



UNIVERSITY OF
LINCOLN

School of Computer Science

**The Impact of Online Consumer Reviews, Web
Atmospherics, and Exogenous Factors on Consumer
Behaviours and Their Purchase Decisions**

A thesis submitted in fulfilment of the requirement for the degree of
Doctor of Philosophy

Submitted by

Mishael Sultan Al-Rasheed

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University of Lincoln
School of Computer Science

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Supervisor

Professor Martin Hingley

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November 2016

STATEMENT OF AUTHORSHIP

I, **MISHAEL ALRASHEED**, confirm that the contents in this dissertation titled “**The Impact of Online Consumer Reviews, Web Atmospherics, and Exogenous Factors on Consumer Behaviours and Their Purchase Decisions**” has not previously been submitted for another degree at any other university or educational institution.

To the best of my knowledge and belief, I confirm that this thesis contains no contents previously published or written by other authors except where due reference is cited.

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Abstract

Consumer reviews, web atmospherics, and other specific exogenous factors currently play a key role in everyone's purchase decisions, and thus the proposed research will include efforts of the researcher to analyse the impact of online consumer reviews, web atmospherics, and exogenous factors on consumer behaviours and their purchase decisions. In brief, it is observed that more and more consumers are now making their decisions based on product-related reviews available on the internet before they buy a product, and thus the proposed research will endeavour to analyse such an impact by using both secondary and primary research methodology to fulfil the aims and objectives of the research. The aim of this research is to evaluate the collective influence of web atmospherics, consumers' reviews and ratings, and major exogenous forces on consumer behaviours and their purchase decisions, and to explore possible inter-linkages between these three factors within the process.

The study will seek the opinions of specialists and web marketers on this topic, and will utilise secondary research to gather information concerning the significance of web atmospherics on consumer behaviour. The study will explore how access to web atmospherics impacts on consumer reviews/ratings and its eventual influence on consumer purchasing behaviour. For this study, the data will be collected using a survey for respondents who sell and purchase goods online, not involving the opinions of buyers who have no experience of online purchases. Geographically, this research will only be conducted in UK.

A generic model that studies the combined effects of these three factors on the e-tail purchase decision is introduced in this research, providing a visual overview of these primary impact factors including web atmospherics, consumer reviews and exogenous factors. Although each of these dimensions has been independently shown to impact on behavioural outcomes, this study will provide a comprehensive analysis, incorporating these factors to

create a more accurate model of behavioural affectation. This detailed framework is a combination of multiple concepts and models, combining different factors that have not yet been explored collectively in any prior research. The outcomes of this research will yield a comprehensive study which considers all the factors that could possibly shape online consumer behaviour.

The current study conducted a major survey of a sample of over 500 participants from the online shopping community in the UK, as a global leading economy. The study claims that it has achieved such a collective approach using the analysis of various factors (represented here by web atmospherics, customers' reviews, and many other external factors), these being analysed together in realistic real-life conditions, as was attempted previously.

The study findings bridge a gap in knowledge in several different facets that can benefit various parties who are usually involved with the online shopping industry. Thus, this research will be beneficial to the managers of online stores to assess the effectiveness of their online purchase services. Not only for managers, the quality of such services is also brought to light for the benefit of customers, organisations and researchers, and consequently to the global Internet shopper community, which is expanding exponentially in numbers and locations. The results of the research are also expected to contribute to the design and development of proper online shopping services, in terms of policies, privacy, security, trust, information provision, navigation and procedures in the area of online services needed by the users.

To conclude, the current research contributes to exploring consumer satisfaction, purchasing and repeated purchasing via online stores' websites, as seen from different angles within a major economy of the world.

Keywords: Online consumer reviews, web atmospherics, exogenous factors, consumer behaviour, online shopper, online buying behaviour, e-consumers, e-satisfaction, purchase decisions, online trust, e-marketing, e-commerce, technology acceptance, e-wom, CGC.

Dedication

I dedicate this thesis to my great mother, Modi Al-Rasheed, and my beloved pregnant wife, Najla Al-Muhaya. I could not have done this without your unconditional love and support. I also dedicate my work to my yet unborn son, Sultan, hoping that one day he is going to be proud of his father.

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Table of Contents

Abstract.....	4
Dedication.....	6
Acknowledgements.....	7
Table of Contents.....	8
1. Introduction.....	11
1.1 Background of the Study.....	11
1.2 Lessons from Traditional Retailing.....	13
1.3 Research Rationale.....	15
1.4 Identified Researchable Gaps.....	16
1.5 Research Aim (Research Problem).....	16
1.6 Research Objectives.....	17
1.7 Research Questions.....	17
1.8 Significance of the Study.....	18
1.9 Scope and Limitations of the Study.....	19
1.10 Summary.....	22
2 Literature Review and Research Conceptualization.....	24
2.1 Internet and e-Shopping.....	24
2.1.1 Internet and Changing Shopping Trends.....	24
2.2 E-WOM and the Socialization of Marketing.....	25
2.2.1 Consumer-Generated Content.....	25
2.3 Consumer Reviews and Ratings.....	27
2.3.1 Consumer Reviews/Ratings and Experience Goods.....	30
2.4 Consumer Decision Making Process.....	31
2.4.1 Decision-Making Impact Factors and Web Atmospherics.....	32
2.5 Empirical Exploration of Consumer Reviews / Ratings in Practice.....	34
2.5.1 Consumer Ratings/Reviews and the Hospitality Industry.....	36
2.5.2 Online Retailing and Reviews and Ratings in Consumer Decision Making.....	37
2.5.3 Micro-Blogs and E-WOM in Consumer Decision Making.....	38
2.6 Critical Analysis of Literature and Significance of Current Research.....	42
2.6.1 A Critical Review of Empirical Studies in CGC and Online Reviews.....	43
2.6.2 Consumer Buying Behaviour.....	45
2.6.3 Building Blocks of Customer Web Experience.....	50
2.7 Theoretical Framework and Contribution.....	63
2.8 Research Conceptual Framework (Research Model).....	64

2.9	Model Explanation and Justification	67
2.10	Research Hypotheses	68
3	Research Methodology	70
3.1	Introduction.....	70
3.2	Research Paradigm	71
3.3	Research Approach.....	80
3.4	Research Instrument	94
3.5	Data Analysis.....	105
3.6	Research Participants.....	107
3.7	Ethical Concerns	110
3.8	Summary.....	111
	Appendices.....	112
	Appendix A: Participant Query Letter.....	112
	Appendix B: Participant Survey	113
4	Data Collection, Analysis, and Research Results	124
4.1	Data Collection Methods: Questionnaire Design	124
4.2	Research Results	131
4.2.1	Part A: Analysis of the participant personal data.....	132
4.2.2	Part B: Analysis of quantitative data	138
4.2.3	Part C: Analysis of qualitative data	164
5	Discussion.....	181
5.1	General Discussion	181
5.1.1	Research intents and expected products	181
5.1.2	Research Procedure.....	183
5.1.3	Demographic profile of participants and their previous online shopping experiences.....	184
5.2	Answering Research Questions	187
5.2.1	Question 1: What are the input factors that influence customer online purchase behaviour and decision making process?.....	188
5.2.2	Question 2: What are the elements and mechanisms associated with the e-tail customer reviews and ranking practices, and how exactly they do influence the online purchase decision?	190
5.2.3	Question 3: How socio-demographic factors affect consumers' online behaviour and purchase decision?	191
5.2.4	Question 4: What is the influence of the e-store web atmospherics on customers' online behaviours, and how it influences their purchase decisions?	193

5.2.5	Question 5: What are the external forces to the web-environment that drive the customers to decide on their online purchases, and how exactly these forces influence such decisions?	194
5.2.6	Question 6: Are there any interlinkages or mutual effects between the three factors of web atmospherics, customer reviews, and external forces as inputs to the e-tail purchase processes?	196
5.2.7	Question 7: How do these three factors combine to collectively influence the online purchase processes?	198
5.2.8	Question 8: What is the share of each of the three mentioned factors on the online decision making process?	200
5.2.9	Question 9: How are these three factors perceived by the e-tail users?.....	202
5.2.10	Question 10: How can the mechanisms of each of these three factors on the online purchase process be optimized?.....	204
5.3	Conclusion of the current discussion.....	205
6	Research Conclusions and Recommendations.....	207
6.1	Research Conclusions	207
6.1.1	The context of this research	207
6.1.2	Testing research hypotheses	210
6.1.3	Research Contributions to Knowledge	211
6.1.4	Research Limitations	214
6.2	Recommendations Resulting From the Current Research.....	216
6.2.1	Recommendations to E-retailers and Online Shopping Website Designers	216
6.2.2	Recommendations to Online Shoppers.....	218
6.2.3	Recommendations for Future Research	219
6.3	Conclusive Summary	220
6.3.1	Summary of the Research Thesis.....	220
6.3.2	Summary of the Research Results	222
	References.....	226

Chapter One

1. Introduction

1.1 Background of the Study

From the mid 1990s, there has been a rise in interest from researchers and marketers in virtual communities on the Internet and their implications on marketing (Algesheimer and Dholakia, 2006). From the perspective of consumer behaviour, one of the salient developments within virtual communities has been the expansion of websites on which customers can write and read about their evaluations and experiences about a variety of services and products. The degree of interest in online retailing has grown dramatically in the recent years as it has increasingly become apparent that online retailing provides an array of advantages to sellers and buyers alike. Burns (2005), Maven (2007), and Leggatt (2009) note that consumer preferences and demands are evolving to a point at which online retailing is becoming the most suitable choice. Online retailing provides consumers with 'spatial and temporal convenience', increased service value or lower priced products (Lynch and Ariely, 2000), as well as enhanced product information that allows consumers to be well informed during purchasing decisions (Bellman, Lohse, and Johnson, 1999). The result of these changing preferences is that retailers can achieve competitive advantage by satisfying the consumer demands just as they used to do in a traditional bricks-and-mortar environment.

This change towards online retailing has made it clear that one cannot simply shift real-world retail marketing models to a virtual shopping environment, and that there are fundamental differences, such as marketing theories, which are tied to the bricks-and-mortar business model and thus cannot be embraced and applied to online retailing. Mehrabian and Russell (1974) purport that the use of environmental psychology has boosted retailing in the real world, and

that researchers now are developing models to adapt this concept to online retailing. The degree to which this subject has been studied from an online viewpoint is limited, however this study intends to add to the existing literature and put forth an alternative model to show the extent to which online consumer reviews, ratings and web atmospherics affect consumer intentions to purchase. As buyers search online for product information and assess product alternatives, they usually gain access to a myriad of product reviews and ratings from other potential buyers or current owners of the same product.

Previous research has widely assessed the role of online recommendation systems and the role of expert reviews, and has concluded that feedback mechanisms can impact on customer trust and intention to purchase, and contended that such reviews and ratings add value for a potential buyer (Chen and Xie, 2005; Bakos, 1997; Chen, Wu, and Yoon, 2004; Gretzel and Fesenmaier, 2006). More recently, research has assessed the role of online buyer product reviews, particularly focusing on the traits of the reviewers and self-selection bias (Forman, Ghose, Wiesenfeld, 2008; Hu, Liu, and Zhang, 2008; Li, and Hitt, 2008; Smith, Menon, and Sivakumar, 2005). Recent research has also indicated that buyer reviews can impact positively on sales (Chen, et.al. 2008; Chevalier and Mayzlin, 2006; Clemons, Gao, and Hitt, 2006; Ghose and Ipeirotis, 2006). Furthermore, Clemons et al. (2006) found that strongly positive ratings can have an optimistic impact on product sales.

Online customer reviews can be defined as peer-reviews of products posted on either third party or the product company's own websites. Nowadays, retail websites provide consumers with the chance to post product reviews with ratings, in the form of numerical star ratings (usually ranging from 1 to 5 stars), and open-ended customer comments about the product (Jacobs and Smith, 2004). Kumar and Benbasat (2006) have posited that the presence of customer reviews on a website has shown to increase the authenticity of the online retailer,

product characteristics, product quality, payments and shipping. Reviews increase the surfing time on the website (“stickiness”), attract buyer visits and create a sense of community for frequent shoppers.

However, as the availability of customer reviews increases, the strategic emphasis changes from the mere presence of customer reviews to the customer evaluation and utilization of the reviews. Online retailers, such as Amazon.com and Epinions, specify elaborate guidelines for generating consumer reviews. The major reason consumers utilize online ratings is to facilitate a sound decision more easily (Dabholkar, 2006). The perceived analytical nature of website information positively influences consumers’ attitudes toward online shopping (Jiang and Benbasat, 2007) and, for some shoppers, seeking information is itself a source of pleasure (Mathwick and Rigdon, 2004). After making the decision to purchase and concluding the purchase itself, some buyers revisit the website in the post-purchase assessment stage to post views and comments about the product purchased. After reviewing peer comments, consumers gain awareness of an unfulfilled product need, hence completing the process of purchase decision.

1.2 Lessons from Traditional Retailing

The term *atmospherics* is a hypothetical concept that is generally tied to the in-store environment. There are a number of studies on the impact of in-store effects in the bricks-and-mortar setting as in-store prompts impact on the consumer’s experience by influencing browsing, shopping time and purchase intentions (Baker, Grewal and Levy 1992; Sharma and Stafford, 2000; Kumar and Karande, 2000; Grewal, Baker, Levy and Voss, 2003; Michon, Hong, Smith and Chebat, 2008; Menon and Kahn, 2002). In-store characteristics that have been analysed consist of the temperature, smell, lighting, and colour of a store, and even the music being played in the store. Based on the concept of psychological stimulus response, researchers

point out that consumer decision making can be influenced by “arousal and pleasure” (Kotler, 1974). For example, stimuli such as loud music and overcrowding reduce browsing time, consumer interaction, and the purchase of products (Harrell, Hutt, and Anderson, 1980; Kahn and McAlister, 1997). This prior research indicates that if a consumer experiences a retail atmosphere that significantly decreases arousal and the pleasure of the shopping experience, it will impact negatively on the behaviour of the buyer.

Researchers have started to apply these methods to online retailing. Dailey (2004, p. 796) views online atmospherics as the “*conscious designing of web environments to create positive cognitions and/or effects in web surfers in order to prompt positive consumer responses.*” Shih (1998) suggests that although an environment does not exist in the ordinary sense, since there is no physical area of exchange, the online interface in which the consumer purchases products still possess “atmospheric qualities”. It is, therefore, proposed that a consumer’s experience of an online shopping site is able to produce similar emotional and cognitive responses to a shopper in a physical store, although the stimuli will differ.

Eroglu, Machleit, and Davis (2003) note that online atmospherics are grouped according to how relevant the media prompts are on a certain website. They suggest that a website will result in cognitive and emotional response by furnishing relevant information to the consumer during the buying process and this information may include pictures, navigation aids and product description, which will constitute an online atmosphere. Eroglu, Machleit, and Davis (2001) additionally suggest that online atmospherics can be grouped into two groups, namely “low task relevant environment” and “high task relevant environment.” They deduce that the atmospheric prompts consist of all the information that assists a consumer in the purchasing process, along with all other background information which may include music, pictures, and advertisements.

This study emphasizes the importance of atmospherics in facilitating customer behaviour in the online retailing environment and proposes that the online atmosphere can be crafted skillfully (much like that of a bricks-and-mortar environment) to improve website effectiveness in encouraging customer buying behaviour. Additionally, it will be highlighted that the existing models of online atmospherics are incomplete when used to explain real life online shopping scenarios. This study will further look at the impact of online consumer reviews/ratings, as well as the influence of some exogenous factors in product purchase decisions.

1.3 Research Rationale

In previous literature, it is proposed that a consumer's experience of an online shopping site is able to produce similar emotional and cognitive responses that a shopper would get from a physical store, although the stimuli will differ. Many attempts were taken in the past to provide evidence to support such a proposal by considering various factors that impact on the online purchase decision-making process. Three key factors of those are the online store website atmospherics, previous consumers' reflection via reviews and ratings, and other influencing external forces. These factors, along with others that influence the online purchase mechanisms, are often studied in isolation from each other, thus greatly reducing the validity of these studies in reflecting real-life situations.

Furthermore, even when studied separately, these factors are not fully addressed with regard to their individualized actual input weight related to the overall e-tail purchase behaviour. For instance, the impact of web atmospherics is yet to be analysed as a holistic carrier environment of the e-tail processes. Also, businesses are still uncertain about the impact of online product reviews/ratings on purchasing behaviour and consumer decision making. Previous studies have only outlined the effect of online product reviews/ratings, customer behaviour and decision making for high involvement and expensive products (Park, Lee, and Han, 2007; Cheung, Luo,

Sia, and Chen, 2009; Prendergast and Ko, 2010). A vital understanding of consumer behaviour in the virtual environment, as opposed to the physical world, cannot be achieved if the issues affecting the purchase decision are not taken into account or are misconceived.

1.4 Identified Researchable Gaps

Existing literature lacks evidence on the exact *collective* influence of web atmospherics, consumers' reviews and ratings, and major exogenous forces on consumer behaviours and their purchase decisions. Additionally, current literature lacks evidence on the exact weights – if any – that these three factors share in the mechanisms of online purchase decision making when taken in combination. Furthermore, a third gap in current literature is the lack of evidence on possible interaction – inter-linkage - between these three factors.

1.5 Research Aim (Research Problem)

Businesses are still uncertain about the impact of online product reviews/ratings on purchasing behaviour and consumer decision making. Most previous studies have only outlined the effect of online product reviews/ratings, customer behaviour and decision making with regard to high involvement and expensive products (Park, Lee, and Han, 2007; Cheung, Luo, Sia, and Chen, 2009; Prendergast and Ko, 2010). So, this study will focus on the impact of online consumer reviews and ratings on consumer behaviours and their purchase decisions. Accordingly, the research aim can be stated as follows:

‘The aim of this research is to evaluate the collective influence of web atmospherics, consumers’ reviews and ratings, and major exogenous forces on consumer behaviours and their purchase decisions, and to explore possible inter-linkages between these three factors within the process.’

1.6 Research Objectives

To achieve the stated aim, this study attempts to fulfil the following objectives:

- I. To explore the various input factors to the customer online purchase behaviour and decision making, with focus on the e-tail customer reviews and ranking attributes.
- II. To appraise the influence of each of the web atmospherics, customer reviews and rankings, and exogenous forces on the customer online purchase behaviour and decision.
- III. To evaluate the collective influence of the three stated factors on customer online purchase behaviour and decision.
- IV. To synthesize the impact of the inter-linkage between the three stated factors within the mechanisms of online purchase decision.
- V. To establish relevant recommendations to enhance the online customer purchase experience.

1.7 Research Questions

In light of the above listed objectives, the following questions are presented to trigger the research cycle:

RQ1: *What are the various input factors to customer online purchase behaviour and the decision-making process?*

RQ2: *What are the various elements and mechanisms associated with the e-tail customer reviews and ranking practices, and how exactly they do influence the online purchase decision?*

RQ3: *How do socio-demographic factors affect consumers' online behaviour and purchase decision?*

RQ4: *What is the influence of the e-store web atmospherics on the customers' online behaviours, and how does it influence their purchase decisions?*

RQ5: *What are the external forces to the web environment that drive customers to decide on their online purchases, and how exactly do these forces influence such decisions?*

RQ6: *Are there any inter-linkages or mutual effects between the three factors of web atmospherics, customer reviews, and external forces as inputs to the e-tail purchase processes?*

RQ7: *How do these three factors combine to collectively influence the online purchase processes?*

RQ8: *What is the share of each of the three mentioned factors on the online decision-making process?*

RQ9: *How are these three factors perceived by e-tail users?*

RQ10: *How can the mechanisms of each of these three factors of the online purchase process be optimized?*

1.8 Significance of the Study

Nielsen conducted a global study in 2010 revealing that almost 20 % of consumers would not buy a product before reading online product reviews (Nielsen, 2010). The study will, therefore, seek to establish the significance of consumer reviews/ratings and how they affect decision making by consumers when making purchases. A vital understanding of consumer behaviour in the virtual environment, as opposed to the physical world, cannot be achieved if the issues affecting the purchase decision are not taken into account or are misconceived. For example, online buyers' concerns about lack of opportunity to assess goods before making a purchase

are regarded as the particular factor influencing the online buying decision. Alba et al. (1997) and Winer et al. (1997) posited that consumers who visit the Internet frequently are expected to utilize online shopping more often as it boosts their trust in the particular website than for less frequent online buyers.

The Internet is revolutionizing the way buyers purchase commodities and services, and is quickly developing into a global phenomenon. A number of companies have begun using the Internet with the sole objective of reducing costs of marketing, hence substantially reducing the price of their services and products in order to stay ahead of their competitors. Companies also utilize the websites to communicate, convey, and distribute information, to get feedback, sell the goods, and conduct customer satisfaction surveys. Customers use the website not only to purchase goods online, but also to compare product features and seek after sales services on the purchased products. This study, therefore, will delve into the online shopping concept to establish the comparative advantages enjoyed by both consumers and online businesses. The study will also analyse the determinants and the effects of online product reviews/ratings on online customer buying behaviour and decision-making process. So, based on the discussion above, this study expects that:

Online consumer reviews, ratings, web atmospherics, and specific exogenous factors have a significant impact on the buying behaviour of the consumers.

1.9 Scope and Limitations of the Study

The focus of this study is on the impact of online consumer reviews/ratings, web atmospherics, and exogenous factors on consumer behaviour and their purchase decisions. The study will seek the opinions of specialists and web marketers on this topic, and will utilise secondary research in order to gather information concerning the significance of web atmospherics on

consumer behaviour. The study will explore how access to web atmospherics impacts on consumer reviews/ratings and its eventual influence on consumer purchasing behaviour. For this study, the data will be collected using a survey for respondents who sell and purchase goods online, not involving the opinions of buyers that have no experience of online purchases. Geographically, this research will only be conducted in UK.

The primary focus will be on the consumer online shopping behaviour and purchasing process, as influenced by the three previously stated aspects: consumer reviews, exogenous influences, and atmospherics. This research will build on the numerous studies that have already been performed on web atmospherics. Table 1 provides a list of studies performed on web atmospherics.

Table 1: Summary on key web atmospherics studies

Citation	Design	Sample	Purpose	Findings/Propositions
Vrechopoulos, O’Keefe and Doukidis (2000)	Conceptual	N/A	To identify the major determinants of effective website design.	A model for the development of a web-shopping environment and a model for the evaluation of the virtual store atmosphere.
Eroglu, Machleit and Davis (2000)	Survey and Experiment	166 undergraduate students	To test a typology of online atmospherics.	Three studies provided empirical evidence for the cue typology. The high task-relevant cues are rated equally helpful by the high and low AR respondents, while the low task-relevant cues are rated as being more helpful for the high AR respondents.
Eroglu, Machleit and Davis (2001)	Conceptual	N/A	To examine the atmospheric qualities of online retailing.	A conceptual model which examines the potential influence of atmospheric qualities of a virtual store.
Childers, Carr, Peck and Carson (2001)	Experiments	274 students and 266 actual shoppers	To develop and test an attitudinal model concerning web behaviour.	Results support the differential importance of immersive, hedonic aspects of e-tailing.

Vrechopoulos and Siomkos (2002)	Conceptual	N/A	To provide an analogy between the conventional and the virtual store atmosphere.	The appropriate virtual retail store atmosphere can be more effectively designed if it considers the same theory and methods through the help of HCI.
Wang, Baker and Wagner (2002)	Conceptual	N/A	To build a conceptual model that examines the role of atmospherics in e-tailing.	It was proposed that in an online shopping environment, desirable ambient stimulus cues will result in positive levels of stimulation, whereas undesirable ambient cues will result in negative levels of stimulation.
Biers and Richards (2002)	Laboratory Experiment	213 undergraduate students	To evaluate the effects of website background hues on consumers' attitudes toward selected product attributes.	Demographic characteristics were associated with significant differences in the effect of web background colour upon attitudes toward products. The likelihood of purchase was higher when a perceived expensive item was featured on a cool background colour.
Eroglu, Machleit and Davis (2003)	Laboratory Experiment	328 respondents	To empirically test the model proposed by Eroglu et al. (2001).	The perceived online store environment influences shoppers' pleasure, which in turn influences attitude, which then affects their approach/avoidance behaviour.
Vrechopoulos, O'Keefe, Doukidis and Siomkos (2004)	Laboratory Experiment	120 real customers in Greece and in U.K.	To test whether conventional store layout theory can be applied in the context of virtual retailing.	The freeform layout was perceived as significantly more useful in finding the shopping list products within the store and the grid layout was significantly easier to use. Racetrack and freeform layouts engage subjects for longer.
Sautter, Hyman and Likosius (2004)	Conceptual	N/A	To offer suggestions for e-tail atmospherics.	An extension of the framework developed by Eroglu et al. (2001), which introduces the concept of dual environments.

Dailey (2004)	Conceptual	N/A	To provide a framework in which the navigational atmosphere of a website can be examined.	The level of reactance aroused by the navigational atmosphere of a website influences site approach/avoidance behaviour.
McKinney (2004)	Online Survey	370 US consumers	To identify the web atmospheric variables that contribute to satisfaction.	Some atmospheric variables influence satisfaction for all consumers, while other atmospheric variables influenced satisfaction for specific shopping segments.
Richard (2004)	Online Survey	Web surfers	To examine the role of web atmospherics on consumer behaviour.	Entertainment is positively related to site attitudes, site involvement, exploratory behaviour and purchase intentions.
Mummalaneni (2005)	Field Experiment.	130 undergraduate students	To investigate website characteristics, consumer online emotional states and shopping behaviours.	Proposes the S-O-R framework as a viable model for the investigation of consumer responses to the websites of virtual stores, and finds substantial support for its propositions.

Adopted from: Krishnamurthy, Sandeep, and Pedro Isaías. (*E-commerce, 2006*)

1.10 Summary

A global study by Nielsen revealed that almost 20 % of consumers would not buy a product before reading online product reviews, and past research purports that the use of environmental psychology has boosted retailing in the real world and now researchers are coming up with models to adapt this concept to online retailing. However, the degree to which this subject has been studied from an online perspective is limited, so this study intends to fill this gap in the existing literature and put forth an alternative model to show the extent to which online consumer reviews, ratings, external influences, and web atmospherics affect consumer intentions and behaviours to purchase. The study will, therefore, seek to establish the significance of consumer reviews/ratings and how they affect decision making by consumers

while making purchases. Additionally, this study is significant because the existing models of online atmospherics are incomplete when used to explain real life online shopping scenarios, and this topic will be explored in detail in the next chapter. The literature review will further discuss the generation of online ratings and reviews, use of consumer feedback in the buying process, web atmospherics, and will finally develop a theoretical framework that will be validated in this research.

Chapter Two

2 Literature Review and Research Conceptualization

2.1 Internet and e-Shopping

Berners-Lee first used the term *World Wide Web* (www) in 1990 after CERN, a Swiss research institute, introduced it in 1989 (info.cern.ch 2008). HTTP, which is the abbreviation for Hyper Text Transfer Protocol, is the protocol used to transfer data from one computer to another. The tool, which allows Internet users to access and view web documents, is called a *web browser* (Shiflett 2003). Hyper Text Markup Language (HTML) is the language generally used to create web documents (Mercer 2003). HTML has supporting links which makes switching from one document to another easy, whereas hypermedia information (i.e. sounds, graphics, etc) are seamlessly displayed (Mercer 2003). When the Internet was first introduced, only government institutions and officials could access it (Todaro 2007); however as the security protocol continued to evolve, business users rapidly emerged, adopting the online protocol as an essential commercial resource (Bangia 2005).

2.1.1 Internet and Changing Shopping Trends

Through the socialization of Internet resources, consumers have assumed control over online content and brand engagement, sharing and exchanging according to preferences and individual values (Sweeny, 2008). For commercial marketers, this radical shift in power has dramatically altered the nature of consumer communication, reducing the value of push-based exchange and placing greater emphasis on consumer-centric, pull-based communication strategies (Sweeny, 2008; Pitt and Berthon, 2011). Accompanying the proliferation of social media channels and online communication exchanges, commercial activities have increased significantly as consumers gradually amend their behaviour to embrace online shopping.

Directly contributing to such amended consumer behaviour are increasingly innovative websites, a broader spectrum of conveniently accessible products, and gradually decreasing risks and vulnerabilities (Javadi et al., 2012). For an increasingly educated and information-rich consumer population, the interconnectivity of Internet-based media provides the unique opportunity to “get involved in the marketing process” (Pride and Ferrell, 2011, p. 252).

2.2 E-WOM and the Socialization of Marketing

Widely disseminated and extensively embraced, the Internet has evolved towards a medium of exchange, whereby both consumers and marketers embrace an informal dialogue in the form of online content. Lisa (2010) opines that the evolution of the Internet towards an innocuous resource has heavily influenced the way people receive and perceive information. As consumers develop their online presence, they continue to participate and influence the purchase decisions of others in word of mouth marketing, whose scope which was quite limited has expanded and gained an extended form known as electronic-word-of-mouth (eWOM) (Lisa, 2010. According to Chatterjee (2001) the most rampant and reachable forms of eWOM are consumers reviews and ratings, whilst Douglas and Liu (2011, p. 47) emphasize that “consumer reports, consumer opinions/*ratings*, product brand, and familiarity with the product are identified by all participants as ways to judge quality online”. Regardless of medium, eWOM is an increasingly influential mechanism in brand development and consumer decision making, evolving the nature of reciprocity in marketing exchanges.

2.2.1 Consumer-Generated Content

With changing shopping trends and increased consumer participation in online commerce, the traditions of purchase decision making are continuing to adapt and evolve dramatically. Consumers rely on the Internet for their purchase decisions more than ever before, leveraging enhanced informational access to affect information sourcing, define brand preferences, and share product experiences. Riegner (2007) recognises that the online

revolution has favourably impacted consumer shopping behaviours, providing informational access that is markedly superior to more traditional (e.g. advertisements, in-store support, product labels) feedback mechanisms.

In order to harness the full potential of Internet marketing, marketers and brands must be able to critically analyse, identify, and influence those factors which directly impact upon consumer decision-making processes (Pride and Ferrell, 2011). At the core of the expanded information platform is what Sweeny (2008, p. 155) defines as *consumer generated content* (CGC), or resources which are ‘created by consumers for consumers’. The breadth of CGC is increasingly important to marketing strategies and brand initiatives, as an empowered and vocal consumer population embraces a variety of media, sharing ‘facts, opinions, impressions, experiences, rumours, reviews, complaints, and praises through online channels’ (Sweeny, 2008, p. 155). A recent report published by eMarketers (2009) indicated that more than 116 million users had accessed or used CGC to influence their online decision making processes, with a population of more than 155 million anticipated by 2013. Similarly, Ostrow (2009) identified a large population of content creators (82 million), predicted to surpass more than 115 million by 2013.

The conceptual foundations of CGC have recently evolved following the publication of the Forrester Technographics ladder, a commercially oriented distillation of social and online media users (Celestre, 2012). This model has provided industry professionals, researchers, and analysts with a singular, comparable archetype on which to base further discussion of CGC and online behaviour. Specifically, this ladder consists of seven distinct categories of online users, highlighting a declining scale of participation and activity (Celestre, 2012):

- Creators: Publish web pages/blogs, upload video/audio (24%)
- Conversationalists: Update status/post updates (36%)
- Critics: Comment on blogs and post ratings/reviews (36%)

- Collectors: Use RSS and tag web pages to gather info (23%)
- Joiners: Maintain profile on social networking sites (68%)
- Spectators: Read blogs, watch peer videos, listen to podcasts (73%)
- Inactives: Are online but don't yet participate in any form of social media (14%)

The distinction in user behaviour associated with this predictive ladder is based upon varying surveys of online users conducted by Forrester over the 2011-2012 period (Celestre, 2012). Importantly, the ladder itself reflects a critical bias in the activities of online users, whereby, a significant percentage (68%) favour the joint category of socially maintained and minimally participative activities. With just 24% of users representing an active, creator-based domain, this ladder suggests that a large percentage of the general user population is being influenced by a small percentage of active, vocal, and integrated individuals.

2.3 Consumer Reviews and Ratings

One category of CGC that has important implications for marketing and brand development is defined by Mudambi and Schuff (2010) as 'peer-generated product evaluations'. These reviews and critiques are posted on third party websites, search indexes, or social media in response to product experiences or consumer-supported opinions regarding product features, characteristics, and value (Mudambi and Schuff, 2010). Ahuja (2009) highlights the importance of these feedback mechanisms, suggesting that the number of individuals following online reviews has now eclipsed that of users following newspaper or magazine reviews and publications. Statistically, Sweeny (2008) reports that 90% of consumers now access the Internet to read about a product or service, orienting their information seeking behaviour towards a collaborative, consultative standard.

Trust in consumer generated content is an essential precondition of behavioural affectation. Constantinides (2008:19) emphasizes that as a direct result of reliability

perceptions, consumers now associate peer-based reviews with expert authority, positively identifying with ‘the genuine feelings’ of the reviewer. Importantly, Smith et al. (2005) contend that consumers now trust reviewers more than they trust the brand messaging espoused and presented by marketers, placing significance upon the perceptual status of brands within the sphere of social exchange and communication. Within the trust-based domain, experiential reporting from other consumers is viewed as a realistic, snapshot representation of the product or service, manifesting ‘real life’ outputs that allow for vicarious consumption (Bickhart and Schindler, 2001). Corchado et al. (2008) identify this experiential dialogue between consumers as one of the primary advantages to the social architecture of CGC and online forums. Further, the researchers reflect that due to the proliferation of online exchange and product/service-specific information, there is a much broader spectrum of feedback to improve the consumer decision-making experience (Corchado et al., 2008). Finally, the variable nature (positive and negative) of the feedback received through CGC is superior to the single-sided branding and messaging which consumers are typically exposed to in more normative daily routines (Corchado et al., 2008; Powell et al., 2011). For this reason, CGC represents a support mechanism for targeted behaviour, whereby consumers actively pursue feedback through popular online channels in order to assist in their decision-making process.

Focusing on the decision making process, early theorists, Olshavsky and Granbois (1979:94) recognized that in any consumer outcome, selections are preceded by a decision-making process, whereby evaluative processes influence the end choice. For many consumers, the experiential contribution of peer reviewers is a primary determinant of behavioural choices, instilling the confidence required to pursue a specific outcome (Nash et al., 2001). Important empirical research in this field conducted by Cha (2011) challenged college-aged consumers to consider the perceived value and usefulness of both real and virtual items, critically evaluating those factors which directly influenced their decision-making process. Based upon

the characteristics of online shopping (usefulness, ease of use, enjoyment, security, privacy concerns) and consumer characteristics (subjective norm, flow, innovativeness, and gender), the researchers attempted to differentiate between online consumer purchases by dependent variable (Cha, 2011:117). Of these factors, subjective norms had the strongest positive influence on consumer purchasing behaviour for both real and virtual items, whilst flow characteristics of the web architecture had the most significant negative influence on both categories (Cha, 2011). The findings reveal a both internally and externally influenced decision-making process, which is similar today to the early research presented by Olshavsky and Granbois (1979) in relation to measured decisions and reasoned actions in purchasing.

Consumer reviews do not only help consumers decide in favour or against a product, they also have specific implications for the producers. Positive and negative reviews about a product or service impact on the reputation of the seller accordingly; however, negative reviews are more powerful than positive ones (Brown and Reingen 1987). Negative information has a stronger impact in the way that it increases the uncertainty and ambiguity in consumer psyche, which prevents him/her from making a buying decision (Brown and Reginen, 1987). Pavlou and Dimoka (2006) suggest that both positive and negative peer ratings have a direct influence on purchase decisions, with many companies providing resources that enable both formal (full review) and informal (star-based, scalar) product ratings. Exemplifying this process, Corchado et al. (2008) highlight the star-based rating scale used at Amazon.com to allow consumers to rate their purchases, an informal determinant of past experiences which Hackel (2009) refers to as a valance of word of mouth feedback. By default, consumer generated feedback differs from more traditional consumer reviews in that they provide a narrowed and experience-based valuation, not detailed or exhaustingly thorough reviews. Therefore, the volume of feedback and the consistency of the response is an important contributor to the user-perceived validity of the reviews.

As user generated content expands throughout all online channels and industries, Chen et al. (2011) suggest that there are specific incentives underlying the posting and moderation of online reviews for consumers. For example, consumers are motivated psychologically as they gain both social and self-approval for vocalized views; furthermore, consumers may use the online forum as a mechanism for catharsis, venting negative experiences to release pent up frustration (Chen et al., 2011). It is for this reason that Tuskej et al. (2011) place significant value on high consumer involvement in brand messaging - building positive, sustainable relationships that will support a consistent brand message. This form of consumer-generated marketing effectively leverages the strengths of the peer-based CGC, whilst simultaneously creating a positive brand image through subjective consumer impressions (Tuskej et al., 2011). The underlying psycho-social affectation described by Chen et al. (2011) is ideally aligned with corporate objectives, building loyal relationships that further brand messaging and add corporate value.

2.3.1 Consumer Reviews/Ratings and Experience Goods

Experience goods, according to Boardman et al (2008, p. 100) “are products about which consumers can obtain full knowledge, but only after purchasing and experiencing them”. Many authors and researchers agree that consumer reviews significantly influence the sales of experience goods (Ye et al 2008; Seyed-Ahmad and Murphy, 2010; Javadi et al., 2012). The trusted status of online reviews is an important predictor of consumer behaviour, whereby Smith et al. (2005) and Constantindes (2008) have demonstrated how reviews operate as an intermediary between uncertainty and anticipated outcomes. For example, Zappal and Gray (2006:195) recognize that when confronted with an unknown retailer or product, the perception of risk by the consumer is high; therefore, peer feedback serves to alleviate these concerns and provide the confidence needed to pursue the purchase. The acceptance of online

communication channels and social marketing through peer-based feedback and ratings is an important predictor of future consumptive behaviour patterns (Akar and Topcu, 2011). Through a comprehensive survey of consumers from varying backgrounds, Akar and Topcu (2011) determined that there was a direct association between participation in social networks and online message boards, and user attitudes towards social media marketing and online product reviews. Yet in spite of such positive affiliations with more socially-innovative marketing techniques, Sultan et al. (2009) present evidence to suggest that receptivity is largely based upon consumer experience and personal valuation with the media in question. From direct to indirect relationships with marketers, consumers across the global community are taking control of their information resources, rejecting those that fail the personal test of relevance and/or validity (Sultan et al., 2009). For marketers, such studies have important implications regarding the continued value of targeted agendas and personalized messaging, whereby consumer interests must be piqued through more innovative and participative exchanges.

2.4 Consumer Decision Making Process

Purchase decisions regarding a product or a service vary from person to person according to both intrinsic and extrinsic impact factors which influence the perceptual viability of the intended purchase. Consumer behaviour, as defined by Lamb et al (2011, p. 189) as the “processes a consumer uses to make purchase decisions, as well as to use and dispose of purchased goods or services; including factors that influence purchase decisions and product use”. This process has five distinct stages: 1) needs recognition, in which the consumer first feels the need for a product or service; 2) information search, in which the consumer tries to gather information about the product and the available options; 3) evaluation of alternatives, in which the consumer compares the options he/she has identified during the last stage in terms

of different characteristics such as usability, price etc; 4) purchase, in which the consumer selects and purchases the product; and finally 5) post purchase behaviour, in which the consumer is either satisfied or dissatisfied with the purchase he/she has made (Lamb et al 2011, p. 189). Figure 2.1 provides a visual overview of this process and highlights a range of influences which contribute to outcomes at each stage of the decision-making process, including cultural, social, individual, and psychological affectations (Lamb et al., 2011:190).

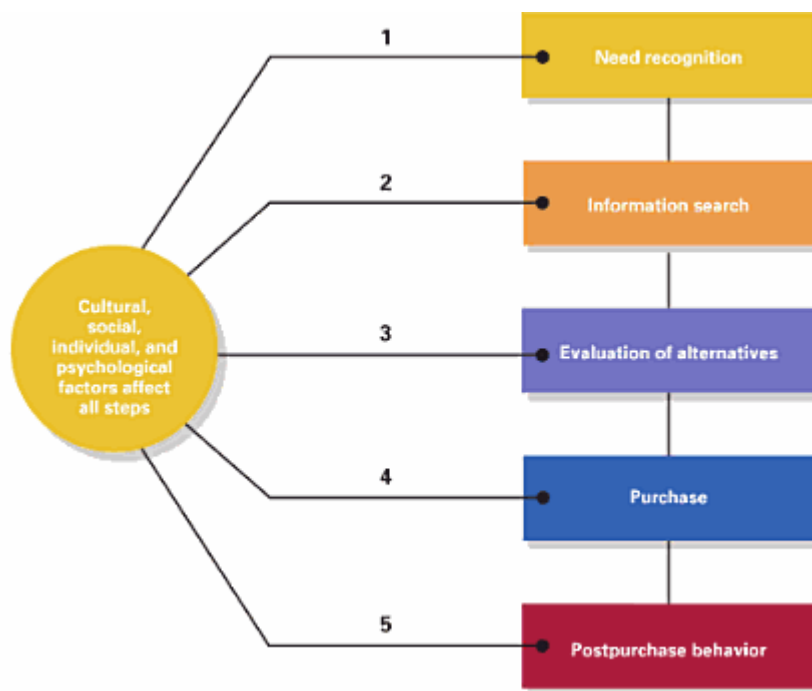


Figure 2.1: Consumer Decision Making Process and factors affecting it (Lamb et al 2011, p. 190)

2.4.1 Decision-Making Impact Factors and Web Atmospherics

Although consumer behaviour has remained a core dimension of academic research for decades, during recent years academics have expanded their focus to address the unique and variable conditions associated with online consumption (Haque 2006; Constantinides 2004). The underlying trends and conditions associated with online shopping behaviour have spawned a new school of academic theory, termed *web atmospherics* (Richard, 2005). Specifically, Richard (2005) identifies the primary dimensions of web atmospherics as either central (structure, organization, informativeness, effectiveness, and navigational characteristics) or peripheral (entertainment); whereby site involvement and exploratory behaviour are directly

impacted by both categories. Hunter and Mukerji (2011) recognize that recent years have seen an upward trend in exploration of the atmospheric concept, addressing specific implications which online shopping has on consumer behaviour.

