Online Trust:
Do People Trust the Internet and the E-Commerce Environment?

By
Rebecca Kestle
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Rebecca Kestle

R.Kestle1@unimail.derby.ac.uk

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Abstract

The influence of many trusting elements, antecedents and characteristics were examined, along with methods of improving such factors in an online context. Previous statistics and difficulties surrounding the nature of trust were also investigated to help understand a change in the field. It was found that there are many antecedents and characteristics of trust that each hold their own influential power in different contexts. A research strategy was devised and a survey was produced that captured opinions and views from 139 individuals. The study discovered that almost 1 in 3 don’t trust one or more aspects of e-commerce, and that 1 in 7 do not (to some degree) trust the internet, the websites they use to shop online, or trust, in general. The study found security and privacy issues to be the most important factors; they were described as the most important factors for building trust, as well as the biggest concerns in consumer’s minds when talking about risks online. It was also the biggest reason for individuals not trusting the internet. Many other antecedents were found to significantly affect perceptions and trusting tendencies. The study was able to answer many of the research questions posed. However, weaknesses and disparities were found. Overseas research was not able to be conducted due to failures in technology, along with other unforeseeable circumstances. Surprisingly, data also demonstrated people were willing to accept / ignore risks perceived and participate in e-commerce regardless. Recommendations were formed around each topic area, the most considerable of which being the need to improve security and privacy, as well as raising awareness and educating consumers in a simple manner, using techniques and procedures that show goodwill, and finally, multichannel retailing becoming more mainstream, and used throughout e-commerce in order to build trust and improve levels of convenience for customers. It is believed that the recommendations and conclusions realised in this paper, with evidence from past literature and results from this study, will help not only consumers to improve their trust (as the paper aims to accomplish), but to help other researches, and the online retailers themselves in adopting methods that will help so many different areas from trust and risk perception from their customers, to the advertising and marketing techniques they should adopt to monitor and move with changes in consumer behaviour in the future.
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1. Introduction

1.1. Project Rationale

It becomes apparent that there are multiple reasons for users’ trust, or lack of it in IT and that many different factors have been believed to be ‘the predominant driver’ or underlying reason for users’ trust in systems, as suggested by Sommerville, I. et al. (2004); Arasanmi, C.N. et al. (2012); Hsieh, J. & Wang, W. (2007) - whether that being ease of use, security and privacy reasons, website design, the dependability of a system or any other reason. The literature available on this topic cannot be found in abundance either, which allows much room for new research to gain a better, more clear understanding of the issues in this area and what it will mean for individuals and organisations alike. With regards to online and e-commerce trust, most of the research carried out is based on data collected in other countries such as Australia, America or small European countries where perceptions may differ. Many studies also indicate that high levels of trust can improve the use of IT in an organisation; maximise productivity, improve its processes or competitive advantage as well as improving the use of IT for consumers / users; allowing them to participate in continued or further use of e-commerce services - thus making it an important topic to discuss as it has obvious wide reaching impacts. There are contrasting views on the actual concept of online trust too (as indicated in section 2.2). Some believe online trust is very different to offline trust (Marcella, 1999; Shankar et al., 2002; Boyd, 2003) whilst others argue that trust in IT is not fundamentally different from that between humans (Wang & Benbasat, 2005) and that it involves the same risk and uncertainty that is found in trust between people (Thatcher, et al., 2011) and other offline trust situations (Corritore et al., 2003). Several other inconsistencies have been found which are discussed in chapter 2, and this lack of consensus in the literature indicates the need for more research to be carried out, especially as e-commerce appears to be an ever growing market.
1.2. **Project Aim and Objectives**

1.2.1. **Project Aim**

The main aim of this paper is to establish whether IT systems are trusted by their users (online and e-commerce systems to be clear) and to identify critical IT systems practices which are necessary to ensure that users can trust the IT that they use to help IT adoption and use in the future.

1.2.2. **Project Objectives**

In order to fulfil the projects main aim, multiple objectives have been set out to be completed which are as follows:

- To identify the basis of trust in artefacts such as the internet and e-commerce systems and the criteria that apply for these.
- To develop a research instrument to measure trust in online environments.
- To analyse and evaluate the levels of trust in defined demographic groups and the criteria that are necessary to ensure trust in IT artefacts in the future.
2. Literature Review

2.1. Introduction

IT is not a commodity as once suggested (Carr, 2004), but a definite necessity in today’s society - everything is creeping into the digital world and society is increasingly relying upon technology to work, entertain, and perform daily tasks for ourselves. The internet especially is something that has revolutionised the way we live, and as such, there has become a great need to talk about, and incorporate trust online - as Luhmann (1979) states, trust is simply “a basic fact of social life” and the concept of trust is no longer restricted to offline situations clearly as it pervades all aspects of human society. So with this digital society that we now live in, trust has to be formed in order for us all to make the most from the technology we have, to make our lives easier, to progress, and to benefit the economy. This chapter looks at a range of past studies and literature to bring together the many issues around online trust, along with looking at defining the concept, what it’s most salient characteristics and other relatable elements are, the subjectivity of the area, trust building solutions, and future research into this field. We will begin though with some quick statistics surrounding the e-commerce and online environment to highlight just how central this field is becoming and why it is worth researching.

2.2. Some Brief Statistics

It has become more noticeable in recent years that something needs to be done about the situation regarding online trust. The Cyber Security Challenge (2013) for example is currently holding competitions with UK universities to tackle the problem and implement new ideas brought about by masters students. It is this kind of large scale event that emphasises just how important and relevant the topic is becoming. It is said to cost the UK alone £851m in failed online deliveries annually (IMRGb, 2012), and just over 10% of all retail sales in the UK are now taking place online (ONS / Office for National Statistics, 2012). The global B2C e-commerce market is valued at €825 billion, and the UK alone is estimated to be responsible for £78 billion of that (IMRGb, 2012) - which is approximately 1 tenth of the markets whole
2.3. What is Trust?

There is no universally defined standard, as of yet, for the meaning of trust - it seems to have been created on an ad-hoc basis (Gligor, 2011) and then adapted in various ways depending on the context it is used in. Disagreements are found in the definition, most salient characteristics and antecedents of trust. It is often conceptualised within given contexts and disciplines but many agree that a single, recognised standard would indeed help in the overall understanding of trust and in the development and research to this field (Wang & Emurian, 2005). Many researchers have formed their own definitions or adapted others’ definitions, due to the multi-disciplinary nature of the word. Different disciplines (psychology, technology, philosophy, marketing, sociology, management) all have their own slightly different take on trust too and this has evolved the definition overtime, rendering the simple dictionary definition, created long ago, redundant and insufficient in most cases now. But despite the arguments and differences in its definition, there does appear to be some clear consistencies and a general agreement in the 3 main dimensions that trust can be characterised by:- Integrity, ability and benevolence – coined by Mayer et al. (1995), supported by Gefan (2000); McKnight, Choudhury, & Kacmar (2002a); Bock, Lee, Kuan, & Kim (2012). Integrity is all about the merchant performing ethical and moral processes which the user finds acceptable or appropriate. Ability
concerns the merchants technical competencies in certain processes, and finally benevolence is characterised by the goodwill of the merchant - whether or not they will keep to their promise. (Li & Yeh, 2010). The Oxford English Dictionary (1971) defines trust to be “Confidence in or reliance on some quality or attribute of a person or thing, or the truth of a statement”. Another definition from the field of philosophy is “The accepted vulnerability to another's possible but not expected ill will toward one.” Baier (1994), and in the psychology discipline Rotter (1967) declares trust to be “an expectancy held by individuals or groups that the word, promise, verbal, or written statement of another can be relied on”. All of these definitions identify some clear aspects - that trust is a human interaction, between multiple parties and that it can involve confidence, reliability and expectations; many variable psychological states, and they do give us a clear understanding and grounding for what trust actually encompasses. However, they are still fairly broad and do not delve into more online related aspects or look at the different objects of trust in an online context so we look for more specific definitions for on-line and e-commerce trust, and several authors give a more comprehensive view of this - Corritore, Kracher, & Wiedenbeck (2003) for example describe trust as “an attitude of confident expectation in an online situation of risk that one’s vulnerabilities will not be exploited” and here are several other definitions given for online trust:

“The belief that allows consumers to willingly become vulnerable to web retailers after having taken the retailers' characteristics into consideration”. (Pavlou, 2003)

“The perception of confidence in the exchange partner’s reliability and integrity”. (Morgan & Hunt, 1994)

“The expectation that the other parties will behave in accordance with commitments, negotiate honesty, and do not take advantage, even when opportunity arises”. (Hosmer, 1995)

These definitions are more accurate and appropriate for this paper - they encompass the important psychological and variable aspects of trust such as beliefs, confidence, vulnerability and expectations that offline trust identifies, as well as describing how it works in an online setting - discussing the different parties and objects involved - thereby, collectively, aligning with McKnight & Chervany’s (2002) 3 dimensions of
trust; institution based trust (trusting that required conditions are there in order for a successful outcome), trusting beliefs (integrity, ability and benevolence) and disposition to trust (a person’s individual tendency / willingness to trust). Just one definition that details all of the aforementioned traits would be more appropriate to use here, so trust that we will concentrate on throughout the study will be defined as “The psychological state that one holds leading to the willingness to participate in e-commerce activities with the expectancy that the other party will behave in an honest manner, fulfilling their obligations, regardless of customer’s ability to control the actions made by the other party”. This, whilst lengthy, covers the above dimensions and places it specifically in an e-commerce setting, whilst still holding the traditional views of trust too.

2.3.1. The Difficulty in Defining Trust

It has already been mentioned that there is no universal standard of trust as of yet, and it is because of these many different contexts, characteristics and dimensions of the word that it has been so difficult in truly defining it. What also makes it problematic is the fact that trust is in part based upon different life experiences, beliefs and expectations that we each carry, thus making trust slightly different for each of us (Mayer et al. 1995; Gefan, 2000). Many definitions imply that it is based upon the beliefs, emotions and feelings of an individual - that trust manifests itself based upon the psychological make-up of an individual - which inherently makes attempting to define trust difficult for researchers because one person will perceive it to be slightly different than the next person (Siegrist at al., 2006). Also, the amount of contributing relationships that trust has with other factors such as risk, confidence, vulnerability, attitudes etc. and how they all interrelate and alter one another, can make it really tricky to prise apart to the fundamental flavours of trust and really create a standard that will suit every part of the spectrum - from people that trust so easily and sense no risks, to those who find themselves vulnerable to everyone and everything. Trust has been studied long before the emergence of the internet and this has provided many researchers grounding in the subject (Wang & Emurian, 2005) but it must not be mistaken for being the same as online trust. Different ingredients are required for online trust to be built and maintained than with offline trust as explained throughout
section 2.4 - there are different artefacts and parties involved, it is a more complex environment and as such - difficulties emerge through these complexities too (Shankar et al., 2002).

2.4. Characteristics and Antecedents of Trust

2.4.1. Security & Privacy

Security and privacy appear to be 2 very dominant factors in the literature that greatly affect a users willingness to participate in transactions (Dinev & Hart, 2006; Aiken & Bousch, 2006). If merchants get this right, it can increase a users trust in a particular company, as it satisfies the ability aspect of “integrity, ability and benevolence”, giving the merchant a more trustworthy image. Having said this, there are authors who have discovered that consumers have come to expect much more nowadays from an online merchant, and as such “Privacy and security have become the new baseline from which one evaluates an online merchant’s trustworthiness.” (Urban et al. 2009). So, in earlier literature, these 2 antecedents were very central to understanding and cultivating trust, but as research and the online environment has matured, they are now found to be just a small part of a much larger picture. Security and privacy concerns for consumers can include having their details passed on, or accessed by unauthorised third parties, tracking their internet usage history, using cookies, receiving spam and viruses, becoming victim to fraudulent sites and not having access or control over their own data. Security is said to be of top concern when consumers are shopping online for the first time (Koufaris, & Hampton-Sosa, 2004), but some studies have found that whilst consumers hold concerns over these areas, it is apparent that many customers do not even read any of a web retailers security and privacy policies (Jensen, Potts, & Jensen, 2005; Vu et al., 2007). Corbitt et al. (2003) also finds that the higher a user’s experience on the internet, the higher their concerns are over security and privacy. These findings suggest that at all stages (first time buyers and experienced users), people will always be very wary when it comes to security and privacy online. There have been improvements in this area over the past decade, but unfortunately viruses, fraud, identity theft and phishing are still very apparent online - as are privacy concerns, so authors now recognise the importance of a
merchants need to be vigilant and evidence this in their site in a way consumers will understand and relate to. (Urban et al. 2009).

**2.4.2. Website Quality & Aesthetics**

When it comes to the quality and the aesthetics of a website, there are no doubts about it helping consumers and helping to build trust in some way, but some researchers appear to have difficulty in gauging the overall amount, or effectiveness that it delivers in some cases; “looking good may be good” - a statement from Urban et al. (2009), but Corbitt et al. (2003) says “flashy is not enough”. Some authors believe it to be more important than other authors do. Liao (2006) found that site appearance did not in fact significantly affect a user’s level of trust, but Heijden (2003) verified the relationship between visual attractiveness to perceived usefulness - which, as part of the TAM, leads to a user’s participation, and McKnight et al. (2002b) discovered that high quality websites produce higher trusting beliefs in users. It is also notable that despite Liao’s (2006) discovery of little correlation between trust and appearance, the author does inform readers that a website of poor quality can lose customers, escalate their own costs and reduce profits - emphasising that regardless of the little evidence here of a relationship with trust, it is still a very influential and potentially damaging factor, and this statement is also synonymous with many other authors’ findings; Schlosser, White & Lloyd (2005); Urban et al. (2009); Yousafzai et al. (2003); Li & Yeh (2010) all agreeing that a good quality website reflects positively on the merchants ability to perform successful transactions, thus increasing the likelihood of participation, consumer satisfaction and consumer trust. The author also ties quality with other antecedents such as behavioural intentions and individual beliefs (which are discussed in the subsequent section), believing that the overall quality will affect a person’s beliefs and affect their behavioural intention to use. It is important to understand these relationships and ties between trust characteristics as it allows researchers to find the best possible solutions for building and maintaining trust - understanding how several items link and can influence another aspect so that best practices can be implemented successfully.
Aesthetics are an important tool when developing trust as it attracts customers and gains their attention (Agarwal & Venkatesh, 2002). This is especially true for first time customers - it is vital that the site is aesthetically pleasing so that customers find it easy to use, interesting and something they would wish to use again in the future. I propose it does more than simply attract though, it can additionally give users more confidence in the trustees technical ability (as discovered by Liao (2006)). Presumably looking professional gives customers the perception that the trustee can handle the process and their requirements professionally too - thus being part of the ‘ability, integrity, benevolence’ structure - increasing and building trust. All website design and aesthetic considerations can be extended too, to help considerably in m-commerce, as the size and processing power of m-commerce devices hinders trust thus making these aforementioned factors inherently more vital and relied upon. Li & Yeh (2010) discuss these as factors of building trust proving them to be paramount.

These design considerations collectively help to build technology acceptance, influencing several of the TAM elements directly (see figure 1) and affecting attitudes to using the technology. Figure 1 shows the model and the parts of the model that website design and quality can affect based on findings from aforementioned literature (highlighted in red). Since its creation in 1989, there have been multiple developments and extensions of the TAM to include various other influential factors or antecedents that show how technology acceptance can be fulfilled in various contextual situations such as e-commerce, m-commerce etc. Kuroso & Kashimura (1995), through an experiment with an ATM, found that there was a relationship between “beauty” and ease of use. This was furthered by Van der Heijden et al. in 2003 when he evidenced the relationship between ease of use, usefulness and perceived attractiveness. Then in 2009, Urban et al., as already stated, denotes looking good, is being good. So it is clear that the look and quality of a website can impact trust and consumer participation in e-commerce. Koufaris & Hampton-Sosa (2004) go on to say that it is an especially important precursor for ‘initial trust’.
2.4.3. **Individuality (Behavioural Disposition, Demographics & Propensity to Trust)**

Disposition to trust can be described as “a general inclination to display faith in humanity and adopt a trusting stance towards others” (McKnight et al., 1998) - a result of socialisation and lifelong experiences - likened to naiveté (Gefan, 2000). This antecedent is cited as being most effective in the initiation phase of e-commerce transactions (Rotter, 1971; Gefan, 2000). We can all understand that our behaviours, beliefs and judgments can differ greatly between one another, and this can be due to any number of factors that could have affected a person throughout their lives and changed their perceptions on things. This is the same for our trusting stance - we all have these different beliefs and dispositions that form who we are and they can influence our attitudes to trust (Wang & Emurian, 2005), which is an uncontrollable factor that no researcher or merchant can change or influence - yet again reinforcing the arduous task of building and sustaining trust. Research indicates that these psychological/behavioural differences are also apparent in each gender, as well as demographically - people from different countries and cultures perceive things in different ways to others (Gefan, 2000) and have different trust trends - people in lesser developed countries for example will have different trusting tendencies than here in the UK - they may be less used to technology and therefore feel more apprehensive and less inclined to trust - conversely, the novelty may make them want to trust and use it more. Therefore, some studies may in fact not be as useful as they originally believe them to be if they have not taken sufficient consideration about
these differences in people - it may be that surveyed results from 1 study illustrate views more of men than women or that surveys in the far east would reveal much more divergent results than in America or the UK - where cultures, experiences, expectations and other demographical characteristics are known to be different (Gefan, 2000; Midha, 2012).

