic online shopping value on consumer preference and intentions	Study describes hedonic value as an overall measurement of experimental benefits and scarifies and utilitarian value as an overall measurement of functional benefits and sacrifices. A hedonic shopping value basically focuses on entertaining emotional benefits and utilitarian value weather consumer find purchase activity efficient and deliberant.
24	Andreas I. Nicolaou and D. Harrison McKnight	2006	Information Systems Research	Perceived Information Quality in Data Exchanges: Effects on Risk, Trust, and Intention to Use	Perceived information quality is found as an important factor of perceived risk and trusting belief. Result shows that if during initial interactions with consumer's information cues are available to online shoppers, it can help in building trusting belief and reducing perceived exchange risk.
25	Hyun-Joo Lee & Patricia Huddleston	2006	Journal of Marketing Channels	Effects of E-Tailer and Product Type on Risk Handling in Online Shopping	results indicate that e-tailer type have a significant impact on Consumer perceived risk in online shopping, but product type does not have any influence. Specifically, consumers perceived lower risk when they purchased a product from multi-channel e-tailers in comparison to a single-channel e-tailers. It is also found that consumer innovativeness has an inverse influence on perceived risk. Money back guarantee, retailer reputation and brand image are the significant risk reduction techniques.

26	Delgado & Hernandez-Espallardo	2008	European Journal of Marketing	Building online brands through brand alliances in Internet	In the online environment return policies, privacy disclosure and assurances of security encryption are risk all reliever tactics that are not only important but unique to this trading platform.
27	C. Boshoff, C. Schlechter and S.-J. Ward	2011	South African Journal of Business Management	Consumers' perceived risks associated with purchasing on a branded web site: The mediating effect of brand knowledge	Study identified three types of risk: performance risk, social risk and personal risk. It was found that Performance risk and Social risk have a strong negative influence on Intentions to purchase on a branded web site. On the other hand, personal risk does not have an impact on Intentions to purchase on a branded web site.
28	Holbrook, M. B., & Hirschman, E. C.	1982	<i>Journal of Marketing</i>	The experiential aspects of consumption: Consumer fantasies, feelings, and fun	In study, a difference in traditional buying decision model (Utilitarian) and modern experiential model (Hedonic) in four substantive areas, which were mental construct, product uses, product classes and individual differences, was identified. It was found that in most of the instances emotional desires which come under hedonic motives dominate the utilitarian motives. The findings of study suggest that for most of the products or brands, the total consumer attitude is poised with at least two dimensions: utilitarian and hedonic.

29	Abhigyan Sarkar	2011	International Management Review	Impact of Utilitarian and Hedonic Shopping Values on Individual's Perceived Benefits and Risks in Online Shopping	The study shows that consumers with high hedonic shopping values tend to avoid online shopping. They perceive more risks and lesser benefits in online shopping. They are likely to avoid online shopping, as they cannot touch the product or interact with the salespeople directly while shopping online.
30	Chaudhari	1998	International Journal of Research in Marketing	Product class effects on perceived risk: The role of emotion.	The necessity and luxurious product categories was compared and it is found that if a product belongs to necessity category, then the risk is perceived to be lower in terms of choosing a brand from a product category. Though, it's a matter of controlling of product importance and negative emotion, there is evidence of a positive connection between necessities and perceived risk.
31	Kamran Khan & Kim Hyunwoo	2009	Jonkoping International Business School	Factors affecting Consumer Resistance to Innovation -A study of Smartphones	They have found consumer resistance a key factor of consumer innovativeness. Innovators have low level of resistance. Result of the study reveals that if consumer perceives higher risk then his/her resistance is also high for Smartphone. Study was conducted in Sweden.
32	Meenakshi Handa and Nirupma Gupta	2009	The Journal of Business Perspective	Gender influence on the innovativeness of young urban Indian online shoppers	This study is conducted to analyze influence of gender on consumer innovativeness of college going young online shoppers of urban India. Open processing innovativeness and domain specific



					innovativeness is being measured. Consumers are not found very innovative in general but, nevertheless are experimental with respect to new retail websites. They surf new retail websites but are hesitant to shop from new online retailers.
33	Ma Mengli	--	International Conference of Innovation & Management	A study of factors affecting consumers attitude towards online shopping intentions in Bangkok, Thailand	The purpose of the study to analyze consumer attitude towards online shopping. Perceived risk was identified as one of the factors influencing and it was found that there was no difference in consumer attitude based on gender, age and education level.
34	E. B.Alcaniz, Carla R. Mafe, J. Manzano and S. S.Blas	2008	Online Information Review	Influence of online shopping information dependency and innovativeness on internet shopping adoption	The purpose is to analyze the influence of online shopping information dependency and innovativeness on the acceptance of internet shopping. Analysis shows that consumer innovativeness and online shopping information dependency has a direct and positive influence on future online shopping intention. Online shopping information dependency can be increased with interfaces that are easier to use, but only if perceived usefulness remains high. Consumer Innovativeness positively influences internet exposure and the ease-of-use perception of the shopping medium.

35	Kyung	2012		The impact of consumer innovativeness, attitude, and subjective norm on cosmetic buying behavior: evidence from APU female students.	This study investigates whether and how factors like consumer innovativeness, attitude, and subjective norm influence cosmetic consumers' purchasing intentions for new cosmetics by exploring the relationships between variables. Consumer innovativeness and attitude towards both skin care and makeup products were crucial predictors of purchase intention in the context of cosmetics.
36	M.E. Gist, and T.R. Mitchell	1992	Academy of Management Review	Self-Efficacy: A Theoretical Analysis of Its Determinants and Malleability	Researchers have found three aspects of self-efficacy: individuals' judgment of implementing specific task, judgment on self-efficacy changes as information and experience changes and self-efficacy involves a motivational factor which activates consumers' behavior.
37	Kim & Kim	2005	the 38 <sup>th</sup> Hawaii International Conference on System Sciences	A Study of Online transaction Self-Efficacy, consumer Trust, and Uncertainty Reduction in Electronic Commerce Transaction	Result was revealed that consumers' self-efficacy has significant impact on consumers' risk perception. It means that when an individual has a higher online transaction self-efficacy then they perceives less risk in comparison to those who have low online transaction self-efficacy.
38	Rachana Kumar & Cevahir Uzkurt	--	Journal of International Business and Cultural Studies	Investigating the effects of self efficacy on innovativeness and the moderating impact of cultural dimensions	A research was conducted in Turkey to investigate the relationship between self efficacy and innovativeness and the moderating effect of cultural dimensions. It was found that a positive relationship between self efficacy and innovativeness exist among the Turkish consumers. Individuals with higher self-efficacy exhibited

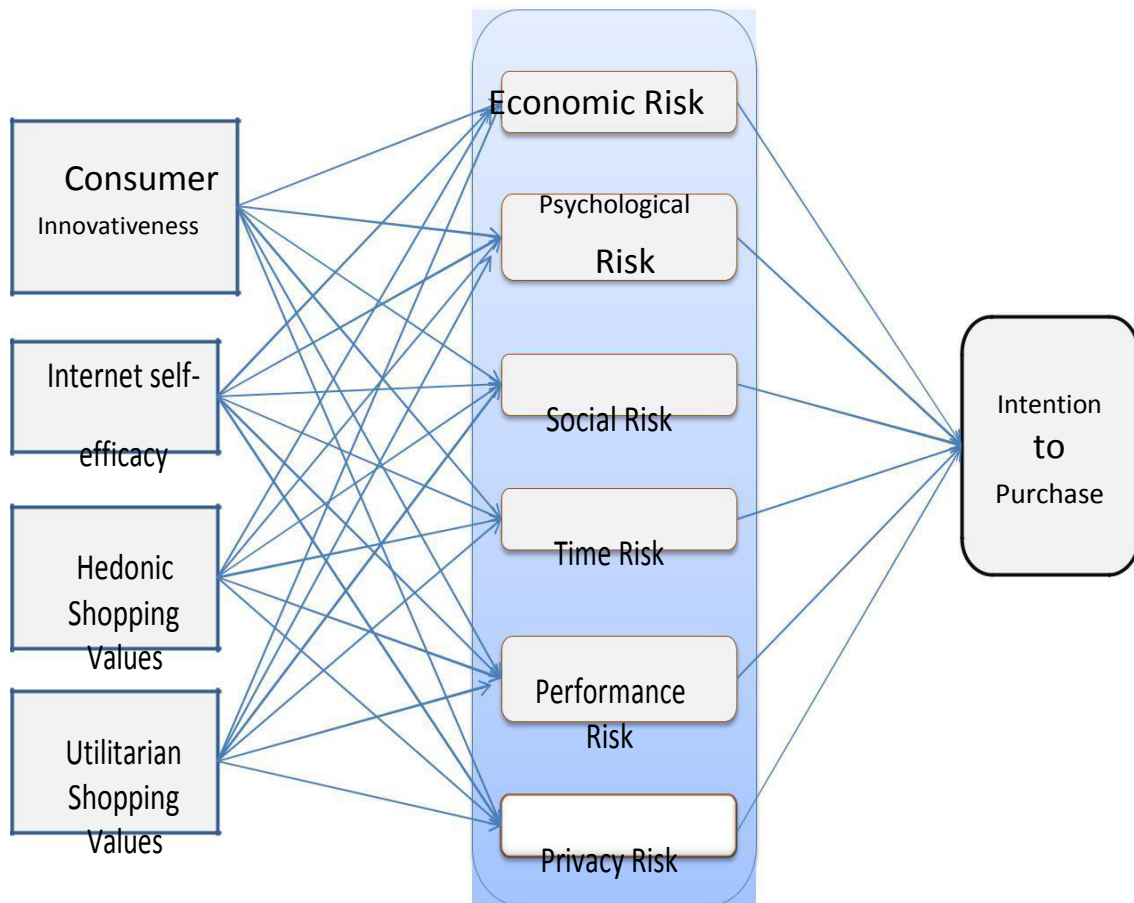
					higher levels of innovative behavior.
39	S. Dash & K. B. Saji	2007	Journal of International Consumer Marketing	The Role of Consumer Self-Efficacy And Website Social-Presence in Customers' Adoption of B2C Online Shopping: An Empirical Study in the Indian Context	The study was conducted in Indian context to explore the role of consumer self-efficacy and online social presence in customers' adoption of online shopping mediated by trust perceived usefulness and perceived risk. The major outcome of the study that consumer self-efficacy influences trust, perceived usefulness and risk and found a negative effect on perceived risk.
40	Arshad, Zafar, Fatima & Khan	2015	International Journal of New Technology and Research (IJNTR)	The Impact of Perceived Risk on Online Buying Behavior	Four risks: financial risk, time risk, security risk and psychological risk had been identified and their relationship with online consumer has been analyzed.
41	Liang and Lai	2000	33 <sup>rd</sup> Hawaii international conference on system sciences	Electronic store design and consumer choice: An empirical study	This paper describes online consumer behavior and found similarities in the shopping process in both traditional and online shopping process.

## **2.10 Research Gap:**

After review various literatures on online shopping and consumers' perceived risk, it can be concluded that it is very important to understand consumers' perception towards online shopping risk because only by reducing perceived risk e-marketer can increase the consumer base for their e-stores and sustain customers for long time period. It is found that there are various types of perceived risk associated with online environment. Researcher has identified six types of risk: financial risk, performance risk, social risk, time risk, psychological risk and privacy risk. Consumer perceived risk can increase the consumers' intentions to purchase online in future as it has an inverse influence on consumers' intentions to purchase (Gefen, D., and D. Straub, 2000). Vijayasathy and Jones (2000) have also explained relationship between perceived risk and future intention to purchase online and it was found that negative relationship exists between perceived risk and future intention to purchase online. During the review of literature, it is found that there are many determinants or constructs influencing consumers' perceived risk directly and indirectly. Out of them consumer innovativeness is the one which has an impact on perceived risk. It was revealed by Manzano, Navarre, Mafe and Blas (2009) that innovativeness can reduce the perceived risk, which means that if a consumer is highly innovative then he/ she will perceive less risk. But this study was conducted only for online banking industry. Another influencing construct is consumer self-efficacy. Kim and Kim (2005) have identified in their study that consumers' self-efficacy has a significant impact on consumers' risk perception. It means that when individuals have a higher online transaction self-efficacy then they perceive less risk. In 1982, Holbrook and Hirschman had developed a model which describes importance of consumer hedonic shopping value and utilitarian shopping value in online environment. Abhigyan Sarkar (2011) explained relationship between shopping values and perceived risk and benefits. He has found that consumers with high hedonic shopping values tend to avoid online shopping. They perceive more risks and lesser benefits in online shopping, as they cannot touch and feel the product. On the other hand, consumers who have more utilitarian shopping values prefer online shopping. They used to perceive high benefit in online shopping but result reveals that these consumers also perceive high level of risk because their expectation with online shopping is very high. All the prior research on perceived risk had been conducted in a different context. It is also not studied that which influencing construct has more or less impact on each types of

risk. As this is a contextual research, researcher has made an attempt to the whole research study for Gujarat region.

## 2.11 Conceptual Framework:



## *Conceptual framework*

**Figure 2.1: Conceptual Framework**

The above diagram shows the conceptual framework of the research study. Theoretically, this research has contributed to the existing body of knowledge pertaining to the factors of consumers' online perceived risk by incorporating new information. An empirical model of consumers' online perceived risk has developed and it has added richness to the perceived risk constructs studied so far in the context of online shopping. Utilizing this model has helped the

researcher in studying its relationship with consumers' purchase intentions for online shopping.

It is very much essential for the e-vendors to understand the role and importance of the risk perceived by online consumers. With the use of empirical model of perceived risk developed in the thesis, e-vendors will be able to identify how consumer innovativeness, internet self-efficacy, hedonic shopping value and utilitarian shopping value affect consumer perceived risk which reduces consumers purchase intentions. On the basis of understandings, e-vendors can formulate the strategies for reducing online perceived risk and strategies for increasing consumers' purchase intentions.

# **CHAPTER – 3**

## **RESEARCH METHODOLOGY**

### **3.1 Introduction**

### **3.2 Problem Identification**

### **3.3 Rationale of study**

### **3.4 Research Philosophy**

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### **3.1 Introduction:**

Research is the conception of new knowledge and the use of existing facts in a fresh and creative way so that new concepts, methodologies and understandings can be generated. Market research is the systematic collection of information or data about people or companies – a market- and analyzes them to better understand their needs and requirements. The results of market research then used to help organizations to take more informed decisions related to company's strategies, future plans, potential customer base and operations. According to American Marketing Association, Market research defines as “Marketing Research is the Function that links the consumer, customer and public to the marketer through information- information used to identify and define marketing opportunities and problems- generate, refine and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process”.

The process of marketing research identifies the relevant information required to deal with these issues, designs information collection methods, implements the data collection process efficiently, analyzes the results and execute the findings and their real world implications 1. Market research provides a platform to understand likes and dislikes needs and requirements, capabilities and expectations of consumers. Market research required a systematic planning of all the stages of process as it is a systematic enquiry. Each stage of market research process should be sound, well planned and well documented as much as possible.

In this chapter, Researcher has made an attempt to outline various aspects of research methodology which includes;

- Identification of problem,
- Rationale of problem,
- Scope of the study,
- Objectives of the study,
- Description of research design selected for the study,
- Sampling method, sample size,
- Instrument of data collection,
- Analysis of pilot study and data analysis tool.



### **3.2 Problem Identification:**

India's internet network is second largest in the world and the numbers of internet users are growing tremendously. According to internetlivestates, in 2015, the number of internet user in India was 354 million. Internet has brought in a revolution in shopping patterns and trends. According to ASSOCHAM the average online purchases are expected to increase from 66% in 2015 to 78% in 2016. Around 55 million consumers purchased online in the year 2015. It has been seen that there is an explosive growth of online users and a positive growth of online shoppers which has led to dramatic shifts in the way purchase activities and transactions are conducted. Despite of this huge growth, statistics shows that internet penetration rate is comparatively less. The gap between opportunity and potential of conducting business on internet is still very large. The clear gap between number of internet users and numbers of online shoppers could be a challenge for marketers. There are many areas on which we have to work out to improve internet as a shopping medium for both vendors and consumers. This study is designed to provide suggestions to online vendors and marketers so that they can understand consumer behavior regarding online shopping. This study also helps e-vendors to understand reasons and barriers of online shopping and finds ways so that internet users can do online shopping without any fear of risk.

