

An investigation of online shopping attitudes of  
Generation Y in relation to the role of trust, risk  
and purchase intention

By

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A dissertation submitted in partial fulfilment for the award  
of

Masters in Business Administration (MBA)

National College of Ireland

Submitted to the National College of Ireland,

September 2014

# Submission of Thesis and Dissertation

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## ABSTRACT

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The main objective of this dissertation thesis was to investigate the online shopping attitude of Generation Y consumers and to examine the relationship between trust, perception of risk and purchase intention. The researcher examined and analyses the impact of gender on the above factors.

This study focused on the Generation Y cohort as due to their spending abilities and online shopping behaviour they are believed to be a growing market segment. Generation Y, also known as Millennials, is believed to be an attractive market segment for marketers as they are considered trend settlers, have a compulsive shopping attitude as well as the fact that they grew up with technological advancements and do not have many financial responsibilities at that age.

According to the existing research trust and perception of risk are believed to be crucial when it comes to purchasing goods online. In order to analyse and examine attitudes towards online purchases the researcher conducted quantitative research via the convenience method. For the purpose of this research an online survey was set up on [surveymonkey.com](https://www.surveymonkey.com) and paper copies were distributed.

This study was limited to respondents living in Ireland and who have previously used online shopping. To ensure that there were no issues with answering the survey and that the questions were easily understood, the researcher conducted a pilot test with a beta group of 10 participants. A total of 230 respondents participated in this survey from a variety of education backgrounds and different age groups. After all the data from the survey was gathered the researcher used statistical package for the social sciences software to examine and analyse the responses. The researcher used Cronbach's Alpha test to ensure validity and reliability of the survey.

The researcher intended to add to the existing research on gender and age differences in respect of purchasing goods and services online.

The results of this research revealed that there is a positive correlation between trust and purchase intention, in other words the more trust consumers have the more likely they are to buy products online. However, the findings revealed that there is a negative relationship between trust and perception of risk. There was also a negative correlation between perception of risk and customer purchase intention. The findings of this research indicate that retailers need to acknowledge the importance of creating a trustworthy website, safe transaction process and accurate security payment methods in order to increase their sales as well as gain new customers and hold onto the existing ones.

The researcher intended to contribute to the existing knowledge about consumer's attitude towards online shopping and to provide more details about gender and age differences. Further research should focus on other demographic factors such as income, education status and marital status as well as considering factors that affect online shopping in each variable.

**Keywords:** Online shopping, Consumer attitude, Trust, Perception of risk, purchase intention, gender differences.

## Acknowledgment

First I would like express my gratitude to my supervisor Colette Darcy, for guidance and help throughout my research.

I would like to show my appreciation to Jonathan Lambert who provided me with valuable suggestions and feedbacks. Thank you for your patience.

A special gratitude I give to my classmates, you made this MBA course a wonderful journey.

I would also like to thank all the participants who took part in my survey.

Last but not least, I would like to thank my family, friends who were always there to support me. The biggest thanks go to my best friend Paul Brady; words cannot express how grateful I am for all the help and encouragement you gave me throughout the years.

Fabiola Galeziewska

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# CHAPTER 1: INTRODUCTION

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## 1.1 Research background

The Internet has had an enormous impact on commerce, global communication and networking and, as Dess and Lumpkin (2008) highlighted it has influenced every business sector. Bhatt and Emdad (2001) noted that the new technologies not only altered the way business is conducted and lowered the costs, but also allowed companies to expand operations and introduce different business activities. Dess and Lumpkin (2008) claimed that the Internet revolutionized the way business is carried out in this constantly changing environment. E-shopping transformed retailing as companies and customers can connect directly all over the world (Alden et al., 2006). Hoffman, Novak and Chatterjee (1996) argued that the Internet enabled customers to find relevant information, compare products and services from different retailers, get better value for products and to purchase goods from the whole world.

With the growth of electronic commerce, companies need to understand online consumers and their shopping behaviour and attitudes in order to better market their products/services and specifically target market segments. It is crucial to identify and analyse the changing behaviours of consumers as the Internet, through PC's, tablets and mobile phones becomes a more popular method for buying goods and services (Robbins, 2010). Knowledge is key because the expansion of online-shopping will lead to a homogeneity with the traditional bricks and mortar stores in terms of sales volume.

Arnett (1995) claimed that from online users young people are the most comfortable with technology as they grew up with it, and their shopping patterns should be observed as they tend to spend more time online than any other group, are more attracted to online shopping, and purchase the most products online.

The following dissertation shows that consumer behaviour has changed in recent times. This research paper will focus on a segment of online customers, Generation Y. Gen-Y,

also called Millennials, Echo Boomers, Generation Next and Digital Natives are people born between 1982 and 2003 (Howe & Strauss, 2000). They are the first generation that experienced and grew up with the technological advancements, but were also forced to live at home longer than previous generations due to economic reasons (Omnicom Media Group, Proprietary Millennials Study, 2011). Millennials are a tech savvy generation; they are permanently connected to the Internet, whether it is at home, college or work on their laptops, tablets or mobile phones. Arnett (1995) suggests that the online shopping attitude, behaviour and purchase decisions of Generation Y comes from their personality and need to identify and belong to a group.

Other reasons to shop online are familiarity, convenience and security of the website and the payment methods (Robbins, 2010). Seyal, Rahim and Tuner (2011) list the main factors of consumers choosing to shop online as being the cheaper cost of products online versus traditional retailers, personal attitude towards e-commerce, trust towards websites as well as ease of use. Alch (2001) suggested that Gen-Y annually spends between 50 to 500 billion dollars, and since they are finishing college and entering the workforce their purchasing potential is only growing. He claimed that the shopping decisions of the Millennials will affect the economy for at least 40 years. Moreover, Morton (2002) discussed that this group have more spending money than any previous generation, and add that to the fact that they have grown up in a consumption-driven society marketers should closely examine their shopping behaviour. The following dissertation shows their attitudes towards online shopping, the type of products Millennials purchase online and what factors influence their decisions and will provide quantitative research on Gen Y.

This research paper will focus on Generation Y as it is considered to be the most influential consumer segment due to its size, loyalty to brands they recognize from an attachment started in adolescence, their influence on their parents' buying decisions and their desire to follow trends (Wolburg and Pokrywczynski, 2001). Moreover, Whiddon (1999) claimed that this group differs from previous generations as the

Internet has the most influence on Millennials, rather than traditional media like newspapers, radio or TV. The research showed that the attitude towards online shopping varies between the generations, and that younger consumers are more likely to have a positive attitude towards it and purchase goods and services online more often (Robbins, 2010).

Existing studies mostly done in America, have concentrated on general characteristics of Gen-Y, their attitude to online shopping; however there is little evidence of the shopping and purchasing behaviour of this demographic cohort, especially in the Irish context. Little is known about what this group actually spend time and money online on and what influences their shopping decisions. To reach this influential segment market one needs to understand their behaviour and what they purchase (Gronbach, 2000). Hence, the objective of this dissertation is to describe Gen-Y, analyze the number of factors that influence their decision to switch from the traditional bricks and mortar shopping to the online retailer as well as analyze the differences between gender when it comes to online shopping and the level to which their decisions are influenced by trust.

This research intends to show that the Internet has been a huge influence on consumer purchasing decisions and choices and that there a number of factors influencing these decisions like age, gender and attitude. The objective of this research is to investigate shopping behaviour of Generation Y in the Irish context.

## **1.2 Research questions**

This dissertation thesis intends to create more understanding about the correlation between trust, risk and purchase intention online. This study will enable marketers to create more personalised and therefore more efficient strategies as well as facilitate online retailers with more knowledge about their consumer's shopping attitudes.



The emerged researched questions are:

- Does gender influence attitudes such as trust, risk and purchase intention towards shopping online?
- Do Millennials have different attitude towards trust, perception of risk and purchase intention online than previous generations?
- Examine the correlation between trust, risk and purchase intention.

### **1.3 Methodology**

To examine research questions and the hypotheses an online questionnaire was distributed through convenience snowballing technique and well as distributed manually. To fulfil the goals of this dissertation thesis a sample of 230 respondents were collected. The data collected from the survey was analysed using SPSS programme.

### **1.4 Structure**

This research paper is divided into 6 chapters: introduction, literature review, research objectives, data findings, analysis and discussions (Figure 1). The introduction chapter of this dissertation thesis provides an overview of the existing literature on Generation Y, the uniqueness of the research study as well as the justification for the chosen topic.

The second chapter focuses on the literature review; the researcher gives an overview of the characteristics of the Millennials consumers and their consumer behaviour as well as the rationale behind shopping online. The researcher also investigates the importance of trust and security in online shopping as well as how perception of risk impacts the purchasing behaviour. It will also describe the key existing literature focusing on discrepancies in age and gender towards online shopping attitude. The

researcher will also describe the gap in the existing literature and topics needing further investigation.

The third chapter focuses on the research objectives that the researcher believes need to be examined in more detail.

The fourth chapter describes the methodology used in this research, the research design, the rationale behind the sample population and sampling procedures. Also included in this section is data collection techniques used and justifications for using the quantitative method, methods and rationale behind data analysis and performed tests. It also examines the limitations of the chosen research method, the pilot test and ethical considerations that were applied.

The fifth chapter illustrates data findings and the rationale behind each test performed in relation to variables of trust, perception of risk and purchase intention in respect of Gender and Millennial age cohort. This section will also include characteristics of the chosen sample, results of the Cronbach's alpha reliability test and depict graphical and numerical descriptives. The researcher will analyse the data findings and link it back to the literature review and research objectives.

The sixth chapters provides an overview of the whole dissertation, it summarises the key literature, provides a discussion about the findings as well as includes implications of the conducted research, limitations of the study and future recommendations.

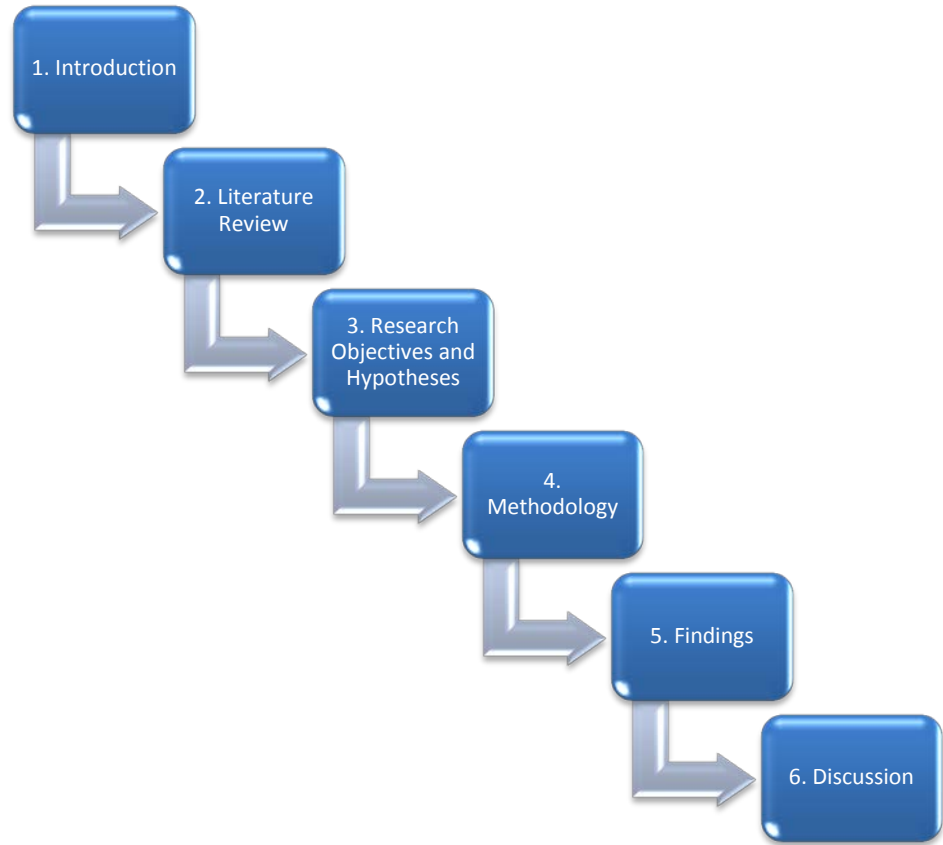


Figure 1: Thesis Structure

## CHAPTER 2: LITERATURE REVIEW

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### 2.1 Introduction

As alluded to by researchers in the past, many factors influence consumers feelings towards online shopping; Chen (2005) lists level of service, Internet site layout, usability, trust and risk. These commonly feature in questions asked of consumers during surveys about online shopping.

Wheatley, Chiu, and Stevens (1980) suggested that customer shopping patterns had been researched and examined before by dividing buyers into groups based on their age. Therefore, online shoppers can be analysed based on the same criteria. People in the same age group share similar characteristics; for the purpose of this research we will study, based on the age and gender of the web shoppers, the attitude towards online shopping and the factors affecting their online purchase intention and decision making.

### 2.2 Characteristics of the Generation Y Customers

According to Cox et al., (2009) Generation Y is a distinctive consumer group that needs a fresh marketing and sales approach as its buying patterns and behaviour are different from the previous generation and is influenced by technological advancements. This cohort is described as Tech-Savvy and use practicality as one of the key determinants when choosing a method of shopping.(Cox et al., 2009). According to Junco and Mastrodicasa (2007) Millenials are the most influential group with around 80 million members and have the biggest purchasing power. Gronbach (2000, p.45) claimed that “today’s Gen Y teens are tomorrow’s wage earners”, this generation has grown up with the Internet and technological advancements, it facilitates them with everyday life and

allows them to communicate with the world. The Internet facilitates web shoppers with easy access to information, peer review, and recommendations about what products to purchase.

Farris et al., (2002) suggested that the purchasing attitudes and habits that Gen-Y have in adolescence will carry over into adulthood. In support of this view, Metcalf (2006) claimed that once the young shoppers recognize the product/service and get attached to the brand, they identify themselves with the brand's personality and the company will gain customers for many years. On the other hand, Myron (2005) argued that since the Internet facilitates Millennials with easy access to information, it made them more independent and less likely to take information online for granted, preferring instead to verify it and thus lowering loyalty to brands.

Millennials are often described as individualistic, multi-taskers, optimistic about the future and career prospects, tech savvy, and open to new challenges and technological advancements (Pickren and Roy,2007; Metcalf, 2006). They originate from diverse backgrounds, are team orientated, because of the Internet they are globally connected with their friends and family and consult with them about their purchasing decisions (Shaw and Fairhurst, 2008). Additionally, Dias (2003) defined Millennials as positive, tolerant, confident and having a strong sense of a digital community. On the contrary, Twenge (2006) described Gen-Y as "Generation Me" because of their sense of entitlement and higher narcissism than other age groups.