Propensity, disposition, behaviour and experience all have a significant influence on a person and determine how likely they are to trust. Evidence of this has been found in many empirical studies (Lee & Turban, 2001; Ridings et al, 2002; Gefan, 2000; Yoon, 2002; Kimery & McCord, 2002; Kim et al, 2003; Teo & Liu, 2007). Therefore what Camp (2001) says, that “there is no single right model for internet commerce..There is no single right answer” is very much correct, and this is why e-trust is (and may always be) very difficult to improve and get right because so many people have so many different beliefs and variable behavioural qualities that distinguish what they want and trust on the internet, and not a single, or several models, ideas, remedies etc. will work for the whole.

There are increasing numbers of studies being undertaken looking at gender differences too, one of which by Riedl et al. (2010) uses fMRI tests between males and females, showing just how much the brain differs across genders. They looked at how different areas of the brain activate during activities that require / encompass trustworthiness. This proves that at least to some degree, genders are different, and one can wonder how much more will be different amongst different groups of people. It also shows there is a need for change - if people form trust based on their gender (or any other demographical factor for that matter), then the trust building techniques online should reflect these differences. One of the main contributing authors to gender differences is Gefan (1997; 2000; 2005) who found there to be differences in perceptions between men and women and different reasons for participating online; for men it is to gain a superior social stance online, whilst for women, it encompasses feelings of empathy. Seybert (2007) found that internet use was dominated by males, and that females tend to hold more concern over privacy, risk (Siegrist et al. 2006), and are more cautious using the internet (Midha, 2012) which could explain Seybert’s (2007) findings as to why men dominate the web. If this is the case for men and women, can the same be said for older people - will they shy away from using
technology because they perceive more risk and hold privacy concerns? This will be discussed more in 2.10.1. Midha (2012) also finds in his study that empowerment has a stronger impact on males overall, and so it may be important to tailor websites on a gender basis - some websites have implemented this kind of gender specific targeting already and it has worked for them, so perhaps this is the way forward for more sites.

2.4.4. Consumer Empowerment

In more recent literature, there seems to have been more emphasis on consumer control and empowerment as an important driver and characteristic of trust. It has been proven that consumer empowerment/control positively impacts on trust levels (Midha, 2012; IBM, 2012) thus leading to greater business, gaining competitive advantage and in fact improving relationships between vendor and consumer as well as between employee and company in an organisational setting (Midha, 2012 pp.203), and Gefan, & Straub, (2004) corroborates this by suggesting that control is one of the central aspects of human behaviour. Therefore we can posit that if the ability to control is present, then consumers are able to put more trust in a merchant. For instance, the recent surge in mobile devices give consumers more control over how and where they shop - and this could be a plausible reason for the recent increase in sales online - the convenience of being able to shop wherever you want and however you want by means of the perception of ‘the customer has control over how, when, and where’ has surely given the industry another push forward (ONS / Office for National Statistics, 2012; IMRG, 2013). Another example of empowering consumers comes from the notion of multichannel retailing (discussed more in 2.8) as it gives customers additional links to a merchant, extra ways of communicating, and shopping to suit individual desires.

There have been links between privacy and consumer empowerment too - suggesting that consumer privacy concerns can be negatively affected by a lack of control and power on the user’s behalf (Westin, 1967; Midha, 2012). This is supported by Keltner’s et al. (2003) approach, inhibition theory, which discusses how control (or power) can be a good thing and can help users reduce the level of risks perceived. When they feel they are in control, they think less about the risks involved and are
content and pay attention to reward based information. Users make snap judgements and information is processed automatically. They go on to say that the opposite is true if a consumer is not in control (or in a position of power); that is, a negative effect, a fear of threats with deliberate and controlled reasoning. So according to this theory, consumer empowerment is a good idea, and should help users to feel more comfortable online.

Empowered consumers can also help to spread the word and influence others’ decisions - the mindset of people has shifted from “a market of me to communities of we” (IBM, 2012). So empowered consumers share information with other people who share common tastes and interests based on which merchants earned their trust, and by doing so, they influence other consumers. It was discovered by Li & Yeh (2010) that incorporating customisation in m-commerce activities has a strong impact on trust, emphasising how the factor of control can help across other contexts of commerce. Essentially, empowerment can indirectly affect trust through means of lowering privacy and risk concerns (Midha, 2012; Keltner et al, 2003), and increasing the convenience for a user.

2.4.5. User Experience & Habit

User experience is based upon the technical ability one holds or sheer experience within the e-commerce domain. Habit on the other hand is an automatic process rather than a decision based process, based on an individual’s history and past experiences (Liao, 2006). These 2 constructs can also influence trust a great deal, Corbitt et al. (2003) states that a higher level of experience will increase the likelihood of the user trusting the technology. However, this statement it seems is not fully supported - one would assume that with increased experience and knowledge, you would become more comfortable, willing and trusting of the internet, but an interesting theory posited by Aiken & Bousch (2006), named the ‘inverted U theory’, suggests the contrary; that a user may actually be less inclined to participate in online activities once they have reached a certain level of expertise or knowledge and trust or risk perception may in fact decline. This is due to the risks, namely in security and privacy, that users will come to perceive and recognise more as their knowledge and
familiarity rises when using the internet. So this highlights the repercussions that can take place and the importance of striking a balance between the levels of experience and knowledge. These 2 dimensions are also linked with the technology acceptance model (TAM) in that they are both said to influence perceived usefulness - with habitual use, a user can gain more knowledge, and more experience, and all of these can lead to the technology in use being perceived as more useful (Liao, 2006). By understanding habit, one can also predict a user’s future behaviour - giving the retailer an advantage by being able to tailor advertising, and by identifying some of the things they like about a site that a user continues to do / use. If consumers have strong habitual tendencies online, then this can really influence their decisions and behaviours, Gefan (2003) discusses how habit is a force much more relied upon than other factors of logic, strategy or other external information - showing how habits, in our eyes, are trustworthy - we do something by habit because we know it to work, we know it to be true and we are comfortable in doing it. So habit, as an antecedent can be powerful in promoting continued use of a website, but is not so prominent or significant for initial use. Balance theory (Heider, 1958) is related to experience too - it is used to explain how previous interaction or association with someone will help develop a positive attitude about them. This works with the online environment as a whole too - if a user has greater experience in using the internet or e-commerce sites then they are more likely to develop a positive attitude towards it, and Corbitt (2003) argues then that a user’s experience is positively related to trust.

2.4.6. Other Influential Factors

Many other contributing factors have been reviewed by various authors that still impact trust, even if not as significantly or directly as its other antecedents and contributors do. Dependability of a system has been characterised as a dominant factor by Sommerville et al. (2004) and Bradach & Eccles (1989). Company reputation or brand size can influence trust too - Bart et al. (2005) found this to be just as important in conveying trust as security and privacy, but this has certainly not received as much attention as security and privacy. Word of mouth is found to be a compelling force for building trust (Walczuch & Lundgren, 2004; Kuan & Bock, 2007; Bock et al. 2012) - and Schneier (2007) illustrates this point well by talking
about how we listen and respond more to people we know regardless of any statistics right in front of us. He states “People tend to base risk analysis more on personal story than on data. If a friend gets mugged in a foreign country, that story is more likely to affect how safe you feel travelling to that country than abstract crime statistics. We generally give stories more weight than statistics. We give storytellers we have a relationship with more credibility than strangers, and stories that are close to us more weight than stories from foreign lands.” This works in the same way with regards to trust online - if someone you know had a bad experience with one vendor and spoke of this to you - chances are, despite plenty of other customers being happy with their experience - you would not choose to shop with them. This highlights the social aspect of trust. Familiarity is cited as an antecedent by Gefan (2000) and proves to be a significant influential factor of trust too. He goes on to explain how advertising will help to increase familiarity and thus improve trust levels too. Finally, optimism and life satisfaction are said to be good influencers of trust in general (Brehm & Rahn, 1997; Uslaner, 1999) which again highlights how just a few of the many individual variables or attitudes from life experiences can influence and build trust - even though these 2 factors are based around offline trust, they may still carry over to online trust - it is not found that they influence general trust independently to online trust.

2.5. The Role of Risk & Vulnerability

Risk has been examined throughout trust research as it plays an integral part and has a very important relationship with trust; “Risk is indispensable in the cultivation of trust because trust would not be necessary if actions could be pursued with absolute certainty.” (Lewis & Weigert, 1985). However, the relationship between the two was not widely studied until it was put into an online context, and then it was found that the two were interwoven (Yousafzai et al. 2003; McAllister, 1995), yet there were still uncertainties with regards to whether it was an antecedent of trust, trust itself, or an outcome of trust - highlighting the point made by Mayer et al. (1995) that one of the main reasons authors disagree on trust is from failing to understand the relationship between trust and risk. Beldad et al (2010) also asks “do we trust because there are risks or do we take risks because we trust?” It can be a confusing environment, and
the answer to this question could be “both”; perceived risk has been formally defined as “the combination of uncertainty plus seriousness of outcome involved” (Bauer, 1967). It can also be seen as “the uncertainty regarding possible negative consequences of using a product or service” (Yousafzai et al. 2003), which is more appropriate for use in this context as it describes the uncertain nature of services - in our case, online services. Risk can influence decisions, behaviours and acceptance of objects (such as technology), and it has been found from limited studies that women appear to perceive more risk than men in general and older people perceive more risk than young people (Siegrist et al, 2006; Greenberg & Schneider, 1995), which could consequently affect their behaviours online and the decisions they make. It is also suggested by many that a reduced level of risk perception will result in higher trust or confidence levels; Mayer et al (1995) found it to be true that trust helped consumers overcome their perceptions of risk, along with Fukuyama (1995) and Morgan & Hunt (1994).

For e-commerce to be successful, authors iterate the need for customers to allow themselves to become vulnerable to a retailer, or the technology even though they have no knowledge or control over the retailers decisions (Gefan, 2000). It has also been posited that risk perception is significantly more noticeable in online trust due to the distant nature, open infrastructure, difficulty in monitoring relationships and lack of regulatory control (Yousafzai et al., 2003) and is said to cost e-retailers billions in lost sales (Midha, 2012), indicating the increased need of risk reduction tactics. But due to the lack of understanding that has just been discussed around risk and the subjective reality of trust, reducing perceived risks can be an arduous task.

2.6. Disagreements

There have been multiple inconsistencies found within the literature that suggest some areas need more research. Corbitt et al (2003) for example found that a higher level of trust in technology did not correlate to a reduced level of risk perception, and this is dissimilar to other studies (Mayer et al., 1995; Siegrist, Gutscher, & Earle, 2006) that find trust will reduce perceived risk. In addition, site appearance is noted to be one of the major factors in affecting and building trust (Belanger et al., 2002; Li & Yeh,
2010; Beldad et al., 2010) however, a study in 2006 by Liao found that there was no significant correlation between site appearance and its effect on consumer trust. There are also inconsistencies in the relationship between privacy and trust - Belanger et al. (2002) suggests (contrarily to many other studies) that privacy issues will not necessarily affect a consumer’s purchase intention. Whilst these disagreements may simply be ‘freak’ results - it is still important to consider them as there may be pertinent reasons behind these conflicting findings. Finally, as discussed already, there are disagreements in the meaning, and most salient characteristics of trust, although much of this seems to be coming together in more recent studies. However, disagreements in these areas can cause problems; it makes it much more difficult for researches to understand and develop the field, due to the fact that different studies and their findings are not in harmony with one another.

2.7. The Challenges of Building & Maintaining Trust

There have been various proposals and arguments for why it has been, and still is, difficult to generate trust among consumers participating in e-commerce, and it is because of this difficulty in building trust that e-commerce is being hindered somewhat. All authors agree upon the importance of the e-commerce environment and how trust has become a major barrier to the success of this business (Beldad et al., 2010; Urban et al., 2009; Midha, 2012; Yousafzai et al., 2003; Corbitt et al., 2003; Wang & Emurian, 2005). However, do consumers realise this - and would they change their habits if they did? For example, would they learn more about the internet so that they could trust it? Would they use technology more and try to adapt to it? Would they try to work more with merchants to reach a mutual goal and more stable environment?

The internet itself brings about challenges due to the intangible, impersonal nature of it - people perceive there to be more risk than benefits and this is a deterrent very difficult, if not impossible, to manage because the nature and overall structure of the internet cannot be changed - it will always stay the same, and consumers will have to accept and find new ways of working with it in order for e-commerce to continue its growth and success.
Consumers can make very quick decisions regarding trusting a web merchant, and if a merchant doesn’t do everything right during their experience, trust can be lost very quickly - and once it has been lost it is very difficult to regain again as people very often base their trust on past experiences (Gefan, 2000). These ‘snap decisions’ that many consumers make create challenges for all businesses and e-commerce in general, so it is important that a web retailer is continually updating and checking their website, checking that there are no errors, no ‘trust busters’ so to speak, and that everything looks and feels ‘right’. The way we, as humans, view trust makes it difficult to maintain - if one thing goes wrong, many people can be unwilling to try again or to re-trust, and in the unsure environment of the internet - this becomes even more pertinent.

The amount of risks and security related problems surrounding the internet that cannot be handled, fixed, prevented or even proved after an incident sometimes can significantly reduce consumers trust and willingness to make themselves vulnerable to merchants over the web. Even with complexity reduction techniques used to help users feel more comfortable in this environment (trust itself being one of them, and rules and policies being another) they cannot be relied upon as Fukuyama (1995) rightly informs that there are no guarantees that people will even abide by those rules. Even trust itself, once formed, and / or maintained, cannot enable us to control a situation or outcome (Gefan, 2000), nor can it necessarily allow us to anticipate another’s behaviour or intent - so errors and problems can still occur even with a user’s unequivocal feeling of trust being held.

Some people have preconceptions that define their lack of trust or lack of willingness to trust. These ‘human factors’ such as being scared of technology - or technostress as it has been researched (Weil & Rosen, 1997), risk perception and experience, whether too much or too little - creating apprehension (Corbitt, 2003) can be very difficult to break or overcome. Around the field of technology related stress there are various suggestions as to why different people are afraid of using technology. Weil & Rosen (1997) point out that only around 10% of the population are eager to adopt new technologies and whilst this was 15 years ago, today there are still plenty of people who experience some form of technostress or anxiety. Younger generations, namely generations Y and Z, are fluent in using and adapting to new breeds of technology.
whilst older generations get left behind (Washer, 2012; Spire Research & Consulting, 2010) and these reasons can invoke difficulties in building trust and participating in online activities such as e-commerce.

The changing online environment can be partly to blame too; the use of technology, new breeds of media - social networks, complaint sites, blogging and other online collaborate networks and advertising through these, bidding sites and functions, search behaviour and so forth. There has become an abundance of new ways to work, play and live and for many people, this involves discovery, learning, and adaption which as previously stated can be a daunting task. For those who don’t find it overwhelming, it still requires time to adjust and understand before trust can be cultivated.

2.8. Trust Building Remedies and Solutions

Empirical studies have found many remedies that can help increase and sustain a trusting relationship online. However, separately, these solutions may not be very effective - they must be used alongside other solutions in order to build a solid trusting relationship and state of mind. Some of these may also be used to reduce perceived risks, thus again, impacting trusting tendencies. Below discusses some solutions proposed from various studies.