### **3.3 Rationale of study:**

Online shopping opens a new world of opportunities and experiences for customers. The array of products and services that online shopping offers at different price range makes it an unbelievable market place. Most consumers have open heartedly adapted to online shopping while others have fears of various types of risks. These risks act as deterrent to online shopping. The literature review has revealed that Lots of research has already been done on online shopping mainly focused on consumer perceived risk. Previous work has done in many ways like; analysis of various types of risk perceived by online shoppers; analysis of impact of perceived risk on consumer purchase intentions; analysis of various factors influencing consumers online perceived risk; role of demographic factors on consumers perceived risk. Moreover, on detailed search the researcher have not found any considerable literature available in Indian context specifically in Gujarat context professed on perceived risk and the various components of the same. According to literature review, it is found that all these

studies have been done in non - Indian context. Researcher has conducted this study in to three parts: in first part types of perceived risk has been analyzed ( analyzed risks are financial risk, performance risk, social risk, time risk, psychology risk and privacy risk), in second part various factors influencing consumers perceived risk has been analyzed (analyzed factors are consumer innovativeness, consumer self-efficacy, hedonic shopping values and utilitarian shopping value) and finally in third part impact of consumer perceived risk on consumer's purchase intentions has been analyzed. The whole study has been conducted on the major four cities of Gujarat. Through this research, the researcher expect to find out the role of perceived risk on consumer purchase intentions and the major factors which plays important role in the level of perceived risk.

### **3.4 Research Philosophy**

All researches make certain assumptions about the nature of the “reality” that is being studied, about how “knowledge” is produced and about the angle or perspective from which the research is approached. (Kent, 2007, p.47) The main methodological assumption in this study is that the consumer perceived risk affects purchase intentions towards online shopping. Discussing philosophical assumptions is a crucial step because it defines the stance taken by the researcher in conducting his/her study. (Creswell, 2007, p.16-19) In this section, researcher has tried to explain the nature of the philosophical assumption. Hence the ontological and epistemological approach will be discussed.

Ontology is a branch of metaphysics that is concerned with the nature of reality (Kent, 2007, p.48). There are two ontological positions which are objectivism and constructionism. Objectivism is an orientation which states that the social reality is external to the researcher, and that social phenomena and their meaning are beyond the reach of social factors. In other words, it exists independently of consciousness or experience and remains unaltered, so there is only one “reality” and this reality is the same for everybody. On the other hand, constructionism is another orientation which states that the reality is constructed by social actors and these actors have a permanent influence on social phenomena and its meaning. (Bryman & Bell, 2007, p. 22-25; Kent, 2007, p.48)

Considering the research study, consumer perceived risk towards online shopping is shaped by factors such as consumer innovativeness (Manzano, Navarre, Mafe and Blas), consumer self-

efficacy (Eastine & Larose), consumer hedonic shopping values (Childers, Overby and Lee) and consumer utilitarian shopping values (Overby and Lee). And those factors have a constant influence on consumer perceived risk for online shopping. Furthermore, consumer perceived risk reality varies overtimes due to social constructed. In conclusion, the philosophy is then based on constructionism.

Epistemology can be defined as “an area of philosophy that is concerned with how knowledge is established” (Kent, 2007, p.48). Bryman and Bell (2007, p. 16-21) discuss two approaches: positivism, and interpretivism. According to them, positivism is assuming that knowledge of a reality is built beyond the human mind. Positivists apparently believe that human experience of the world reflects an objective, independent reality and that this reality provides the foundation for human knowledge. Normally, the objectively verifiable knowledge is possible by setting up and then testing hypotheses that relate to identifiable and measurable variables. The researchers who are labeled as positivists tend to use certain kinds of research methods in their work experiments, surveys, and field studies. On the other hand, interpretivism which assesses that the researcher needs to interpret the reality recognizes that the knowledge they build reflects their particular goals, culture, experience, history, and so on. They intentionally constitute knowledge. Knowledge is built through social construction of the world. Unlike positivists, interpretivists tend to use other kinds of research methods in their work- case studies, ethnographic studies, and ethnomethodological studies.

With regarding to this research conducted, researcher has tried to explore consumer perceived risk towards online shopping and the factors influence perceived risk were investigated as well. Knowledge can be acquired only by quantitative research method in order to measure and test hypotheses. Thus, researcher has decided then to follow a positivism epistemology. Considering both ontological and epistemological considerations, the research philosophy is based on a constructed approach of reality where social interactions are interpreted. Indeed the aim is to understand consumer perceived risk towards online shopping. In this way the research approach is based on both constructionism and positivism.

### **3.5 Scope of work**

The research carried out in the thesis focus on consumers’ online perceived risk, its impact on customer purchase intentions and factors influencing perceived risk. Four major cities of

Gujarat were selected: Ahmedabad, Vadodara, Surat and Rajkot. The major cities were selected on the basis of population. Data was conducted through online and offline survey. Online survey was conducted with the help of SurveyMonkey.com. SPSS 20 and AMOS 20 software were used for analysis of the data. This research would guide online vendors in understanding online shopper's mindset towards risk and it helps them in designing strategies to reduce online perceived risk.

### **3.6 Research Design of the study:**

The research design of this research study is descriptive by nature considering its objectives, hypothesis, sampling decisions, source of information, data analysis as well as in a view of results, findings and limitation of the research study.

#### **3.6.1 Objectives of the study:**

The various research objectives were used as the basics focus of the investigation as follows:

- 5) To identify various types of perceived risk associated with online shopping.
- 6) To analyze impact of various perceived risk on consumers' online purchase intentions.
- 7) To identify factors influencing consumer perceived risk for online shopping.
- 8) To analyze impact of identified factors on each type of perceived risk. (factors are consumer innovativeness, internet self-efficacy, hedonic and utilitarian shopping value)

#### **3.6.2 Illustrative list of hypothesis of the research study:**

An effort has been made by the researcher to design and test various statistical hypothesis derived from review of literature.

For second objective which is to analyze impact of various perceived risk on consumers' online purchase intentions, list of hypothesis has been given as follows:

- Financial risk has a significant impact on consumer purchase intention.
- Performance risk has a significant impact on consumer purchase intention.
- Social risk has a significant impact on consumer purchase intention.
- Time risk has a significant impact on consumer purchase intention.

- Psychological risk has a significant impact on consumer purchase intention.
- Privacy risk has a significant impact on consumer purchase intention.

For fourth objective which is to analyze impact of identified factors on each type of perceived risk, list of hypothesis has been given as follows:

- Consumer innovativeness has a significant impact on Financial Risk.
- Consumer innovativeness has a significant impact on Performance Risk.
- Consumer innovativeness has a significant impact on Social Risk.
- Consumer innovativeness has a significant impact on Time Risk.
- Consumer innovativeness has a significant impact on Psychological Risk.
- Consumer innovativeness has a significant impact on Privacy Risk.
- **Internet self-efficacy has a significant impact on Financial Risk.**
- Internet self-efficacy has a significant impact on Performance Risk.
- Internet self-efficacy has a significant impact on Social Risk.
- Internet self-efficacy has a significant impact on Time Risk.
- Internet self-efficacy has a significant impact on Psychological Risk.
- Internet self-efficacy has a significant impact on Privacy Risk.
- Consumer hedonic shopping value has a significant impact on Financial Risk.
- Consumer hedonic shopping value has a significant impact on Performance Risk.
- Consumer hedonic shopping value has a significant impact on Social Risk.
- Consumer hedonic shopping value has a significant impact on Time Risk.
- Consumer hedonic shopping value has a significant impact on Psychological Risk.
- Consumer hedonic shopping value has a significant impact on Privacy Risk.
- Consumer utilitarian shopping values has a significant impact on Financial Risk.
- Consumer utilitarian shopping values has a significant impact on Performance Risk.
- Consumer utilitarian shopping values has a significant impact on Social Risk.
- Consumer utilitarian shopping values has a significant impact on Time Risk.
- Consumer utilitarian shopping values has a significant impact on Psychological Risk.
- Consumer utilitarian shopping values has a significant impact on Privacy Risk.

### **3.6.3 Source of information and data:**

Researcher has made genuine efforts in collecting available information from various published sources. Secondary data was collected in form of literature reviewed from various national and international journals, newspapers, business magazines, website, books, online reports and online database.

An illustrative list includes various national and international journals and conferences. Some of them are Journal of Global Information Management, Journal of Global Information Management, Journal of consumer Behavior, Journal of Consumer Affairs, World Academy of Science, Engineering and Technology, ”, IAENG International Journal of Computer Science, Journal of Global Information Management, journal of mobile communication, African journal of business management, Journal of electronic Science and Technology of China, Electronic Commerce Research and Application, Journal of psychological behavior, Journal of systems Integration, International Journal of Consumer studies, journal of consumer marketing, journal of marketing research, journal of Psychology & Marketing, International Journal of Retail & Distribution Management, Journal of Retailing, Marketing Management Journal, Journal of Internet Commerce, Asia pacific journal of marketing and logistics, Journal of Product & Brand Management, journal of Behavior and Information Technology, International Journal of Service Industry Management, Journal of Internet Banking and Commerce, International Journal of Information Science And Technology, Journal of Information Science and Management, journal of Risk Research, Social Behavior and Personality and the 28<sup>th</sup> International Conference on Information systems, Montreal, Canada, the 4<sup>th</sup> Annual workshop on Economics and Information Security, Chicago: National Educational Resources etc.

### **3.6.4 Collection of primary data:**

The primary data was collected by the researcher in the year 20014-15. The primary data was collected by both the medium online and offline. Total numbers of 610 internet users who have purchased online at least once have been surveyed.

The essence of survey method can be explained as “questioning individuals on a topic or topics and then describing their responses” (Jackson, 2011, p.17). In consumer behavior

studies survey method of primary data collection is used in order to reflect attitude of people, test concepts, conduct segmentation research, establish the level of customer satisfaction and a set of other purposes. Researcher has collected primary data to examine consumer's overall opinion towards online shopping process, restrictions in terms of perceived risk associated with the online shopping and role of their innovativeness, efficiency and mode of involvement in online shopping. Questioning in this research study is done in structured way therefore it is called as structured data collection method. Researcher has planned to collect data from 200 respondents from each city (Ahmedabad, Vadodara, Surat and Rajkot). But actual data collection varies from the planned one. Actual distribution is as follows:

**Table 3.1: Distribution of Respondents**

<b>CITY</b>	<b>NO OF RESPONDENT (PLANNED)</b>	<b>NO OF RESPONDENT (Actual)</b>
AHMEDABAD	150	172
VADODARA	150	155
SURAT	150	153
RAJKOT	150	131
TOTAL	600	610

### **3.6.5 Development of research instrument and scaling technique:**

In the simpler form, a questionnaire is not more than a list of questions to which answers are being sought. To reduce the ambiguities or misunderstandings in questioning to a minimum, a number of ways of presenting have been developed (C. Dyer, 1995). A questionnaire is a means of bringing out the feelings, beliefs, experiences, perceptions, or attitudes of some sample of individuals. Questionnaire is a set of questions has been prepared to ask a number of questions and collect answers from respondents relating to the research topic. In 2004, Brace has emphasized the importance of questions formulating to the success of communication process, specifically in consumer market research, which suppose to be able to successfully

tune in to language of respondents that are different in terms of age, gender, education level, occupation as well as income.

In a questionnaire, questions could be of open ended or close ended. Open ended questions are not that good for survey because answers of them would be inadequate and very typical in nature. On the other hand, close ended questions have an advantage that they are pre-coded. For self-compilation questionnaires, close ended questions suits well as they save writing time of respondents (Hague et al., 2004). Therefore, researcher has used close ended questions in the questionnaire and respondents are asked to choose the code of their level of agreement.

In this study, researcher has formulate a structured questionnaire to enquire view of respondent towards various types of perceived risk, consumer innovativeness, consumer self-efficacy, hedonic shopping values, utilitarian shopping values and their future prospect for online shopping. Questionnaire consists of two sections. First section is framed to define consumer's responses towards online shopping and its associated consequences and their view towards various constructs. 5-point likert scale has been used for the study as it is quite easy to construct and administer. 5-point likert scale is defined by Tak-Kee Hui and David Wan (2006) as 1 = Strongly Disagree to 5 = Strongly Agree with reference to online shopping.

**Table 3.2: Scaling of Questionnaire**

No.	Construct	Item coding	Item description	Source
1	CONSUMER INNOVATIVENESS	CI_1	I visit new company's website even if I have not heard of it before.	Handa & Gupta (2009) and Daghfous, N., Petrof, J.V. and Pons, F. (1999)
		CI_2	I know about new retail websites before most other people in my circle do	
		CI_3	I would be the first in my circle to shop online from a new website	
		CI_4	I have a better knowledge of online shopping than other people in my circle.	
		CI_5	I would shop online even if I did not know anyone who had done it before	
		CI_6	Often, people ask my opinion about new products/ new brands/ new websites	



2	SELF-EFFICACY	SA_1	I can shop online even if I have never experienced the same before.	Kim & Kim (2005) and Chan et al. (2004)
		SA_2	I can obtain relevant information of Web vendors through online resources.	
		SA_3	I can get the products that I want, form web vendors.	
		SA_4	I can handle all order and delivery related problems on my own.	
		SA_5	I can find trustworthy web vendors based on ratings provided.	
		SA_6	I am confident about online shopping even if I have only an assistance of “online HELP function”.	
3	HEDONIC SHOPPING VALUES	HS_1	The time spent in online shopping is enjoyable to me.	A Sarkar (2011) and Kim & Eastin (2011)
		HS_2	I enjoy being involved in exciting new products while shopping.	
		HS_3	I enjoy shopping although I do not need the product.	
		HS_4	I feel adventurous while shopping online.	
		HS_5	Online Shopping satisfies my curiosity.	
		HS_6	Online shopping offers new experiences.	
		HS_7	Online shopping gives me pleasure.	
4	UTILITARIAN SHOPPING VALUES	US_1	Online shopping enables me to shop quickly.	Yang (2010) and Davis (1989)
		US_2	Online shopping makes shopping easy.	
		US_3	Online shopping enables me to shop from far off locations.	
		US_4	Online shopping helps in saving my money.	
		US_5	I can compare price easily via internet.	
		US_6	I can buy things whenever I want.	
		US_7	I can get variety of products online.	
5	FINANCIAL RISK	FR_1	I get value for money for products bought online.	A.H.Crespo, R.D.Bosque & Salmones Sanchez
		FR_2	It is safe to disclose credit card details while shopping online.	

		FR_3	Products always get delivered when purchased online.	M.M. (2009)
6	PERFORMANCE RISK	PR_1	I get the same features of the product, as ordered.	A.H.Crespo, R.D.Bosque & Salmenes Sanchez M.M. (2009)
		PR_2	I get the level of benefits as advertised on the Website.	
		PR_3	The product performs the same as promoted.	
7	SOCIAL RISK	SR_1	Online shopping creates good opinion about me in my circle.	A.H.Crespo, R.D.Bosque & Salmenes Sanchez M.M. (2009)
		SR_2	All people from my circle may agree to my online buying decision.	
		SR_3	My friends and relatives think that I am wise.	
8	TIME RISK	TR_1	Searching products does not take time.	A.H.Crespo, R.D.Bosque & Salmenes Sanchez M.M. (2009)
		TR_2	Placing order does not take time.	
		TR_3	Online shopping provides quick delivery of product.	
9	PSYCHOLOGICAL RISK	PSY_1	I feel comfortable while shopping online.	A.H.Crespo, R.D.Bosque & Salmenes Sanchez M.M. (2009)
		PSY_2	Online shopping does not make me feel anxious.	
		PSY_3	I do not get tense during shopping online.	
10	PRIVACY RISK	PRR_1	My personal information is not used without my knowledge.	A.H.Crespo, R.D.Bosque & Salmenes Sanchez M.M. (2009)
		PRR_2	Due to online shopping, I do not receive unnecessary e-mails.	
		PRR_3	My personal information is not used improperly.	
11	INTENTION TO SHOP ONLINE	IPO_1	I will continue to purchase products online.	W.M.Ling & D.H.Ting (2012)
		IPO_2	I will shop online for my needs.	
		IPO_3	I plan to do more of my shopping via online shopping sites.	
		IPO_4	I recommend good online store to others.	