As Palmer (2009) highlighted, while most people use the Internet and technological advancements despite their age, Millennials are the only generation that grew up in the digital world. Therefore, it formed the way Millennials think, process data, and gain knowledge, impacting directly upon their purchasing decisions and habits (Partridge and Hallam, 2006). The same view is shared by Martin and Turley (2004) who believed that since technology surrounded Millennials during their formative years they embrace it and stay up to date with all the changes and innovations that come in. Goldenberg

(2005) noted that the Internet is the main source of information for Gen-Y, using it to communicate with the world and to entertain them.

According to the Cisco Connected World Technology Report conducted in 2012 for Gen-Y information is “real-time, all the time”, with nine out of 10 respondents globally using their mobile phones and tablets as part of their morning routine to check emails, get updated with their social media websites and to read news online. This means that Millennials are more up-to-date with what is going on in the world; they are also more informed and responsive. The constant need to be connected affects the way Millennials shop, with 90% of respondents shopping online, and 58% admitting that when purchasing a product online they depend on customer reviews and 57% will share their personal details online like email address in order to receive a discount and notice about sales (Cisco Connected World Technology Report, 2012).

### **2.3 Consumer behaviour of Generation Y**

Lester and Lloyd (2006) suggested that Gen-Y’s shopping behaviour is highly influenced by the Internet and should be studied in this context. This group has tremendous purchasing power (Whiddon, 1999) and their shopping experience is different from previous generations and as Taylor and Cosenza (2002, p.393) described Millennials “love to shop”.

Schiffman et al., (2008) said that the last decade has seen a diversity of technological advancements which influenced the shopping attitudes and patterns of customers. The services have altered, evolved and entered the online world with the rise of e-commerce and mobile commerce, which shaped the behaviour of the consumers and their habits.

Solomon (2011) and Schiffman et al.,(2008) described traditional perspectives in the decision making process, where customers gather internal (experience) and external

(search engines e.g. Google) information that can be used when making a purchase. Some customers have a rational system of cognition that uses logical thoughts; others have an experimental system where they evaluate information more holistically.

With technological advancements customer purchasing behaviour and attitude has transformed and web shoppers have evolved. Donthu and Gracia (1999) suggested that online shoppers have become more impulsive in relation to purchases, less brand conscious and less price conscious.

## **2.4 Rationale behind shopping online**

Bakewell and Mitchell (2003) suggested that for Millennials shopping is not just about making purchases, it is a pleasurable experience in which they put thought and research to procure items which satisfy a number of needs. According to the study done by Omnicom Media Group in 2011, Gen-Y chose online shopping over high-street shops due to the feeling of being in control, no pressure to purchase the products and the ability to shop at their own pace and at a time that is suitable for them. Wolfinbarger and Gilly (2001) looked into what motivations shoppers have while making purchases online, and came up with independence, power and enjoyment.

According to Alch (2001) Millennials take advantage of knowledge garnered online about items for purchase to improve their decision making process. Gen-Y do not use the same criteria as previous groups did; Facebook, Twitter and other social media websites are a significant influence in how their conscious mind thinks and is often their main tool for communicating with relatives and peers (Apresley, 2010).

In the past people walked down the street or around shopping centres to peruse what was for sale but Millennials do this in cyberspace and from blogs and customer comments on shopping websites they can get an idea of a product's worth (Sheahan,

2005). Often they will share their shopping experience and what they have bought through Facebook, get the latest news about products via tweets (Palmer, 2009).

Morganosky and Cude (2000) explain that convenience is an important motive for consumers to shop online. Online stores are convenient because they are available 24 hours a day, providing customers with a full range of products, opinions, online demonstrations, specification reviews and comparisons with other products. (Dennis et.al, 2006; Rabinovich and Laseter, 2011). Yang and Lester (2004) conducted a study which showed that university attendees mostly appreciated the ease and quickness of shopping on the Internet. Moreover, Rohm and Swaminathan (2004) also discovered that social interaction, variety seeking and convenience were the most important motivators for customers' online shopping. The same opinion was shared by Joines et al., 's (2003) whose research of third-level Millennials looked to make sense of why they are motivated by trends, status, need to feel accepted and desire to be highly informed. This suggests that situational factors may be the key in shaping and reinforcing online shopping motivations, such as:

- Peer group attraction
- Virtual communities e.g. Boards.ie
- Social experience outside home
- Communication among those who share interests

Wolfenbarger and Gilly (2001) stated that people shop on the Internet because they get a better understanding of the many choices as opposed to the pre e-commerce method of consumerism. Knowledge is a key tool for shoppers and by surfing the Internet they can take away some of the doubts they may have about making a purchase. According to Kim and Kim (2008) Gen-Y 'ers can take more care when using an electronic store to check out specifications, special discounts, make better choices or simply enjoy the thrill of the information hunting. Study from WARC (2008) by the EIAA (The European Interactive Advertising Association) showed that when it comes to purchase decisions, 84% of customers keenly examine the products they intend to purchase in order save



money. Nevertheless, Gen-Y is considered to be careful when it comes to parting with their cash as it is held that a quarter of them have grown up in a household with only one income earner (Neuborne and Kerwin, 1999).

New information shoppers are consumers that research valuable information online before making their purchase. According to a study conducted by WARC (2008) consumers now exclusively value Internet research (76%) more than personal recommendation (72%). Websites of well-known brands are also important sources of information (59%) and 61% of consumers find price comparison sites beneficial. Web shoppers are also most likely to change their minds as a result of online research (WARC, 2008). According to Solomon (2011) and Schiffman et al., (2008) social media also has a great influence on what consumers are buying as word of mouth is very important in today's economic climate.

## **2.5 Demographic factors influencing consumer buying decision**

According to Akhter (2003) many studies have been carried out to identify the different behaviours and attitudes of men and women. Fischer and Arnold (2006) claim that the genders differ in their consumer patterns because they process information differently. Lewellen et al., (1977) conducted research in finance industry which demonstrated that that man refer more to their own instincts while making decisions. Furthermore, a research by Hinz et al., (1997) proved that men are more likely to engage in possible risky behaviour. On the other hand, women are believed to have a lower tolerance for risk (Powell and Ansic, 1997). One may assume that these characteristics will also translate into online behaviour. On the contrary, Chiu et al., (2005) found from their analysis and research that women like to see themselves as innovative and that this will lead to females having a more positive outlook and stronger intention towards shopping via the Internet than men.

Male / female is still one of the main ways of segmenting consumers for a majority of manufacturers and retailers (Mokhlis and Salleh, 2009). Garbarino and Strahilevitz (2004) analysed and compared the levels of hazards from purchasing online or in person; they concluded that females associate more of a risk with Internet purchases. According to their research women are more concerned about privacy and security and so they shop less online because as stated by White and Truly (1989) a perceived risk will reduce intention to purchase. This sentiment is echoed by Bartel-Sheeha (1999) who states that females are more concerned about privacy and security when using online retailers. This is because when shopping online one needs to give the retailer their credit card details and address and women deem this risky according to Graeff and Harmons (2002). As pointed out by White and Truly (1989) if there is a perception of risk, it will negatively affect intention to purchase for females and one may assume that this will translate to the online medium.

Another scholar to draw the same conclusions as shown above is Jackson et al., (2001) who found that the gender gap in online shopping is a result of men feeling more comfortable in a virtual environment. Rodgers and Harris (2003) have also found from their research that men feel more positive about shopping over the Internet and state that there is a major gender gap and they say they is because men trust it more than women. Park and Lee (2009) have drawn a similar conclusion and found that females spent less time online and are not as familiar with how the web works compared to males. Men have also been found to be more in favour of technology and cyberspace (Bimber, 2000), and use the Internet more for all reasons, especially making purchases (Dennis et al., 2010).

Moreover, Susskind's (2004) research demonstrated that women spend less money on online purchases than men. Yang and Lester (2005) found that males are concerned about the amount of time it takes to shop online while females may be anxious about using computers and the safety of their money. A study conducted by Rodgers and Harris (2003) demonstrated that men find online shopping to be more practical, useful

and convenient compared to woman who treat shopping more like a social interaction. Woman were also found to have a stronger need to evaluate the goods, to touch and see the physical product which impacts the type of products both genders purchase (Citrin et al., 2003). Citrin et al., (2003) suggested that females purchase more food and clothes while men will focus on electronics and software. One definitive difference highlighted by Kim and Kim (2004) is that women will spend a lot more on fashion apparel e.g. clothes and jewellery but overall men will have a higher intention to purchase. Many researchers have found men experience a thrill and sense of victory in purchasing online, as they search for the cheapest price and thus “win one over” retailers (Herrmann, 2004).

The discrepancies between the genders when it comes to attitude and purchasing online are summarised by Zhou et al. (2007). Firstly, he found that women like the social aspect of shopping, doing it with their friends in stores and interacting with sales staff while men value ease, convenience and simplicity of online shopping. Secondly the most popular products online are easily associated with men, electronic gadgets and computers and finally women just enjoy the ability to evaluate products using sight and touch.

It has been pointed out by Rodgers and Harris (2003) that both genders use the Internet equally but more men buy goods online. Dittmar et al., (2004) looked at store-based consumerism compared to online shopping and concluded that men have the same feelings about both while women have a different outlook to e-commerce, less favourable. Men have been found to spend more time and money purchasing via the Internet than women because the type of goods they buy are different. (Cyr and Bonanni, 2005)

The U.S. Census of 2000 revealed that women made over 70% of all buys in bricks and mortar shops, however nowadays the pattern is starting to change as women are now seeking information and buying online at a closer level to men (Pew, 2010). According to the study conducted by the Pew Group (2008) the gap of Internet usage between male

and female college students is very small. This is due to the fact that Generation Y students rely on the Internet to look up information for college material (Mitra et al., 2005). Nowadays, women students are believed to be looking up more products and services online, whether as research for buying in stores or ordering over the Internet and will buy more clothes online than their male counterparts (Seock and Bailey, 2008). Different research into university students showed that women will use the Internet for email and academic work whilst men will use it for shopping, news and gaming, (Odell et al., 2000).

Hannah and Lybecker(2010) concluded that women are becoming savvy online shoppers and comfortable with the Internet. Park et al., (2009) found that women will spend more time reviewing products and sharing after purchase recommendations than men. It is believed those women who do engage in online shopping, purchase products on the Internet more often than men (Burke, 2002).

Comegys and Brennan, (2003) feel that some of these discrepancies between the genders may no longer apply with Gen-Y's in university as they are more likely to have had constant Internet access all their life due to their background. Men may have been traditionally held to be irritated by shopping in physical stores as opposed to women, but in the age of consumerism and cyber space these stereotypes may not hold through (Rajamma and Neeley, 2005). Burke (2002) also suggested that not only gender but also the education plays important factor when choosing a shopping channel, with higher education comes higher level of Internet literacy and confidence using it.

## **2.6 Customer Online Purchase intention**

Salisbury et al., (2001) claimed that customers' online shopping intentions establish a unique purchasing behaviour. Shim et al., (2001) developed an online pre-purchase model which measured the correlation between consumer's intention to browse for

information online and the actual purchases made in the digital world. A big factor of intention to buy online is an intention to search for information online first. According to Whitlark et al., (1993) a customer's intention to look for information online has a positive impact on the rate of purchases online. Kim and Park (2005) also highlighted the fact that when customers decide to purchase products via the Internet they research the products more deeply compared to less information being sought when purchased via traditional bricks and mortar retailers. Research conducted by Lohse et al (2000) claims that the medium via which people look for information is mostly chosen as the channel they actually buy products via.

Chang and Chen (2008) suggest that the level of consumer trust in online retailers is correlated with online purchases. Moreover, Chen and He (2003) claimed that perceived risk is another factor taken into consideration with online purchase intention. Kim and Kim (2004) suggest gender as another variable. On the other hand, Ganguly et al (2010) disagree with this as his research found negative correlation between trust, perceived risk by consumer and the products they bought online. Ganguly et al (2010) discovered that people in India have different feelings than people in North America about the connection between intention to buy and risk. Thus this research will focus on the impact of trust and perception of risk on the purchasing behaviour of web shoppers, concentrating the study on Generation Y.

## **2.7 Perception of risk**

The perception of risk refers to a customer's feelings towards possible negative consequences as a result of a transaction they might carry out online (Hsu and Chiu, 2004). Perceived risk and trust has been widely examined in a literature and most of the evidence shows that trust plays more important role when it comes to shopping via web rather than consumer's purchase intention (Chen, 2009, Pavlov, 2003). This view is

supported by the research conducted by Ganguly et al., (2010) who found negative correlation between customers' purchasing intention and the perceived risk.

According to the study, 40% of participants in their survey worried about monetary loss while 25% felt that the quality of items purchasable online was an issue. Furthermore, according to the Shergill and Chen's (2005) study consumers are anxious about security, privacy and product quality as they cannot examine a purchase physically before buying. Neither of these studies state what generation their respondents would be classed in. Similarly, the study conducted by Miyzaki and Fernandez (2001) found that security is the biggest worry about shopping online due to the possibility of credit card fraud. Overall the studies show that perceptions of risk are determined by different factors, the security of electronic payment systems, possible fraud by online retailers, theft of personal information by third-parties and inability to inspect product quality (Fischer and Arnold, 2006). Studies carried out by Pavlou (2003) and Bhatnagar et al., (2000) drew the same conclusions about perceived risks, security, quality etc. According to Jarvenpaa et al., (2000) trust is intertwined with risk. Pavlou (2003) says that once an online retailer can show integrity along with competence consumers perceive a lot less risk.

## **2.8 The role of security and trust in online shopping**

The different aspects of trust are similar it seems; security, reputation, feedback and privacy are the most important in terms of our research in this thesis. Jarvenpaa et al., (2000), as well as Monsuwé et al., (2004) found that the absence of trust is the main reason for a consumer not making a purchase of a product/service using e-commerce.

Scholars have not collectively defined online trust. Its popular to state that trust comes when a party is willing to make themselves vulnerable to what another party may do as

they assume and expect that they will do what they feel is important even if there is a lack of control or scrutiny (Mayer, et al., 1995).

The early characterization of non-shoppers by Gillett (1970) stated that consumers who shop at home are willing to purchase products without touching them as they prefer convenience and shop infrequently without planning the purchase. Although Dennis et.al (2006) noted that risk and insecurity could be associated with:

- The fact that customers cannot touch the product
- Barriers of returning faulty/unwanted products

There is a difference between how a consumer defines trust with a high-street purchase and an online one due to not being able to deal face to face with sales staff or physically see the item (Yoon 2002). Chang and Chen (2008), Gefen and Straub (2004), Ling et al (2010) all draw the same conclusion that trust is significant for consumers to have high intentions to purchase. The bigger a company is the more likely they are to be deemed trustworthy by consumers Balasubramanian, Konana, and Menon, (2003); Koufaris and Hampton-Sosa, (2004). When the business operating online has a good reputation consumer trust is increased, Doney and Cannon, (1997); Figueiredo, (2000).