Multichannel retailing - it is suggested that this method could cultivate more trust as it gives customers multiple points of contact. It has been discussed that the intangible nature of the internet makes it difficult to form trust, and it is known that people do not trust online merchants as much as traditional merchants (Turban et al., 2000), therefore, by utilising multiple channels - the customer gets the best of both worlds - the convenience and ease of shopping whenever they want online, and the confidence and trust established through the extension of offerings by merchants - a physical, tangible presence where customers are able to talk to someone - brick-and-clicks if you will (Ranganathan, Goode, & Ramaprasad, 2003). The multichannel experience can go beyond this too, for example, by adding mobile devices to their channels - ultimately enabling even more connections and allowing consumers to build and
maintain high levels of trust (Stevens, 2013). Bock et al. (2012) also evidences the effectiveness that multichannel retailing offers, as trends in this have increased, also evidencing the shift in consumer behaviour, as IMRG(a) corroborates (2012).

**Morphing** - This is a relatively new idea, proposed by Urban et al. (2009). It works by dynamically altering (morphing) a website based on a consumer's cognitive decision style (analytic, holistic, impulsive). The goal is to communicate more efficiently with each individual - a site’s appearance and content can be confusing and difficult to use for some people, which does not help to foster trust, or promote further use. This idea, therefore, tracks the clicks and uses Gitten’s algorithms and machine learning theory to display the most appropriate morph for an individual, and this should help consumers to feel the website understands their needs and provides a level of empathy (Urban et al. 2009).

**Privacy certificates** - It is proposed by Midha (2012) that altered language and structure of policies will greatly benefit businesses as it will enable consumers to feel more knowledgeable, and several studies suggest having strong, clear privacy policies in place such as Yoon (2002). However, not all agree with their usefulness; Jensen, Potts & Jensen (2005) & Vu et al. (2007) revealed that many users do not even look at privacy policies when shopping online. So the effectiveness of this measure is limited.

**Third party involvement / Partnerships with trusted brands** - TRUSTe, BBBonline, Verisign, Norton etc are all examples of bodies that can vouch for a retailer’s security, privacy and authenticity. This can really help in initial trust formation. Other involvement e.g. banks during the transaction process can also help to boost trust levels as it shows added security - that the retailer can be trusted and wants to help protect your money / data. Partnerships with large companies can be appealing to shoppers too - e.g. if a relatively anonymous website has a working relationship with a large brand such as Nike, or Tesco this would boost the web retailers’ image and increase customers’ attitude towards them, as the brands they work with are trusted, well established labels.

**Transparency** - is something that appears to be an effective trust builder - numerous authors have found evidence for this to be the case (Urban et al., 2000; Yousafzai et
al., 2003) that disclosing all information about security and privacy, unbiased information about products, prices and competitors can increase customers perceptions of a merchant and they will be more inclined to do business with them.

**Advisors** - Urban et al. (2005) recommend ‘virtual advisors’ as a best practice - people who are there to talk to customers online to gain customer confidence. However, without substantial evidence, this could be perceived to be an ineffective option; how would a customer be able to trust one of these anonymous advisors? They could be perceived simply as salesmen trying to lure them into using their website - which in fact would deter customers further.

**Transferring control** - IBM (2012) and Midha (2012) both agree that consumer empowerment will allow customers to have more confidence and faith in web retailers. Empirical studies have shown how giving consumers more control over certain aspects of a transaction process can increase their participation and change their attitude. Merchants should always give notice; it may not appear like notifying customers is to empower them - but with this knowledge they can make informed decisions based on what they want. Merchants should also allow choice; whether through opt-in / out decisions or choice on web site customisation - it will promote a feeling of empowerment. Finally merchants should allow access; this could be to their own personal data (which should be correctable) or buying trends, or access to appropriate competitors information - which helps show benevolence, as Mayer et al. (1995) deems important (FTC, 2000).

**Useful reviews** - Whilst this may not be as effective as word of mouth, it can help somewhat towards customer participation. They are more likely to look at reviews or comments from previous users and base their decision to shop on these. It is important however, for the retailer to govern how this is done - if anyone from anywhere can write a review, it will diminish the accuracy and trustworthiness of the review, so depending on the type of e-commerce site - there should be a reviewing system in place such as e-bays (reviewers get rated and you can see how much they comment and their history).

**Improved security** - Consumers consistently mention this factor and how they would be able to trust merchants if they knew the site was secure- but the difficulty with this
is that how do customers know that a website is secure? Just from the websites say so? Do customers have to make themselves vulnerable in order to see for themselves? It is also difficult as many people may not understand website security and the technical concepts behind it. Perhaps if retailers attempted *explaining* and *evidencing* their technical competency to the consumer they would put more faith in them; achieving ‘ability’ through having good security measures in place and showing technical competence, ‘integrity’ through successfully securing customers data and benevolence through explaining and evidencing the security measures to consumers showing goodwill. It may also help if users were more aware and educated in good security and privacy practices / safeguards. In any case, a good site will ensure they have firewalls in place, along with encryption, password protection, and use of SSL (secure socket layer) which can be identified by a padlock, or in the URL (green bar, or https rather than http) which shows that the connection between yourself and the server is secure and your data will not be susceptible to theft or eavesdropping (Digicert, 2013, Mitchell, 2013).

**Site design and quality** - Getting this right can make a customer believe they are shopping in a professional setting, help foster trustworthiness of the vendor, as well as increase the time they spend browsing and using the site - again increasing the probability that the consumer will begin to trust that site (Urban et al., 2009). So here’s what they need to do:

- There should be clear thought about the ease of use and usefulness of a website - these are 2 predominant elements of the technology acceptance model (TAM) (Davies, 1989) and have been found to directly influence attitudes to use. This includes easy and clear navigation consistently throughout the site, as well as any assistive tools required being readily available to the customer.

- With regards to content, there should always be sufficient amounts of information, but not too much to bombard the customer. Images and use of colour should be apparent, although images should be of good quality, otherwise they may as well be excluded (Urban et al. 2009).

- There needs to be a coherent layout to the website so as not to confuse customers, and good use of the space (note this does not mean fill as much
space as possible - white space can be attractive and helps to give a simple and clear look).

- The site needs to be error free. This means no spelling mistakes, no missing or broken links, no overlaps or inconsistencies. This encourages the perception of looking professional and capable.

(Schultz, 2005)

### 2.9. **Looking to the Future: Further Research**

There is a scarcity of literature on gender based and demographic based research. Many studies are based either abroad, or mostly around students and they do not discuss correlations and effects between any of these groups despite the fact that it has been identified in research (Gefan, 2000) that these groups/ areas are most likely to show variances. Therefore, this is an interesting area to continue studying and future publications should focus more on this.

Fairly little has been examined around multichannel retailing - there are many questions that could be answered through research that would help to discover how exactly these different channels affect trust, to what level and how to improve them. For example - how does trust transfer across multiple channels? If one channel is not trusted - does this affect all subsequent channels? Is trust consistently maintained across these channels? All of these are important questions that need answering and studying - it will help both organisations to understand customer desires, as well as helping the customer to improve their confidence in multichannel retailers and in the merchants themselves - thus allowing the industry to continue to thrive.

Urban et al (2009) talks about the need for a standard set of ‘trust scales’ - past studies use different scales and different items, and these do not work across all environments. So he identifies the need for this to be studied further. Now, however useful this would be, what is worth noting is the extreme difficulty that is apparent in implementing this - due to the many variable environments it would have to be created for, i.e. many antecedents and influential trust factors are contextual; brand strength is a lot more important for financial websites than it is other sites, and risk is
a lot more influential on higher risk sites such as travel and automobile sites where transactions are much larger (Bart et al., 2005). So whilst Urban et al (2009) discusses the need for this and the benefits such an idea would bring, it is obviously a very timely, arduous task - one which may never get completed.

Urban et al (2009) also identified the need for more work to be put into ratings / reviews, because it is not apparent just quite how much these can affect trust. Word of mouth is a positive influencer of trust but reviews from anonymous users can create a grey area for multiple reasons. They create several questions:

- Are they trustworthy?
- By someone ‘rating a rater’, does this help build trust?
- How can you tell if a rating is genuine?
- Is there anything a vendor can do to stop ‘fake’ reviews / reviewers?

Recent news highlights these concerns directly - An employee of Accor was found posting fake ratings and reviews on Tripadvisor to boost his company image and diminish the reputation of his competitors via a pseudonym he created. Hundreds of posts were found by his name too, thus potentially misinforming hundreds of thousands of people that use Tripadvisor to read accurate, helpful reviews they can base their trip upon (White, 2013). This is something that many people may also be doing, and it takes time to find out that this is happening, in some cases, they may not get found out at all. This can deter people from using these online rating systems / websites as well as decreasing a user’s willingness to read and write reviews themselves on e-commerce sites. Until this issue is resolvable, and sufficient software or procedures are in place to fully combat fraudulent reviews like this example, trust in this area will not increase. So, past work could be extended in order to answer these crucial questions and help this field.

As stated in section 2.8, virtual advisors have become a tool recommended to improve trust, but there are issues at the moment with how they can be trusted. Further to this idea - Urban et al (2009) states research is underway to determine how these advisors can be created in the best way; fMRI (Functional magnetic resonance imaging) data has discovered how and where trust is influenced in the brain and that oxytocin actively increases trust by increasing a person’s willingness to accept risks, thus allowing better social interactions and transactions (Kosfeld et al, 2005). They are
using this kind of research to determine the trustworthiness of advisors facial features and alter them accordingly. This is an interesting field which could be extended into other aspects of trust building online.

2.10. Conclusions

One of the key issues here are the contradicting results from many studies. I have highlighted numerous of these throughout the chapter that require further research. These differences are very important for the development of understanding and improving online trust. They imply that some of these influential factors’ effects on trust are relative and in some cases subjective, which can degrade their relevance and use in certain online situations, so these will be analysed further as indicated in 2.10.1.

This chapter has also discovered the sheer complexity of the subject around trust, and just how interrelated it can be with so many other factors and characteristics. It has been discussed throughout how difficulties emerge in multiple aspects of trust online, and what this means for the industry - the fact that it is being hindered somewhat. It is interesting to find that the research has developed well over the years, with many consistent findings despite the few evident inconsistencies, and that there are in fact many people working on solutions and future projects that should have clear improvements for the field. Having said this, there are several points that show this to be a field in which much more work is still necessary in order to understand and improve the situation, such as a true standard being formed and further work into the differences among groups of people and how they can be approached, as well as the statistics that show the continued growth, and losses in this market. The chapter has given good grounding for a broad sense of trust and all that it encompasses, as well as allowing for deeper questions to be formed.

2.10.1. Refined Research Questions

Q1. After finding out that there are so many different contributing factors to trust - and so many determinants of it - It is of interest to discover what people find the most important of these - if any, or if there is something else predominant in their minds.
So many authors talk about so many different contributing factors that it is difficult to know which one really is the key driver, if any.

Risk has been discussed many times, in many studies so it could be rewarding to look at how much it affects trust - how it relates and intertwines itself with trust, thus asking:

Q2. Does it affect consumer’s online activities?
Q3. What do people perceive as online risks?
Q4. Is there anything that would help reduce the risks perceived?

Due to some findings giving conflicting results - it is important to further study them and attempt to clarify these areas. So several questions have arisen;

Q5. Does trust in technology really reduce risk perception? Some studies suggest that it will, but Corbitt (2003) found no evidence for this, so multiple technical experience and trust in technology questions will be run to see if this has a positive effect on risks that people still perceive.

Q6. Liao (2006) also found that site appearance did not really affect people’s trust, and this appears to be quite odd - especially because of how much weight other researchers give this area, claiming its importance - so the survey will test this by asking subjects if they believe the appearance to be important in building trust as well as trying to gauge this by using images of different quality sites.

Q7. There is a need to delve deeper into demographics, relationships on different genders, age groups, countries and education - to see if any patterns emerge, and why this might be. Some studies show that there are differences in demographics (Gefan, 2000; Midha, 2012) but there is still much room for investigation in this area.

Q8. Aiken & Bousch (2006) suggest something very interesting - the relationship between knowledge / experience and online trust creates an inverted U effect; initially one’s trust begins to increase as their experience and knowledge builds up, but with more experience and knowledge, one’s trust begins to decline again - as they realise and become aware of the security, privacy and other technological risks involved, so it will be interesting to study this further and compare this theory with this study’s results.
3. Research Methodology

3.1. Introduction

In order for the research to be successful and obtain as much appropriate data as possible, it is vital that a clear, relevant strategy is formed, with clear directions, intentions and targets. This chapter sets out to achieve this first by discussing the overall research strategy developed, justifying the use of a survey, followed by the type of survey to be used, and how the data will be collected in various ways. The analysis approach is then discussed, detailing why both quantitative and qualitative analysis is to be used, along with the sampling techniques and targets, followed by a few ethical considerations. 6 limitations are then outlined with concluding remarks on the chapter.

3.2. Research Strategy

This project sets out to use a survey approach to obtain its data. Several other strategies were considered such as ethnography so that some of the demographical questions could also be answered, and action research so that data and observations could be recorded from a dummy website looking at trust, website characteristics, quality and aesthetics, but due to both technical and feasibility reasons, a survey approach was deemed more appropriate, answering the refined research questions more easily. The survey approach was also deemed desirable due to some of its other notable benefits:

- They retrieve lots of data in a short amount of time due to their ability to be sent in many different forms to many different people in one go.
- Quantitative analysis can be achieved easily from surveys.
- They can be replicated quick and simply to collect new samples, or in new areas etc.
- They are good for people with poorer interpersonal skills as they can participate in their own way at their own pace and time without feeling pressurised.
• Generalised conclusions can be made more easily due to the nature of surveys and the amount of coverage they can reach.

(Oates, 2006)

The survey will run a pilot to help check and reduce any errors or misunderstandings as deemed necessary by Cornford & Smithson (2006). It will be a very small pilot given to just 4 people to ensure:
• They understand everything.
• They feel that it is structured well.
• Enough questions are given along with sufficient response types.
• There are no grammar or layout ambiguities.

3.3. Data Generation Methods

Questionnaires will be used, with several types of triangulation - method triangulation and space triangulation (Oates, 2006). The former (which involves multiple data generation methods) will use both online questionnaires and paper based questionnaires, whereas the latter (studies in several countries / cultures) will involve sending out an online only questionnaire to countries other than the UK - namely India, Brazil, and western European countries. Method triangulation will be used for 2 reasons:
• To reach more people.
• To show a broader range of people (due to the nature of this topic, it would not be representative to only include individuals who have access to the internet / social media, and thus, this will generate a fairer representative of the population and seek to understand a wider range of users).

Space triangulation will be used for 2 reasons:
• To answer the demographical based research questions.
• Again to reduce the parochialism of a questionnaire solely based in this country, and to include a broader spectrum of the population.
Using a questionnaire rather than other survey approaches such as interviews, documents and observations has numerous benefits - it is a quicker method, a relatively cheap method (other than cost of printing for the paper based questionnaires), has the potential to reach more people and involves less ethical issues than observations.

All questionnaires have been developed to be self-administered as opposed to researcher-administered. This is because for this particular study, this method is much more appropriate; self administered questionnaires are more likely to produce ‘truer’ results. Participants are less likely to answer in a biased way, or give answers they believe the researcher wants to hear. (Oates, 2006). They also save time, and can reach a lot more people - by sending them via e-mail, social media, instant messaging and so forth. Although researcher based administration often receives a better response rate, this study expects to reach its target discussed in section 3.5 and with researcher administration there are issues around body language and how the researcher interacts with the participant, and these factors can potentially taint results.

The questionnaires (online and offline) include the same set of 36 questions, in 8 structured groups with the exception of the overseas questionnaire that will include 1 additional question to capture their country of residence and analyse data based on demographics and cultures.

Many questions will use Likert scales (1932) to allow participants to record their attitudes in a fixed response format, so that these can be measured and analysed easily. This ‘direct method’ is more appropriate for this survey than other direct methods such as ‘semantic differential techniques’ or ‘indirect methods’ such as ‘projective techniques’ of collecting data (McLeod, 2009) as they are widely understood by more people and are easy to implement without causing too much bias results or asking respondents to do more than necessary or more than they would like to.