### **3.7 Sample Design:**

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample (C. R. Kothari, 2004). A sample design is the framework, or road map, that serves as the basis for the selection of a survey sample and affects many other important aspects of a survey as well. A sample is a subset of population which has been studied. It is the representation of larger population and further it is used to draw conclusions about that population. It is a widely used technique in social studies as a method of gathering information about a population. And there is no need to measure the entire population (Crossman, 2017). A sample design includes:

- Sample unit
- Sample technique
- Sample size

#### **3.7.1 Sample Unit:**

A sampling unit is a unit or an element, which is available for selection at some stage of sampling process. A sampling unit can refer to any single person, animal, plant, product or 'thing' being researched. The term sampling unit refers to a singular value within a sample database. Sampling units are taken from an entire population, such as a country, customer database or region, and put into a smaller group to form a research sample. This group of units is then used to research, analyze and draw conclusions on. In this study, the purpose is to study consumer perceived risk towards online shopping and to study the impact of consumer innovativeness, self-efficacy, hedonic and utilitarian shopping value on the level of risk perceived by consumers. The scope of the study focuses only on Gujarat state therefore four major cities of Gujarat has been selected. The selection is done on the basis of population size. The selected cities are Ahmedabad, Vadodara, Surat and Rajkot. So internet users from these selected cities who have shopped online atleast once in past six months, are the respondents of the study.

### **3.7.2 Sample Technique:**

Sampling technique is concerned with choosing a subset of individuals from a statistical population to estimate characteristics of a whole population. Selection of sampling technique involves several decisions. According to Naresh Malhotra (2010), sampling techniques may be broadly classified as probability and non-probability sampling. Probability sampling is a technique where sampling units are selected by chance. On the other hand, non-probability sampling is a technique where sample are selected by personal judgment of researcher rather than chance to select sample elements.

Researcher has used judgmental non-probability sampling for this study. Naresh Malhotra (2010) has explained judgmental sampling where population elements are selected on the basis of judgment of researcher. By the judgment or expertise of researcher, sample elements are selected. It is the believed by researcher that all the selected elements are the representative of population of interest or are otherwise appropriate.

Judgmental sampling method is also known as purposive sampling. The idea behind using judgmental sampling is that the researcher already knows about the required qualities from the respondents thus making them the proper ones for the study. Researcher has approached only those respondents who can provide best information for the study. It is less time consuming and does not require statistical knowledge. Researcher has tried to take responses from all the areas (age, gender, and occupation, income group) to get best possible information as per her knowledge and judgment. Researcher has selected respondents from all age groups like teenagers, middle age and senior citizens. Some of the respondents were students from various colleges like L.J. institute, Xcellon Institute, Parul University, GLS University etc. Middle age respondents were professionals from various management colleges, government banks like State Bank of India & Punjab National Bank, multinational organizations like ITW, Bosch, Hitachi, Makita, Black & Decker etc.

### **3.7.3 Sample Size:**

The four cities selected for the descriptive study are Ahmedabad, Vadodara, Surat and Rajkot. In 2009, Sanders, Lewis and Thornhill say that larger samples are more likely the accurate

reflection of the population. Most of the statistical books favors larger sample that they are more appropriate for the use of various statistical analysis (Pallant, 2007). Researcher has following method to decide sample size:

According to Yamane's Equation:

$$n = \frac{N}{1 + N(e)^2}$$

**Table 3.3: Calculation of Sample Size**

Sr. No.	Parameter	Interpretation
1.	n	Sample Size
2.	N	Population size
3.	e	Level of precision or sampling error; which is 5%
4.	Sample size calculation	$n = \frac{N}{1 + N(e)^2}$ <p>N = 7,06,45,200 (penetration rate of online shoppers was 34.8 % ; and internet users population in India was 462 million )</p> <p>e= 0.05</p> <p>n = 399</p> <p>n (taken as) = 610</p>

### 3.8 Pilot Study:

A pilot study was conducted before to the data collection process. According to C. R. Kothari (2004), Pilot study should be undertaken for pre-testing the questionnaire. The questionnaire may be edited according to the results of the pilot study. Generally a Pilot Study for testing the questionnaire is carried out which discloses the flaws, if any, of the questionnaire. Pilot study may be conducted for determining a more efficient and appropriate plan.

### 3.8.1 Reliability Test:

Researcher has conducted reliability test for measuring the consistency of the scale during the scale development process. According to Saunders, Lewis & Thornhill (2007), when a questionnaire is a likert scale type, reliability test become more important because there are so many variable for testing the concept. Result of reliability test is an indication that how consistence the results are based on data collection and analysis methods.

The summary of Cronbach's Alpha score for all criteria is given in the following table:

**Table 3.4: Reliability Test Result**

Sr. No.	Item coding	Item description	Cronbach's Alpha
1	CI_1	I visit new company's website even if I have not heard of it before.	0.772
2	CI_2	I know about new retail websites before most other people in my circle do	0.697
3	CI_3	I would be the first in my circle to shop online from a new website	0.716
4	CI_4	I have a better knowledge of online shopping than other people in my circle.	0.698
5	CI_5	I would shop online even if I did not know anyone who had done it before	0.719
6	CI_6	Often, people ask my opinion about new products/ new brands/ new websites	0.727
7	SA_1	I can shop online even if I have never experienced the same before.	0.778
8	SA_2	I can obtain relevant information of Web vendors through online resources.	0.761
9	SA_3	I can get the products that I want, form web vendors.	0.735
10	SA_4	I can handle all order and delivery related problems on my own.	0.74
11	SA_5	I can find trustworthy web vendors based on ratings provided.	0.72

12	SA_6	I am confident about online shopping even if I have only an assistance of “online HELP function”.	0.738
13	HS_1	The time spent in online shopping is enjoyable to me.	0.8
14	HS_2	I enjoy being involved in exciting new products while shopping.	0.812
15	HS_3	I enjoy shopping although I do not need the product.	0.864
16	HS_4	I feel adventurous while shopping online.	0.802
17	HS_5	Online Shopping satisfies my curiosity.	0.798
18	HS_6	Online shopping offers new experiences.	0.819
19	HS_7	Online shopping gives me pleasure.	0.797
20	US_1	Online shopping enables me to shop quickly.	0.858
21	US_2	Online shopping makes shopping easy.	0.838
22	US_3	Online shopping enables me to shop from far off locations.	0.86
23	US_4	Online shopping helps in saving my money.	0.864
24	US_5	I can compare price easily via internet.	0.858
25	US_6	I can buy things whenever I want.	0.841
26	US_7	I can get variety of products online.	0.844
27	FR_1	I get value for money for products bought online.	0.895
28	FR_2	It is safe to disclose credit card details while shopping online.	0.891
29	FR_3	Products always get delivered when purchased online.	0.894
30	PR_1	I get the same features of the product, as ordered.	0.907
31	PR_2	I get the level of benefits as advertised on the Website.	0.888
32	PR_3	The product performs the same as promoted.	0.891

33	SR_1	Online shopping creates good opinion about me in my circle.	0.89
34	SR_2	All people from my circle may agree to my online buying decision.	0.889
35	SR_3	My friends and relatives think that I am wise.	0.89
36	TR_1	Searching products does not take time.	0.887
37	TR_2	Placing order does not take time.	0.892
38	TR_3	Online shopping provides quick delivery of product.	0.886
39	PSY_1	I feel comfortable while shopping online.	0.89
40	PSY_2	Online shopping does not make me feel anxious.	0.898
41	PSY_3	I do not get tense during shopping online.	0.891
42	PRR_1	My personal information is not used without my knowledge.	0.889
43	PRR_2	Due to online shopping, I do not receive unnecessary e-mails.	0.896
44	PRR_3	My personal information is not used improperly.	0.896
45	IPO_1	I will continue to purchase products online.	0.74
46	IPO_2	I will shop online for my needs.	0.808
47	IPO_3	I plan to do more of my shopping via online shopping sites.	0.797
48	IPO_4	I recommend good online store to others.	0.786

The value of cronbach alpha varies from 0.6 to 0.9 for the selected scales.



# **CHAPTER-4**

## **DATA ANALYSIS & INTERPRETATION**

### **4.1 Introduction**

### **4.2 Simple Regression analysis**

### **4.3 Exploratory Factor analysis**

### **4.4 Confirmatory Factor analysis**

### **4.5 Demographic Profile of respondents**

#### **4.5.1 Gender-wise distribution of respondents**

#### **4.5.2 Age group-wise distribution of respondents**

#### **4.5.3 Education-wise distribution of respondents**

#### **4.5.4 Occupation-wise distribution of respondents**

#### **4.5.5 Income-wise distribution of respondents**

#### **4.5.6 Respondents' distribution on the basis of their frequency of online purchase**

### **4.6 Objective – wise analysis**

#### **4.6.1 Objective 1**

#### **4.6.2 Objective 2**

#### **4.6.3 Objective 3 (reliability & validity)**

#### **4.6.4 Objective 4**

### **4.3.6 Analysis of Confirmatory Factor analysis**

## **4.1 Introduction:**

The heart of research process is the analysis of collected data and the conclusion that are drawn with the help of interpretation of the analyzed data. Researcher has made an attempt to analyze and interpret its result after the collection of relevant primary data by applying softwares like AMOS and SPSS 20. First, researcher has collected data through structured questionnaire, then, collected data were tabulated in MS EXCEL and analyzed with the help of various statistical tools. Used statistical tools are Confirmatory Factor Analysis and Simple Regression analysis. Researcher has also analyzed demographic profile of respondent by using graphs and charts. After the analysis, interpretations of statistical results were made to get the meaningful conclusion.

In this chapter, researcher has included demographic profile of online respondents with its graphical representation. Researcher has conducted researcher in three parts: in the very first part; Researcher has defined six types of perceived risk with the help of literature review. They are financial risk, performance risk, social risk, psychological risk, time risk and privacy risk. In second part; researcher has made an attempt to find impact of all six types of perceived risk on consumers' intentions to purchase online individually. In the next part; researcher has extracted various constructs influencing consumers' perceived risk. These extracted constructs are consumer innovativeness (coded as CI), consumer self-efficacy (coded as SA), Hedonic shopping values (coded as HS) and Utilitarian shopping values (coded as US). Thereafter, researcher has discussed and taken opinion from the industry experts Mr. Shivakant (Amazon) and Mr. Piyush Verma (PayPal). Exploratory factor analysis has been used to identify the influencing factors as a statistical tool. Confirmatory factor analysis has been conducted for statistical validity of extracted constructs or variables. After then, researcher has found out impact of all these influencing variables on each six types of perceived risk individually.

Four research objectives were identified for the study in previous chapters and they are reiterated again as follows:

- 1) To identify various types of perceived risk associated with online shopping.
- 2) To analyze impact of various perceived risk on consumers' online purchase intentions.
- 3) To identify factors influencing consumer perceived risk for online shopping.

- 4) To analyze impact of identified factors on each type of perceived risk. (factors are consumer innovativeness, internet self-efficacy, hedonic and utilitarian shopping value)

## 4.2 Simple Regression Analysis:

The simple regression technique is used to determine the degree to which financial risk, performance risk, social risk, psychological risk, time risk and privacy risk impact on consumers purchase intentions with respect to online shopping.

Simple linear regression is a statistical method that allows us to summarize and study relationships between two continuous (quantitative) variables (Michael H. Kuntner, Christopher J. Nachtsheim & John Neter, 2005). A regression uses the historical relationship between a dependent and an independent variable to predict the future values of the dependent variable.

According to C. R. Kothari, Regression is the determination of a statistical relationship between two or more variables. In simple regression, we have only two variables, one variable (defined as independent) is the cause of the behavior of another one (defined as dependent variable). Regression can only interpret what exists physically i.e., there must be a physical way in which independent variable  $X$  can affect dependent variable  $Y$ . The basic relationship between  $X$  and  $Y$  is given by -

$$Y = a + bX$$

In 2010, Rajendra Nargundkar explained that regression equation is judged for its usefulness based on:

1. If the overall F-test for the model, is significant at 95 per cent confidence level, indicates that the model is overall good one. This is shown as a p – value and the value of p is less than 0.05 in the ANOVA table in the regression output.
2. For deciding, whether explanatory variable in the model is significant or not, a significance value should be referred. If output shows that the p – value is less than 0.05, it means that the concerned variable is significant in the model.
3. In the output, the R square value also known as coefficient of determination and adjusted coefficient of determination of the model concludes what percentage of the

variation in the dependent variable is explained by all independent variables in the model.

### **4.3 Exploratory Factor Analysis:**

According to C.R.Kothari (2004), factor analysis is the most often used multivariate technique of research studies, especially concerning to social and behavioral sciences. This multivariate technique is applicable when there is a systematic interdependence among a set of observed variables and the researcher is interested in finding out something more fundamental or latent which creates this commonality. Rietveld & Van Hout (1993) explained the goal of factor analysis as “to reduce the dimensionality of the original space and to give an interpretation to the new space, spanned by a reduced number of new dimensions which are supposed to underlie the old ones”. According to Habing (2003), exploratory factor analysis explains the variance in the observed variables in terms of underlying latent factors.

### **4.4 Confirmatory Factor Analysis:**

According to Timothy A. Brown (2006), Confirmatory factor analysis (CFA) is a type of structural equation modeling (SEM) that deals specifically with measurement models, that is, the relationships between observed measures or indicators (e.g., test items, test scores, behavioral observation ratings) and latent variables or factors. A fundamental feature of CFA is its hypothesis-driven nature. CFA is used to test the extent to which derived factor structure represents the actual data.

Confirmatory factor analysis (CFA) is used to study the relationships between a set of observed variables and a set of continuous latent variables. CFA with covariates includes models where the relationship between factors and a set of covariates are studied to understand measurement invariance and population heterogeneity. These models can include direct effects, that is, the regression of a factor indicator on a covariate in order to study measurement non-invariance (Bollen 1989; and Kenny & McCoach 2003). CFA differs from EFA in that it specifies a factor structure based upon expected theoretical relationships. Whereas we might think of EFA as a procedure for inductive theory construction, CFA is a

procedure for testing hypotheses deduced from theory. In 2006, Hair explained that CFA provides a confirmatory test of Measurement Theory. Measurement theory defines how variables measured systematically and logically represents the constructs that are involved in theoretical model. The purpose of CFA is twofold: 1) it confirms a hypothesized factor structure

2) It is used as a validity procedure in the measurement model

CFA output provides various fit statistics that are used to determine the model fit for the data.

In the Model Fit Summary section, various indexes appear for assessing Model Fit.

#### 4.4.1 Chi Square Test with degree of Freedom:

The Chi square goodness of fit metric is used to assess the correspondence between theoretical specification and empirical data in a CFA. By default, the null hypothesis of SEM is that the observed sample and SEM estimated covariance matrices are equal, meaning perfect fit. The chi-square value increases as differences (residuals) are found when comparing the two matrices. With the chi-square test, the statistical probability that the observed sample and SEM estimated covariance matrices are equal is assessed. The probability is the traditional p- value associated with parametric statistical tests. Chi-square GOF test is the only statistical test of the difference between matrices in SEM and is represented mathematically by the following equation where N is the overall sample size.

$$\chi^2 = (N - 1) (\text{Observed sample covariance matrix} - \text{SEM Estimated covariance matrix})$$

Or

$$\chi^2 = (N - 1)(S - \Sigma_K)$$

This statistic ( $\chi^2$ ) is also known as the likelihood ratio chi square or generalized likelihood ratio. The estimation process in SEM will focus on yielding parameter values so that the

discrepancy between sample covariance matrix (S) and the SEM estimated covariance matrix ( $\Sigma_k$ ) is minimal. The value of  $\chi^2$  for a just-identified model generally equals zero and has no degrees of freedom. If  $\chi^2 = 0$ , the model perfectly fits the data (i.e., the predicted correlations and covariance's equal their observed counterparts). As the value of chi square increases, the fit of an over identified model becomes increasingly worse. Thus, chi square is actually a “badness-of-fit” index because the higher its value, the worse the model's correspondence to the data. Degrees of freedom represent the amount of mathematical information available to estimate model parameters. The number of degrees of freedom for a SEM is calculated by the formula:

$$df = \frac{1}{2} [(p)(p + 1)] - k$$

Where p is the total number of observed variables and k is the number of estimated (free) parameters. Subtracting the number of estimated parameters from the total amount of available mathematical information is similar to other multivariate methods.

#### 4.4.2 The Goodness of Fit Index (GFI & AGFI):

The goodness-of-fit index (GFI) was the very first standardized fit index (Joreskog & Sorbom, 1981). It is analogous to a squared multiple correlation ( $R^2$ ) except that the GFI is a kind of matrix proportion of explained variance. Thus, GFI = 1.0 indicates perfect model fit, GFI > .90 may indicate good fit, and values close to zero indicate very poor fit. However, values of the GFI can fall outside the range 0–1.0. Values greater than 1.0 can be found with just identified models or with over identified models with almost perfect fit; negative values are most likely to happen when the sample size is small or when model fit is extremely poor. Another index originally associated with AMOS is the adjusted goodness-of-fit index (AGFI; Joreskog & Sorbom, 1981). It corrects downward the value of the GFI based on model complexity; that is, there is a greater reduction for more complex models. The AGFI differs from the GFI only in the fact that it adjusts for the number of degrees of freedom in the specified model. The GFI and AGFI can be classified as absolute indices. The parsimony goodness-of-fit index (PGFI; Mulaik et al., 1989) corrects the value of the GFI by a factor that reflects model complexity, but it is sensitive to model size.