Furthermore, Fenech (2003) recognized more risks with buying online: a multidimensional factor, with economic, social, performance, personal and privacy elements. In support of this view, Vijayasarathy and Jones (2000) noted:

- The economic threat is the risk of buying a poor quality product.
- The social threat is the risk of social disapproval for buying a product from a non-physical source.
- The performance risk is associated with the risk of theft and unauthorised access to a consumer's credit card information.
- The privacy risk is the danger of compromising personal data.

Ang, Dubelaar, and Lee (2001) looked at online shopping created different aspects of trust which can increase the likelihood that a consumer will feel secure making purchases online. These are consistency from the retailer to deliver good on time and as described, an ability to return goods and receive a refund if a product is faulty or misleading and a mission statement that sets out the retailer's privacy and security policy. McKnight et al., (2002) state that trust happens when the shopper examines and seller's website and accepts the level of service and security it offers. Kim et al., (2001) claim in their research that there are 6 aspects that makes up trust; amount of information given, product, institutional, consumer-behavioural, transaction and technology. A study of people who make regular purchases on eBay by Ba and Pavlov (2002) showed how trust is built by reading the feedback given about sellers, on the web site consumers can read about other people's experiences with retailers and whether it was positive or negative.

Salisbury et. Al. (2001) state that security plays an influential part in how a customer feels and shapes their intentions about online purchases as providing credit card details to web-sites can be seen to be a risky thing to do. Lee and Turban (2001) propose that for shoppers, sharing credit card details and personal information is an uncomfortable experience as they lack the ability to physically see the product before buying or monitor how their financial details are being used. Kim and Shim (2002) also allude to this as they emphasize that security has a major influence on a person's intentions and attitudes to shopping through the Internet. When a consumer uses a website the experience they have will shape the opinion they form about the company that owns the site, do they appear professional and trustworthy (Tan and Thoen 2001). Yoon (2002) states that trust is essential in order for a consumer to start dealing with an online retailer. Flavian and Guinaliu (2006) echo this sentiment saying trust is a key for satisfying online purchases.

According to Solomon (2011) consumers mostly focus on trust when choosing a product and brand. Security/privacy concerns relate mostly to payment but as time goes by e-



shoppers become more advanced and experienced with this aspect. They purchase more products online and become less worried about the security issues. This view is supported by Javelin Strategy and Research (2007) which demonstrated that the risk perceived by e-commerce and e-shopping is much lower in generation-Y than the older generations. Therefore security threats are not discouraging Millennials from turning to online shopping.

For the most part it is young people that shop online; usage amongst people over 55 is growing but a Pew report from 2006-2008 shows that younger users dominate cyberspace (Jones and Fox, 2009). Gen-Y has an advantage over older people because they can analyse online material much quicker (Kim and Ammeter, 2008). In contrast Sullivan (2004) notes that some Millennials prefer not to partake in online shopping due to security concerns. The Cisco Connected World Technology Report (2012) demonstrates that 75% of the Millennials do not trust companies enough to give them their personal details like mobile phone number or home address. Zhou et al., (2007) also talked about the security concerns of Gen-Y, the desire to actually be able to see and touch a product before purchase and an unfavourable attitude to the cost of shipping.

Schewe and Meredith (2004) point out that Millennials' grew up into a time where society is highly interconnected and thus Gen-Y does not place as much value on privacy as constant contact and sharing with others is part of their human experience (Oblinger and Oblinger, 2005). On a contrary, the older generations are more concerned about the security of their information because society were more privacy orientated when they were growing up whilst Millennials put less emphasis on privacy due the connections they create using technology (Schewe and Meredith, 2004).

In cyberspace as opposed to the real world, risk is assumed to be larger along with a reduction in the amount of trust because of the inability to look at and feel a purchase to assess its quality or talk to selling agents (Laroche et al., 2005). According to Barnes et al., (2007) risk is the main reason governing customer activity in seeking out information

as they look to negate the possibility of making a bad purchase; something also alluded to by Anderson and Srinivasan (2003) when they said that the perception of risk is “an important variable mediating trust”. Businesses should make sure that the information provided by their customers is secure as trust is a valuable asset for businesses (PWC, 2010). Since the beginning of electronic shopping security concerns have been a major issue for consumers and Gen-Y will also feel the need for a fast and efficient service as it is what they have come to expect.

Just as word-of-mouth has always played a key role in the marketing of goods and services in the physical shopping world, online vendors have come to learn that it has a major impact on how their sales perform. Kim and Kim (2008) claimed that if a shopper feels confident about an online retailer they will make others aware of the good nature of the service by writing reviews or making recommendations on social media. Opinions and recommendations which are shared online spread faster than offline WOM and so marketers need to understand the impact which it has on businesses (Kim and Kim, 2008). Koufaris and Hampton-Sosa (2002) stated in their research that trust is created through a positive experience for the consumer. The consumer’s positive experience can come from reading feedback from other consumers or from general word of mouth. WARC (2008) carried out a survey which found that 25 million people make others aware of what they thought about purchases made on the Internet with Millennials making it a consistent habit to check reviews and social media for feedback.

Salisbury et al., (2001) state that security plays an influential part in how a customer feels and shapes their intentions about online purchases as providing credit card details to web-sites can be seen to be a risky thing to do (Janda, 2002). Lee and Turban (2001) propose that for shoppers, sharing credit card details and personal information is an uncomfortable experience as they lack the ability to physically see the product before buying or monitor how their financial details are being used. Kim and Shim (2002) also allude to this as they emphasize that security has a major influence on a person’s intentions and attitudes to shopping through the Internet. When a consumer uses a

website the experience they have will shape the opinion they form about the company that owns the site, do they appear professional and trustworthy (Tan and Thoen 2001). Yoon (2002) states that trust is essential in order for a consumer to start dealing with an online retailer. Flavian and Guinaliu (2006) echo this sentiment saying trust is a key for satisfying online purchases.

## 2.9 Online spending

According to the research done by Amárach Research in 2012, 8 in 10 adults in Ireland use the Internet and it has become a crucial part of their everyday routine; it has changed the way people work, learn, shop and seek entertainment. On average, consumers surf the Internet 5.7 days each week, spending approximately 2.6 hours online during a week and higher at the weekends (Figure 2).

	Weekday	Weekend Day	Increase at Weekend
All Adults	156	167	11
15-24	179	187	8
25-34	173	189	16
35-44	155	166	11
45-54	147	160	12
55+	133	140	7
Higher Income	152	166	14
Lower Income	159	168	9

\* Sources: ComReg & Amárach Research data \*\* Amárach estimates

Figure 2: Minutes per day spent online

The research proved that people spend most of the time online shopping and communicating on social networks (Figure 3).

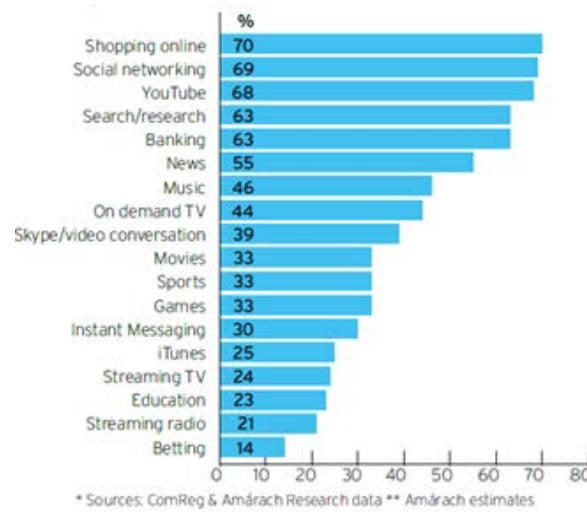


Figure 3: Online Activities and Services used at Home

Esrock, (1999) suggested that the Internet facilitates consumers to make informed decisions and that most of the users browse the Internet to gain information and find better deals, but when it comes to actually buying a product/service they will go to high-street stores. However, the study done on the Irish market contradicts this theory; Amárach Research (2012) established that in 2012, 2.6 million web shoppers in Ireland spend 3.7 billion euro to purchase goods and services online and by 2016 the figure will increase to 5.7 billion euro. 6 out of 10 Irish shoppers have a tendency to browse the products in the traditional shop but then go online compare the prices and purchase them online at a cheaper cost.

In the last couple of years there has been increase of people owing and using technology, with the percentage of Irish adults shopping online raising to 59 (Figure 4).

<b>% of All Irish Adults*</b>	<b>2007</b>	<b>2012</b>
Internet at Home	48	<b>78</b>
Broadband at Home	24	<b>65</b>
Shopping Online	15	<b>59</b>
Banking Online	18	<b>42</b>
Mobile Phone	90	<b>98</b>
Smartphone	5<**	<b>34</b>
Using Social Networks	10<**	<b>52</b>

\* Sources: ComReg & Amárach Research data \*\* Amárach estimates

Figure 4: % of Irish adults owning and using digital technology since 2007

Zhou et al., (2007) claimed that there a number of factors which impact a customer’s decision whether to purchase products online or not. It depends on customer trust of the website, acceptance of the online payment methods and customer preference; some people like to stick to the same brand and retailer so when leveraging their purchasing options they check the company’s own website for information (Stringer, 2004). Lepkowska-White (2004) suggested that the type of good bought online, its price, selection and service depend on the consumer decision-making process.

Web shoppers have a tendency to check information online on goods like electronics or jewellery before deciding to buy the products. This theory is supported by the Amárach Research conducted in 2012 (Figure 5) which demonstrates that people prefer to purchase online intangible goods like travel and holidays services, book flights, download music and movies but also to acquire electronic goods which is often considered cheaper. Fig 6 also illustrates that people also switch away from traditional high street stores to purchase tangible goods like books, clothes and footwear. Research conducted by Comegys and Brennan (2003) established similar results amongst young people who tend to spend more money than other groups on clothes, books, and entertainment.

	Prefer to buy online	Prefer to buy in a shop	Doesn't matter or no preference
Travel/hotel related services	87%	2%	11%
Music/CDs/mp3 tracks (e.g. iTunes)	67%	12%	21%
Medical and health related (e.g. insurance, equipment)	60%	14%	26%
Movies/DVDs/film rentals (e.g. iTunes)	59%	16%	25%
Electronic goods (e.g. iPad)	48%	19%	33%
Flowers	48%	19%	33%
Books	42%	28%	30%
Electrical goods (e.g. toaster)	40%	37%	23%
Perfumes and cosmetics	35%	33%	32%
Toys/baby products	30%	30%	40%
Clothing/footwear	19%	55%	26%
Furniture	19%	53%	28%
Groceries, food or alcohol	16%	55%	29%

\* Sources: ComReg & Amárach Research data \*\* Amárach estimates

Figure 5: The channel preferences of consumers who have purchased online

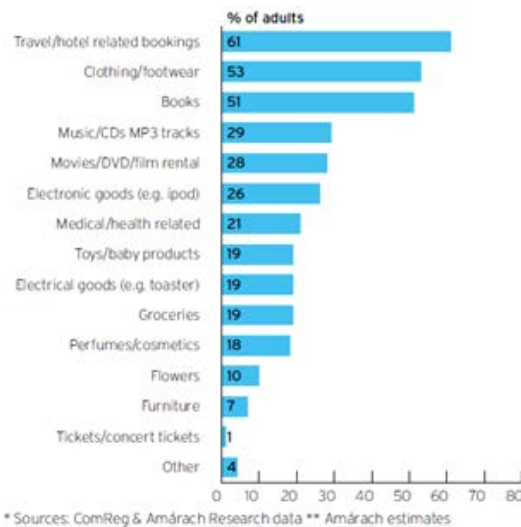


Figure 6: Items Purchased Online in past 6 months

## 2.10 Literature review conclusions

The aim of the literature review is to demonstrate the existing literature on the topic of consumer behaviour and attitude towards online shopping, specifically the target audience of Generation-Y, also referred to as Millennials, people both male and female born between 1982 and 2003. Ample academic research exists with regards to the

characteristics of Gen-Y and their consumer behaviour. The existing research also helps identify what people like and dislike about e-commerce, for example convenience and security concerns. Trust is a big issue when it comes to people deciding to procure goods and services through the Internet, and demographic factors may also influence consumer buying decision.

Existing literature falls short in that most of the academic work is focused on the USA, and this dissertation aims at conducting a study in an Irish context to fill in the gap.

## CHAPTER 3: RESEARCH OBJECTIVES

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The overall objective of this dissertation is to attain a more comprehensive understanding of Millennial consumers, their attitude and purchasing habits online.

The motivations for consumers shopping behaviour has been studied over a number of years (Bakewell and Mitchell, 2003). According to Jin and Kim (2003) research has shown that Millennials as individuals may have various attitudes and actions and so they called for more analytical evidence. It was also suggested that Gen-Y shoppers may have fostered a differing purchasing attitude compared to older segments of the population (Ma and Niehm, 2006). Numerical evidence about Irish Millennials is uncommon and as Noble et al., (2009) recommended it is necessary to carry out consistent research to get a better understanding and learn the patterns of the Irish Gen-Y consumer base and how different ages make different shopping choices.

The purpose of this dissertation is to analyse and examine the attitude of Millennials towards purchasing goods and services online. The following research investigates if there is a correlation between trust, perception of risk and purchasing behaviour of the Generation Y. Moreover, the goal of this study is to get a better understanding of the impact of gender on attitude towards trust, perceived risk online and purchasing intention. This research is important because the results may help marketing agencies create successful strategies for targeting specific market segments like people at different age groups and especially Gen-Y shoppers.

As suggested by Domegan and Fleming (2007, p.23) "Objectives are broad statements of intent" so it is essential that sub-objectives are identified and examined.



1. Does gender influence attitudes such as trust, risk and purchase intention towards shopping online?

This dissertation paper will research if men and women living in Ireland have different purchasing attitudes and whether they have a dissimilar degree of trust and risk toward buying products via online retailers.

As stated by Odell et al., (2000) looking at what university students do with their time online has always provided good insight as men and women spend the same amount of time online. Noble et al., (2009) concluded that researchers have looked at what causes men and women to use the Internet differently but there is limited studies about the attitudes and differences in the Gen-Y segment in an Irish context.

2. Do Millennials have different attitude towards trust, perception of risk and purchase intention online than previous generations?

This research question intends to determine whether people belonging to different age cohorts have different attitudes towards purchasing products online. This research will determine what issues people certain age group have with shopping online, what concerns them about shopping online. This research question will determine what conditions need to be met for Gen-Y in Ireland to purchase products online.

3. Examine the correlation between trust, risk and purchase intention.

This research will examine the correlation between trust, perception of risk and purchase intention towards goods and services online. This research will identify to what degree trust and perception of risk affect online purchasing intention based on gender variable.

This research will determine whether the correlation exists and if the factors such as gender and age impact it.

