



Investigating Website Design Factors that Influence Customers to Use Third-Party Websites for Booking Hotels: The Saudi Customers' Perspective

This Thesis is Submitted for the Degree of Doctor of Philosophy

By

Yasser Ali Mohammed-Saleh Baeshen

Brunel Business School

College of Business, Arts and Social Sciences

Brunel University London

2017

## Abstract

Customers are influenced in the physical world by their surroundings; important factors such as packaging, human interaction and atmosphere (environment) play important roles in any purchase decision customers make. Today's customers are moving towards faster, and more efficient ways of purchasing products/services. One of the most influential features in online purchase decisions is the Virtual Store Atmosphere (VSA). VSA is a marketing tool that not only influences purchase decisions, but it also measures the level of satisfaction in tourism and other industries. A high level of customer satisfaction increases the chance that they will recommend the product/service to other customers. However, despite different studies concerning information technology development and the impact of Electronic Word of Mouth (eWOM) on online Customer Purchase Decisions (CPD), eWOM has been little explored in the sphere of web design. It is vital that this research gap should be addressed, based on the online customer nature and the number of online bookings made in the tourism sector. Based on the above, this study aims to critically investigate and examine the impact of the online shopping environment on eWOM and customer purchase decisions, with respect to online bookings in the hotel industry, and develops a framework. The study aims to assess whether or not this impact is due to customers' web satisfaction and willingness to book a hotel online. Additionally, it looks at the influence of the online tourism environment on eWOM and Saudi Arabian customers' purchase decisions with respect to trust and the perceived risks in the area of hotel bookings made online. This research mainly adopts a quantitative method to achieve the objectives. Therefore, a conceptual framework has been developed based on existing literature concerning eWOM, web design and the hotel industry. The proposed framework has been validated using a measurement scale from previous validated studies. The research embraced and applied two main theories in the study, which are the Technology Acceptance Model (TAM) and the Stimulus-Organism-Response model (S-O-R). The research used an online survey of 1,002 respondents, which was distributed between two groups (Saudi national undergraduate students and Saudi national academic employees). Interviews, focus groups, and a pilot study were conducted to validate the survey too. Data analysis applied Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM) to validate the relationships between constructs and to test the research hypotheses. The findings from this study show that the majority of the environmental factors selected (web design) affect ES and motivate users to book a hotel online; these are: Perceived Ease of Use, Perceived Usefulness, Website Content, Intrusive Marketing Tools 'Pop-up Ads and Banner Ads', Search Engine and Enjoyability, but not System Quality. In addition, the results suggest that one of the organism factors, i.e. eWOM, does not influence CPD. As a result, this study contributes to the customer behaviour and web design/quality literature within the travel/tourism context in Saudi Arabia. It contributes to the existing knowledge and supports practitioners of third-party hotel

websites in shaping their web development priorities and enables them to focus on the most influential and critical factors.

## **Dedication**

By the grace and blessings of Almighty Allah I was able to accomplish this doctoral research. I dedicate my doctoral research to my loving family, for their encouragement and unwavering support. A special feeling of gratitude to my loving parents, the greatest father, Ali Baeshen, who I unfortunately lost midway through my PhD period, I will forever feel his warm embracing support, prayers and blessings with me, may Allah rest his soul in peace in Jannah, and my precious mother, Seham Abuznadah, for being my supporting pillar who I may lean on at all times, and for her continuous love, compassion and prayers, which light up my life. And to my siblings, Mohamed Saleh, Nawal, Hosam and Ohoud, who never left my side and are very dear. Without the grace of Almighty Allah and then my amazing family's encouragement, support and prayers, I would not have been able to accomplish this great achievement.

## **Acknowledgements**

The greatest thanks go to Almighty Allah who enables and supports me in completing this long journey. I wish to thank my supervisors, who have been more than generous with their expertise and precious time. Special thanks to Dr. Wafi Al-Karaghoul, my principal supervisor, for his countless hours of reflecting, reading, encouraging and most of all patience throughout the entire PhD process. I would also like to thank Dr. Ahmed Ghoneim, my second supervisor, for his valuable guidance, motivational support and encouragement, which was invaluable to me. I am unable to express how proud and honoured I am to have had the good fortune of having two such highly specialised supervisors guiding me in my work during my PhD journey. Their excitement and willingness to provide feedback made my experience extremely enjoyable. I would like to extend my gratitude towards my friends at Brunel Business School for their support and encouragement during my PhD study, especially towards the senior PhD students who advised me and from whom I learned throughout my research.