Some questions have been asked several times in slightly different ways to look for consistencies or inconsistencies in participants answers in order to determine the integrity of results as Oates (2006) states that if data shows consistency - it can increase confidence in the study’s findings. Finally, for the paper based
questionnaires, after completion the results will be manually entered into the online survey so that all data can be analysed together in a more organised and logical fashion.

3.4. **Data Analysis**

There are several online survey websites available to use such as SurveyMonkey and WebSurveyor, but this strategy uses LimeSurvey, a service available to use through the University. It allows for easy and useful data analysis - presenting information in a well structured manner via PDF, online or MS Excel.

The study takes a mixture of qualitative and quantitative approaches. Archer (1988) reviews these approaches and posits that these 2 approaches can work to complement one another and unlock new observations that may have been overlooked without both approaches being implemented. Of course, this does not work for all cases but holds true for this project. Many of the questions will be analysed statistically through numerical analysis and proportions (quantitative) to show exactly how many people think a certain way, agree or disagree etc., but some questions will have to be analysed by means of observing the responses, then processing, reviewing and structuring them in order to make sense of them and reach a conclusion (qualitative) - these questions will include image based queries, along with open questions - to express individual thoughts, rather than strict, multiple choice answers that may not suit everyone (Cornford & Smithson, 2006). With regards to Quantitative analysis, numerous visual aids such as bar charts, graphs, pie charts will be created to help organise and show relationships in data, and then some statistical analysis can be drawn upon from a few interesting questions to further prove findings. Qualitative analysis will mainly focus on analysing the themes of data and then interpreting them.

3.5. **Sampling**

Cornford & Smithson (2006) and Oates (2006) identify that a response rate of 20% can be deemed successful, and that a badly designed questionnaire can affect the
response rate. It is important that the questionnaires are not restricted to just 1 place or set of people, as this may bias the results (Cornford & Smithson, 2006). Therefore, the surveys will be accessible through several individuals social networks with a total potential audience of 335 individuals as well as paper versions handed out to 20 individuals who cannot be accessed through social networking and the survey will also be sent through a division of a company directly reaching 62 participants. This gives a total potential sample size of at least 417 individuals. A good response rate as previously stated reaches 20% of the sample size - in this case that would be 83 subjects. The study aims a little higher than this however, for 100 respondents in order to give any findings more confidence and integrity.

The aim is to obtain various types of people with various types of qualities in order to hold results that are representative of a cross section of the general public - making sure to include various ages, knowledge types and groups of people so generalisations can be established - thus implementing probabilistic cluster sampling - using social media to mainly target younger, and more knowledgeable users, and a paper based questionnaire to give to older people or those who do not use the internet that much. However, this method can prove difficult in many cases and can be timely to implement, so other non-probabilistic approaches are to be used; self selection and convenience sampling. The questionnaires were handed out through multiple individuals’ social networks, so that more results could be gained, and so that anyone who did want to participate, could do so regardless of their individual qualities. This was also the reasoning behind sending the link to a separate company. The author is aware that these methods do not generally produce such worthy results as probabilistic sampling does, but when used in conjunction with others and with a probabilistic technique, the samples should still work well. (Oates, 2006)

3.6. Ethics

Withdrawal, briefing, right to give informed consent and confidentiality terms will be given to all potential respondents via an online message sent with their invitations to complete so that no unethical collection, holding, or analysis of data is being carried out. It will state that by participating in the survey, they will be agreeing to all terms
specified. For the paper based survey, I will include a separate document detailing the same terms that each individual will sign in order to confirm their agreement.

With regards to the briefing material containing all terms for the online surveys - participants may easily overlook it and continue to the survey without knowingly agreeing to anything, or knowing about termination procedures and so forth. This could be an issue. Alternatively, the briefing material may deter some people from completing the survey altogether. Some people do not like to feel that they have to agree to set conditions and the length of the briefing material may put them off. So, it is important to keep it short, simple and unobjectionable with regards to the language used and procedures involved - making sure not to confuse them or overload them with details.

The study abides by such legislation such as the Data Protection Act (Great Britain, DPA 1998) and the briefing material reflects this. The data held is kept for a brief time, purely for reasons specified only, and anonymous in most parts so has no unethical implications here. The offline questionnaires that are given out in person - the researcher will know who has undertaken the surveys - and as such, the individuals involved will be notified of this to ensure they are still willing to proceed. In addition to this, all participants are given several points of contact if any issues or questions arise. There are no deceptions given, no incentives and no unnecessary intrusions on the researchers behalf.

### 3.7. Limitations

There is a danger of receiving a poor response rate. Just because it has been forecasted that more than a 20% response rate will be obtained, this may not be achieved when put into practice. This could limit the study quite significantly; a small amount of responses can neither be generalised to illustrate the feelings and views of the general population, nor will it show information on demographics, or justify and prove with confidence, any of the refined research questions and theories proposed in chapter 2, thus rendering the study’s findings and conclusions limited. Some mitigating actions have been put into place to reduce the chance of this; the
kind of sampling techniques used in order to reach out to more individuals, as well as using multiple triangulation methods.

“The quality of the information obtained from a questionnaire is directly proportional to the quality of the questionnaire, which in turn is directly proportional to the quality of the construction process” (Peterson, 2000). This quote highlights the importance of the construction process and how a badly constructed questionnaire can limit the findings. Questions must be understood by all and structured well, in a logical order, using varied question types so they can answer in ways that suit them, and be free of jargon.

Respondents are known to lie due to social desirability - this meaning that they try to answer in a way they deem socially acceptable or because they believe the researcher wants to hear a certain response (McLeod, 2009). This can be reduced by administering anonymity. There is clear anonymity through the online surveys - but with regard to the offline questionnaire, as previously highlighted, the researcher will know who they have given it to, and vice versa - the participant may realise the researcher will remember who they are, which could lead participants to become more partial to lying in their answers. Also the questionnaire is quite long which may put off some individuals and some authors suggest that keeping it short is better (Cornford & Smithson, 2006; Oates, 2006).

Furthermore, it is important to take into account the possibility of ontology and epistemology affecting individuals understanding of the subject and their responses - thus affecting the results after analysis; The subject of this study is around trust - a subjective, ‘no single truth’ matter within an interpretive paradigm (Interpretivism is based more around a social reality rather than a logical, facts only reality, i.e. positivism) so many people can interpret different things to be the most important, and this can greatly affect the results or affect how the results can be interpreted.

There are several downfalls to using surveys and following this strategy that must be considered when analysing the data - one of the main risks is that surveys only show associations rather than in depth analysis of cause and reasoning i.e. the survey may find that younger people prefer a more attractive looking website, but that doesn’t necessary show that the age of a person causes, or is the reason behind them liking a
website’s appearance more (Oates, 2006). But despite this, the justifications for using this strategy outweigh the possible disadvantages and provide this study with the best chance of fulfilling its aim and objectives.

3.8. Conclusion

A clear, coherent strategy has been formed for the creation and implementation of a survey with justified reasons for using such approaches. It is believed that all of the techniques disclosed will benefit the project and allow for the most appropriate collection method. The chapter has drawn upon quite a number of potential limitations but mitigating actions and recommendations have been expressed to reduce the risks of such events occurring although, it is difficult to control all aspects, such as some respondents lying or giving bias information. There are few ethical issues with this methodology too, thus increasing the chances of success, and the originality and familiarity of some of the approaches taken (such as likert scales, use of questionnaires) should allow the rollout of the surveys to be much easier and allow participants to feel more comfortable in completing the survey.
4. Findings and Analysis

4.1. Introduction

Of the 139 responses collected, 73 were male (53%) and 66 were female (47%), with ages ranging from 16, to over 55, with most respondents aging between 16 and 25. The modal value for the time spent participating in e-commerce activities a week was between 0 and 3 hours (51%).

As previously noted, the age group was largely young, and this does not reflect the population as diversely as I would have liked, and it may have affected the results as many of the young participants are regular, fairly experienced users of the internet. However, there are sufficient samples still of each age group to compare results.

The survey failed to reach a satisfactory sample size for the overseas questionnaire, so no results are shown or analysed for this. This is a great disappointment and drawback for the study as it means some of the main demographical questions cannot be answered by this project. This was in part due to technical issues with Limesurvey, and unforeseen circumstances after the survey was sent out that hindered, and drastically reduced the sample size obtained.

The response rate for the UK based survey, however, was very successful. As discussed in Chapter 3.5, the total potential audience was 417 individuals, and the total achieved was 139 respondents, giving a response rate of 33.3%, which is deemed very successful by Comford & Smithson, (2006) and Oates (2006), as well as surpassing the survey target of 100 responses. Limesurvey also shows that out of these 139 responses, the survey received 15 incomplete responses. However, they will all be kept and analysed as the majority of them have only 1 or 2 answers missing from them, and they still provide valid, usable data.

The following section has been analysed in groups for navigational ease. The most interesting results will be analysed. To see the complete set of data, graphs etc. see appendix 2 and 3. Refined research questions will not be answered in this chapter, for full discussions see chapters 5 and 6.
4.2. **Analysis**

4.2.1. **General Trust Statistics**

The following 3 tables show the results for questions 4, 5 and 6.

Q4. Generally, do you feel that you are a trusting person?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, I am a very trusting person (1)</td>
<td>39</td>
<td>28.06%</td>
</tr>
<tr>
<td>Yes, to some degree (2)</td>
<td>65</td>
<td>46.76%</td>
</tr>
<tr>
<td>Sometimes I am, Sometimes I am not / I don't know (3)</td>
<td>16</td>
<td>11.51%</td>
</tr>
<tr>
<td>No, not particularly (4)</td>
<td>18</td>
<td>12.95%</td>
</tr>
<tr>
<td>No, not at all (5)</td>
<td>1</td>
<td>0.72%</td>
</tr>
</tbody>
</table>

Q5. Overall, do you generally trust the internet?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, absolutely (1)</td>
<td>4</td>
<td>2.88%</td>
</tr>
<tr>
<td>Yes, mostly (2)</td>
<td>40</td>
<td>28.78%</td>
</tr>
<tr>
<td>Somewhat (3)</td>
<td>63</td>
<td>45.32%</td>
</tr>
<tr>
<td>No, not particularly (4)</td>
<td>26</td>
<td>18.71%</td>
</tr>
<tr>
<td>No, not at all (5)</td>
<td>6</td>
<td>4.32%</td>
</tr>
</tbody>
</table>
Q6. Overall, do you generally trust the websites you use to shop on-line?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, absolutely (1)</td>
<td>13</td>
<td>9.35%</td>
</tr>
<tr>
<td>Yes, mostly (2)</td>
<td>85</td>
<td>61.15%</td>
</tr>
<tr>
<td>Somewhat (3)</td>
<td>34</td>
<td>24.46%</td>
</tr>
<tr>
<td>No, not particularly (4)</td>
<td>5</td>
<td>3.60%</td>
</tr>
<tr>
<td>No, not at all (5)</td>
<td>2</td>
<td>1.44%</td>
</tr>
</tbody>
</table>

As you can see from the tables, the majority of respondents felt they were either mostly trusting, or somewhat trusting towards the internet, e-commerce sites and their general tendency to trust. Roughly 1 in 7 people were not trusting in some form. A total of 75% described themselves as either very trusting or trusting to some degree, and more people trusted the individual websites they use more than the internet in general. This is most likely due to the fact that they have more experience and are familiar with the e-commerce sites they use, whereas the internet as a whole is a vast medium which can allow one to do / access many things - and as such people may not understand it as much or be willing to trust it (23% in this case) - they will not want to become too vulnerable to anything other than the specific e-commerce sites that they use, and are familiar with.

Q11. Even though you have indicated that you do not trust certain aspects of the internet and / or e-commerce, do you still participate in on-line shopping?

A total of 44 people expressed that they did not trust one or more aspects of the internet / e-commerce sites, which is 32% of total respondents - equating to almost 1 in 3 people that do not trust aspects of e-commerce. This indicates that it is still an issue just as it was 10 years ago, and even though we have had time to adapt to technology and move forward with it, many of us simply have not.
<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (1)</td>
<td>39</td>
<td>28.06%</td>
</tr>
<tr>
<td>No (2)</td>
<td>6</td>
<td>4.32%</td>
</tr>
<tr>
<td>No answer</td>
<td>94</td>
<td>67.63%</td>
</tr>
</tbody>
</table>

**Q12.** If you do not trust the web, or online shopping, then please specify why?

The clear distinction in results here illustrates just how dominant security risks are in people’s minds. The 10 ‘Other’ suggestions for this question included 3 data concerns (privacy and security), 3 concerns over trusting humans (human error, not trusting staff, and not trusting to receive the product) as well as concerns over reputation and company size. The last 2 suggestions cover perceptions about the nature of the internet - they hold concerns over human factors and the reputation of the company because of the intangible, faceless nature of the internet. These concerns would not be applicable in offline scenarios - there is not as much need to be so trusting in brick and mortar shops. These worries over security are most likely deepened by news and stories over the latest security breaches, and reported issues over fraud that happen to so many people these days. The National Fraud Authority (2010), identified online shopping to be the main target of fraud too, so their worry is
not misplaced or exaggerated. Improving these areas are challenging however, and even though there have been improvements in security, attacks become increasingly intelligent and difficult to prevent.

### 4.2.2. Online Experience Statistics

**Q14.** If you never take part in e-commerce, why?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Bar Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot touch or see products</td>
<td>5</td>
</tr>
<tr>
<td>Trust reasons / Do not trust using the internet enough</td>
<td>4</td>
</tr>
<tr>
<td>Prefer to shop in-store</td>
<td>3</td>
</tr>
<tr>
<td>No web knowledge</td>
<td>2</td>
</tr>
<tr>
<td>Lack of interest</td>
<td>1</td>
</tr>
</tbody>
</table>

The graph shows a tri-modal value, and all 3 of these answers are linked with the nature of the internet being different (and obviously harder to work with for these individuals) than traditional shopping environments, thus suggesting that if efforts were focused on making the environment similar to traditional shops, or linking with them (via multichannel retailing for example) it may help them to feel more at ease and trust the internet enough to participate in e-commerce.

**Q16 and Q17.** Do you believe that your current trusting stance is based mostly upon the amount of web experience you have / upon your habitual behaviour?

It is interesting to discover that most people answered ‘Yes’, for both. A total of 74% believed their trust to be based upon their experience, whilst 63% said it was based on habit. They can both impact one another indirectly, and it was found that most people answering ‘yes’ for one, also answered ‘yes’ for the other, showing this to be the case.
The results here confirm these 2 antecedents to be important in the trusting process. Gefan (2003) however, inferred that habit can be very powerful - more so than other factors of logic, external information and so forth, so it was expected that this factor would attain a higher percentage for ‘Yes’ responses than experience, which was not the case. This implies that it may not be as powerful as once imagined, or it may be more context specific.

4.2.3. Risk Based Statistics

Q21, Q23 and Q24. Do you feel you take on a certain amount of risk when shopping online? Does the risk you perceive affect your participation? Would you still participate regardless of the risks involved?

**Q23:**
- Yes (1) 31 22.30%
- Somewhat (2) 68 48.92%
- No (3) 31 22.30%

**Q24:**
- Yes I would (1) 69 49.64%
- No I would not (2) 29 20.86%
- I’m not sure (3) 31 22.30%

These questions are grouped because they all encompass the same kinds of ideas; are there risks, and does it affect you? The first of which can be analysed simply. Responses from this section visibly show risks are current in people’s minds, and it isn’t just 1 or 2 risks, respondents showed to view numerous risks whilst online, and the majority of participants indicated they were taking on risks whilst shopping online - 91% felt this to be true to some extent. To add to these alarming numbers, almost a quarter of participants then stated the risks they perceive will not affect their participation online, and a further question indicated half of the sample - 69 people - would participate whatever the risks were. These results are very unexpected and show that large numbers of consumers are now willing to take on the many risks that are apparent online. This may be due to the fact that the internet has become so central in our everyday lives now that people have become much more dependent upon it, increasing their willingness to participate and take on risks whatever they may be.
Q22. Do you believe you are at risk from any of the following whilst shopping online?