Based on the aforementioned literature review, the following hypotheses are presented:

**H1:** Gender does not affect trust attitude towards online shopping.

**H2:** Gender affects the perception of risk associated with internet purchases.

**H3:** Perception of risk negatively affects purchase intention.

**H4:** Millennials are more trustworthy compared to Non-Millennials in respect to online shopping.

**H5:** Millennials associate less risk towards online shopping.

**H6:** Perception of trust affects purchase intention.

## CHAPTER 4: METHODOLOGY

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### 4.1 Introduction to Methodology

The aim of this dissertation thesis is to examine the relationship between variables trust, perception of risk and online purchase intention and to what degree factors such as Gender and belonging to the Millennial age cohort influence those variables. As highlighted in the literature review there is a gap in the existing research and therefore the researcher intends to examine those factors in an Irish context.

This chapter will discuss the research methodology used to examine the aforementioned objectives. It will include an explanation of the research approach, followed by outline of the sample used to conduct the research and then finished with the discussion of the research instrument and data collection methods. This chapter will also include analysis of the data and an examination of the validity and reliability of the study used.

In order to examine and test the hypotheses in this research thesis data needs to be gathered. According to Merriam (1998) the way data is gathered is crucial for the reliability and accuracy of the research.

### 4.2 Research design

The researcher used a positivism approach as it facilitated the identification of truths and statistical evidence as highlighted by Jankowicz (2005). The researchers also choose a descriptive research design as they gathered a lot of information and it helped to clarify statements and their hypotheses (Malhotra, 2004).

Zikmund et al (2012) mentioned that the research design includes all ways of gathering and collecting data used to research the given subject and methods used to analyze it. This research conducted across-sectional study by collecting data from different segments of the population in Ireland at a single moment in time as supposed to longitudinal study where research is taken over time to compare trends and changes (Zikmund et al 2012). This research also used existing studies conducted on consumer's attitude towards online shopping and variances in the attitude based on age and gender. Those studies acted as research guidelines for the purpose of this dissertation to identify dependent and independent variables. The researcher used a quantitative method to determine to what degree trust and risk affect online purchase intention and to analyse if there are any discrepancies in age and gender towards that attitude. The methods used in this dissertation thesis were heavily impacted by the access and availability to the data. Existing studies and current literature about online shopping and the factors affecting consumer behaviour are built upon a quantitative approach thus the researcher found this method as the most appropriate. As stated by Adams et al., (2007) a quantitative method enables the generalization of a sample of a population and gives a ground for better analysis and interpretation. The researcher also examined the validity and consistency of the conducted questionnaire using Cronbach's Alpha reliability test.

### **4.3 Sampling and sampling procedures**

The purpose of this research was to examine if there are significant gender and age differences in consumers' purchase intention and whether the degree of trust and perceived risk affects these intentions. Zaikmund et al., (2012) stated that sampling is a process that requires making assumptions about the population based on the research conducted on a sample part of that population. The researcher used the convenience sampling technique as it is good for identifying differences across different sections of a population sample (Zikmund et al., 2010). This study intended to measure the attitude

and behaviour of Generation Y, as claimed by Horrigan (2008) young adults under the age of 30 make the most purchases through websites and are the heaviest users of the Internet. Furthermore, Gallagher et al., (2001) highlighted the fact that students and college leavers are a good cohort to examine and analyse in the field of online shopping behaviour.

Thus, the target population for this dissertation was Internet savvy Gen-Y people living in Ireland. Millennials are people born between 1982 and 2003; for the purpose of this study the researcher targeted people aged 18 to 32 living in Ireland. The target group was gender-balanced with a mixture of backgrounds. However, to measure the behaviour and attitude of Generation Y group, one needs to be able to compare it to the behaviour of the rest of the population. It is suggested that college students and people who have recently graduated are believed to be the most familiar users of technology and most likely to purchase goods via the Internet (Bruin and Lawrence, 2000). Jover and Allen (1996) claim that a higher level of education indicates a higher disposable income and thus future purchases online are more probable.

In order to determine how trust, perception and risk affect the purchase intention and shopping behaviour of Generation Y, as well as to determine if there are any differences in patterns between different age groups and gender there must be a sample done on the whole population. The intention of this research was to validate whether online shopping patterns differ between Millennials and Non-Millennials.

According to Kent (2007), to collect a valid and reliable data for the quantitative method a researcher should collect a sample with a minimum of 100 responses in order to be able to perform tests on their hypotheses. In this dissertation thesis a researcher intended to gather at least 200 responses, 100 from the Millennial cohort and 100 from Non-Millennials. Respondents in the survey were made aware that it participation was voluntary, anonymous and took 4 minutes to complete the questionnaire. The participants were informed about the subject of the research thesis as well as ensured that after they can have access to the research results if requested.

After all the surveys were distributed through a variety of methods the researcher collected 230 responses confident that this allowed for maximum accuracy and minimum sampling error.

#### **4.4 Data Collection**

For the purpose of this dissertation the researcher collected and examined primary and secondary data. Firstly, the secondary data was collected, which as mentioned by Saunder et al., (2007) as data that has been gathered and analysed for the purpose of alternative research. This method allows for time efficiency and low cost when analysing theoretical concepts and models. It enabled the researcher to determine the areas of research that should be analysed in more depth. Furthermore, it enabled for data comparison with the data collected from the primary data collection.

On the other hand, the researcher understood the limitation of this method as the data collected and findings were fitted to a different context. Saunder et al., (2007) also highlighted the fact that secondary data is harder to verify and may not address the issue that a researcher is examining. The researcher analysed a number of articles from online Emerald and ERIC databases as well as external journals via the online library search system MyAthens. These articles provided a base for the literature review that enabled the researcher to develop research objectives and hypotheses needed to examine them.

Primary data was then collected in order to examine the hypotheses and research objectives stated in this research thesis. The researcher decided to collect primary data through a questionnaire that was sent to the target population.

Primary research was conducted using the descriptive method in the form of a structured questionnaire which focused on facts and statistics. Saunder et al., (2007) indicated that a questionnaire is one of the methods to collect primary data. The survey

was sent to 250 people between the ages of 18 to 60 who are living in Ireland using non-probability convenience sampling, based on the respondent's availability. A centralised survey completed by respondents on a website was used in this research. Respondents were invited to take part in this survey by using a specific URL. An online questionnaire was also printed out and 110 copies were distributed on the 1<sup>st</sup> of August 2014 to the co-workers of the researcher in one of the financial institutions in Dublin as well as 20 copies handed to the students in the National College of Ireland library who voluntarily agreed to participate in the research. As suggested by Gilber et al., (2005) all non-probability methods depend on personal judgement while collecting necessary data.

Data gathered for this research was conducted on Survey Monkey ([www.surveymonkey.com](http://www.surveymonkey.com)). Survey monkey is described by Domegan and Fleming (2003) as a research tool used by researchers to build their own surveys using an online editor. Results can be seen as they are collected in real time. This survey was sent to 250 potential candidates. Candidates were chosen by the researcher through social media websites (Facebook, LinkedIn and Twitter) and via e-mail (using Gmail). This facilitated access to the targeted group with relative ease and allows for access to a bigger sample of the population. Data needed for this research was also gathered using the snowball non-probability sampling technique, where the researcher's family, friends and colleagues were asked to fill in the online based questionnaire and share it with other people who would be interested in taking part in the survey. The researcher used personal contacts on social media to spread the survey through their contacts in a way which has become the norm as sharing is a key component of social media. As Saunders et al., (2012) explained a snowball sampling technique is efficient way of gathering data by distributing responses by initial participants. Furthermore, Domegan and Fleming (2007) mentioned that this method enables the researcher to make assumptions for large population based on small sample.

The study adopted a quantitative research approach as explained by Schiffman and Kanuk (2004). This involves the use of straight forward questions with a list of pre-set

answers and is used to survey a large group of people quickly and effectively (Hair, Bush and Ortinau, 2000). Quantitative study is about analysing data and then using it to highlight results (Gall et al., 1999). According to Smith (1988) quantitative study involves counting occurrence and then studying data collected. For this thesis the researcher was able to gather a large amount of data quickly and effectively. As Denscombe (2003, p.159) stated “standardised answers to the extent that all respondents are posed with exactly the same questions”.

A questionnaire was used to gather information from the targeted group Gen-Y as well as Non-Millennials in order to analyse the behaviour and attitude patterns towards Web-based shopping and trust towards online retailers. The researcher gathered 230 samples which one may assume is a large enough sample to give a fair reflection of how the general Millennial population feels about e-commerce and how they go about conducting their virtual consumerism.

The structured questionnaire used closed questions with the exception of the respondent’s nationality question which was open ended. Appendix A includes all the questions asked for the purpose of this research. Adams et al., (2007) claim that an online survey allows facilitates the validation of theoretical models and the proposed hypotheses.

By using this method the researcher had more control over the sample, which is necessary to avoid errors. The main advantage in using online surveys is the instant delivery and return of data, quicker response time, lower cost and greater convenience for both the respondents and the researcher. The main function of the survey was to establish people thoughts and feeling about the subject. There are three scale-measurements for questionnaires: questions, concepts being investigated and the actual scale point. The researcher decided to conduct primary data research by the online survey and print-out versions of it as it was less time consuming than other methods such as observations and interviews.



It was decided that quantitative method will be the most suitable as qualitative research techniques are not useful when taking a large population sample. The researcher considered carrying out individual interviews but concluded it would take too long to gather a useable volume of data on the sample population and also because they wanted to offer participants anonymity. Previous studies on online shopping, attitude to trust and perception of risk have used anonymous surveys. The researcher had a target of completing the work by September 2014 and so the chosen method of quantitative data collection was seen as best. Because the thesis is about online shopping the researcher used an online survey. It also helped gather information efficiently and economically.

#### **4.5 Instrument Development**

A research instrument was developed based on the review of the existing literature on online shopping and differences in attitude based on age. A questionnaire was created in order to collect in-depth information for the theoretical models: Perception of Trust, Perception of Risk and Purchase Intentions and to validate the discrepancies in the attitude based on age and gender. These items were based on a review of existing literature and have been validated in previous studies that the researcher examined.

Studies which supply predetermined questions and answers are advantageous because precise data will be accrued as there are only a limited number of answers (Tustin et al., 2005). This is the method of choice for this research as it is the most useful way to collect enough quantitative data to use the results as a fair sample of the general population. It also cuts out on bias from the researcher.

### **4.5.1 Independent variables**

Zikmund et al., (2012) claimed that independent variable is a variable that is going to affect the dependent variable and its outcomes. The questionnaire the researcher conducted consisted of two sections; the first section examined respondent's demographic information and included questions such as gender, age of respondent, education level, marital status as well as amount of purchases done in the last 12 months. This structured part of the questionnaire used closed questionnaire, excluding question about participant's country they are from, which was open ended.

### **4.5.2 Dependent variables**

As suggested by Zikmund et al., (2012) dependent variable is an outcome of a process and depends on the independent variable mentioned above. The second section of the questionnaire included questions to analyse attitude towards trust and perception of risk of the respondents as well as intention to purchase in the future. The questionnaire was designed to highlight how men and women differ in online shopping behaviour and how age affects the attitude towards online purchasing and risk involved. During data collection all respondents participated voluntary, however a reminder had to be sent via social media to ensure that the survey was filled within a time frame. Likert scales are often used to examine attitude and to what degree respondents agree or disagree with the given statements. It allows for better understanding of the participant's attitude and feelings on a scale rather than getting short answers like "yes" or "no" (Grattion and Jones, 2005). The researcher used the 7-point Likert scale with the answer options "strongly disagree", "disagree", "disagree somewhat", "neutral", "agree somewhat", "agree" and "strongly agree" used to measure attitude because as Kothari(2009) says, it is easy to create and makes information simple to garner and study. However, Grattion and Jones (2005) argue that when filling in questions with the Likert scale respondents tend to choose answers that are extreme or their favourable answers like "strongly

disagree” or “neutral”. The researcher believes that the use of the Likert scale allows for reducing rate of data errors.

According to Gilbert et al., (2005) it is crucial to ensure validity when conducting experimental research. The design of this survey was based on existing literature to ensure validity and reliability of the conducted research and to ensure that theory supports the theory and conceptual models used. As suggested by Pallant (2013) for the research scale to be valid and reliable it needs to have Cronbach’s Alpha value above 0.7. All the questions used to measure dependent variables were used in their original form.

Three dependent variables that were used in the survey:

#### Online trust

As mentioned in the chapter 2 of this dissertation thesis online trust can be described as the security feeling that customers have while purchasing goods online (Ang, Dubelaar, and Lee, 2001).

The items for the independent variables “*online trust*” were adopted from O’Cass and Carlson (2012) and were measured by a four-item seven point Likert scale that ranges from strongly disagree to strongly agree. O’Cass and Carlson (2012) conducted a study on online trust while investigative Australian customer’s assessment of retailer websites, the study was based on Bart et al (2005) and Loiacono et al (2007) research. The reported reliability of the scale was very high Cronbach’s Alpha values 0.94.

#### Perception of risk

Perception of risk was defined as customers’ perception of uncertainty while buying products via online retailers and the adverse consequences that follow that purchase (Hsu and Chiu, 2004).

The items for the independent variable “*perception of risk*” are adopted from Chen and He (2003) and were measured by a six-item seven point Likert scale that ranges from strongly disagree to strongly agree. Chen and He’s (2003) study investigated the relationship between brand knowledge and perceived risk and its impact on consumers’ intention.

#### *Online purchase intention*

As described in the literature review section, online purchase intention is intention of customers to purchase products or services via the Internet.

The items for the independent variable to check behavioural attitude “*online purchase intention*” are adopted from Hasan (2010) and were measured by a four-item seven point Likert scale that ranges from strongly disagree to strongly agree. In the study Hasan (2010) analysed and examined gender differences in online shopping attitude. The reported reliability of the scale was Cronbach’s Alpha values 0.80.

## **4.6 Data analysis**

Data analysis is when researchers use input data collected in a data matrix to produce relevant information for their research. Data can be shown in tables etc. to identify variations and patterns (Kent, 2007).

To analyse the data gathered from the questionnaire the researcher used a SPSS, statistical package for the social sciences. On the 7<sup>th</sup> of August data collected from surveymonkey was exported to an excel spreadsheet and then imported to SPSS for tabulation and analysis. The researcher collected data from 230 participants for analysis. The Researcher analysed data to confirm respondents completed the survey. The researcher checked data for completeness, 3 sub-questions were missing one value and those were replaced by the mean values. The data cleaning also involved analysing the

difference between samples to ensure that adequate amount of responses were collected from two age groups – Millennials and Non-Millennials.

The questionnaire was categorised into headings and every question of the questionnaire was pre-coded along with every different answer which was also assigned a different code. After data was imported to SPSS version 21, the variables were divided by gender, age, country, marital status and number of purchases done in the last 12 months. Then the researcher decided to create another variable based on their age needed for this research – Millennials and Non-Millennials. The items of the measurement scale were pre-coded to reflect that higher result means higher agreement with the given statement about attitudes and behaviour about online shopping.