I momentarily value the incredible support and professionalism from the students, academic staff and expert managers who participated in the focus group and pilot study phases of this research; it was a pleasure to work with them. Special acknowledgements and thanks go to my brother, Dr. Hosam Baeshen, King Abdulaziz University (Medical School and Business School) and Al Farabi Dental College for supporting my study and allowing me to conduct my research during the instrument validation and data collection phase.

Finally, I thank King Abdulaziz University for the scholarship, which gives me the opportunity to further my education and extends my knowledge expertise at such a prestigious university, Brunel University London. Thanks also to the Saudi Cultural Bureau in London for their professional assistance during my PhD in the UK.

## Declaration

I, Yasser Baeshen, declare that the ideas, research work, analyses and conclusions reported in this PhD thesis, “*Understanding Website Design Factors that Attract Customers to Use Third-Party Websites for Booking a Hotel: The Saudi Consumers’ Perspective*”, are products of entirely my own efforts. Also, I certify that this thesis contains no material that has been previously submitted, in whole or in part, for the award of any other academic degree or diploma. Except where indicated, this thesis is the work of Yasser Baeshen only.

## Publications and Conferences Associated With This PhD Thesis

- Alboqami, H., Al-Karaghoul, W., **Baeshen, Y.**, Erkan, I., Evans, C. and Ghoneim, A. 2015. Electronic word of mouth in social media: the common characteristics of retweeted and favoured marketer-generated content posted on Twitter. *International Journal of Internet Marketing and Advertising*, 9(4), pp. 338-358.
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- Baeshen, Y. A., Al-Karaghoul, W. and Ghoneim, A. 2017. Investigating the Effect of Website Quality on eWOM and Customer Purchase Decision: Third-Party Hotel Websites, *International Conference on Internet of Things and Machine Learning (IML2017)*, Liverpool, UK, October, 2017. **(Accepted and will be presented in October 2017.)**
- Baeshen, Y. A., Al-Karaghoul, W. and Ghoneim, A. 2017. Web Quality and Customer Behaviour Dimensions: A Systematic Review of Tourism Industry, *Journal of Enterprise Information Management*. **(Submitted and is under 3<sup>rd</sup> Review.)**
- Baeshen, Y. A., Al-Karaghoul, W. and Ghoneim, A. 2017. The Impact of Web Design on Electronic Word of Mouth and Purchase Decision, *Proceedings of Brunel University Conference*, London, UK, 5<sup>th</sup> May 2017. **(Won the best papers distinction prize on the business and management track.)**

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## Chapter 1 - Introduction

### 1.1 Introduction

This chapter provides an overview of the research topic and a rationale for the studies that make up this PhD thesis, by providing an overview of web atmosphere and eWOM, and also outlines the scope of the research. It provides an overall image of the whole study, in order to understand the current situation surrounding the areas of focus. Section 1.2 presents the research literature review and background. Section 1.2.1 presents the research rationale. The next section, 1.2.2, discusses the motivations and the research gaps. Section 1.2.3 discusses and explains the aim and objectives of the study. Section 1.2.4 identifies the research questions behind the thesis. Section 1.3 concisely discusses the general aspects of the research methodology. The expected contribution made by the research is highlighted in section 1.4. Saudi Arabia is the context used in this study, which is discussed and justified based on the relevant literature in section 1.5. Finally, section 1.6 describes the overall structure of the thesis.

### 1.2 Literature Review and Background

A literature review is a discussion of information about a specific topic in a certain period of time that comprises the current knowledge in addition to theoretical and methodological contributions to a specific topic. It is a secondary source, and does not report original experimental work (Saunders et al., 2012; Maylor and Blackmon, 2005).

In order to understand the importance of Electronic Word of Mouth (eWOM), it is important to understand the term 'Word of Mouth'. According to Cork and Eddy (2017), Liu et al. (2015), Huang et al. (2011) and East et al. (2007), word of mouth is informal recommendations spread by people regarding merchandise, services and community issues. Huang et al. (2011) have also indicated that word of mouth influences customer purchase decisions through the informal advice and reviews of other people regarding the relevant product or service. Another definition of word of mouth, according to Lu et al. (2013, p.597), is "*oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as non-commercial, regarding a brand, a product, a service or a provider*". Similarly, Gu et al. (2012) suggest that eWOM has emerged as a key tool for influencing online customer purchase decisions.