#### **4.4.3 Normed Fit Index (NFI):**

The NFI is one of the original incremental fit indices introduced by Bentler and Bonnet (1980). It is a ratio of the difference in the value for the fitted model and the null model divided by the value for the null model. It ranges between zero to one. A Normed fit index of one indicates perfect fit.

#### **4.4.4 Relative Fit Index (RFI):**

The relative Fit Index (RFI; Bollen, 1986) represents a derivative of the NFI; as with both the NFI and CFI, the RFI coefficient values range from zero to one with values close to one indicating superior fit (Hu and Bentler, 1999).

#### **4.4.5 Comparative Fit Index (CFI):**

The CFI is an incremental fit index that is an improved version of the NFI (Bentler, 1990; Bentler and Bonnet, 1980; Hu and Bentler, 1999). The CFI is Normed so that values range between zero to one, with higher values indicating better fit. Because the CFI has many desirable properties, including its relative, but not complete, insensitivity to model complexity, it is among the widely used indices. CFI values above 0.90 are usually associated with a model that fits well. But a revised cut off value close to 0.95 was suggested by Hu and Bentler (1999).

#### **4.4.6 Root Mean Square Error of Approximation:**

Root Mean Square Error Approximation (RMSEA) was first proposed by Steiger and Lind (1980). It is one of the most widely used measures that attempts to correct for the tendency of the GOF test statistic to reject models with a large sample or a large number of observed variables. Thus it better represents how well a model fits a population, not just the sample used for estimation. Lower RMSEA values indicate better fit. Earlier research suggest values of  $<0.05$  (Browne and Cudeck, 1993), Hu and Bentler (1999) have suggested value of  $<0.06$  to be indicative of good fit.

#### 4.4.7 Validity of Scale:

Zainudin Awang explains in his book that Validity is the ability of instrument to measure what it supposed to measure for a latent construct. In other words, validity is the ability of instrument to measure that how well it can calculate for a latent construct. There are three types of validity mandatory for each measurement model is:

##### a. Convergent Validity:

When all the items in a measurement model are statistically significant, then the measurement model is said to be convergent validate. The convergent validity could also be verified by calculating the Average Variance Extracted (AVE) for each construct. The value of AVE should be 0.5 or higher for this validity to achieve. The value of AVE is calculated by using following formula:

$$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$$

Where;  $\lambda$  = Standardize factor loading

i = Number of items

According to the formula, given by Fornell and Larcker (1981), AVE is calculated as the sum of the squared standardize construct loadings divided by the number of items. Construct Reliability (CR) is also considered as one of the measure of convergent validity. Construct reliability is computed with the following formula:

$$CR = \frac{(\sum_{i=1}^n \lambda_i)^2}{(\sum_{i=1}^n \lambda_i)^2 + (\sum_{i=1}^n \delta_i)}$$



Where;  $\lambda$  = Standardize factor loading

i = Number of items

According to Hair (2006), rule of the thumb for construct reliability is that value of 0.6 and 0.7 is considered as acceptable, provided that other indicators of a model's construct validity are good. Reliability value of more than 0.7 is suggested as good reliability.

**b. Construct Validity:**

Construct validity is established when a construct achieved its required level of the Fitness Indexes. The fitness indexes specify how fit is the items in measuring their respective latent constructs. The Fitness Indexes, their respective category, and the level of acceptance are presented in below given table:

**Table 4.1: The three categories of model fit and their level of acceptance**

NAME OF CATEGORY	NAME OF INDEX	LEVEL OF ACCEPTENCE
Absolute Fit	Chi Square	p value > 0.05
	RMSEA	RMSEA < 0.08
	GFI	GFI > 0.9
Incremental fit	AGFI	AGFI > 0.9
	CFI	CFI > 0.9
	TLI	TLI > 0.9
	NFI	NFI > 0.9
Parsimonious fit	Chisq / df	Chisq / df < 3

**c. Discriminant Validity:**

Discriminant validity indicates the measurement model of a construct is free from redundant items. In AMOS software, a discrepancy measure named Modification Indices (MI) could identify the items redundancy in the model. If MI value is high than

it indicates that the respective items are redundant. According to Zainudin Awang, researcher could delete one of the identified items and run the measurement model. The researcher could also constraint the redundant pair as “free parameter estimate”. Another requirement for discriminant validity is the correlation between exogenous constructs should not exceed 0.85. If correlation value exceeding 0.85, it indicates the two exogenous constructs are redundant or having serious multicollinearity problem.

#### 4.4.8 Reliability:

Reliability is the extent of how reliable is the said measurement model in measuring the intended latent construct. The assessment for reliability for a measurement model could be made using the following criteria.

**a. Internal Reliability :**

The Internal Reliability indicates how strong the measuring items are holding together in measuring the respective construct. This reliability is achieved when the value of Cronbach’s Alpha exceeds 0.7 (calculated in SPSS).

**b. Composite Reliability:**

The Composite Reliability (CR) indicates the reliability and internal consistency of a latent construct. A value of CR > 0.6 is required in order to achieve composite reliability for a construct.

**c. Average Variance Extracted:**

The Average Variance Extracted (AVE) indicates the average percentage of variation explained by the measuring items for a latent construct. An AVE > 0.5 is required for every construct.

$AVE = \sum K^2 / n$	K = factor loading of every item and n = number of items in a model
$CR = (\sum K)^2 / [(\sum K)^2 + (\sum 1 - K^2)]$	

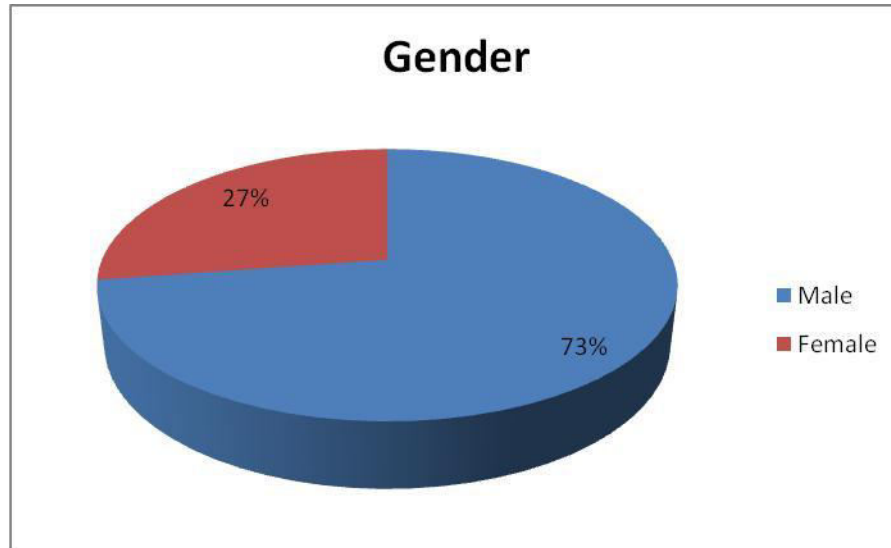
#### 4.5 Demographic Profile of respondents:

610 respondents were questioned about their demographic profile. Their demographic profile included gender, age, qualification, income, occupation and their frequency of online purchase in last six months. Responses of respondents are presented in the following table. Pie chart is used to present characteristic wise respondent profile and for better understanding, its interpretation is also given with the chart.

**Table 4.2: Demographic profile of respondents**

Sr. No.	Characteristics	Category	Frequency	%
1	Gender	Male	533	72.16
		Female	167	27.83
2	Age	18-25	168	28
		26-35	295	59
		35-50	123	20.5
		50 & above	15	2.5
3	Education	Graduate	307	51.16
		Post - graduate	253	50.5
		Doctorate	12	2
		Others	38	6.33
4	Occupation	Student	256	51
		Business	57	9.5
		Govt. Employee	66	11
		Pvt. Employee	222	37
		Others	9	1.5
5	Income (annual)	Below Rs. 100000	105	17.5
		Rs. 100001 – 300000	520	70
		Rs. 300001 – 500000	60	10
		Rs. 500001 & above	15	2.5

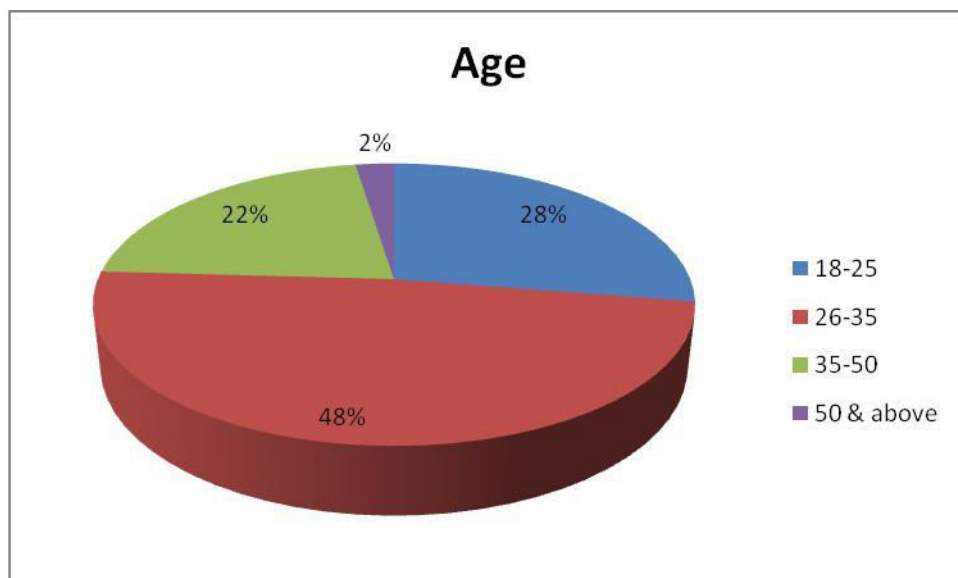
#### 4.5.1 Gender-wise distribution of respondents:



**Figure 4.1 Gender-wise distribution of respondents**

It is evident from the above graph that out of 610 respondents; the percentage of male respondent is 73%; on the other hand the percentage of female respondents is 27%.

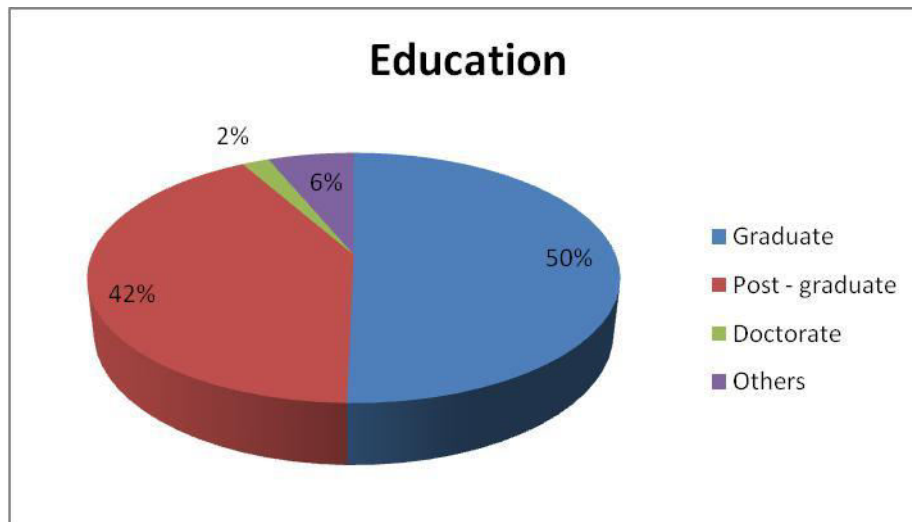
#### 4.5.2 Age group-wise distribution of respondents:



**Figure 4.2: Age group-wise distribution of respondents**

From the above graph it is clear that maximum proportions of respondents are from the age group of 26-35 i.e. 48%. It is obvious because in this age group most of the people are into their early earning stage and they are innovative. The second highest group is 18-25 with 28%, which include students. The age group 35-50 is having 22% proportion and the least proportion is from age group 50 & above.

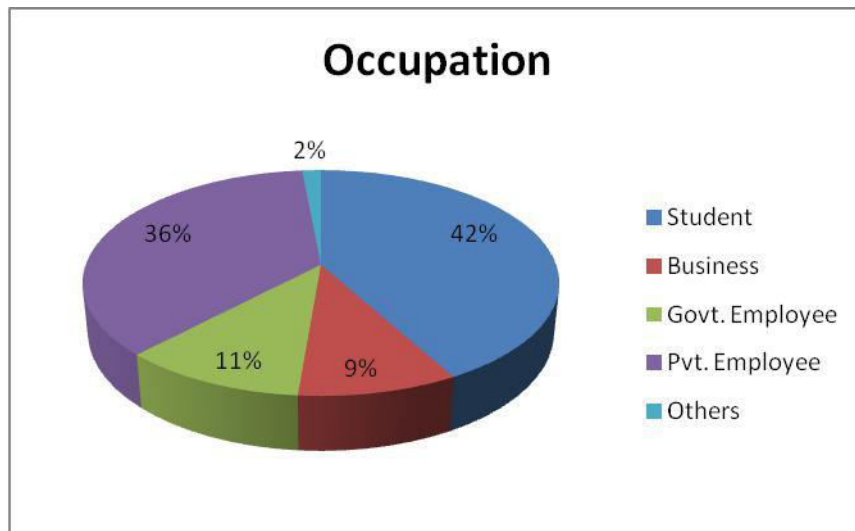
#### 4.5.3 Education-wise distribution of respondents:



**Figure 4.3: Education-wise distribution of respondents**

As seen from above 50% of the respondents who are graduate shares largest proportion followed by post-graduate respondents with 42% of proportion. Which is obvious that educated people prefers online shopping. From all respondents, 6% respondents are doctorate and remaining belongs to others category.

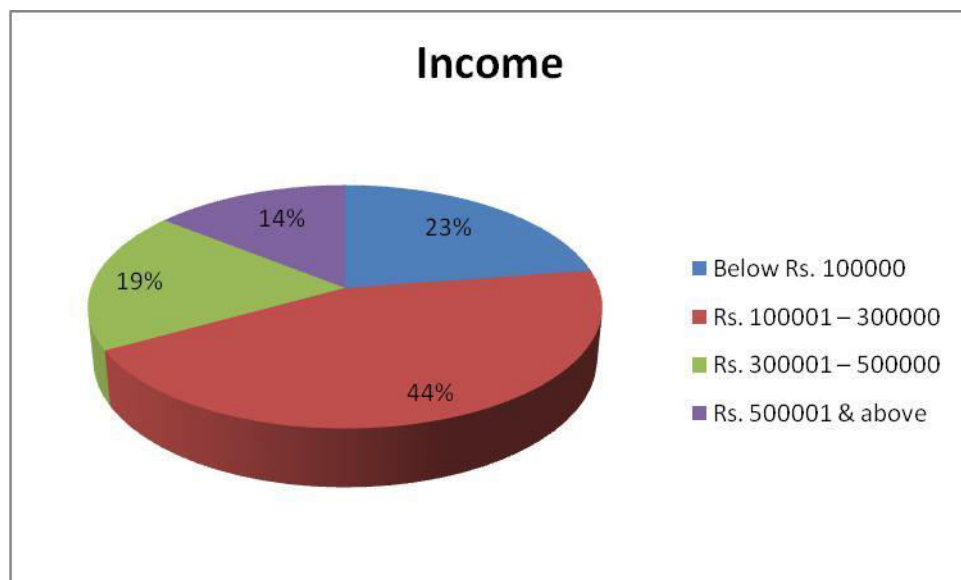
#### 4.5.4 Occupation-wise distribution of respondents:



**Figure 4.4: Occupation-wise distribution of respondents**

Out of 610 respondents, most of the respondents are pursuing their studies. The student category consist maximum proportion i.e. 42% followed by 36% of private employees. Remaining respondents belongs to 11 % of government employees and 9 % belongs to the businessmen.

#### 4.5.5 Income-wise distribution of respondents:



**Figure 4.5: Income-wise distribution of respondents**

It is apparent from the above graph, that out of 610 respondents 44% of the respondents belong to the income category Rs. 100001 – Rs. 300000. This category has maximum students and the people who are in their early employment. Another higher proportion comes from income category below Rs. 100000 followed by income categories Rs. 300001 – Rs. 500001 and Rs. 500001 & above with the proportion of 23%, 19% and 14% respectively.