For graphical descriptive of different variables the researcher used histogram graphs and simple chart bars were used for general descriptive.

The researcher used an excel spreadsheet to find recurring trends in the variable answers to the questionnaire e.g. finding if gender made a difference in intention to purchase online. SPSS is an important tool for measuring data and creating readable tables that allow for the easy interpretation of survey findings.

#### **4.6.2 Methods of Data Analysis**

Through examining the collected data the researcher intended to be able to identify a difference between the sexes in Gen-Y when it comes to online shopping and their attitude towards trust and perception of risk in online shopping. To achieve objectives set up in the thesis the researcher conducted a number of tests.

#### **4.6.2.1 Cronbach's Alpha reliability tests**

In the analysis part of research it is crucial to ensure the validity and internal consistency of the questions asked in the conducted survey. The reliability test was used to examine if the collected data reflected the questions it was supposed to measure.

In this study the researcher used Cronbach's Alpha reliability test and it was performed on variables trust, intention to purchase and perception of risk. As Field (2005) suggests the scores of the Cronbach's Alpha tests can be between 0 and 1 with 1 representing perfect reliability. Henseler et al., (2009) claimed that the acceptance value of Cronbach's alpha is 0.7, with the higher results indicating higher consistency and reliability. Moreover, Nuannally et al., (1967) pointed out that results with value below 0.6 indicate a lack of reliability.

#### **4.6.2.2 Statistical Tests Undertaken**

After the reliability test was performed, the researcher used graphical descriptives in the form of histograms to illustrate frequency distribution for each of factor. Subsequently, numerical descriptives were used to demonstrate the summary of the variables for each of the factors in relation to the examined factors Gender as well as Millennial and Non-Millennial age cohort.

The researcher used descriptive statistics in order to demonstrate general characteristics of the chosen sample. This method also allowed for validation whether any assumptions in the performed tests were violated (Pallant, 2013). As suggested by Pallant (2013) descriptive statistics depict the summary of the statistics with the information about mean, median and standard deviation of the chosen sample.

#### **4.6.2.3 Tests of distribution shape**

Then, the Shapiro-Wilk test was performed to examine normality of the data and direct to type of preferential statistics. The Shapiro-Wilk distribution shape is the most popular method to examine the variables in respect of normal distribution. As suggested by Walker (2008) the test examines the probability that results of the tests have happened by chance. As claimed by Althouse et al., (1998) Shapiro-Wilk test examines the departures of the sample from normality because of its skewness or kurtosis. Data is considered to be normal if the values are larger than 00.05.

*Assumptions as suggested by Razali and Wah (2011):*

- Null hypothesis – sample came from normal distribution
- If p-value < 0.05 - then the null hypothesis is rejected and it is inferred that the samples came from a not-normal distribution
- If p-value > 0.05 - then the null hypothesis cannot be rejected and it is inferred that the sample came from a normally distributed population

#### **4.6.2.4 Tests of comparison across groups.**

As the normality assumption in respect of the variables Gender and Millennials age cohort towards the factors trust, purchase intention and perception of risk were violated, the researcher performed a non-parametric Mann-Whitney U-Test. This test enabled the researcher to compare groups in order to examine differences between them. The Mann-Whitney U-test is an alternative to an Independent-samples t-test and is used to explore the differences between the chosen variables, in this instance the researcher tested the probability that the two sets of scores came from the same population (Pallant, 2013).

Assumptions as suggested by Sheskin (2007):

- Null Hypothesis – the distribution of both groups are identical
- If p-value  $>0.05$  – then the null hypothesis can be rejected , there is no significant difference between samples
- If p-value  $<0.05$  - then the null hypothesis cannot be rejected, there is a significant difference between samples

#### **4.6.2.5 Pearson’s and Spearman correlation tests**

The researcher also undertook Pearson and Spearman correlation tests to examine if changes in one variable will impact the second variable. Pearson’s correlation, also called Pearson Product-Moment Correlation or PPMC is a “measure of the strength of the linear relationship between two variables” (Lane, 2010). The test also examines whether the relationship is positive or negative. As an alternative to Pearson’s correlation test the researcher used non-parametric Spearman’s Rank Order Correlation (rho) test. This test was performed to examine the strength of the association between two continuous variables. (Pallant, 2013).

According to Illinois State University (2014) the Pearson Correlation Coefficient measures:

- The strength of the relationship, with the values between -1 and 1
  - -1 represents perfect negative linear relationship between variables
  - 1 represents perfect positive relationship between variables
  - 0 represents no relationship between variables
- The direction of the relationship
  - Positive correlation where figure is positive and represents that variables move in the same direction
  - Negative correlation where figure is negative and represents that variables move in the opposite direction



In this test the researcher checked the correlation and the strength of the relationship between the variables trust, intention to purchase as well as perception of risk.

#### **4.7 Limitations of the Research Methods**

There were few limitations with the research method. Time was a constraint on the research, with the dissertation thesis due on 1<sup>st</sup> of September 2014 which impacted the choice of methods. To better understand attitudes and behaviours a combination of both methods, quantitative and qualitative should be conducted. This thesis used a survey; however conducting a number of interviews would be beneficial to fully understand attitude and behaviour of online shoppers. As Saunders et al., (2012: p164) argued that using multiple research methods enable greater efficiency and utilize strengths of both techniques. The sample size for this research was 230; the researcher believes that a big sample would allow for better representation of the Irish population. Saunders et al., (2012) also mentioned respondent's failure to understand questions and ask for feedback as a drawback of using online surveys. Another limitation is the word count of 20,000 words per whole dissertation thesis.

#### **4.8 Pilot study**

Before the survey was sent out online it was used by a beta group to ensure no issues arose with answering any of the questions and that the questions were easily understood as suggested by Saunders et al., (2012). The author pre-tested the survey through a trial test on the Internet with a beta test of 10 participants (n=10) to examine wording and questions used. Based on the feedback from the pilot study, the researcher decided to change wording in one of the questions to make it more clear and understandable.

## 4.9 Ethical considerations

As suggested by Saunders et al., (2009) when conducting a research it is crucial to consider ethical issues that can arise during the process. This research was done ethically. When survey was being distributed, the researcher attached an explanation email specifying details of this dissertation research such as subject of the thesis, how collected data will be stored and contact details of the research if any questions would arise. It also included information how long it will take to fill in the questionnaire to ensure that participants are fully aware of the goals of the research and how much of their time will be taken in the process. Where the surveys were distributed manually the researcher also verbally informed the participants about the purpose of the survey, its anonymity and voluntary participation.

All the participants were informed about the context and extent of the research both verbally and via the attached email. Participation in the survey was voluntary. All the participants had the rights to anonymity, confidentiality and to withdraw anytime without giving any reason. As Sekaran and Bougie (2009) suggested omitting the name of the participants in the survey provides higher anonymity and confidentiality. Furthermore, the researcher believes that this method allows for participants to be less-biased and fill the questionnaire more truthfully. Respondents were informed that if required they will receive a copy of the research findings.

As suggested by Saunders et al., (2009) the data collected for the purpose of this dissertation thesis was processed equally, lawfully and was also stored securely. The researcher collected the data only for the purpose of this research and will destroy it after completing the study. For better security password was used to protect the file.

## **4.10 Conclusions**

The purpose of the methodology chapter was to conduct research on Millennial and Non-Millennials to examine and analyse their attitude towards shopping online and related factors such as trust and perceived risk. Following investigation the researcher concluded that best method to carry out this study was to perform a quantitative study such as survey and distribute this amongst previously specified demographic group. After a pilot study was performed a survey of 9 closed questions was developed with the participants ranking answers along a scale.

## CHAPTER 5: FINDINGS

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### 5.1 Introduction

In this section we present a detailed overview of the results obtained from this study. We first present the results associated with the validation of the underlying scales that are relied upon for this study. In particular, we validate three scales that include: Levels of Trust; Levels of Risk and Levels of Purchase Intention. In addition to the validation of the original scales we also reassess those scales for which they have been found to have low internal consistency through an item removal process in anticipation of increasing their overall reliability. We also present a detailed overview of the characteristics of each scale and their respective distributions and their respective shape characteristics. The results section also includes a detailed overview of each scale and the results of tests of the differences between levels of gender, Millennials, and the relationship between the three measured factors.

### 5.2 General statistics

A total of 230 people responded to the questionnaire ( $n = 230$ ). The demographic profiles of the participants are illustrated in **Figures 7 to 11**, through the use of bar charts; with each bar chart being accompanied by a table that lists percentages and actual frequencies of observations falling within each level of measurement associated with a demographic variable. The demographic variables: gender, age, marital status, education level, and number of purchases online were considered.

#### Gender Distribution

An examination of the gender of respondents is presented in **Table 1** and **Figure 7** below. With respect to **Table 1** the first column depicts the gender category with the second and third column depicting the percentage and total number of respondents falling into each category. For example, the sample data set contained 50.4% ( $n=116$ ) females and males 49.6% ( $n=114$ ).

		Response Percent	Response Count
Gender	Female	50.4%	116
	Male	49.6%	114

Table 1: Gender Distribution

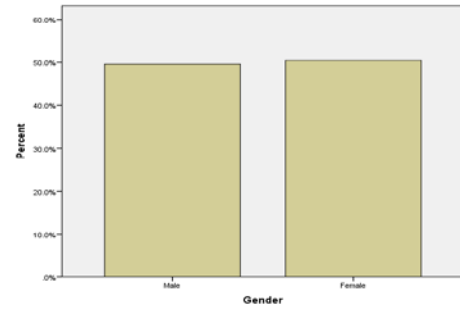


Figure 7: Gender Distribution

### Age Distribution

Table 2 and Figure 8 below give a breakdown of the age profile of the participants. With respect to Table 2, the first column depicts the age categories and the second and third column depict the percentage and total number of respondents falling into each category. For example, the collected sample represents 119 respondents from the Millennial age group, where the age of the respondent is less than 32) and 111 from the Non-Millennial group and that the majority of the respondents were between ages 26-36.

		Response Percent	Response Count
Age	20 and below	2.2%	5
	21 to 25	15.2%	35
	26 to 31	34.3%	79
	32 to 36	26.1%	60
	37 to 40	8.3%	19
	41 and above	13.9%	32

Table 2: Age Distribution

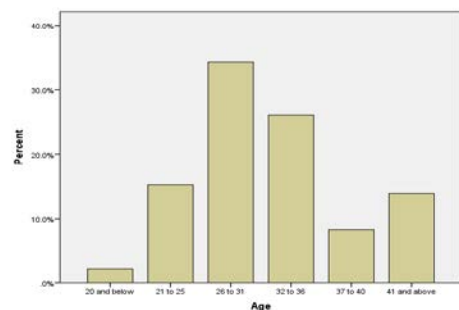


Figure 8: Age Distribution

## Marital Status Distribution

**Table 3** and **Figure 9** below present an examination of the marital status of the respondents of the survey. With respect to **Table 3** the first column depicts the marital status category and the second and third column depict the percentage and total number of respondents falling into each category. For example, most of the participants are recorded to be single with the figure of 48.3% followed by 24.8% in a relationship.

		Response Percent	Response Count
Marital Status	Single	48.3%	111
	Married	23.0%	53
	Separated	0.9%	2
	Divorced	1.3%	3
	Widowed	1.7%	4
	In a relationship	24.8%	57

Table 3: Marital Status Distribution

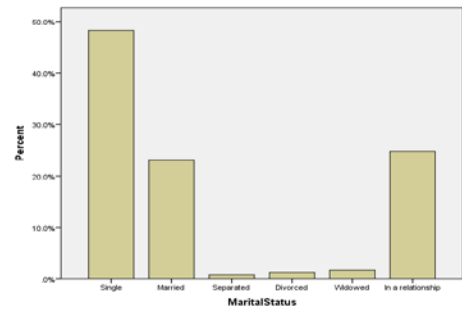


Figure 9: Marital Status Distribution

## Education level Distribution

An examination of the education level of respondents is presented in **Table 4** and **Figure 10** below. With respect to **Table 4** the first column depicts the education level category and the second and third column depict the percentage and total number of respondents falling into each category. For example, the majority of the sample population have a third-level degree, 57.4% attending College / University and additional 23% having Post-graduate degree.

		Response Percent	Response Count
Education level	No formal schooling	0.9%	2
	Primary school	0.9%	2
	High School	17.8%	41
	College / University	57.4%	132
	Post-graduate degree	23.0%	53

Table 4: Education level Distribution

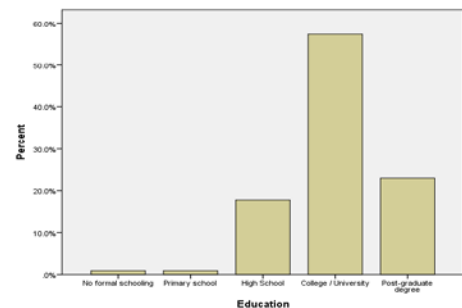


Figure 10: Education level Distribution

### Online Purchase Distribution

An assessment of the number of purchases online by participants made in the last 12 months is demonstrated in **Table 5** and **Figure 11**. With respect to **Table 5** the first column lists the number of purchases made and the second and third columns depict the percentage and total number of respondents falling into each category. For example, the majority of the respondents purchased 9 or more products online in the last 12 months. 45% of the participants say that they purchased 3 to 4 products online.

		Response Percent	Response Count
Number of purchases in the last 12 months	0	4.8%	11
	1 to 2	7.8%	18
	3 to 4	19.6%	45
	5 to 6	17.4%	40
	7 to 8	8.3%	19
	9 and above	42.2%	97

Table 5: Online Purchase Distribution

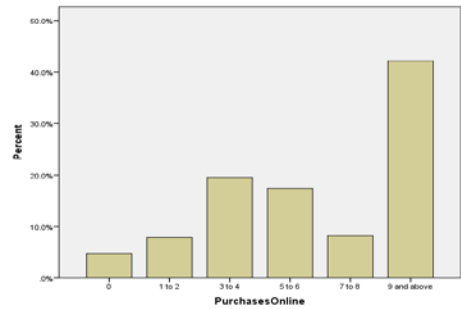


Figure 11: Online Purchase Distribution

### 5.3 Reliability Test

In order to test the hypotheses a number of tests were performed on the collected data. Firstly, the researcher undertook the reliability test to examine if the collected data reflected the questions it was supposed to measure and to minimise research error. The test used in this research is the Cronbach’s Alpha reliability test. Three different factors were tested in this research: online trust, purchase intention and perception of risk.

The results of the Cronbach’s Alpha test are depicted in the **Tables 6, 7** and **8** and are all above 0.7 and thus represents high internal reliability.