According to Zhu and Zhang (2010), overall, online reviews are a significant proxy for word of mouth. Moreover, Sparks and Browning (2011) state that word of mouth commonly influences customers' intention and buying decisions. They have also stated that, when customers purchase

online, in order to make a final decision, they rely on conducting online search strategies such as reviewing sites. Zhang et al. (2013) also argue that online reviews affect customer purchase decisions. Furthermore, the number of people who are relying on eWOM in making their final decisions is increasing (Pauwels et al., 2016; King et al., 2014; Lu et al., 2013; Hu et al., 2012). Online review systems are highly effective tools for generating eWOM for high-involvement products (Wang et al., 2016; Pan and Chiou, 2011; Chang and Chen, 2008). In addition, Yen and Tang (2015) and Bronner and de Hoog (2011) found that the expression '*eWOM*' has become widespread over the past decade.

Further studies, such as Zhu and Zhang (2010) and Duan et al. (2008), provide statistics on customers who rely on eWOM when making purchase decisions. For example, while making a decision, more than 60% of customers use eWOM (Gu et al., 2012). Other researchers, such as Floh et al. (2013), suggest that the number of customers depending on online reviews when planning a holiday exceeds 74% of the total. Furthermore, various tourism operations have acknowledged the value of adding eWOM to their websites (Xiang and Gretzel, 2010).

From above, previous research has studied eWOM in many areas, including how it affects sales, purchase intention, purchase decisions and actual purchases. It has also covered many external factors, such as satisfaction and trust, and how these affect eWOM, leading to increased sales for experience and search goods. However, there are a limited number of studies that have explored whether or not web design or the online store atmosphere can increase, enhance or influence customers' reliance on eWOM when booking a hotel. Therefore, the relationship between web design and online purchase decisions with and without the reading of peer reviews for booking hotels will be studied based on web design factors. The next sections will discuss the literature review of this study in detail.

### **1.2.1 Research Rationale**

Globalisation and technology – in particular, information technology and the Internet – have made online shopping and e-business unavoidable necessities of modern life. E-business has the power to launch huge economic benefits for many companies, for example: the rapid distribution of information, the progress of new technology and the promotion of new products and services (Audretsch et al., 2014; Chang and Chen, 2008). This development of information technology, and in particular the Internet, has led to a dramatic increase in the number of customers who prefer to buy online (Huang et al., 2014; Moon, 2004). The existing literature has been critically examined to cover many elements, e.g. gratification and product involvement, that have an impact on customers' electronic word-of-mouth (eWOM) (Huang et al., 2014; Huang et al., 2011). However, Law et al. (2010) have indicated that little research has been carried out on the evaluation of hotels and tourism

websites. Electronic services (such as booking a hotel) are important for business people, tourists and tourism companies. Therefore, it is essential to gain a better understanding of how the virtual environment can affect e-satisfaction, eWOM and purchase decisions when booking a hotel online.

As online services are becoming more of a necessity for any business, there is a need for further studies about the online customers' behaviour and website quality. For marketers and web designers it is important to understand how online consumers respond to their websites. Thus, they can adjust the channel to generate more revenue. Online customer behaviour – for example: the continuous use of a website, surfing attitudes, recommending the website to others (eWOM) and motivation to purchase – have become important research areas (Cantalops and Salvi, 2014; Cheung et al., 2005). Scholars have also focused their attention on the functions, the parameters and the aesthetics of the online channels. From Information System (IS) and Human-Computer Interaction (HCI) viewpoints, many variables of website atmosphere/quality are examined to evaluate the website's performance. Although numerous studies have been conducted on diverse products or businesses, such as governmental transactions, banking, retailing, and other areas, there is still a huge demand to identify online customers' behaviour for product- or industry-specific web channels (Xie et al., 2014; Al-Karaghoul et al., 2005).

This study concentrates on a specific industry, the Third-Party Hotel Websites sector, which is concerned with reserving hotels online. An online service industry such as hotel booking is vital for the tourism business to keep growing. However, motivating more customers to rely on booking hotels online rather than via other portals (offline) is more important. Yet, as Law et al. (2010) have indicated, little research has been carried out on the use and evaluation of tourism websites.