One of the first studies published in the field of atmospherics was conducted by Eroglu et al (2001), and subsequently explored in Dennis et al (2004, p. 136). Specifically, the Eroglu et al. (2001) study concludes that online atmospheric cues have a direct influence on behavioural outcomes, including the scope of purchase, the overall satisfaction with the purchase, and the amount of time spent online. Furthermore, the researchers pursued specific evidence relative to the impact which atmosphere plays on high and low task cues, addressing the consumptive outcomes which manifest as a result of these influences. In a more recent study in this field, Richard (2005) further addressed the issue of cues, suggesting that ‘atmospheric cues were impacting on the other constructs, with the central cues most affecting site involvement and exploratory behaviour, while entertainment affected site involvement and site attitudes’. Such findings are important for brands and marketers, as they describe a direct affectation which site architecture, design, and aesthetics can have on consume behaviour, potentially limiting the willingness to purchase if deficiently implemented.

Whilst first time experiences are directly impacted by atmospherics (Richard, 2005), Kevok (2003) further extends this concept to focus on the dimensions of customer relationship management (CRM) over a longer-term alliance. Specifically, the research suggests that consumer experiences across the online purchasing experience are variable, impacting upon long-term relational outcomes and thereby requiring ongoing analysis and consumer-oriented amendments (Kevok, 2003). In order to synthesize the spectrum of research that has emerged in the field of atmospherics and address the particularities associated with the site-based consumer experience, it is important to differentiate between core impact factors:

Navigation: Dailey (2004) critically evaluated site navigation, determining that restrictive architecture can negatively impact consumer behaviour, ultimately resulting in future avoidance.

Aesthetics: Manganari et al (2009) offered empirical evidence regarding the degree to which consumer satisfaction with site aesthetics can have a direct influence on consumer behaviour, including purchasing and repeat visitations.

Personalization: Hunter and Mukerji (2011) explored the impact of the atmospheric effects on consumer behaviour and found that organizations should strategically tailor their offerings to distinctive and variable consumer needs. This indication of personalized service evidences the complicated and unpredictable nature of consumer responses to atmospheric variables during site visitation.

2.5 Empirical Exploration of Consumer Reviews / Ratings in

Practice

Perhaps the most important factor in online commerce and marketing is the impact which these varied and complex strategies have on consumer behaviour. Ariely (2010) specifically focuses on the consumer perspective in online shopping, highlighting the variables which psychologically and cognitively impact behavioural decision making. Importantly, Ariely (2010) determined that the psychological impact of perceived value (e.g. a 5 cent versus a 50 cent aspirin) is a compelling and motivational factor in consumer purchasing. Regardless of the benefit underlying competing projects, it is the alliance between brand status and consumer perceptions of brand and product value which ultimately directs the purchase decision (Ariely, 2010). A similar, psychologically-oriented study was conducted by Haugtvedt et al. (2005), addressing the degree to which EWOM impacts upon consumer decision-making practices. The researchers determined that direct association with positive reviews and convenience-based shopping conditions in the online marketplace had a positive

impact on the consumers' decisions to purchase. Both Haugtvedt et al. (2005) and Ariely (2010) contend that there are personal values and expectations that initially impact the perceived value of the product; however, if marketers are able to influence consumers through personalized and experiential online portals, the potential for improving the likelihood of purchase is elevated.

For many organizations in non-traditional commercial industries such as manufacturing or industrial production, the enigmatic nature of the Internet can reduce the overall commitment to more in-depth marketing strategies. In an empirical survey of manufacturing organisations, Ciliberti (2011, p.01) reveals that the social dimension of the Internet provides businesses with added online presence. From the introduction of feedback mechanisms (e.g. consumer ratings, discussion boards) to social support for specific brands to broad spectrum online presence, the intrinsic value for companies with a limited customer reach is of importance when defining a positioning strategy (Ciliberti, 2011).

In another similar study conducted by Chen and Xie (2008, pp. 477-491), it was found that online reviews and consumer ratings (e.g. word of mouth) have emerged as sophisticated forms of marketing strategy, which has the capability of influencing consumer behaviour and decision making. The study focused on the impact of these reviews on consumer decision making, highlighting a variety of opportunities and pitfalls for marketers seeking to leverage the visibility of CGC and peer reviews (Chen and Xie, 2008). Further, Chen and Xie (2008) contend that businesses must remain active in their review moderation and auditing strategies, focusing on identifying business deficiencies in order to improve consumer impressions. It is the distinct variance in affectation between positive and negative reviews which creates vulnerabilities for businesses in highly competitive markets, exposing their products and reputation to significant scrutiny on a global scale (Chen and Xie, 2008; Papadopolous, 2011).

Extending such arguments regarding the psychological impact of reviews and ratings on consumer behaviour, Zhu and Zhang (2010, pp. 133-148) critically evaluated such processes in the gaming industry. The researchers determined that popularity of games also played a role in consumer ratings, whereby more popular games received a higher popular rating output from the user population (Zhu and Zhang, 2010). For less popular games, it was found that negative reviews had a much higher impact on end sales than for more popular games, highlighting a form of hive mentality which permeates the allied consumer population (Zhu and Zhang, 2010).

2.5.1 Consumer Ratings/Reviews and the Hospitality Industry

The proliferation of ratings and reviews as a consumer-audited determination of quality and service performance in the hospitality industry has perhaps had a more significant impact on consumer behaviour than any other industry. Researchers, such as Vermeulen and Seekers (2008), Ye et al. (2008), and Sparks and Browning (2011), have all conducted thorough explorations of the impact of online reviews on hotel booking choices and tourism-related decision making. In an exploration of consumer behaviour prior to booking hotels, Vermeulen and Seegers (2008) found that the majority of consumers surveyed actively pursued feedback from online sources prior to making a final decision. Such research confirmed that, regardless of positive or negative reviews, consumer awareness regarding hotel brands and destination features increased following their exploration of peer generated content (Vermeulen and Seegers, 2008). Ye et al. (2008) built upon such findings, providing quantitative evidence to positively correlate the impact of positive online reviews by consumers who demonstrated hotel booking behaviour. As such findings are more consistent with Zhu and Zhang (2010) in relation to their hive mentality perspective of consumer behaviour, it is suggested that Ye et al. (2008) establish a baseline expectation that could be applied across the hospitality industry: positive reviews will increase bookings.

Although the purchase is the final indication of consumer valuation, Sparks and Browning (2011) expand upon the relationship between consumer behaviour and online reviews, addressing the key concept of trust in peer-based communication. Recognizing that information proliferation in the Internet is often overwhelming for the consumer, the researchers attempted to decipher what factors impact upon trust in relationship to review searching and evaluation behaviour (Sparks and Browning, 2011). The depth of peer reporting, and more specifically the experiential nature of the reviews, was found to be of particular importance to consumers, particularly when the feedback was markedly positive or negative. More important than an overwhelmingly positive perspective, however, Sparks and Browning (2011) concluded that recent, positive reviews could over-ride and moderate the effect of past negative reviews, indicating that consumers are concerned about immediate service conditions and are willing to look past failures and flaws that are dated and less relevant.

2.5.2 Online Retailing and Reviews and Ratings in Consumer Decision Making

One of the primary industries affected by CGC and E-WOM is the retail sector, in which a broad spectrum of online retailers has emerged as an alternative and replacement to more traditional bricks-and-mortar establishments. Focusing on the degree to which EWOM impacts upon consumer decision making in the retail book industry, Chevalier and Mayzlin (2008) conducted a comparative review of two market-leading sites. From a ratings perspective, the researchers determined that positive consumer reviews were directly correlated with a positive increase in book sales; a finding that is consistent with findings in other industries as well (e.g. Vermeulen and Seekers (2008); Zhu and Zhang, 2010). In addition, the researchers were able to model a negative decline in book sales that was directly correlated with an increase in negative reviews, highlighting the degree of impact which peer-based feedback has on consumer behaviour (Chevalier and Mayzlin, 2008).

Other retail sectors offer similar snapshot evidence of the degree to which CGC influences consumer behaviours. For example, Monsuwe et al. (2004) evaluated factors impacting on consumers' brand perceptions and attitudes in online fashion retailing. Key findings indicated that a variety of factors influenced decision making, including product characteristics, consumer traits, and prior experiences. However, feedback and value perceptions relative to the online marketplace were important catalysts affecting future buying behaviour (Monsuwe et al., 2004). Focusing more specifically on the online music retailing industry, Dhar and Chang (2007) also addressed the nature of influence on consumer behaviour, evaluating social networking and peer-to-peer exchange of feedback. The researchers confirmed the similar findings of Monsuwe et al. (2004) that for preferential products, such as fashion or music, consumers internalize a variety of factors prior to making purchase decisions, many of which evolve from personal preferences and experiences. Whilst Dhar and Chang (2007) did indicate a positive relationship between EWOM and CGC and future consumer behaviour, they also recognized that these factors were consumer-specific and tied to the genre and target market of the products.

2.5.3 Micro-Blogs and E-WOM in Consumer Decision Making

Across the global community, microblogging sites such as Twitter are gaining popularity as both a social and a commercial resource. In order to evaluate the degree to which such sites are able to impact consumer behaviour, Jansen et al. (2009) conducted a critical analysis of branding and online references. Through a quantitative analysis of more than 149,000 posts, the researchers highlighted core feedback mechanisms and consumer preference indicators that could be utilized for developing marketing strategies and targeting initiatives (Jansen et al., 2009). Yet such research neglects the nature of exchange in microblogging, a factor which Godes et al. (2005) and Hu et al. (2006) considered more carefully in order to

highlight the link between social interactions and brand preferences. The similar outputs reported by Godes et al. (2005) and Hu et al. (2006) suggest that in spite of the inaccuracies and biased nature of social exchanges in online channels, the net impact (positive or negative) on consumer impressions is significant and must be strategically managed.

Management in many cases requires the ability for brands and service providers to secure consumer trust, leveraging an allied relationship to improve perceptions and enhance word of mouth value (Sparks and Browning, 2011). Babin (2009) furthers such arguments to suggest that there is a reputational factor which extends to the reviewer as well, whereby egregiously negative or overwhelmingly positive reviews will have limited impact on consumer behaviour. Such arguments confirm Sparks and Browning (2011) in their proposition that consumer intentions are generally measured and consumption decisions are moderated, and not overly reactive, in online shopping. Further, Chen and Xie (2005) suggest that, as a combative strategy, many companies are pursuing third-party reviewers as advocates for their products, diluting the overall validity of the online review sphere and raising concerns regarding the trustworthiness of this expanded feedback cycle. By leveraging positive consumer reviews, however, there is a potential to establish a firmly held reputational platform on which additional marketing schemes and advertising initiatives can be targeted and launched (Chen and Xie, 2005).

Online reviews are now an innocuous segment of the online community; therefore, it is important for marketers to know the degree to which consumers are actually considering and internalizing these reviews during their search and decision-making processes. Senecal et al. (2005) conducted an exploratory study of the impact of reviews on the decision-making cycle itself when available and when absent for controlled experimental consumer populations. The findings of this moderated survey revealed that consumers who consulted and evaluated peer feedback had greater difficulty in selecting an appropriate product; whilst those who did not

have this additional input found the decision-making process much more intuitive and generally easier (Senecal et al., 2005). These findings are important because they affirm the conditions of information excess in online reviews, whereby additional inputs may overload and delay the consumer decision-making process (Park et al., 2006).

The impact of online reviews can have significant financial implications for marketing schemes. For example, online surveyor ComScore (2007) reported that consumers were willing to pay at least 20% more for services that received an “Excellent” (5-Star) rating than the same services receiving a “Good” (4-Star) rating. Whether based upon confidence factors or past experiences with performance outcomes, this distinction is an important revelation for both market leaders with superior products and aspiring competitors seeking a differentiated position. Furthering such discussion, Deloitte and Touche (2007) reported that around 82% of online consumers were directly affected by viewing online reviews in their purchasing behaviour. In many cases (76%), the survey respondents indicated that if viewing positive reviews, they were likely to share these findings with their peers (e.g. friends, family) in later discussions (Deloitte and Touche, 2007). Ultimately, both studies further validate the importance of online review management and awareness for corporations seeking to growth a stable and supportive consumer base.

2.6 E-Servicescape

Servicescape is a concept that was developed by Booms and Bitner (1981) to emphasize the impact of the physical environment in which a service process takes place. The concept of servicescape can help assess the difference in customer experience between two or more service providers that sell the same service product but within different physical environments; the thing that can result in a different customer perception of a higher quality in one or another

of the service providers, mainly due to the influence of the environment in which the service is provided.

Booms and Bitner defined a servicescape as "the environment in which the service is assembled and in which the seller and customer interact, combined with tangible commodities that facilitate performance or communication of the service".

For physical service provider stores; the servicescape includes the facility's exterior (landscape, exterior design, signage, parking, surrounding environment) and interior (interior design and decor, equipment, signage, layout, air quality, temperature and ambiance).

Services marketing studies show that service activities between customer and service provider cannot be separated, therefore, it is important to create a physical environment where the service is performed can affect consumer's perception towards its perceived quality (Wall & Berry, 2007). The physical surroundings – indicated here by the servicescape - has the power to influence targeted customers and to capture the tangible elements within service organisations like restaurants, hotels, banks, stores, hospitals, and many more (Bitner, 1992). As a continuation to the concept; Vilnai-Yavets & Rafaeli, 2006) claims that the term of servicescape in cyberspace turned into e-servicescape, while Williams and Dargel (2004) use the term of cyberscape. As the original purpose of the servicescape, the main function of a website using e-servicescape model is to persuade, maintain, and offer some knowledge and information for prospective customers (Josien, 2010). Eventually, e-servicescape of service organizations can affect customers in the virtual world.

Hakim and Deswindi (2015) conducted a thorough research on e-servicescape. They studied the use of e-servicescape of hospital websites via various research activities as illustrated in figure 2.10. This current research will apply a similar approach that will explore the e-servicescape in terms of studying the influence of web atmospherics – as a virtual environment attributed – on the formation of the online buyers' perceptions. It is expected that the findings of this research will emphasize the significance of the e-servicescape on the behaviour of those buyers. Current everyday experiences indicate that many

online buyers would be inclined towards obtaining their required services from certain websites in particular although such exact services may be available via so many other online stores. It is an essential task of the current research to explore the influence of the quality, format, and appearance of information given within an online service provider’s website on how users would perceive their online purchase experiences on that site compared to others that provide services of similar type.

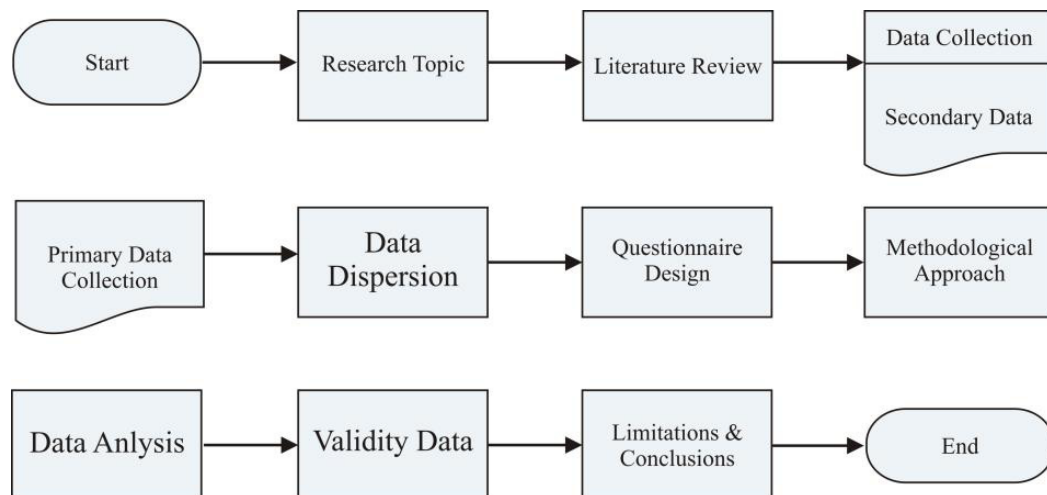


Fig. 2.2 Research Design for e-servicescape (Hakim and Deswindi 2015)

2.7 Critical Analysis of Literature and Significance of Current Research

Informed decision making in consumer behaviour is an essential precondition of buyer confidence, product satisfaction and, ultimately, brand loyalty. The pursuit of effective decisions has evolved significantly in light of a new online network of reviews, ratings, and critiques, providing consumers with a much more robust platform to influence decision making than traditionally available. The impact of web atmospherics on consumer decision making has increasingly become an essential factor when considering site design, web-based marketing, and CGC (Richard, 2005). For this reason, companies are critically evaluating their

online presence and actively exploiting motivational factors and influences in order to drive and retain consumer traffic.

Outside of the immediate scope of the website, reviews and ratings have been found in academia to have a significant influence on consumer behaviour (Park and Kim, 2003; Schultz et al., 2011; Ye et al., 2011). In recent years, marketers have recognized the potential benefits of such CGC and peer-based dialogue, attempting to maximize the value and presentational potential in relation to consumer decision making. To achieve such agendas, Chatterjee (2001) recognizes that active strategies are being implemented which re-orient and position message boards and social feeds, creating a foundation of positive social dialogue surrounding a particular brand or product. A recent WEF-based publication edited by Dutta and Bilbao-Osorio (2012:79) offers statistical evidence to suggest that the ‘final third billion’ of the world’s population will soon gain access to online portals and media, creating a globally interconnected community with the power to influence and impact brand value and market successes. The following sections will critically evaluate various empirical studies associated with the proliferation of CGC and the influential nature of web atmospherics in accomplishing strategic marketing objectives.

2.7.1 A Critical Review of Empirical Studies in CGC and Online Reviews

Across the scope of evidence collected for this review, there are several studies which focused predominately on consumer reviews and online ratings systems. Researchers, such as Papadopolous (2011) and Ciliberti (2011), place direct emphasis on consumer generated content as a strategic marketing tool, focusing on ways in which reviews can be leveraged to positively impact consumer behaviour. Babin (2009) and Zhu and Zhang (2010) further such research by addressing the ways in which reviews affect the purchase decision and highlight impact factors, both of which contribute to and overwhelm satisfactory consumer outcomes.

Yet in spite of such targeted research, the vast majority of evidence collected in academia is industry specific and targeted to a very narrow survey population (e.g. Vermeulen and Seekers (2008): Travel Industry; Dhar and Chang (2007): Music Industry; Ye et al. (2008): Hotel Industry). More general studies, including a survey of online shoppers by Park and Kim (2003), raise concerns about network limitations and site-specific restrictions that are over a decade old and technologically irrelevant. Even across more modern and socially-oriented studies, such as Marques et al. (2012) and Li and Shiu (2012), there is an incumbent pressure to generalize the link between CGC and consumer behaviour as the researchers describe dynamics and outcomes that are inherently individualistic and group-specific. Such limitations and inherently broad divergence across the methodological and theoretical frameworks for each of these studies have important implications for their conceptual relevance when developing a more succinct model of web atmospherics and effective online marketing.

The vast majority of the research in this field addresses the subjective conditionality of experiential goods and services and the nature of social exchange and informational sharing which underpins the foundations of these industries. There is an abject failure to address the core atmospheric dimensions which affect behaviour and influence consumer purchasing decisions. Even across those studies which focus on atmospherics, researchers such as Hunter and Mukerji (2011) address the concept in generalities, Kevok (2003) jumps from online experience to long-term relationships, and Dailey (2004) redirects interest towards navigation as the core determinant of behaviour. Each of these studies misses the diversified mark in relation to the actual significance of atmospherics and the role of CGC and central and peripheral factors on consumer decision making and future buying decisions.

Focusing on the nature of online consumption, Monsuwe et al (2004) explored those factors which are directly responsible for motivating the consumer's online purchase. Specifically, the research considered several aspects that influence the purchase decision of an

online buyer, including product characteristics, consumer traits, shopping experiences, situational factors, and trust in online shopping. Yet the research fails to adequately account for the relationship between consumer reviews and web atmospherics during the purchasing process. Similar to other researchers in this field (Hunter and Mukerji, 2011), Monsuwe et al. (2004) make assumptions about the primary influences during these processes, neglecting the socio-cultural power of exchange and review-based pressures. As a direct result of this significant gap in the extant literature in this field, the current study seeks to develop a theoretical framework which incorporates the full spectrum of impact factors, addressing the direct link between web atmospherics, CGC, external factors, and consumer buying behaviour. The following sections will outline this framework and highlight the core conceptual determinants of the research.

2.7.2 Consumer Buying Behaviour

Consumer buying behaviour remains a central topic in marketing theory and has been extensively researched and debated over the last couple of decades. Throughout academic research, consumer buying behaviour has been described as a process in which a consumer learns about the product, processes the information gathered from multiple sources, and eventually makes a decision which is further divided into multiple steps including: identification of customer need, information searching, evaluation of alternatives, purchasing decision, and post-purchase consumer behaviour (Boyd et al., 2002; Kotler, 2003; Brassington and Pettitt, 2003).

Yet in spite of such epistemology, consumer buying behaviour is far from congruent with the five-step model. One key determinant of behavioural variation is the degree of risk associated with the purchase choices (Boyd et al., 2002; Sultan et al., 2009; Sparks and Browning, 2011). The extent of risk affects the involvement of the buyer in the purchasing process, whereby perceptions of risk depend on multiple factors such as the experience of buyer

with similar purchases in the past, buyer's buying experience, the buyer and supplier relationship etc., and in general products purchased for the first time usually require more involvement than products purchased frequently (Boyd et al., 2002). Besides defining the stages of consumer buying process, marketers actively seek to define and describe the potential role of marketing initiatives at every stage of the consumer buying cycle. Such initiatives include those specific factors that affect the purchasing decision, focusing on consumer responses, biases, values, and feedback. For this reason, consumer generated data is essential to the identification of how consumers have reacted to past experiences and what future experiences they encounter might yield. (Legris et al., 2003).

Although most of the factors that affect consumer buying preferences, and consequently behaviour, are beyond the control of marketers and retailers, these agents attempt to substantially influence these factors through different marketing tools, such as the marketing mix (McCarthy, 1964). Elements of the marketing mix are studied and selected in the light of consumer demographics, cultural, social, psychological, geographical, and economic attributes that have significant effect on customer purchasing behaviour and buying decisions (Dibb et al., 2001; Jobber, 2001; Boyd et al., 2002; Solomon and Stuart, 2003). The task of utilizing the marketing mix in an online environment is further complicated by the fact that this marketing tool, which has been used in traditional retailing and bricks-and-mortar marketing, is frequently disputed even in its traditional offline form (Gronroos, 1994; Gummesson, 1997; Goldsmith, 1999) Nevertheless, many contemporary marketing academics and practitioners consider the marketing mix to be an influential tool that can be utilized for shaping the ultimate result of buyer-supplier interaction (Kotler and Armstrong, 2001; Kotler, 2003).

2.7.2.1 Online Buying Behaviour

In the quickly expanding virtual shopping and marketing environment, marketing academics and practitioners are continuously amending the traditional marketing tools to

satisfy an evolving population of hyper-aware online consumers. With increasing emphasis on Internet retailing in terms of the number of online shoppers, volume of transactions, and the value of transactions; marketers are continuously striving to understand the virtual shopping behaviour of online customers (Cheung et al., 2003). Researchers, such as Sultan et al. (2009), have demonstrated how adoption behaviour in new online channels is constrained by social resistance and risk aversion, thereby mitigating the overall effectiveness of marketing in some markets. Yet other researchers, such as Seyed-Ahmad and Murphy (2010), highlight the potential net benefits which brands and corporations can achieve through a strategically-oriented online presence. The variation in consumer behaviour and adoption outcomes is inherently experiential in nature, highlighting the significant value of improved understanding and predictability in modelling future outputs.

Modern researchers continue to focus on the identification and analysis of both intrinsic and extrinsic factors that affect, or even shape, consumer buying behaviour in virtual space and are trying to develop a theoretical model or framework to predict the online purchasing and decision making process (McKnight et al., 2002; Joines et al., 2003). Although a number of researchers did not find any fundamental difference between traditional and online buying decision-making behaviour, others propose a new step in the online buying process, i.e. building or developing trust and confidence by the online retailer (McKnight et al., 2002; Suh and Han, 2002; Liang and Lai, 2002; Sparks and Browning, 2011; Tuskej et al., 2011). Clearly there is an important link between brand valuation and trust-based dynamics that is continuing to require additional evidence and analysis.

An extensive and comprehensive literature review conducted by Cheung et al. (2003) points out two main categories of impact factors – controllable and uncontrollable - that affect the online consumer behaviour. These two categories are further broken down into groups such that consumer characteristics and environmental influences are the two groups that constitute

uncontrollable factors; with product/service attributes, communication/ marketing/ sales medium attributes, and merchant attributes constituting the three groups in controllable factors (Cheung et al., 2003). It has been further contended that, as in traditional bricks-and-mortar markets, these controllable and uncontrollable factors interact to establish an online consumer decision-making process (O’Cass and Fenech, 2003).

2.7.2.2 Influencing the Consumer Web Experience

At the core of the consumer communication model, customers’ buying behaviour can be influenced through corporate marketing and advertising campaigns. Such exposure provides input to the consumer’s information-processing need before the final decision is reached (Kotler, 2003). In a virtual space, online marketers can attempt to tilt the decision-making process in their favour by persuading online consumers through traditional marketing and advertising methods. Alternatively, these professionals are increasingly opting for more innovative, e-based experiential communication strategies. This online experience or web experience can be tweaked through a skilful selection of online functionality, website design, stimuli, product assortment, services, emotions, cues, and above all retailer and user-generated information, which complicates the marketing mix beyond the traditional 4Ps of marketing.

The primary mode of delivering the appropriate web experience is the online retailer’s website that provides an interaction or an interface between the retailer and the online shopper (Constantinides, 2002). This paper aims to identify the elements that constitute the web atmospherics and utilization of these elements by the online marketers to influence and shape the client consumer buying process during a virtual interaction. Kotler (2003) has pointed out that the web experience is constantly evolving; and therefore, additional input is an essential, controllable factor that can be used by online marketers to influence consumer buying behaviour. Figure 2.3 provides an overview of three core dimensions of stimuli which have been identified as influential in the buyer decision-making process.

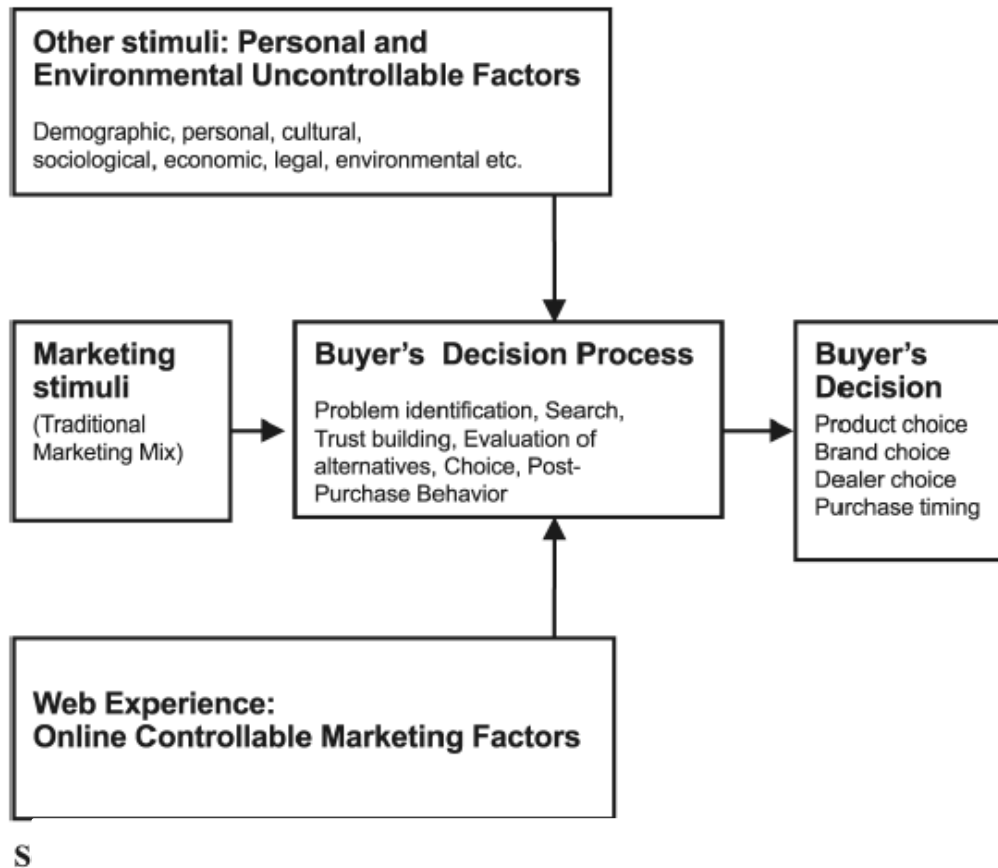


Figure 2.3: Factors affecting the online consumer's behaviour (Kotler, 2003)

In order to determine the outcome of virtual interaction between an online buyer and the retailer, it is necessary to identify and classify the elements of the web experience. This process seeks to systematically define those varying, yet controllable factors, that impact upon the decision-making process. Such a classification also provides online marketers with the ability to recognize and assess the nature and potential of their online marketing tools in influencing the consumer behaviour.

The exchange-based nature of the online environment is an important factor in defining and supporting the brand-consumer communication strategies. Cho and Park (2001), for example, recognize the online shopper as a technology user and an information provider. Tuskej et al. (2011) describe an alliance between the brand and the consumer, whereby congruity in values creates loyalty and supports long-term relationships within the online environment. Where consumer-brand relationships are new or untested, researchers such as

Zhang et al. (2010) and Ye et al. (2011) have demonstrated that experiential factors, including online communication and exchange, serve as important moderating influences, ultimately either supporting or rejecting the purchasing decision.

Many of the traditional retailers who have adopted a multi-channel marketing and sales approach are now expanding their business and customer base with a high-quality online experience aiming to mimic the shopping experience of in-store purchasing. On the other hand, poor and dysfunctional websites are not only a source of potential threat to the retailer's virtual presence but they also hamper the physical activities and overall brand image of the retailer in the minds of its regular shoppers. Yet Constantinides (2004) contends that, for those brands that are able to develop a positive, stable, and meaningful online presence, the performance of both their online and traditional bricks-and-mortar establishments markedly improves. For this reason, online positioning must be based upon systematic, strategic, and meaningful endeavours that are designed to capture consumer interest and maximize their perceptions of brand value.

2.7.3 Building Blocks of Customer Web Experience

The dimensions of customer web experience can be divided into three main building blocks (Constantinides, 2004), depicting the nature and impact of various customer experience factors in the online buying process.

1. **Functionality block** – the elements belonging to this block tend to enhance customer online experience and buying behaviour by providing appropriate real-life functionality, such as product search and interactivity. Furthermore, these elements come with added functionality to provide an advantage over in-store shopping by enabling shoppers to perform fast and easy exploration of products and evaluation of alternatives. This block can be further divided into two major groups - *usability* and *interactivity* (Figure 2.3).

2. Psychological block – it is imperative for websites to gain customer trust and promote credibility and integrity to lure customers to the website and then make it easy for them to conduct online transactions without the fear of fraud or any other malpractice, such as inappropriate usage of personal consumer information or installation of viruses on a user's computer. These factors play a vital role in creating *trustworthiness* among online consumers, who are either unfamiliar with the online retailer or are experiencing online transactions for the first time. Example of trust-creating factors include the product return and refund policies defined by online retailers to reduce the risk of buying an unwanted product by the consumer, and the usage of consumer data by online retailers for marketing and promotional purposes. Since these factors affect the trust of online consumers, they are regarded as psychological factors.
3. Content block – the elements included in this block have a direct and vital influence over the buying behaviour and decision making of online customer. These elements comprise the creative aspects of the website and other controllable factors such as the marketing mix that is communicated online. These elements can be further broken down into *aesthetics* and *marketing mix* (Figure 2.3).

The three building blocks (functionality, psychological, and content factors) and their subcategories (usability, interactivity, trust, aesthetics, marketing mix) are illustrated in Figure 2.4, which is adopted from Constantinides (2004). What is evident from this model is that the primary focus of research in this field has been placed on website usability and trust development, dimensions of functionality and psychological affectation (rather than content-based factors).

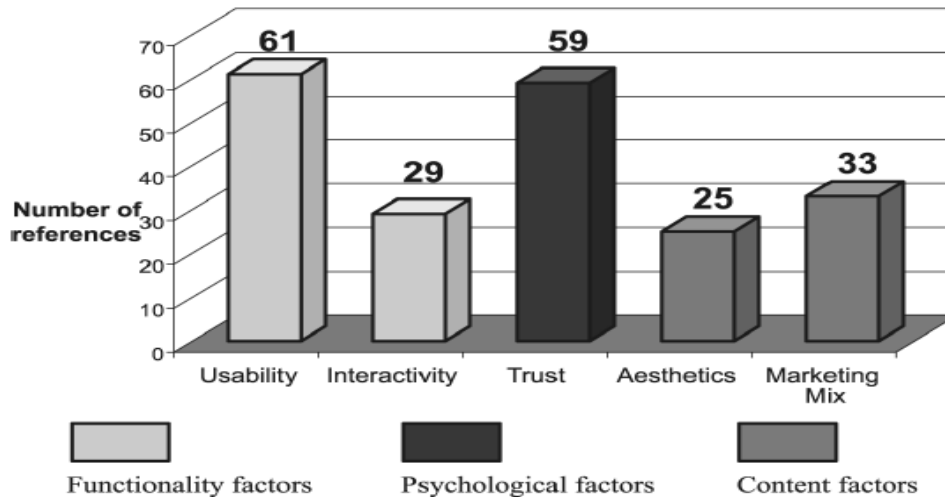


Figure 2.4: Web-experience building blocks. Source – Constantinides (2004)

In the next section the building blocks and their subcategories of web atmospherics are discussed with respect to their influence on online customer buying behaviour and decision-making process.

2.7.3.1 Functionality factors

The functionality factors of a website are divided into two components – usability and interactivity - and in literature these two factors have been frequently regarded as the primary reasons for the success or failure of websites (See Ciliberti, 2011; Pride and Ferrell, 2011). These elements deeply influence online customer experience as they comprise the basic expectations of an online consumer. Lack of appropriate interactivity or slow and dysfunctional web pages lead online customers to search for alternatives. Consumers primarily shop online in order to save time and enjoy convenience (Bangia, 2005; Sweeny, 2008) and if these two motives are not satisfied by the website there is a very high probability of these consumers switching their online shopping needs to competitors with better online usability and interactivity features.

2.7.3.1.1 Usability

Web usability can be defined as “the ability to find one’s way around the web, to locate desired information, to know what to do next, and, very importantly, to do so with minimal effort. Central to this idea of usability are the important concepts of ease of navigation and search” (Nah and Davis, 2002, p. 99). Traditionally, usability has always been considered as a vital criterion to judge the quality of information systems and now this is also considered applicable to the websites. A multitude of elements contribute to the usability of a website such as arrangement of information, the speed of downloading the web pages, accessibility, and the payment process, as shown in Figure 2.5.

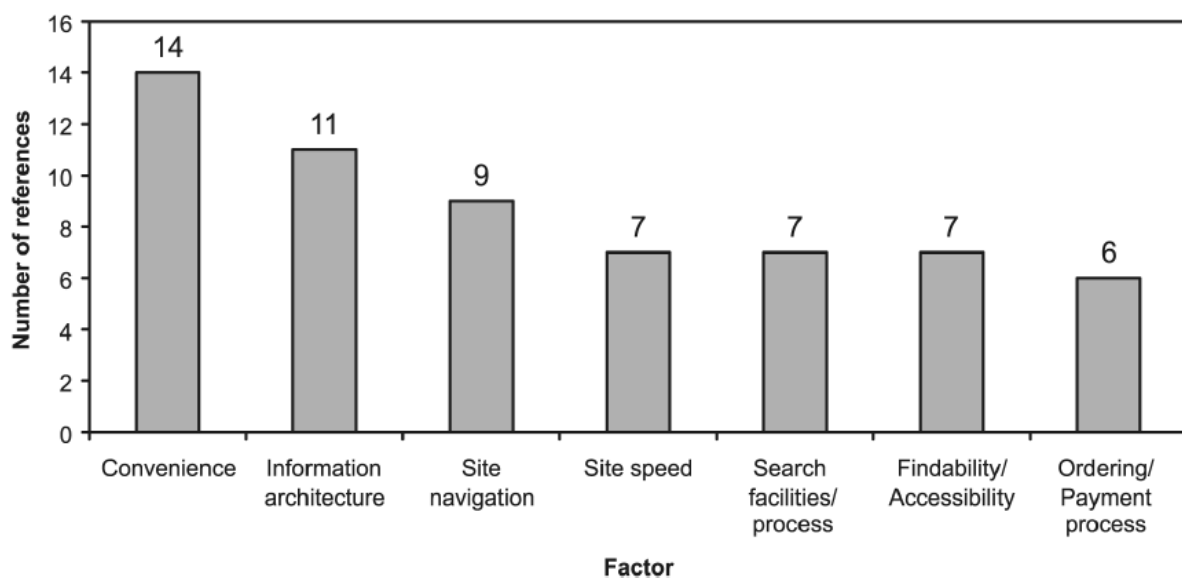


Figure 2.5: Web experience functionality elements - Usability. Source Constantinides (2004)

A high quality, user-friendly website not only requires high-end technology but must also be able to accommodate customer needs, requirements, and expectations associated with the online interaction. Over the past decade, the usability of websites has drastically improved because of increasing insight into customer expectations and quantitative monitoring of websites by market research firms such as Mintel, AC Nielsen, and American Customer Satisfaction Index (ASCI). Technologically speaking, high-speed Internet connections have contributed to better performance and usability of online shopping websites and now almost

50% of Internet users in western countries, such as US and the UK, have high-speed connections at their homes (Tessler, 2010). Usability is a broader term that can be broken down into five identifiable and controllable features, as outlined below.

1. **Convenience:** Existing literature frequently refers to convenience as the primary motive for online customers to use websites for their shopping needs (Constantinides and Fountain, 2008). Customers judge the convenience of a website with respect to the ease and speed of information browsing across the website to fulfil their information needs and to conduct online transactions (Constantinides, 2004). It is important for website designers to understand the information-searching behaviour of potential website users by identifying convenience-based influences throughout the site architecture.
2. **Website navigation, structure of information, and search facilities:** Online shoppers expect straightforward site navigation in both forward and backward direction to easily access required information (Constantinides, 2004). Websites are increasingly endowed with a search function that allows customers to enter keywords against which relevant products and services of the retailer are immediately accessible. In this way, shopping websites enable customers to quickly locate the required information, critically evaluate these findings, and proceed with their decision accordingly.
3. **Website accessibility:** Today, a number of customers search for products across multiple vendors by using search engines such as Google, Yahoo, Bing, and MSN, thereby making it important for website designers to optimize their websites for easy access and findability through search engines (Constantinides and Fountain, 2008). Website designers should adopt a consistent search engine strategy to enable potential customers to easily find individual items through different search engines and website browsers.

4. Website speed: The average time spent on a single website page is low and is continuously diminishing; therefore, online retailers should design their websites to expedite downloading of web pages and capture the limited attention span of today's online shoppers (Cockburn and McKenzie, 2001).
5. Ordering and payment process: One of the major sources of customer frustration with online transactions is a lengthy and cumbersome online checkout process to finalize the transaction (Constantinides, 2004). Today, online retailers try to minimize the checkout time by asking all the required information on a single checkout web page, avoiding any interruption in the transaction. However, websites need to make a trade-off between simple navigation and features, and security protocol and consumer protections.

2.7.3.1.2 Interactivity

The interactivity of the Internet allows online vendors to enhance web experience by presenting the customer with more personalized services and facilitating interaction with other online users willing to share experiences and suggestions. Interactivity, therefore, can be seen as underpinning two of the basic elements of the Internet revolution, namely personalization and networking (Constantinides, 2004). Interactive elements contribute to a positive customer experience by reducing uncertainty during the online transaction and cognitive dissonance afterwards. Elements enhancing interactivity include facilities allowing interaction with vendors in case customers have questions or difficulty in using the site and online helpdesks for technical assistance or support. Networking and the possibility of establishing contacts with other users by means of active or passive interfaces (user's forums, chat-rooms or bulletin boards) are also factors enhancing the website interactivity (see Figure 2.6).