Reliability Statistics	
Cronbach's Alpha	N of Items
.910	4

Table 6: Reliability test Online Trust Output

Reliability Statistics	
Cronbach's Alpha	N of Items
.958	4

Table 7: Reliability test Purchase Intention Output

Reliability Statistics	
Cronbach's Alpha	N of Items
.845	6

Table 8: Reliability Test Perception of Risk Output

## 5.4 Findings in respect of Gender

As mentioned in the literature review, the advancement of the Internet in the last decade has hugely impacted retailing and altered the business model. As suggested by Rodgers and Harris (2003) more males than females use Internet and buy products via online retailers. As such it is vital to analyse the determinants of the attitude towards online shopping and examine whether factor such as Gender has an impact on the electronic retailing. This section will provide data findings in respect of Gender in order to examine the below hypotheses:

**H1:** Gender does not affect trust attitudes towards online shopping.

**H2:** Females associate more risk with Internet purchases.

**H3:** Female's perception of risk negatively affects purchase intention.

### 5.4.1 Graphical and numerical Descriptives in respect of Gender

This section of the research will examine the distribution of response frequency across variables trust, perception of risk and purchase intention in respect of Gender. As suggested by Pallant (2013) descriptive statistics were performed to gather information about the general characteristics about the sample population as well as examine whether the assumptions in each test were violated. As Collis and Hussey (2009) suggested by measuring descriptive statistics the researcher will be able to examine the distribution and central tendency of the response frequency across the chosen factors. Firstly, the researcher demonstrated the collected data through 6 histograms as shown in Figure 12, and subsequently presented it via Descriptive Statistics as shown in Table 9 and 10.

Within **Figure 12** there are 6 histograms, with figure **12a** and **12b** depicting the distribution of males and females in respect of trust, with figure **12c** and **12d**



distribution of males and females in respect of purchase intention and with figure 12e and 12f distribution of males and females in respect of perception of risk.

In all cases in the below Figure 12, the horizontal axes represents the particular scale of measurement such as trust, purchase intention and perception of risk, vertical axes represent number of observation of samples falling into that Male / Female category. In the frequency distribution histograms, higher values mean stronger agreement with the corresponding variable.

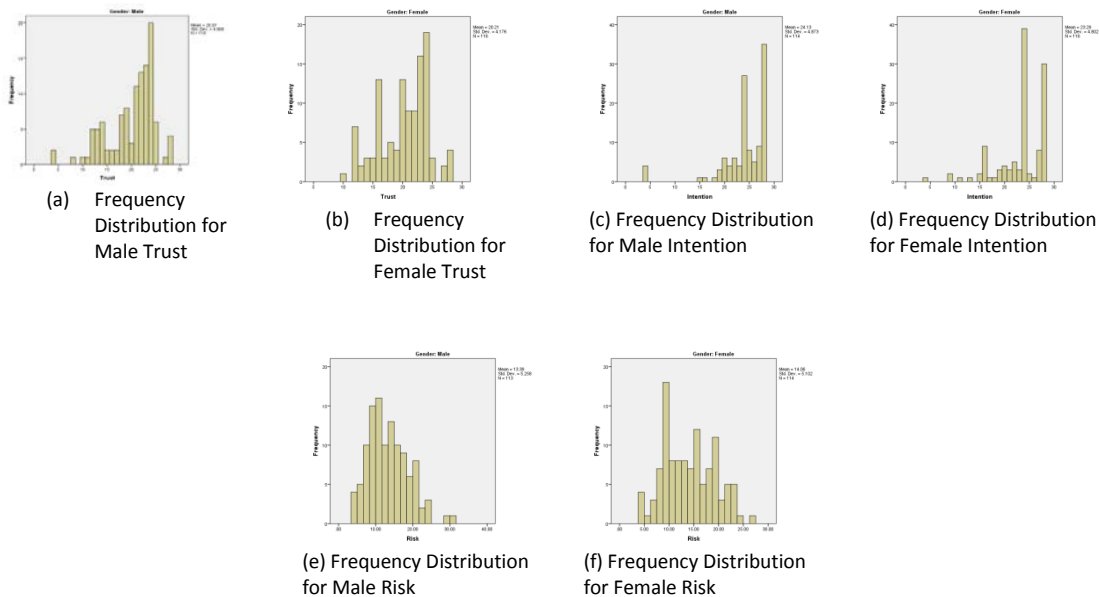


Figure 12: Scale Distributions Grouped across Gender

Table 9 and 10 demonstrate a summary of the usual descriptive statistics used for the variables Trust, Intention and Risk in relation to variable Gender. The first row of the Table 9 and 10 lists the usual statistics; with row two presenting the statistics related to the variable Trust, with row three depicting the statistics related to the variable Intention, with row four depicting the level of measurement related to the Risk variable and row five depicting the number of valid responses.

For example, in the output presented below one can observe that there were 114 cases considered valid in respect to the Trust variable and the results record a mean result of approximately 20.07 with a standard deviation of approximately 4.90.

	N	Minimum	Maximum	Mean	Std. Deviation
Trust	114	4	28	20.07	4.904
Intention	114	4	28	24.13	4.873
Risk	113	4.79	30.86	13.3907	5.25805
Valid N (listwise)	113				

a. Gender = Male

Table 9: Descriptive Statistics on Trust, Intention and Risk on Males variable

	N	Minimum	Maximum	Mean	Std. Deviation
Trust	116	10	28	20.21	4.176
Intention	116	4	28	23.29	4.802
Risk	114	4.79	26.94	14.0604	5.10171
Valid N (listwise)	114				

a. Gender = Female

Table 10: Descriptive Statistics on Trust, Intention and Risk on Females variable

### 5.4.2 Tests of Distribution Shape in respect of Gender:

The researcher used the Shapiro-Wilk test to assess the level of normality of the sample in relation to the variable Gender, as the collected sample (**n=230**) is relatively small. The intent of the research was to examine how close the sample is to a perfect distribution. The Shapiro-Wilk test was conducted to examine if the distribution of the chosen variables are normal in relation to Gender. The results were also used to indicate whether the probability that results of the tests have happened by chance (Walker, 2008).

**Table 11** below presents the results of the Shapiro-Wilk normality test that was conducted in order to assess normality of the collected sample in respect of Gender. The first column under the heading Shapiro-Wilk presents the appropriate test statistics, the second column depicts the degree of freedom and the third column the significance of the result.

As depicted in **Table 11**, the normality assumption was not met for the trust and purchase intention for both genders as the values are lower than the 0.05 chosen Alpha level. Therefore, the null hypothesis is rejected and we may assume that the collected data is not normal, which means it is not from normally distributed population.

**Tests of Normality**

Gender	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Trust Male	.181	113	.000	.906	113	.000
Trust Female	.127	114	.000	.952	114	.000
Intention Male	.230	113	.000	.703	113	.000
Intention Female	.246	114	.000	.836	114	.000
Risk Male	.093	113	.019	.966	113	.005
Risk Female	.103	114	.005	.971	114	.014

a. Lilliefors Significance Correction

**Table 11: Shapiro-Wilk Normality Test Results across Gender variables**

### 5.4.3 Tests of Difference in respect of Gender:

The researcher performed a Mann-Whitney U-Test as the results of the test of distribution shape indicated that the normality assumption in respect of Gender towards variables trust, purchase intention and perception of risk is violated. Therefore, the researcher could not perform Independent Samples t-test as its results could not be statistically relied upon. Moreover, the non-parametric Mann-Whitney U-test enabled the researcher to explore the differences between the chosen variables, in this instance the researcher tested the probability that the two sets of scores (for females and males) came from the same population (Pallant, 2013). In other words, the researcher wanted to explore if males and females differ in the terms of their perception or risk, trust and purchase intention.

**Table 12** depicts the information in respect of the output of the Mann-Whitney U-test. The first column depicts all the variables that have been included in the analysis. The second columns, labelled 'N' depicts the sample associated with each variable. The third and fourth columns lists the 'Mean Rank' and 'Sum of Ranks' for each of the variables analysed, respectively. For example, in relation to intention variable males are recorded to have a mean rank of 122.65 as compared to women's 108.47 and the sum of ranks 13982.50 and 12582.50 respectively.

**Ranks**

	Gender	N	Mean Rank	Sum of Ranks
Trust	Male	114	116.96	13333.00
	Female	116	114.07	13232.00
	Total	230		
Intention	Male	114	122.65	13982.50
	Female	116	108.47	12582.50
	Total	230		
Risk	Male	113	109.25	12345.50
	Female	114	118.71	13532.50
	Total	227		

Table 12: The Rank's table representing output of the Mann-Whitney U-test on Gender variable

**Table 13** depicts the results of the non-parametric Mann-Whitney U-test used to examine the differences between genders on all three scales. For example, in respect to variable intention the **Z value** is **-1.656** with a significance level of **p=0.98**. The probability value (p) is not less than or equal to 0.05, so the result is not significant. There is no statistically significant difference in the purchase intention scores of males and females, although the probability of observing the data is low.

**Test Statistics<sup>a</sup>**

	Trust	Intention	Risk
Mann-Whitney U	6446.000	5796.500	5904.500
Wilcoxon W	13232.000	12582.500	12345.500
Z	-.331	-1.656	-1.085
Asymp. Sig. (2-tailed)	.741	.098	.278

a. Grouping Variable: Gender

Table 13: Results for Mann-Whitney U-test for Gender variables

#### 5.4.4 Correlations:

The researcher also performed a number of correlations tests on the variables trust, perception of risk and purchase intention in relation to Gender and Millennial / Non-Millennial age cohorts in order to examine the relationships between the variables. As suggested by Pallant (2013, p.121) correlation coefficients illustrate a numerical summary of the direction and the strength of the linear relationship between two variables. The researcher investigated whether the direction is positive or negative in order to test the hypotheses and make assumptions based on the results.

### 5.4.4.1 Pearson's correlation test

The relationship between trust, perception of risk (as measured by the Risk) and purchase intention (as measured by the Intention) was investigated using Pearson product-moment correlation coefficient. This method was chosen as all three variables use ratio scale of measurement. The results of the test are depicted in **Table 14** below.

		Trust	Intention	Risk
Trust	Pearson Correlation	1	.425**	-.484**
	Sig. (2-tailed)		.000	.000
	N	230	230	227
Intention	Pearson Correlation	.425**	1	-.394**
	Sig. (2-tailed)	.000		.000
	N	230	230	227
Risk	Pearson Correlation	-.484**	-.394**	1
	Sig. (2-tailed)	.000	.000	
	N	227	227	227

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 14: Pearson Correlation Results on Trust, Intention and Risk variables.

#### 5.4.4.1.1 Correlation between trust and purchase intention

The relationship between trust and purchase intention (as measured by the Intention) was investigated using Pearson product-moment correlation coefficient. The first value of '.425' from the **Table 14** above indicates the strength of association between trust and purchase intention, and the second value of '.000' ( $p < 0$ ) indicates the significance of this result. In this case the results, [ $r = -0.0425$ ,  $n = 230$ ,  $p < 0.000$ ], suggest that there is a moderate positive association between trust and purchase intention variables, '.425', and the result is statistically significant '0.000' meaning that these results are not due to chance.

**Figure 13** below represents scatter plots between variables trust and purchase intention. The horizontal axis depicts variable trust and the vertical axis depicts variable purchase intention. **Figure 13** indicates that high levels of trust are associated with high levels of purchase intention.

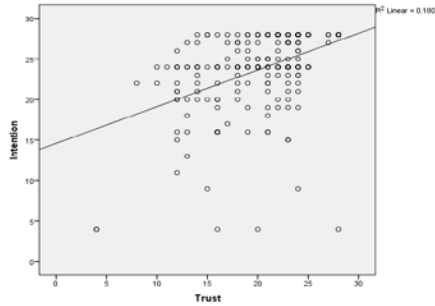


Figure 13: Pearson’s correlations between Trust and Intention variables

#### 5.4.4.1.2 Correlation between trust and perception of risk

The relationship between trust and perception of risk (as measured by the Risk) was investigated using Pearson product-moment correlation coefficient. The value of ‘-.484’ from the **Table 14** above indicates the strength of association between trust and perception of risk, and the second value of ‘0.000’ ( $p < 0$ ) indicates the significance of this result. In this case the results, [ $r = -0.484$ ,  $n = 227$ ,  $p < 0.000$ ], suggest that there is a moderate negative association between trust and perception of risk variables, ‘-.484’, and the result is statistically significant ‘0.000’ meaning that these results are not due to chance.

The scatter plot in the **Figure 14** below depicts a relationship between variables trust and perception of risk. The horizontal axis depicts variable trust and the vertical axis depicts variable perception of risk. As perception of risk towards online shopping increases the degree of trust decreases.

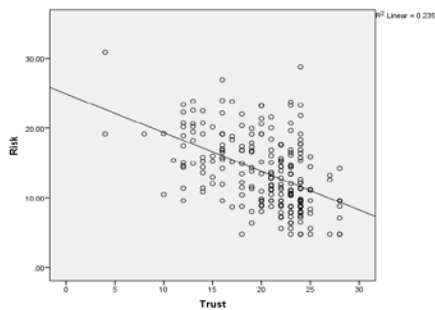


Figure 14: Pearson’s correlations between Trust and Risk variables

#### 5.4.4.1.3 Correlation between perception of risk and purchase intention

The relationship between perception of risk (as measured by the Risk) and purchase intention (as measured by the Intention) was investigated using Pearson product-moment correlation coefficient. The value of  $-.394$  from the **Table 14** above indicates the strength of association between perception of risk and purchase intention, and the second value of  $0.000$  ( $p < 0$ ) indicates the significance of this result. In this case the results,  $[r = -.394, n = 227, p < 0.000]$ , suggest that there is a moderate negative association between perception of risk and purchase intention variables,  $-.394$ , and the result is statistically significant  $0.000$  meaning that these results are not due to chance.

**Figure 15** below represents scatter plots between variables perception of risk and purchase intention. The horizontal axis depicts variable perception of risk and the vertical axis depicts variable purchase intention. **Figure 15** indicates that low level of risk is associated with high level of purchase intention.

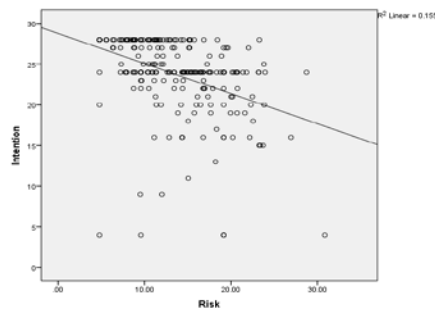


Figure 15: Pearson's correlations between Intention and Risk variables

#### 5.4.4.2 Spearman's Correlation test

A Spearman correlation test was performed to evaluate the relationship between trust, perception of risk, purchase intention on the Gender variable. Dependent variables trust, risk and intention are measured on a ratio scale of measurement, however

Gender of the participants is measured on the ordinal scale thus the researcher used the Spearman test.