Not knowing whether your personal data will be passed on / sold to other companies (1) 111 79.86%
Having your money stolen (2) 92 66.19%
Not receiving the product (3) 98 70.50%
The computing technology failing, thus creating problems for your order (4) 82 58.99%

These are all large quantities that are shown in the table above, and as such should all be regarded as very significant. Financial, performance, psychological and social risks are evident here, clearly having implications across a range of areas. Again, these results reinforce the fact that privacy concerns are still very prominent in users’ minds, and as more details are divulged through the internet year on year, these worries are not going to dissolve away anytime soon.

Q26. What would work best for you as a risk reduction tactic?

<table>
<thead>
<tr>
<th>Q26. What would work best for you as a risk reduction tactic?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giving you, the consumer, more...</td>
</tr>
<tr>
<td>Positive reviews from anonymous...</td>
</tr>
<tr>
<td>Positive word of mouth - hearing...</td>
</tr>
<tr>
<td>Partnerships with trusted, well...</td>
</tr>
<tr>
<td>Money back guarantees (1)</td>
</tr>
</tbody>
</table>

It can be inferred that the least useful tactic might as well not be considered in reducing risks online, but the top 2 should be implemented to give the most significant effect on risk. ‘Positive reviews from anonymous users’ was ranked the least useful risk reduction tactic here, and users also rated it as the 4th least useful factor for building trust in Q34 too. So it can be assumed from this that the least useful tactic might as well not be considered in reducing risks online. The most probable reason that this was ranked in this way is most likely due to the fact that
because you do not know who they are, or what their agenda or reason for writing a review is, it is hard to put your faith in their words and trust what they are telling you, and therefore base your actions upon their say so. The top 2 results, however, were ranked far more than the other 3 options. E-retailers should bare these results in mind, and whilst they may not agree upon money back procedures, or spending time and money negotiating with large companies in order to partner with them - it is clearly what consumers would like to see, and would benefit the merchants by increasing their audience. People would view these techniques as sowing benevolence and an understanding of their demands.

### 4.2.4. Institution Based Statistics

**Q27.** In your opinion, are there more complications in on-line trust because of the fact that you cannot see or touch a product and speak to a merchant - unlike traditional brick and mortar shopping environments where all products are tangible and you can speak to staff / owners?

![Pie chart showing responses to Q27](chart.png)

Surprisingly, almost 10% of respondents didn’t think it made any difference at all. These answers have been cross referenced with other answers relating to the intangible nature of the internet - those being Q12, Q14 & Q25. It is interesting to find that of the 10% of respondents that believed there are no complications in trust online because you can’t see / feel a product and / or speak to a merchant, that 3 of these still believed the biggest risk to them (Q25) was the fact that they did not know the vendor and could not speak to them if something went wrong, and another participant stated in Q12 that they didn’t trust the internet due to the ‘very nature of it
- faceless, intangible etc’. This shows that whilst risks are present in some people’s minds, they do not necessarily perceive them to be that high of a risk, or they simply feel that whilst they know the risk is present, they do not see that it complicated anything further, and still wish to participate in e-commerce.

A huge 91% however, believed that it would make it harder to some degree - whether through choosing ‘yes’ or ‘somewhat’. This finding backs up studies that believe multi-channel retailing to be very useful and helpful in building trust, such as Bock et al. (2012) and Ranganathan, Goode, & Ramaprasad (2003).

**Q28.** When you make your decisions on whether or not to trust a merchant, doe the size and reputation of that company have any bearing on your decision?

![Pie chart showing responses to Q28](image)

A total of 56% (of 125 people that completed this question) chose option 1, proving the reputation / image and size of a company to be an important factor when purchasing online. This highlights the difficulties that small online merchants can face - people will perceive there to be too much risk involved and they do not want to allow themselves to become vulnerable to a company they have never heard of before - as Q27 results also indicate.

Surprisingly however, 4 respondents would still buy from any merchant of any reputation and size - meaning someone they have never heard of, or know nothing about. This appears to be quite a risky undertaking, and as well as this, these 4 participants also stated for Q24 (Would you still participate in on-line shopping
regardless of the risks involved?) ‘Yes’ they would. This indicates how for some people, they do not care of the risks involved, or simply do not perceive them the same as other people.

**Q29.** Does having an offline presence allow you to trust an on-line merchant more? (i.e. If they have 1 or more physical shops that you can visit as well as a website)

A total of 86% (of 125 people that completed this question) thought having an offline presence (becoming a multichannel retailer) would allow you to trust an online merchant more. So, whilst 90% believe that there are more complications in online trust because of the fact there is nothing tangible, and you cannot speak to anyone (from Q27), 86% of those believe that an offline presence would help, again reiterating the need for a multichannel way of working.

<table>
<thead>
<tr>
<th>No. of Respondents</th>
<th>Yes, definitely (1)</th>
<th>Somewhat (2)</th>
<th>Not really (3)</th>
<th>No, not at all (4)</th>
<th>I don't know (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of respondents</td>
<td>66</td>
<td>42</td>
<td>15</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

No. of respondents 66 42 15 1 1
4.2.5. Improving Trust

Q33. Do you think that consumer trust could be the biggest barrier to the long-term success of internet shopping (e-commerce)?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (1)</td>
<td>92</td>
<td>74.19%</td>
</tr>
<tr>
<td>No (2)</td>
<td>16</td>
<td>12.90%</td>
</tr>
<tr>
<td>I don't know (3)</td>
<td>16</td>
<td>12.90%</td>
</tr>
</tbody>
</table>

Interestingly, an equal number of people either didn’t know or didn’t think that trust was the biggest barrier - looking at this data now, it would be interesting to ask a further question to those that chose ‘no’, asking what they did believe to be the biggest barrier. It may be the case for the ‘I don’t know’ group that they just do not understand enough about the topic in order to decide, if they were given more knowledge or they used the internet more, they may have been able to give a specific answer one way or the other. The fact that 92 respondents, almost 3/4 of the sample, believe it to be the biggest barrier acknowledges and supports the statements of most authors that the market is being hindered by trust concerns and that it is an important subject (Beldad et al., 2010; Urban et al., 2009; Midha, 2012; Yousafzai et al., 2003; Corbitt et al., 2003; Wang & Emurian, 2005) - both in the eyes of authors and consumers themselves.

Q34 and Q35. What would you say is the most / least important from the list below for building trust?

The data gave clear results as to the most and least important factor. This can be useful information for both academics looking into specific areas more, as well as e-retailers who are looking to make the most effective improvements to their site to build trust. The remaining results were dispersed along all options, for both the most
and least important factor, which means that all of these options can be perceived as important in some form or another. (See section 5.2.1 or appendix 3 for visual representations of the data)

**Q36.** Is there anything else you can think of that would help improve trust levels for you or other users participating in e-commerce?

In total, 20 valid responses were given for this question (page 80 of Appendix 3 shows 24 responses, but 4 of these were invalid or simply stated ‘no’). Within these 20 responses included multiple suggestions, totalling 41 suggestions (see appendix 2 for full results). The most recurring suggestion - mentioned 7 times, was to have some sort of governing body or regulator that could show a blacklist of danger sites, or a list of trusted sites - participant no.47 suggested licensing before a site can operate, no.54 suggested a trusted list by their bank. Another participant suggested trustworthy sites would have to show they have gained approval on both the ‘auditors’ site and the site in discussion. This is clearly an issue for many people, and this was raised in Q34 too, as being the most important factor for building trust for 1 participant. Whilst these are all valid responses, and this suggestion could potentially greatly increase the levels of trust for users, it is quite implausible and would be a highly complicated suggestion to implement as there are implications around who would regulate, how they would regulate, how long it would take, and what conditions e-retailers would have to meet in order to qualify.

Other top suggestions included worries over fraud - mentioned 6 times, and PayPal affiliations, mentioned 5 times. These findings are interesting as some were not mentioned much or at all within the literature, such as PayPal affiliations. Worries over fraud implies that customers want to see improvements in the security of the internet, so that it doesn’t continue to happen. Fraud concerns will become increasingly common as more people use the internet, as they increasingly enter vast amounts of personal and sensitive data that can be exploited if a website doesn’t do enough to protect their customers. There have been many cases of failures in large, reputable companies over the past decade that evidences this - Sony for example, in 2011, did not sufficiently encrypt their customer’s online data, nor did they have
appropriate firewalls in place, leaving it vulnerable to attackers who were reported to have stolen details of 77 million customers (Schwartz, 2011).

### 4.3. Conclusions

This analysis has drawn upon some interesting findings from the survey. It was very surprising to find that most people will participate in e-commerce regardless of the risks they perceive, and that many people have trust concerns with the internet in general and with e-commerce websites that they use, yet, again, still want to participate in shopping online. This suggests that the convenience, ease, and accessibility of the e-commerce environment outweighs any of the trust issues or risks apparent in them. It has been discovered that 32% of people do not trust aspects of e-commerce in some form, which, when generalised, can equate to almost 1 in 3 people, and that 1 in 7 do not trust in general, or trust the internet as a whole, or trust the websites they use to shop online. The open ended question (Q36) also revealed some insightful suggestions that customers believe could help them and others to shop online more and to trust websites more. The top 3 suggestions that occurred most often implies that authorities need to be actively engaging in this market with e-retailers to give customers peace of mind, and that PayPal needs to take a more prominent role in payment procedures as many people seem to trust this method. Security was said to be the most important factor for building trust (Q34) and this was highlighted again through Q36 - security and fraud concerns were mentioned 9 times collectively. Throughout, security and privacy concerns appear to be very dominant too, when asked questions regarding these, response rates were always very high.

There have also been some drawbacks such as the inability to collect data from other countries, which, as discussed, has had implications for the study - some questions cannot now be answered as thoroughly as originally intended, and some questions did not give answers as hoped - for example, it would have been interesting to have obtained a greater sample for Q15 that spent more than 10 hours a week of their time online to test the effect that time online has on certain factors such as trust and risk more accurately.
5. Discussion

5.1. Introduction

This chapter follows on from the previous chapter, in that results are discussed further within the context of the literature review, by looking at how this study answers the questions posed in section 2.9.1. The chapter discusses consistency testing of the survey and also provides insights into why the results may have turned out the way they have and looks at several other questions and statements made from chapter 2, supporting or arguing them. Finally, section 5.4 will discuss what should, or can be done given the answers to all of the research questions.

5.2. RRQs (Refined Research Questions)

5.2.1. RRQ1: What do people find the most important determinant for building trust?

To answer this question we can look at Q34 and Q35 to find the top ranked factor and least important factor.

Q34 and Q35. What would you say is the most important from the list below for building trust? / What would you say is the least important from the list below for building trust?
You can see people had a harder time choosing the most important than the least important as there is a wider spread of answers for the most important. It is clear that users believe morphing to be the least useful, as 34% of respondents chose this option. Nobody thought there was anything other than what was on the list to be the least important factor and equally nobody thought that improved website security was the least important. There were 2 close contenders for the most important factor, with a difference of only 5 between them - ‘involvement of recognised, trusted 3rd parties’ and ‘improved website security’ with the latter being the modal value. What is interesting is that ‘word of mouth’ is the second least important factor for building trust from this sample, which contradicts Corbitt et al (2003) who found positive word of mouth to be the most important factor. This shows how different groups and samples of data can give conflicting results and confuse findings. There were many options to choose from here and perhaps that is why word of mouth was found so far down the list, or maybe it is because (as stated in chapter 2) that consumer behaviour and expectations are changing rapidly - this is very plausible due to the fact that Corbitt et al’s study was 10 years ago now. Looking at these results shows the accuracy in some other literature though - both old and new research have found
security and privacy to be at the forefront of concerns and this supports those studies (Koufaris & Hampton-Sosa, 2006; Aiken & Bousch, 2006; Corbitt et al., 2003; Urban et al., 2009; Dinev & Hart, 2006). The 1st and 3rd top ranked factor involves security and privacy on the web. This indicates the need for this to be an area the industry focuses on and tries to improve - throughout the survey, results show that security and privacy are high on consumers’ minds - questions 7 to 11 asked about specific factors of websites that users trust and security and privacy of data ranked the lowest for trust too.

5.2.2. **RRQ2: Does risk affect online consumer’s activities?**

Q23. Does the amount of risk you perceive affect your participation in these on-line activities?

Q24. Would you still participate in on-line shopping regardless of the risks involved?

![Bar chart showing responses to Q23 and Q24](chart.png)

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>Somewhat (2)</th>
<th>No (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q23</td>
<td>31</td>
<td>68</td>
<td>31</td>
</tr>
<tr>
<td>Q24</td>
<td>69</td>
<td>29</td>
<td>31</td>
</tr>
</tbody>
</table>
A total of 53% stated they would participate regardless of the risks (Q24) - thus indicating that risk doesn’t necessarily affect the majority of users. However, when asked Q23, only 24% answered ‘No’ - that the amount of risk would not affect their participation. When asked a similar question in a different way, it is possible to get confused and think about slightly different things in order to reach an answer and this is perhaps why we are seeing inconsistent proportions here. From these results it is quite difficult to answer RRQ 2 - because from 1 angle it appears risk does not matter (Q24) but from another angle (Q23) it appears risk can matter. Looking at this another way, the 3 pie charts below show the different sets of answers for Q23 and Q24 that will show consistency - i.e. if a participant answered ‘Yes’ risk perception does affect my participation, then they should have answered in a synonymous manner - for the next question: ‘No’ I would not participate if risks were too high, and only the first set of answers shows this consistency, thus again illustrating the difficulty in answering this question with clarity. Maybe this suggests that it depends on the situation, and the context. So does risk affect consumer’s activities? The
answer to that is inconclusive. The consistency of these 2 questions are discussed more in section 5.3.

5.2.3. RRQ3: What do people perceive as online risks?

To determine an answer to this research question, we can look at what the biggest risk is for people from Q25, the most common risk chosen from Q22, as well as looking at how many people did not choose any risks for Q22.

Q22. Do you believe you are at risk from any of the following whilst shopping online?

Q25. What would be the biggest risk in the process for you?

<table>
<thead>
<tr>
<th>Risk</th>
<th>No. of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not knowing whether your personal data will be passed on / sold to other companies</td>
<td>100</td>
</tr>
<tr>
<td>Having your money stolen</td>
<td>90</td>
</tr>
<tr>
<td>Not receiving the product</td>
<td>80</td>
</tr>
<tr>
<td>The computing technology failing, thus creating problems for your order</td>
<td>60</td>
</tr>
</tbody>
</table>

Do you believe you are at risk from any of the following whilst shopping online?
It is clear from Q22, that the modal value is “Not knowing whether your personal data will be passed on / sold to other companies”. A very high number of respondents felt they were at risk from this (80%). This is also consistent with the results found from Q25. There are large differences between the responses obtained from Q25, and the biggest risk is one of ‘data being stolen or sold to 3rd parties’ - responsible for 38% of the sample size. This means privacy risks are of the greatest concern to people. The 2nd most common response for Q22 was not receiving the product, but this was ranked 2nd to last for the biggest risks, so whilst many people obviously think they are at risk from this, they do not believe it to be as important or as big a risk as many of the other options.

Nobody left Q22 blank - which means everybody believed they were at risk from at least 1 or more of the options whilst shopping online, and as displayed in the graph, numbers are all very high for each risk, having more than 80 participants believing they are at risk from each one of these - proving the points made throughout chapter 2, that this is a risky, uncertain environment.

The results also show that the option everyone believes they are the least at risk from is the technology failing, which is supported by results from Q7 - asking if they trusted the underlying technology - 96% were somewhat trusting or totally trusting. Questions 7 to 10 were based around the same worries that Q22 encapsulates but focused more on ‘trusting’ than ‘risk perception’. These questions corroborate my
findings here too - the least trusted were Q9 and Q10 - which involved data protection and data security (the comparisons of Q7 to Q10 can be examined via appendix 3 to see the differences in proportions as the questions progress, and trust declines).

5.2.4. **RRQ4: Is there anything that would help reduce risks perceived?**

Q26. What would work best for you as a risk reduction tactic?