#### **4.5.6 Respondents' distribution on the basis of their frequency of online purchase:**

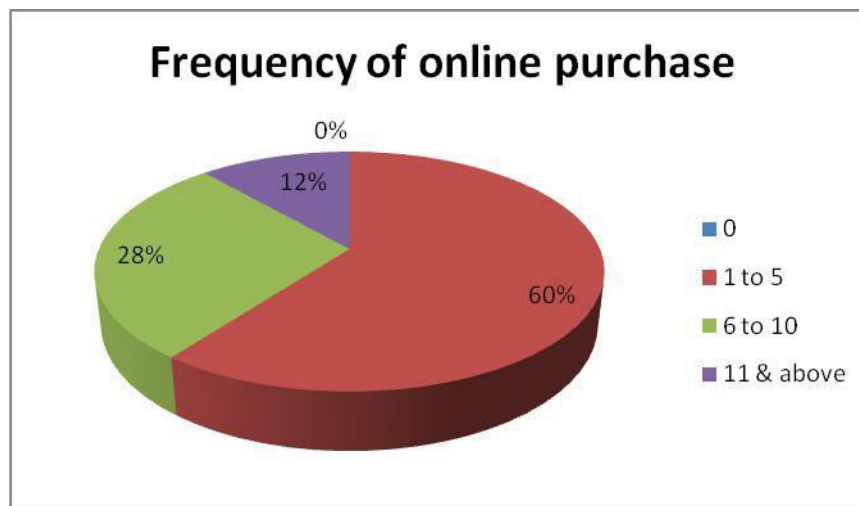


Figure 4.6: **Respondents' distribution on the basis of their frequency of online purchase** 60% of the respondents agreed to purchase around 1 – 5 items in last 6 months and 28% of the respondents agreed to purchased 6 – 10 items in last 6 months. Out of 610 respondents 12% of respondents purchased 11 & above items in last 6 months so they are considered as frequent online purchaser. None of them belongs to the category 0 as only those people are approached who have purchased online atleast ones in last 6 months.

#### **4.6 Objective – wise analysis:**

For the main study, analysis and its interpretation is given in the order of objectives of studies.

##### **4.6.1 Objective 1: To identify various types of perceived risk associated with online shopping.**

The concept of consumer perceived risk in the marketing was first introduced by Bauer in 1960. The topic has now extended itself into a broad discussion and led to numerous comprehensive definitions (Huang, Schrank, & Dubinsky, 2004). Researchers repeatedly define fundamentals of perceived risk with respect to improbability and consequence. In the online shopping background, the level of perceived risk may be exaggerated due to limited physical access to products and sales personnel (Forsyth & Shi, 2003). Human perceptions are main reason behind the way any person behaves. Their likes-dislikes, choices, intentions and behavior are triggered by their perceptions. To understand the consumer perceived risk it is necessary to identify the perception of consumers. This way it will be a lot easier for e-marketers to satisfy and study the consumer insides. Perceived risk can be identified into six major types (Cunningham 1967, Camarero and Rebeca San Jose, 2007, Featherman and Pavlou 2003) which are being discussed in this research.

To identify various types of online risk associated with online shopping, researcher has taken help of literature review. Through literature review, researcher has come to know that there are various category of risk perceived by consumer when they shop online. Majority of the previous studies have identified and proved that there are major six types of risk perceived by online consumers.

Illustrative list of six types of perceived risk with their sources are shown below:

**Table 4.3: Literature sources of Perceived Risk**

Sr. No.	TYPES OF PERCEIVED RISK	REFERENCES
1	Financial Risk	Cunningham (1967), Jacoby & Kalpan(1972), Peter & Ryan (1976), Ingene & Hughes(1985), Stone & Gronhughes(1993), Roselius(1971), W. Huang, H. Schrank and A. J. Dubinsky (2004), Sonia San Marti'n, Carmen Camarero and Rebeca San Jose, 2007, Bhatnagar et al.(2000) and Pradeep A. Korgaonkar& Eric J. Karson (2007)
2	Performance Risk	Cunningham (1967), Jacoby and Kaplan (1972), Peter and Ryan (1976), Ingene and Hughes (1985), Stone and Gronhaug (1993)W. Huang, H. Schrank and A. J. Dubinsky (2004) and Biswas & Burman (2009)



3	Social Risk	Cunningham (1967), Jacoby & Kalpan(1972), Peter & Ryan (1976), Sheth (1981), Ingene & Hughes(1985), Stone & Gronhughes(1993), Roselious(1971), W. Huang, H. Schrank and A. J. Dubinsky (2004), Sonia San Marti'n, Carmen Camarero and Rebeca San Jose, 2007
4	Psychological Risk	Cunningham (1967), Jacoby & Kalpan(1972), Peter & Ryan (1976), Stone & Gronhughes(1993), Roselious(1971), W. Huang, H. Schrank and A. J. Dubinsky (2004) and Pradeep A. KorgaonkarÆ Eric J. Karson (2007) and Sonia San Marti'n, Carmen Camarero and Rebeca San Jose (2007)
5	Time Risk	Cunningham (1967), Peter & Ryan (1976), Ingene & Hughes(1985), Stone & Gronhughes(1993), Roselious(1971), Chen & He (2003), Forsythe and shi (2003) and Littler and Melanthiou (2006)
6	Privacy Risk	Jarvenpaa and Todd (1997), Featherman and Pavlou (2003), J. A. Manzano, C. L. Navarre, C. R. Mafe & S.S. Blas (2009), G. R. Milne, A. J. Rohm and S. Bahl (2004)

#### **4.6.2 Objective 2: To analyze impact of various perceived risk on consumers' online purchase intentions.**

After identifying six major types of perceived risk, researcher has analyzed their impact on consumers' purchase intentions for online shopping. Researcher has studied impact of all six types of perceived risk on consumers' intentions individually. For analyzing impact, simple regression analysis has been conducted by the researcher.

#### **Analysis of Simple Regression:**

Analysis of Impact of all types of Risk on consumers' Intention to Purchase Online:

To analyze the impact of consumers' various types of perceived risk on consumers' intention to purchase following hypothesis were set:

- 1) H1a: Financial Risk has a significant impact on consumer purchase intention.
- 2) H1b: Performance Risk has a significant impact on consumer purchase intention.

- 3) H1c: Social Risk has a significant impact on consumer purchase intention.
- 4) H1d: Time Risk has a significant impact on consumer purchase intention.
- 5) H1e: Psychological Risk has a significant impact on consumer purchase intention.
- 6) H1f: Privacy Risk has a significant impact on consumer purchase intention.

**Table 4.4: Result of Objective 2**

Hypothesis	Sig. Value	R Square value	ANOVA Value	Result
H1a: Financial Risk has a significant impact on consumer purchase intention.	.000	.351	.000	Accepted
H1b: Performance Risk has a significant impact on consumer purchase intention.	.000	.285	.000	Accepted
H1c: Social Risk has a significant impact on consumer purchase intention.	.000	.455	.000	Accepted
H1d: Time Risk has a significant impact on consumer purchase intention.	.025	.430	.000	Accepted
H1e: Psychological Risk has a significant impact on consumer purchase intention.	.000	.364	.000	Accepted
H1f: Privacy Risk has a significant impact on consumer purchase intention.	.000	.163	.000	Accepted

The above shown table demonstrates that the ANOVA value of all the six types of risks are 0.00 which is less than 0.05 at 95 per cent confidence level. It indicates that the model is overall good. Another parameter to interpret regression analysis is significance value. Significance value of all six types of risks are again 0.00 which is less than 0.05. It signifies that the variables in the model are significant. Therefore, null hypothesis are not accepted for all six types of perceived risk.

R square values of the above table stipulate that to what extent each factor causes the variation in consumer purchase intention towards online shopping. A comparative value of the above table shows that various types of perceived risk results variation in consumers intentions to shop online. The R square value for financial risk is 0.351 which shows that 35.1 % of variation in consumers' intention to purchase is explained by financial risk. The R square value for performance risk is 0.285 which shows that 28.5 % of variation in consumers' intention to purchase is explained by performance risk. The R square value for social risk is



0.455 which shows that 45.5 % of variation in consumers' intention to purchase is explained by social risk. The R square value for time risk is 0.430 which shows that 43.0 % of variation in consumers' intention to purchase is explained by time risk. The R square value for psychological risk is 0.364 which shows that 36.4 % of variation in consumers' intention to purchase is explained by psychological risk. The R square value for privacy risk is 0.163 which shows that 16.3 % of variation in consumers' intention to purchase is explained by privacy risk.

### **4.6.3 Objective 3: To identify factors influencing consumer perceived risk for online shopping.**

In this part of the research study, researcher has made an attempt to identify various factors influencing consumers' perceived risk. For extracting factors or construct, researcher has considered literature review. After that all the extracted variables are validated by industry experts. Exploratory Factor Analysis has also used to identify the extracted factors. Those selected constructs were confirmed by statistical tool named Confirmatory Factor Analysis. Following given table shows the supported literature review of extracted constructs or factors influencing consumers' perceived risk:

**Table 4.5: Literature consistency of the types of Perceived Risk**

<b>Extracted constructs Influencing Consumer Perceived Risk</b>		
<b>Sr. No.</b>	<b>Name of Constructs</b>	<b>Reference</b>
1	Consumer Innovativeness	Norazah BTE Mohd Suki (2004), Joaquin Aldas - Manzano et. Al. (2008), Enrique Bigne - Alcaniz et. al. (2008), Kamran Khan & Kim Hyunwoo (2009), Meenakshi Handa & Nirupama Gupta (2009) and Arun Kumar Kaushik & Zillur Rehman (2014)

2	Consumer Self – Efficacy	Young Hoon Kim & Dan J Kim (2005), Satyabhushna Dash & Saji (2007), Young Hoon Kim et. Al. (2009), Xianjin Jha, Jing Li & Yalan Yan (2013), Rachana Kumar & Cevahir Uzkurt And Claudia Iconaru (2013)
3	Consumers' Hedonic Shopping Values	Childers et. Al. (2001), Dholakia, R. R. & Uusitalo (2002), Parsons, A. G. (2002), Abhigyan Sarkar (2011) And Arpita Khare & Sapna Rakesh (2011)
4	Consumers' Utilitarian Shopping Values	Childers et. Al. (2001), Dholakia, R. R. & Uusitalo (2002), Parsons, A. G. (2002), Abhigyan Sarkar (2011) And Arpita Khare & Sapna Rakesh (2011)

### **(A) Summary of Expert Interaction:**

Post the literature review, the researcher met to industry expert Mr. Shivkant (Amazon) and Mr. Piyush Verma (PayPal) to get more input for the questionnaire based on literature review.

The discussion of both the interaction is summarized below:

- Both the industry personnel agreed to the fact that in India online shopping has significantly improved.
- They attributed various reasons for increase in online shopping which were- Internet penetration, increase awareness of consumers, more brand conscious society, easy access of availability of information, increase in numbers of mobile applications, more offering from marketers and promotions, increase in numbers of working members in family.
- They both felt future for online shopping is very bright but they also shared some apprehensions.

- Both spoke about the rising number of queries and complaints of online shoppers in recent years. They were concerned and felt that either the e-marketers are really not given quality product/services or expectations of consumer are increasing.
- They discussed that the risk involved while shopping is higher than offline shopping. Also many Indian consumers are very new to online shopping and hence it is difficult to manage their perception and expectations as they expect more benefits from the online shopping.
- On enquiring about the type of consumers who shop online the experts shared that while few consumers especially youth were impulsive and were ready to experiment with new products, there is also another category of confident shoppers who are very comfortable with online shopping.
- The biggest challenge they felt to win the trust of online shoppers, by adapting the different marketing strategies and convert them to online shopping is very essential.

The researcher showed the first draft of the questionnaire and took the inputs. Some minor changes were suggested.

## **(B) Analysis of Exploratory Factor Analysis:**

The KMO measures the sampling adequacy which describes whether responses given with the sample is adequate or not. The KMO measure should be close than 0.5 for a satisfactory factor analysis condition. If value is between 0.7-0.8, considered as acceptable and value above 0.9 are the superb one. If the KMO value is less than 0.5, it is not accepted.

Bartlett test is an indication of the strength of relationship among variables. Bartlett test check the null hypothesis that the correlation matrix is an identity matrix.

**Table 4.6: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.817
Bartlett's Test of Sphericity Approx. Chi-Square	9.207E3
Df	325

**Table 4.6: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.817
Bartlett's Test of Sphericity	Approx. Chi-Square
	9.207E3
	Df
	325
	Sig.
	.000

From the above table, it can be seen that the value of KMO measure is 0.817, which is an acceptable value. The data set is considered to be highly suitable for factor analysis. From the same table Bartlett test is showing a significance level of 0.000 which means that data is multivariate normal and acceptable for factor analysis.

**Table 4.7: Communalities**

	Initial	Extraction
CI_1	1.000	.737
CI_2	1.000	.655
CI_3	1.000	.707
CI_4	1.000	.675
CI_5	1.000	.683
CI_6	1.000	.588
SA_1	1.000	.587
SA_2	1.000	.551
SA_3	1.000	.667
SA_4	1.000	.791
SA_5	1.000	.664
SA_6	1.000	.666
HS_1	1.000	.669
HS_2	1.000	.640
HS_3	1.000	.530
HS_4	1.000	.802
HS_5	1.000	.715
HS_6	1.000	.678

HS_7	1.000	.685
US_1	1.000	.636
US_2	1.000	.745
US_3	1.000	.555
US_4	1.000	.646
US_5	1.000	.756
US_6	1.000	.682
US_7	1.000	.674

Extraction Method: Principal Component Analysis.

The above table shows the communalities values of all the 26 items of influencing factors of perceived risk. Here all the values are above 0.5 which suggest that the data set was appropriate for further analysis.

**Table 4.8 Total Variance Explained**

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.940	34.383	34.383	5.429	20.879	20.879
2	2.367	9.102	43.486	3.180	12.230	33.109
3	1.848	7.107	50.593	2.497	9.602	42.711
4	1.636	6.292	56.885	2.386	9.177	51.888
5	1.252	4.814	61.699	2.198	8.455	60.342
6	1.045	4.019	65.718	1.398	5.375	65.718
7	.930	3.579	69.296			
8	.878	3.377	72.673			
9	.798	3.071	75.744			
10	.783	3.012	78.756			
11	.642	2.470	81.226			
12	.606	2.331	83.557			
13	.550	2.116	85.673			
14	.479	1.844	87.517			
15	.466	1.791	89.308			



16	.412	1.583	90.891		
17	.369	1.418	92.309		
18	.359	1.379	93.688		
19	.302	1.163	94.852		
20	.280	1.079	95.930		
21	.263	1.013	96.943		
22	.210	.806	97.749		
23	.191	.734	98.483		
24	.166	.637	99.120		
25	.123	.473	99.593		
26	.106	.407	100.000		

Extraction Method: Principal Component Analysis.

All the 26 factors in the above table accounted for 65.718% of the variance. Total variance explained (65.718%) by these 26 components surpasses the 60 percent threshold commonly used in social sciences (Hair, 2006).

**Table 4.9: Rotated Component Matrix<sup>a</sup>**

	Component					
	1	2	3	4	5	6
CI_1						.825
CI_2			.711			
CI_3			.777			
CI_4			.709			
CI_5					.667	
CI_6			.593			
SA_1					.481	
SA_2					.580	
SA_3				.641	.431	
SA_4				.836		
SA_5				.691		
SA_6		.433		.427		.424

HS_1	.570	.524			
HS_2	.661				
HS_3		.484			
HS_4		.845			
HS_5		.760			
HS_6	.701				
HS_7		.693			
US_1	.690				
US_2	.779				
US_3	.711				
US_4	.516			.600	
US_5	.669				
US_6	.772				
US_7	.790				

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Rotated component matrix table represent the strength of relationship between the item and factor. The membership of the item in factor is determines by identifying the highest loading in one factor. The loading values lies between 0 to 1. If value is close to 1, it shows the highest factor loading. Usually factor loading higher than 0.4 is acceptable but according to Hair (2006), for social science research factor loading of 0.40 is acceptable. The above table shows all loadings more than 0.4 which represent that all items are in the range of acceptance.