#### 5.4.4.2.1 Correlation between Gender variable and Trust

A Spearman’s Rank Order Correlation test was computed to assess the relationship between Gender and trust. **Table 15** depicts the results of the test. **Table 15** below depicts the results of the test, [ $r = -0.022$ ,  $n = 230$ ,  $p < 0.000$ ], which suggest that there exists no correlation between both variables ‘-0.022’, and the result is not statistically significant, ‘.742’.

			Gender	Trust
Spearman's rho	Gender	Correlation Coefficient	1.000	-.022
		Sig. (2-tailed)	.	.742
		N	230	230
	Trust	Correlation Coefficient	-.022	1.000
		Sig. (2-tailed)	.742	.
		N	230	230

Table 15: Spearman’s Correlation Gender and Trust variables.

#### 5.4.4.2.2 Correlation between Gender variable and Perception of Risk

A Spearman’s Rank Order Correlation test was computed to assess the relationship between Gender and perception of risk (as measured by the Risk). **Table 16** depicts the results of the test, [ $r = 0.072$ ,  $n = 227$ ,  $p < 0.000$ ], which suggest that there exists no association between both variables ‘0.072’, and the result is not statistically significant, ‘.278’.

			Gender	Risk
Spearman's rho	Gender	Correlation Coefficient	1.000	.072
		Sig. (2-tailed)	.	.278
		N	230	227
	Risk	Correlation Coefficient	.072	1.000
		Sig. (2-tailed)	.278	.
		N	227	227

Table 16: Spearman’s Correlation Gender and Risk variables.



### 5.4.4.2.3 Correlation between Gender variable and Purchase Intention

A Spearman's Rank Order Correlation test was computed to assess the relationship between Gender and purchase intention (as measured by the Intention). **Table 17** depicts the results of the test, [ $r = -0.109$ ,  $n = 230$ ,  $p < 0.000$ ], which suggest that there exists no correlation between both variables  $-.109$ , and the result is nearly significant,  $.098$ .

Correlations			Gender	Intention
Spearman's rho	Gender	Correlation Coefficient	1.000	-.109
		Sig. (2-tailed)	.	.098
		N	230	230
	Intention	Correlation Coefficient	-.109	1.000
		Sig. (2-tailed)	.098	.
		N	230	230

Table 17: Spearman's Correlation Gender and Intention variables.

## 5.5 Findings in respect of Millennials and Non-Millennials age cohort

As mentioned in the theoretical section of this dissertation, when analysing consumer's shopping behaviour online it is important to assess how belonging to different age groups affects online shopping attitude and purchase intention. It is crucial to examine the correlation between age cohorts as well as the purchasing attitude and factors affecting it. This section will provide data findings in respect of two age cohorts Millennials and Non-Millennials in order to examine the below hypotheses:

**H4:** Millennials are more trustworthy compared to Non-Millennials in respect to online shopping.

**H5:** Millennials associate less risk towards online shopping.

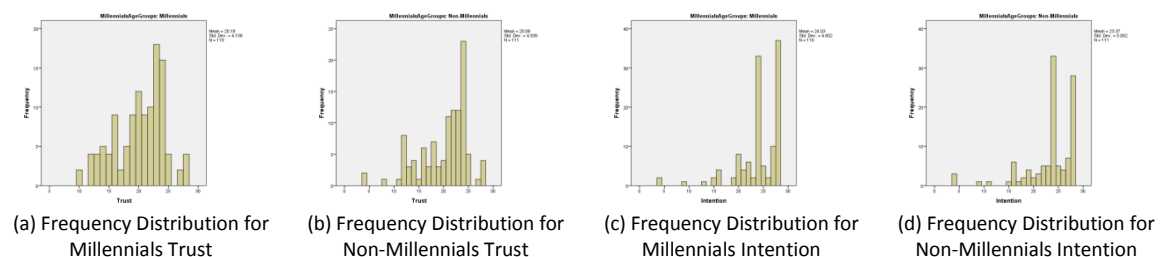
**H6:** Perception of trust affects purchase intention.

### 5.5.1 Graphical and Numerical Descriptives in respect of Millennials and Non-Millennials age cohort:

As previously mentioned, this section of the study will examine the distribution of response frequency across variables trust, perception of risk and purchase intention in respect of Millennials and Non Millennials age cohort. Descriptive statistics were used to demonstrate general information about Millennials / Non-Millennial population as well as analyze if assumptions in each of the performed tests were violated (Pallant, 2013). Firstly, the researcher demonstrated the collected data through 6 histograms as shown in **Figure 16**, and subsequently presented it via Descriptive Statistics as shown in **Table 18 and 19**.

Within **Figure 16** there are 6 histograms, with figure **16a** and **16b** depicting the distribution of Millennials and Non-Millennials in respect of trust, with figure **16c** and **16d** distribution of Millennials and Non-Millennials in respect of purchase intention and with figure **16e** and **16f** distribution of Millennials and Non-Millennials in respect of perception of risk.

In all cases in the below **Figure 16**, the horizontal axes represents the particular scale of measurement such as trust, purchase intention and perception of risk, vertical axes represent number of observation of samples falling into that Millennials / Non-Millennials category. In the frequency distribution histograms, higher values mean stronger agreement with the corresponding variable.



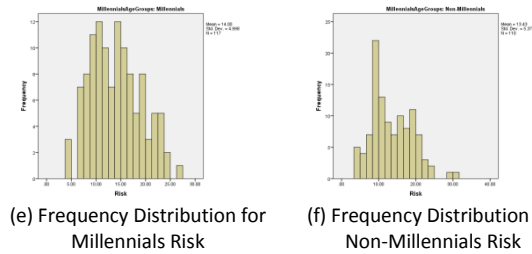


Figure 16: Scale Distributions Grouped across Millennials and Non-Millennials

**Table 18** and **19** demonstrate a summary of the usual descriptive statistics used for the variables Trust, Intention and Risk in relation to variable Age groups– Millennials and Non-Millennials. The first row of the **Table 18** and **19** lists the usual statistics; with row two presenting the statistics related to the variable Trust, with row three depicting the statistics related to the variable Intention, with row four depicting the statistics related to the Risk variable and row five depicting the number of valid responses.

For example, one can observe that there were 119 cases considered valid in respect to the Intention variable and the results record a mean result of approximately 24.03 with a standard deviation of approximately 4.602.

Descriptive Statistics<sup>a</sup>

	N	Minimum	Maximum	Mean	Std. Deviation
Trust	119	10	28	20.18	4.158
Intention	119	4	28	24.03	4.602
Risk	117	4.79	26.94	14.0023	4.99752
Valid N (listwise)	117				

a. MillennialsAgeGroups = Millennials

Table 18: Descriptive Statistics on Trust, Intention and Risk on Millennials variable

Descriptive Statistics<sup>a</sup>

	N	Minimum	Maximum	Mean	Std. Deviation
Trust	111	4	28	20.09	4.939
Intention	111	4	28	23.37	5.092
Risk	110	4.79	30.86	13.4343	5.37376
Valid N (listwise)	110				

a. MillennialsAgeGroups = Non-Millennials

Table 19: Descriptive Statistics on Trust, Intention and Risk on Non-Millennials variable

## 5.5.2 Tests of Distribution Shape in respect of Millennials and Non-Millennials age cohort

The researcher used the Shapiro-Wilk test to assess the level of normality of the sample in relation to variable Millennial and Non-Millennial age cohort, as the collected sample (**n=230**) is relatively small. The intent of the research was to examine how close the

sample is to a perfect distribution. The Shapiro-Wilk test was conducted to examine if the distribution of the chosen variables are normal in relation to chosen age group. The results were also used to indicate whether the probability that results of the tests have happened by chance (Walker, 2008).

**Table 20** below presents the results of the Shapiro-Wilk normality test that was conducted in order to assess normality of the collected sample in respect of Age cohort. The first column under the heading Shapiro-Wilk presents the appropriate test statistics, the second column depicts the degree of freedom and the third column the significance of the result

		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
MillennialsAgeGroups		Statistic	df	Sig.	Statistic	df	Sig.
Trust	Millennials	.119	117	.000	.957	117	.001
	Non-Millennials	.186	110	.000	.903	110	.000
Intention	Millennials	.227	117	.000	.782	117	.000
	Non-Millennials	.247	110	.000	.780	110	.000
Risk	Millennials	.082	117	.050	.975	117	.030
	Non-Millennials	.106	110	.004	.961	110	.003

a. Lilliefors Significance Correction

**Table 20: Shapiro-Wilk Normality Test Results based on Millennials and Non-Millennials variables**

### 5.5.3 Tests of Difference in respect of Millennials and Non-Millennials age cohort

The researcher performed a Mann-Whitney U-Test as the results of test of distribution shape indicated that the normality assumption in respect of Age groups towards variables trust, purchase intention and perception of risk was violated. Therefore, the researcher could not perform Independent Samples t-tests as its results could not be statistically relied upon. Moreover, the non-parametric Mann-Whitney U-test enabled to explore the differences between the chosen variables, in this instance the researcher tested the probability that the two sets of scores (for Millennials and Non-Millennials) came from the same population (Pallant, 2013). In other words, the researcher wanted to explore if Millennials and Non-Millennials differ in terms of their perception of risk, trust and purchase intention.

**Table 21** depicts the information in respect of the output of the Mann-Whitney U-test. The first column depicts all the variables that have been included in the analysis. The second columns, labelled 'N' depicts the sample associated with each variable. The third and fourth columns lists the 'Mean Rank' and 'Sum of Ranks' for each of the variables analysed, respectively. For example, in relation to risk variable Millennials are recorded to have a mean rank of 117.98 as compared to Non-Millennials 109.77 and the sum of ranks 13803.50 and 12074.50 respectively.

Ranks				
	MillennialsAgeGroups	N	Mean Rank	Sum of Ranks
Trust	Millennials	119	113.25	13476.50
	Non-Millennials	111	117.91	13088.50
	Total	230		
Intention	Millennials	119	119.75	14250.50
	Non-Millennials	111	110.94	12314.50
	Total	230		
Risk	Millennials	117	117.98	13803.50
	Non-Millennials	110	109.77	12074.50
	Total	227		

**Table 21: The Rank's table representing output of the Mann-Whitney U-test on Millennials and Non-Millennials variable**

**Table 22** depicts the results of the non-parametric Mann-Whitney U-test used to examine the differences between Millennial Age groups on all three scales. For example, in respect to variable risk the Z value is  $-0.0941$  with a significance level of  $p=0.346$ . The probability value ( $p$ ) is not less than or equal to 0.05, so the result is not significant. There is no statistically significant difference in the perception of risk scores of Millennials and Non-Millennials, although the probability of observing the data is low.

Test Statistics <sup>a</sup>			
	Trust	Intention	Risk
Mann-Whitney U	6336.500	6098.500	5969.500
Wilcoxon W	13476.500	12314.500	12074.500
Z	-.534	-1.028	-.941
Asymp. Sig. (2-tailed)	.593	.304	.346

a. Grouping Variable: MillennialsAgeGroups

**Table 22: Results for Mann-Whitney U-test for Millennials and Non-Millennials variables**

### 5.5.4 Correlations in respect of Millennials and Non-Millennials age cohort:

In order to test the relationship between trust, perception of risk and purchase intention the researcher applied a correlation function. The dependent variables trust, risk and intention are measured on ratio scale of measurement, however Millennial and Non-Millennial age cohort are measured on the ordinal scale thus the researcher used the Spearman test.

#### 5.5.4.1 Correlation between Millennials age group variable and Trust

A Spearman’s Rank Order Correlation test was computed to assess the relationship between Millennials Age Groups and trust. Table 23 depicts the results of the test, **[r=0.035, n =230, p < 0.000]**, which suggest that there exists no correlation between both variables ‘0.035, and the result is not statistically significant, ‘0.594’.

			MillennialsAgeGroups	Trust
Spearman's rho	MillennialsAgeGroups	Correlation Coefficient	1.000	.035
		Sig. (2-tailed)	.	.594
		N	230	230
	Trust	Correlation Coefficient	.035	1.000
		Sig. (2-tailed)	.594	.
		N	230	230

Table 23: Spearman’s Correlation Millennials Age Groups and Trust variables.

#### 5.5.4.2 Correlation between Millennials age group variable and Perception of Risk

A Spearman’s Rank Order Correlation test was computed to assess the relationship between Millennials Age Groups and perception of risk (as measured by the Risk). **Table 24** depicts the results of the test, **[r =-0.062, n =227, p <0.000]**, which suggest that there exists no association between both variables ‘-0.062’, and the result is not statistically significant, ‘0.350’.

**Correlations**

			MillennialsAgeGroups	Risk
Spearman's rho	MillennialsAgeGroups	Correlation Coefficient	1.000	-.062
		Sig. (2-tailed)	.	.350
		N	230	227
	Risk	Correlation Coefficient	-.062	1.000
		Sig. (2-tailed)	.350	.
		N	227	227

**Table 24: Spearman's Correlation Millennials Age Groups and Risk variables.**

### 5.5.4.3 Correlation between Millennials age group variable and Purchase Intention

A Spearman's Rank Order Correlation test was computed to assess the relationship between Millennials Age Groups and purchase intention (as measured by the Intention). Table 25 depicts the results of the test, [ $r = -0.068$ ,  $n = 230$ ,  $p < 0.000$ ], which suggest that there exists no correlation between both variables '-0.068', and the result is not statistically significant, '0.305'.

**Correlations**

			MillennialsAgeGroups	Intention
Spearman's rho	MillennialsAgeGroups	Correlation Coefficient	1.000	-.068
		Sig. (2-tailed)	.	.305
		N	230	230
	Intention	Correlation Coefficient	-.068	1.000
		Sig. (2-tailed)	.305	.
		N	230	230

**Table 25: Spearman's Correlation Millennials Age Groups and Intentions variables.**

## 5.6 CONCLUSIONS

This section of the dissertation thesis provides an overview of the main findings of the study and this enabled the researcher to examine proposed hypotheses. This research intended to create a better understanding about attitudes towards shopping online and the impact of the correlation between trust, perception of risk on online purchase intention. The research objective was to examine whether factors such as gender and belonging to a specific age cohort, in this instance Generation Y, influences consumer's attitude and their purchasing decisions.

## CHAPTER 6: DISCUSSION

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### 6.1 Discussion

The main objective of this dissertation thesis was to investigate shopping attitudes of Generation Y in relation to the effect of trust, perception of risk and purchase intention. The researcher investigated whether the differences between males and females existing in relation to attitudes.

Results of the research conducted by Dittmar et al., (2004) as well as Cyr and Bonanni (2005) are inconclusive on whether gender has an impact on attitudes towards online purchases. Chang et al., (2005) concluded that considering differences between males and females, males tend to purchase more products online. However, other studies suggest that there are and no significant gender differences when it comes to purchasing online (Zhou et al., 2007). Therefore, it is vital to get a better understanding and investigate more deeply the impact of gender on attitude and online shopping behaviour.