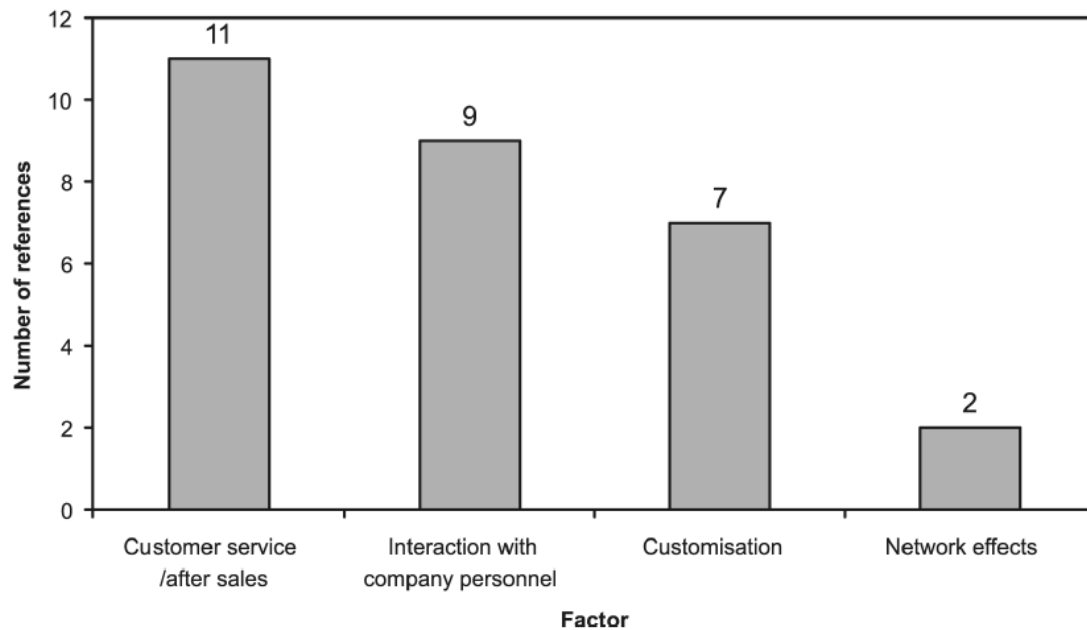


Figure 2.6: Website Interactivity. Source - Constantinides (2004)

Interactivity components are divided in two categories: (1) interactivity with the online vendor, and (2) interactivity with other web users. Customer service/after sales service online, interaction with company personnel and customization are components of interactivity between the customer and online vendor. Web customers expect well-organized online or offline helpdesks, efficient reverse logistics, quick response to e-mail complaints and inquiries. As in the case of usability, good knowledge of customer profiles and needs are of vital importance for the designers of these online services.

Network effects were considered in the 1990s as a major Internet innovation in communication, likely to bring about customer empowerment and dissemination of market knowledge through interaction between online clients. Yet the number of recent literature references to users' forums, bulletin boards, chat rooms, guest books, and social media – typical vehicles of online C2C interaction – as essential web experience elements are rather limited (Constantinides, Romero, and Boria, 2009). More research is necessary in order to assess the exact role and effects of such elements, as well as the trends in this area. Technological innovation seems to support new forms of C2C interaction, often allowing

consumer interaction and transactions outside the traditional, or even the “classic”, online trade environment. Online consumer auctions, online bartering, virtual classifieds or entirely new forms of peer-to-peer (P2P) interaction without clear commercial objectives (music files exchange, web-logging) are forms of virtual interaction rapidly gaining popularity and area for intensifying online commercial and non-commercial activity (Constantinides, 2002).

2.7.3.2 Psychological Elements: Online Trust

Online trust is one of the issues researchers, as well as practitioners, frequently associate with the success or failure of online ventures. Around 70 per cent of US web users are seriously concerned about the safety of their personal information, transaction security and misuse of private consumer data (McCole, Ramsey, and Williams, 2010). Subjects such as hacking, fraud, spam and online scams frequently make headlines, raising security concerns, as well as scepticism and mistrust. Physical distance, lack of personal contact and the anonymity of the Internet are also factors that further increase consumers’ anxiety and risk perceptions (Chen and Dibb, 2010). Online firms, especially those lacking strong brand recognition and physical presence, should not underestimate the importance of trust as a web experience element. The multi-dimensional character of online trust makes it a complicated issue and, despite considerable research attention, several online trust issues are still little explored (Beatty et al., 2011). It is worth noticing here that there are have two components of trust:

- i. Market-based - trust in brand, company (e.g. guarantees and returns)
- ii. Web-based - online trust (psychological trust in transactions and consumer details security)

A study of Grabner-Krauter and Kaluscha (2003) underlines the complexity of this subject. Based on an extensive review of research work done in this field, these researchers identified trust constructs reflecting “both institutional phenomena (system trust) and personal and interpersonal forms of trust (dispositional trust, trusting beliefs, trusting intentions and

trust-related behaviours)” (Grabner-Krauter and Kaluscha, 2003, p. 783). Online marketers should identify elements enhancing or undermining trust among potential customers and try to understand how those can affect the online customer’s perceptions. This knowledge is valuable for including the right mix of trust-establishing elements in the website and creating the proper organizational infrastructure – technological and organizational, as well as managerial – needed for delivering this mix. Next to website trust-enhancing elements, the “off-line” vendor image and reputation have often been found to be critical enablers of virtual interactions and transactions by lowering the transaction risk threshold and reducing customer anxiety.

Addressing trust-related issues also is a strategic initiative which can be enhanced through synergies between marketing activities and consumer interactions (Fischer and Reuber, 2011; Marques et al., 2012) Multi-channel firms with well-established reputations, brands or products usually have a serious advantage against online novices and start-ups. High levels of brand awareness and good reputation make it easier for customers of physical firms to trust them online, reducing the online customers’ demands for credibility or integrity credentials. (Kim et al., 2003; Nah and Davis, 2002; McKnight et al., 2002; Joines et al., 2003). The psychological factors affecting online trust are illustrated in Figure 2.7.

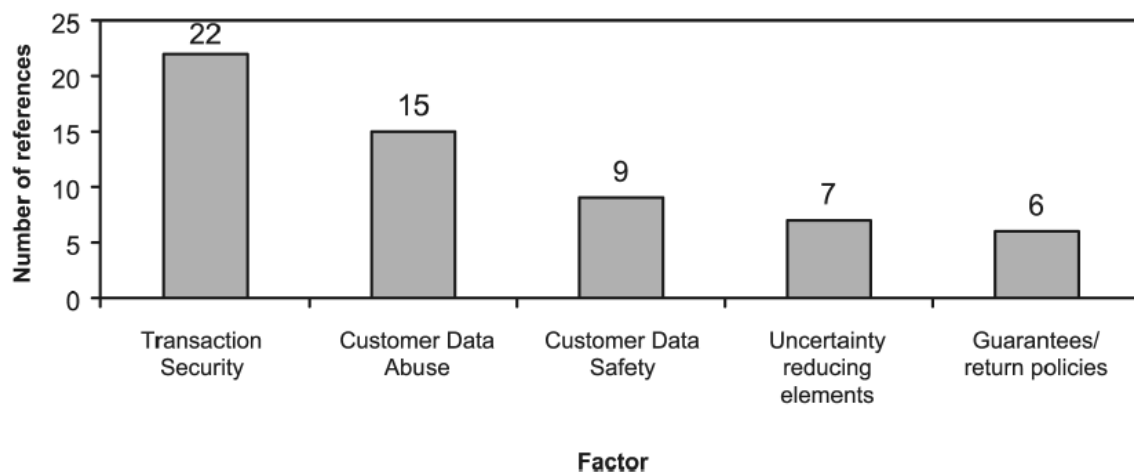


Figure 2.7: Psychological factors affecting online trust. Source - Constantinides (2004)

The different elements of online trust in more detail are:

1. Transaction security and customer data safety. These are principal concerns of online customers purchasing products or services online. Service disruptions, hacking into online vendors' databases and display of customer data on clandestine websites are frequent Internet incidents requiring constant vigilance by online firms. Clear ordering, payment and refunding procedures, as well as concrete customer policies, good communication and strict security, help customers face online transactions with more confidence. Online vendors can also encourage security-minded customers by offering multiple payment alternatives, or individualized controls.
2. Customer data abuse. A critical question for privacy-minded customers is whether personal data known to online firms is used for any type of commercial purposes against their knowledge and will. This is a growing concern among Internet users confronted daily with an explosive growth of spam, fraud and online scams (McCole, Ramsey, and Williams, 2010). Web vendors should allow online customers to opt for possible follow-up activities and ask always the customer's clear permission for any further use of data for commercial purposes.
3. Guarantees and return policies. As in traditional business, product guarantees offered by web firms are powerful tools for gaining competitive advantages, raising the level of customer trust and reducing the online transaction anxiety (Ranganathan, 2012). Clear policies outlining product returning procedures and compensation in cases of dissatisfaction with the product have been found to have a positive effect on online vendors' credibility.
4. Uncertainty reducing elements. Components of uncertainty reducing elements are "frequently asked questions" (FAQs) and conflict-resolution policies (Ranganathan, 2012). Allowing easy access of online customers to this type of information enhances

trust but also reduces the number of inquiries of customers with questions on such issues.

2.7.3.3 Content elements

The content factors are divided into two categories: (1) aesthetics and (2) marketing mix.

2.7.3.3.1 Aesthetics

Special attention must be paid to aesthetics, not only because aesthetic elements are often important indicators of online vendor quality (Vrechopoulos et al., 2000) but they also form the main clue of vendor and website credibility for the majority of web users (Fogg et al., 2002). Aesthetics embrace the artistic and creative elements of the online presentation, aiming at a pleasing appearance or effect. These elements communicate the website's atmosphere, something important for attracting online customers by inducing positive and powerful motives for visitors to stop, explore and possibly interact with the site.

Traditional retailers are well aware of the fact that a positive experience of new customers entering their shop is an important factor in their decision to stay or leave; the atmosphere is a major retailing quality evidence affecting his/ her impression about a sales outlet and defining the customer's further actions and behaviour (Rousey and Morganosky, 1996; Jobber, 2001; Kotler, 2003). Research suggests that aesthetics influence online and traditional shoppers in similar ways, underlying the importance of these elements as success factors in online retailing (Vrechopoulos et al., 2000; Kim et al., 2003). The aesthetic elements of the web experience are illustrated in Figure 2.8.

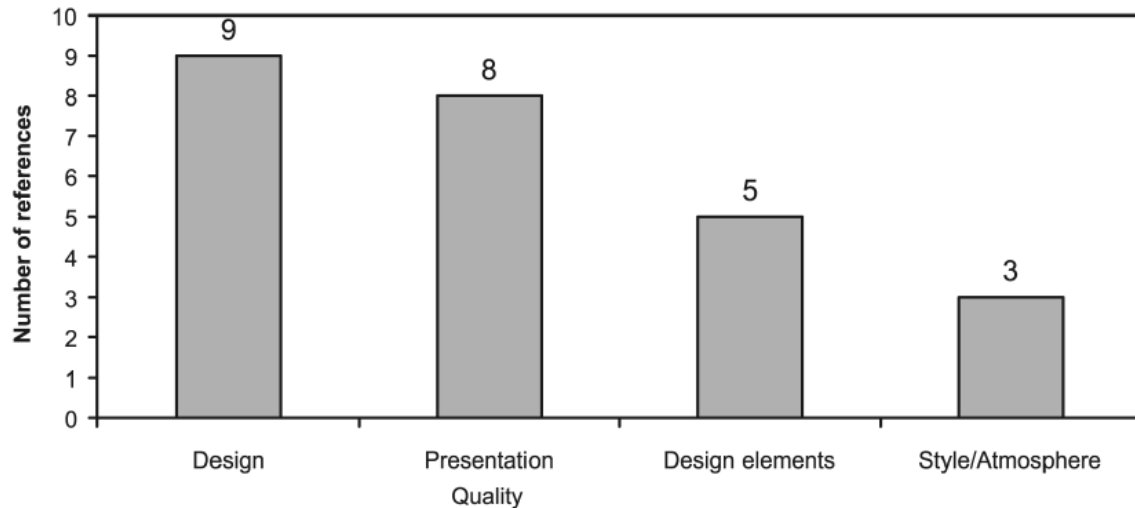


Figure 2.8: Aesthetics of a Web Experience. Source - Constantinides (2004)

Design and style/atmosphere of websites are elements quite crucial in shaping the online experience and the buying decision-making process. Like shoppers in traditional shops, these elements are particularly important for first-time website visitors. However, unlike traditional shoppers, online consumers spend much less time in web shops they visit. Given the very limited time the average Internet users spend on browsed pages when searching for information or products online, the design and atmosphere of websites must attract the attention and capture the interest of the online customer in a very short time. There is furthermore strong evidence that website design is one of the most important factors communicating the online firm's credibility, something crucial for transacting online.

2.7.3.3.2 Marketing mix

Several researchers have focused on the impact of marketing mix elements on the behaviour of web users searching the Internet or buying products and services online. Researchers agree that, with the addition of fulfilment, the marketing mix's 4Ps are essential contributors to the web experience. The ongoing debate on the value of the marketing mix as the toolkit of conventional marketing (Gronroos, 1994; Gummesson, 1997; Goldsmith, 1999) underlines the fact that more research is needed in order to define its exact role of the Ps as part

of the online content and online marketing in general. The marketing mix elements and the number of relevant literature references are depicted in Figure 2.9.

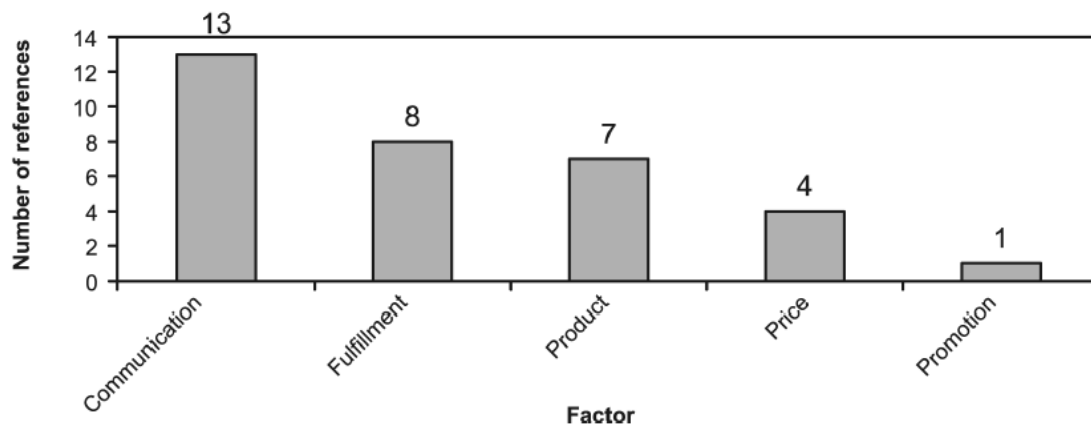


Figure 2.9: Marketing mix and online consumer behaviour. Source - Constantinides (2004)

1. Communication. The literature references on this aspect refer to the quality of information provided about the firm's products, the clarity of selling conditions and the delivering terms.
2. Fulfillment. With the exception of digitized products (music, software, e-books, etc.) easily delivered online, for all other types of products offered online the order fulfilment and product delivery do not coincide with the placing the online order. The way online vendors follow up orders and deliver products has an immediate impact on the willingness of customers to order and more importantly, to return to the website for business in the future. Alternative payment methods, fast delivery, flexible delivery options and order tracking are frequently mentioned elements of the fulfilment process.
3. Product elements affecting the web experience are the online brands and product assortment, product features and product presentation. Online vendors can in some cases improve the customer experience by enhancing their product presentation by means of 3D or other high-tech methods.
4. Price has a limited impact on online consumer behaviour. Research on the role and importance of the online price contradicts the predominant belief that price is the main

motivator for consumers when choosing a particular website. While most online consumers would insist that low price is their major motive to buy online products, facts do not seem to confirm this (Constantinides, 2004; The McKinsey Quarterly, 2001).

5. Promotion. This element is also rarely found to be one of the essential ingredients of the web experience, and the number of relevant literature references is rather limited (Constantinides, 2004). Specific promotional elements mentioned in the literature as enhancing the web experience are free extra services, sales promotions and incentive programs.

2.8 Theoretical Framework and Contribution

With regard to the gaps in existing academic literature identified above, this research study focuses on three core areas related to the online consumer purchase decision. These are web atmospherics, consumer reviews and ratings and exogenous factors. These three aspects are the main factors that, according to prior research, combine to determine online consumer behaviour and purchase decisions.

A generic model that studies the combined effects of these three factors on the e-tail purchase decision is introduced in this research as shown in Figure 2.10, which provides a visual overview of these primary impact factors including web atmospherics, consumer reviews/ratings and exogenous factors. Although each of these dimensions has been independently shown to impact on behavioural outcomes, this study will provide a comprehensive analysis, incorporating – all of these factors in order to create a more accurate model of behavioural affectation.

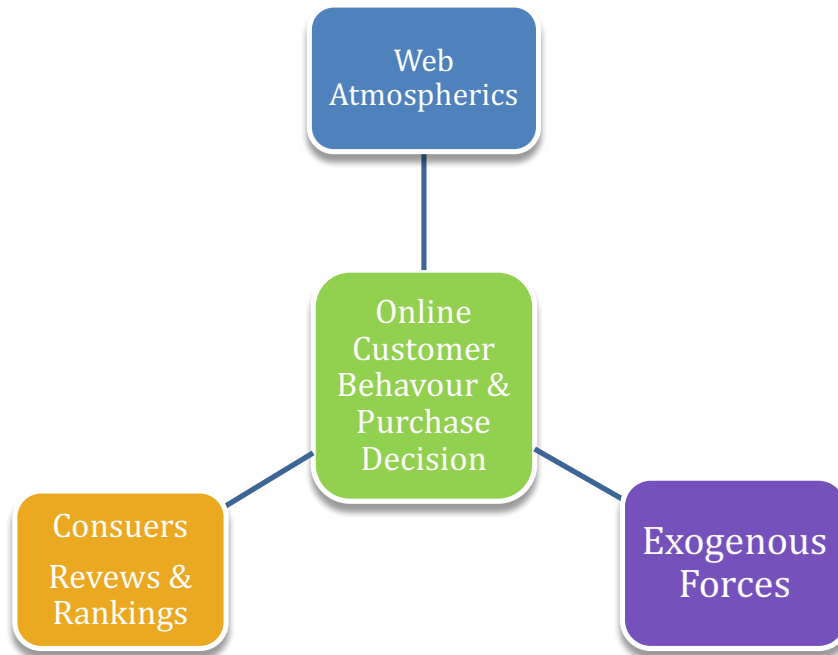


Figure 2.10: The basic research model: The influence of web atmospherics, customer reviews, and exogenous forces on online purchase behaviour and decision

2.9 Research Conceptual Framework (Research Model)

This basic framework incorporates the findings of several studies discussed in literature, i.e. web atmospherics, consumer reviews and ratings, and exogenous factors. These three aspects are the main factors that, according to prior research, combine to determine online consumer behaviour and purchase decisions. The above simple model can be further developed into a conceptual framework for this research. This detailed conceptual framework is illustrated in Figure 2.11.

This detailed framework is a combination of multiple concepts and models, combining different factors that have not yet been explored collectively in any prior research. Through the critical analysis of this framework, the research will explore the effect of consumer reviews and ratings, and web atmospherics on online consumer behaviour and consumer purchase

decisions. The outcomes of this research will yield a comprehensive study which takes into account all the factors that could possibly shape online consumer behaviour.

In addition to the basic categorical foundations which overarch the scope of this research (web atmospherics, consumer reviews and ratings, and exogenous factors), there are a variety of sub-factors under each aspect which further explore these areas in detail. All these factors and sub-factors collectively contribute to the consumer's overall perception of the brand, product, or website, which in turn will influence their information-seeking behaviour and purchase decisions.

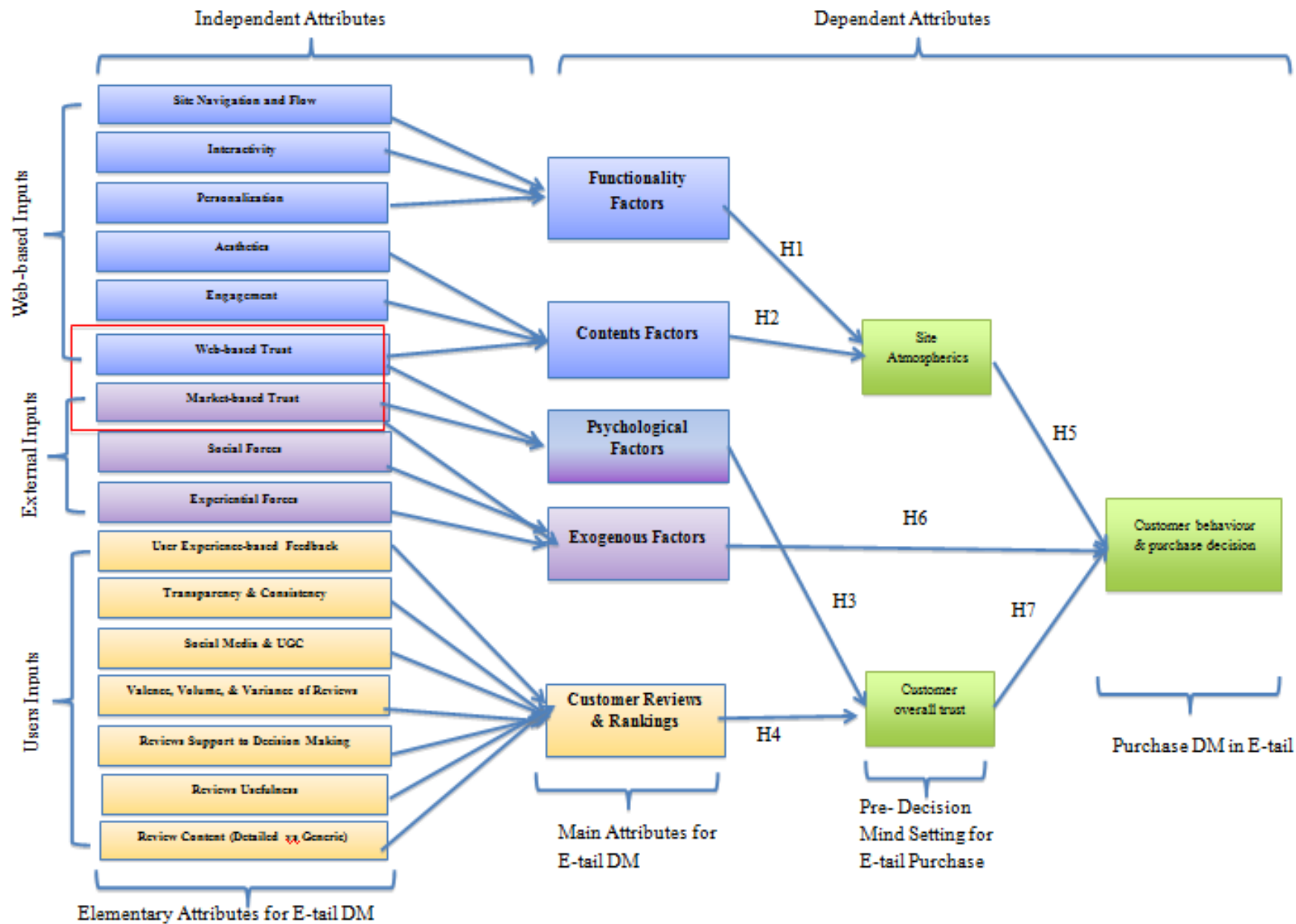


Figure 2.11: The basic research model

2.10 Model Explanation and Justification

The research conceptual framework can be briefly explained as follows:

- The online purchase and decision process is directly influenced by the relevant website atmospherics and the overall trust of the customer on a certain e-tail activity. These two attributes shape the mind pre-setting of a customer just prior to the final decision stage.
- The web atmospherics encompass both the given website functionality, and its content. According to previous research, these two attributes are further rooted to the main five elementary attributes, as shown in the model.
- The overall trust, on the other hand, encompasses the combined effects of both the relevant customer reviews and other driving psychological forces.
- The customer reviews, ranking, and other customer generated content are similarly down-rooted to seven elementary aspects, as shown in the model.
- The psychological drivers are, in fact, the combined effects resulting from two roots: the customer trust in the website content and the purchase process, such as the trust in the protection of personal data and purchase security; and the market-based trust, which is the trust in external associated factors, such as the trust in the product characteristics (brand) or the vender after-sales support.
- Another main attribute of the model are the exogenous forces that encompass both of the social and experiential effects surrounding the user, in addition to the market-based trust.
- The overall model re-samples the mechanisms of 15 root attributes that are either web-based, external to the web, or user generated. These 15 attributes are the independent variables of the model.

- For the purposes of answering the research questions listed previously, a set of hypotheses are based on this model, to explore the dynamics of the various attributes of the e-tail purchase and decision-making process.

2.11 Research Hypotheses

Built on the dynamics of the research conceptual framework, the following set of hypotheses is brought forward to be tested by various methods of this research:

H1: *There is a direct positive impact of the online store website functionality on the website user's perceived atmospheric influence.*

H2: *There is a direct positive impact of the online store website contents on the website user's perceived atmospheric influence.*

H3: *There is a direct positive impact of the psychological factors on the customer's perceived overall trust.*

H4: *There is a direct positive impact of the previous customers' reviews and ratings on the potential customer's perceived overall trust.*

H5: *There is a direct positive impact of the online store website perceived atmospheric on the customer's behaviour and purchase decision.*

H6: *There is a direct positive impact of certain associated exogenous forces on the customer's behaviour and purchase decision.*

H7: *There is a direct positive impact of the customer's overall trust on the customer's behaviour and purchase decision.*

Based on this architecture, there are three primary categories and various sub-factors which are hypothesized to effect online consumer behaviour and purchase decision-making outcomes. Online consumers are faced with a variety of options and competitive choices due to the speed and scope of online commerce. This breadth of information has direct implications for the gap between shopping intentions and behavioural outcomes, potentially influencing future decision making. In order to evaluate the link between web atmospherics, external factors, and consumer reviews and ratings during the decision-making process, this study will critically explore a range of intrinsic and extrinsic forces, highlighting their degree of impact during the shopping process. These findings will have implications for online marketers as the outcomes seek to clarify which aspects and sub-aspects they must focus on in order to activate consumer interest and achieve brand loyalty. Through the scope and targeted focus of this comprehensive study, it is suggested that a much more robust model of consumer behaviour will be developed, defined, and instrumentalised, providing a tangible architecture for implementing more effective marketing initiatives and enhancing website design. It is ultimately the alliance between consumer and brand interests which creates the necessary synergies to influence and support consumer behaviour. Therefore, this research is an essential step towards demystifying the enigmatic link between these three complex concepts.

Chapter Three

3 Research Methodology

3.1 Introduction

The foundations of academic research in social sciences are underpinned by a robust epistemological and ontological heritage. Yet the techniques, approaches, and foci of empirical research evolve organically as an innovative and purposed community of scholars continues to reformat and redefine methodological agendas. Although the field of online consumer behaviour is relatively new, it draws upon well-established research methodologies and theoretical approaches. There are three major research approaches that will be relevant to the current study: quantitative, qualitative, and mixed methods. Each of these approaches is supported by paradigms or theoretical approaches such as positivism (or post-positivism) and constructivism. The third approach, mixed methods, is both a combination of the qualitative and quantitative approaches and also, increasingly, an independent research paradigm (Johnson et al., 2007). Quantitative or positivist methodologies are focused on discovering cause and effect relationships that can be empirically tested (Creswell, 2003). This approach can be reductionist because it attempts to take large ideas and to identify a small set of discrete ideas or variables. The outcomes of positivist or quantitative research are numerical measurements of observations from the real world. Qualitative research, by contrast, is related to constructivism, which holds that individuals seeking meaning in their life and work construct subjective meanings for their environments and experiences (Creswell, 2003). Because the meanings emerge from the individuals being studied, as opposed to the researcher, they are complex and varied. Qualitative research seeks to gain an understanding of how the study participants see the world and the situation that the researcher is investigating. Questions tend

to be open-ended and answers subjective. One of the important areas of focus for constructivist or qualitative research is concerned with the processes of interaction between individuals and organisations, individuals and their environment, and among individuals in social groups (Creswell, 2003). This interaction is critical to the constructivist point of view because meaning is believed to be a product of social interaction. For a mixed methods approach, both types of data, quantitative and qualitative, are collected and analysed in a single study. Often this takes the form of a field observation or interview component, combined with a traditional survey component. Because both qualitative and quantitative methods are limited in terms of the kind of data they can collect, the rationale is that a combination of the two would act to neutralize those weaknesses.

As described in the literature review, the goal of this study is to explore the effects of consumer reviews and web atmospherics on online consumer behaviour across a large number of factors. The complexity of the data requires a nuanced instrument that can gather information on each variable. The current study has adapted a revised, modernised agenda in order to generate, describe, and analyse a robust spectrum of influences affecting consumer behaviour in the online environment. Specifically, these techniques focus on web atmospherics and consumer reviews/ratings as impact factors which contribute to and influence online purchase decision making. The study will follow a mixed methods approach that combines traditional survey and in-depth interview components. The following sections will describe the fundamentals of this approach, highlighting the epistemological background that has provided the foundation for these research methods and data analysis techniques.

3.2 Research Paradigm

Social research in general is bounded by its theoretical positions. Theories help social science researchers understand, categorise, and select the data pertinent to a particular research

question out of the myriad forms of data available (Bryman, 2012). Theories also set the guidelines for the research questions themselves. The prevailing trends in theoretical approaches impact the researcher's choices of topic and approach, and form a background against which the research is undertaken (Bryman, 2012). This is because the types of outcomes or research results the researcher is seeking will be dependent upon their epistemological position, or what sort of knowledge is acceptable. Positivism, growing out of a natural science background, focuses on observable phenomena and on theoretical statements that can be directly tested through observation. The goal of positivism is to explain human behaviour, often through an identification of the forces acting upon human agents. While positivism has been subject to substantial criticism, has continually adapted and now remains a valuable tool for social research. Interpretivism, or constructivism, rejects the notion that natural science principles should be applied to the study of human behaviour and institutions (Bryman, 2012; Creswell, 2003). These approaches draw upon the humanities and rely to a large extent on the researcher interpreting the data that emerges from the human subjects. The background is more closely related to the humanities (religion, history, literary analysis) than to the natural sciences. There are a number of different approaches under the interpretivist banner, in part because the movement is a reaction against positivism instead of a unified theoretical model. One of the key parts of the anti-positivist movement is the growth of phenomenology in social science research. Phenomenology seeks to understand how people make sense of their world. As a result, it is inherently subjective because it claims the subjective experience of its subjects as a valid form of knowledge. The rest of this section will discuss the development of positivism, including its modern or post-positivist interpretations, and the anti-positivist paradigms. Finally, it will look at the growth of the mixed-methods paradigm as an attempt to take advantage of the strengths of both approaches.

Positivism

Arising out of a background of natural science, positivism advocates studying social phenomena that can be observed and measured empirically. Positivism generates theories and hypotheses that are testable and then undertakes research to test those theories. These theories are then used to describe and explain the behaviour of individuals and organisations. As described by Jonker and Pennink (2011:29), the positivist paradigm contends that 'scientific action produces concepts that are useful, addressing research problems through three primary stages including the diagnosis of the problem, the design of the research, and the implementation/change of the general rule. Morcol (2001:382) recognises that from the positivist perspective, 'knowledge affects external realities' and the 'laws of the universe can be known'. These distinctions are important when applied to empirical research, as they describe a reality which is inherently objective and can be 'expressed in the observable, statistical regularities of behaviour' (Wildemuth, 1995:450). From a summary standpoint, the positivist research paradigm is deductive, systematic, and typically quantitative in nature, focusing on the extraction of evidence from tangible, data-driven analysis of a problem that reveals a general, broadly applicable rule or observation (Jonker and Pennink, 2011).

The development of positivism can be traced back to the logical positivism of the Vienna Circle in the early 1900s, to 19th century philosophers such as Comte or Mill, or even as far back as Plato (Morcol, 2001; Johnson et al., 2007). Positivism is based upon a realist or objectivist ontology which assumes that reality, in this case social reality, can be understood objectively, outside the knowing subject. An important element of positivism is its belief in determinism, the relationship between causes and effects that reduces the role of agency in human behaviour (Morcol, 2001). Because the determinants of behaviour are external, they can be observed objectively. These ontological and epistemological beliefs underlie the primacy of quantitative methods in positivist research. Determinism involves the identification and

assessment of causes which influence outcomes that can be empirically tested or observed (Creswell, 2013). This often involves working backwards from the outcome in which the researcher is interested (for example, the decision of an online shopper to purchase a product from a particular website) and then the development of a hypothesis as to why the shopper made that choice. This hypothesis about the cause of the outcome can then be tested by collecting data related to the way in which the factors in the hypothesis influence the subject's purchasing decision, and the theory can then be validated or refined (Creswell, 2013). Because of the need to test and measure, positivism requires that concepts have clear definitions that provide a methodology for measurement (Phillips and Burbules, 2000).

The rigidity of early positivism has been softened in recent years to the point that some researchers use the term *post-positivism* to create a conceptual break from traditional positivism, while still acknowledging the linkages. Some of the key assumptions of post-positivism were identified by Phillips and Burbules (2000). First, the positivist view of knowledge is that it is fundamentally conjectural and no proposition can be considered absolute truth. Empirical research is always fallible and hypotheses can never be fully proven. Second, quantitative research begins with a theory that is then refined, abandoned, or augmented as warranted by the data. Third, knowledge comes from evidence and observation. The information recorded on instruments or observed by the researcher is subjected to rational analysis in light of the hypotheses. Fourth, the purpose of positivist research is to explain causal relationships between variables and outcomes. Fifth, it is necessary for the researcher to maintain objectivity and to investigate the potential biases in the methodology used and the conclusions drawn. For this reason, the inquiry has to meet standards of validity and reliability.

Positivism has been subjected to a substantial amount of criticism, with some commentators claiming that the term is used more for "polemical" or "pejorative" purposes than as a descriptor of a philosophical position (Bryman, 2012; Morcol, 2001). These critics

claim that positivism represents crude or superficial data collection (Bryman, 2012). One of the reasons for the reaction against positivism may be that, even today, positivism still carries with it the impression from the logical positivists of the early 20th century, who believed that it was not only unscientific but also nonsensical to study anything that could not be directly observed and that it was meaningless to make statements about such topics (Phillips and Burbules, 2000). Given that the majority of people experience and attribute a great deal of value to internal events, theology, and metaphysics, the high-handed dismissal of the validity or utility of these concepts engenders a reaction.

Constructivism

As an alternative to the positivist approach to empirical research, the constructivist paradigm represents a humanistic or socialistic perspective, by which interpretive, explanatory research yields specific observations and conclusions that are drawn directly from the phenomena itself (Dressler, 1999; Jonker and Pennink, 2011). Wildemuth (1995:450) reveals that this approach “assumes that reality is subjective and socially constructed and that the way to understand this reality is to know what the actors know, see what they see, understand what they understand.” The constructivist research approach involves a variety of socialistic research techniques ranging from ethnography to phenomenology to action research, whereby evidence is typically qualitative in nature, inductive in its extrapolation, and specific in its relevance to a particular problem, situation, or phenomena (Jonker and Pennink, 2011).

Constructivism, closely related to interpretivism, holds that the subjective meaning that individuals construct from their experiences is a valid form of knowledge and subject for investigation (Creswell, 2003). This approach arose in the late 1960s and 1970s as a response to what some researchers believed was an over-emphasis of scientific methodologies and of

externalities in the positivist approach. One of the major differences between the constructivist and positivist approaches is that while positivism seeks to reduce and simplify phenomena into empirically testable categories and concepts, constructivism seeks to understand the complexity of the subjective views and meanings generated by human actors (Creswell, 2003; Wildemuth, 1995). Interpretivist or constructivist approaches are generally associated with qualitative research and with more exploratory studies which endeavour to find the meanings that emerge from the data. This contrasts with the confirmatory and statistically focused positivist approach. The goal of constructivism is to discover how the actors within the study understand the social world within which they act (Wildemuth, 1995). This investigation involves the exploration and interpretation of the symbolic actions and cognitive processes of the subjects.

Part of the philosophical basis for constructivism or interpretivism comes from Weber, whose approach to sociology involved the sociologist acting as an interpreter of social action so as to be able to understand cause and effect relationships (Bryman, 2012). Although his approach did embrace the deterministic aspects of positivism, the description of the social scientist's role as an interpretive agent had a substantial impact on the development of the direction of constructivist research. The notion of interpreting the subjective views and perceptions of the individuals in a study, a central idea in constructivism, is firmly rooted in this Weberian concept of understanding. From a constructivist, the social forces that matter are the ones that are subjectively understood by the individual and constructed from his or her social environment. The external forces relied upon by the positivists are considered irrelevant because "they have no meaning for those involved in that social action" (Bryman, 2012). One of the early writers to apply these concepts in social science was Alfred Schutz, whose work was translated into English in the 1960s and has had a profound effect on the development of the constructivist or interpretivist approach (Bryman, 2012). Schutz's argued that social science

should not follow the procedures and approaches of natural science because the precepts of natural science hold no meaning for the subjects studied; it does not mean anything to the frog that we categorise him as an amphibian. Social reality, on the other hand, has meanings and structures that are relevant to and interpreted by the people living within the society. As a result, the meanings and structures, the thought objects constructed by the social scientist have to be based upon the meanings and structures constructed by the social actors if they are to have any foundation in reality (Bryman, 2012; Schutz, 1962).

The largely qualitative research methodologies that are derived from constructivist or interpretivist epistemologies are based on a series of assumptions. Crotty (1998) proposed three key assumptions for constructivist research. First, human beings actively construct meanings to interpret the world around them. The implication of this assumption is that research questions should be open ended in order to capture as much as possible of the views, perceptions, and interpretations of the subjects. Second, the interpretations and meanings that people create are dependent upon the historical and social circumstances within which they operate. The cultural environment provides sets of symbolic meaning from which individuals can draw in order to shape their identity and interpret their reality. In order to understand the impact of the cultural environment on the individual's interpretive process, the researcher should gain first-hand experience of the subject's social and cultural circumstances. Third, meaning is constructed socially and is dependent upon a community of people. The researcher has to inductively derive meaning from the data they collect.

Post-Positivist / Methodological Pluralism

The rigidity of paradigmatic authority has resulted in a broad sweeping epistemological conflict, whereby heritage and background determine approach and technique throughout the academic community. Yet Wildemuth (1995:451) contends that there is an alternative to either

the positivist or the constructivist paradigm termed the *post-positivist* approach which ‘advocates methodological pluralism. Whilst a seeming amendment to the tenor of methodological conflict manifested in the dysfunction of academic debate, the post-positivist paradigm suggests that quantitative and qualitative approaches to empirical research are inherently interchangeable and that neither paradigm is superior in practice (Lee, 1991; Wildemuth, 1995). As an extension of this paradigm, Creswell and Clark (2011) and Bryman (2012) have championed a revisionist approach to research methods, embracing a mixed paradigm which interlinks both quantitative and qualitative research within a single methodology. This mixed methods technique utilises the strength of triangulated findings to develop new, diversified insights in relation to research problems and phenomena, emphasising the research aim and objectives, rather than methodological puritanism (Bryman, 2012).

There is a degree of confusion in the use of the term *post-positivist* in terms of its relationship to positivism. Some, like Wildemuth (1995) relate post-positivism to a mixed methods approach that incorporates the positivist and constructivist approaches. However, as referenced above, others like Phillips and Burbules (2000) refer to post-positivism as a refinement of positivism that, while receptive to some of the criticisms, retains the focus on determinism, observable phenomena, and a scientific approach. For the purposes of clarity, this study will use the term *mixed-methods* to refer to the pluralism and the integration of different methodologies encouraged by Wildemuth, Bryman, Creswell and others, and will eschew the use of the term *post-positivism* although it is definitely positioned within the post-positivism paradigm.

For more emphasis; although mixed methodology approach is fundamentally counted within the 'pragmatic paradigm', but the use of a quantitative and qualitative data collection and analysis methods together is also still valid for a post-positivist study (Creswell 2014) and consequently the position of this study can be clearly stated as: A post-positivist research

that will apply a multi-method approach of both quantitative and qualitative data collection and analysis. This position is well-established and supported by literature (Jick 1979, Brewer and Hunter 2005).

While the origins of mixed-methods research designs go back to early in the 20th century, most of the major works in the field began in the late 1980s (Creswell, 2013). Originally, the rationale for adopting a mixed-methods approach was based on the notion that each methodological approach had certain weaknesses and biases that would influence or limit the results of the study. By adopting multiple methodologies, the study would be able to cancel out the weaknesses of each study with the strengths of the others (Creswell, 2013). Later, in the 1990s, mixed-methods approaches began to turn away from simply layering methods on top of one another and towards integrating the different research designs and the databases they produced. Some of the ways of integrating the methodological approaches suggested by Tashakkori and Teddlie (2010) include using the database from one methodology to check the validity of another; using one database to explain the other; exploring different questions with different databases; or using one database to refine or develop instruments to be used in a different methodology.