This chart displays all options for ranks 1 to 5 so that each option of each rank can be seen clearly. All options were chosen - even if only by a few participants in some cases, showing though, that participants did believe all to be effective in reducing risk to some degree or other. There is only a small difference between the top 2 most effective methods - money back guarantees and partnerships. So it would be fair to say that these 2 together, would help reduce risks perceived and probably encourage a lot more people to shop online. However, these only address solutions for customers and do not solve the problems that are apparent and cause these to be required, the problems with losing / not receiving orders, security flaws in systems and so forth. Therefore, companies could lose a lot more money from refunding customers with money back guarantees. Partnerships on the other hand would give peace of mind to
customers who had concerns over security and privacy because larger more established companies will have more robust systems, more money to spend on ensuring customer data is held securely.

5.2.5. **RRQ5: Does trust in technology really reduce risk perception?**

Q7. Do you trust the underlying technology to work as it should?

Q21. Do you feel you are taking on a certain amount of risk when you shop online?

<table>
<thead>
<tr>
<th>Question 7</th>
<th>Answers</th>
<th>Yes definitely</th>
<th>Some but not much</th>
<th>No involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>27</td>
<td>39</td>
<td>N/A</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

There were only 3 participants that believed there was no risk involved online - but all 3 did indeed trust the technology. Those that did not trust the technology (there were only 5), indeed did believe there to be definite risk involved online. ‘Yes’ responses for Q7 were then compared with ‘Yes definitely’ and then with ‘Some but not much’ responses for Q21, and the data does suggest (only by a small majority) that trust in technology can affect risk perception positively - so more people that trust the technology (Q7, response Yes) do in fact either perceive ‘some, but not much’ or no risks (42 participants), than people that do trust the technology (Q1, response Yes) and perceive definite risks online (27 participants).

So whilst the sample as a whole for each question shows the majority of people do trust the technology (53%) but still perceive definite risks online (47%), there is a trend showing that trusting technology correlates to reduced risk perception when you look at each participant’s response individually, thus RRQ5, does not support Corbitt’s et al. (2003) findings, and in fact, supports other work such as Mayer (1995) and Siegrist et al (2006) who did find that trust in technology can affect risk perception positively.
5.2.6. RRQ6: Are ‘site quality’ and ‘appearance’ really that important in building trust?

The survey showed that consumers believe site quality to be very important (47%), and site appearance to be quite important overall (35%). Only 7 people viewed quality as unimportant in some form, and 15 viewed appearance to be unimportant in some form. This clearly indicates that both the overall quality and appearance of websites are considered important to users, even though not at the same level as one another. Q32 then asked individuals to look at 3 different pictures and say which they thought would be the best to shop with based on many design features and considerations. Image no.1 was taken from a very poorly designed website - the page was cluttered, of low quality, included spelling errors, was hard to follow and links, text and images were overlapping one another, obstructing sections of the site. Image no.2 was a standard quality webpage, with clear navigation, images to emphasise parts of the site, and a clear consistent layout. Image no.3 was of a very expensive website that has been designed specifically around customer requirements. The page is very plain, simple, well structured, assistive tools are visible along the left pane, good use of colour, error free (and the site is also very innovative to use but this cannot be evidenced through the image). The general consensus showed image no.3 to be the best with 51% of participants choosing this image. This supports the results.
from the previous 2 questions and further grounds the idea that the look and feel of a website is very important. Interestingly, 5 people did choose website no.1, which just goes to show the difficulty in building a website that will be suited to everyone. Therefore, this study does support the research that finds website appearance and quality to be important (McKnight et al., 2002b; Heijden, 2003; Urban et al., 2009; Li & Yeh, 2010; Schlosser, White & Lloyd, 2005) and does not support Liao’s (2006) findings.

5.2.7. RRQ7: How do demographics influence trust?

Age, gender and level of education were compared with levels of trust and perceived risk to find trends in certain groups. Equal numbers were not apparent for each and every group i.e. there were many more 16 - 25 years olds than 46 and over’s, and many more university level participants than GCSE or no education only. This makes it difficult to compare accurately. Significant correlation was found between age groups, showing that younger individuals perceived less risk, and were more trusting than older people. As Siegrist et al. (2006) suggested, this may be due to their familiarity with technology, thus making them more confident and trusting in using it and perceiving there to be less dangers in participating.

![Bar chart showing Do you generally trust the websites you use to shop online?](image-url)
The same questions were then analysed between males and females, however, only a very small difference was noted in that females tended to perceive a little more risk than males - no significant trends were found in their trusting stances. Education found similar results upon analysis - the majority of people, regardless of their education tended to mostly trust e-commerce websites. University level participants however, tended to perceive slightly less risk than GCSE or no education level participants. (For full analysis graphs, see appendix 2). This substantiates Siegrist’s et al (2006) work that found age to positively correlate with perceived risks, and for females to perceive more risks than men. This study cannot, however, support other demographical studies that show differences across genders (Midha, 2012; Gefan, 1997; Gefan, 2000; Gefan, 2005) as no significant relationship was seen in this study, and the overseas survey was a failure. So, in part, demographics / groups of people / can hold differences in their level of trust and risk, thus making it important that differences are considered when trying to build and maintain trust as indicated in section 2.4.3.
5.2.8. **RRQ8: Are Aiken & Bousch (2006) correct in their inverted U theory?**

To determine an answer to this question, experience / technical knowledge at different stages must be compared with a user’s level of trust. In this case, trust in both the internet in general, and in e-commerce websites was compared with each individual's experience level. To view the table containing and comparing results for this question, refer to appendix 2, p109. The number of responses for ‘Very trusting’ and ‘not at all trusting’ were compared over each question and experience level, as well as looking at the modal values in each section. It was found that (although sample sizes were not matching across each level of expertise) users that had little or no experience, trusted the least, with none of the 30 respondents saying they were ‘very trusting’, and then, with a moderate amount of experience behind them, results showed no respondents (of 133) to have chosen ‘not at all trusting’ and 14 chose ‘very trusting’, which is a significant improvement on the last group. There was also an increase in modal values at this stage - thus at the moment aligning and supporting Aiken & Bousch’s (2006) theory. Then moving on to the most experienced users, it was apparent that trust had again, declined - but the trust levels were still higher than people that said they had little or no experience / technical knowledge. This last experience level, however, does not fully support the inverted U theory because, despite there being a reduced modal value and an increase in people that said they were ‘not at all trusting’, there was a rise in those that said they were ‘very trusting’. Overall though, the results generally corroborate Aiken & Bousch’s (2006) theory, evidencing RRQ8 to be correct.
5.3. **Consistency**

To check the consistency of the responses from participants, I have included multiple questions from multiple areas of the questionnaire that ask the same or similar question, but in a slightly different manner. It has been discovered that the results did show some inconsistencies, which are clarified below. These findings will be examined to determine the implications they may have. There are 6 question comparisons to check for consistent behaviour, as follows:

**Test 1:****

Q11. Even though you have indicated that you do not trust certain aspects of the internet and / or e-commerce, do you still participate in on-line shopping?

Q13. Do you take part much in e-commerce activities?

Only 6 individuals stated that they didn’t participate for Q11, so 6 should have answered ‘no’ in Q13, but only 5 said they never take part in e-commerce, which means 1 person answered inconsistently.

**Test 2:****

Q18. Would you say you were technically competent in using the internet and understanding how it works?

Q19. Do you understand much about on-line security, privacy and the structure of e-commerce websites that you use?

With the responses available for Q18 - it would be acceptable to presume that if you were very technically competent online, understood networks, and can solve any issues that arise online (as the option for the question states), that you would also be aware of security and privacy issues, but comparison of the data for these 2 questions does not support this. People are far less aware and knowledgeable when it comes to security and privacy online. This might be linked with studies showing people to have high security and privacy concerns (Dinev & hart, 2006; Aiken & Bousch, 2006;
Koufaris & Hampton-Sosa, 2004). People may have high concerns over these areas because of the fact that they are less confident and educated in these areas.

Test 3:

Q21. Do you feel that you are taking on a certain amount of risk when you shop online?

Q22. Do you believe you are at risk from any of the following whilst shopping online?

Just 4 participants indicated ‘I don’t know’ or ‘no’ for Q21, but for Q22 checked several options showing they believe that they are at risk from at least 1 or more of 4 events.

Test 4:

Q23. Does the amount of risk you perceive affect your participation in these online activities?

Q24. Would you still participate in online shopping regardless of the risks involved?

Consistent results here would show respondents choosing either ‘Yes’ for Q23 and ‘No’ for Q24, or ‘No’ for Q23 and ‘Yes’ for Q24, because both questions ask respondents if risk affects their participation, just in different ways. When these questions were compared, it was found that some respondents did in fact give inconsistent answers - 12 people stated ‘yes’, the amount of risk they perceive does affect their participation (Q23) but at the same time indicated ‘yes’ they would participate regardless of the risks involved (Q24) which contradicts the former questions response. Similarly, 8 people chose ‘no’ for both questions, inferring that risk doesn’t affect their participation, and yet, they would not participate in e-commerce if the risks involved were high.
Test 5:

Q25. What would be the biggest risk in the process for you?

Q26. What would work best for you as a risk reduction tactic? Please rate from 1 - 5; 1 being the most important, 5 being the least important

This test worked, and showed clear integrity. The most common answer for Q25, was the top answer for Q26, and the same was found for the bottom 2 results. This shows that this set of data can be trusted and relied upon.

Test 6:

Q30. Do you think that the quality of a website is important in building trust?

Q31. Is the visual appearance of a website important to you when deciding on whether to shop with them?

Q32. Which website would you prefer to shop on-line with based on the images of the following 3 websites?

The answers for Q30 and Q31 should be reflected in the website chosen for Q32, in order to back up evidence of web quality being important or not and to show consistency in answers given. Comparing Q30 and Q31 with Q32 shows that overall, the results are consistent - most people believed quality and appearance to be important by some degree, and also chose website number 3 (51%). For those that chose website no.1 (5 participants), only participant no.60 believed website quality was very important, others generally chose ‘neither yes or no’ for both questions. Having said this, even if inconsistent results were found, it is unclear whether this can be classed as affecting the integrity and trustworthiness of the results because it is a question about perceptions - and to some individuals, whilst unlikely, it might feel that a cluttered, colourful, obstructive website is one of better quality or appearance.

There are several, small inconsistent results that have been highlighted, but a few of these questions have in fact, found that data is reliable. Tests 5 and 6 were successful, tests 1 and 3 contained very minor issues that could be deemed insignificant in affecting the general results, and test 4 contained the most integrity
issues, as 20 people answered in an inconsistent manner. The findings from this test have affected some of the analysis, and has made answering RRQ2 difficult. Test 2, just like test 6 may not be very relevant to consistency testing. Just because it is more likely / probable that an individual will know about both areas because they are of similar topics and linked with one another, does not necessarily mean that they have to be. It is important to run these tests within a survey as the issues can have implications on the integrity of the data and therefore the results too. They can raise questions such as ‘can the rest of the data and results be trusted?’ However, in this case the issues are few, and the numbers in all but 1 test are small.

5.4. What Does it Show? What Should be Done Now?

5.5. Security & Privacy

As Schneier (2013) details in his online essay, information is collected about us all the time and we may not know it. “Companies...may know more about your interests than your spouse”. This is a fact that scares many of us and makes us wary - something that is highlighted in this study’s findings, that many people are wary of privacy and security over anything else (see results for Q7 - 10, Q12, Q22, Q25 and Q34 to see security and privacy amongst the top trust and risk concerns). This also clearly supports the words by Urban et al (2009), as mentioned in section 2.4.1, that “Privacy and security have become the new baseline from which one evaluates an online merchant’s trustworthiness.”. These are 2 antecedents that are placed clearly at the forefront of consumers’ minds, and as such, are key areas that merchants must focus on improving - again, supporting claims in section 2.4.1 by Urban et al (2009) that merchants must be vigilant and evidence how seriously they take security and privacy in a way that consumers will understand and relate to. As evidenced from Q19 of the survey, 14% know little or nothing about security and privacy of e-commerce sites, and 53% claim to only know ‘a little of one or more areas’. This highlights the need for merchants to make sure customers understand what the website is doing in regard to their data and their personal security. This could mean directing them to informative websites describing such procedures to allow them to self-educate, or informing / evidencing their privacy and security protective measures...
themselves, but clearly the point is that it has to be simple and easy to follow, without jargon and / or complex language due to the fact that almost 67% of respondents know only a little or nothing of these factors. As stated in section 2.6, Belanger et al. (2002) found that privacy issues may not necessarily influence purchase intentions, and whilst this appeared odd, and contradictory of other literature, this also seems to be the case for this study. Many people appear to hold concerns over privacy, however, the majority of people still shop online (as indicated by Q11, and Q21) regardless of their distrust or perception of risks.

5.6. **Website Quality & Appearance**

Whilst the importance of quality and appearance found in this study have backed up evidence from many other authors, this study found that morphing (one of the proposed remedies in section 2.8, recommended by Urban et al. (2009)) which involves tailoring websites to suit individual needs, was regarded as the least important factor for building trust, suggesting that perhaps this idea will not improve the online situation. However, it might just be that because this is a new idea, not many people know much about it or realise its potential. In any case, there are many solutions and trust building techniques that can be implemented, and suggestions of which can be found in section 2.8, under ‘Site design and quality’. It is also important, as people suggested in the survey and Yousafzai et al. (2003), that the website show its transparency - disclosing all relevant and necessary information to allow consumers to make better informed decisions and to increase their trust in the retailer. The implications of not getting this right, as it’s the first thing customers see and use, could mean loss of customers, both initial and loyal customers (although it will detract more initial customers), leading to loss of business and reduced competitive advantage.

5.7. **Demographics**

As the only significant set of results for demographical differences came from age groups in this study, the recommendations will be tailored around this more. As young people appear to deal with issues surrounding the internet more, and are more
confident and experienced in using it, generally speaking it is advisable that the focus be turned on the older generations. Improving trust, confidence and risk perception here will have a great impact on the market. One way of achieving this (although expressed in this survey as the least important factor for building trust) would be to implement morphing suited to older or middle aged people - tailor websites so that they are clearer, easier to use and simpler for these age groups. Provide plenty of clear and simple information on the site, so they feel more comfortable in using it. Another useful suggestion, although missed out from the survey, would be to educate. This could be organised through communities so that it promotes use of e-commerce and the benefits could be explained and walked-through. Online advisors could be another way forward.

5.8. Consumer Empowerment

This was an emerging characteristic and driver of trust detailed throughout chapter 2 - particularly section 2.4.4 and 2.8, that Midha (2012), IBM (2012), Gefan & Straub (2004) amongst others have found evidence of it being greatly helpful in building trust and also helping to improve relationships. One method that denotes empowerment is multichannel retailing which, from the survey results, was shown to improve trust and reduce complexities (Q27 - 37% agree, Q29 - 48% agree) thus showing Bock et al (2012) and IMRG(a) (section 2.8) to be accurate. Consumer empowerment directly, did not seem to have much effect on the participants of this research however, expressing consumer control to be the second least important factor for building trust. However, because factors linking to empowerment, such as multichannel retailing appeared to be useful for consumers, it is still important to ensure that merchants are trying to embody this within their website - making sure to include ‘CAN’ - 3 methods that can help a customer feel more empowered and willing to participate - detailed in section 2.8, it includes giving customers choice, access and notice (FTC, 2000). Further research into empowerment should be considered, to look at additional ways that can be implemented so users can feel in control of their online experience in a more strict fashion and reduce the risks and implications that privacy and security bring about from feeling less in control of them.
5.9. **User Experience**

From results, and literature, experience can affect behavioural intentions to use, as well as trust and risk perception, thus having strong implications. It is not simply a case though, of increasing the amount of time spent online to reduce risks and improve trust, as the inverted U theory (Aiken & Bousch, 2006) and this survey discovered. The best point, it seems, where trust and risk perception are at their most positive is where the individual has some experience - not too much, nor too little. But it seems very impractical to suggest that experience should be developed only to a certain point. If this was the case, individuals would use e-commerce websites for a set period and then stop using them. Instead, it is more sensible and rewarding that users should become aware of this, so that it does not put them off. Awareness is key, and allows users to make their own decisions more effectively. If users become more aware that upon gaining more experience at first, this could encourage them to use it more. At the other end of the scale (or U in this case) experienced users can be told of ways to minimise the risks they perceive, and how best to conduct themselves online in a better way (now they are highly experienced, and are able to) so that they can prevent and avoid risky situations. People need to learn not to be put off by the amount of experience they have, and this can be a significant number of people, as the survey found 76% of respondents to base their trusting stance on the amount of experience they had. Habit, did not appear to have such a significant effect on trust as experience did. Habit was said to affect 65% of the sample’s trusting stance, which still proves that Gefan (2003) may be correct - that habit is a force relied upon more than logical, strategic, or external information factors due to the fact that we trust our own habits more - they are automatic to us. As this is the case, a solution that is cited to work well for these areas is through use of tailored advertising, and monitoring activities so that patterns emerge in what they like, and don’t like, so that this can be expressed through their online experiences too.