### Factor Extracted:

**Table 4.10: Factor Extracted**

FACTORS	ITEMS	ITEMS LOADING
Consumer Innovativeness	CI_1	0.825
	CI_2	0.711
	CI_3	0.777
	CI_4	0.709
	CI_5	0.667

	CI_6	0.593
<b>Consumer Self-Efficacy</b>	SA_1	0.481
	SA_2	0.58
	SA_3	0.641
	SA_4	0.836
	SA_5	0.691
	SA_6	0.433
<b>Hedonic Shopping Value</b>	HS_1	0.57
	HS_2	0.661
	HS_3	0.484
	HS_4	0.845
	HS_5	0.76
	HS_6	0.701
	HS_7	0.693
<b>Utilitarian Shopping Value</b>	Us_1	0.69
	US_2	0.779
	US_3	0.711
	US_4	0.6
	US_5	0.669
	US_6	0.772
	US_7	0.79

Through literature review and exploratory factor analysis, researcher has extracted four major factor influencing consumers' online perceived risk. Extracted factors are: consumer innovativeness, consumer self-efficacy, hedonic shopping value and utilitarian shopping value.

### **(C) Analysis of Confirmatory Factor analysis:**

Based on literature review and expert opinion, researcher has extracted four factors or constructs and a factor structure has developed. For confirming and verifying the factor structure, confirmatory factor analysis has been conducted by researcher. In the following structure consumer innovativeness (CI), consumer self – efficacy (SA), Consumer hedonic shopping value (HS) and utilitarian shopping value (US) are observed variables and financial risk (FR), performance risk (PR), Social risk (SR), Time risk (TR), psychological risk (PSYR) and privacy risk (PRR) are the latent variables in the following factor structure.

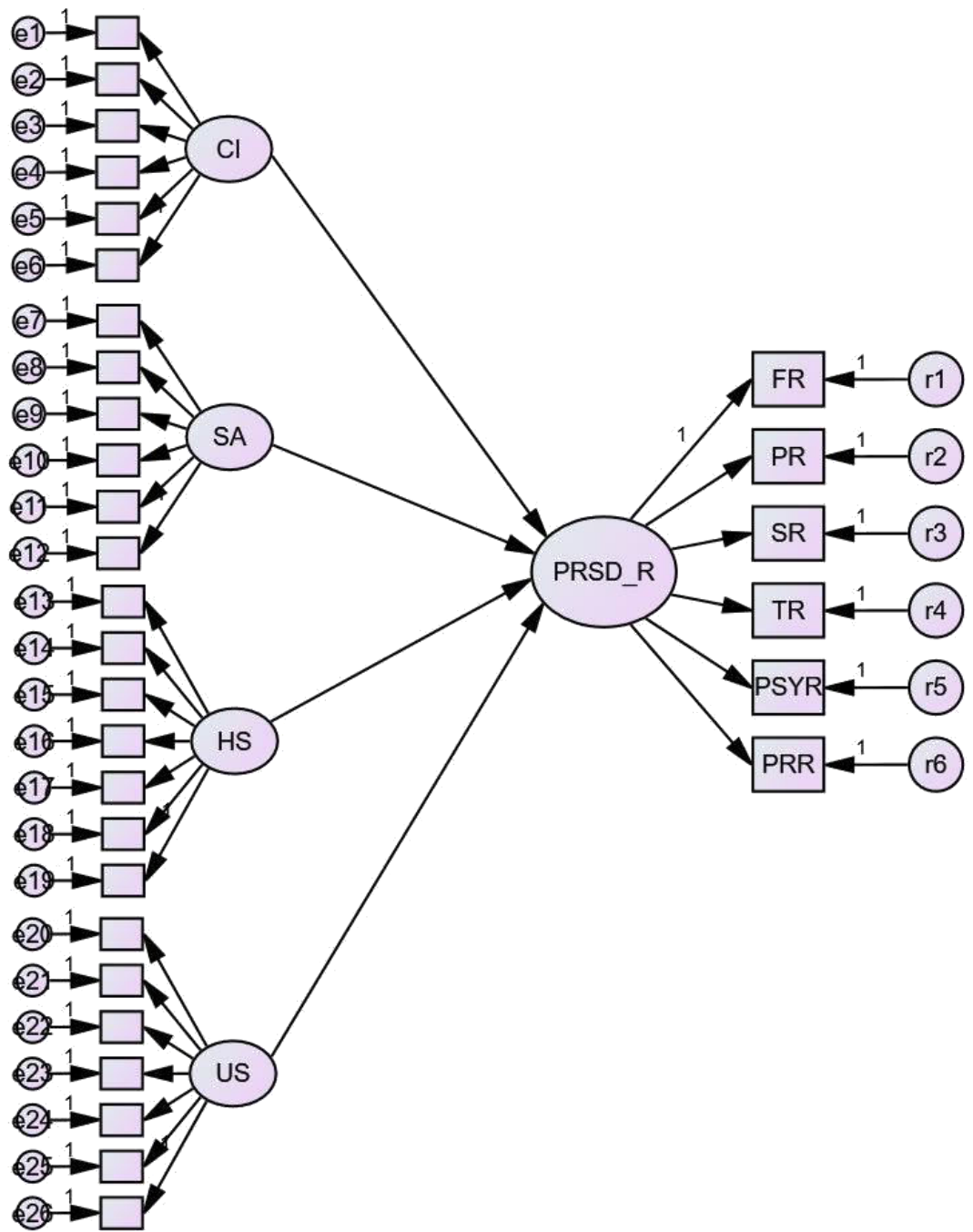


Figure 4.7 Factor structure

**Table 4.11: Model for fit Indexes**

<b>Model For Fit Indexes</b>	
<b>Measures of Model Fit</b>	<b>Values</b>
Ratio of Chi-square to degrees of freedom (CMIN/DF)	2.833
Goodness-of-fit index (GFI)	0.949
Adjusted GFI (AGFI)	0.888
Normed fit index (NFI)	0.952
Tucker-Lewis Index (TLI)	0.934
Incremental Fit Index (IFI)	0.968
Relative Fit Index (RFI)	0.902
Comparative Fit Index (CFI)	0.968
Root Mean Square Error of Approximation (RMSEA)	0.055

The above given table shows the Model Fit Summary of the factor structure. As discussed early, it has different measures for model fit. First it shows the chi square value to degree of freedom whose value is greater than 0.05. It shows a less difference between observed and expected covariance matrices, which indicated that model is of good fit. Next measure is Goodness of Fit Index (GFI) and adjusted Goodness of Fit Index (AGFI). Their values should be of more than 0.9 and as it is depicts from the table that value of GFI is greater than 0.9 and Value of AGFI is close to 0.9 which indicates that model is of good fit. Values of Tucker-Lewis Index (TLI), Incremental Fit Index (IFI) and Relative Fit Index (RFI) are also greater than 0.9 indicating good fit model. The Comparative Fit Index (CFI) evaluates overall improvement of a proposed model. In the above model, value of CFI is also more than 0.9 showing a good model fit. The last measure is Root Mean Square Error of Approximation (RMSEA) which relates to the residuals of model. The good model fit value of RMSEA should be equal or less than 0.06. In the above model, RMSEA value lies in the range of good fit model, so the above measured values shows that the model is of good fit.

<b>Table 4.12: CONVERGENT VALIDITY</b>				
<b>Constructs</b>	<b>Item</b>	<b>Item Loadings</b>	<b>Composite Reliability (CR)</b>	<b>Average Variance Extracted (AVE)</b>
Consumer Innovativeness	CI_1	0.914	0.847934593	0.4938765
	CI_2	0.577		
	CI_3	0.774		
	CI_4	0.753		
	CI_5	0.667		
	CI_6	0.665		
Consumers' Self - Efficacy	SA_1	0.699	0.845959938	0.5240838
	SA_2	0.671		
	SA_3	0.749		
	SA_4	0.776		
	SA_5	0.72		
Consumers' Hedonic Shopping Values	HS_1	0.827	0.895817422	0.554719286
	HS_2	0.764		
	HS_3	0.811		
	HS_4	0.774		
	HS_5	0.584		
	HS_6	0.791		
	HS_7	0.626		
Consumers' Utilitarian Shopping Values	US_1	0.759	0.894958585	0.552352143
	US_2	0.818		
	US_3	0.649		
	US_4	0.616		
	US_5	0.665		
	US_6	0.847		
	US_7	0.813		

Item loadings of all the four factors are 0.5 or higher than 0.5, which indicates that these factors converge on a common point on Latent Variable i.e. Consumer Perceived Risk. This confirms the convergent validity at a significant level of 0.05.

Composite reliability of all the four observed variables is higher than 0.8 which indicates that the factor structure has a good reliability. The final component of convergent validity is Average Variance Extracted (AVE). AVE calculated for Consumer self – efficacy, Consumer Hedonic Shopping Value and Utilitarian Shopping Value is greater than 0.50 which indicates

that more than half of the variance of the consumer perceived risk is explained by each construct. On the other hand, AVE calculated for Consumer Innovativeness is 0.49 which shows that almost half of the variance of consumer perceived risk is explained by consumer innovativeness. Item loading, construct reliability and AVE confirm the convergent validity of the factor structure.

<b>Table 4.13: DISCRIMINANT VALIDITY AND NOMOLOGICAL VALIDITY</b>		
	<b>Average AVE of two Constructs</b>	<b>Correlation Value</b>
CI ↔ SA	0.509	0.48
CI ↔ HS	0.5245	0.379
CI ↔ US	0.523	0.392
SA ↔ HS	0.5395	0.571
SA ↔ US	0.538	0.519
HS ↔ US	0.5535	0.635

Discriminant validity is the degree to which I construct is truly different from the other construct. According to Hair (2006), Average AVE of two construct must be greater than the square of their correlation to satisfy the condition of discriminant validity. In the above shown table the average AVE value and square correlation values of all constructs satisfy the condition, hence it can be concluded that discriminant validity of the factor structure is confirmed.

Nomological validity can be tested by analyzing correlation between the construct in the measurement model (Hair, 2006). From the above table, it is clear that constructs are positively related to each other and satisfy the e nomological validity of factor structure.

**4.6.4 Objective 4: To analyze impact of identified factors on each type of perceived risk. (Factors are consumer innovativeness, internet self-efficacy, hedonic and utilitarian shopping value)**

For achieving above objective, researcher has used simple regression analysis to analyze impact of all four identified factors on all six types of perceived risk.

**To analyze the impact of consumer innovativeness on all six types of perceived risks following hypothesis were set:**

- 1) H2a: Consumer innovativeness has a significant impact on Financial Risk
- 2) H2b: Consumer innovativeness has a significant impact on Performance Risk
- 3) H2c: Consumer innovativeness has a significant impact on Social Risk
- 4) H2d: Consumer innovativeness has a significant impact on Time Risk
- 5) H2e: Consumer innovativeness has a significant impact on Psychological Risk
- 6) H2f: Consumer innovativeness has a significant impact on Privacy Risk

**Table 4.14: Result of impact of CI on Various Perceived Risk**

Hypothesis	Sig. Value	R Square value	ANOVA value	Result
H2a: Consumer innovativeness has a significant impact on Financial Risk	.000	.196	0.000	Accepted
H2b: Consumer innovativeness has a significant impact on Performance Risk	.000	.161	0.000	Accepted
H2c: Consumer innovativeness has a significant impact on Social Risk	.000	.262	0.000	Accepted
H2d: Consumer innovativeness has a significant impact on Time Risk	.000	.186	0.000	Accepted
H2e: Consumer innovativeness has a significant impact on Psychological Risk	.000	.185	0.000	Accepted
H2f: Consumer innovativeness has a significant impact on Privacy Risk	.000	.067	0.000	Accepted

The above shown table exhibits that the ANOVA value of consumer innovativeness for all six types of perceived risks are 0.00 which is less than 0.05 at 95 per cent confidence level. It indicates that the model is overall good. Another parameter to interpret regression analysis is





significance value. Significance values of consumer innovativeness for all six types of perceived risks are 0.00 which is less than 0.05. It signifies that the variables in the model are significant. Therefore, null hypothesis are not accepted for all four factors.

R square values of the above table specify that to what extent consumer innovativeness causes the variation in various types of consumer perceived risk for online shopping. Comparison of R square value shows that which type of perceived risk shows maximum variation. The R square value for consumer innovativeness for financial risk is 0.196 which shows that 19.6 % of variation in financial risk is explained by consumer innovativeness. The R square value for consumer innovativeness for performance risk is 0.161 which shows that 16.1 % of variation in performance risk is explained by consumer innovativeness. The R square value for consumer innovativeness for social risk is 0.262 which shows that 26.2 % of variation in social risk is explained by consumer innovativeness. The R square value for consumer innovativeness for time risk is 0.186 which shows that 18.6 % of variation in time risk is explained by consumer innovativeness. And finally, the R square value for consumer innovativeness for privacy risk is 0.067 which shows that 6.7 % of variation in privacy risk is explained by consumer innovativeness.

**To analyze the impact of consumer self - efficacy on all six types of perceived risks following hypothesis were set:**

- 1) H3a: Internet self-efficacy has a significant impact on Financial Risk
- 2) H3b: Internet self-efficacy has a significant impact on Performance Risk
- 3) H3c: Internet self-efficacy has a significant impact on Social Risk
- 4) H3d: Internet self-efficacy has a significant impact on Time Risk
- 5) H3e: Internet self-efficacy has a significant impact on Psychological Risk
- 6) H3f: Internet self-efficacy has a significant impact on Privacy Risk

**Table 4.15: Result of impact of SA on Various Perceived Risk**

Hypothesis	Sig. Value	R Square value	ANOVA value	Result
H3a: Internet self-efficacy has a significant impact on Financial Risk	.000	.188	0.000	Accepted

H3b: Internet self-efficacy has a significant impact on Performance Risk	.000	.162	0.000	Accepted
H3c: Internet self-efficacy has a significant impact on Social Risk	.000	.163	0.000	Accepted
H3d: Internet self-efficacy has a significant impact on Time Risk	.000	.170	0.000	Accepted
H3e: Internet self-efficacy has a significant impact on Psychological Risk	.000	.302	0.000	Accepted
H3f: Internet self-efficacy has a significant impact on Privacy Risk	.000	.098	0.000	Accepted

The above shown table explains that the ANOVA value of consumer self – efficacy for all six types of perceived risks are 0.00 which is less than 0.05 at 95 per cent confidence level. It indicates that the model is overall good. Another parameter to interpret regression analysis is significance value. Significance values of consumer self – efficacy for all six types of perceived risks are 0.00 which is less than 0.05. It signifies that the variables in the model are significant. Therefore, null hypothesis are not accepted for all four factors.

R square values of the above table specify that to what extent consumer internet self-efficacy causes the variation in various types of consumer perceived risk for online shopping. Comparison of R square value shows that which type of perceived risk shows maximum variation. The R square value for consumer self - efficacy for financial risk is 0.188 which shows that 18.8 % of variation in financial risk is explained by consumer self - efficacy. The R square value for consumer self - efficacy for performance risk is 0.162 which shows that 16.2 % of variation in performance risk is explained by consumer self - efficacy. The R square value for consumer self - efficacy for social risk is 0.163 which shows that 16.3 % of variation in social risk is explained by consumer self - efficacy. The R square value for consumer self - efficacy for time risk is 0.170 which shows that 17.0 % of variation in time risk is explained by consumer self - efficacy. The R square value for consumer self - efficacy for psychological risk is 0.302 which shows that 30.2 % of variation in psychological risk is explained by consumer self - efficacy. The R square value for consumer self - efficacy for privacy risk is 0.098 which shows that 9.8 % of variation in privacy risk is explained by consumer self - efficacy.



**To analyze the impact of consumer hedonic shopping value on all six types of perceived risks following hypothesis were set:**

- 1) H4a: Consumer hedonic shopping value has a significant impact on Financial Risk.
- 2) H4b: Consumer hedonic shopping value has a significant impact on Performance Risk
- 3) H4c: Consumer hedonic shopping value has a significant impact on Social Risk
- 4) H4d: Consumer hedonic shopping value has a significant impact on Time Risk
- 5) H4e: Consumer hedonic shopping value has a significant impact on Psychological Risk
- 6) H4f: Consumer hedonic shopping value has a significant impact on Privacy Risk

**Table 4.16: Result of impact of HS on Various Perceived Risk**

Hypothesis	Sig. Value	R Square value	ANOVA Value	Result
H4a: Consumer hedonic shopping value has a significant impact on Financial Risk.	.000	.202	0.000	Accepted
H4b: Consumer hedonic shopping value has a significant impact on Performance Risk	.000	.255	0.000	Accepted
H4c: Consumer hedonic shopping value has a significant impact on Social Risk	.000	.324	0.000	Accepted
H4d: Consumer hedonic shopping value has a significant impact on Time Risk	.000	.236	0.000	Accepted
H4e: Consumer hedonic shopping value has a significant impact on Psychological Risk	.000	.206	0.000	Accepted
H4f: Consumer hedonic shopping value has a significant impact on Privacy Risk	.000	.165	0.000	Accepted

The above shown table reveals that the ANOVA value of consumer hedonic shopping value for all six types of perceived risks are 0.00 which is less than 0.05 at 95 per cent confidence level. It indicates that the model is overall good. Another parameter to interpret regression analysis is significance value. Significance values of consumer hedonic shopping value for all six types of perceived risks are 0.00 which is less than 0.05. It signifies that the variables in the model are significant. Therefore, null hypothesis are not accepted for all four factors.