There are a number of different ways to combine quantitative and qualitative approaches in a mixed-methods study. For example, one of the most popular study types involves a quantitative survey using a questionnaire instrument, followed by an in-depth interview or focus group to go into more detail. This approach was used by Poortinga et al. (2004) in a study on the public's trust in government information on Foot and Mouth Disease (FMD). Initially, a self-completion questionnaire was given to samples of people in areas that were suffering differing levels of impacts from FMD. The questionnaire measured the respondent's levels of agreement with various statements about their level of trust in the government's information and handling of the outbreak, as well as information about their connection to farming or

tourism, - two industries most affected by the outbreak. Then, a qualitative focus group was convened with selected respondents from the questionnaire group. The focus groups were useful for obtaining additional information, such as the reasons and arguments that formed the basis for people's perceptions of the government's handling of the FMD outbreak. This type of mixed-methods approach is referred to as explanatory-sequential because the researcher first conducts and analyses a quantitative study and then does a qualitative study to build upon the results of the quantitative (Creswell, 2013). In another type of study, called the convergent-parallel approach, the researcher merges the qualitative and quantitative data together and analyses them together to gain a fuller picture of the issue. Both types of data are gathered at the same time, sometimes through a hybrid instrument. An example of such an instrument might be a questionnaire with some open response questions (Creswell, 2013). Mixed-methods studies provide the benefit of side-stepping the "paradigm wars" that fruitlessly produce antagonism and rigidity (Johnson et al., 2007). These two approaches differ in terms of where the mixing of the mixed-methods takes place; at the data collection stage or the data analysis stage.

3.3 Research Approach

Applications of Theory to Web Research

The paradigmatic conflict in academic research has raised questions as to the efficacy of any specific methodology. As academics in this field have adopted a variety of techniques and strategies in the collection of relevant data, it is important to first distil these epistemic roots to a tangible and relevant framework for the current study. Grant et al. (2010) describe a spectrum of online information ranging from consumer clicks to repeat purchasing behaviour to time spent on a single page which can be systematically analysed through quantitative comparison and analysis. Lin et al. (2007) demonstrate how such quantitative methods can be applied

systematically to an in-depth survey in order to critically evaluate consumer behaviour through sampling and measurement of preferences and values in the online environment. Finally, Kopetz et al. (2012) reveal a purely qualitative research framework which describes consumer goals and preferences according to an intuitive, exploratory sampling technique resulting in an output of representational insights. Each of these three studies provides an example of the three dominant techniques that have been applied in recent years in the assessment of consumer behaviour in the online commercial environment.

Consumer research on the relationship between the space and environment and the behaviour of the consumer, including their decision to purchase, has a long history in bricks-and-mortar retail settings. The prompts and cues provided by retail environments to promote consumers' purchasing decisions include music, temperature, lighting, colour, the arrangement of merchandise, and the smell of the space (Hunter and Mukerji, 2011). Researchers have linked negative experiences, such as over-crowding (Harrell et al., 1980) and loud music (Kahn and McAlister, 1997), to negative effects on consumer behaviour and purchase intention. The field of web atmospherics is intended to expand this inquiry into the online retail environment. The reason why, despite the fact that the consumer is in their home, office, or otherwise outside of the store, the web environment is subject to a similar inquiry as physical retail environments is that the consumer's experience of the online environment produces the same emotional and cognitive reactions as a physical store (Hunter and Mukerji, 2011). For example, a cluttered web page will produce the same confusion and discomfort as a cluttered physical retail space.

The growth of the Internet has created an entirely new social space in which individuals can explore, interact, and consume (Chen and Xie, 2008; Grant et al., 2009). Some of the reasons why consumers have increasingly turned to online retailers are that online purchasing can be more convenient, offer lower prices, and present increased levels of product information than would be available in a physical retail store (Hunter and Mukerji, 2011). While there are

some similarities between online and physical retail spaces, online retail websites face a variety of issues that are unique to the medium. Online retailers have an interest in ensuring that the spaces they present, limited by the form of interactivity (through a computer screen) and by the extremely short time the average web user spends on a given page, capture the attention of a user and encourage them to continue exploring and to make a purchasing decision. Users of a commercial website can encounter challenges or frustrations that they would ordinarily not encounter in a bricks-and-mortar establishment. Some of the difficulties associated with shopping online include an inability to touch or examine the object, to interact with sales staff, and the time lag between purchase and receipt of the item (Fang, 2012). These unique problems have created a need for specialised inquiry into the behaviour of consumers in online retail spaces and analysis of the way in which those spaces affect consumer behaviour. Studies of online retailing and the online consumer experience have grown alongside the massive growth in online commercial activity (Hunter and Mukerji, 2011).

While attention has become focused on this online consumer behaviour, the methodological and theoretical underpinnings of the studies are drawn from the larger environment of social science research methodologies. The dominant approaches remain a form of positivism, interpretivism, and a variety of mixed-methodologies. The rest of the section will examine how each of these methodologies has been applied to the topic of web atmospherics and online consumer behaviour.

Positivist

As described above, a positivist methodology is generally a quantitative, empirical, and scientific approach that begins with the development of a theory or conceptual model which is then tested through a measurement instrument. The goal of positivist research is to understand the external factors that determine the behaviour of consumers when they interact with a

particular website. Although it is acknowledged that the factors may vary with particular websites, individual users, and the purpose of the interaction, the intent is still to generate a model which can be applicable across a wide range of websites (Lin, 2007). Appropriate web environments can help to overcome the potential resistance that online shoppers encounter if a web retailer's site is difficult to navigate, uncomfortable or unpleasant to look at, or does not present the customer with a sense of reliability and trustworthiness. In order to achieve the goal of identifying the web atmospheric factors that positively or negatively influence online consumption decisions, positivist researchers have developed a number of models to explain consumers' use of online services (Lin, 2007).

Examples of these include intention-based models, such as the technology acceptance model which posits that two consumer beliefs about a technology service, perceived usefulness and perceived ease of use, combined with the consumer's attitude toward the service, determine the consumer's behavioural intention. In this model, a website design that has a clear and simple-looking user interface will generate better impressions from consumers because they will perceive that the site is easy to use (Lin, 2007). Another model, the theory of planned behaviour, states that individuals' behaviour is defined by their attitudes and behavioural intentions which are constrained by the subjective norms of their peer group and their knowledge of the resources available and required for engaging in the technology service (Lin, 2007). This theory can be further broken down to analyse the relationship between attitudes and beliefs that underlie the individual's acceptance and use of a technology service. Lin (2007), drawing on the notion that online shopping was an innovation in services, identified three innovation characteristics that the attitude of the consumer can be decomposed into: relative advantage, complexity, and compatibility. The relative advantage is, in many ways, similar to the usefulness element of the technology acceptance model in that it depends on the degree to which the innovation (i.e. online shopping) is superior to the prior service technology.

Complexity, the inverse of the ease of use element of the technology acceptance model, refers to the array of choices, tasks, and informational types that confront the consumer. Finally, compatibility refers to the way in which the service technology (online shopping, in this case) conforms to the norms, values, and needs of the consumer.

To test these models, it is often necessary to use something more than a simple questionnaire. Because the issue revolves around the interaction between a user and a web environment, the study has to have its subjects interact with specific websites and then measure their reactions. In Lin's (2007) study, 305 senior undergraduates were asked to do tasks such as going to an online bookstore, finding a needed book, registering with the bookstore website and placing the book in the shopping cart, and then filling out the payment and delivery data. All of the participants who successfully completed the tasks were then asked to fill out a questionnaire that was designed to measure actual usage, behavioural intention, perceived usefulness and perceived ease of use (Lin, 2007). Structural equation modelling was then used to test the fit of the data to the theoretical models.

A large part of positivist research, including within the online consumer behaviour field, involves theory building. In a paper by Chen and Xie (2008), the authors developed a model of the impact of consumer reviews in online retailer websites on consumer behaviour as compared to other forms of product information. Based upon the premise that sellers of goods and services can optimise their informational content delivery to encourage buyers to purchase their products, the paper investigates sellers' content strategies through both seller-consumer and consumer-consumer channels. Chen and Xie (2008) argued that allowing consumer reviews can bolster the seller's sales by encouraging novice consumers' trust in the total mix of product information. However, the consumer-consumer channel cannot be as easily managed or controlled as the seller-consumer channel, so there is a risk that harmful information may be disseminated through the seller's own website. To investigate the

relationship between consumer reviews and consumer behaviour, Chen and Xie (2008) propose several models of consumer responses to information structures where the seller (1) does not offer the opportunity to publish consumer reviews; (2) defensively responds to consumer reviews by modifying the information in the seller-consumer channel; and (3) proactively responds to potential consumer reviews by shaping the information in the seller-consumer channel. The model that they propose identifies independent and dependent variables and lines of inquiry that can be taken up empirically by further research.

Constructivist

Constructivist or interpretivist approaches are also common in research into online consumer behaviour, reflecting the broad range of perspectives in the field. The constructivist approaches are, like positivist, driven by a desire to understand why consumers in online environments behave as they do, but they differ in that the theories tend towards more general or holistic, and to focus on internal, cognitive, emotional, or psychological factors rather than the external factors preferred by positivism (Bryman, 2012; Creswell, 2013). Concepts such as preference, motivation, goals, and loyalty imply internal functions or processes of the consumer that, while impacted by the external environment, have to be understood through reference to the subjective individual's perceptions of their social reality (Creswell, 2013; Jonker and Pennink, 2009). Constructivist research aims to capture the dynamic and emergent behaviours that characterize human activity and, within the realm of online shopping, it focuses on the cognitive constructs and emotional motivations that drive consumption behaviour. This differs from positivist research on the topic in that where positivism seeks to reduce questions to narrow hypotheses that can be tested, constructivism looks to broader theories and allows the researcher to act explicitly as an interpreter of subject-generated data (Creswell, 2013).

Constructivist approaches tend to use qualitative methods to gain insights into consumer behaviour. These methodologies rely less on formal survey tools and more on interpretive techniques for understanding consumer generated data or responses to open-ended questions. In a study by Berthon, Pitt, and DesAutels (2011), the researchers looked at consumer-generated videos about brands or consumer uses of products. Building on the premise that social networking and social sharing websites, such as Facebook and YouTube, are not only platforms for information sharing but shapers of culture and society in themselves, the paper examines the consumer-creator narratives posted as videos and the interactive process by which others consume, comment on, and respond to these videos. This paper utilises the BASIC IDS framework for dimensional qualitative research, which is an acronym for eight overlapping psychological dimensions: behaviour, affect, sensation, imagery, cognition, interpersonal relations, drugs, and sociocultural aspects (Berthon et al., 2011); Cohen, 1999). The researchers acknowledge the difficulties faced by qualitative research when it comes to the elimination of bias, because qualitative researchers “recognize the constitutive role of the language, theories, and methods that co-create these phenomena” that are being studied (Berthon et al., 2011). The research focuses on consumer-created videos because, as the writers note, the video is like the written word in that it not only serves as a method of communication between people but also allows people to develop a deeper understanding of themselves.

Videos created by people about themselves and their experiences are sources of information about their sense-making processes and, therefore, are potentially very useful for consumer research. The authors reflect that as companies are spending millions of dollars on research into how consumers view their products, the consumers are producing this material by themselves and posting it online (Berthon et al., 2011). The challenge, and the reason why these sources have only rarely been examined by social science and consumer researchers, is that the format requires a substantial amount of interpretation on the part of the researcher. The

messages or information that the researcher is interested in have to be shifted from an array of narratives and implicit meanings (Berthon et al., 2011). The role of the researcher as interpreter is, in this case, particularly clear because the videos are produced entirely by the subjects. In a situation where a researcher records and observes a subject, there is always the need to be aware of the role of the interaction between researcher and subject, and its effect on the subject's responses. The possibilities for qualitative research on the Internet are expanding as social media and other participatory technologies help to bring the expressions, opinions, and comments of large numbers of potential subjects into the public space. However, this very volume of potential information presents its own problems, namely finding appropriate subjects and setting boundaries for data collection (Berthon et al., 2011; Liu and Burns, 2013).

Qualitative research, while not as explicitly theory/hypothesis driven as positivist-quantitative research, is still informed by theoretical positions. Many of these theories are drawn from psychology. In particular, motivation theory is important to many different areas of consumer research, including advertising, product preferences, brand loyalty, and consumer decision making (Kopetz et al., 2011). The basis of motivational theory is the premise that human beings are motivated by the desire to seek personal gratification and satisfaction (Liu and Burns, 2013). The range of motivations involved in consumer purchasing behaviour include the motives to shop, such as the need for a new kitchen table, as well as personal and social motives that influence the decision to seek a good and which good to purchase.

Mixed-Methods

Mixed-methods approaches don't simply combine or layer one methodology on top of one another, they use both qualitative and quantitative methods (either sequentially or contemporaneously) to create a fuller picture of consumer behaviour. At the heart of the mixed-methods paradigm is the premise that the quantitative and qualitative methods are not, as the

purists would argue, incompatible (Johnson and Onwuegbuzie, 2004). A focus on the differences between qualitative and quantitative approaches is unproductive and divisive. Mixed-methods approaches integrate the strengths and minimise the weaknesses of both approaches into a unified research methodology (Bryman, 2012; Johnson and Onwuegbuzie, 2004). This is more than a layering or lining up of two studies because each are designed to complement the other or draw upon the insights generated by the other. Johnson and Onwuegbuzie (2004) identify several commonalities between qualitative and quantitative approaches that offer opportunities to build bridges across the conceptual gap. In terms of objectives, both methodologies, as social science research, attempt to answer questions about the behaviour of human beings and their relationships to society. Both methodologies use empirical observations as the basis for their analysis. Furthermore, both methodologies incorporate safeguards against confirmation bias or other issues that might undermine the trustworthiness or reliability of the data. In an academic world that is becoming more interdisciplinary and dynamic, where theoretical developments from widely different areas are used to spur creativity and exploration in others, it is advisable for research methodologies to be similarly open and ecumenical (Johnson and Onwuegbuzie, 2004).

Mixed-methods approaches offer a number of substantial advantages over purely quantitative and qualitative studies. A set of quantitative data can be enriched by the narratives of subjects' emergent responses. A collection of qualitative data can be supported by numerical precision from a statistical analysis of subjects' survey responses. In this way, the mixed studies are able to answer a broader range of research questions than single methodology approaches (Johnson and Onwuegbuzie, 2004). However, the benefits of mixed-methods studies do sometimes come at a cost, namely that the diversity of methodological approaches requires that the researcher be well versed in each methodology or that they bring in additional support to aid in designing and interpreting the study. Additionally, a mixed-methods study can be more

time consuming. For example, a sequential quantitative-qualitative study would require all the time needed for a survey study combined with the time required for an in-depth interview study, along with the added challenges of maintaining a steady sample pool during this longer process. Despite these challenges, the potential benefits of a pragmatic, mixed-methods approach are substantial in terms of using different perspectives to gain new insights into the data generated by either quantitative or qualitative studies.

In a study examining the motives of luxury shoppers in an online context, Liu and Burns (2013) adopted a mixed-methods approach. The qualitative study helped to generate hypotheses about the motivation for consumption, while the quantitative study was used to test these hypotheses. The qualitative study, which was performed first, used a survey to identify a “luxury consumer” population among a group of undergraduates. A two-part criteria at the beginning of the survey separated “luxury consumers” from the rest of the sample: first, a question about whether the respondent had made any luxury brand purchases in the prior three years; second, five questions using a seven-point Likert scale intended to measure the respondents luxury consumption tendency (Liu and Burns, 2013). The respondents who met the researchers’ criteria were separated out as “luxury consumers” and passed on to the remainder of the study. In addition to several questions about the frequency of luxury consumption and online versus in-store luxury shopping, the respondents were asked a series of open-ended questions about their attitudes towards luxury shopping online. These responses were coded into different categories: better price, more convenient, see item personally to avoid risk, etc. (Liu and Burns, 2013). To ensure reliability, the responses were then re-coded by a second coder and the inter-coder agreement checked. These codes were then grouped into themes. The coding frequency revealed that luxury shoppers who preferred online purchasing valued convenience and price, while those who preferred in-store shopping valued the aesthetic appeal of the store, as well as trust in the physical retail establishment. From this, the

researchers developed a series of hypotheses, such as: “Online luxury consumers value product availability more than their in-store counterparts” and “In-store luxury consumers demonstrate a higher level of risk aversion than online luxury consumers” (Liu and Burns, 2013). The researchers then used a quantitative survey to test the hypotheses generated in the first study. The quantitative survey, with a similar sample, used multi-item scales to measure attitudes towards product availability, pricing, online and in-store trust, and risk aversion. This kind of mixed-methods study allows the researchers to gain additional insights and empirical support for their interpretation and coding of the open-ended responses. Other mixed-methods studies might proceed in a different direction, with a quantitative survey providing the basis for an in-depth investigation via qualitative means.

Rationale for Approach to Current Study

This study adopts a mixed-methods approach to study the effect of web atmospherics and consumer reviews on consumers’ purchasing behaviour. From the discussion above, it is clear that a mixed-methods approach has a number of advantages that will be beneficial for this study. The large number of factors and variables involved means that the tight focus on quantitative surveying helps to reduce the complexity and provide a basis for further investigation. On the other hand, the individual and personalized nature of the interaction between web user and website means that an open-ended, semi-structured, qualitative element helps to elucidate factors that may not have been immediately apparent to the researcher. In addition, the emergent responses from the subjects adds depth and colour to the quantitative results, making the interpretation of the study more descriptive and, potentially, more impactful. Without a methodological framework that is robust, complex, and multi-dimensional, it would be impossible to capture the range of data necessary to address the issues

raised in the literature review. The qualitative and quantitative elements of the study are conducted simultaneously and the results are compared against one another using triangulation.

The current study is concerned with a multi-dimensional problem which focuses on the impact of web atmospherics, exogenous forces, and consumer reviews/ratings on online consumer behaviour and purchase decision making.

To attempt to limit the research approach to a single (quantitative or qualitative) research method would ultimately result in a fragmentation of evidence that not only would yield a simple snapshot of experience, but would likely neglect the underlying factors influencing such experience. For this reason, the current study has embraced the post-positivist research paradigm and has adopted a mixed methods research approach to surveying and evaluating consumer behaviour from an opportunity sample of online shoppers (Bryman, 2012).

Survey Methodology

In this mixed-methods study, the surveying process consists of two distinct segments which are interconnected by virtue of the purpose, architecture, and direction of the study itself. The first component is purely quantitative in its construct, and consists of a structured survey which includes five different sections: demographics, web atmospherics, psychological factors, exogenous forces, and consumer reviews and ratings. The subjects will be asked to view several websites as a part of the study. The websites will be scored by the subjects according to factors such as the navigation, aesthetics, and interactivity of the site. The second component is qualitative in nature and consists of semi-structured questions which give the subject the opportunity for open-ended responses. These open-ended responses will be coded and sorted into themes that emerge from the responses. The themes will then be compared to the responses

from the quantitative section. The rest of this section will discuss the basics of the structured and semi-structured surveys and the following section will discuss each instrument in greater detail.

Quantitative Component

The quantitative survey component of this study uses a wide range of questions in order to cover all of the factors identified earlier in the literature review. The survey will begin with a series of demographic questions to elicit independent variables, such as the subjects' gender, age, education, income level, experience status in online browsing, experience status in online shopping, and frequency of shopping behaviours. This data will help to group the subjects into useful categories during the data analysis process. Just as different bricks-and-mortar store designs appeal to consumers of different backgrounds, it may be that web atmospheric characteristics are more attractive and more effective in influencing the purchasing behaviour of online consumers of certain ages, genders, education levels, and experiences.

The second section of the quantitative survey asks the subjects to indicate their agreement with a series of 21 statements about their impressions with regard to the atmospherics that shaped their online shopping experiences. The subjects indicate their level of agreement with each statement according to a 5-point Likert scale, where 1 indicates strong disagreement and 5 indicates strong agreement. These questions will demonstrate the subjects' overall trust in online shopping, website functionality features, navigation and flow, interactivity, personalisation, website content factors, aesthetics, and provided market mix.

The third section of the quantitative survey evaluates the subjects' perceptions and evaluations of the underlying psychological aspects that shape their performance when they purchase on line. These aspects are mainly about their web-based trust and market-based trust in the purchasing process. The fourth section explores the external factors that they perceived

as external influences on them as they experience online shopping such as any socio-cultural forces, as well as their previous online shopping and other experiences. Finally, in the fifth section, the subjects are asked to express the potential influences of the consumer reviews and ratings on their online purchase decisions and behaviour, using 21 statements.

The quantitative section involves a large number of questions on a broad range of factors, including a requirement that the subjects view and examine a series of websites. One of the key challenges is to ensure that the subjects respond to all of the questions and that they give sufficient time for a thoughtful response to each factor. In order to help support this goal, the quantitative questions are written in such a manner that increases readability and flow and are free from any jargon that might confuse or slow down participants. The questions for the quantitative survey are attached in Appendix B.

Qualitative Component

In order to draw more specific insights from the respondent backgrounds and experiences as they relate to online purchase decision making, an additional set of qualitative questions is included in this process. The qualitative component is to be presented to the subjects at the same time, as part of the quantitative survey instrument. This semi-structured, 5-question segment asks the participants to consider specific factors tied to online purchase decision making and related to the factors investigated in the quantitative component. These questions are presented with text boxes and subjects are prompted to provide open-ended responses to influences, atmospheric supports, and rating-based considerations. The questions relate primarily to the subjects' impressions of the websites, the influences of certain atmospheric factors, their feelings about the online shopping experience, and their experience of the online shopping process. The responses to this segment will be collected through the web form and then transcribed into a database. The responses are then coded and divided according to the

themes that emerged from the responses. The coding and analysis of these qualitative responses is expected to produce an experiential blueprint of phenomenological evidence that would be triangulated with the quantitative findings in order to generate a succinct and targeted analysis.

3.4 Research Instrument

The survey instrument is designed to elicit responses from the subjects on a wide series of factors, which can be categorised into three main groups. The survey does not explicitly demarcate the groups for the subject but each question presented relates to a specific factor within one or other of the main groupings. From the literature review, the current conceptual framework emphasises three distinct groups of factors which influence consumer behaviour. These groups are Web Atmospherics (Dailey, 2004; Managanari et al., 2009; Hunter and Mukerji, 2011; Fang, 2012; Chen, 2013), Exogenous Forces (Mollen and Wilson, 2010; Cetina et al., 2012), and Consumer Reviews/Ratings (Chen and Xie, 2008; Yee et al., 2008; Ariely, 2010; Prie and Ferrel, 2011; Javadi et al., 2012; Meshkova, 2013). Within these three factors there are multiple dimensions, each of which represents a distinct, yet interrelated, force operating upon consumer decision-making processes and affecting consumers' behavioural, cognitive, and perceptual biases. These dimensions or factors, which were explored in the literature review, are each examined within the quantitative survey.

One of the goals of the study is to investigate any general and widely applicable dynamics and relationships between the factors being examined. This is in fact an integration of the collective influences of the three main factors that represent the core idea of the research. In contrast to studies that focus exclusively on a particular industry, such as Vermeulen and Seekers' (2008) study on the travel industry, Dhar and Chang's (2007) work on the music industry, or Ye et al.'s (2012) study of the hotel industry, this study does not use industry specific websites but draws from a number of different types of retail websites, focusing more on differences in atmospherics and in the prevalence and presentation of consumer reviews. By

including all of the identified factors, this study is able to not only generate a substantial data set including the responses of the subjects to each factor, but also to use the data to understand the link between these factors, especially between consumer reviews and web atmospherics, in influencing consumers' purchasing decisions. The quantitative survey uses 51 questions or dimensions, each within one of the 11 factors identified in the literature review and described below. Each question relates to some aspect of the factor and, ultimately, to the larger categories of web atmospherics, exogenous factors, and consumer reviews/ratings.

The online experience is increasingly interactive and involves considerable user input, both in terms of how the user navigates through the online environment and in the content they generate. For the purposes of this study, the qualitative section will take advantage of the subjects' interpretive and content generative capabilities by encouraging them to explore their impressions of the websites they visited as a part of the study. The qualitative survey is semi-structured, in that the prompts ask the subjects to focus on a particular area related to the categories and factors explored in the quantitative section. However, the subjects are given substantial freedom to discuss the topic in the manner they choose. There are five questions in the qualitative section and each is followed by a text box that provides space for the subject to write their answer. It is to be expected, given the fact that the qualitative questions come directly after the quantitative survey, that the qualitative responses will be influenced by the quantitative survey in terms of vocabulary and topic. In a sense, the quantitative survey will call certain concepts and terminology into the subjects' minds, and the qualitative surveys will reflect the topics of interest from the quantitative section. While it is important to be on guard for the possibility that the qualitative responses will be shaped by the quantitative survey, the neutral tone of the quantitative questions should prevent shading the qualitative data in one direction or another. Rather, the quantitative survey should simply get the subjects thinking about the topics of interest, and thereby prime them for the task of responding to an open-ended

question. The rest of this section will discuss each of the three major categories or groups, and their various sub-factors, which are included in the quantitative survey.

Web Atmospherics

Web atmospherics was defined by Dailey (2004) as the “conscious designing of web environments to create positive effects in users in order to increase favourable consumer responses”. The goal of web atmospherics is to encourage users to spend time on the site and to use the elements of the site that are useful for the site proprietor. For an e-commerce or online retail site, this includes browsing the products, selecting products for purchase, and the use of the shopping cart/check-out functions. The aspects of the website that influence the consumer are broken down by Eroglu et al. (2001) into high and low-task relevant categories. High-task relevant aspects would be those elements that directly affect and facilitate the consumer’s goal of shopping on the site. These aspects include product information and navigation cues. Low-task relevant aspects include things that, while important in the site experience, were not directly relevant to the user’s goal. These aspects include the aesthetics of colour, background patterns or images, typographical, and other decorative elements. As websites have become more advanced since Eroglu et al (2001) proposed these categories, additional elements can be added that also have substantial impact on the atmospherics of the website. These elements include site interactivity, which means the site changes and responds dynamically to the behaviour of the user, usually through responsive sorting functions. At the forefront of website technology, interactivity is taking the form of virtual agents who interact with users as if they were a real person (Etemad-Sajadi, 2014). Additionally, modern websites allow users to personalize their experiences by choosing the kinds of information they are interested in and the types of products they wish to see. Finally, many sites offer users the opportunity to become active participants and content creators. The ability to communicate

with the seller and with other users/buyers can overcome some of the difficulties associated with the inability to inspect goods purchased on the Internet until well after the transaction. The rest of this section will briefly look at each of these factors.

Site Navigation and Flow

In a bricks-and-mortar store, customers have to walk around the displays in order to find and examine the goods they want to buy, whereas in an online retail environment the customers have to scroll and click in order to navigate the store and find the goods (Dailey, 2004). In a physical retail store, the directory or signs above the aisles are used to assist customers in finding what they are looking for. In addition, the layout of the store and the displays can also shepherd customers around the space. Similar explicit and implicit navigation cues exist for websites, with navigation bars and site indexes replacing the directories and signs, and the site design replacing the store layout. Additionally, the flow of the website can be restricted so that users have to go through certain pages or areas of the site in order to get where they want to go. These kinds of restrictive navigations limit the user's freedom of movement, as in a retail store where the customer has to walk past a series of displays before reaching the check-out or exit. The survey investigates the subjects' impressions of the websites' navigational cues and their impact on the subjects' desire to purchase goods from the web site.

Aesthetics

Aesthetics is a potentially broad factor that includes colour, image and text density and design, and the visual aspects of the layout of the site. These impressions are generally formed very quickly, creating an immediate positive or negative impression for the user (Manganari et al., 2009). The complexity of the site, in terms of how many lines of text, how many images,

and the number of objects on screen at any one time, can also be considered an aesthetic element. Research has demonstrated that colours and hues that promote calmness and relaxation tend to be more aesthetically pleasing for website users (Manganari et al., 2009). Websites with poor aesthetics, where the colours don't interact well or where there is clutter interrupting the user's flow, may suffer negative impressions from users. The quantitative survey investigates these elements of website aesthetics and their impact on the subjects' purchasing intentions.

Interactivity

A part of shopping in a physical retail outlet involves the human interaction between buyer and seller. The physical presence of the store implies solidity, which is contrasted with the relatively effervescent footprint of a website. Additionally, humans establish trust through interaction and the website is an impersonal information source that affords only limited interaction. Increasing the levels of interactivity by allowing chats or other interactions with the buyer can overcome feelings of uncertainty stemming from the possibility of deception or fraud in an online environment. The quantitative survey elicits the subjects' responses and impressions of website interactivity.

Personalisation

The same atmospheric elements can have different effects on different website users. This insight is a key part of the Stimulus-Organism-Response Framework, developed by Eroglu et al. (2001) and Menon and Kahn (2002), which holds that the effects that particular web atmospheric elements have on users can be determined by their individual differences. Because one size does not always fit all, many companies give users the ability to personalise their websites. Customer preferences could include hedonic features, such as aesthetic elements, or

more pragmatic features like product information. Allowing the user to increase or decrease particular elements of the site, for example by presenting an expandable product information section, can help the website's atmospheric features satisfy a broader range of users than a more static presentation. Questions in the quantitative survey elicit subjects' responses to personalisation options in the sample websites.

Engagement

In online marketing, engagement is a broad concept that encompasses a range of mechanisms designed to create customer loyalty through the customer's interactions with the marketing messages (Mollen and Wilson, 2010). The emotional, psychological, and physical investment of a consumer into a particular brand can be bolstered by repeated interactions between consumer and brand messaging. The result of this investment and interaction is the customer engagement. There is a disagreement between the academic community and practitioners over whether increased sales can be directly attributed to customer engagement, with practitioners pushing engagement as a key factor in swaying consumers and academics seeking to place engagement as more of an element within a larger constellation of forces and influences on consumer behaviour (Mollen and Wilson, 2010). The quantitative survey questions measure the subjects' levels of engagement with the websites.

Exogenous Forces

The consumer experience of a retail website does not exist in a vacuum; it is shaped by exogenous forces. Socio-cultural influences, the prior experiences of the individual consumer, market information, and trust factors, all affect the way in which the individual consumer interacts with the atmospheric elements of the website and the way in which those atmospheric elements influence their purchasing behaviour (Cetina et al., 2012; Mollen and Wilson, 2010).

Just as some consumers, based upon their socio-cultural background and personal experiences, tend to feel more comfortable shopping in a large, warehouse-style retail environment, others tend to shop in small, boutique stores. In addition, individual variation occurs among online shoppers (Cetina et al., 2012). Customers are also better informed and have access to greater amounts of information about a company's products and about their competitors' products. Furthermore, the notion of consumer trust in the company, and the online environment in general, is essential to the relationship between seller and consumer and on consumer attitudes towards the company (Cetina et al., 2012).

When examining effects outside of a model, certain exogenous factors must be considered. For instance, while analyzing the reasons why gas supply is in shortage, the reasons behind the shortage are exogenous. To this end, it is known in psychology that, exogenous stimuli are external stimuli without conscious intention (Posner 1980). An example of this is attention drawn to a flashing light in the periphery of vision.

Socio-Cultural Forces

Consumer behaviour is influenced by the social environment of which the consumer is a part; both their 'real world' environment and the online environments (Cetina et al., 2012). Word of mouth (WOM) opinion spreads through social networks, friendship groups, work groups, and consumer action groups. Consumers reference the products they are interested in, the goods they purchase, and the companies they support. Friends and acquaintances are then exposed to the brands and products without direct influence from the company. This influence can be both positive and negative because the same process by which friends positively reference brands can be turned around to spread negative reviews or commentaries about brands. The perception of a brand or company among a peer group can enhance or inhibit an individual's purchasing decisions, as a brand that is considered 'uncool' or undesirable for

whatever reason may find it impossible to break through to a potential customer, no matter what their atmospheric qualities or brand messaging.

A related finding by Jamil and Mat (2011) proposed that subjective norm does not significantly influence actual buying through the internet but have a profound significant effect on online purchase intention. The results implied that families, friends and the media only have a minor influence on the actual internet purchasing. Subjective norm was the second most influential factors after perceived behavioral control to influence the purchase intention to shop online (Orapin, 2009). He et al. (2008) indicated that the recommendations by third parties (subjective norm) significantly impacted the purchase intention of the consumers. Most of the findings indicated that subjective norm does has a direct significant influence on purchase intention towards online shopping (Leeraphong & Mardjo, 2013)

Experiential Forces

Consumers are also strongly influenced by their prior experiences, either with a particular product, with online shopping in general, or with representatives of a brand or company (Cetina et al., 2012). These experiences can shape the perception of a website or of a marketing message. The consumer's interpretation of the online world and of the enormous variety and volume of stimuli is based upon the way their brains have incorporated and structured their prior experiences (Cetina et al., 2012). Also, an individual consumer's response to web atmospheric elements will be dependent upon their background and experience with, among other factors, different types of websites, artistic or design aesthetics, and levels of product information. Also, the consumer's experience with technology, the Internet, and navigating websites can influence how they experience a retailer's website. The quantitative survey captures some of the relevant experiences of the subjects, in particular their prior online retail experiences and the brands involved in the study.

Trust and Market-Based Forces

A key problem in online shopping is the fact that the consumer is not able to physically encounter the product before purchasing (Fang, 2012). As a result, a consumer's trust in a brand or a company can make the difference between a decision to purchase and a decision to simply click away (Fang, 2012). The high risk of fraud in online retailing and high profile data security breaches in recent years makes consumers legitimately concerned about sending their bank or credit card information online. With bricks-and-mortar retailers, there is a physical structure that represents a capital investment and reduces the perception that the retailer may be a 'fly-by-night' operation. The relative ease of setting up a website can make even a reliable and solid retailer appear unsteady. Retailers or brands with a substantial physical footprint and market presence can operate as online retailers by drawing upon this reservoir of prior customer experience for the necessary trust to facilitate purchases. The challenge for other retailers is to generate trust among consumers who have no prior experience with or knowledge of their brand (Fang, 2012). The quantitative survey examines the elements of interactivity and information that influence the subjects' trust responses.

Consumer Reviews/Ratings

The third major category of factors in this study is consumer reviews and ratings, which can be found, not only on dedicated consumer review sites, but increasingly on retail websites. Online consumers, with access to enormous amounts of data about products and brands, are sceptical of information provided directly by a company and may view claims of quality with suspicion (Cetina et al., 2012). Consumer reviews are tied closely to the growth of social media, where peer-to-peer communications and interactions are the norm. The consumer review, provided by an uninterested third party, is viewed as more honest than the marketing materials provided by the company who obviously have a financial stake in the product (Cetina et al.,

2012; Javadi et al., 2012). Consumer reviews can be as simple as a star rating for a product or as complex as a user-generated video blog. The quantitative survey examines the influence of reviews and experience feedback, the transparency and consistency of those reviews/ratings, and social media and other user-generated content which take place on third-party websites, but can be linked to the retailer's site.

Reviews and Experience Feedback

The feedback that prior purchasers leave about a particular product, in the form of consumer reviews and ratings, is an important source of information for many consumers when making a purchasing decision (Ye et al., 2008; Javadi et al., 2012). These reviews are a component of the WOM on the product that includes conversations with peers, both online and in other forms of interaction. In particular, products whose utility is based upon the experience they generate, such as books, music, movies, vacation destinations, or hotels, are highly sensitive to consumer reviews and feedback mechanisms (Ye et al., 2012). The reason for this is that the quality of the goods cannot be ascertained before the consumer actually gets their hands on it. The feedback studied can take the form of either a text-based review posted on a retail site, or a star-based or otherwise numerical rating system. In these systems, the consumer can see an average rating (e.g. out of four or five stars) and the number of reviewers. The quantitative survey looks at the subjects' responses to consumer reviews and ratings and how their presence or absence influences purchasing decisions.

Transparency and Consistency in Online Reviews

Because consumer reviews are often located on the retailer's website, they are nominally under the control of the retailer. As a result, there is a possibility that the retailer can manipulate or edit the reviews to limit the negatives or enhance the positives. Given the naturally higher level of trustworthiness in third-party consumer reviews, there is a substantial

incentive for retailers to encourage positive, informative reviews (Chen and Xie, 2008). The transparency and consistency in the reviews and ratings, and the extent to which the retailer presents the negative alongside the positive, enhance the reliability of the reviews and their perception of veracity (Chen and Xie, 2008). The quantitative survey examines the subjects' perceptions of consumer review reliability, transparency, and consistency and the impact of these perceptions on their purchasing decisions.

Social Media and User-generated Content

The growth of Web 2.0, social media, and the creative consumer present substantial challenges to traditional marketing concepts, but also opportunities for brands to exploit (Berthon et al., 2012). The relationship between social media, where consumers share information, experiences, and content, and the creative consumer, who produces content to be shared, forms the crux of value in new media (Berthon et al., 2012). User-generated content (UGC) spread virally can have a more powerful impact than a multi-million dollar advertising campaign that is limited to its particular ad buy. UGC can range from simple text discussions about products and services to structured reviews or advertising blogs/videos to the active modification products or services and dissemination of these new creations (Berthon et al., 2012). The social media component comprises both the content created by users and the means by which that content is shared and distributed. The distribution systems, such as Facebook or Twitter, are entirely driven by UGC. The discussion turns from a one-to-many model, where a single advertiser sends a message to a multitude of listeners/viewers, into a many-to-many discussion, wherein the multitude speaks to itself.

In order to critically evaluate the degree to which each of these forces impact on consumer behaviour, a 30-dimension survey component was designed (See Appendix B), in which each dimension was representative of one of the aforementioned factors. The

dimensions were randomised so as to prevent structural bias during the sampling process, each dimension was assigned three unique respondent prompts for a total of 90 distinct indicators, all of which emphasised the respondents' level of agreement (e.g. 1=strongly agree, 5=strongly disagree). Through this process, each of the 30 dimensions could be assigned an effective weight relative to the feedback received from the respondents, and all of the impact factors could be compared with other independent variables to determine degrees of bias or influence that may be related to consumer

3.5 Data Analysis

The mixed methods approach to research requires that evidence is analysed according to the primary research objectives and the core considerations of the research problem (Bryman, 2012). For this reason, the behavioural framework developed from the literature was instrumental in the data analysis process, providing a grouping mechanism for addressing the affective nature of web atmospherics and online reviews in relation to consumer behaviour. As this research was exploratory in nature, the findings were not experimental, and therefore, representative of individual biases and opinions (as opposed to the directional purposing of the empirical techniques). Therefore, quantitative analysis of participant survey responses was based upon a factor analysis framework that attempted to identify the core factors affecting consumer behaviour and online commerce. Statistical research methods included a comparison of independent variables (demographics) with responses across the first segment of the survey (dependent variables) in order to highlight any influences that might be unique to user groupings. These one-way ANOVA comparison of means tests revealed any biases which may have skewed or impacted the responses to the experiential observations in the subsequent sections of the survey. Factor analysis was then utilised to distil the feedback for each

of the remaining sections into weighted indicators of influence, highlighting the degree to which specific site characteristics (web atmospherics) and feedback forces (consumer reviews) impact upon consumer behaviour.

The qualitative research segment of this survey/interview resulted in a broad spectrum of open responses that were directly associated with each of the research questions. Merriam (2009) describes an analytical qualitative coding technique which uses such structured responses to identify major and minor thematic elements that are interspersed throughout the responses to each question. This technique was applied to the transcribed feedback, utilising Microsoft Excel to divide the responses by question. A line-by-line analysis was then performed, resulting in a blueprint of thematic elements which were then compared for similarity (major/minor themes) and dissimilarity (outliers, group aberrations). The discussion of these findings included the presentation of key responses by virtue of their congruence with the broader group interpretation of the question, as described of these thematic dimensions.

The qualitative responses were coded and scored by two raters independently. Each of the raters engaged in segmenting the text, creating a codebook, coding the text, assessing the inter-rater reliability, modifying the codebook, and coding the responses. The text consisted of all of the open-ended responses elicited by the qualitative questions. The texts were first separated by question and then further segmented into specific rationales or impressions. A review of these segments led the raters in the development of codes. These codes were then grouped into themes that related to the broader themes of the study. Once all of the codes were assigned, the frequency of each code's occurrence was recorded and set in a database. The frequency results of the coding were then compared to the results from the quantitative survey, using triangulation to assess the relationship between the two components of the survey and to validate the responses.

3.6 Research Participants

3.6.1 About statistical sampling for research

Sampling for research is a process used in statistical analysis in which a predetermined number of observations are taken from a larger population. The methodology used to sample from a larger population depends on the type of analysis being performed, but may include simple random sampling, systematic sampling, stratified random sampling, and cluster random sampling (Pratt et al. 1995).

For a correct sampling for a research such as the current one; the proposed sample should be a representation of the entire population. When taking a sample from a larger population, it is important to consider how the sample is chosen. To get a representative sample, the sample must be drawn randomly and encompass the whole population.

An unbiased (representative) sample is a set of objects chosen from a complete sample using a selection process that does not depend on the properties of the objects (Lomax et al. 2011). In an astronomical context, an unbiased sample might consist of that fraction of a complete sample for which data are available, provided the data availability is not biased by individual source properties.

The best way to avoid a biased or unrepresentative sample is to select a random sample, also known as a probability sample. A random sample is defined as a sample where each individual member of the population has a known, non-zero chance of being selected as part of the sample (Cochran 1977).

Sampling methods are classified as either probability or nonprobability. In probability samples, each member of the population has a known non-zero probability of being selected. Probability methods include the above mentioned random sampling, systematic sampling, and stratified sampling methods. In nonprobability sampling, members are selected from the population in

some nonrandom manner. These include convenience sampling, judgment sampling, quota sampling, and snowball sampling. These three *probability* sampling methods can be highlighted in brief as follows:

Random sampling

is the purest form of probability sampling. Each member of the population has an equal and known chance of being selected. When there are very large populations, it is often difficult or impossible to identify every member of the population, so the pool of available subjects becomes biased.

Systematic sampling

is often used instead of random sampling. It is also called an Nth name selection technique. After the required sample size has been calculated, every Nth record is selected from a list of population members. As long as the list does not contain any hidden order, this sampling method is as good as the random sampling method. Its only advantage over the random sampling technique is simplicity. Systematic sampling is frequently used to select a specified number of records from a computer file.