5.10. **Risk & Vulnerability**

The implications for risk were difficult to judge due to the inconclusive nature of results obtained from this study. It is perhaps sensible to suggest, therefore, that it is still a large factor as many authors have regarded it, but more specific work should be
completed - i.e. additional questions would have to be asked in order to find a more conclusive answer to establish whether risk really is that important to consumers and what to do about it. The results appeared to show that risks were at least apparent online in the eyes of consumers, inferring Yousafzai et al (2003) to be correct that risk is significantly more noticeable online (see section 2.5, p.19), but not whether they regarded those risks as influential or not. As discussed in section 2.5, risk has not always been fully understood in various contexts (Mayer et al., 1995) especially regarding its relationship with trust, and whilst authors have found it to be very influential on customer decisions, this study cannot argue or support such work, making it difficult to suggest what should be done in this area to seek improvements. Again, perhaps it is sensible to suggest that work should continue to reduce perceived risks, for the many people that do feel it affects their participation online, and if this is the case, risk reduction tactics should be aligned more with women than men as it was found in chapter 2 that women perceive more risk than men, in multiple situations (Midha, 2012; Siegrist et al., 2006; Gefan, 1997; Gefan, 2005). It was also found in this survey that women perceived slightly more risk than men. The survey found that the best way to reduce perceived risks was for retailers to have partnerships with other trusted, well known parties or brands, which would increase confidence in the retailer because it creates the perception that ‘if large, trustworthy company X is working with company Y, then surely company Y can be trusted too’.

5.11. **In more general terms**

Not looking at specific areas for just a minute, it is important to look at the implications of some results in general terms and look at more general solutions too. As the survey evidences, people trust the internet in general less than they trust e-commerce sites (see appendix 2), so it is, therefore, important to look at improving trust around the internet as a whole before it is the responsibility of each individual e-commerce site to build trust. People will not use e-commerce to its full potential if they do not first trust the internet - the medium on which e-commerce sits. On the whole, as security and privacy have proven to be vital, these should be the starting points, or the foundations on which trust is built. If a customer experiences one good transaction, it will encourage continued use, and with continued use comes strong trusting beliefs about a vendor, increased experience and confidence and then word
will spread and a company can grow. If security and privacy protective measures are not evident or something goes wrong in the transaction and the security is compromised, or data gets lost, customers will very rapidly move to another merchant, or it could even deter them from e-commerce altogether. Once these areas have accumulated more trust and confidence, trust can improve, risk perception can reduce, smoothing out the whole process and allowing the focus to be shifted to the next most important factor. It is imperative though, that research, reviews, opinion panels, surveys etc. continue to be created as it has been shown how customer requirements can change over the years, along with the technological environment in which e-commerce exists in, and how this can mature needs and perceptions. Urban et al. (2009) for example, suggested that there was an increase in consumer online trust due to there being a 73% increase from 2004 to 2007 in credit card purchases online - again highlighting the changes in procedures. This statement can be supported also from this survey’s results, showing 61% of people to generally trust the websites they use to shop online. Company reputation was found to be important in chapter 4 for building trust, and a good way of trying to improve this and allow customers to become more familiar with a company is through advertising - something recommended by Gefan (2000) in section 2.4.6.

5.12. Conclusion

There is no clear cut answer for the question that comprises the title of this study. But, overtime it does appear that more people are using the internet and the e-commerce environment and that plenty of things are being done to combat the lack of trust visible in the environment. In an uncertain setting such as this, there will never be absolute trust. There will always be doubters, inexperienced and / or unwilling users, but the goal is to find a way to help reduce the amount of people who feel this way by introducing new ways of working and using the systems, new ways of reducing risks foreseeable, and always moving with the changing demands of customers. The findings from past literature and this study has highlighted and evidenced some of the areas which are failing, along with what customers say would help the most, security and privacy being at the top of their lists, and with staggering findings suggesting almost 1 in 3 do not trust aspects of e-commerce, a change must
start to take place, merchants must become more aware of what to do right, and customers need to become aware of what they can do too. Authorities (as suggested by multiple respondents) need to become more involved, whether this means trusted banks, governing bodies or trusted parties setting up blacklists or whitelists. Research must look further into the many subjective contexts that can alter the needs and procedures necessary to build trust and reduce risk, as it has been suggested throughout that these different situations online require different conditions to be met.
6. Conclusions and Recommendations

6.1. Conclusions

This chapter summarises this study’s findings - rounding up the most important things that can be taken away or learnt from this project.

6.1.1. RRQs

RRQ 1: What do people find the most important determinant for building trust?
- Most important factor: Improved web security (27%), closely followed by involvement of trusted 3rd parties (23%)
- Least important factor: Morphing / ability to tailor websites to individual needs (30%)

RRQ 2: Does risk really affect consumer’s online activities?

Inconclusive. Data taken from respondents was shown to be inconsistent and could be argued both ways. Therefore, it is more sensible to refer to other literature for a more comprehensive answer.

RRQ 3: What do people perceive as online risks?

Not knowing if your personal data will be passed on or sold to 3rd parties was ranked the top risk for Q22 (80%) and Q25 (35%).

Other risks perceived online were:
- Not receiving the product
- Having your money stolen
- Not knowing the vendor or being able to contact anyone
- The technology failing

RRQ 4: Is there anything that would help reduce the risks perceived?

The top ranked answer was ‘partnerships with trusted, well known parties or brands’.

Other ideas that consumers agreed would help (in varying degrees) were:
• Money back guarantees
• Positive word of mouth from people you know
• Giving the consumer more control over certain aspects of the process
• Positive reviews from anonymous users

**RRQ 5:** Does trust in technology really reduce risk perception?

There is marginal evidence that suggests the answer to be yes. More people overall, who trusted the technology to work, perceived less risks than those who did not trust the technology, or those who did trust the technology and also perceived risks to be high, thus not supporting Corbitt’s et al (2003) findings.

**RRQ 6:** Are ‘site quality’ and ‘appearance’ really that important in building trust?

Yes. Evidence from this survey suggests heavily that it is. Users rated quality more important than appearance but both were still regarded as either ‘quite important’ or ‘very important’ factors.

When given the choice of 3 websites (secretly rated from poor quality to great quality) 51% chose to use the website of great quality.

**RRQ 7:** How do demographics influence trust?

The most significant difference was found between age groups. The group of 16 - 25 year olds perceived far less risk than the group of 46 and over’s, and they proved to be far more trusting in the internet and the websites used to shop online.

There were no significant patterns or trends between trust and gender or trust and education.

There were slight trends forming between risk perception and level of education - showing that university educated participants perceived slightly less risk than GCSE or no education participants.

Unfortunately, overseas demographical comparisons were not able to be completed.

**RRQ 8:** Are Aiken & Bousch (2006) correct in their inverted U theory?
Yes. Evidence was found that proved this theory to be correct. Inexperienced / less knowledgeable individuals tended to trust the least, then, as experience increased, more trust was present and no participants (of 133) were found to be ‘not trusting at all’. The level of trust was then reduced again, within the high experience group.

6.1.2. Negative Results / Inconclusive Evidence

For the questions that were found to be inconclusive, further research would have to be undertaken that produced bigger sample sizes and discussed certain areas in more depth to get a greater feel and to produce a more thorough, accurate answer for a question. The questions that were found to be unsupportive of several authors does not necessary mean that the other authors were wrong, or that this data was wrong either. As suggested previously there may be legitimate reasons that are not clearly visible such as a change in consumer demand altering perceptions. One can also infer that these contradictions can come about due to the subjectivity and relativity of each context they are placed in - from different transactions, to different parties involved, to different types of website. These kind of results only push for further research in various contexts and degrees of thoroughness to develop the field.

6.1.3. Most Significant & Interesting Findings

As well as the research questions being answered, the study found other interesting and significant results. The major discoveries from this study are:

- Almost 1 in 3 do not trust aspects of e-commerce (found from Q11 of this study’s survey), and 1 in 7 people do not generally trust in some form (found from Q4, 5, 6) - whether that be the internet in general, websites they generally use, or their inclination to trust in general.

- Online security, privacy and data concerns were the highest issues found from this study. People held more concern over these areas, trusted less because of these factors, and stated that improvement in these areas would reduce risks, and improve trust (discovered from questions ).
• When asked if there was anything else that respondents believed could help the situation, the most common answer given was around the involvement of governing bodies or authorities to manage and control trusted websites or a blacklist of websites, so that essentially someone trustworthy (the governing body) could oversee e-commerce and take action on any company found being dishonest and untrustworthy, thus reducing the chances of having a bad experience, losing money, losing data and so forth.

• The limited number of participants in this survey that did not participate in e-commerce, it was found to be because of 3 main reasons, each responsible for the same number of votes, and all of which centred around the nature of the internet - not being able to touch the products, preferring to shop in-store, and not being able to trust the internet enough. This suggests that multichannel retailing would help the transition of in-store to on-line for these participants, it would give them confidence to trust the internet - knowing that they have a physical shop, as well as giving them someone to talk to or a place to pick up the product.

• Company reputation, as detailed in section 2.4.6, and brand size were found to be important in this study too, not as important as Bart et al. (2005) found it to be, but still a compelling factor to help improve trust.

• Word of mouth was not very highly thought of during this study as authors such as Kuan & Bock (2007) and Bock et al. (2012) found it to be. It was ranked low in importance for building trust, and low in risk reduction tactics.

• Habit and web experience are important influencers of trust, as a combined percentage, they equate to 68% of respondents believing experience, and / or habit to be what they mostly base their trusting stance on, but individually, more people base trust levels on their web experience than their habits in using the internet.
6.2. Recommendations

6.2.1. Improving Trust

It is important to focus on initially improving security standards within e-commerce websites, and the privacy procedures they have in place, as these were the most important factors found in the study. A shift needs to be made to caring more about the customer’s data and requirements than their own profits and marketing desires - as one participant in the study highlighted - “companies care more for the bottom line than for me, leaving my data liable to mis-selling” (participant no.43). This means implementing stricter privacy policies that companies adhere to, using sufficient, secure firewalls, encryption methods, and other payment protection techniques used for credit or debit transactions online, ensuring secure connections to servers, and lastly people within the organisation that are continually monitoring and updating these areas. Companies must make their policies clear and visible to all visitors of the site, and must not (unless customers say that do not mind) pass or sell data to any other organisation or 3rd party. It is also good practice to evidence all of this by keeping customers up to date with the techniques and procedures implemented by a company - including information for example that shows you care about the security of data - with partnerships from Verisign, Norton, or any other trustworthy online security organisation, showing digital certificates and seals of approval. Gaining as many of these as possible can greatly reduce the risk and uncertainty consumers perceive when thinking about security and privacy online.

Customer awareness is key - as highlighted in the study, many people were comfortable and competent in using the internet (Q18 - 45%) but people are a lot less aware or educated in the security and privacy issues present, and how e-commerce sites function (Q19 - 30% say they are aware and fully understand). This also supports a study in 1999 by Furnell & Karweni that found awareness to be key in increasing confidence online. This involves including information on merchant’s websites that discusses and educates everyday users in the concepts of security online, how data can be intercepted, and how it is prevented or the ways consumers can check if a site is doing what they should be. Obviously, the information must be kept as simple as possible, so as not to confuse or frighten consumers further, with use of diagrams or short video clips to help solidify their understanding in such concepts.
It is perhaps a good idea that to further show goodwill, merchants can offer money back guarantees if products are not delivered to customers. However, this would be a somewhat difficult process to implement because there is nothing to stop customers pretending that they don’t have the product and demanding their money back. Systems would have to be developed with delivery services to confirm delivery to reduce chances of this, and several other systems may have to be developed that e-retailers may believe would bring about more difficulties than benefits.

Evidence in general portrays multichannel retailing as the way forward. Evidence from this survey has also supported this statement, where customers believe having several channels, methods of contact, and physical stores would help in their trust towards an online merchant. So this study also recommends the use of this to build and maintain high levels of trust, giving customers the option to shop via many methods for their convenience, and still improve trust by allowing customers to visit physical stores, talk to real people and make the whole process a smoother, more trustworthy one.

6.2.2. Looking ahead / What next?

Chapter 2 looked at the technology acceptance model and noted that there are, and have been, many variations of it, and extensions to it. However, whilst there are many other models that try to incorporate various elements and look at how they relate and influence one another in order to reach trust, acceptance, extended use etc. there are no broader models that look at a much wider range or relationships between trust, risk, antecedents, influential factors and so forth, and this would be a very important and useful tool for e-retailers as they would be able to take many more factors into consideration when designing and running an e-commerce website to suit their specific market and audience in a more effective manner. This suggestion was further realised after looking at the results from this study of the sheer number of relationships and contributing factors that all appear to have some importance on trust and risk online.

Obviously, there is room to further consider risk, as this study failed to produce viable results one way or the other on the matter. As more of the world’s population are
starting to make their way online as, indicated in section 2.2, it is still as vital as ever that they feel safe, comfortable and willing on the web, and so methods of reducing risks are still necessary and whilst there are still debates over its relationship with trust and its influential power, its overall importance is still deemed high, and while ever risk is obvious, it shows that there are always improvements to be made. So, it is recommended that merchants partake in partnerships with reputable brands and try and build their partnerships too. This spreads trust amongst different retailers across the web and increases the chances of getting consumers involved. It is also recommended that further research especially in this area should be undertaken: 1 - in a sense that the previous paragraph details, so that it can be understood with other factors and characteristics, and 2 - so that it can be understood in different contexts, because risk has been confused in this study’s results and other authors have described the tricky predicament that risk is placed in.
7. Personal Reflection

If I had more time, or had to repeat the process, I would certainly have done some things differently. I spent the first month of the process trying to really figure out what it was I wanted to research, and add to a field, and after much deliberation settled on the idea of trust around the internet, after several other ideas were filtered out and found to be insufficient or already answered. I found this to be a little demoralizing and this affected my interest in the topic to begin with. Then I struggled for another month trying to figure out a structure that I felt covered as much as I would like to know about the subject and enough to give the readers a clear, yet fairly in depth perspective on the subject. In the future, I would try to organise this part of the process differently, and much more quickly as I feel that I had lost a lot of time through this, and I did not have much to bring to many of the early meetings with my supervisor. I believe if I had organised this and made some decisions earlier that I may have gotten more out of these earlier sessions and gained a better insight into some areas. I also realised, after I had already sent my survey / questionnaires out, that there were some additional questions I could and should have asked - questions to cross reference with other questions, questions linking experience with risk perception directly, questions about technology related anxiety or stress, and questions looking at individuality, preconceptions and so forth. However, these questions arose too late in the process. After pretty much completing chapter 1 and 2, I continued to read more and more literature and found additional interesting, and thought provoking material that in retrospect may have been better to argue, or include, but with much of my work already having been completed, it was too far along the process, with not enough time to change. There were some interesting new research ideas to help trust building move forward (some of which are briefly outlined in section 2.6 and 2.7) and I remember thinking (along with numerous other researchers believing it to be something that was missing within the literature) that it would be a rewarding topic to research. It was around customer advocacy and trust based marketing, which have been seldom discussed, let alone researched properly in literature. It also extended and linked to other very new research fronts such as customer ratings. Varadarajan & Yadav (2009) discuss some internet marketing strategies and how old strategies can be changed to new ones online in order to promote trust in a more context appropriate
and effective way. This would be a future direction if I were to continue studying the area.

The subject has continued to grow on me throughout the whole process and I have found myself wanting to search further into different, more specific areas of e-commerce trust and online trust in general, and look at future areas. I have found this subject area to be one of great interest to me, whereas at the beginning of the process I knew very little about it and had little interest in it. I was therefore obviously very disheartened by the time it came to surveying, as I had hoped to look at demographics, and my overseas survey just didn’t reach anywhere near the target set. This then hindered the project and meant I couldn’t answer some of the questions I had hoped for as well as others that may have appeared upon analysing data. There were, at some stages, times when I could not find sufficient sources too, or the right kind of sources - by this I mean for instance old sources could be found, but no sources for recent years to back up any evidence from 10 or 20 years ago, and with this being a topic on technology - I realise that the area can change dramatically in that time, so I feel that some of my findings may be limited.