R square values of the above table specify that to what extent consumer hedonic shopping value causes the variation in various types of consumer perceived risk for online shopping.

Comparison of R square value shows that which type of perceived risk shows maximum variation. The R square value for consumer hedonic shopping value for financial risk is 0.202 which shows that 20.2 % of variation in financial risk is explained by consumer hedonic shopping value. The R square value for consumer hedonic shopping value for performance risk is 0.255 which shows that 25.5 % of variation in performance risk is explained by consumer hedonic shopping value. The R square value for consumer hedonic shopping value for social risk is 0.324 which shows that 32.4 % of variation in social risk is explained by consumer hedonic shopping value. The R square value for consumer hedonic shopping value for time risk is 0.236 which shows that 23.6 % of variation in time risk is explained by consumer hedonic shopping value. The R square value for consumer hedonic shopping value for psychological risk is 0.206 which shows that 20.6 % of variation in psychological risk is explained by consumer hedonic shopping value. The R square value for consumer hedonic shopping value for privacy risk is 0.165 which shows that 16.5 % of variation in privacy risk is explained by consumer hedonic shopping value.

**To analyze the impact of consumer utilitarian shopping value on all six types of perceived risks following hypothesis were set:**

- 1) H5a: Consumer utilitarian shopping values has a significant impact on Financial Risk
- 2) H5b: Consumer utilitarian shopping values has a significant impact on Performance Risk
- 3) H5c: Consumer utilitarian shopping values has a significant impact on Social Risk
- 4) H5d: Consumer utilitarian shopping values has a significant impact on Time Risk
- 5) H5e: Consumer utilitarian shopping values has a significant impact on Psychological Risk
- 6) H5f: Consumer utilitarian shopping values has a significant impact on Privacy Risk

**Table 4.17: Result of impact of US on Various Perceived Risk**

Hypothesis	Sig. Value	R Square value	ANOVA Value	Result
H5a: Consumer utilitarian shopping values has a significant impact on Financial Risk	.000	.244	0.000	Accepted

H5b: Consumer utilitarian shopping values has a significant impact on Performance Risk	.000	.197	0.000	Accepted
H5c: Consumer utilitarian shopping values has a significant impact on Social Risk	.000	.193	0.000	Accepted
H5d: Consumer utilitarian shopping values has a significant impact on Time Risk	.000	.221	0.000	Accepted
H5e: Consumer utilitarian shopping values has a significant impact on Psychological Risk	.000	.253	0.000	Accepted
H5f: Consumer utilitarian shopping values has a significant impact on Privacy Risk	.000	.040	0.000	Accepted

The above shown table concludes that the ANOVA value of consumer utilitarian shopping value for all six types of perceived risks are 0.00 which is less than 0.05 at 95 per cent confidence level. It indicates that the model is overall good. Another parameter to interpret regression analysis is significance value. Significance values of consumer utilitarian shopping value for all six types of perceived risks are 0.00 which is less than 0.05. It signifies that the variables in the model are significant. Therefore, null hypothesis are not accepted for all four factors.

R square values of the above table specify that to what extent consumer utilitarian shopping value causes the variation in various types of consumer perceived risk for online shopping. Comparison of R square value shows that which type of perceived risk shows maximum variation. The R square value for consumer utilitarian shopping value for financial risk is 0.244 which shows that 24.4 % of variation in financial risk is explained by consumer utilitarian shopping value. The R square value for consumer utilitarian shopping value for performance risk is 0.197 which shows that 19.7 % of variation in performance risk is explained by consumer utilitarian shopping value. The R square value for consumer utilitarian shopping value for social risk is 0.193 which shows that 19.3 % of variation in social risk is explained by consumer utilitarian shopping value. The R square value for consumer utilitarian shopping value for time risk is 0.221 which shows that 22.1 % of variation in time risk is explained by consumer utilitarian shopping value. The R square value for consumer utilitarian shopping value for psychological risk is 0.253 which shows that 25.3 % of variation in psychological risk is explained by consumer utilitarian shopping value. The R square value for

consumer utilitarian shopping value for privacy risk is 0.040 which shows that 4.0 % of variation in privacy risk is explained by consumer utilitarian shopping value.



# **CHAPTER – 5**

## **FINDINGS OF THE STUDY**

**5.1 Findings for Research Objective 1**

**5.2 Findings for Objective 2**

**5.3 Findings for Objective 3**

**5.4 Findings for Objective 4**

**5.4.1 Impact of consumer innovativeness on various dimensions of perceived risk**

**5.4.2 Impact of consumer self-efficacy on various dimensions of perceived risk**

**5.4.3 Impact of consumers' hedonic shopping value on various dimensions of perceived risk**

**5.4.4 Impact of consumers' utilitarian shopping value on various dimensions of perceived risk**

In this chapter, researcher has summarizes the overall research procedure and discuss the background of the whole research. Findings have drained after the whole process of data collection and statistical analysis for consumers' perceived risk. The findings discussed are based on the four research objectives established for the study.

## **5.1 Findings for Research Objective 1: To identify various types of perceived risk associated with online shopping.**

Based on literature review on consumers' online perceive risk, researcher has analyzed perceived risk associated with online environment and identified six types of online perceived risk. These risks are: Financial Risk, Performance Risk, Social Risk, Time Risk, Psychological Risk and Privacy risk.

An illustrative list of references of all types of perceived risk is given below:

<b>Sr. No.</b>	<b>TYPES OF PERCEIVED RISK</b>	<b>REFERENCES</b>
<b>1</b>	Financial Risk	Cunningham (1967), Jacoby & Kalpan(1972), Peter & Ryan (1976), Ingene & Hughes(1985), Stone & Gronhughes(1993), Roselious(1971), W. Huang, H. Schrank and A. J. Dubinsky (2004), Sonia San Marti'n, Carmen Camarero and Rebeca San Jose, 2007, Bhatnagar et al.(2000) and Pradeep A. KorgaonkarÆ Eric J. Karson (2007)
<b>2</b>	Performance Risk	Cunningham (1967), Jacoby and Kaplan (1972), Peter and Ryan (1976), Ingene and Hughes (1985), Stone and Gronhaug (1993)W. Huang, H. Schrank and A. J. Dubinsky (2004) and Biswas & Burman (2009)
<b>3</b>	Social Risk	Cunningham (1967), Jacoby & Kalpan(1972), Peter & Ryan (1976), Sheth (1981), Ingene & Hughes(1985), Stone & Gronhughes(1993), Roselious(1971), W. Huang, H. Schrank and A. J. Dubinsky (2004), Sonia San Marti'n, Carmen Camarero and Rebeca San Jose, 2007

<b>4</b>	Psychological Risk	Cunningham (1967), Jacoby & Kalpan(1972), Peter & Ryan (1976), Stone & Gronhughes(1993), Roselious(1971), W. Huang, H. Schrank and A. J. Dubinsky (2004) and Pradeep A. KorgaonkarÆ Eric J. Karson (2007) and Sonia San Martí'n, Carmen Camarero and Rebeca San Jose (2007)
<b>5</b>	Time Risk	Cunningham (1967), Peter & Ryan (1976), Ingene & Hughes(1985), Stone & Gronhughes(1993), Roselious(1971), Chen & He (2003), Forsythe and shi (2003) and Littler and Melanthiou (2006)
<b>6</b>	Privacy Risk	Jarvenpaa and Todd (1997), Featherman and Pavlou (2003), J. A. Manzano, C. L. Navarre, C. R. Mafe & S.S. Blas (2009), G. R. Milne, A. J. Rohm and S. Bahl (2004)

## **5.2 Findings for Objective 2: To analyze impact of various perceived risk on consumers' online purchase intentions.**

For e-marketers it is very important to understand consumer behavior towards their future purchase intentions. Researcher has made an attempt to analyze consumers' online purchase intentions by studying impact of all types of perceived risk on consumers' purchase intentions. A simple regression analysis has been performed to analyze impact of perceived risk.

**Table 5.1 R<sup>2</sup> value for online purchase intentions**

<b>R SQUARE VALUE</b>	
<b>TYPES OF PERCEIVED RISK</b>	<b>R Square Value</b>
FINANCIAL RISK	0.351
PERFORMANCE RISK	0.285
SOCIAL RISK	<b>0.455</b>
TIME RISK	<b>0.43</b>
PSYCHOLOGICAL RISK	0.364
PRIVACY RISK	0.163

The result of the study indicates that out of all six types of perceived risk social risk has a maximum impact on consumers' online purchase intention for future. That means online consumers of Gujarat state are perceived higher social risk when they are planning to shop online. After social risk, time risk is another risk which bothers online consumers most. According to statistical analysis privacy risk has least R square value which means consumers of Gujarat state perceives less privacy risk while they opt online shopping. Over an all social risk, time risk, psychological risk and financial risk plays important role while online consumers of Gujarat state are planning for online shopping.

### **5.3 Findings for Objective 3: To identify factors influencing consumer perceived risk for online shopping.**

On the basis of literature review, researcher has identified constructs/factors influencing online consumer perceived risk. Further these constructs were justified by experts from academics and industry. Statistically, exploratory factor analysis was used to identify these constructs. The constructs are: consumer innovativeness, consumer self-efficacy, hedonic shopping values and utilitarian shopping values. Further the developed factor structure was confirmed through another statistical tool, confirmatory factor analysis.

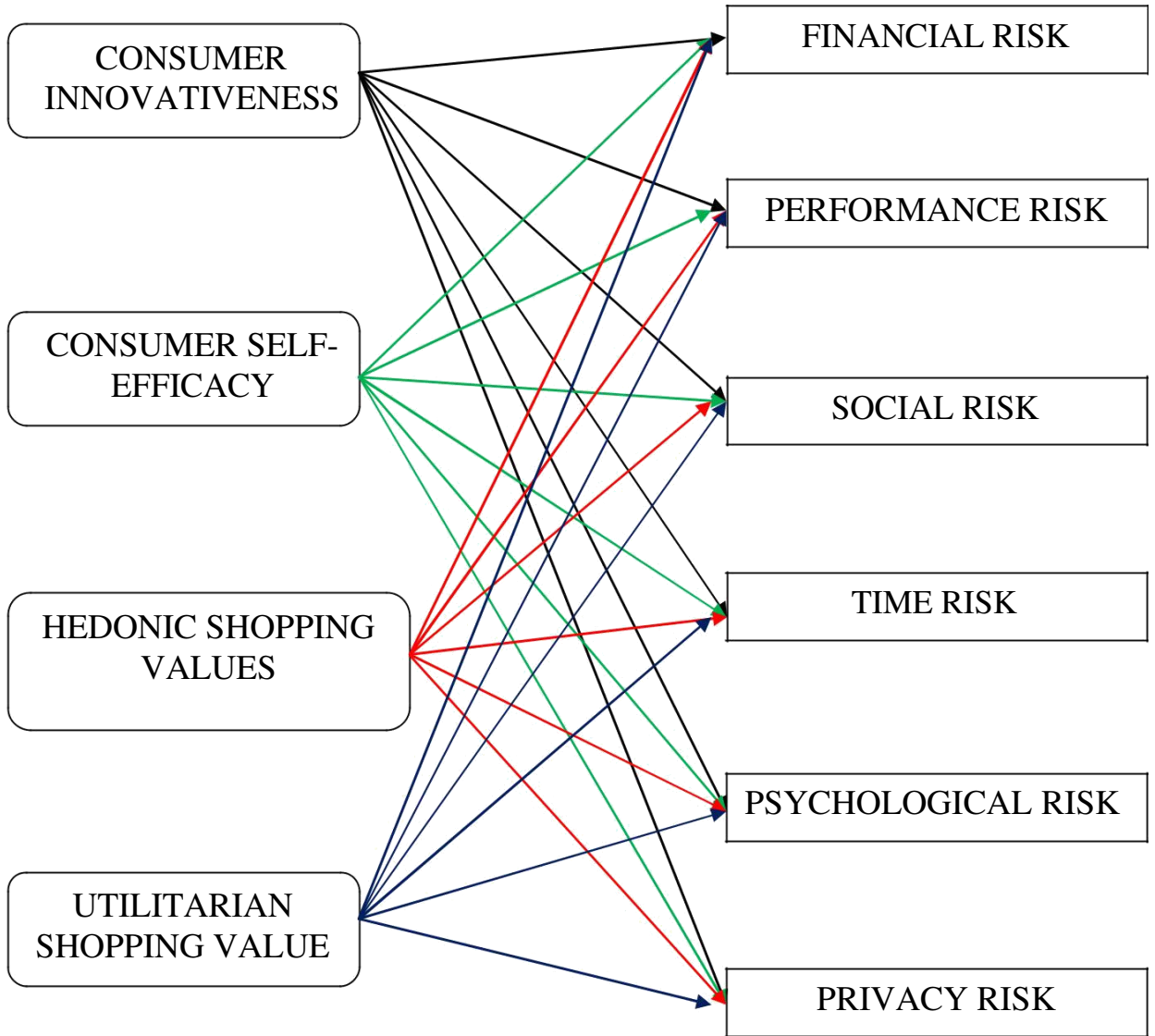


Figure 5.1: Factor Structure

The first factor is consumer innovativeness which describes that how much online consumers are receptive towards new shopping medium, new product, new technology and new way of transaction. The same factor was studied by Manzano, Navarre, Mafe and Blas (2009) but in the context of online banking.

The second factor is consumer self-efficacy which describes the self confidence of consumers. Which is basically the extent to which consumer believe that they are capable of performing specific behavior in order to attain certain goal. The same factor was explored by Kim and Kim (2005) and they found an inverse impact of self –efficacy on perceived risk. They have analyzed perceived risk as a whole concept rather than its dimensions.

The third factor is consumers’ hedonic shopping value which reflects shopping’s potential entertainment and emotional worth which is subjective and personal more from fun and the playfulness. The same factor was analyzed by Childers et al. (2001) and they had found that consumers with high hedonic shopping motives perceived more risk with online shopping as it lacks direct interaction. The study was conducted in foreign context.

The last and fourth factor is a consumer utilitarian shopping value which is basically an overall measurement of functional benefits and sacrifices associated with online shopping. This factor was analyzed by A. Sarkar (2011) and he found a negative influence of utilitarian shopping values on the perceived risk. The perceived risk was not analyzed with its dimensions but as a whole concept.

<b>Table 5.2: Consistency with previous research</b>		
<b>Sr. No.</b>	<b>Name of Constructs</b>	<b>Reference</b>
1	Consumer Innovativeness	Norazah BTE Mohd Suki (2004), Joaquin Aldas - Manzano et. Al. (2008), Enrique Bigne - Alcaniz et. al. (2008), Kamran Khan & Kim Hyunwoo (2009), Meenakshi Handa & Nirupama Gupta (2009) and Arun Kumar Kaushik & Zillur Rehman (2014)
2	Consumer Self – Efficacy	Young Hoon Kim & Dan J Kim (2005), Satyabhushna Dash & Saji (2007), Young Hoon Kim et. Al. (2009), Xianjin Jha, Jing Li & Yalan Yan (2013), Rachana Kumar & Cevahir Uz Kurt And Claudia Iconaru (2013)
3	Consumers' Hedonic Shopping Values	Childers et. Al. (2001), Dholakia, R. R. & Uusitalo (2002), Parsons, A. G. (2002), Abhigyan Sarkar (2011) And Arpita Khare & Sapna Rakesh (2011)

4	Consumers' Utilitarian Shopping Values	Childers et. Al. (2001), Dholakia, R. R. & Uusitalo (2002), Parsons, A. G. (2002), Abhigyan Sarkar (2011) And Arpita Khare & Sapna Rakesh (2011)
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#### **5.4 Findings for Objective 4: To analyze impact of identified factors on each type of perceived risk.**

For analyzing impact of all four factors on each types of risk, a simple regression analysis has been carried out.