Stratified sampling

is commonly used probability method that is superior to random sampling because it reduces sampling error. A stratum is a subset of the population that share at least one common characteristic. Examples of strata might be males and females, or managers and non-managers. The researcher first identifies the relevant strata and their actual representation in the population. Random sampling is then used to select a sufficient number of subjects from each stratum. "Sufficient" refers to a sample size large enough

for us to be reasonably confident that the stratum represents the population. Stratified sampling is often used when one or more of the strata in the population have a low incidence relative to the other strata.

For the purposes of this research the third stratified sampling method is selected to ensure that the explored sample would be a relevant and representative one to the this research's intentions: To study buyers within UK who have at least purchased once from online stores.

3.6.2 Use of random sampling in the current research

The data was collected by applying a nationwide questionnaire that examined the online shopping community in UK. The respondents were selected randomly from the open community of those who are familiar with (or accustomed to) buying goods and services via online stores websites. For validity and reliability of the collected data, the survey commenced with a screening question which ensured that all respondents have had at least one successful online purchase experience. This indicates that respondents would answer from their own real experiences of online purchase. This will further consolidate the reliability of the data collected. According to model complexity, analysis methods, and the software used for analysis, the 504 respondents were chosen as a valid representative sample of the overall UK community of online shoppers since it was open for all random online users in the UK without any restrictions on the sample selection, apart from the first screening question. The sample was not biased as it was directly and randomly collected from the open unaltered community of the UK online shoppers' community.

The major criterion that was applied to select the pool of participants was composed of two aspects:

- a. Participants must be resident in UK.
- b. Each participant must have had at least one online shopping experience.

3.7 Ethical Concerns

The range of ethical concerns in this study was based upon the sampling approach to the mixed methods research and the leverage of the feedback yielded by a participative yet vulnerable respondent population. Deontology in ethical responsibility is described by Jonker and Pennink (2011:62) as the ‘study of the nature of duty and obligation of what is necessary’, whereas Kanniyakonil (2007) suggests that researchers are compelled to embrace rule-based or act-based standards of ethical governance in research. The deontological foundations of the current study were based upon exacting academic responsibilities to the research problem and the controls implemented in order to distil and represent participant feedback as accurately and completely as possible. Key risks in ethical management of evidence, identified by Mamotte and Wassenaar (2009), include a lack of agreement, disparities in moral judgement, ambiguity about governance, and an incomplete review of the findings. The methods and research techniques employed during this process were tailored to mitigate the likelihood of such affectation and to ensure that ethical concerns were mitigated from the onset of the study.

Specifically, all respondents were asked to read and agree to the terms of the surveying process prior to the multi-phase survey/interview being administered. This process included a query letter (See Appendix A) which outlined the purpose of the study and established the at-will nature of the research. Further, the respondents were guaranteed in writing that all feedback would be collected anonymously and would be used for academic purposes only (not commercial or marketing purposes), thereby protecting their individual rights to privacy. Such controls were perceived as an important guarantee in order to encourage the respondents to answer the questions openly and honestly. Upon receipt, all answers were aggregated into a single Excel spreadsheet and any lingering

metadata (e.g. names, IP addresses, etc.) were purged, utilising the redaction module included with the software suite.

3.8 Summary

This chapter has provided a discussion of the techniques and methods employed in the collection and analysis of evidence relating to consumer behaviour and the effects of web atmospherics and online reviews. By embracing the mixed methods approach to empirical research, these techniques have allowed for robust feedback to be collected, identifying a variety of impact factors and forces that contribute to online decision making on a daily basis. Through the critical and systematic analysis of such feedback, it is argued that behavioural intentions may be predicted with accuracy and that key characteristics and dimensions of site-specific presentations can be improved in order to effectively meet and exceed consumer expectations. The following chapter will present the evidence collected over the course of this process and will describe the significance of these findings in relation to pragmatic applications in the web development community.

Appendices

Appendix A: Participant Query Letter

Appendix B: Participant Survey

Constructs of the research survey tool Part One: The Demographic scan of participants

1	Gender	Male	Female			
2	Age Range	18-24	25-34	35-44	45-54	55+
3	Education Level	Secondary	Some College	Bachelor's	Master's	PhD+
4	Annual Income Level	20-30K	31-50K	51-90K	91-200K	200K+
5	Computer User Expertise	Novice	Navigation/Search	Intermediate	Blog and Web Design	Programmer/Expert
6	Number of Online Purchases Made in Past 6 Months	0	1-4	5-8	9-12	13+
7	Number of Online Shopping Sites Visited in Past Month	0	1-4	5-8	9-12	13+

Part Two: The quantitative component

Variable	Code	Definition	Items
Behaviour and decision to purchase online	BDM	Customer decision to purchase from e-commerce sites is influenced by several factors such as information quality, firm's reputation, perceived ease of payment, sites design, benefit of online shopping, and trust (Kartavianus O and Napitupulu T A , 2012)	<ol style="list-style-type: none"> 1. My online purchase decisions are influenced by the shape, functionality, and contents of the stores websites. 2. I decide to purchase online via a certain website if I trust that website. 3. I find purchasing online beneficial.
Web Atmospherics	WA	Central or peripheral web dimensions which affect website involvement, exploratory behaviour, and purchase behaviour (Richar, 2005; Hunter and Mukerji, 2011)	<ol style="list-style-type: none"> 4. I find the appearance of the website to be an important aspect of my online shopping experience 5. The website's appearance and layout helps me to interact with the site 6. The quality of information provided in an online store website influences my decision to purchase.
Overall consumer trust on the online shopping	OCT	Trust is the party's expectation of fulfilling its specific obligations and willingness to accept possible damage the transaction, irrespective of its ability to control the other party (Mayer, Davis, and Schoorman, 1995)	<ol style="list-style-type: none"> 7. My overall trust to the e-tail process is built on the web security. 8. My overall trust to the e-tail process is built on the previous customers' reviews. 9. When I buy on line I expect the online retailers to fulfil their obligations 10.I buy online because I trust the online purchasing process.
Website functionality features	WF	The functionality of a website its usability and interactivity. These two factors have been frequently regarded as the primary reasons for the success or failure of websites (Ciliberti, 2011; Pride and Ferrell, 2011).	<ol style="list-style-type: none"> 11.Easy-to-use websites of online stores encourage me to place my purchase orders. 12.My online purchase activity is influenced by the performance of a given e-store website.
Navigation and Flow	NAV	Navigation bars, site indexes, and other cues that help users find what they need on the website. Also, navigation restrictions that limit access to certain areas of a site. (Dailey, 2004)	<ol style="list-style-type: none"> 13.The navigation bar helps me get around the site 14.The restrictions on navigation around an online store site limit my ability to purchase via that site
Interactivity	INT	Methods of allowing customers to chat, ask questions, or otherwise interact with staff or a community of fellow shoppers (Manganari et al., 2009)	<ol style="list-style-type: none"> 15.I used the chat elements of the site to get more information 16.I found the interaction with the website staff/support to be helpful

Personalisation	PER	From aesthetic features to levels of product information, personalisation provides tools that allow users to customize their experience of the site (Eroglu et al., 2001; Menon and Kahn, 2002).	17.I tend to choose personalisation options when I use a website 18.I found the personalisation options on the website to be effective in helping me create a pleasant experience
Website content factors	WC	The website content is its informational content and design (Rahimnia and Hassanzadeh, 2013)	19.An online store website informational contents influence my purchase decision. 20.The style of an online store website influences my purchase decisions.
Aesthetics	AES	Colour, layout, text density, and font are basic aesthetic elements, but the category can include site complexity and clutter. (Manganari et al., 2009)	21.The colours and fonts of an online store website makes me feel at ease 22.An online store website that has a clear and easy to follow layout forces me to continue browsing for more products.
Market mix	MM	The e-Marketing mix considers the elements of presenting the marketing mix online, namely it encompasses price, product, promotion, communication, and fulfilment. (Elkhani, 2014)	23.I use the price comparison facilities if provided within the online stores websites 24.I tend to purchase products that come with online promotions.
<u>Psychological factors</u>	PSY	Factors that cause concerns to online consumers in regards to safety of their personal information, transaction security and misuse of private data, as well as their trust in the specific vendors, brands, and products (McCole, Ramsey, and Williams, 2010)	25.My perceived risk tends to decrease when I use online payments many times 26.I emotionally feel safe to purchase online at certain websites.
Web-based trust	WBT	Psychological state leading to the willingness of customers to perform payment transaction over the Internet and expect the payment platform fulfilling its obligations, irrespective of customer's ability to monitor or control payment platform's actions." (Yang et al, 2015)	27.I take the online transaction security seriously when I buy online. 28.I look at the security features of online commerce websites before I place any purchase orders.
Market-based trust	MBT	A consumer's trust in a brand or a company can make the difference between a decision to purchase and a decision to simply click away (Fang, 2012).	29.I trust the companies running the online stores websites that I use. 30.My knowledge of the brand influences my trust in the website that I buy from

<u>Exogenous Forces</u>	EXO	Socio-cultural forces which act upon consumer sensibilities, values, priorities, and agendas to influence consumer behaviour (Cetina et al., 2012). Or; exogenous factors are the consumer traits, situational factors, product characteristics, previous online shopping experiences, and trust in online shopping . (Monuwe et al, 2004)	31.My consumption decisions are influenced by my personal background 32.I am experienced in using technology
Socio-Cultural Forces	SCF	Consumer behaviour is influenced by the social environment the consumer is a part of, both their 'real world' environment and the online environments (Cetina et al., 2012).	33.My friends or family think that I should shop online 34.People I find influential think that I should shop online
Previous Online Shopping and Other Experiences	EXP	An individual consumer's response to web atmospheric elements will be dependent upon their background and experience with, among other factors, different types of websites, artistic or design aesthetics, and levels of product information. Also, the consumer's experience with technology, the Internet, and navigating websites can influence how they experience a retailer's website (Cetina et al., 2012).	35.I have had good experiences online shopping in the past 36.I am familiar with a lot of different types of websites design or artistic styles
<u>Consumer Reviews and Ratings</u>	CRR	A compelling, socially-driven impact factor which provides consumers with an externalised interpretation of product value that is psychologically and sociologically processed through internalised cognitive forces (Chen and Xie, 2008; Zhu and Zhang, 2010; Papadopolous, 2011; Lee and Shin, 2014).	37.I read consumer reviews for products I am considering purchasing 38.Reading a negative review makes me less likely to purchase the product 39.Reading a positive review makes me more likely to purchase the product
Reviews and Experience Feedback	REF	As simple as a star rating or as complex as a video blog, consumer ratings are tied to social media and can be more trusted than marketing materials because of their lack of financial motivation (Ye et al., 2012; Javadi et al., 2012).	40.I tend to think that consumer reviews are honest 41.I trust reviews that link to the reviewer's social media accounts more than anonymous reviews

Transparency and Consistency in Online Reviews	TC	The transparency and consistency in the reviews and ratings, and the extent to which the retailer presents the negative alongside the positive, enhance the reliability of the reviews and their perception of veracity (Chen and Xie, 2008).	42.The presence of negative reviews on a retailer's website makes me think the retailer is more honest 43.I am suspicious of overly positive reviews
Social Media and User-generated Content	SMC	UGC which can range from simple text discussions about products and services to structured review or advertising blogs/videos to the active modification products or services and dissemination of these new creations, provide a new model for brand/consumer and consumer/consumer interaction. (Berthon et al., 2012).	44.I follow social media and read/watch content created by users (instead of marketing advertisements) 45.User-generated web content (about a product) influences my perception of a brand
Valence, Volume, and Variance of Reviews	VVV	Review volume is the number of reviews received for a specific seller or product, review valence is the average of the review ratings, and variance is the indication of the distribution of reviews for a given product or service. (Wolf and Muhanna 2011, Feng and Zhang 2010)	46.I look at a product's star rating before deciding to purchase it 47.The number of ratings is important to me in assessing the overall rating.
Reviews Usefulness	RU	Reviews usefulness allow consumers to obtain sufficient information and have indirect purchasing experiences so as to reduce their level of perceived uncertainty (Liu and Park 2015)	48.Review ratings and review elaborateness positively affect my perceived usefulness of them. 49.It is useful to me if reviews are given in an enjoyable and readable way.
Reviews level of detail and support to Decision Making	RDS	Reviews support decision making if they provide unbiased understanding of the product, construct evaluative standards, and reduce the consumers' cognitive cost (Liu, Karahanna, and Watson, 2011). The level of detail in a review is operationalized as the amount of specific information about the product found in	50.I find detailed information is more diagnostic, which is beneficial for me to make a decision. 51.User-generated web content influences my decision to purchase a product

		the written portion of a review (Jiménez F R and Mendoza N A, 2013)	
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This part is re-produced as follows:

Part Two: The quantitative component –Reproduced

Please select the answer that best expresses your opinion:

Item No.	Item Code	Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
			5	4	3	2	1
1	BDM1	My online purchase decisions are influenced by the shape, usability, and contents of the stores websites					
2	BDM2	I decide to purchase online via a certain website if I trust that website					
3	BDM3	I find purchasing online beneficial					
4	WA1	I find the appearance of the website to be an important aspect of my online shopping experience					
5	WA2	The website's appearance and layout helps me to interact with the site					
6	WA3	The quality of information provided in an online store website influences my decision to purchase.					
7	OCT1	My overall trust to the e-tail process is built on the web security.					
8	OCT2	My overall trust to the e-tail process is built on the previous customers' reviews					
9	OCT3	When I buy on line I expect the online retailers to fulfil their obligations					
10	OCT4	I buy online because I trust the online purchasing process					
11	WF1	Easy-to-use websites of online stores encourage me to place my purchase orders					
12	WF2	My online purchase activity is influenced by the performance of a given e-store website					
13	NAV1	The navigation bars are useful and helpful in getting me around the site.					
14	NAV2	The restrictions on navigation around an online store site limit my ability to purchase via that site					
15	INT1	I used the chat elements of the site to get more information					
16	INT2	I found the interaction with the website staff/support to be helpful					
17	PER1	I tend to choose personalisation options when I use a website					
18	PER2	I found the personalisation options on the website to be effective in helping me create a pleasant experience					
19	WC1	An online store website informational contents influence my purchase decision					
20	WC2	The style of an online store website influences my purchase decisions					

21	AES1	The colours and fonts of an online store website makes me feel at ease					
22	AES2	An online store website that has a clear and easy to follow layout forces me to continue browsing for more products					
23	MM1	I use the price comparison facilities if provided within the online stores websites					
24	MM2	I tend to purchase products that come with online promotions					
25	PSY1	I am more trusting of online payments the more I use them.					
26	PSY2	I emotionally feel safe to purchase online at certain websites					
27	WBT1	I take the online transaction security seriously when I buy online					
28	WBT2	I look at the security features of online commerce websites before I place any purchase orders.					
29	MBT1	I trust the companies running the online stores websites that I use					
30	MBT2	My knowledge of the brand influences my trust in the website that I buy from					
31	EXO1	My consumption decisions are influenced by my personal background					
32	EXO2	I am experienced in using technology					
33	SCF1	My friends or family think that I should shop online					
34	SCF2	People I find influential think that I should shop online					
35	EXP1	I have had good experiences online shopping in the past					
36	EXP2	I am familiar with a lot of different types of websites design or artistic styles					
37	CRR1	I read consumer reviews for products I am considering purchasing					
38	CRR2	Reading a negative review makes me less likely to purchase the product					
39	CRR3	Reading a positive review makes me more likely to purchase the product					
40	REF1	I tend to think that consumer reviews are honest					
41	REF2	I trust reviews that link to the reviewer's social media accounts more than anonymous reviews					
42	TC1	The presence of negative reviews on a retailer's website makes me think the retailer is more honest					
43	TC2	I am suspicious of overly positive reviews					
44	SMC1	I follow social media and read/watch content created by users (instead of marketing advertisements)					

45	SMC2	User-generated web content (about a product) influences my perception of a brand					
46	VVV1	I look at a product's star rating before deciding to purchase it					
47	VVV2	The number of ratings is important to me in assessing the overall rating					
48	RU1	Review ratings and review elaborateness positively affect my perceived usefulness of them					
49	RU2	It is useful for me if reviews are given in an enjoyable and readable way					
50	RDS1	I find detailed information is more diagnostic, which is beneficial for me to make a decision					
51	RDS2	User-generated web content influences my decision to purchase a product					

Part Three: The qualitative component

The questions related primarily to the subjects' impressions of the online shopping websites, the influences of certain atmospheric factors, and their attitude towards the use of these websites.

Please answer the following questions 1-5:

1. What motivates you and makes you decide to shop online?

.....

2. What are your personal and background factors that influence your online purchase decisions?

.....

3. How do you perceive the influence of websites usability and content on your online purchases?

.....

4. In what way (if at all) and how you are influenced by consumer reviews and ratings when you buy online?

.....

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.....

5. What are your recommendations to make the e-Tail process more efficient and enjoyable?

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Chapter Four

4 Data Collection, Analysis, and Research Results

4.1 Data Collection Methods: Questionnaire Design

As discussed in the previous chapters, the main data for the purposes of this research was conducted using a questionnaire survey. Questionnaires are defined as “any written instruments that present respondents with a series of questions or statements to which they react either by writing out their answers or selecting from among existing answers” (Brown, 2001).

Accordingly, and referring to the relevant literature on questionnaire design, the current instrument is designed to survey collecting the required data from Internet online stores users (Churchill 1979; Davis 1989; Moore and Benbasat 1991; Hinkin 1998). The questionnaire consists of three sections of questions: Section A, Section B, and Section C. The measurement used is a nominal scale which splits data into mutually exclusive and collectively exhausted categories (Sekaran, 2006). The questionnaire factors and sub-factors are manifested via the constructs listed in Table 4.1.

The questionnaire is sent online to prospective responders from those who purchase online. The online questionnaire started with an opening welcome paragraph that outlined the aim of the research, and fully explained all the ethical considerations and requirements.

As indicated above the questionnaire was composed of three sections. Section A gathered demographic details of respondents. These details included gender, age, level of education, and annual income. Such details enable better evaluation of the natures of the participating sample

and its relevance to the topic under research. This section also explored the familiarity of the respondents with IT technology in general, and online purchase activities in particular.

Section B of the questionnaire measured a number of major factors (online purchasing behaviour, web atmospherics, and customer trust) and a number of sub-factors (web functionality, web content, psychological factors, exogenous factors, and previous customer reviews). This second section of the questionnaire comprised 51 items that measured the whole range of factors and sub-factors. A 5-point Likert scale was used, with 1 = “strongly disagree” and 5 = “strongly agree”.

The third section of the survey was designed to further explore the exact perceptions of the participants with regard to their online purchases experiences. The qualitative data collected in this section would be analysed utilizing specific qualitative data analysis methods.

Table 4.1: List of Constructs and Items to be used in the Survey

Constructs of the research survey tool

Part One: The Demographic scan of participants

1	Gender	Male	Female			
2	Age Range	18-24	25-34	35-44	45-54	55+
3	Education Level	Secondary	Some College	Bachelor's	Master's	PhD+
4	Annual Income Level	20-30K	31-50K	51-90K	91-200K	200K+
5	Computer User Expertise	Novice	Navigation/Search	Intermediate	Blog and Web Design	Programmer/Expert

6	Number of Online Purchases Made in Past 6 Months	0	1-4	5-8	9-12	13+
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7	Number of Online Shopping Sites Visited in Past Month	0	1-4	5-8	9-12	13+
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Part Two: The quantitative component

Variable	Code	Definition	Items
<u>Behaviour and decision to purchase online</u>	BDM	Customer decision to purchase from e-commerce sites is influenced by several factors such as information quality, firm's reputation, perceived ease of payment, sites design, benefit of online shopping, and trust (Kartavianus O , Napitupulu T A, 2012)	52.My online purchase decisions are influenced by the shape, functionality, and contents of the stores websites. 53.I decide to purchase online via a certain website if I trust that website. 54.I find purchasing online beneficial.
<u>Web Atmospherics</u>	WA	Central or peripheral web dimensions which affect website involvement, exploratory behaviour, and purchase behaviour (Richar, 2005; Hunter and Mukerji, 2011)	55.I find the appearance of the website to be an important aspect of my online shopping experience 56.The website's appearance and layout helps me to interact with the site 57.The quality of information provided in an online store website influences my decision to purchase.
Overall consumer trust on the online shopping	OCT	Trust is the party's expectation of fulfilling its specific obligations and willingness to accept possible damage the transaction, irrespective of its ability to control the other party (Mayer, Davis, and Schoorman, 1995)	58.My overall trust to the e-tail process is built on the web security. 59.My overall trust to the e-tail process is built on the previous customers' reviews. 60.When I buy on line I expect the online retailers to fulfil their obligations 61.I buy online because I trust the online purchasing process.
Website functionality features	WF	The functionality of a website its usability and interactivity. These two factors have been frequently regarded as the primary reasons for the success or failure of websites	62.Easy-to-use websites of online stores encourage me to place my purchase orders.

		(Ciliberti, 2011; Pride and Ferrell, 2011).	63. My online purchase activity is influenced by the performance of a given e-store website.
Navigation and Flow	NAV	Navigation bars, site indexes, and other cues that help users find what they need on the website. Also, navigation restrictions that limit access to certain areas of a site. (Dailey, 2004)	64. The navigation bar helps me get around the site 65. The restrictions on navigation around an online store site limit my ability to purchase via that site
Interactivity	INT	Methods of allowing customers to chat, ask questions, or otherwise interact with staff or a community of fellow shoppers (Manganari et al., 2009)	66. I used the chat elements of the site to get more information 67. I found the interaction with the website staff/support to be helpful
Personalisation	PER	From aesthetic features to levels of product information, personalisation provides tools that allow users to customize their experience of the site (Eroglu et al., 2001; Menon and Kahn, 2002).	68. I tend to choose personalisation options when I use a website 69. I found the personalisation options on the website to be effective in helping me create a pleasant experience
Website content factors	WC	The website content is its informational content and design (Rahimnia and Hassanzadeh, 2013)	70. An online store website informational contents influence my purchase decision. 71. The style of an online store website influences my purchase decisions.
Aesthetics	AES	Colour, layout, text density, and font are basic aesthetic elements, but the category can include site complexity and clutter. (Manganari et al., 2009)	72. The colours and fonts of an online store website makes me feel at ease 73. An online store website that has a clear and easy to follow layout forces me to continue browsing for more products.
Marketing mix	MM	The e-Marketing mix considers the elements of presenting the marketing mix online, namely it encompasses price, product, promotion, communication, and fulfilment. (Elkhani (2014)).	74. I use the price comparison facilities if provided within the online stores websites 75. I tend to purchase products that come with online promotions.
<u>Psychological factors</u>	PSY	Factors that cause concerns to online consumers with regard to safety of their personal information, transaction security and misuse of private data, as well as their trust in the specific vendors, brands, and products (McCole, Ramsey, and Williams, 2010)	76. My perceived risk tends to decrease when I use online payments many times 77. I emotionally feel safe to purchase online at certain websites.

Web-based trust	WBT	Psychological state leading to the willingness of customers to perform payment transaction over the Internet and expect the payment platform fulfilling its obligations, irrespective of customer's ability to monitor or control payment platform's actions.' (Yang et al, 2015)	78.I take the online transaction security seriously when I buy online. 79.I look at the security features of online commerce websites before I place any purchase orders.
Market-based trust	MBT	A consumer's trust in a brand or a company can make the difference between a decision to purchase and a decision to simply click away (Fang, 2012).	80.I trust the companies running the online stores websites that I use. 81.My knowledge of the brand influences my trust in the website that I buy from
<u>Exogenous Forces</u>	EXO	Socio-cultural forces which act upon consumer sensibilities, values, priorities, and agendas to influence consumer behaviour (Cetina et al., 2012). Or; exogenous factors are the consumer traits, situational factors, product characteristics, previous online shopping experiences, and trust in online shopping . (Monzuwe et al 2004)	82.My consumption decisions are influenced by my personal background 83.I am experienced in using technology
Socio-Cultural Forces	SCF	Consumer behaviour is influenced by the social environment the consumer is a part of, both their 'real world' environment and the online environments (Cetina et al., 2012).	84.My friends or family think that I should shop online 85.People I find influential think that I should shop online
Previous Online Shopping and Other Experiences	EXP	An individual consumer's response to web atmospheric elements will be dependent upon their background and experience with, among other factors, different types of websites, artistic or design aesthetics, and levels of product information. Also, the consumer's experience with technology, the Internet, and navigating websites can influence how they experience a retailer's website (Cetina et al., 2012).	86.I have had good experiences online shopping in the past 87.I am familiar with a lot of different types of websites design or artistic styles
<u>Consumer Reviews and Ratings</u>	CRR	A compelling, socially-driven impact factor which provides consumers with an externalised interpretation of product value that is psychologically and sociologically processed through internalised cognitive forces (Chen and Xie, 2008; Zhu and Zhang, 2010; Papadopolous, 2011; Lee and Shin, 2014).	88.I read consumer reviews for products I am considering purchasing 89.Reading a negative review makes me less likely to purchase the product 90.Reading a positive review makes me more likely to purchase the product

Reviews and Experience Feedback	REF	As simple as a star rating or as complex as a video blog, consumer ratings are tied to social media and can be more trusted than marketing materials because of their lack of financial motivation (Ye et al., 2012; Javadi et al., 2012).	91.I tend to think that consumer reviews are honest 92.I trust reviews that link to the reviewer's social media accounts more than anonymous reviews
Transparency and Consistency in Online Reviews	TC	The transparency and consistency in the reviews and ratings, and the extent to which the retailer presents the negative alongside the positive, enhance the reliability of the reviews and their perception of veracity (Chen and Xie, 2008).	93.The presence of negative reviews on a retailer's website makes me think the retailer is more honest 94.I am suspicious of overly positive reviews
Social Media and User Generated Content	SMC	UGC which can range from simple text discussions about products and services to structured review or advertising blogs/videos to the active modification products or services and dissemination of these new creations, provide a new model for brand/consumer and consumer/consumer interaction. (Berthon et al., 2012).	95.I follow social media and read/watch content created by users (instead of marketing advertisements) 96.User-generated web content (about a product) influences my perception of a brand
Valence, Volume, and Variance of Reviews	VVV	Review volume is the number of reviews received for a specific seller or product, review valence is the average of the review ratings, and variance is the indication of the distribution of reviews for a given product or service. (Wolf and Muhanna 2011, Feng and Zhang 2010)	97.I look at a product's star rating before deciding to purchase it 98.The number of ratings is important to me in assessing the overall rating.
Reviews Usefulness	RU	Reviews usefulness allow consumers to obtain sufficient information and have indirect purchasing experiences so as to reduce their level of perceived uncertainty (Liu and Park, 2015)	99.Review ratings and review elaborateness positively affect my perceived usefulness of them. 100. It is useful to me if reviews are given in an enjoyable and readable way.

Reviews level of detail and support to Decision Making	RDS	Reviews support decision making if they provide unbiased understanding of the product, construct evaluative standards, and reduce the consumers' cognitive cost (Liu, Karahanna, and Watson (2011). The level of detail in a review is operationalized as the amount of specific information about the product found in the written portion of a review (Jiménez F R and Mendoza N A, 2013)	101. I find detailed information is more diagnostic, which is beneficial for me to make a decision. 102. User generated web content influences my decision to purchase a product
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Part Three: The qualitative component

The questions related primarily to the subjects' impressions of online shopping websites, the influences of certain atmospheric factors, and their attitude towards the use of these websites.

Please answer the following questions 1-5:

1. What motivates you and makes you decide to shop online?
2. What are your personal and background factors that influence your online purchase decisions?
3. How do you perceive the influence of websites usability and content on your online purchases?
4. In what way (if at all) and how are you influenced by consumer reviews and ratings when you buy online?
5. What are your recommendations to make the e-tail process more efficient and enjoyable?

4.2 Research Results

This chapter reports the data analysis, and it also presents the main results of the study. First, the respondents' characteristics are outlined. The sample consists of 504 UK Internet users who have shopped online. The first part of the questionnaire investigated the familiarity of the respondents with the Internet and their online shopping experiences; this part also included important background demographics of the participants such as age, gender, income level, and education.

The chapter then provides the descriptive statistics of Site Atmospheric, Exogenous Factors, and Customer Reviews and Rankings as they collectively influence the online customer's behaviour and purchase decisions. Data Characteristics, such as normality tests results and reliability assessment, are also examined in this chapter. The chapter provides analysis and results using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). This is followed by the results of the structural model assessment and evaluation, and hypothesis testing with regard to factors influencing the online purchase behaviour and decision making. Lastly, the chapter presents the results from the qualitative data which formed a major enriching part of this research.

The overall chapter is organized in parallel with the three main parts of the data collection instrument used, with its demographic and relevant personal characteristics, quantitative, and qualitative sections:

- Part A: Analysis of the participant personal data
- Part B: Analysis of quantitative data
- Part C: Analysis of qualitative data

Details of the analyses approaches and results follow bellow:

4.2.1 Part A: Analysis of the participant personal data

The research respondents completed an anonymous confidential questionnaire designed to study the factors influencing online shopping and the factors that influence their decision to purchase online. The collected data included personal demographic attributes, as well as a detailed examination of their fluency with online shopping.

The data collection instrument started with a single screening question to ensure eligibility of participants with regard to the topic under focus: online shopping. This is indicated by Figure 4.1. It is thus confirmed that all the 504 included participants have at least one personal experience of online shopping.

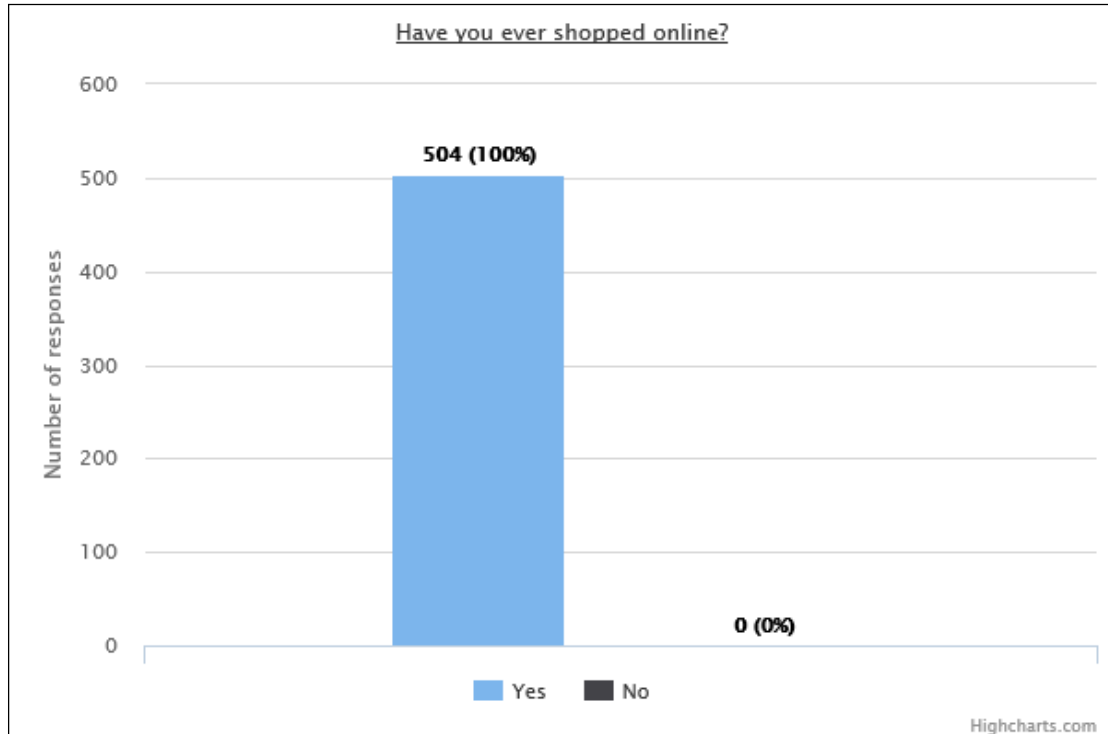


Figure 4.1 The screening question: All participants have previous online shopping experience.

4.2.1.1 Demographic scan of participants

4.2.1.1.1 Age

The age related distribution indicated wide range of participation from age interval between 18 to 65 years and above. The overall distribution was obtained as follows:

Table 4.2 Age groups distribution of the participants

Age group	18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +
Frequency	82	134	129	99	43	17
Percentage	16.2 %	26.6 %	25.6 %	19.6 %	8.5 %	3.4 %

Table 4.2 shows that this distribution logically indicates a dominant share of the participants from the mid-age category between 25 to 54 years of age.

4.2.1.1.2 Gender

Table 4.3 shows that the difference in percentages of males and females who participated in the survey is not large. This implies that both males and females in UK have similar perceptions towards the use of online purchase applications.

Table 4.3 Gender groups distribution of the participants

Age group	Males	Females
Frequency	236	268
Percentage	46.8 %	53.2 %

4.2.1.1.3 Education

The majority of participants attended colleges and universities up to Bachelor's degree level. This is again logical when considering the fact that the fluent use specific applications, such as online purchase, customer forums, online payments and goods tracing, require certain levels of skills in IT. Figure 4.2 illustrates the distribution of participant groups in terms of education levels.

4.2.1.1.4 Annual Income

Figure 4.3 indicates that the majority of the respondents, at a percentage of 57%, have an annual income between £31,000 and £50,000, which is the range that is higher than the average annual income of the workforce in UK, as will be discussed later.

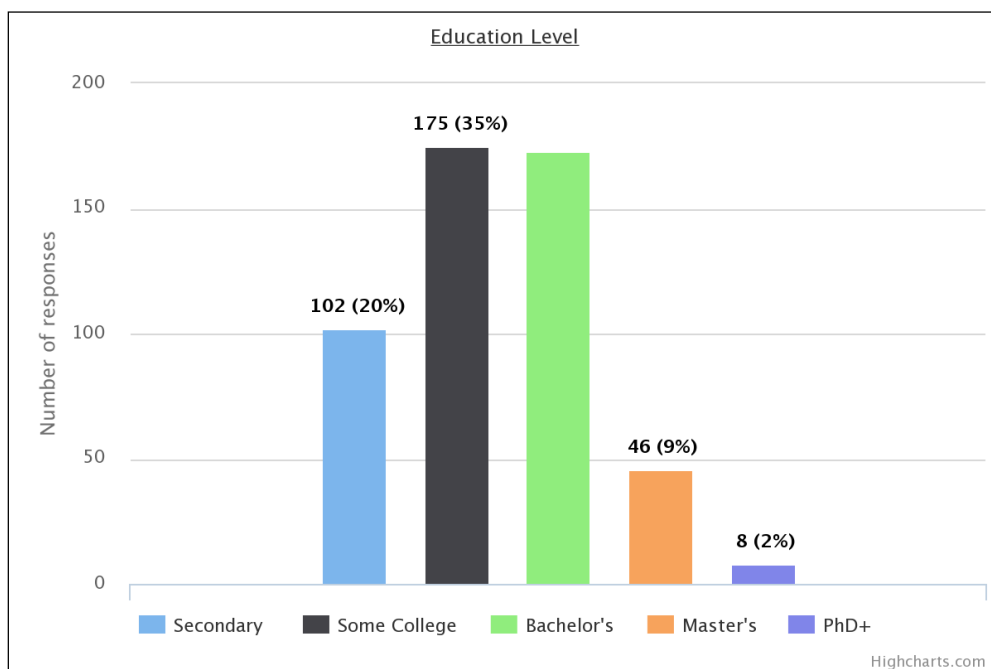


Figure 4.2 Participants' education levels

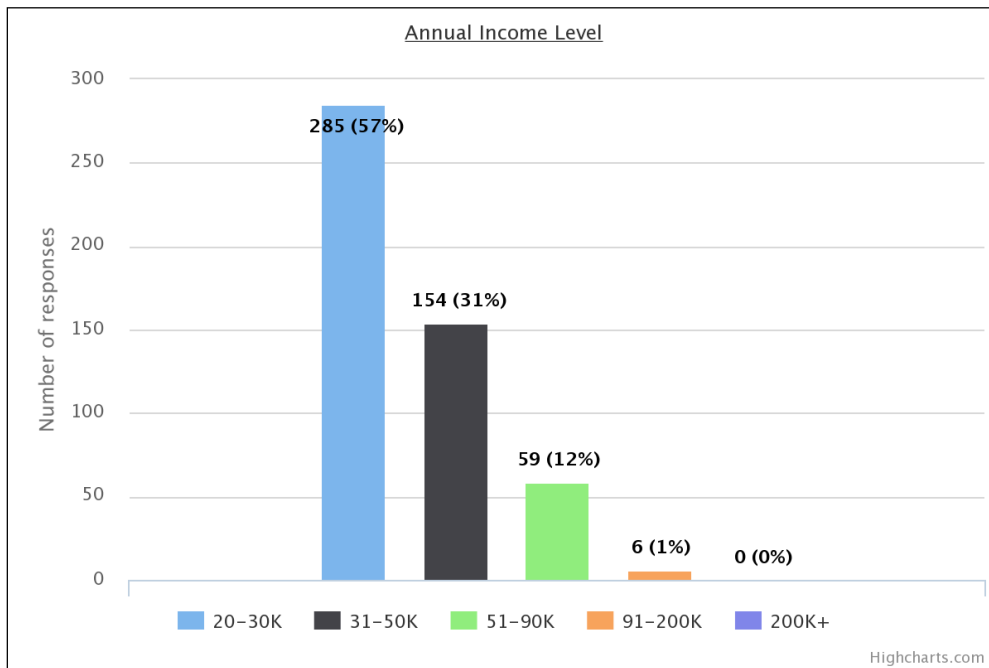


Figure 4.3 Participants' annual income range groups

4.2.1.2 Relevant characteristics of participants

In order to grasp an evidenced conclusion with regard to participants' characteristics relevant to the topic of this research, namely online shopping activities and know-how, three further affirming questions were introduced at the first stage of the data collection instrument. These questions provided the following baseline information describing the participants' computer user experience, and their overall involvement in online marketing by exploring the numbers of online purchases made and the visits made to an online store's website, each during a given past period.

4.2.1.2.1 Computer user expertise

The vast majority of the participants enjoyed intermediate experience of computer use and overall IT know-how. Figure 4.4 indicates that 67% of the participants have a reasonable to high experience in browsing the web, exploring and purchasing online.

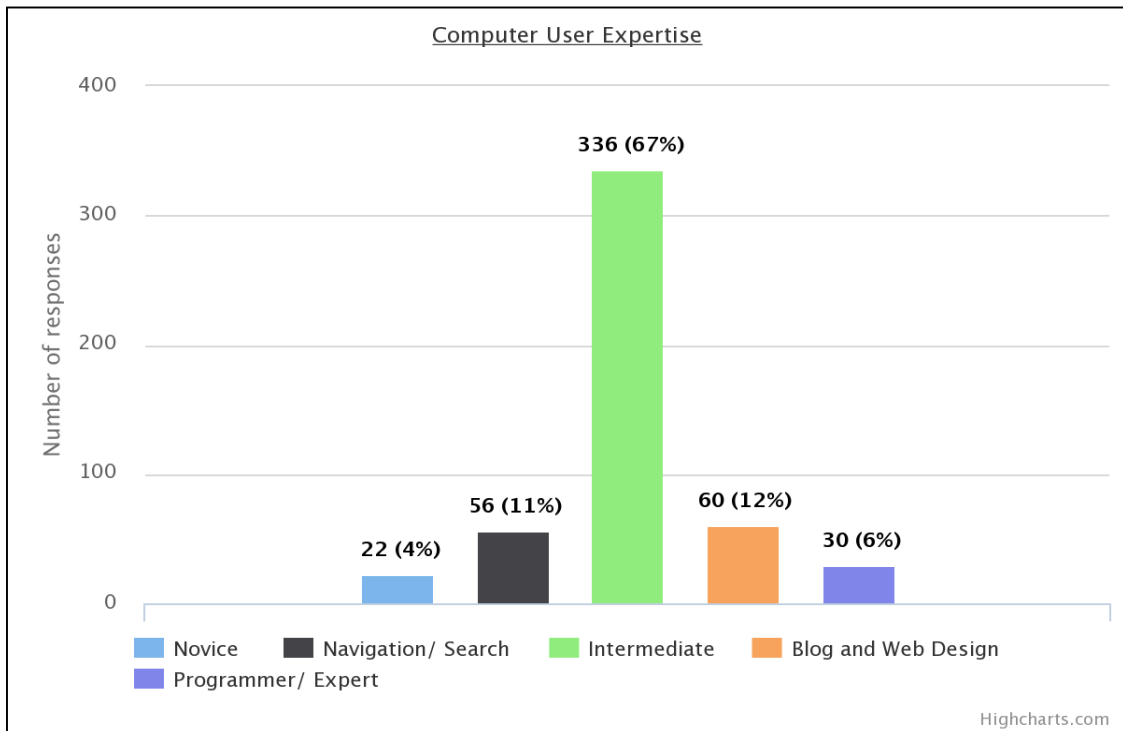


Figure 4.4 Participants' computer user expertise

4.2.1.2.2 Number of online purchases made in past 6 months

The respondents to the instrument of this research have significant experiences of online purchases. This is an important characteristic of the sample of participants, confirming their familiarity with the field about which they are being asked. Over 40% of the sample comprises frequent online shoppers, with 13+ purchases during the previous six months. Over 86% of the sample had at least five online purchases over the same time span. Figure 4.5 illustrates more data on this.