I am pleased with my survey and the feedback obtained, some insightful comments were given and it has produced some interesting results and conclusions that can help in understanding, building and maintaining trust, as well as other areas (risk, demographics etc.).

Several times I strayed from the time plan produced, but altered other parts so that generally everything went smoothly - other than events out of my control. So I am pleased with the length of time it took and this aspect of my organisation.
8. Bibliography


IMRG, 2013. *Online Retail Growth Steady, but Mobile Trends Developing*. [Online]. Available at: http://imrg.org/ImrgWebsite/User/Pages/Press%20Releases-IMRG.aspx?pageID=86&parentPageID=85&isHomePage=false&isDetailData=true&itemID=9009&specificPageType=5&pageTemplate=7 [Accessed: 16/03/2013]


Weil, M.M., & Rosen, L.D., 1997. TechnoStress: Coping with technology @Work @Home @Play. New York: Wiley


9. Appendices

9.1. Appendix 1: UK Questionnaire

On-line Trust:

Do People Trust the Internet and the E-commerce Environment

Please circle the appropriate answer unless stated otherwise.

About you:
1. Gender
   Male                        Female

2. Please specify your age group
   16-25                        26-35                        36-45                        46-55                        55+

3. Please indicate the highest level of education you have received
   Non                                                              College level (A-level / Diploma / Equivalent)
   GCSE / O-level                                  University level (Bachelor Degree / Masters / PHD etc.)

Trust:
4. Generally, do you feel that you are a trusting person?
   Yes, very             Yes, to some degree           I'm not sure           Not particularly            Not at all

5. Overall, do you generally trust the internet?
   Yes, absolutely            Yes, mostly            Somewhat               Not particularly            Not at all

6. Overall, do you generally trust the websites you use to shop online?
   Yes, absolutely            Yes, mostly            Somewhat               Not particularly            Not at all

   Questions 7 - 10 are related to the previous question of trusting the websites that you shop with, but go into more detail about individual aspects of shopping on-line.

7. Do you trust the merchant to deliver on their word?
   Yes                        Somewhat                        No
8. Do you trust that the underlying technology will work as it should / as you expect it should?
   Yes                     Somewhat                     No

9. Do you trust that your personal data will be held in a secure manner?
   Yes                     Somewhat                     No

10. Do you trust the privacy of your personal data to be upheld?
    Yes                     Somewhat                     No

11. If you answered no to any question between 5 and 10, do you still participate in e-commerce activities even if you do not trust it?
    Yes                     No

12. If you do not trust the web, or do not trust online shopping then please specify why? Please tick all that apply.
    The very nature of the internet - faceless, intangible etc.  
    Appears to be more risks than benefits
    Lack of experience or knowledge in using the internet
    Technophobia
    Security related risks such as ID theft, Fraud, Virus’s, privacy concerns
    Other:

    ________________________________________________________________
    ________________________________________________________________
    ________________________________________________________________
    ________________________________________________________________

Online Experience:

13. Do you take part much in e-commerce transactions?
    Never                     Once                     On occasion                     Regularly

14. If Never, why? Please tick all that apply
    Trust reasons / Do not trust using the internet enough
    Lack of interest
    Cannot see/ touch the products
    No web knowledge
    Prefer to shop in-store
    Other:

    ________________________________________________________________
    ________________________________________________________________
    ________________________________________________________________
    ________________________________________________________________

________________________
15. How many hours per week roughly on average are you online - participating in e-commerce activities (Whether this is just browsing or making purchases)?

- 0-3
- 3-5
- 5-10
- 10+  

16. Do you believe that your current trusting stance is based mostly upon the amount of web experience you have?
- Yes
- No  

17. Do you believe that your current trusting stance is based mostly upon your habitual behaviour in using the web?
- Yes
- No  

**Technical ability:**

18. Would you say you were technically competent in using the internet and understanding how it works?
- Yes
- To some degree
- Not really
- No  

19. Do you understand much about online security, privacy and the structure of e-commerce sites that you use?
- Yes, I am very aware of security and privacy issues, along with what sites do to protect against them. I know how e-commerce websites are created and how they work.
- Somewhat, I know a little of one or more of the areas mentioned above. I know enough to understand what happens with my information with regards to security and privacy.
- No, I know little, or nothing about any of the above areas.  

20. Does your knowledge in the previous questions areas determine your trust and use of the internet to transact? i.e. if you know little about the aforementioned areas, does this deter you from participating?
- Yes it definitely does
- It has some impact
- No it definitely does not
- I don’t know  

**Risk:**

21. Do you feel that you take on a certain amount of risk when you conduct online shopping?
- Yes there is definitely risk involved
- Some, but not much
- No, there is not any risk involved
- I don’t know
22. Do you believe you are at risk from any of the following whilst shopping on-line? Please tick all that apply.
   - Not knowing whether your personal data will be passed on / sold to other companies
   - Having your money stolen
   - The computing technology failing, thus creating problems for your order
   - Not receiving the product

23. Does the amount of risk you perceive affect your participation in these online services activities?
   Yes       Somewhat       No

24. Would you still participate in on-line shopping regardless of the risks involved?
   Yes       I don’t know       No

25. What is the biggest risk in the process for you? Please tick one only.
   - Your personal data being stolen/ passed to 3rd parties
   - Your money being stolen
   - Trusting the technology behind it all to work effectively
   - Not receiving what you expected/ ordered
   - Not knowing the vendor, or being able to contact him / her if something goes wrong
   - Other:

26. What would work best for you as a risk reduction tactic? Please rate from 1 - 5; 1 being the most important, 5 being the least important.
   - Money back guarantees
   - Partnerships with trusted, well known parties or brands
   - positive word of mouth - hearing good things about the merchant from people you know
   - positive reviews from anonymous users of a site
   - Giving you, the consumer, more control over certain aspects of the process (ability to change your details, tailor the design of the website based on your preferences - such as layout, colour, content etc., a chance to have your say and be listened to, and acted upon)

Institution Based:

27. In your opinion, are there more complications in trust online because you cannot see or feel a product and speak to a merchant - unlike traditional brick and mortar shopping environments where all products are tangible and you can speak to staff/ shop owners etc?
   Yes       Somewhat       No       I don’t know
28. When you make your decisions on whether or not to trust a merchant, does the size and reputation of that company have any bearing on your decision?

Yes, I only like to do business with reputable merchants

To some degree

No, I will buy from any merchant

29. Does having an offline presence allow you to trust an online merchant more? i.e. if they have 1 or more physical shops as well as a website.

Yes, definitely

Yes, somewhat

Not really

No, not at all

I don’t know

Website Quality/ Aesthetics:

30. Do you think that the quality of a website is important in building trust? (i.e. the design, navigational ease, grammar errors, working links/ buttons, content etc.)

Yes, very

Yes, quite

Neither yes or no

Not particularly

Not at all

31. Is the visual appearance of a website important to you when deciding on whether to shop with them?

Yes, very

Yes, quite

Neither yes or no

Not particularly

Not at all

32. Which website would you prefer to shop online with based on the images of the following 3 websites? I would like you to base your opinion on which is designed the best for you - thinking about layout, clarity, image use, navigation, colour, consistency, assistive tools, or any other design considerations. Please circle the number next to your chosen image.
Improving Trust:

33. Do you think that consumer trust could be the biggest barrier to the long-term success of internet shopping (e-commerce)?

Yes  I don’t know  No

34. What would you say is the most important from the list below for building trust? Please tick one.

Morphing/ ability to tailor aspects of a website to suit gender, geographies and individual needs
Privacy & Security certificates
Involvement of recognised, trusted 3rd parties (Verisign, Norton, e-trust etc.)
Partnerships with trusted, well known brands
Changing the language and structure of policies to make them simple, short and clear
Transparency / disclosure of information to customers
Giving customers more control / power
Improved site quality (clear, simple, well structured, consistent layout, features, assistive tools and information, error free)
Useful reviews from other customers
Word of mouth
Improved website security
Other:

35. What is the least important from the list below for building trust? Please tick one.

Morphing/ ability to tailor aspects of a website to suit gender, geographies and individual needs
Privacy & Security certificates
Involvement of recognised, trusted 3rd parties (Verisign, Norton, e-trust etc.)
Partnerships with trusted, well known brands
Changing the language and structure of policies to make them simple, short and clear
Transparency / disclosure of information to customers
Giving customers more control / power
Improved site quality (clear, simple, well structured, consistent layout, features, assistive tools and information, error free)
Useful reviews from other customers
Word of mouth
Improved website security
Other:
36. Is there anything else you can think of that would help improve trust levels for you or other users participating in e-commerce?

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Thank you very much for completing my survey!
9.2. Appendix 2: Analyses Graphs, Tables & Extra Data

Q2. Age Groups

No. of respondents

Q3. Please specify the highest level of education you have received

Q4, 5, 6. Levels of Trust

No, not at all (5)
No, not particularly (4)
Sometimes I am, Sometimes I am not / I don’t know (3)
Yes, to some degree (2)
Yes, I am a very trusting person (1)

Q6 - E-Commerce Trust  Q5 - Internet Trust  Q4 - General Trust
Q11. Even though you have indicated that you do not trust certain aspects of the internet and/or e-commerce, do you still participate in on-line shopping?

Yes (1)  No (2)

87%  13%

Q15. How many hours per week on average are you online participating in e-commerce activities?

<table>
<thead>
<tr>
<th>Hours</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3</td>
<td>1 (1)</td>
</tr>
<tr>
<td>3 - 5</td>
<td>2 (2)</td>
</tr>
<tr>
<td>5 - 10</td>
<td>3 (3)</td>
</tr>
<tr>
<td>10+</td>
<td>4 (4)</td>
</tr>
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</table>

Q34, 35. Most & Least Important Factors for Building Trust

<table>
<thead>
<tr>
<th>Factor</th>
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<th>Least important</th>
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</thead>
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<tr>
<td>Morphine/ability to...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Privacy &amp; Security</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement of...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changing the language</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transparency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Giving customers more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved site quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Useful reviews from...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word of mouth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved website</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Graphs showing the effect of gender:

- Overall, do you generally trust the websites you use to shop online?

- Generally do you feel that you are a trusting person?

- Do you feel that you take on a certain amount of risk when you conduct online shopping?
Graphs / charts showing the effect of education:

Do you generally trust the websites you use to shop online?

Risk: GCSE or NON

Risk: University level
<table>
<thead>
<tr>
<th>Q18 (1)</th>
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<th>Q18 (3 + 4)</th>
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</thead>
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<tr>
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<td>Q6</td>
<td>Q5</td>
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<td>4</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>Q19 (1)</td>
<td>Q19 (2)</td>
<td>Q19 (3)</td>
</tr>
<tr>
<td>Q5</td>
<td>Q6</td>
<td>Q5</td>
</tr>
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<td>3</td>
<td>6</td>
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<td>2</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Aiken & Bousch Theory:
- Less trust
- High trust
- Slightly higher trust
- Slightly less trust
- Moderately higher trust
- Little knowledge
- Less trust

Experience level:
- High knowledge
- Moderate knowledge
- Slightly higher trust
- Slightly less trust

This Survey's Results:
- Less trust
- High trust
- Slightly higher trust
- Slightly less trust
- No trusts

Sample size:
- 105
- 133
- 30
Q32. Which website would you prefer to shop online with based on the images of the following 3 websites?


Total responses with usable ‘wrong’ results: 124

Count for website no.1: 4 (5 if you include freak result)

Count for website no.2: 52 (55 if you include freak results)

Count for website no.3: 64

Reponses to open ended question, and responses to ‘Other’ options:

<table>
<thead>
<tr>
<th>ID</th>
<th>Answer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>connecting with bank when paying for products</td>
</tr>
<tr>
<td>36</td>
<td>Guarantees for returns. Using methods such as PayPal so you can still control your money. More contact points to the merchant. E.g. More than a generic email address.</td>
</tr>
<tr>
<td>39</td>
<td>better government to find and deal with untrustworthy and fraudulent sites</td>
</tr>
<tr>
<td>40</td>
<td>Better communication between both parties.</td>
</tr>
<tr>
<td>47</td>
<td>some sort of e-commerce regulations enforceable by law - before sites can operate. (licences for instance)</td>
</tr>
<tr>
<td>50</td>
<td>Receiving goods before payment is made? Paypal is a good idea, as are credit cards that refund you if you suffer fraud....</td>
</tr>
<tr>
<td>54</td>
<td>If I bought something before, or knew someone who had. If there was a list (created by someone I trust - like my bank) of trusted sites.</td>
</tr>
<tr>
<td>64</td>
<td>Websites that do not force you to divulge information that is not pertinent to</td>
</tr>
</tbody>
</table>
the purchase i.e. home phone numbers etc

66 Although there is the security lock shown, I don’t like putting my credit/debit card information on line as you are not aware whether this information is retained and there are so many bogus sites are there glicks in their software allowing your information to be cloned. When shopping on line i tend to use my credit card as a security to prevent fraudulent access to my bank account/details

70 trusted site by users barometer on each site

74 Official recognised e-commerce auditor approval on websites. But the website must appear within the auditor’s website as well as the website in discussion.

75 Greater use of PayPal and continuing improvements within Banking / Finance Industry to prevent on-line fraud. Consumers need to be protected when making on-line transactions.

80 its good if the site has a telephone number that you can ring, get an answer to give you confidence you its a genuine UK site and can query a problem if required

83 People need to understand how to use websites, such as using pins on paypal and ensuring they actually check their account for discrripences. People need to understand how much more protection they have buying with card aswell compared to cash.

87 Brand recognition and positive knowledge of a shop e.g. Secret Sales.

104 No, i am aware there is always a risk when ordering online for the first time..

112 Paypal affiliation to protect my jewish gold :)

133 Some sort of 'Kite Mark' for trusted sites that could be indipendently verified. Like the FSA Also a register of blacklisted sites.

140 Money back guarantees if fraud occurs.
Security is one of the biggest issues for me, having been victim of Card Fraud when on-line shopping, i.e. card details cloned and used by someone to try to buy goods.

Q12. If you do not trust the internet, or do not trust e-commerce sites, then please specify why

<table>
<thead>
<tr>
<th>ID</th>
<th>Answer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>only trust specific vendors</td>
</tr>
<tr>
<td>43</td>
<td>The businesses I use are for-profit organisations and as such, care more for the bottom line than me - leaving my data liable to mis-selling</td>
</tr>
<tr>
<td>48</td>
<td>buying fakes</td>
</tr>
<tr>
<td>50</td>
<td>access by their staff - site might be secure but staff might be corrupt</td>
</tr>
<tr>
<td>53</td>
<td>Always room for error</td>
</tr>
<tr>
<td>54</td>
<td>Don't know what privacy policies, seals are .. don't understand the security</td>
</tr>
<tr>
<td>74</td>
<td>Depends upon the website being used and the level of security used on the computer device being used to browse/purchase.</td>
</tr>
<tr>
<td>103</td>
<td>Numerous documented cases of big companies (Sony, Reddit etc.) insecurely storing data.</td>
</tr>
<tr>
<td>106</td>
<td>I do trust some sites, such as those run by large companies that I recognise. Although there are many more questionable sites that I would not buy from.</td>
</tr>
<tr>
<td>110</td>
<td>Data hacking</td>
</tr>
</tbody>
</table>

Q34. What would you say is the most important from the list below for building trust?
<table>
<thead>
<tr>
<th>ID</th>
<th>Answer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Better governing bodies that show us that a merchant is trustworthy</td>
</tr>
<tr>
<td>77</td>
<td>all of these would create more trust in internet buying</td>
</tr>
<tr>
<td>110</td>
<td>Word of mouth is probably the most important but in an online context no consumer could safely say that their personal data is secure and hasn't been used / sold on to 3rd parties if there was a way to limit personal data used in online shopping that would highly influence me I.e. shopping by scanning a telco clubcard</td>
</tr>
</tbody>
</table>
9.3. Appendix 3: Survey Results

Separate PDF document.