As a result, the goal of this dissertation thesis was to fill the gap in the existing literature and provide more understanding of the gender differences in online shopping attitude. To investigate this the researcher performed a number of tests, and according to the results of the conducted Mann-Whitney U-Test of distribution shape, there is no significant gender differences when it comes to factors such as trust, perception of risk and purchase intention, however the probability of observing data is low.

The existing research indicates that gender is a crucial factor and has considerable influence on consumer's shopping behaviour (Jayawardhena et. al., 2007). Therefore, the researcher performed Pearson's correlation test to investigate if there is a relationship between different trust and perception of risk and shopping attitude. Based on the results, there is a positive relationship between trust and purchase intention, which means that high levels of trust are connected with high levels of purchase



intentions. However, there is a negative relationship between trust and perception of risk, as the perception of risk towards online purchases rises, the degree of trust declines. The results for perception of risk are the same, as perception of risk increases an intention to purchase good via online retailers decreases. All the results were statistically significant on the collected sample, meaning that they are not likely to chance.

The researcher intended to examine the association between Gender and factors affecting purchasing behaviour. Spearman's correlation test was conducted and based on the results the researcher believes that there is no correlation between gender and variables trust, perception of risk and purchase intention. The results are also not statistically significant.

Therefore, hypothesis 1 '*Gender does not affect trust attitude towards online shopping*' is supported in this research. The findings of the research disagree with the study conducted by Dittmar et al., (2004) who suggests that males have more positive attitude towards online shopping as woman prefers traditional shopping rather than online and trust it more.

On the other hand, hypothesis 2 '*Gender affects the perception of risk associated with internet purchases*' is unsupported by the findings. Gender does not act as differentiator when it comes to online trust. Based on the findings from the performed tests the researcher suggests that males and females have similar degree of trust and the differences between males and females in respect of perception of risk are not significant.

However, the hypothesis 3 '*Perception of risk negatively affects purchase intention*' is supported in the conducted research. The correlation between those variables was examined using Pearson product-moment correlation coefficient and its results indicate that there is a negative relationship between perception of trust and purchase

intention. The researcher suggests that high level of risk result in low level of purchase intention of the consumers.

This study also intended to assess consumer's behaviour from the aspect of belonging to the Millennial age cohort, and to determine if different age groups have various attitudes.

According to the Spearman's correlation test there is no correlation between belonging to the Millennial age group and the variables trust, perception of risk and purchase intention. The results are also not statistically significant. Therefore hypotheses 4 '*Millennials are more trustworthy compared to Non-Millennials in respect to online shopping*' and 5 '*Millennials associate less risk towards online shopping*' are unsupported.

The hypothesis 6 'Perception of trust affects purchase intention' is supported in this research. A study conducted by McCole and Palmer (2001) suggested that trust is a necessity when conducting online purchases and that purchase intention increases as customer's trust towards online retailers go higher. This view is supported by Gefen and Straub (2004) who claimed that trust is positively correlated to purchase intention, if trust raises so will the intention to buy goods online.

## **6.2 Implications of the Research**

This thesis provides theoretical and practical perspective on the attitudes towards online shopping of the Millennial group as well as differences in behaviour between gender.

As mentioned above, the negative relationship between trust and perception of risk is followed by negative association between perception of risk and purchase intention. In online world it is crucial for the retailer to create a trust in order to gain customer's loyalty.

These findings may indicate that consumers are still worried about the risks and threats when switching from the traditional brick-and-mortar retailer to online shopping. The businesses that plan to increase their presence online should create secure systems that are trustworthy and would allow consumers to overcome negative perceptions.

This dissertation study has implications to different stakeholders; it could enable the creation of new e-marketing strategies. As the research findings are supported by the existing literature where trust is believed to be positively impacting consumer's online purchase intention (Lee and Tan, 2003). The marketers need to be aware that to increase sales they need to increase consumer's trust. This can be done through variety of methods such as enhance website security, create a more secure payment method, provide more trustworthy information so that customers can trust the retailers more and therefore will purchase more goods online.

The findings in relation to age and belonging to Millennials age cohort did not show a correlation between those variables and attitude towards online shopping. However, as mentioned in the literature review the results of the tests conducted on the gender and age are inconclusive. If the online retailers intend to effectively and efficiently target specific market segments they require more information about the behaviour of specific group, for example, the difference in shopping attitudes based on different demographics. Therefore, more research is suggested on these variables.

### **6.3 Limitations of the research**

This dissertation thesis intends to add to the understanding of the online shopping attitudes of Generation Y and differences between the genders. However, this study should be viewed in light of some limitations.

Firstly, the size of the sample is considerable small, it focused on consumers who have purchased goods online in the past, and it did not take into consideration people who do not shop online but would like to engage in this way of shopping. If those consumers

were included in the research, higher generalization would be possible in the subsequent study.

This study did not focus on particular reasons why people do not shop online and how this can be transformed, the gender and age differences can be further exploited so that marketers can fully understand the segment market they are selling to. Deeper research into factors affecting shopping attitude based on gender and belonging to different age groups will enable for better understanding of the relationship between shopping attitude and actual shopping behavior.

The chosen convenience sampling method could also affect the type of population that participated in this research and the findings cannot be generalized to the whole population (Zikmund, et al., 2010). This study used a convenience sampling method to choose participants of the survey since it was complex to obtain a sample of Millennials to take part in the research. As a consequence, based on the chosen sample, when analysing and interpreting the findings of the research one must bare this in mind when generalising and making assumptions for the whole population.

This study did not investigate the type of products that consumers purchase online, and thus the attitude towards trust and purchase intention may vary based on the price and value of the products. When customers purchase high quality and expensive goods they may have different attitudes than when they buy a few euros worth of merchandise. Further study should investigate whether there is correlation between attitude and type of products purchased online and whether consumer's perception of risk affects their actual behaviour based on type of goods bought. It should be investigated in more details if there is a correlation between price and purchase intention and what retailer actions reduce privacy and safety concerns.

#### **6.4 Future recommendations**

This study was conducted via a quantitative method, for future recommendation the researcher would recommend conducting a study with a mix of methods, both

quantitative and qualitative techniques should be deployed. Neither method is sufficient in itself, however by utilising both the researcher can work off the strengths and weaknesses of the methods. By conducting interviews the researcher would be able to investigate more deeply the attitudes that consumers have and ask follow up questions. This method would also enable feedback and better understanding of Generation Y consumer's shopping patterns and attitudes.

Based on the limitations of this study, the researcher would also suggest that subsequent research focuses on gender, consider age and past online behaviour. The type of products that customers bought online, what factors persuaded them to purchase online and what stopped them from doing it should also be looked at. This would facilitate marketers fully reaching a chosen market segment. The researchers should also consider other demographic characteristics like disposable income, marital status and education and to investigate a correlation between those and attitude towards shopping online so that online retailers can better profile their target segment market (Porter and Donthu, 2006). Future research should also examine customer's view on privacy concerns issues and methods that allay such fears.

Purchase intention should be measured based on prior purchase experience but also take into consideration the population who intends to buy goods via online retailers in the near future. By taking into consideration those consumers, the marketers can gain more knowledge about the consumer behaviour and his/her attitude, alleviate doubts that customers have about purchases online as well as overcome the barriers that currently exist and therefore create more successful campaigns, manage retailers websites more effectively and gain new customers as well as help retain the existing ones.

This thesis explored the subject of online shopping in terms of trust, perception of risk and purchase intention in respect of Gender and Millennial age group. Future studies can take into consideration the limitation of this study, what constrained this research and develop new method based on the data findings and recommendations.

## 6.5 CONCLUSIONS

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The main goal of this research was to identify and examine the correlation between factors such as trust, perception of risk and its impact on purchase intention in respect of Gender and Age. The existing literature suggests that due to the extensive growth of the Internet and the increase of transactions conducted online it is crucial to examine the rationale behind shopping online and as well as the factors that refrain people from purchasing online (Kim et al., 2003). Therefore, as highlighted in the Research Objectives chapter this research focused on the attitude towards online shopping in respect of trust, perception of risk and its impact on purchase intention, as viewed from two perspectives, Gender and belonging to the Millennial age group.

As the customers cannot physically touch the products and need to provide online shops with personal details like credit card information, marketers need to be aware of the impact of trust and risk on online transactions and the degree to which they impact online retailers. It is crucial to determine what impacts consumer's online purchase intention and how this can be influenced. Therefore, the theoretical framework focuses on general characteristics of Millennials and the differences between sexes in attitude towards factors such as trust, risk and intention to buy products via online retailers.

As existing studies are conducted mainly in USA the researcher decided to fill in the gap in the research and perform the study in Ireland. To conduct the study the researcher used snowball and convenience non-probability sampling methods as it was the easiest and quickest methods to collect large data in quick time (Blumberg et al., 2008). In other words, the researcher asked friends, workmates, and other students to fill in the survey and also asked them to distribute the survey amongst their friends. However, as highlighted by Bryman and Bell (2007) the hazard of this method is the lack of ability for two way feedback and follow up questions in case the participants do not understand the questions. It is also harder to ensure precision and make assumptions from the sample to the total population (Bryman and Bell, 2007).

In order to analyse the behaviour of Generation Y consumers and to compare them to other market segments, the researcher invited members of the Non-Millennial age groups to take the survey. The idea was to be able to fully examine the impact of belonging to the Millennial cohort on online shopping perceptions and usage.

The researcher conducted a pilot study to ensure all questions are understood by participants and to avoid issues when recording data (Saunders et al., 2012). It is worth mentioning that findings from this research are based on the sample of 230 participants and may not be applicable to the total population of Generation Y consumers. Moreover, as suggested by McNabb (2013) the researcher's chosen sampling technique increases the risk of bias as only selected individuals are representing the population and not everyone living in Ireland had the same chances to be chosen as a participant of the survey.

The main goal of this research was to identify and examine the correlation between factors such as trust, perception of risk and its impact on purchase intention in respect of Gender and Age. Therefore, the researcher decided that the best way to perform the study is by quantitative method where variables were numerically measured and examined.

As discussed in the Methodology section this research had a total of 230 respondents with 50.4 % of females and 49.6% of males, as well as 119 participants from the Millennial and 119 from the Non-Millennial age cohort. This amounted to a well-balanced data collection in terms of gender and age cohorts. To ensure reliability and consistency the researcher conducted Cronbach's Alpha test and with all the results above 0.7, therefore it represents high internal reliability and demonstrate that all the measurement scales used in the questions were consistent.

Based on the results of the study it emerged that there are no correlations between factors such as gender and age when it comes to attitude towards online shopping. Males and females at different age levels share similar consumer shopping attitude and

behaviour. The differences between gender and age are not statically significant. Findings of the study suggest that trust is closely correlated with purchase intention, the higher degree of trust that consumers possess the more likely they are to purchase products online. On the other hand, there is a negative correlation between trust and risk, which means that those consumers that possess high level of perception or risk are more likely to trust online retailers and therefore their purchase intention to shop online will be low. This has implications for online retailers and marketers, to ensure that the marketing strategies and business strategies are adapted to the consumers. Retailers must bear in mind the implications of the consumer's attitude to trust and in what way they can create websites that consumers perceive as trustworthy and will convince them purchase products online.

The findings of this research have significant research and managerial implications. It can help marketers and online retailers when creating business strategies and marketing campaigns. The knowledge about consumer's purchasing attitude can create better marketing strategies and benefit both, the marketers and the consumers.

As suggested by study conducted by Eurostat (2009) the differences between genders when it comes to internet are decreasing. Furthermore, Shin (2009) mentioned that since males and females demonstrate similar interest in technology and are becoming more familiar users of the internet there is no statistical difference in their usage.

Nevertheless the limitations of the study, this research provides both a theoretical and empirical contribution to understanding attitudes towards shopping online and the gender and age differences. Based on the examined and analysed data the researcher suggests that the Millennial customers are similar in their shopping attitudes and behaviours as the rest of the population.



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# APPENDIX 1

## Online Shopping Behaviour

Dear Participant,

This is a research for a Master's thesis at the National College of Ireland. The purpose of this survey is to identify and get insight into core factors that affect online shopping attitude. This questionnaire contains a few demographic questions and questions about attitude towards trust, perception of risk and purchase intention.


The full questionnaire should take approximately four minutes to complete. Your participation is voluntary, anonymous and entirely confidential. No personal data will be collected. The findings of the research will be included in my final thesis and will not be passed onto any third parties. The results of this research will be provided to you on request.

I would be grateful if you could fill this in and please feel free to forward on survey to anyone you feel would have an interest in taking part.

Many Thanks,

Fabiola Galeziewska

### 1. What is your gender?

 SurveyMonkey Audience

- Female
- Male

### 2. What is your age?

- 20 and below
- 21 to 25
- 26 to 31
- 32 to 36
- 37 to 40
- 41 and above

### 3. What country are you from?

### 4. What is the highest level of education you have completed?

- No formal schooling
- Primary school
- High School
- College / University
- Post-graduate degree

**5. What is your marital status?**

- Single
- Married
- Separated
- Divorced
- Widowed
- In a relationship

**6. How many purchases have you made online in the last 12 months?**

- 0
- 1 to 2
- 3 to 4
- 5 to 6
- 7 to 8
- 9 and above

**7. On a 7-point scale that ranges from strongly disagree to strongly agree, please indicate to what degree you disagree or agree with the following statements regarding online trust.**

	Strongly Disagree	Disagree	Disagree somewhat	Neutral	Agree somewhat	Agree	Strongly Agree
I feel safe in my transactions with the retailer's website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I trust the retailer's website to keep my personal information safe.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall the retailer's website is trustworthy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that any information communicated by the retailer's website is secure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**8. On a 7-point scale that ranges from strongly disagree to strongly agree, please indicate to what degree you disagree or agree with the following statements regarding perceived risk.**

	Strongly Disagree	Disagree	Disagree somewhat	Neutral	Agree somewhat	Agree	Strongly agree
My expected monetary loss resulting from purchasing products from an online retailer is high.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My expected failure of product performance if I buy products from an online retailer is high.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I buy products from the online retailer, I think I will experience high difficulty in gaining social reorganization (from family, friends etc).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will feel uneasy psychologically if I buy products from an online retailer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not think it is safe to buy products from the online retailer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel uncertainty as to whether the online retailer is time efficient in terms of dealing with the order and delivery.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**9. On a 7-point scale that ranges from strongly disagree to strongly agree, please indicate to what degree you disagree or agree with the following statements regarding online consumer purchase intention.**

	Strongly Disagree	Disagree	Disagree somewhat	Neutral	Agree somewhat	Agree	Strongly agree
I plan to use the internet to purchase products or services in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I intend to use the internet to buy products or services in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect my purchases from this website to continue in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying products or services via the internet is something I would do in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>