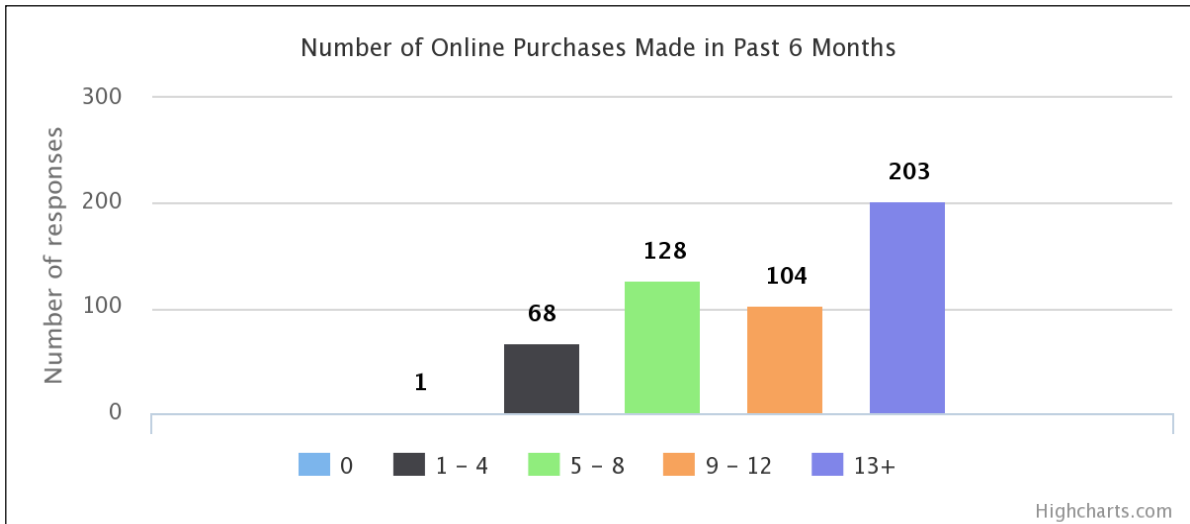


Figure 4.5 Number of online purchases made in past 6 months

4.2.1.2.3 *Number of online shopping sites visited in past month*

Similarly, Figure 4.6 shows the number of online shopping websites that were visited by the participants during the past month. This is again important since it indicates the level of familiarity of the participants with the online shopping websites.

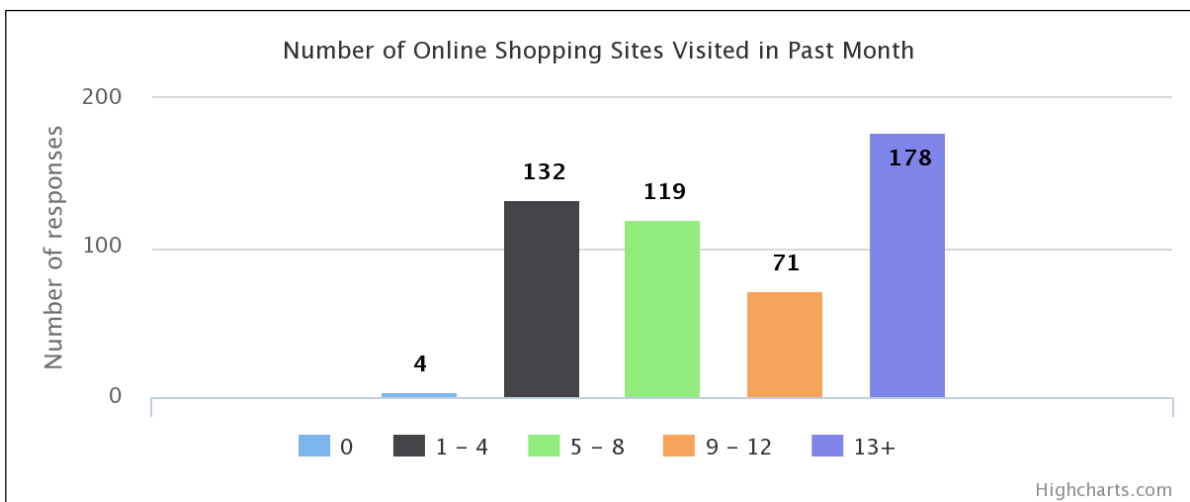


Figure 4.6 Number of online shopping sites visited in past month

4.2.2 Part B: Analysis of quantitative data

Quantitative data analysis is performed to establish the exact weights of the various factors of the research model, and to study the relations between these factors, thus examining the research hypotheses. This analysis comprised various stages and applied various statistical analysis techniques. These are generally given under the notions:

- Descriptive statistics
- Exploratory factors analysis
- Confirmatory factors analysis
- Assessment of the measurement model
- Evaluation of the structural model
- Research hypotheses testing

4.2.2.1 Descriptive Statistics

Descriptive statistics is a statistical approach that is frequently used in the analysis of data collected via instruments such as the one used in the current research. Each variable within the main research model is looked at individually, and in aggregation with other variables as well. Descriptive statistics involves the statistical calculation of frequencies, percentages, means and standard deviations for the variables of the model. The aim of the descriptive analysis is to facilitate the interpretation of the facts that are manifested by the collected data. This involves the rearrangement of the collected responses of the 504 participants from the linguistic format as described by the well-known Likert Scales into the associated numerical scales. Table 4.4 illustrates the five-point Likert scale that is used in the research questionnaire, together with the associated numerical scale used for the statistical analysis. In this scale, the ‘strongly agree’

category is represented by the value 5 and the scale ranges to the category ‘strongly disagree’ which has the numerical value of 1.

Table 4.4 The five-point Likert Scale used in Part B of the questionnaire

Linguistic scale	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Numerical scale	5	4	3	2	1

The data collected from the 504 responses were transferred into a numerical table using a single sheet within the MS-Excel software. The collected data were thus transformed into a form that was easy for the researcher to understand and interpret (Zikmund 1997). The overall representation of the model used for the purposes of this descriptive analysis is given by Figure 4.7. The overall descriptive statistical output is given in full in Table 4.4. These are obtained using the SPSS 22 analytical software.

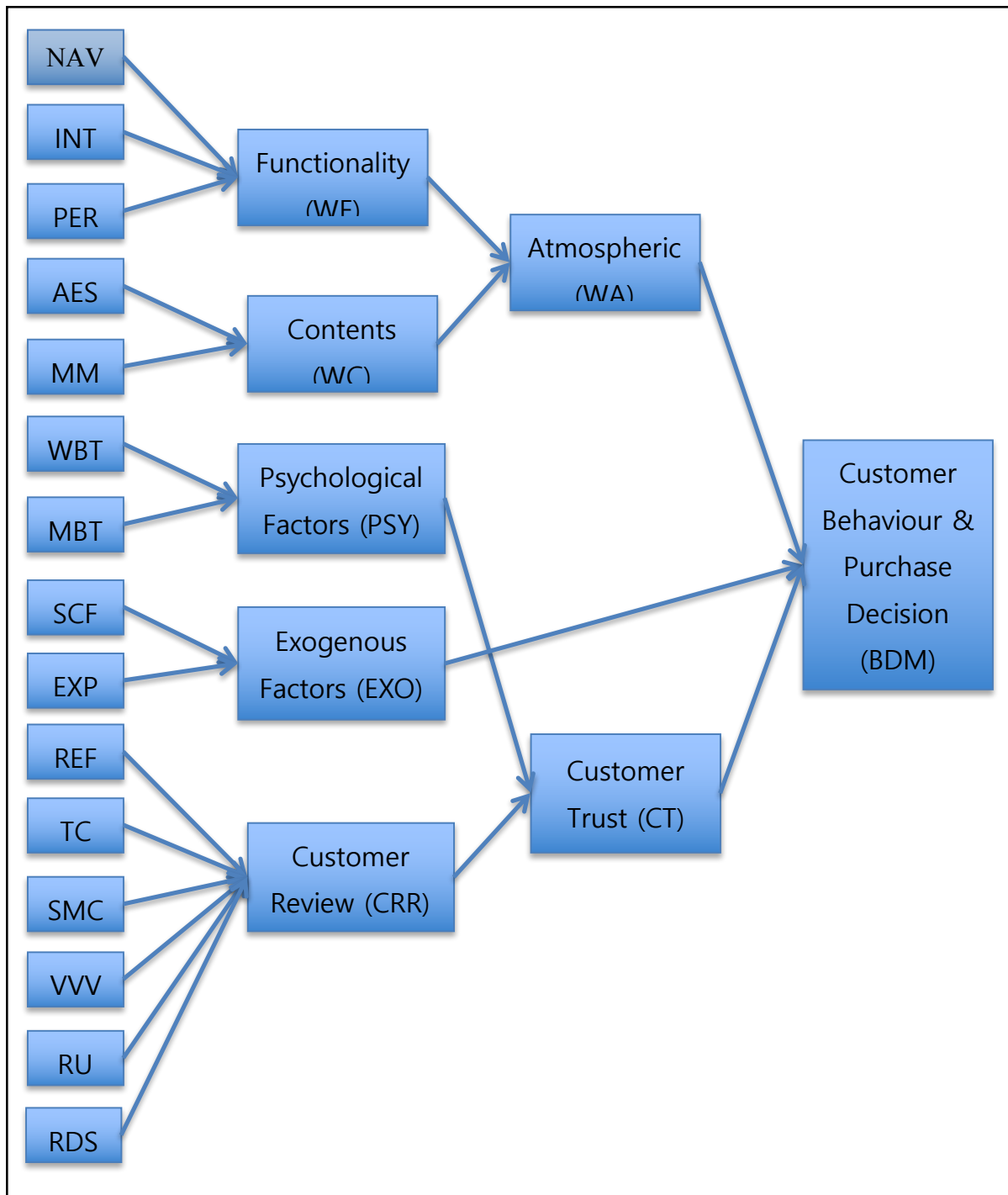


Figure 4.7 Factors and variables of the main model

The descriptive statistics of measurement items for each construct are discussed in detail, as in Table 4.5. These statistics include the calculation of means, variances, and standard deviations (among other statistics) for each variable in the model. All items in section B of the questionnaire were rated on a five-point Likert scale, with a score of 5 indicating strong agreement and a score of 1 indicating strong disagreement. The means of almost all variables

(51 items) were well above the neutral position (> 3), with a minimum of 2.67 and a maximum of 4.69. These results indicated a strong level of agreement among respondents on each of the statements used for measuring variables in this survey.

Table 4.5 Main descriptive statistics for all the model variables

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
BDM1	504	4	1	5	3.71	.038	.855	.731	-.556	.109	.308	.217
BDM2	504	3	2	5	4.33	.027	.602	.362	-.355	.109	-.344	.217
BDM3	504	4	1	5	4.41	.031	.688	.473	-1.043	.109	1.174	.217
WA1	504	4	1	5	3.93	.037	.839	.703	-.766	.109	.779	.217
WA2	504	4	1	5	4.17	.030	.682	.465	-.609	.109	.864	.217
WA3	504	4	1	5	4.19	.033	.736	.542	-.760	.109	.751	.217
CT1	504	4	1	5	4.04	.035	.785	.617	-.536	.109	.175	.217
CT2	504	4	1	5	3.67	.040	.901	.811	-.506	.109	.097	.217
CT3	504	2	3	5	4.69	.024	.539	.290	-1.520	.109	1.385	.217
CT4	504	3	2	5	4.12	.032	.729	.531	-.459	.109	-.157	.217
WF1	504	4	1	5	4.22	.033	.740	.548	-.857	.109	1.086	.217
WF2	504	4	1	5	3.83	.035	.782	.612	-.412	.109	.176	.217
NAV1	504	3	2	5	4.18	.029	.657	.432	-.456	.109	.321	.217
NAV2	504	4	1	5	3.73	.037	.824	.679	-.314	.109	-.260	.217
INT1	504	4	1	5	2.67	.051	1.149	1.319	.404	.109	-.703	.217
INT2	504	4	1	5	3.25	.040	.906	.820	-.095	.109	.245	.217
PER1	504	4	1	5	2.86	.047	1.065	1.134	.190	.109	-.630	.217
PER2	504	4	1	5	3.11	.045	1.000	1.001	.003	.109	-.377	.217
WC1	504	4	1	5	3.76	.037	.828	.685	-.622	.109	.723	.217
WC2	504	4	1	5	3.66	.039	.867	.752	-.598	.109	.379	.217
AES1	504	4	1	5	3.51	.039	.869	.755	-.338	.109	.027	.217
AES2	504	4	1	5	3.76	.044	.988	.976	-.849	.109	.435	.217
MM1	504	4	1	5	3.80	.043	.959	.919	-.601	.109	-.116	.217
MM2	504	4	1	5	3.66	.041	.926	.857	-.424	.109	-.179	.217
PSY1	504	4	1	5	3.92	.036	.801	.641	-.432	.109	-.084	.217
PSY2	504	4	1	5	4.08	.034	.755	.570	-.744	.109	1.104	.217
WBT1	504	3	2	5	4.37	.030	.677	.459	-.753	.109	.076	.217

WBT2	504	4	1	5	3.86	.042	.951	.905	-.564	.109	-.310	.217
MBT1	504	4	1	5	4.00	.033	.730	.533	-.647	.109	1.008	.217
MBT2	504	4	1	5	4.05	.035	.779	.607	-.549	.109	.088	.217
EXO1	504	4	1	5	3.75	.038	.859	.738	-.323	.109	-.221	.217
EXO2	504	4	1	5	4.17	.034	.752	.566	-1.104	.109	2.339	.217
SCF1	504	4	1	5	3.54	.039	.873	.762	.133	.109	-.295	.217
SCF2	504	4	1	5	3.40	.039	.879	.773	.035	.109	.250	.217
EXP1	504	3	2	5	4.39	.028	.633	.401	-.631	.109	-.102	.217
EXP2	504	4	1	5	3.94	.040	.889	.791	-.675	.109	.164	.217
CRR1	504	4	1	5	4.23	.036	.816	.666	-1.258	.109	2.230	.217
CRR2	504	4	1	5	3.95	.035	.784	.614	-.439	.109	-.021	.217
CRR3	504	4	1	5	4.02	.034	.768	.590	-.453	.109	-.015	.217
REF1	504	4	1	5	3.72	.037	.837	.701	-.488	.109	.165	.217
REF2	504	4	1	5	3.32	.045	1.005	1.011	-.163	.109	-.307	.217
TC1	504	4	1	5	3.66	.038	.855	.731	-.467	.109	.175	.217
TC2	504	4	1	5	3.81	.041	.916	.840	-.447	.109	-.364	.217
SMC1	504	4	1	5	3.12	.052	1.171	1.370	-.217	.109	-.818	.217
SMC2	504	4	1	5	3.51	.037	.822	.676	-.329	.109	.341	.217
VVV1	504	4	1	5	4.07	.035	.788	.621	-.832	.109	1.185	.217
VVV2	504	4	1	5	3.98	.037	.831	.691	-.851	.109	1.123	.217
RU1	504	4	1	5	3.85	.035	.790	.624	-.593	.109	.938	.217
RU2	504	4	1	5	3.92	.035	.782	.612	-.389	.109	-.082	.217
RDS1	504	4	1	5	3.95	.034	.768	.590	-.421	.109	.169	.217
RDS2	504	4	1	5	3.63	.037	.824	.679	-.467	.109	.655	.217
Valid N (listwise)	504											

4.2.2.1.1 *Functionality and its components (sub-variables)*

The ‘web functionality’ factor was measured directly by two items (WF1 and WF2), and indirectly by three variables. These variables were the site ‘navigation’, ‘interaction’ and ‘personalization’ attributes. Each of these variables was measured using two items. Means, variances, and standard deviations for this factor and its components are further focussed in Table 4.6.

In general, the results demonstrate that respondents were positive about the influence of proper website functionality in their online purchase behaviour. This is illustrated by an aggregated mean of 4.03 and standard deviation of 0.762. The research instrument’s respondents think that a higher quality of navigation provision within the relevant websites positively influences their online purchase behaviour. This is illustrated by a collective mean of 3.96. The navigation attribute is followed in importance by the personalization and interactivity features of these websites, with respective means of 2.99 and 2.96.

The overall weights of the functionality factor and its components are of significant importance to the respondents’ online purchases, which is indicated by an overall aggregated mean of 3.48 and standard deviation of 0.905.

Table 4.6 Main descriptive statistics for ‘website functionality’ and its sub variables (All items received 504 responses)

Variable	Items	Mean	Variance	Std. Deviation
WF1	Easy-to-use websites of online stores encourage me to place my purchase orders.	4.22	.548	.740
WF2	My online purchase activity is influenced by the performance of a given e-store website.	3.83	.612	.782
	Sub statistic descriptors	4.03	0.58	.762
NAV1	The navigation bar helps me get around the site.	4.18	.432	.657

NAV2	The restrictions on navigation around an online store site limit my ability to purchase via that site.	3.73	.679	.824
	Sub statistic descriptors	3.96	.56	.745
INT1	I used the chat elements of the site to get more information.	2.67	1.319	1.149
INT2	I found the interaction with the website staff/support to be helpful.	3.25	.820	.906
	Sub statistic descriptors	2.96	1.066	1.034
PER1	I tend to choose personalisation options when I use a website.	2.86	1.134	1.065
PER2	I found the personalisation options on the website to be effective in helping me create a pleasant experience.	3.11	1.001	1.000
	Sub statistic descriptors	2.99	1.068	1.033
Overall D. statistics for 'functionality' and its components		3.48	.818	.905

4.2.2.1.2 Web Content and its components (sub-variables)

Similarly, the 'web content' factor was measured directly by two items (WC1 and WC2), and indirectly by two variables. These variables were the site 'aesthetics', and 'market mix' attributes. Each of these variables was measured using two items. Means, variances, and standard deviations for this factor and its components are further focussed as per Table 4.7.

Results demonstrate that participants were positive about the influence of attractive website contents in their online purchase behaviour. This is illustrated by an aggregated mean of 3.71 and standard deviation of 0.719. The respondents think that a higher quality of aesthetics (i.e. colours, fonts, and layout) of an online website positively influences their online purchase behaviour. This is illustrated by a collective mean of 3.64. The importance of the market mix content is even of greater importance for the sample participants, with a higher mean of 3.73.

The overall weights of the web content factor and its components is of significant importance to the respondents' online purchases, as indicated by an overall aggregated mean of 3.69 and standard deviation of 0.908.

Table 4.7 Main descriptive statistics for 'web contents' and its sub variables (All items received 504 responses)

Variable	Items	Mean	Variance	Std. Deviation
WC1	An online store website informational contents influence my purchase decision.	3.76	0.685	.828
WC2	The style of an online store website influences my purchase decisions.	3.66	0.752	.867
	Sub statistic descriptors	3.71	0.719	.848
AES1	The colours and fonts of an online store website makes me feel at ease.	3.51	0.755	.869
AES2	An online store website that has a clear and easy to follow layout forces me to continue browsing for more products.	3.76	0.976	.988
	Sub statistic descriptors	3.64	0.866	.931
MM1	I use the price comparison facilities if provided within the online stores websites.	3.8	0.919	.959
MM2	I tend to purchase products that come with online promotions.	3.66	0.857	.926
	Sub statistic descriptors	3.73	0.888	.942
Overall D. statistics for 'web content' and its components		3.69	0.824	.908

4.2.2.1.3 Psychological factors and their components (sub-variables)

The 'psychological' factors were measured directly by two items (PSY1 and PSY2), and indirectly by two variables: web-based and market-based trusts. Each of these variables was measured using two items. Means, variances, and standard deviations for this factor and its components are further focussed, as in Table 4.8.

In general, the results demonstrate that psychological factors greatly influence their online purchase behaviour. This is illustrated by an aggregated mean of 4.00 and standard deviation of 0.606 for the psychological items PSY1 and PSY2. This means that research instrument's respondents think that they feel more relaxed to purchase online if they sense that the relevant website is trustworthy. Illustrated by a collective mean of 4.12 and 4.04 respectively, both the web-based trust and market-based trust subcomponents showed significant importance in the course of online purchase decisions.

The overall weights of the psychological factors and its components are of significant importance to the respondents' online purchases, this is indicated by an overall aggregated mean of 4.05 and standard deviation of 0.787.

Table 4.8 Main descriptive statistics for 'psychological factors' and its sub variables (All items received 504 responses)

Variable	Items	Mean	Variance	Std. Deviation
PSY1	My perceived risk tends to decrease when I use online payments many times.	3.92	0.641	0.801
PSY2	I emotionally feel safe to purchase online at certain websites.	4.08	0.57	0.755
	Sub statistic descriptors	4.00	0.606	0.778
WBT1	I take the online transaction security seriously when I buy online.	4.37	0.459	0.677
WBT2	I look at the security features of online commerce websites before I place any purchase orders.	3.86	0.905	0.951
	Sub statistic descriptors	4.12	0.682	0.826
MBT1	I trust the companies running the online stores websites that I use.	4.00	0.533	0.73
MBT2	My knowledge of the brand influences my trust in the website that I buy from.	4.05	0.607	0.779
	Sub statistic descriptors	4.04	0.570	0.755
Overall D. statistics for 'psycho factors' and its components		4.05	0.619	0.787

4.2.2.1.4 Exogenous factors and their components (sub-variables)

The ‘exogenous’ factors were measured directly by two items (EXO1 and EXO2), and indirectly by two variables: social factors and experiential factors. Means, variances, and standard deviations for this factor and its components are reported in Table 4.9.

In general, the results demonstrate that respondents were positive about the influence of external factors in their online purchase behaviour. This is illustrated by an aggregated mean of 3.96 and standard deviation of 0.807 for EXO1 and EXO2 collectively. Respondents think that many social factors influence their online purchase behaviour. This is illustrated by a collective mean of 3.47 of both SCF1 and SCF2 collectively. These social attributes are preceded in importance by the previous users’ experiences features conveyed to the participants. This is expressed by a collective mean of 4.17 that represented both EXP1 and EXP2.

The overall weights of the exogenous factors and their components are of significant importance to the respondents’ online purchases, as indicated by an overall aggregated mean of 3.87 and standard deviation of 0.820.

Table 4.9 Main descriptive statistics for ‘exogenous factors’ and its sub variables (All items received 504 responses)

Variable	Items	Mean	Variance	Std. Deviation
EXO1	My consumption decisions are influenced by my personal background.	3.75	0.738	0.859
EXO2	I am experienced in using technology.	4.17	0.566	0.752
	Sub statistic descriptors	3.96	0.652	0.807
SCF1	My friends or family think that I should shop online.	3.54	0.762	0.873

SCF2	People I find influential think that I should shop online.	3.4	0.773	0.879
	Sub statistic descriptors	3.47	0.768	0.876
EXP1	I have had good experiences online shopping in the past.	4.39	0.401	0.633
EXP2	I am familiar with a lot of different types of websites design or artistic styles.	3.94	0.791	0.889
	Sub statistic descriptors	4.17	0.596	0.772
Overall D. statistics for 'exogenous factors' and its components		3.87	0.672	0.820

4.2.2.1.5 Customer reviews their components (sub-variables)

The 'customer reviews' factor was measured directly by three items (CRR1, CRR2, and CRR3), and indirectly by three variables. These variables were the 'previous reviewers and their experience-based feedback', 'transparency and consistency in online reviews', 'social media and user generated content', 'valence, volume, and variance of reviews', 'reviews usefulness', and 'reviews level of detail and support to decision making'. Each of these variables was measured using two items. Means, variances, and standard deviations for this factor and its components are included in Table 4.10.

In general, the results demonstrate that respondents were positive about the influence of proper previous customer reviews in their online purchase behaviour. This is illustrated by an aggregated mean of 4.07 and standard deviation of 0.623. The research instrument's respondents think that a higher quality of previous users' reviews and rankings within the relevant websites highly elevates their level of trust in the website and the products under focus, thus positively influencing their online purchase behaviour. This is illustrated by the collective mean of the sub-components of the 'customer reviews' factor. The aggregated means for the 'experience-based feedback', 'transparency and consistency', 'social media and user generated

content’, ‘valence, volume, and variance of reviews’, ‘reviews usefulness’, and ‘reviews level of detail’ were found to be 3.52, 3.74, 3.32, 4.03, 3.89, and 3.79 respectively.

The overall weights of the customer reviews factor and its components is of significant importance to the respondents’ online purchases, this is indicated by an overall aggregated mean of 3.783 and standard deviation of 0.0.857.

Table 4.10 Main descriptive statistics for ‘customer reviews’ and its sub variables (All items received 504 responses)

Variable	Items	Mean	Variance	Std. Deviation
CRR1	I read consumer reviews for products I am considering purchasing.	4.23	0.666	0.816
CRR2	Reading a negative review makes me less likely to purchase the product.	3.95	0.614	0.784
CRR3	Reading a positive review makes me more likely to purchase the product.	4.02	0.59	0.768
	Sub statistic descriptors	4.07	0.623	0.790
REF1	I tend to think that consumer reviews are honest.	3.72	0.701	0.837
REF2	I trust reviews that link to the reviewer’s social media accounts more than anonymous reviews.	3.32	1.011	1.005
	Sub statistic descriptors	3.52	0.856	0.925
TC1	The presence of negative reviews on a retailer’s website makes me think the retailer is more honest.	3.66	0.731	0.855
TC2	I am suspicious of overly positive reviews.	3.81	0.84	0.916
	Sub statistic descriptors	3.74	0.786	0.886
SMC1	I follow social media and read/watch content created by users (instead of marketing advertisements).	3.12	1.37	1.171
SMC2	User-generated web content (about a product) influences my perception of a brand.	3.51	0.676	0.822
	Sub statistic descriptors	3.32	1.023	1.011

VVV1	I look at a product's star rating before deciding to purchase it.	4.07	0.621	0.788
VVV2	The number of ratings is important to me in assessing the overall rating.	3.98	0.691	0.831
	Sub statistic descriptors	4.03	0.656	0.810
RU1	Review ratings and review elaborateness positively affect my perceived usefulness of them.	3.85	0.624	0.79
RU2	It is useful to me if reviews are given in an enjoyable and readable way.	3.92	0.612	0.782
	Sub statistic descriptors	3.89	0.618	0.786
RDS1	I find detailed information is more diagnostic, which is beneficial for me to make a decision.	3.95	0.59	0.768
RDS2	User generated web content influences my decision to purchase a product.	3.63	0.679	0.824
	Sub statistic descriptors	3.79	0.635	0.797
Overall D. statistics for 'customer reviews' and its components		3.783	0734	0.857

4.2.2.1.6 Web atmospherics

The 'web atmospherics' factor was measured directly by three items (WA1, WA2, and WA3). Means, variances, and standard deviations for this factor and its components are reported in Table 4.11.

In general, the results demonstrate that respondents were positive about the influence of high-quality website atmospherics in their online purchase behaviour. This is illustrated by an aggregated mean of 4.10 and standard deviation of 0.755. The research instrument's respondents think that a higher quality of functionality and adequate web contents within the relevant websites positively influences their online purchase behaviour.

Table 4.11 Main descriptive statistics for 'web atmospherics' received 504 responses)

(All items

Variable	Items	Mean	Variance	Std. Deviation
WA1	I find the appearance of the website to be an important aspect of my online shopping experience.	3.93	0.703	0.839
WA2	The website's appearance and layout helps me to interact with the site.	4.17	0.465	0.682
WA3	The quality of information provided in an online store website influences my decision to purchase.	4.19	0.542	0.736
Overall D. statistics for 'web atmospherics'		4.10	0.57	0.755

4.2.2.1.7 Overall customer trust

The 'customer trust' factor was measured directly by four items (CT1, CT2, CT3, and CT4). Means, variances, and standard deviations for this factor and its components are further focussed as per Table 4.12.

In general, the results demonstrate that respondents were more encouraged to purchase online if they developed an elevated level of trust in the online store websites they visit. This is illustrated by an aggregated mean of 4.13 and standard deviation of 0.750. The research instrument's respondents think that a higher level of trust from, for instance, referring to previous customers' reviews, and other psychological aspects, positively influences their online purchase behaviour.

Table 4.12 Main descriptive statistics for 'customer trust' (All items received 504 responses)

Variable	Items	Mean	Variance	Std. Deviation
CT1	My overall trust to the e-tail process is built on the web security.	4.04	0.617	0.785
CT2	My overall trust to the e-tail process is built on the previous customers' reviews.	3.67	0.811	0.901
CT3	When I buy on line I expect the online retailers to fulfil their obligations.	4.69	0.29	0.539

CT4	I buy online because I trust the online purchasing process.	4.12	0.531	0.729
Overall D. statistics for 'customer trust'		4.13	0.562	0.750

4.2.2.1.8 Customer behaviour and purchase decision

The 'customer behaviour and purchase decision' main factor was measured directly by four items (CT1, CT2, CT3, and CT4). Means, variances, and standard deviations for this factor and its components are further focussed as shown in Table 4.13.

In general, the results demonstrate that respondents were more encouraged to purchase online if they developed an elevated level of trust in the online store websites they visit, and if they trust those websites. This is illustrated by an aggregated mean of 4.15 and standard deviation of 0.722.

Table 4.13 Main descriptive statistics for 'Customer behaviour and purchase decision' (All items received 504 responses)

Variable	Items	Mean	Variance	Std. Deviation
BDM1	My online purchase decisions are influenced by the shape, functionality, and contents of the stores websites.	3.71	0.731	0.855
BDM2	I decide to purchase online via a certain website if I trust that website.	4.33	0.362	0.602
BDM3	I find purchasing online beneficial.	4.41	0.473	0.688
Overall D. statistics for 'customer behaviour and purchase decision'		4.15	0.522	0.722

4.2.2.2 Verifying Quantitative Data Characteristics

For the purposes of quality and correctness assurance of the research data collection and analysis procedures, a reliability assessment approach is followed. Reliability is important as it measures the correlation between items within a given factor of the model (Straub, Boudreau

et al. 2004). It refers to the repeatability of the measurement using the same items of the questionnaire. In other words, it shows the extent to which the respondent can answer the same questions (or close approximations) in the same way each time they answer the questionnaire statements, So, reliability assesses consistency and accuracy (Straub, 1989).

4.2.2.2.1 Normality

A main approach towards assessing the reliability of the collected quantitative data is to evaluate the degree of normality of that data. Thus, it is important to check the validity of the normality assumption for relevant statistical tests (Field 2009). Usually, normality is tested using Kolmogorov-Smirnov and Shapiro-Wilk tests. Another test involves assessing skewness and kurtosis ratings (Anderson et al. 1995). Skewness is a measure of the asymmetry of a distribution, while kurtosis measures the degree to which scores cluster in the tails of a distribution (Hair, Anderson et al. 1995; Field 2009). Data of good normality level occurs when skewness and kurtosis ratings are within the +2 to -2 range; other authors showed that a range of +3 to -3 for kurtosis is a good sign of normality (Hair, Anderson et al. 1995; Carver 2005; Tabachnick and Fidell 2007; Field 2009). For samples greater than 200 participants, the danger of misinterpretation of results is very low, even if the above ranges are crossed (Tabachnick and Fidell 2007).

From Table 4.5, the results show that the collected data is well within the normality range distributed with skewness and kurtosis ratings between 1.520 to 0.404 for skewness and 2.339 to 0.8 for kurtosis. The results of the Kolmogorov-Smirnov and Shapiro-Wilk tests of the collected quantitative data of section B of the research questionnaire showed that the data were again within the acceptable range as in Table 4.14.

Table 4.14 Results of the normality test (All items received 504 responses)

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BDM1	.283	504	.000	.861	504	.000
BDM2	.309	504	.000	.750	504	.000
BDM3	.317	504	.000	.744	504	.000
WA1	.290	504	.000	.837	504	.000
WA2	.284	504	.000	.790	504	.000
WA3	.259	504	.000	.800	504	.000
CT1	.255	504	.000	.835	504	.000
CT2	.263	504	.000	.874	504	.000
CT3	.445	504	.000	.594	504	.000
CT4	.259	504	.000	.818	504	.000
WF1	.246	504	.000	.793	504	.000
WF2	.284	504	.000	.849	504	.000
NAV1	.298	504	.000	.784	504	.000
NAV2	.270	504	.000	.864	504	.000
INT1	.238	504	.000	.897	504	.000
INT2	.260	504	.000	.878	504	.000
PER1	.191	504	.000	.911	504	.000
PER2	.211	504	.000	.909	504	.000
WC1	.288	504	.000	.849	504	.000
WC2	.285	504	.000	.860	504	.000
AES1	.243	504	.000	.879	504	.000
AES2	.296	504	.000	.849	504	.000
MM1	.257	504	.000	.869	504	.000
MM2	.248	504	.000	.882	504	.000
PSY1	.270	504	.000	.849	504	.000
PSY2	.280	504	.000	.813	504	.000
WBT1	.296	504	.000	.764	504	.000
WBT2	.245	504	.000	.865	504	.000
MBT1	.306	504	.000	.812	504	.000
MBT2	.260	504	.000	.833	504	.000
EXO1	.246	504	.000	.872	504	.000
EXO2	.290	504	.000	.773	504	.000
SCF1	.278	504	.000	.855	504	.000
SCF2	.285	504	.000	.855	504	.000
EXP1	.298	504	.000	.752	504	.000
EXP2	.263	504	.000	.851	504	.000
CRR1	.257	504	.000	.774	504	.000
CRR2	.270	504	.000	.844	504	.000
CRR3	.263	504	.000	.836	504	.000
REF1	.283	504	.000	.860	504	.000
REF2	.208	504	.000	.904	504	.000
TC1	.271	504	.000	.868	504	.000
TC2	.243	504	.000	.871	504	.000
SMC1	.192	504	.000	.911	504	.000
SMC2	.242	504	.000	.865	504	.000

VVV1	.278	504	.000	.816	504	.000
VVV2	.289	504	.000	.828	504	.000
RU1	.284	504	.000	.837	504	.000
RU2	.270	504	.000	.847	504	.000
RDS1	.269	504	.000	.839	504	.000
RDS2	.258	504	.000	.855	504	.000

a. Lilliefors Significance Correction

4.2.2.2.2 Item Analysis and Reliability Assessment

The second reliability check that is conducted on the collective quantitative data of section B is the most commonly accepted measure in field studies. It is the check of the internal consistency reliability using Cronbach's α (Cronbach 1971; Hinkin 1998). Internal consistency checks for reliability are widely used in quantitative research (Straub, Boudreau et al. 2004). The generally agreed lower limit for Cronbach's α is 0.7, but it may be lowered to 0.6 in exploratory research (Straub 1989; Hair, Anderson et al. 1995; Carver 2005). The collected data was subjected to

Cronbach's α reliability test using SPSS 22 and the results showed full agreement with the pre-specified range of $0.7 < \alpha < 0.95$. This is illustrated in Tables 4.15 and 4.16

Table 4.15 Results of the collective Cronbach's reliability test (All items received 504 responses)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.936	.938	51

Table 4.16 Detailed results of the Cronbach's reliability test (All items received 504 responses)

	Total Correlation	Cronbach's Alpha if Item Deleted		Total Correlation	Cronbach's Alpha if Item Deleted
BDM1	.465	.935	PSY1	.530	.934
BDM2	.455	.935	PSY2	.512	.935
BDM3	.467	.935	WBT1	.326	.936
WA1	.571	.934	WBT2	.281	.936

WA2	.514	.935	MBT1	.499	.935
WA3	.521	.934	MBT2	.513	.934
CT1	.377	.935	EXO1	.467	.935
CT2	.449	.935	EXO2	.293	.936
CT3	.264	.936	SCF1	.355	.936
CT4	.469	.935	SCF2	.435	.935
WF1	.544	.934	EXP1	.471	.935
WF2	.518	.934	EXP2	.448	.935
NAV1	.481	.935	CRR1	.489	.935
NAV2	.432	.935	CRR2	.447	.935
INT1	.385	.936	CRR3	.541	.934
INT2	.437	.935	REF1	.438	.935
PER1	.468	.935	REF2	.552	.934
PER2	.498	.935	TC1	.365	.935
WC1	.550	.934	TC2	.103	.937
WC2	.547	.934	SMC1	.474	.935
AES1	.522	.934	SMC2	.595	.934
AES2	.410	.935	VVV1	.534	.934
MM1	.388	.935	VVV2	.473	.935
MM2	.462	.935	RU1	.599	.934
			RU2	.559	.934
			RDS1	.499	.935
			RDS2	.622	.934

4.2.2.3 Factor Analysis and Results

The next step of the quantitative analysis was to conduct the exploratory and confirmatory factor analyses, as well as the evaluation of the research model via the detailed assessment of the structural model and its set hypotheses.

4.2.2.3.1

4.2.2.3.2 Exploratory Factor Analysis (EFA) (factor loading matrices)

Table 4.17: Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.916
Bartlett's Test of Sphericity	Approx. Chi-Square	11044.100
	df	1275
	Sig.	.000

The data were, therefore, considered appropriate for conducting EFA.

4.2.2.3.2.1 Functionality and its components (sub-variables)

Table 4.18: Factor loading matrix and communality for web functionality sub variables

Rotated Component Matrix^a		
	Component	
	1	2
NAV1		.812
NAV2		.802
INT1	.772	
INT2	.777	
PER1	.845	
PER2	.842	
Eigen values	2.657	1.376
Explained Variance per factor (%)	44.289	22.937
Cumulative (%)	44.289	67.226
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

4.2.2.3.2.2 Web Content and its components (sub-variables)

Table 4.19: Factor loading matrix and communality for web contents sub variables

Rotated Component Matrix^a		
	Component	
	1	2
AES1		.840
AES2		.711
MM1	.867	
MM1	.719	
Eigen values	1.333	1.297
Explained Variance per factor (%)	33.320	32.430
Cumulative (%)	363.320	65.750
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

4.2.2.3.2.3 Psychological factors and their components (sub-variables)

Table 4.20: Factor loading matrix and communality for web functionality sub variable

Rotated Component Matrix^a		
	Component	
	1	2
WBT1	.801	
WBT2	.899	
MBT1		.792
MBT2		.855
Eigen values	1.486	1.440
Explained Variance per factor (%)	37.154	35.999
Cumulative (%)	37.154	73.153
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

4.2.2.3.2.4 Exogenous factors and their components (sub-variables)

Table 4.21: Factor loading matrix and communality for web functionality sub variable

Rotated Component Matrix^a		
	Component	
	1	2
SCF1	.916	
SCF2	.921	
EXP1		.841
EXP2		.820
Eigen values	1.715	1.413
Explained Variance per factor (%)	42.879	35.326
Cumulative (%)	42.879	78.205
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

4.2.2.3.2.5 Customer reviews their components (sub-variables)

Table 4.22: Factor loading matrix and communality for web functionality sub variable

Rotated Component Matrix^a			
	Component		
	1	2	3

REF1	.508		
REF2		.701	
TC1			
TC2			.863
SMC1		.852	
SMC2		.718	
VVV1	.762		
VVV2	.805		
RU1	.751		
RU2	.668		
RDS1	.647		
RDS2		.586	
Eigen values	3.342	2.511	1.197
Explained Variance per factor (%)	27.850	20.926	9.979
Cumulative (%)	28.850	48.775	58.754
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 4 iterations.			

4.2.2.4 Confirmatory Factor Analysis and Evaluation of the Measurement Model

Following Jöreskog (1993), Castaneda (1993), and Anderson and Gerbing (1988), a structural equation modelling procedure was conducted in two successive stages, using AMOS 22 software added to the SPSS 22 program, in order to estimate various parameters of the model.

The analysis was conducted in two steps:

- Measurement model: This is a confirmatory factor analysis (CFA). The purpose of the measurement model is to specify the relationships between observed variables and latent variables.
- Structural model: The structural model specifies the relationships among latent variables. It specifies which latent variables directly or indirectly influence changes in the values of other latent variables of the model (Schumacker and Lomax, 2004).