##### **5.4.1 Impact of consumer innovativeness on various dimensions of perceived risk:**

**Table 5.3: R<sup>2</sup> value for consumer innovativeness**

<b>R SQUARE VALUE FOR CONSUMER INNOVATIVENESS</b>	
<b>TYPES OF PERCEIVED RISK</b>	<b>R Square Value</b>
FINANCIAL RISK	0.196
PERFORMANCE RISK	0.161
SOCIAL RISK	<b>0.262</b>
TIME RISK	0.186
PSYCHOLOGICAL RISK	0.185
PRIVACY RISK	0.067

The result of the study shows that social risk has been influenced by consumer innovativeness by the maximum extent. This means that consumers who are highly innovative perceive less social risk in comparison to the other types of risk. Financial risk is another dimension of the perceived risk which is negatively influenced by consumers' innovative nature. This means that if an individual is innovative, he/she will not take care of what society is thinking about

them and any types of monetary loss associated with online shopping. Privacy risk has minimum R square value which means that even innovative consumers are also having privacy concerns.

#### 5.4.2 Impact of consumer self-efficacy on various dimensions of perceived risk:

**Table 5.4: R<sup>2</sup> value for consumer self-efficacy**

<b>R SQUARE VALUE FOR CONSUMER SELF-EFFICACY</b>	
<b>TYPES OF PERCEIVED RISK</b>	<b>R Square Value</b>
FINANCIAL RISK	0.188
PERFORMANCE RISK	0.162
SOCIAL RISK	0.163
TIME RISK	0.17
PSYCHOLOGICAL RISK	<b>0.302</b>
PRIVACY RISK	0.098

The analytical result shows that consumers' self-efficacy has a maximum impact on psychological risk. This means that a highly self-confident consumer is having less mental pressure, anxiety and stress during the online purchase. Financial risk is another dimension which is less influenced by self- efficacy. This means that highly self-eficcate consumer is confident that he/she will not face any monetary loss during online shopping. On the other hand, even a highly self-eficcate consumer is also concerned about the privacy measures.

#### 5.4.3 Impact of consumers' hedonic shopping value on various dimensions of perceived risk:

**Table 5.5: R<sup>2</sup> value for hedonic shopping value**

<b>R SQUARE VALUE FOR HEDONIC SHOPPING VALUE</b>
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<b>TYPES OF PERCEIVED RISK</b>	<b>R Square Value</b>
FINANCIAL RISK	0.202
PERFORMANCE RISK	0.255
<b>SOCIAL RISK</b>	<b>0.324</b>
TIME RISK	0.236
PSYCHOLOGICAL RISK	0.206
PRIVACY RISK	0.165

The above R square table shows the impact of hedonic shopping behavior of consumers on all types of risk perceptions. Statistics reveals that hedonic shopping values of a consumer has maximum impact on social risk, which means that if a consumer is having high hedonic motives, he/she will perceive high level of social risk. Except social risk, performance risk is also highly influenced by such consumers because they want to touch and experience the product before purchasing. Statistically, consumers with high hedonic value perceive less privacy risk which means that they are having less privacy concerns.

#### 5.4.4 Impact of consumers' utilitarian shopping value on various dimensions of perceived risk:

**Table 5.6: R<sup>2</sup> value for utilitarian shopping value**

<b>R SQUARE VALUE FOR UTILITARIAN SHOPPING VALUE</b>	
<b>TYPES OF PERCEIVED RISK</b>	<b>R Square Value</b>
FINANCIAL RISK	<b>0.244</b>
PERFORMANCE RISK	0.197
SOCIAL RISK	0.193
TIME RISK	<b>0.221</b>
PSYCHOLOGICAL RISK	<b>0.253</b>
PRIVACY RISK	0.04

The above table shows comparative value of R square of consumers' utilitarian shopping value and various dimensions of perceived risk. The R square value reveals that consumers with high utilitarian shopping value perceive maximum psychological risk, financial risk and time risk. This means that consumer who is expecting more benefits from shopping process; do not want any types of mental pressure, monetary threat and wastage of time while shopping, therefore, they perceive more psychological risk, financial risk and time risk. Such consumers comparatively perceive less privacy risk.

**Table 5.7: Comparative R<sup>2</sup> value of all factors with ranking**

<b>COMPARITIVE R SQUARE VALUE OF ALL FACTORS WITH RANKING</b>				
	<b>CONSUMER INNOVATIVENESS</b>	<b>CONSUMER SELF-EFFICACY</b>	<b>HEDONIC SHOPPING VALUE</b>	<b>UTILITARIAN SHOPPING VALUE</b>
<b>FINANCIAL RISK</b>	0.196(3)	0.188(4)	0.202(2)	<b>0.244(1)</b>
<b>PERFORMANCE RISK</b>	0.161(4)	0.162(3)	<b>0.255(1)</b>	0.197(2)
<b>SOCIAL RISK</b>	0.262(2)	0.163(4)	<b>0.324(1)</b>	0.193(3)
<b>TIME RISK</b>	0.186(3)	0.17(4)	<b>0.236(1)</b>	0.221(2)
<b>PSYCHOLOGICAL RISK</b>	0.185(4)	<b>0.302(1)</b>	0.206(3)	0.253(2)
<b>PRIVACY RISK</b>	0.067(3)	0.098(2)	<b>0.165(1)</b>	0.04(1)

The above comparative table of R square for all four influencing factors gives a comparative structure of their relationship. It is shown that for financial risk, utilitarian shopping value has maximum impact and for performance risk, hedonic shopping value has a maximum impact. The R square values of social risk, time risk and privacy risk also shows a maximum influence of hedonic shopping value. On the other hand, consumer self-efficacy has a maximum impact on psychological risk.

**CHAPTER – 6**

**CONCLUSIONS, MAJOR CONTRIBUTIONS,  
LIMITATIONS AND FUTURE SCOPE OF THE  
STUDY**

**6.1 Conclusion of the Study**

**6.2 Major Contributions**

**6.3 Limitations of the study**

**6.4 Directions for Future Research**

## **6.1 Conclusion of the Study:**

Consumer online perceived risk and its dimensions were studied by different authors since years. In this doctoral research, consumer online perceived risk was studied in three parts specifically for Gujarat state. In the first part, various dimensions of perceived risk were studied through literature review. It was found that there are six major types of perceived risks and these were Financial Risk, Performance Risk, Social Risk, Psychological Risk, Time Risk and Privacy Risk.

In the second part, influences of all six types of risk on consumers purchase intentions were studied. It was found that there was a statistically significant influence of perceived risk on purchase intentions of online consumers. Statistically it was proved that financial risk, social risk, time risk and psychological risk has more impact in compare to performance and privacy risk on consumers' future intentions to shop online.

In the third part, various factors were identified which have influence on consumers' online perceived risk. These factors were consumer innovativeness, consumers' self-efficacy, hedonic shopping values and utilitarian shopping values. An empirical model of online perceived risk was developed based on it. This model was further validated by confirmatory factor analysis. Impact of these identified factors on perceived risk was studied with the help of simple regression analysis. Based on statistical result, it was found that performance risk, social risk, time risk and psychological risk were highly influenced by hedonic shopping values. Utilitarian shopping value has a great influence on psychological risk and financial risk. Consumer self-efficacy has a great influence of psychological risk. Consumer innovativeness has also influenced social risk, financial risk and time risk.

## **6.2 Major Contributions and Significance of the study:**

This study has both theoretical and practical implications.

⌋ The major contribution of this research is in the field of understanding the dimensions of perceived risk and their role in online environment. This research has contributed to the existing body of knowledge of consumers' online perceived risk by adding new information through qualitative research. The developed empirical model of perceived

risk has added richness to the perceived risk factors studied so far in the context of Gujarat State.

- In past, lots of researchers have studied relationship between online perceived risk and its influencing factors. Although, there was a lack of study on consumer innovativeness, self-efficacy, hedonic shopping value and utilitarian shopping value and their impact on various dimensions of perceived risk. From this study, an inclusive picture of perceived risk is clear for future studies.
- Consumers' pattern of shopping has changed due to explosive growth of Internet in India. Consumers are moving towards online shopping. Although, there is a huge gap between internet users and online shoppers in India due to online risk perceptions, it provides new opportunities to the e-retailers. So, it becomes necessary to understand concept of perceived risk and to monitor it in a regular interval, as it is related to the human aspect. This study contributes to the body of knowledge that how consumers' risk perception has changed due to various factors in recent years.
- It is very important for e-retailers to understand the role and importance of various dimensions of perceived risk. So that, they can adopt risk reduction strategies according to the associated type of risk. And they do not waste their time, money and efforts in implying strategies which are not the relevant one.
- This study reveals that innovative consumers perceive less risk in comparison to the less innovative people and innovative consumers are characterized as young, educated and have higher income (Im, Bayus & Mason, 2003). So this is recommended to e-marketers to focus on those consumers who belongs to these categories therefore it become easy to convince them to shop online.
- This study shows the importance of consumer self-efficacy in online environment, as highly self-efficient consumer perceive less risk. It is recommended to the e-retailers that they can use concept of self-efficacy as an uncertainty reduction mechanism. They

can boost confidence among the online shoppers by demonstrating the procedure of shopping.

- The result of the study reveals that hedonic shopping value and utilitarian shopping value have a negative influence on perceived risk. By improving entertainment and hedonic value of the website, e-retailers can attract more and more consumers and can reduce their risk perception for online shopping.
- E-retailers can use utilitarian concept by improving security policies, by reducing technical complications of website and by providing monetary safety assurance to the online consumers. In this way they can reduce risk perceptions associated with the online shopping.

### **6.3 Limitations of the study:**

Even though, this study has pointed various advantages and benefits still this study is not free from limitations. There are certain limitations as follows:

- This study is restricted to the four major cities of Gujarat state: Ahmedabad, Surat, Rajkot and Vadodara only. This restricts the generalization of the study.
- As the sampling method was chosen as judgmental sampling, hence the researcher bias in choosing the respondents may have been present.
- Non-probability sampling is being used because of sampling- time, cost constraint and unavailability of the entire list of Gujarat online shoppers.
- The responses given by the respondents too were subject to their personal choices and biases, could be a limitation.

- Researcher collected data online (Survey Monkey) and offline by personally meeting respondents. As during online data collection researcher presence was not there, hence, the possibility of resolving respondent's query, if any, was limited.
- Incomplete questionnaire were received from online source more than offline.
- Personal interaction with respondent was found to be more time consuming.
- Few respondents which include housewives and small businessmen found it difficult to understand the questionnaire in English.
- Statistical interpretation is possible from used quantitative method was successful in establishing relationship between variables, but behavioral analysis might had limitation.
- As this study is based on the perception of the online consumers, which may change with time as it is related to their behavior.
- The generalizability of the research study results may not be true as it is limited to a small sample size.

#### **6.4 Directions for Future Research:**

- The study was conducted in four major cities of Gujarat only; therefore, the similar study can be conducted again in other cities or states of the country at a larger scale.
- The study focused on various dimensions of perceived risk. Future researchers can conduct same study by taking perceived risk as a whole concept.

- The study was conducted to identify the influencing factors, their impact on perceived risk and then impact of perceived risk on consumers' purchase intentions. Future researcher may study the direct impact of these factors on purchase intentions with mediatory effect of perceived risk.
  
- In future, researchers can add or replace more influencing factors to find out their role on consumers online perceived risk and to see whether the empirical model of perceived risk could be developed in the study.
  
- Future researchers can conduct same study for the specific product categories like books, electronics etc.
  
- Future research can be conducted keeping in focus the various demographic variables.



# CHAPTER – 7

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## List of Publications

- Nidhi Sharma (October, 2012) “**Twitter: As a Powerful Marketing Tool**”, International Conference on Finance & Business Management, New Delhi.
- Nidhi Sharma and Dr. Siddharth Das, (July-December, 2016) “**The Role of Consumer Innovativeness on Consumer Perceived Risk towards Online shopping**”, Journal of Management and IT, New Delhi.

## Appendix: Questionnaire

Dear Respondents,

I, Nidhi Sharma currently pursuing PhD from Gujarat Technological University. My topic for the study is “A Study of Consumer’s Perceived Risk towards Online Shopping in selected cities of Gujarat”.

I would appreciate if you could spare some time and thought in completing the survey questionnaire. This information will be used only for academic purpose. I hope that you would co-operate in completing the Questionnaire with the best of your ability.

### PART-1

**Q1- Please rate the following statements based on your agreement on “Consumer Innovativeness” affecting your decision of shopping online:**

No.	Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1	I will visit a new company’s website even if I have not heard of it before.					
2	I know about new retail websites before most other people in my circle do					
3	I would be the first in my circle to shop online from a new website					
4	I have a better knowledge of online shopping than other people in my circle.					
5	I would shop online even if I did not know anyone who had done it before					
6	People often ask me to give my opinion about new products or new brands or new websites					

**Q-2 Please rate the following statements based on your agreement on “Consumer Self-Efficacy” affecting your decision of shopping online:**

No.	Statements	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)



1	I am confident that I can obtain relevant information through online sources about the Web vendors.					
2	I am confident that I would be able to purchase exactly the item that I want from Web vendors.					
3	In case my order does not come through in a satisfactory manner, I am able to take care of the problem(s) on my own.					
4	I can find the trustworthy web vendors based on ratings provided.					
5	I am confident about online shopping even if I have never experienced the same before.					
6	I am confident about online shopping even if I have only an assistance of “online HELP function”.					

**Q-3 Please rate the following statements based on your agreement on “Hedonic Shopping Value” affecting your decision of shopping online:**

No.	Statements	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
1	The time spent in online shopping is truly enjoyable to me.					
2	I enjoy being immersed in exciting new products while shopping.					
3	I enjoy shopping for its own sake and not because of that I need to purchase something.					
4	While online shopping, I feel a sense of adventure.					
5	Online Shopping satisfy my sense of curiosity.					
6	Online shopping offers new experiences.					

7	Online shopping gives me pleasure.					
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**Q-4 Please rate the following statements based on your agreement on “Utilitarian Shopping Value” affecting your decision of shopping online:**

No.	Statements	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
1	Online shopping enables me to accomplish the task quickly.					
2	Online shopping makes shopping easy.					
3	Online shopping enables me to shop from far off locations.					
4	Online shopping helps in saving my money.					
5	I can compare price easily via internet.					
6	I can buy things whenever I want.					
7	I can access wide selection online.					

**Q-5 Please rate the following perceived risk factors which influence your decision making while shopping online:**

No.	Statements	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
<b>Economic/Financial Risk</b>						
1	I would be concerned that I really would not get my money’s worth from the product					
2	I would feel concerns about providing the number of my credit card					
3	there would be many possibilities for non-delivery of ordered goods					

<b>Performance Risk</b>						
1	It is difficult to evaluate product's features accurately.					
2	I may not get the level of benefits as advertised on the Web					
3	The product may not perform as it is supposed to					
<b>Social Risk</b>						
1	Online shopping would negatively affect the opinion that my friends or relatives have about me					
2	All people from my circle may not agree to my online buying decision.					
3	My friends and relatives would think that I am unwise.					
<b>Time Risk</b>						
1	It takes too much time in placing order.					
2	It takes too much time for searching the product					
3	I have to wait too long for the delivery of the product					
<b>Psychological Risk</b>						
1	Online shopping makes me feel uneasy					
2	Online shopping gives me a feeling of anxiety					

3	Online shopping cause me unnecessary tension					
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**Privacy Risk**

1	My personal information may be used without my knowledge					
2	I will receive unwanted e-mails					
3	Improper use of my personal information may lead to loss of privacy					

**Q-6 Please rate the following statements according to your intention to purchase online:**

No.	Statements	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
1	I will continue to purchase products from online retailers					
2	I will visit an online retailer site to shop for my needs.					
3	I plan to do more of my shopping via online shopping sites.					
4	I will strongly recommend the use of my online store to others.					

**PART – 2: Respondent Profile**

1. Name: \_\_\_\_\_

2. Gender:      Male       Female

3. Contact No: \_\_\_\_\_ Email id: \_\_\_\_\_

4. Age Group:

18-25  26-35  36-50  50 and above.

5. Educational Background (highest qualification)

Graduate  Post Graduate  Doctorate  Others.

If Others: Pls. specify \_\_\_\_\_ .

6. Occupation

Student  Business  Govt Employee  Pvt Employee

Others

If Others: Pls. specify \_\_\_\_\_ .

7. Annual Income Range

Below Rs. 1,00,000

Rs. 1,00,001 – 3,00,000

Rs. 3,00,001 – 5,00,000

Rs. 5,00,001 and above

8. How many time did you shop online last month?

0

1-5

6-10

11 & above