4.2.2.5 Model Assessment (Measurement)

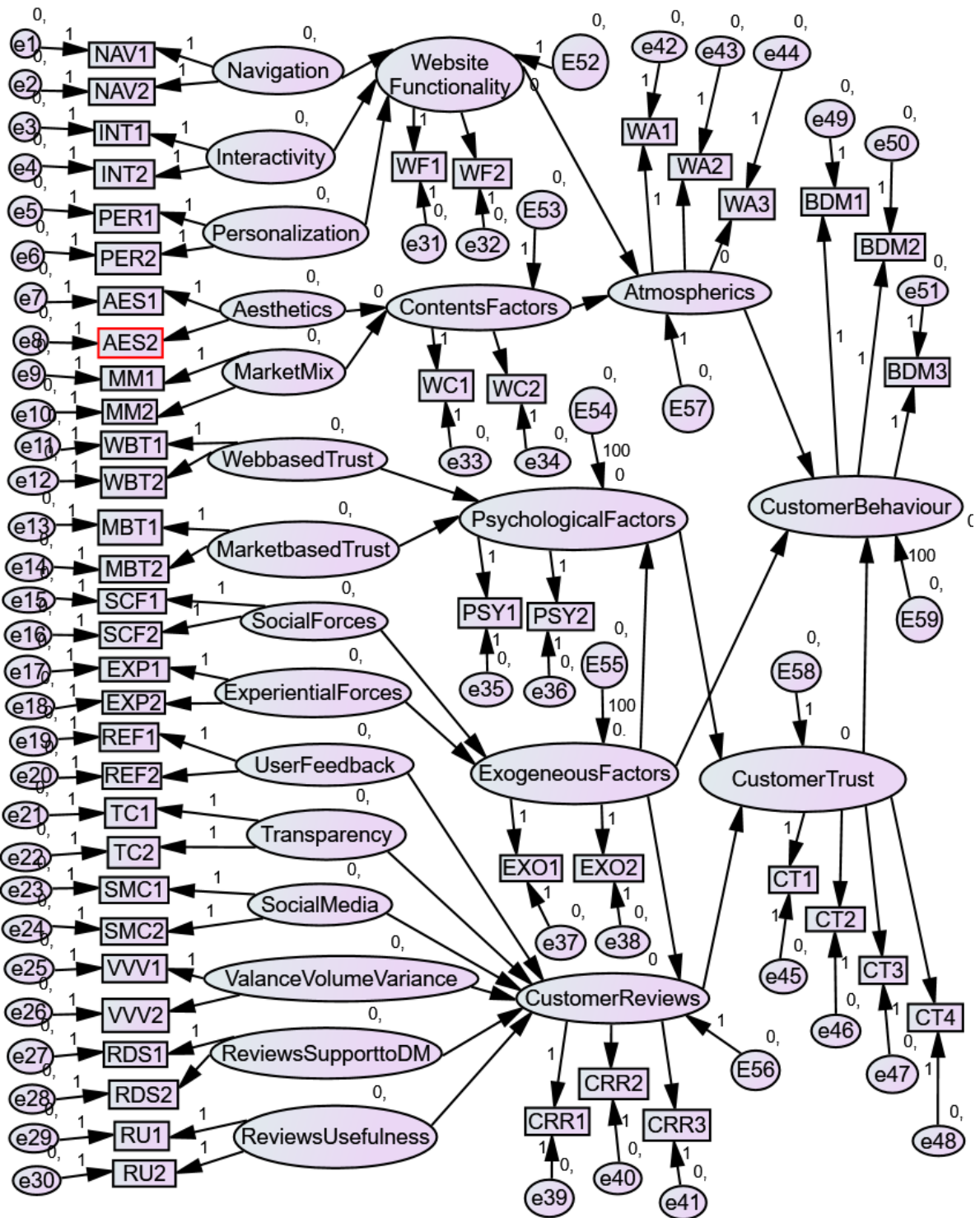


Figure 4.8: Structural equation model for the online purchasing (Measurement Model)

4.2.2.6 Structural Model Evaluation and Hypotheses Testing

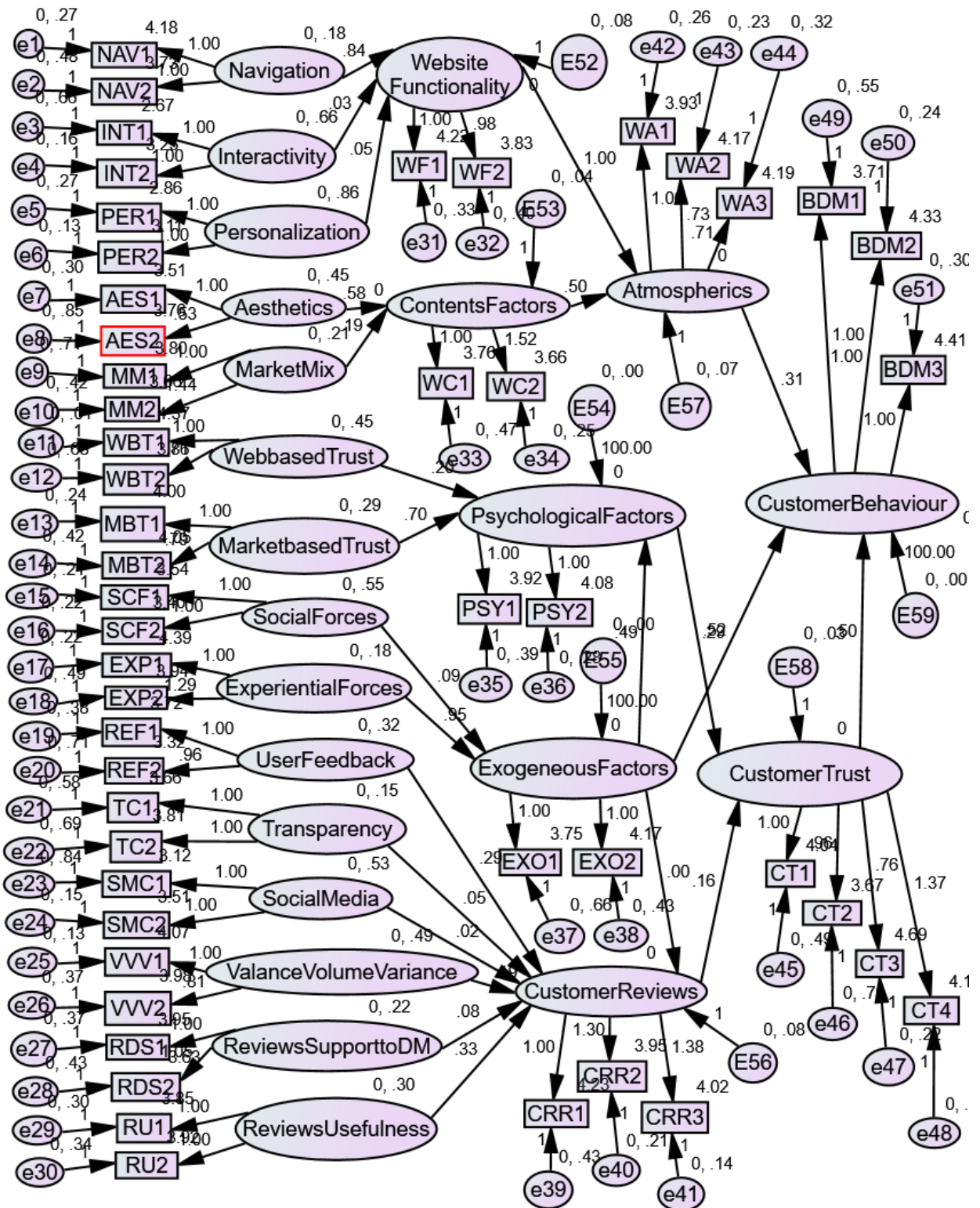


Figure 4.9: Structural equation model for the online purchasing (Structural/ Hypothesis testing Model)
 From the above figure, it is clear that all the hypotheses of the research were accepted to various degrees of influences between the factors. This is further detailed in Figure 4.10 and Table 4.23.

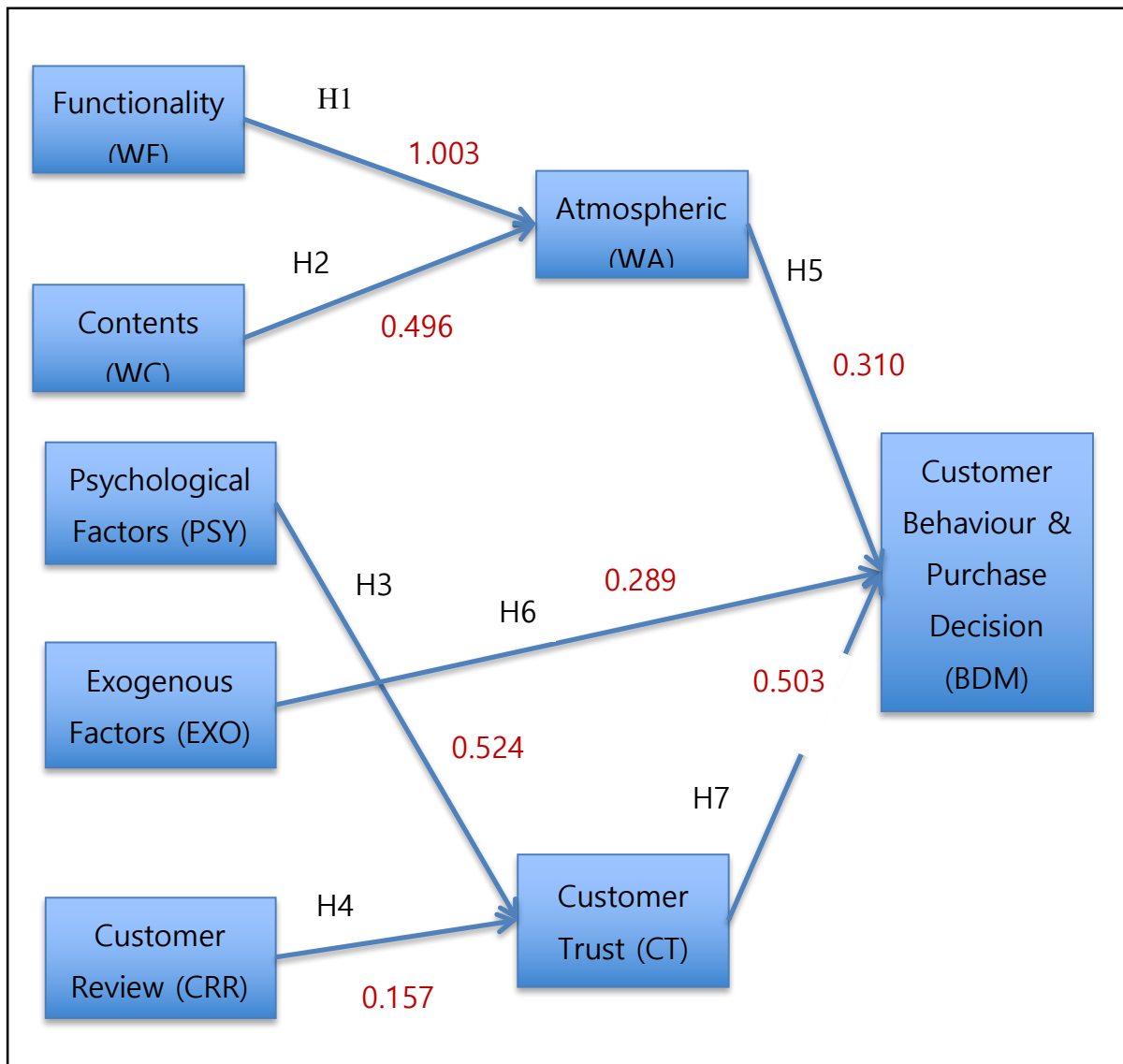


Figure 4.10: Hypothesis Testing Model

Table 4.23: Hypotheses testing using SEM

Hypothesis	Hypothesized relations between factors	Regression	Test
H1	Atmospherics <--- Website Functionality	1.003	Accepted
H2	Atmospherics <--- Contents Factors	.496	Accepted

H3	Customer Trust <--- Psychological Factors	.524	Accepted
H4	Customer Trust <--- Customer Reviews	.157	Accepted
H5	Customer Behaviour <--- Atmospherics	.310	Accepted
H6	Customer Behaviour <--- Exogenous Factors	.289	Accepted
H7	Customer Behaviour <--- Customer Trust	.503	Accepted

4.2.3 Part C: Analysis of qualitative data

The last part of the questionnaire was composed of five open-ended questions that targeted further exploration of the exact factors that influence and shape the online purchase of the participants. The collected data provided very rich insights into the exact perceptions of the participants as a representative sample of UK online shoppers.

As intended, the qualitative data gathered by these five open-ended questions clearly explained what was revealed by the quantitative part B of the questionnaire. Respondents made use of the spaces allocated to them to express their deeper feelings, beliefs, and perceptions as they browse various online shopping stores. The collected data is vast. Respondents used various approaches to answer the questions in their own words, thus imposing more personalized and honest features to the data that they collectively provided.

In all cases, the respondents eventually agreed on certain dominating scopes of the answers to the five questions at hand. Some of the answers were very detailed, with cited examples and named brands or stores as evidence to the presented arguments. Other answers were rather short; some containing only one word, yet such single words were found to be entirely sufficient to convey and describe the exact messages intended.

The aim of the analysis of the qualitative data gathered via the five questions of Part C was to fill any gaps that the quantitative data of Part B may have failed to satisfy. The qualitative data really help the research to understand the big picture around people visiting various online shopping sites. The material within the respondents' answers to the five questions is hoped to further describe and evaluate the phenomenon of why and how people decide to purchase online.

The collected qualitative data was analysed using the Content Analysis technique, which is defined as “a procedure for the categorisation of verbal or behavioural data, for purposes of classification, summarisation and tabulation.” (UoS 2015). The purpose of the context analysis technique is to make sense of the data collected and to highlight the important messages, features or findings.

There are two levels of the content analysis approach when analysing qualitative data:

- Basic level: a descriptive account of the data.
- Higher level: a deeper interpretation of the detailed responses.

Accordingly, for the current research, the qualitative analysis via content analysis required close studying, sorting, tagging, and coding of all the collected data with the intention of identifying any similarities, variations, or trends. The collected data from the five questions was subjected to a multi-technique approach of analysis that involved the following:

- Study of phrasing and meaning categorization
- Word frequency counting and string identification
- Identification of trends dominating collective understanding / perception of the phenomena under study

- Selecting adequate representative quotes from the collective account as exemplar evidence of the main themes identified

Applying the collective functions of the content analysis, as listed above, on the collected data, the following trends and findings could be identified from each question:

The main motivators towards online shopping:

Question 11:

What motivates you and makes you decide to shop online?

Collective findings from 504 responses:

Generally, the data listed a range of motivating factors that stimulate online purchase decision making by the responders. This was manifested via both the exact words and texts provided by the respondents within their responsive answers to this first question within Part C, as well as via the word usage frequency distribution throughout the 504 free text answers.

The main motivating factors for online purchase activities were the convenience of the process to fit around personal circumstances (e.g. work, time limitation, restriction of mobility, lifestyle and other needs), ease of access and ordering, home delivery, wide range of selections, reduced prices, and trust. These are expressed by the majority of respondents. Some selected quotes from the collected accounts are listed as follows:

Participant A:

“It is convenient, can browse several shops to compare prices easily and quickly.”

Participant B:

“Ease of access - you can shop 24/7. Ability to customise delivery. Greater range available. Ability to compare directly from different retailers through multiple tabs / windows.”

Participant C:

“So much easier, I work full time with unsociable hours, makes it hard to fit in time to buy products on the high street. Can often get products cheaper online and it's easier to shop around online for the best price.”

Participant D:

“1. Variety of Items, 2. Price comparisons, 3. Shipping, 4. Product Details, 5. User reviews. These save time rather than having to visit various shops to get prices. You tend to find more product info online than from Customer Service Reps.”

Participant E:

“I am motivated by my need to make a purchase and by the fact that I really do dislike "real" shopping. I find it boring, time consuming and tiring. I dislike pushy sales staff and queues. I love to shop from home, at a time to suit, to take my time, read reviews, compare prices, etc. I do not mind waiting for the item to arrive or, on the rare occasion it happens, to have to return it. I also find my money goes further on line. That said, I may have been lucky. I am careful where I buy and have not had a negative experience (yet).”

Further content analysis was performed by counting the frequencies of usage of certain key indicative words and strings. This is further evidenced and made more tangible by ranking the importance of these keywords in forming perceptions of respondents. The ranking is used to categorize these keywords into strings of mutually supporting indicators. Table 4.24 illustrates these strings and their ranked importance in forming the perceptions of the respondents. Additionally, Figure 4.11 shows the graphical dashboard representation of the counted keywords frequency of use within the text answers to this question.

**Table 4.24 Frequency count (importance) of Keywords used in the collected 504 free text answers to question (11)
(What motivates you and makes you decide to shop online?)**

Ranked importance of keywords as manifested by frequency of use	Strings of mutually supportive keywords
Level 1	Convenience/ convenient
Level 2	Price/ prices / cheaper / saves /cost /less /value / money /cashback
Level 3	Easier/ease /easy
Level 4	Products/ product/ compare / range /items/ lot / variety / things /choice
Level 5	Quickly / quick/ delivered / home/ delivery/delivered
Level 6	Deals / promotions/ offers
Level 7	Available / ability / access
Level 8	Reviews/ websites/ website



Figure 4.11 Graphical dashboard of frequency of use of the keywords within the text answers to question 11

Personal lifestyle factors influencing online purchase decisions

Question 12:

What are the most important personal or lifestyle factors that influence your online purchase decisions?

Collective findings from 504 responses:

Similarly, the data collected from the free text answers to this question listed a range of personal lifestyle factors that trigger and influence the online purchase decision making by the responders.

The main dominating personal factor for this sample of UK online shoppers is price and overall cost of the product or service. This is followed in importance by a perceived ease of use of the relevant websites and the ease of the whole process of the online purchase. Quality of products, availability of wide range of selection options, and after-sales delivery services come next in importance for the respondents respectively. Lastly, respondents were attracted by websites that had answers to their questions (interactivity), thus building higher levels of trust. Some selected quotes from the collected accounts of answers to question 12 are listed as follows:

Participant F:

“Cost”

Participant G:

“Do I need it, will i use it and what the cost is. I am not interested in trends and wary of flashy advertising.”

Participant H:

“Cost, delivery options, busy lifestyle, single parent and working.”

Participant I:

“The website accepts payment methods that I trust, the website is regularly maintained if it is not a 'corporate' seller. Style, design, quality of goods, price.”

Participant J:

“Simple user interface, easy to understand product descriptions, plenty of reviews.”

Participant K:

“Living in a rural area means shopping online is easier and convenient and cheaper as I don't have the expense of travelling to a city with the shops I like.”

Again, deeper content analysis was performed by counting the frequencies of usage of certain key indicative words and strings to explore the ranking the importance of certain keywords in forming perceptions of respondents. Table 4.25 illustrates these strings and their ranked importance in forming the perceptions of the respondents with regard to question 12. Similarly, Figure 4.12 shows the graphical dashboard representation of the counted keywords frequency of use within the text answers to this question.

**Table 4.25 Frequency count (importance) of Keywords used in the collected 504 free text answers to question (12)
(What are the most important personal or lifestyle factors that influence your online purchase decisions?)**

Ranked importance of keywords as manifested by frequency of use	Strings of mutually supportive keywords
Level 1	Money/ price /cost
Level 2	Easier / home / convenience
Level 3	Quality / products/ lifestyle/ brands
Level 4	Availability / available / things / items/ products
Level 5	Delivery / anywhere
Level 6	Questions / understand / certain /trust



Figure 4.12 Graphical dashboard of frequency of use of the keywords within the text answers to question 12

Influence of Websites' usability and content in online purchase decisions

Question 13:

How do you perceive the influence of a website's usability and content on your online purchases?

Collective findings from 504 responses:

The collective text from the 504 participants showed that they greatly perceived a 'good website design' as a major factor for them to purchase from a given online store. This was manifested via both the exact words and texts provided by the respondents within their responsive answers to this third question within Part C, as well as via the word usage frequency distribution throughout the 504 free text answers. Almost all the participants indicated, with varying degrees of emphasis, that they wouldn't buy from a website that is not well designed.

The participants then gave a wide range of their own, yet collective, perception of what 'a good website design' means for them: 'Ease of use' emerged as the most important feature of a well-

designed website. This is followed in importance by provision of adequate payment facility to complete the purchasing process as simply as possible. A main concern of the participants as well was to have well-supported navigation features that can help them adequately and conveniently scan the various ranges of options. These are expressed by a significant share of the respondents. Some selected quotes from the collected accounts are listed as follows:

Participant L:

“If it is a well designed website I am much more likely to go back.”

Participant M:

“If a site is hard to navigate I get frustrated with it and move on. If the person/company doesn't put in the effort to have a well designed website I'm not likely to trust them with my money either.”

Participant N:

“If i think that they did pay attention, spent time and money on their website, it means they want to encourage people to use it , they value customers who shop online. So positive.”

Participant O:

“If the website is easy to use and well designed it is reassuring me that the company has invested in making its ordering procedures as professional as the website appears to be.”

Participant P:

“If the site is easy to navigate you tend to make more purchases as the site makes it want you to browse.”

Further content analysis was performed by counting the frequencies of usage of certain key indicative words and strings. Table 4.26 illustrates these strings and their ranked importance in forming the perceptions of the respondents. The respondents also perceived that a good-looking, colourful, and full of fun website would be more likely for them to buy from. Security and trust came later as features of a good well-designed online store website. Additionally, Figure 4.13 shows the graphical dashboard representation of the counted keywords frequency of use within the text answers to this question.

**Table 4.26 Frequency count (importance) of Keywords used in the collected 504 free text answers to question (13)
(How do you perceive the influence of a website's usability and content on your online purchases?)**

Ranked importance of keywords as manifested by frequency of use	Strings of mutually supportive keywords
-----------------------------------------------------------------	-----------------------------------------

Level 1	Website (collective text indicates: 'good website design')
Level 2	Easy / easier / simple /easy / easily
Level 3	Purchase / buy
Level 4	Navigate/ usable / browse
Level 5	Information/ search / helps / contents
Level 6	Looks / clear / fun / friendly
Level 7	Secure / trust / sure
Level 8	Hard/ poorly/



Figure 4.13 Graphical dashboard of frequency of use of the keywords within the text answers to question 13

Influence of consumer reviews and ranking on online purchase decision

Question 14:

In what way (if at all) are you influenced by consumer reviews and ratings when you buy online?

Collective findings from 504 responses:

The collected data from the text answers to question 14 listed a range of perceptions with regard to how UK online shoppers – as represented by this sample of 504 respondents – make use of the previous consumers’ reviews and rankings of products or services to decide about their current online purchase decisions, and how such reviews influence their trust in both the products or services and the online stores providing them.

The majority of respondents indicated that they carefully search and study the previous reviews and/ or ranking of products or services in order to make a firm conclusion on whether to continue or reject their current online purchase endeavours. The main aspects of these previous reviews that the respondents looked at were the overall feedback and evaluations left on products and services. Respondents used such reviews and rankings to decide to purchase (if the overall feedback on their selected products was ‘positive’) or otherwise to reject buying. Having reached this conclusion, a significant part of the respondents, however, indicated that they would drop considering the reviews or previous rankings if they felt that those were not honest, overly positive or negative, or when the reviews were supported by the relevant associated online store company. Some selected quotes from the collected accounts are listed as follows:

“Participant Q:

“Somewhat influenced, if there are lot of bad reviews it may deter me from ordering.”

Participant R:

“I always check reviews before I buy and it strongly influences me.”

Participant S:

“I tend to look at the overall trend of customer reviews and read the full range and see if problems/issues are repeated in multiple reviews.”

Participant T:

“I'm more likely to choose a product that has a large number of good reviews, but tend to ignore the overly positive or negative ones.”

Participant U:

“Important to me - I am influenced but will take the view that not everyone will be satisfied, etc so usually look at the overall average consumer responses until I can make a measured response.”

As before, content analysis was performed by counting the frequencies of usage of certain key indicative words and strings for this question 14. Table 4.27 illustrates these strings and their ranked importance in forming the perceptions of the respondents. Additionally, Figure 4.14 shows the graphical dashboard representation of the counted keywords frequency of use within the text answers to this question.

**Table 4.27 Frequency count (importance) of Keywords used in the collected 504 free text answers to question (14)
(In what way (if at all) are you influenced by consumer reviews and ratings when you buy online?)**

Ranked importance of keywords as manifested by frequency of use	Strings of mutually supportive keywords
Level 1	Reviews (collective text indicates: ‘reviews are important for participants’)
Level 2	Product / products.
Level 3	Negative
Level 4	Positive

This question was intended to explore the ways in which respondents perceived their preferred settings of a good online store website and after-sales services. This collective perception was sought by exploring the recommendations that respondents could provide to improve the online purchase experiences in the future. The collected data listed a range of recommendations that were highlighted by respondents.

The main list of revealed recommendations included the call for more simplicity of websites, more provision of information on the products and/ or services, quicker processes of online purchases and delivery, more secure transactions, and personal information security. Reduced prices, and better market-based trust could also be traced within the collected data. Some selected quotes from the collected accounts are listed as follows:

Participant V:

“Sites are offering more and more information - like online magazines. I just don't care about all the extraneous information - I want to shop the products as simply as possible.”

Participant W:

“Easy to use/navigate website and great customer service when problems with websites arise.”

Participant X:

“More websites having PayPal or another Internet wallet service, it is annoying to have to get my card out and type all the information out.”

Participant Y

“Make websites more intuitive to use and easy to search through.”

Participant Z:

“Rewards and loyalty schemes, predictive shopping based on my own personal information - automatic recommendations for bargains, etc”

Participant AA:

“Delivery times, price comparisons , large pictures angles pictures more pictures.”

Participant AB:

“Quick checkout process. Good search function so you feel you have seen all the options without wading through incorrect search hits. Wish list function is good on Amazon to quickly come back to things I am undecided on or can't afford until a later date.”

Further content analysis was again performed by counting the frequencies of usage of certain key indicative words and strings. Table 4.28 illustrates these strings and their ranked importance in forming the perceptions of the respondents. Similarly, Figure 4.15 shows the graphical dashboard representation of the counted keywords frequency of use within the text answers to this question.

**Table 4.28 Frequency count (importance) of Keywords used in the collected 504 free text answers to question (15)
(What are your recommendations to make the e-Tail process more efficient and enjoyable?)**

Ranked importance of keywords as manifested by frequency of use	Strings of mutually supportive keywords
Level 1	Websites / easy/ simple/ easier
Level 2	Information / descriptions/ search / details / service / options / lots
Level 3	Delivery / quick
Level 4	Checkout / security

Level 5	Navigation / navigate
Level 6	Honest / sure / ensure
Level 7	Reviews
Level 8	Images/ friendly



Figure 4.15 Graphical dashboard of frequency of use of the keywords within the text answers to question 15

Chapter Five

5 Discussion

5.1 General Discussion

5.1.1 Research intents and expected products

This study emphasizes the importance of atmospherics in facilitating customer behaviour in the online retailing environment, and to explore whether the online atmosphere can be crafted skilfully to improve website effectiveness in facilitating customer buying behaviour. This study further, investigates the impact of online consumer reviews/ratings, as well as the influence of some exogenous factors in the product purchase decisions made by online customers. In particular, attempts were made to identify and investigate the external factors affecting decisions of online buyers, such as their cultural, social, psychological, and financial backgrounds. Application of the study is made to online customers from the United Kingdom (UK).

The outcomes of this project are expected to be beneficial for organizations, managers and customers of online marketing websites within the UK and globally. The anticipated outcomes will also bring further awareness of theories and knowledge of the mechanisms that online purchasers follow in buying or rejecting a certain product from a certain online store at a certain time and a given location. This study similarly highlighted areas where companies need to develop in order to provide the most encouraging and supportive virtual marketing experiences to prospective customers.

This research develops a model that may be used to identify and explain the various dynamics that combine a number of mutually interactive factors, leading to an online purchase decision and consequent actions. The model is expected to identify the various mutual influences that represent inputs from a specific online store website atmospherics, reviews from previous

customers and users, and many other factors external to the website context, as well as specifically identifying the nature of these mutual influences between factors.

The research study found a direct positive impact of the online store website functionality on the website user's perceived atmospheric influence. This expectation was confirmed for the overall study population from UK online shoppers by the confirmation of the *first hypothesis* of this research. A direct positive impact of the online store website contents on the website user's perceived atmospheric influence was also found. This was also confirmed for the overall study population by the confirmation of the *second hypothesis* of this research to be true, based on the collected data.

It was expected also to find a direct positive impact of the psychological factors on the customer's perceived overall trust. This was confirmed for the overall study population from the UK online shoppers as *the third hypothesis* of this research as true based on evidence from the collected data. Similarly, it was expected to find a direct positive impact of the previous customers' reviews and ratings on the potential customer's perceived overall trust, This was similarly confirmed for the overall study population, as well by the confirmation of the *fourth hypothesis* given in the current research.

It was expected that there exists a direct positive impact of the online store website perceived atmospheric influence on the customer's behaviour and purchase decision. The outcomes of this research showed that this expectation was confirmed for the overall study population by an evidence-based confirmation of the *fifth hypothesis* of this research. As explored by the *sixth hypothesis* of this study, it was proved that there is a direct positive impact of certain associated exogenous forces on the customer's behaviour and purchase decision. This hypothesis again was found to be true by the accumulated results of this research.

Finally, it was expected to find a direct positive impact of the customer's overall trust on the customer's behaviour and purchase decision. This has been found by confirmation of the

seventh hypothesis of this research to be true, and was confirmed for the overall study population as well.

5.1.2 Research Procedure

This research project developed a new model that identifies the factors and sub-factors influencing online purchase decision making, and to explore various interactions and mutual dynamics between these factors and sub-factors. The model, as presented in this thesis, was developed building on widely cited literature that discussed online purchase practices, trust, technical contexts of websites, customer satisfaction as illustrated by previous customers' reviews, exogenous factors, behaviours, attitudes and decision making to purchase or reject.

This thesis addresses the gap in literature in terms of studying the joint simultaneous influence of many factors that interact together to produce an online purchase decision, in contrast to previous works that tend to study each of these factors individually as unique influences to such decision. To fill this gap in existing literature, this research study focuses on the combined influences of three core areas in relation to the online consumer purchase decision. These are web atmospherics, consumer reviews and ratings and exogenous factors. These three aspects are the main factors that, according to the model developed in this research, combine to determine online consumer behaviour and purchase decisions. Thus, this study provides a comprehensive analysis, incorporating all of these factors in order to create a more accurate model of online purchasing behaviours.

The new model (Figure 2.10 in Chapter 2) was used to illustrate the proposed set of seven hypotheses, and consequently was further used to develop a survey questionnaire for the evaluation of the relationships between the model variables: websites atmospherics and its functionality and content sub-factors, customer overall trust and its previous customers reviews

and psychological sub-factors, and exogenous factors. These all collectively influence online purchase behaviours and decisions. The model was designed to allow for the use of the Structural Equation Modelling (SEM) technique to study the relations between the various factors and sub-factors, and especially to study the correctness of the presented hypotheses.

The survey questionnaire was distributed online to an open public of online purchasers in the UK. A total of 504 complete responses were collected. The following series of analysis activities were used for conducting wide-ranging data analysis: The Microsoft Excel Application, the statistical SPSS package, and the Analysis of Moment Structures (AMOS) Software Application.

Qualitative data analyses techniques were used to analyse the collected data. These techniques, including descriptive statistics, were used for the calculation of frequencies, percentages, means and standard deviations for factors under study. Confirmatory factor analysis was then used to investigate the questionnaire validity, as well as the use of Cronbach's alpha (α) and Composite Reliability (CR) to investigate the reliability of the multi-item measures of the questionnaire. The project also used inferential statistics in the form of multiple regression, for testing and exploring relationships between different constructs of the questionnaire, and, as previously indicated, Structural Equation Modelling (SEM) to assess the overall fit of the new model, as well as to test the structural model overall. The overall and detailed findings of all the analyses established the major findings of the research, as will be illustrated by answering the ten research questions. This will be discussed within the following sections of this chapter.

5.1.3 Demographic profile of participants and their previous online shopping experiences

The 504 respondents to the research questionnaire completed a basic section which explored the factors that influence their decision to purchase online. The collected data included personal demographic attributes, as well as a detailed examination of their fluency with online shopping.

5.1.3.1 Demographic backgrounds of the investigated population

The demographics of the participants were investigated using four distinct questions that gathered information about the participants' age distribution, gender distribution, level of education, and their annual income. These four items were investigated because of their direct impact on the anticipated behaviours of the population when they make their online purchases.

With regard to the participants' age, the results showed that there is a wide range of participation from age interval between 18 to 65 years and above. Further, the results showed an appropriate distribution indicating a dominant share of 61.8% of the participants from the mid-age category between 25 to 54 years of age, which is the age range usually expected to buy online.

With regard to the participants' gender distribution, the results showed that the difference in percentages between males and females who participated in the survey is not large, with 46.8 % of the participants being males and 53.2 % of the participants being females

When considering the education levels of the participants, as expected the majority attended colleges and universities up to the Bachelor degree level. This is again understandable when considering that fluent use of specific applications, such as online purchase, customer forums, online payments and goods tracing requires certain levels of skills in IT technology, and is as expected in the UK where the percentages of people to educated higher secondary schooling or universities are generally high compared to other parts of the world.

Results also indicated that the majority of the respondents (57%) have an annual income between 31,000 to 50,000 GBP, which is the range that represents a income higher than the average in the UK, which is calculated by the UK Office for National Statistics to be £26,500 in 2015 (ONS 2015). This suggests a correlation between a high annual income and the use of online shopping activities within UK.

5.1.3.2 Relevant technical experiences of the investigated population

As for the previous experience of the participants relevant to this research, all the respondents passed a screening question to ensure that they had at least a single previous experience of online purchasing in which they ordered and received a product/ service online, and thus could respond to the questionnaire referring to perceptions supported by actual experience.

Furthermore, it was considered that higher reliability of the collected data could be achieved if an adequate level of relevance of the investigated population to the topic under research could be established. Results indicated that this was the actual case witnessed during this research where participants were found to have good familiarity with the topic of online shopping. To confirm this point, three investigative questions were used within part A of the questionnaire to map the actual experiences and level of familiarity of the population with online shopping activities. These questions provided baseline information that described the participants' computer user experience, and their overall involvement in online marketing by exploring the numbers of online purchases made and the visits made to online stores websites during a given past period.

In consideration to their knowledge of the use of computers, Internet, smartphones and other similar tools, the results showed that the vast majority of the participants had significant experience of computer use and overall IT know-how, as 67% of the participants stated that they had reasonable to high experience of browsing the web, exploring and purchasing online. This is of importance as it indicates that participants were building on actual knowledge and detailed understanding of the subject matter.

Furthermore, the results indicated that over 40% of the sample were frequent online shoppers, with 13+ purchases during the previous 6 months leading to the date of their responses to the survey, and over 86% had at least 5 online purchases over the same time span. This is strong

evidence of the suitability of the participants to provide accurate answers to the questions at hand.

Further focussing on the connection between the investigated sample and the topic under research, they were asked to indicate the number of online shopping websites they had visited during the past month leading to the date of their response to the questionnaire. The results, as detailed in Chapter 4, showed once more that the investigated population is well-versed with the topic under investigation.

These screening questions at the start of the questionnaire helped to provide evidence of adequacy of the investigated sample to reliably handle, understand, and accurately respond to the instrument. This, in turn, evidenced a high level of reliability of the collected data. The collected data and the consequential analysis thus provided answers to the research problem and research questions. This is discussed further in the following sections.

5.2 Answering Research Questions

Methods of data collection and analysis helped the researcher to derive answers to the research questions. Various research methods were applied, both during the data collection and analysis. These methods started by conducting a thorough critical literature review that was followed by the introduction of a model which presented the theory of this research. A set of hypotheses was developed, and a set of questions produced to help identify tangible milestones that need to be achieved in order to satisfy the research aim.

The current research collected quantitative and qualitative data using a questionnaire survey that obtained 504 responses. Multiple analysis steps were taken to reach answers to the research questions. In the following sections, it will be demonstrated how each of the research questions was satisfied by referring to the results of the analyses carried out on the collected data.

5.2.1 Question 1: What are the input factors that influence customer online purchase behaviour and decision making process?

The results of this study showed that there is a decisive impact of previous online consumer reviews/ratings, web atmospherics, and exogenous factors on online purchasers' behaviours and their online purchase decisions in the UK.

This study has partly been developed from literature already available on web atmospherics as a key input factor for people making decisions to purchase online (Haque 2006; Constantinides 2004, Richard, 2005). Web atmospherics, in turn, encompasses many sub-factors that are evidenced by the output of this research to significantly influence the cognitive mind-sets of online customers as they decide whether or not to buy. Specifically, the influence of web atmospherics shapes online customer behaviour via two main avenues. The first involves the central influence on customers as they respond to the given site's content and structure, informativeness, effectiveness, and navigational features. The second avenue is a more peripheral one that reflects the extent to which a given website is entertaining and encouraging for users to continue browsing, and thus hopefully buy. This confirms previous research (Hunter and Mukerji 2011).

Web atmospherics was a major input to the conceptual framework of this research, as indicated by the research model illustrated in Chapter 2, where the influences of Site navigation and Flow, Interactivity, Personalization, Aesthetics, Engagement, and Web-based Trust interact to shape the overall online behaviour. These sub-factors join up to shape two higher-level attributes of web atmospherics: Functionality and Content.

In general, the results of this study demonstrate that respondents were positive about the influence of good website functionality in their online purchase behaviour. This is illustrated by an aggregated mean of 4.03 on the 1 to 5 scale, where 1 represents a lower limit and 5 represents a higher limit of respondents' approval. For instance, this research instrument's respondents think that a higher quality of navigation provision within the relevant websites

positively influences their online purchase behaviour. Web personalization and interactivity features also influence online purchase activities.

A further factor was highlighted by the current research as being influential on online purchase experiences of the respondents: this previous online consumer reviews/ratings of products and services. The 'customer reviews' factor was measured via the sub-factors of previous reviewers and their experience-based feedback, transparency and consistency in online reviews, social media and user generated content, valence, volume, and variance of reviews, reviews' usefulness, and reviews' level of detail and support to decision making. Again, the results demonstrate that respondents were positive about the influence of proper previous customer reviews in their online purchase behaviour. This is illustrated by an aggregated mean of 4.07. Respondents think that a higher quality of previous users' reviews and rankings within the relevant websites highly elevates their level of trust in the website and the products under focus, and thus positively influences their online purchase behaviour.

The third component of the conceptual framework of this research was the exogenous factors that work to shape the cognitive perceptions of respondents as they take their decision to purchase online. Market-based trust, social forces, and experiential forces are three main components of the exogenous factors that influence the online shopping activities, as confirmed by the current study. In general, results showed that respondents were more likely to buy online if they developed trust in the online store websites they visit. This is illustrated by an aggregated mean of 4.13 between the streams of 1 to 5. The research instrument's respondents think that a higher level of trust achieved by, for instance, referring to previous customers' reviews, and other psychological aspects, positively influences their online purchase behaviour.

The above paragraphs highlight the generic set of factors that influence online purchase decision making as perceived by the respondents within the current research.

5.2.2 Question 2: What are the elements and mechanisms associated with the e-tail customer reviews and ranking practices, and how exactly they do influence the online purchase decision?

In continuation of the above discussion, customer reviews play a significant role in encouraging an online purchase activity. The collective findings from 504 respondents, especially as collected from their qualitative answers, indicated that they frequently used the previous consumers' reviews and rankings of products or services to decide about their current online purchase decisions. Results showed that a major influence of such customer reviews was their significance as elevators to the level of trust that the respondents develop in a given website, eventually leading to online orders. The collected data further evidenced many mechanisms that expose how these customer reviews influence online purchase decisions: the majority of respondents indicated that they carefully search and study previous reviews and/ or ranking of products or services before coming to a firm conclusion. The main aspects of these previous reviews was that respondents looked at the overall feedback and evaluations left on products and services. Respondents used such reviews and rankings to decide to purchase (if the overall feedback on their selected products was 'positive') or otherwise not to purchase. Having reached this conclusion, a significant proportion of the respondents, however, indicated that they would ignore reviews or previous rankings if they felt that those were not honest, were overly positive or negative, or when the reviews were supported by the relevant associated online store company. These findings mostly confirm previous works which reported that consumers evaluate previous reviews of the specific product, and consider any other product-related information prior to purchase. This supports the feelings of perceived usefulness and trust of the service and products online which is more important than the hedonic aspect of the shopping experience (Babin et al., 1994).

Generally, the respondents perceived that they consider and use the previous reviews to collect information and build their own perceptions and feelings by considering the following:

- How far these reviews describe and evaluate the products under consideration.
- What is the overall trend of the previous users' experiences in terms of being positive or negative towards a given product or service.
- The rank of a given product or service among its peers' products or when compared to services provided by other companies.
- How far the respondents of this study felt that the previous customers' reviews were transparent and honest.

Most significantly, the overall collective finding of the current research, when previous customers' reviews were considered, is that the collected data clearly supported the hypothesis that previous customers' reviews have direct influence on current research respondents' decisions to buy a product or a service online.

5.2.3 Question 3: How socio-demographic factors affect consumers' online behaviour and purchase decision?

The evidence collected from the research questionnaire indicated that the respondents' social and demographic backgrounds significantly influenced their online behaviours and online purchase decisions. These backgrounds were presented in terms of different lifestyles, varying financial situations, different allocation of priorities, varying educational achievements, different social ties and influences, and above all, different tastes when it comes to shopping habits and traditions. This multi-faceted diversity of the respondents' social backgrounds was captured through the answers that were provided by the 504 participants when asked to express their views about the personal or lifestyle factors that usually influenced their online purchase preferences.

The results showed that the main dominating personal factor for this sample of UK online shoppers is price and overall cost of the product or service. Other inputs to the online purchases

activities of the respondents include their perceptions of how convenient their whole experiences were, including home delivery services. Quality of the products or services purchased comes third in importance. Availability of a wide range of selection options usually satisfies personal and cognitive needs of the participants, as such availability of options will undoubtedly enrich the online purchase experiences, and this is followed by whether a good provision of after-sales support was granted. This is in line with previous research that mapped the relationships between perceived adequacy of online services (their matching with customers' expectations) with positive and favourable customers attitudes within different industries (Mahadeo, 2009; Barkhi et al., 2008; Childers et al., 2001).

Social influences were evident when considering the psychological input to the online purchase decision-making process. Evidence showed that participants positively responded to inputs from their families and friends with regard to selecting a certain product or online store website. In general, the main motivation to the online purchase activities was the convenience of the process to fit around personal circumstances of the respondents; for example, work commitments, time limitations, restriction of mobility, certain lifestyle and other needs. Other factors, such as ease of access and ordering, home delivery, wide range of selections, reduced prices, and trust, were also cited. In this regard, as a psychological factor, trust was greatly influenced, in accordance with the findings, by the social interactions in which the participants received comments, advice, encouragements, or prohibitions from their families and friends and wider community that either consolidated or reduced their own trust in a given product or online store, thus shaping their ultimate decisions to place or reject an online purchase order. In other words, the instrument's respondents are more relaxed to purchase online if they feel that the relevant website is seen as 'trustworthy' by their surrounding social context.

5.2.4 Question 4: What is the influence of the e-store web atmospherics on customers' online behaviours, and how it influences their purchase decisions?

The 'web atmospherics' factor was measured directly and indirectly by a number of items within the questionnaire. In general, the results demonstrate that respondents were positive about the influence of high quality website atmospherics in their online purchase behaviour. This is illustrated by an aggregated mean of agreement of 4.10 out of a scale of 1 to 5, with 5 indicating maximum agreement. The respondents think that a higher quality of functionality and adequate web contents within the relevant websites positively influences their online purchase behaviour.

Collected numerical evidence showed that respondents found the appearance of an online store website to be an important aspect of their online shopping experience. This is further explained by the respondents, who indicated their reliance and preference of good appearance and layout, smooth browsing features, high level of interactivity provision, and quality of information provided as major influences that shape their decisions to buy online. These findings are supported by results given by the collected qualitative data within Part C of the questionnaire. This study investigated the relationship between customers' behaviour and their actual perception of a given website's atmospherics. Results showed that high quality atmospherics is a major input to the customers' positive perception and consequent behaviour. Respondents perceived a website that has high quality atmospherics as the one that features:

- Trust in products, in mother store, and in established security levels
- Ease of browsing and options selections
- Satisfaction with the company's transparency, commitment, and abilities
- Rich informing content facilitates informed decision making
- Ease of ordering and payment procedure
- Comprehensive presentation of previous customers reviews and rankings

- Fun and entertainment
- Live chats and personalized services.
- After-sale services such as provision of inbuilt windows or embedded links for shipment tracking, guarantee, and FAQs.

These and many other atmospherics stimulate a customer's cognition positively to stay on the website and browse for more options and information, which is more likely to increase trust and lead towards completing a prospective online purchase.

Goods selection, service booking and payment facility are major areas where a customer positively or negatively evaluates the website, the mother store, and the whole online purchase experience. If these areas are perceived by customers to be 'easy' first time of use, the whole experience will be much easier to use in the future, will engage them in other online entertaining and enjoyable experiences, and will be a major and strategic investment in future for the given company. This is in line with previous research works identified in literature. For example, considering that the online service is easy to use, interactive, informative, secure, and entertaining have been found to affect the adoption of higher levels of loyalty (Igarria et al 1995, Igarria 1996).

5.2.5 Question 5: What are the external forces to the web-environment that drive the customers to decide on their online purchases, and how exactly these forces influence such decisions?

The 'Exogenous' factors were measured by a total of four items of the questionnaire. In general, the results demonstrated that respondents highly acknowledged the influence of external factors in their online purchase behaviour. This is illustrated by an aggregated mean of 3.96 on the 1 to 5 scale. External factors are mainly articulated by two categories: social factors and experiential factors. The respondents think that many social factors influence their online purchase behaviour, as discussed in details within the answers to the third research question. Moreover, the experiential factors (i.e the previous users' experiences features conveyed to the

participants) were found to be more important to current participants than the social influences. This is evident in the overall mean of 4.17 for these experiential influences.

These external factors were found by the 504 respondents to have deeply influenced their online purchases, and the dynamics of such influence can be collected from the available evidences as:

- ‘Word of mouth’ was a major influencing factor, either positively or negatively in the decision to buy a certain product or service online.
- The relevant social networks postings and comments on a given product or service work to encourage specific orientation of perception with regard to that product or service.
- Comments, descriptions, and user-based evaluations of products, websites, or stores provided within traditional written or video /audio media channels.
- The influence of close family or friends who promote certain products and websites.
- Consumption decisions made by participants who were usually influenced by their own personal backgrounds.
- Personal background included the actual familiarity of participants with certain websites, products, or the online purchase know-how.

These and similar other attributes form the baseline for participants to go online and buy. They usually combine to shape the ‘unconscious mind-set’ of the participants, which later drive and control their online behaviours and purchase decisions. The major dynamics that are usually influenced by such external factors were found from the collected evidence to be:

- Providing triggering information that persuaded the participants to visit certain websites or to search some specific products – especially those of higher quality brands.
- Building trust on the product and on the online purchase experience.
- Participants were more positive towards browsing and purchasing online when they relied on reasonable to high level of previous experiences and familiarity with online

shopping. Through data analysis, this study found that such positive attitudes make online shoppers have a strong behavioural intention to further use and re-use a certain online purchase service. These results are similar to previous research works (e.g. Ahn et al., 2004).

5.2.6 Question 6: Are there any interlinkages or mutual effects between the three factors of web atmospherics, customer reviews, and external forces as inputs to the e-tail purchase processes?

This research focused on three core areas in relation to the online consumer purchase decision: atmospherics, consumer reviews and ratings, and exogenous factors. It was hypothesized that these three aspects are the main factors that combine and mutually interact to determine online consumer behaviour and purchase decisions. This theorization is confirmed as all the hypotheses were accepted and confirmed by the evidence from the data and analysis.

In a more detailed analysis of this mutual interaction between the three major factors and sub-factors, the following attributes were found, as a result of the confirmation of all of the hypotheses, to be true:

- The online purchase and decision process is directly influenced by website atmospherics and the overall trust of the customer in a certain online shopping activity.
- Web atmospherics encompasses both the given website functionality, and its content. According to results, these two attributes formed a significant presence in the development of overall trust in the website, store, and product. This is evidenced when looking at the weights of influences of attributes in the main model. Thus, a link is found to exist between web atmospherics and overall trust,
- Overall trust, on the other hand, encompasses the combined effects of both the relevant customer reviews and other driving psychological forces. This is again evidenced from the results furnished in Chapter 4.

- Customer reviews, ranking, and other customer-generated content are similarly found to have greatly influenced the decision-making process by providing for both informed decisions and elevated trust.
- The psychological drivers are, in fact, the combined effect resulting from two roots: the customer trust in the website content and the purchase process (such as the trust on the protection of personal data and purchase security) and the market-based trust, which is the trust in external associated factors (such as the trust in the product characteristics (brand) or the vendor after-sales support).
- Another main point that strongly supports the mutual interactive nature of these factors within the model was the effect of the external factors surrounding the individual participants. Exogenous attributes were found to influence two inputs to the online purchasing action. The first was the mind pre-set of participants as they approach the online purchase activity (e.g. under the influence of word of mouth from a friend); here the exogenous attributes acted as psychological elevators for the activity. The second point was the indirect influence of these external inputs (e.g. comments on a product spreading within the social networks) that shaped the unconscious minds of those previous users when they later put their own ranking or evaluation of a given product. Thus, the external factors were additional drivers that are now thought to have a share in shaping the previous reviews and rankings.
- The overall model resampled the mechanisms of 15 root attributes that were either web-based, external to the web, or user generated. These 15 attributes were the independent variables of the model which were accepted as correct, i.e. having all the hypotheses been approved as correct.

5.2.7 Question 7: How do these three factors combine to collectively influence the online purchase processes?

As discussed in the answer to the previous research question, the collected data and consequent analysis revealed that these three main attributes of the model (namely web atmospherics, customer reviews, and exogenous forces) were not in fact separate attributes, rather they were found to act in an inter-linked collective mechanism. There was much supporting evidence to this conclusion that could be extracted from the analysis. For instance, the 504 collected responses to the qualitative open-ended 11th question of the questionnaire, ‘What motivates you and makes you decide to shop online?’ gives rich insights to this. The responses listed a range of motivating factors that stimulate online purchase decision making by the respondents. This was manifested within texts provided by the respondent’s answers as well as the word usage frequency distribution throughout the 504 free text answers. The significant finding was that each of the factors and variables within the model seemed to directly or indirectly influence, and be influenced by, the rest of the factors in the model. Thus the answer to research question 7 above is that each of the three attributes of the model exerts and receives direct or indirect influence from the other two attributes. This is illustrated by reproducing the main theoretical model of the research, as shown in figure 5.1.

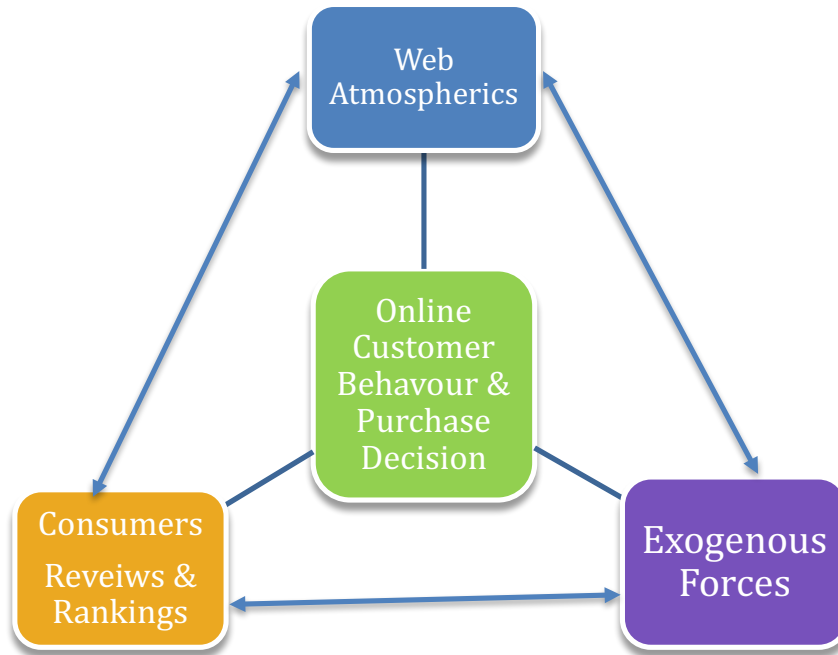


Figure 5.1. The mutual influence of web atmospherics, customer reviews, and exogenous forces on the online purchase behaviour and decision

From the collected evidence, the main motivating factors for online purchase activities were:

- The convenience of the process to fit around personal circumstances (e.g. work, time limitation, restriction of mobility, lifestyle, home delivery, and other needs). These are representatives of exogenous forces.
- Ease of access and ordering, wide range of selections, reduced prices, entertainment, etc. These are representatives of the atmospherics.
- Trust is expressed by almost all the participants, as either web-based trust (as part of the roles of high quality atmospherics), or market-based trust (as a result of external forces and customer reviews).

Only referring to these three points extracted from the collective answers from the 504 respondents to one question , it can be seen that ‘Trust’ is a key major input to the ‘decision to buy online’. As an attribute, ‘Trust’ joins all inputs from customer’s reviews, external forces, and atmospherics. Accordingly this research found that Trust is a major attribute for all the three major factors. Thus, web atmospherics, customer reviews, and external forces are all

joined together collectively to shape the respondents' behaviours to buy on line. It is worth presenting here only one answer from a participant that combines it all:

"I am motivated by my need to make a purchase and by the fact that I really do dislike "real" shopping. I find it boring, time consuming and tiring. I dislike pushy sales staff and queues. I love to shop from home, at a time to suit, to take my time, read reviews, compare prices, etc. I do not mind waiting for the item to arrive or, on the rare occasion it happens, to have to return it. I also find my money goes further online. That said, I may have been lucky. I am careful where I buy and have not had a negative experience (yet)."

5.2.8 Question 8: What is the share of each of the three mentioned factors on the online decision making process?

This research question was found not to be a straightforward one to answer, although the collected evidence showed that all the three attributes of web atmospherics, customer reviews, and external forces were always there together, as discussed in the answer to the previous research question.

Although attributes such,as trust, perception, motivation, morals, feeling entertained or satisfied, and similar cognition-based inputs to the process are so far removed from being tangible to be measured to an exact value or a range of values, referring to the evidence collected from the descriptive statistics of the data may shine light on a rough estimation of the shares of each of the main three attributes of the research as influences to the online purchase activity.

Recalling the mean values (as evidence of their being influential factors that the respondents perceived when they made their online purchases) as presented in Tables 4.6, 4.7, 4.9, 4.10, and 4.11, the following summarizing Tables 5.1, and 5.2 could be derived.

Table 5.1 temporarily calculates the overall mean value for the 504 respondents that the atmospherics main factors with its two components, the web functionality and the web content (and their sub variables), making use of the combined finding of Tables 4.6, 4.7, and 4.11. Table 5.2, meanwhile, provides a brief representation of the overall means for how far the respondents

collectively perceived the actual influences of these three main factors on their online purchase decisions.

Table 5.1 Overall mean values for ‘web atmospherics’ and its two subfactors. (All items received 504 responses)

Atmospherics and its sub factors	Calculated means
‘Functionality’ and its components	3.48
‘Web content’ and its components	3.69
Atmospherics’ and its components	4.10
Overall D statistic for ‘Atmospherics’ and its components and their subcomponents	3.76

Table 5.2 Overall actual and normalized mean values for ‘web atmospherics’, ‘exogenous forces’, and ‘previous customers reviews’ as agreed by the 504 respondents to have influenced their online purchase behaviours and buying decision making. (All items received 504 responses.)

Main factors	Actual overall mean value of agreement that the main factor influences online purchase decision making	Normalized overall mean values for the three main factors as influences to online purchase decision making
‘Atmospherics’ and its components	3.76	0,3298
‘Exogenous factors’ and its components	3.87	0.3395
‘Customer reviews’ and its components	3.77	0.3307
Total values	11.40	1.00

Table 5.2 is an overall summation of the obtained evidence from Chapter 4 with regard to the share of influences on the online purchase decision, and clearly identifies two major conclusions:

- The overall shares of the power of influence of each of the three main factors are highly similar in magnitude.
- External influences have a very slightly higher level of influence on the overall behaviour and buying decision making (normalized mean of 0.3395), followed by the previous customers’ reviews and rankings, and lastly by the power of the given websites atmospherics (with normalized mean of 0.3307 and 0.3298 respectively).

This researcher thinks that more elaboration is needed for a more in-depth investigation as to which of the factors is more dominating as an influence to the process. This is a recommended area for future research in this field.

5.2.9 Question 9: How are these three factors perceived by the e-tail users?

In general, the respondents provided direct and indirect accounts of their perceptions of these three main factors: web atmospherics, customer reviews, and external factors. Almost all of the 504 responders acknowledged, to various degrees, the significant importance of these three factors in shaping their individualized perceptions of the whole online purchase experiences. Questions 13 and 14 of the research instrument directly asked the participants to describe their perceptions with regard to the influence of these three main factors on their online purchasing behaviours: “How do you perceive the influence of a website's usability and content on your online purchases?” and “In what way (if at all) are you influenced by consumer reviews and ratings when you buy online?”

The collective text from the 504 participants showed that they greatly perceived a ‘good website design’ as a major factor for them to purchase from a given online store. Almost all the participants indicated, with various degrees of emphasis, that they wouldn’t buy from a website that is not well designed. The participants then gave a wide range of their own, yet collective, perception of what ‘a good website design’ means to them. ‘Ease of use’ came as a first important feature of a well-designed website. This is followed in importance by provision of adequate payment facility to complete the purchasing process as simply as possible. In addition, a main concern of the participants was to have well-supported navigation features that could help them adequately and conveniently scan the various ranges of options. These views are expressed by a significant share of the respondents. Some selected quotes from the collected accounts are listed as follows:

“If a site is hard to navigate I get frustrated with it and move on. If the person/company doesn't put in the effort to have a well-designed website, I'm not likely to trust them with my money either”

The respondents also perceived that a good looking, colourful, and full-of-fun website would result in customers being more prone to buy from it. Security and trust came later as features of a well-designed online store website.

As with the previous consumers' reviews and rankings, the collected data listed a range of perceptions with regard to how UK online shoppers, as represented by this 504 sample of respondents, make use of such reviews.

The majority of respondents indicated that they study the previous reviews and/ or ranking of products or services in order to make a firm conclusion about whether to continue or reject their current online purchase endeavours. The main aspects of these previous reviews that the respondents looked at were the overall feedback and evaluations left on products and services. Respondents used such reviews and rankings to decide to purchase (if the overall feedback on their selected products was 'positive') or otherwise to reject buying. Having reached this conclusion, a significant section of the respondents, however, indicated that they would drop considering the reviews or previous rankings if they felt that those were not honest, were overly positive or negative, or when the associated online store company supported the reviews, in one way or another

To conclude, the evidence collected from this research showed that all the respondents acknowledged directly or indirectly that they were influenced at various levels by a collective effect of these three factors which acted collectively to guide their choices and inform their decisions to buy online.

5.2.10 Question 10: How can the mechanisms of each of these three factors on the online purchase process be optimized?

The research participants were given the opportunity to express their views with regard to what they thought would optimize their online purchase experiences. The associated question 15 of the questionnaire was intended to explore the ways in which respondents perceived the preferred settings of a good online store website and after-sales services. This collective perception was sought by exploring the recommendations that respondents could provide to improve the online purchase experiences in the future. The evidence suggested a range of recommendations that can lead to optimized online shopping experiences, such as:

- Providing for more simplicity of websites. This includes easier browsing facilities, more interactivity and personalization options, higher speeds of websites loading, etc,
- Providing for richer content by provision of information on the products and/or services, and providing for quicker processes of online purchases and delivery, more secure transactions and personal information security.
- Good search function “so you feel you have seen all the available options”
- Providing for large illustrations, illustrations from different angles, and generally more illustrations of products
- Wish list function to facilitate later-timed activities
- Empowering rewards and loyalty schemes, and predictive shopping based on personal information - automatic recommendations for bargains, etc
- Reduced prices and better market-based trust
- Readily available customer service when problems with websites arise
- More websites having PayPal or another Internet wallet service (i.e. quick checkout process).
- Better competitive delivery times, and price comparisons

Furthermore, the collected evidence indicated that the interactivity (or mutual influence) of these three main factors on each other, and their collective impact on the online purchasing experiences were always perceived by the respondents. It is noticeable from the 504 textual responses to Question 15 of the questionnaire that almost each respondent listed a set of recommendations that actually addressed each one of the three main factors: web atmospherics, customers' reviews and ranking, and external influences on the participants.

5.3 Conclusion of the current discussion

To conclude, based on evidence from the collected data and subsequent analyses, there are three main factors and various sub-factors which combine to effect online consumer behaviour and purchase decision-making outcomes. Online consumers are faced with a variety of options and competitive choices due to the speed and scope of online commerce. This breadth of information has direct implications for the gap between shopping intentions and behavioural outcomes, potentially influencing future decision-making. In order to evaluate the link between web atmospherics, external factors, and consumer reviews and ratings during the decision-making process, this study critically explored a range of intrinsic and extrinsic forces, highlighting their degree of impact during the shopping process. These findings will have implications for online marketers as the current study clarified many aspects that positively or negatively influence online shopper's interests and achieve brand loyalty.

The current study presented a robust model of online purchase behaviour dimensions that interact to produce a decision to buy a service or a product online, these being the relevant websites atmospherics, the previous customers' reviews, and other personal and social external input factors to the process. Consequently, a set of recommendations can now be derived, based

on this study's evidences, to help better improve the online shopping experiences from the perspectives of individual customers, online stores managers, and online shopping websites designers. These recommendations will be listed in the next chapter.

Chapter Six

6 Research Conclusions and Recommendations

6.1 Research Conclusions

6.1.1 The context of this research

This research investigated the combined influences of online stores websites atmospherics, previous customers' online reviews of products and services, and other relevant external factors on the overall behaviours and subsequent decisions of individuals to purchase online. Interest in online retailing has dramatically grown in the recent years as it has increasingly become apparent that online retailing provides a significant set of advantages to sellers and buyers alike. Burns (2005), Maven (2007), and Leggatt (2009) note that consumer preferences and demands have evolved to a point where online retailing is becoming the most suitable choice.

From the perspective of consumer behaviour, one of the salient developments within virtual communities has been the expansion of websites on which customers can read about a variety of services and products and post their evaluations and experiences (Dijkmans, 2013).

Online retailing provides consumers with 'spatial and temporal convenience', increased service value or products through lower prices (Lynch and Ariely, 2000), and enhanced product information that allows consumers to be well informed during purchasing (Bellman, Lohse, and Johnson, 1999). The result of these changing preferences is that retailers can achieve competitive advantage by satisfying the consumer demands as they do in normal bricks-and-mortar environments.

This transformation towards online retailing has made it obvious that real-world retail marketing models cannot simply be applied to online 'virtual' shopping environments as there

are fundamental differences. The well-established marketing theories, which are tied to the bricks-and-mortar business model, seem not to be directly applicable to online retailing. For instance the use of environmental psychology that has boosted retailing in the real world needed to be modified to support an online trading virtual environment (Mehrabian and Russell 1974). The degree to which this subject has been studied from an online perspective is limited, thus the current study has attempted to add to the existing literature, and bring about an alternative model that can show the extent to which a combined influence of online consumer reviews and ratings, web atmospherics, and other personal external inputs can affect consumer intentions and behaviour to purchase online.

Online customer reviews were defined as peer reviews of products posted on third-party or the product company's websites. Retail websites provide consumers with the chance to post product reviews with ratings, in the form of numerical star ratings (usually ranging from 1 to 5 stars), and open-ended customer comments about the product. Kumar and Benbasat (2006) showed that the presence of customer reviews on a website has been shown to increase the authenticity of online retailers, product characteristics, product quality, payments and shipping. Reviews increase the surfing time on the website ("stickiness"), attract buyer visits and create a sense of community for frequent shoppers. With these considerations in mind, this research has taken customers reviews as a key factor that needs to be further studied, in combination with other inputs, to better imitate the actual real behaviour of online shoppers.

This study emphasized the importance of atmospherics in facilitating customer behaviour in the online retailing environment and proposes that the online atmosphere can be skillfully crafted (much like that of a bricks-and-mortar environment) to improve website effectiveness in facilitating customer buying behaviour. The current study highlighted that the existing models of online atmospherics are incomplete when used to explain real-life online shopping

scenarios, especially as they were always taken in isolation from other, hard to separate, groups of input factors to the process.

Web atmospherics was defined by Dailey (2004) as the “conscious designing of web environments to create positive effects in users in order to increase favourable consumer responses”. A valuable influence of web atmospherics is to encourage users to spend time on the site and to use those elements that are useful for them. For an online retail site, the term *atmospherics* comprises browsing the products, selecting products for purchase, and the use of the shopping cart/check-out functions. The aspects of the website that influence the consumer are further broken down into detail aspects of product information and navigation cues, aesthetics (such as colour, background patterns or images), typographical elements, and other decorative elements. Additional elements can be added that also have substantial impacts on the atmospherics of the website. These elements include site interactivity (by responding dynamically to the behaviour of the user) and personalization (when websites allow users to personalize their experiences by choosing the kinds of information they are interested in and the types of products they are interested in seeing). To this end, the current research acknowledged the importance of the web atmospherics for e-tail practice, and further evidenced its significant influence on online shoppers.

Furthermore, the current research investigated the impact of exogenous factors; those which are external to the exact technical nature of the online purchase process. These factors are basically of social nature that can unconsciously influence the perception of individual, either positively or negatively, to decide upon a certain online purchase operation. These exogenous factors were found to have an impact, together with web atmospherics and customer review, on how far a web store or a brand can gain customer’s trust, loyalty, and willingness to set their online purchases. The confirmation of the presence of such a combined effect of these

three main inputs to the online shopping process was a major rationale of this current study, which is satisfied by the furnished evidence from the collected data and subsequent analysis.

As the original purpose of the servicescape, the main function of a website using *e-servicescape* model

is to persuade, maintain, and offer some knowledge and information for prospective customers (Josien, 2010).

Eventually, *e-servicescape* of service organizations can affect customers in the virtual world.

6.1.2 Testing research hypotheses

The current research introduced the following hypotheses for verification:

H1: *There is a direct positive impact of the online store website functionality on the website user's perceived atmospherics influence.*

H2: *There is a direct positive impact of the online store website contents on the website user's perceived atmospherics influence.*

H3: *There is a direct positive impact of the psychological factors on the customer's perceived overall trust.*

H4: *There is a direct positive impact of the previous customers' reviews and ratings on the potential customer's perceived overall trust.*

H5: *There is a direct positive impact of the online store website perceived atmospherics on the customer's behaviour and purchase decision.*

H6: *There is a direct positive impact of certain associated exogenous forces on the customer's behaviour and purchase decision.*

and,

H7: *There is a direct positive impact of the customer's overall trust on the customer's behaviour and purchase decision.*

These hypotheses attempted the conceptualization of possible collective influences of the main factors of web atmospherics, customers' reviews, and exogenous inputs on the behaviour and decision making of individuals who shop online. Recalling the comprehensive studies conducted throughout this research, and building on the collective output of the theorization and practical applications of the research main model, it can be concluded that all the seven above mentioned hypotheses are verified to be true. This consequently confirmed the presence of a complex combined influence of the three main factors mentioned before and their inclusive sub-factors on beliefs, feelings, perceptions, trust, knowledge, and aptitudes of an online shopper in order for them to decide on a specific online purchase process.

6.1.3 Research Contributions to Knowledge

An important background to this study is that the understanding of consumer behaviour in such a virtual environment, as opposed to the physical world, cannot be achieved if the issues affecting the purchase decision are not taken into account or are misconceived. This is ideally possible only if all relevant input factors to the online purchase process are taken in solid internally interacting combinations – as they are in real life – rather than taking each main influencing factor in isolation of the others. The current study conducted a major survey of a sample of over 500 participants from the online shopping community in the UK, as a global leading economy. This current study claims that it has achieved such a collective approach using the analysis of various factors (represented here by web atmospherics, customers' reviews, and many other external factors), all of these being analysed together in realistic real-life conditions, as was attempted previously.

The study findings bridge a gap in knowledge in a number of different facets that can benefit various parties who are usually involved with the online shopping industry in particular, and those involved in research paradigms and methodology in general. The contribution to

knowledge of this research can be emphasized in terms of theoretical and applied folds as follows:

A. Contribution to theory and research

- There are several issues to which this study adds value and contributes significantly to knowledge, including the multiple use of different research methodologies to answer the research questions. It was intended within this research to collect and analyse both qualitative and quantitative data, then applying various statistical tests and methods, to clearly understand how purchasing decisions are made by customers, and how they develop intentions for repeated purchasing of the services online. This is a new exploratory task into the combined psychological and social influences in an individual's decision making attitude.
- Another contribution of this study from a research perspective was also entrenched in the introduction of a new conceptual model, and subsequent questionnaire that could be used later by fellow researchers. This study put forth an alternative model to show the extent to which online consumer reviews, ratings, external influences, and web atmospherics affect consumer intentions and behaviours to purchase.
- This study has established the significance of consumer reviews/ratings and how they affect decision making by consumers while making purchases. The significance of the study stems from the fact that the existing models of online atmospherics are incomplete when used to explain real life online shopping scenarios. This has been addressed in this study by capturing the detailed natural interactions between the various factors that influence the mechanisms of decision making when buying online.

B. Contribution to industry practice

- This research produced an outcome that is beneficial to the managers of online stores organizations in empowering them to assess the effectiveness of their online purchase services.
- Not only for managers, the quality of such services is also brought to light for the benefit of customers, organizations and researchers, and consequently to the global Internet shopper community, which is expanding exponentially in numbers and locations.
- The results of this research focused a contribution towards the design and development of proper online shopping services, in terms of policies, privacy, security, trust, information provision, navigation and procedures in the area of online services needed by the users.
- The outcomes of this research, although limited to UK settings, is also applicable and beneficial when extended into other regional or worldwide market places with similar (or even different) features to that of the UK online shoppers' community.
- The study also identifies the key prerequisites for the use and acceptance of technology in the area of marketing and shopping, and the strengths and weaknesses of such services in the UK as a large well-established economy.
- This research managed to evaluate the links between web atmospherics, external factors, and consumer reviews and ratings during the decision-making process, thus it critically explored a range of intrinsic and extrinsic forces, and highlighted their degree of impact during the shopping process. These findings will have implications for online marketers as such outcomes clarified which aspects and sub-aspects that industry

managers must focus on in order to activate consumer interest and achieve brand loyalty.

- Through the scope and targeted focus of this comprehensive study, it is suggested that a much more robust model of consumer behaviour will be developed, defined, and instrumentalized, providing a tangible architecture for implementing more effective marketing initiatives and enhancing website design. It is ultimately the alliance between consumer and brand interests which creates the necessary synergies to influence and support consumer behaviour. Therefore, this research is an essential step towards demystifying the enigmatic link between these three complex concepts.

To conclude, the current research contributes to exploring customer satisfaction, purchasing and repeated purchasing via online stores websites, as seen from different angles within a major economy of the world.

6.1.4 Research Limitations

The current research tried to provide notable insight to comprehend the various factors coming together to influence the decision for an online purchase activity to be thought of, approached, conducted, and even repeated on different occasions within the UK online shoppers community. However, as always encountered within this type of scientific research, this research is subject to boundaries and limitations. These are outlined below:

- a. The online purchasing experiences of participants within this research vary from those who are frequent online buyers to some who have less experience. Although the collected data was proved to be homogeneous and statistically sound, this variation in experiences might have marginally influenced their qualitative responses.
- b. The study was limited to participants from the UK. Although the general perceptions towards online shopping may reasonably be expected to have vast similarities between

different communities, given the overall (by definition) characteristics of those who have the ability to buy online, the obtained results are considered as true only within the UK online shopping industry. The study could have been more generic if other communities were investigated, which was not possible due to time constraints.

- c. The largest part of the used data collection methodology was quantitative via the first parts of the used survey tool. It is known that quantitative methods do not address the ‘why’ and ‘how’ types of investigative questions. To avoid this limitation, five open-ended questions were added to the survey tool to get more in-depth data. This qualitative element added rich insights to the research investigations. This could have even be further enriched if this qualitative part was more extended, or if other qualitative data collection methods were applied, such as conducting interviews with various representatives of the online shopping community or with the online stores who power these online shopping websites.
- d. It will also be interesting from a knowledge perspective to assess whether online shoppers will have different responses if different set of external factors (other than those addressed by the current research) were considered within the main conceptual model of this study, keeping in mind that not all the external factors could be included within the model.
- e. If not constrained by the current research’s scope and timeline, further data collections and analysis techniques could have been applied in-depth to seek a better detailed explanation of how and why a variable, within the given model, internally influences other variables, other than merely studying the combined influence of all these factors coming together into action.
- f. Statistically, having so many variables coming into action together will limit the room for them to be considered with higher number of items within the survey questionnaire.

Currently, many of the variables of the model were measured by only two items each. This vastly complicated the analysis process when AMOS add-in software was used. A minimum of three items to measure each of the conceptual model variables would have given even more accurate results.

6.2 Recommendations Resulting From the Current Research

6.2.1 Recommendations to E-retailers and Online Shopping Website Designers

According to the results from the data analysis in this study, e-retailer organizations and their websites designers are recommended to consider certain issues to improve their customers' online shopping experiences:

1. Providing greater simplicity in websites. This includes easier browsing facilities, more interactivity and personalization options, higher speeds of websites loading, etc,
2. Providing richer content in terms of information on the products and/ or services, quicker processes for online purchases and delivery, more secure transactions and personal information security.
3. Providing good search function to facilitate efficient browsing.
4. Showing rich visual content to provide full details of products, This can be manifested by providing more fully-detailed pictures of products taken from various angles.
5. Providing efficient shopping basket facilities.
6. Providing tools and mechanisms to enhance customers' security so that websites can ensure privacy and confidentiality. Customers need to feel safe, and they need their credit cards and other personal and financial details to be secure.
7. Considering all features that are more convenient for the customers to provide for greater satisfaction and encouragement for more online purchase loyalty.

8. Developing facilities within online shopping services that make customers enjoy entertainment during purchasing online. It is known that customers are more likely to buy when they feel happy. This reflects the findings of this research in terms of what motivates people to shop online (see Table 4.26).
9. Empowering rewards and loyalty schemes, predictive shopping based on personal information, e.g. automatic recommendations for bargains etc.
10. Customers would find it more acceptable to use online technology (i.e. e-ticketing service) in the purchase of tickets in the airline industry if they feel that there is higher ease of use and perceived usefulness in the online technology. For example, customers will develop satisfaction when they accept an e-ticketing website.
11. Offering reduced prices, and better market-based trust.
12. Providing flexible and dynamic websites by offering a simple graphical user interface, navigation and complete information support.
13. Readily available customer service when problems with websites arise.
14. Providing flexible payment methods through the use of different payment channels and making refunds possible at the point of booking. This provides more satisfaction, especially for those who do not have access to the most common methods in the market, such as credit cards.
15. More websites having PayPal or another Internet wallet service (i.e. quick checkout process).
16. Better competitive delivery times, price comparisons.
17. Treating the added value services and payment utilities as a strategic and major investment of online retailing services. Providing an online service is no longer a supplementary service, particularly as the number of online users is increasing rapidly from all domains.

18. Monitoring the posted information about the online shopping experiences in terms of accuracy, completeness, reliability, time and relevance. This improves trust for customers and makes them feel that someone is taking care of them.
19. Continuous improvement of available technology to sustain advanced networking and communication technologies using supercomputers and servers to avoid system-freeze threats. This will save the customer time and avoid technical problems, consequently improving customer satisfaction.

6.2.2 Recommendations to Online Shoppers

As the numbers of those who buy online are increasing every day, it is necessary to be directly involved in the further development of the e-tail industry. Customers need to be engaged in the success of online buying and payment systems. Referring to the collected evidence from this research, it is recommended that online shops customers should consider the following inputs to the process:

1. Customers should approach the online shopping activities with open minds and make the best of all the various features within the relevant shops' websites. This will significantly enhance their overall experiences.
2. Online shoppers should avoid peak times when purchasing online. This will make it easier, faster and more effective to obtain such service online.
3. Customer should become engaged by providing their honest comprehensive reviews or ranking assessment on various products or services. This will benefit other customers, and will shape a larger user feedback pool on almost all the products and services available online.

4. Customers should develop trusted connections with e-tail service providers through online communication and interaction.
5. Online shoppers should provide accurate and timely feedback to service providers. This will help to improve the quality of service.
6. Online customers should be careful when providing sensitive information about themselves online, including financial details, or when giving approval by directly ticking affirmation boxes without carefully studying what they are giving approval to.

6.2.3 Recommendations for Future Research

The current research can further be followed by works that aim at theorizing for the overall combined effects of various factors influencing the online shopping activity. The following points can focus a light on such potential future research works:

1. Expanding the context of this current research to study the combined mutual interactive effects of the three major factors; web atmospherics, customers' reviews, and external influences within contexts larger than the current UK-based study. A proposed newer context would be to study the European online shopping industry, or to compare the current UK results with data collected from other regions, such as the Middle East.
2. The current research conceptual framework is found to be critically loaded in terms of the overall number of variables that were used to measure the main element of the model. Future works should try to focus more on these variables such that smoother analysis and higher reliability of model fit could be obtained.
3. More dedicated qualitative inquiry using in-depth questions could be conducted to give deeper insights to the context of the online shopping practice.

4. Future research works are encouraged to look at the impact of demographic information of the customer, such as culture, income level, education, gender, age, lifestyle, on the customers' perceived convenience of online purchase activities.
5. Further research could be conducted, building on the findings from the current research, in order to investigate the exact cognitive values and processes that take place within online purchasers before they execute their online shopping. This proposed future research should use current cognition processes theories (such as the cognitive information processing and response model, and the multi-criteria decision-making mental processes theories) to investigate the cognitive influence of online purchase websites on the mental activities of their users. Such proposed research can concentrate more on the exact values, attributes, or perceptions that can empower online customers to develop enough trust in a given product or an online shopping website.

6.3 Conclusive Summary

6.3.1 Summary of the Research Thesis

The current thesis presented new knowledge and insights into online customer familiarity and satisfaction with purchasing online from various e-store websites within the UK e-tail industry. In the first introductory chapter, an introduction is provided to the key questions of online shopping services acceptance, quality, and perception of online purchase services and relevant customer loyalty and satisfaction drivers using a set of conclusive factors of web atmospherics, customer reviews, and other exogenous factors. The chapter presented a setting of the research objectives, questions and scope, and also explained the contribution and significance of this project, providing the structure of this dissertation.

Chapter 2 presented a literature review that addressed the online shopping practices in the UK and other parts of the world, with an illustration of the importance of research in the area of e-tail and the advantages of offering marketing and shopping services online. Factors

that affect the behaviour and decision-making process of online purchase were also discussed. These factors included websites attractiveness and usability, security and privacy, information and content quality, website design, and substitutability of personal examination, particularly when products cannot be tested through touching, tasting or smelling. The chapter thus sets the scene to lead into the next chapters of the thesis.

The third chapter discussed various research methodologies, including quantitative and qualitative approaches for data collection and analysis. The chapter discussed the conceptual framework (model) of this research. This was preceded by a theoretical background on various research paradigms deployed in this project with a focus on research philosophy, strategy, design and approach. The chapter presented the conceptual framework of the research and then provided a discussion of the techniques and methods employed in the collection and analysis of evidence relating to consumer behaviour and the effects of web atmospherics and online reviews. By embracing the mixed methods approach to empirical research, these techniques have allowed for robust feedback to be collected, identifying a variety of impact factors and forces that contribute to online decision making on a daily basis. The chapter then discussed the UK research context, revised the hypothesis, and explained the design and use of questionnaire data collection tool for this research.

Chapter 4 provided the results that followed the analysis of the collected data. These results included the demographic and personal characteristics of the study population. The chapter provided descriptive statistical analysis results on the model variables, and results for verifying data characteristics in terms of normality, reliability and suitability. The chapter also produced results for the evaluation of the measurement model and its suitability for the UK online shopping community, as well as the statistical results from hypotheses testing.

Chapter 5 discussed the obtained results with a focus on the anticipated outcomes, characteristics of the UK online shopping customers, the influence of various atmospherics,

customer reviews, and exogenous factors such as the experience and knowledge of the online shoppers in the UK. The chapter also included crucial discussions on the factors affecting the decision-making process to purchase online as indicated by the rich qualitative collected data, and the challenges and effectiveness of these services.

Lastly, Chapter 6 emphasized the research contributions to theory and to knowledge, and highlighted research limitations, a summary of this project results, and a summary of the dissertation contents (in the following section). This last chapter also reflected on the outcomes of the analysis of the collected data. In response to these reflections, a series of key recommendations to the online stores organizations, web designers, marketing managers, and online customers to improve the overall online shopping experiences, based on the UK generated data, and aimed at online shoppers world-wide. The chapter also highlighted the potential for future research works that can build on the findings from the current study.

6.3.2 Summary of the Research Results

This study has produced significant results through the analysis of earlier studies and literature in the area of online shopping and the factors impacting the process, based on the UK industry. The research provided a conceptual model and employed a multi-methods approach for data collection and analysis. These results – obtained from 504 responses to the main research survey questionnaire - have the potential to provide insights into understanding the success factors affecting customers' experiences and loyalty to online purchase practices. The key results found by this study are as follows:

- a. Generally, the data listed a range of motivating factors that stimulate online purchase decision making by the responders. The main motivating factors for online purchase activities were the convenience of the process to fit around personal circumstances (e.g.

work, time limitation, restriction of mobility, lifestyle and other needs), ease of access and ordering, home delivery, wide range of selections, reduced prices, and trust.

- b. The data collected and analysis revealed a range of personal lifestyle factors that trigger and influence online purchase decision making by the responders. The main dominating personal factor for this sample of UK online shoppers is price and overall cost of the product or service. This is followed in importance by a perceived ease of use of the relevant websites, and the ease of the whole process of the online purchase. Quality of products, availability of a wide range of selection options, and after-sales delivery services come next in importance for the respondents respectively. Lastly, respondents were attracted to websites that had answers to their questions (interactivity), thus building higher levels of trust.
- c. The collective text from the 504 participants showed that they greatly perceived a 'good website design' as a major factor for them to purchase from a given online store. Almost all the participants indicated, with varying degrees of emphasis, that they wouldn't buy from a website that is not well designed.
- d. The participants then gave a wide range of their own (yet collective) perception of what 'a good website design' means for them; 'Ease of use' came as the most important feature of a well-designed website. This was followed in importance by provision of adequate payment facility to complete the purchasing process as simply as possible. A main concern of the participants was to have well-supported navigation features that help them adequately and conveniently scan the various ranges of options.
- e. The collected data from the text answers to question 14 listed a range of perceptions with regard to how UK online shoppers – as represented by this 504 sample of respondents – make use of previous consumers' reviews and rankings of products or

services to decide about their current online purchase decisions. Such reviews influence their trust in both the products or services and the online stores providing them.

- f. The majority of respondents indicated that they carefully search and study the previous reviews and/or ranking of products or services in order to reach a firm conclusion about whether to continue or reject their current online purchase endeavours. The main aspects of the previous reviews that the respondents looked at were the overall feedback and evaluations left on products and services. Respondents used such reviews and rankings to decide whether to purchase (if the overall feedback on their selected products was ‘positive’) or to reject buying. Having reached this conclusion, a significant proportion of the respondents, however, indicated that they would drop considering the reviews or previous rankings if they felt that those were not honest, were overly positive or negative, or when the reviews were supported by the relevant associated online store company.
- g. The collected data listed a range of recommendations for better online purchase experiences. The main list of revealed recommendations included the call for more simplicity of websites, more provision of information on the products and/or services, quicker processes for online purchases and delivery, more secure transactions and personal information security. Desire for reduced prices, and better market-based trust could also be traced from the collected data.

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