Based on existing literature on the online customer behaviour point of view, studies have adopted traditional theories, such the Expectation Confirmation Theory (ECT) and Stimulus-Organism-Response (S-O-R) (Mehrabian and Russell, 1974). Moreover, the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975) and its branches of theories, such as the Theory of Planned Behaviour (TPB) and the Technology Acceptance Model (TAM), have also been verified widely. TAM theory has built an optimistic reputation in Information Systems (IS). Additionally, TAM conditions that real system use is firmly based on behavioural intentions and attitudes towards usage, which can be clarified by the perceived usefulness and perceived ease of use (Davis, 1989). However, perceived usefulness and perceived ease of use have not been found to be sufficient in relation to clarifying web users' motives (Hess et al., 2014; Ahn et al., 2007). El-Gohary (2012) indicated the demand to conduct more studies to examine the TAM from an e-marketing point of view.

Since this research concentrates on online customer behaviour (eWOM) and Web design, it is necessary to apply what has been gained from the Information Systems and Human-Computer

Interaction sectors in terms of web features. Much research has concentrated on website quality while surfing a website. Scholars have established many scales to measure website quality, and consequently described many dimensions, for example: content of the website, website design, responsiveness, accessibility, personalisation and enjoyment. Parasuraman et al. (1985) state that most of these scales have been established based on the traditional service quality scale, SERVQUAL. Examples of these scales include SITEQUAL (Yoo and Donthu, 2001), e-SERVQUAL (Zeithaml et al., 2000) and E-S-QUAL (Parasuraman, 2005). Many studies have indicated that the dimensions of website quality may vary based on the product or retailer, and there is a demand to discover each type individually (Peterson et al., 1997). From the tourism industry, Kaynama and Black (2000) established the E-QUAL instrument to measure web service quality. Law and Wong (2003) recommended three dimensions to stimulate Hong Kong customers to buy travel products online which are information quality, time and content sensitivity. However, Nusair and Kandampully (2008) state that, in relation to reporting parallel web quality dimensions, the past reports do not completely match each other. This shows the necessity for more research to improve web quality dimensions that suit the purpose of the company or product type for the online storefront. As such, the main aim of this study is to critically investigate and examine the impact of the online shopping environment on eWOM and customer purchase decisions, with respect to online bookings in the hotel industry, and develops a framework. The study aims to assess whether or not this impact is due to customers' web satisfaction and willingness to book a hotel online. Additionally, it looks at the influence of the online tourism environment on eWOM and Saudi Arabian customers' purchase decisions with respect to trust and the perceived risks in the area of hotel bookings made online in order to address the above-mentioned research gaps and contribute to enhancing online services for tourism.

The research will contribute to the literature on e-marketing for academics and practitioners. From an academic perspective, this study will enrich the understanding of the main research aim concerning eWOM and web design. It will also add to the published e-marketing literature by verifying the suitability of several aspects of web design and confirming the conceptual framework in third-party tourism websites. In practical terms, it will enable managers to encourage customers to create eWOM in order to gain more revenue. Also, to know which aspects of web design encourage customers to stay on their website. In addition, it will provide managers with a robust framework that supports e-marketing strategies. A brief literature review is discussed above to highlight the effect of eWOM and web design (atmosphere) on customer behaviour in online marketing. This is followed by the identification of the proposed aim and objectives of the thesis, and the methodologies that are applied in order to achieve the required outcomes.

### 1.2.2 Research Motivation and Gaps

Despite widespread research on the development of IT, HCI and e-marketing and the influence of eWOM on online CPD, there is a real need for further research in the field of web design (atmosphere) and its relation to eWOM. Researchers such as So et al. (2016), Sparks and Bradley (2014), Gu et al. (2012) and Sparks and Browning (2011) have argued that eWOM is key to influencing customers to purchase online. Moreover, they have shown that, in order to make a final decision, customers surf online for more information, applying search strategies such as reviewing sites (Raassens and Haans, 2017; Duan et al., 2016; Cantallops and Salvi, 2014; Floyd et al., 2014; Floh et al., 2013; Gu et al., 2012; Xiang and Gretzel, 2010; Zhu and Zhang, 2010; Duan and Whinston, 2008). Furthermore, eWOM is an influential channel because it provides online customers with information and reviews (Zhang et al., 2010). In addition, researchers (Lopez-Lopez and Parra, 2016; Chuang et al., 2014; Reichelt et al., 2014; Hu et al., 2012; Zhu and Zhang, 2010; Yang and Mai, 2010; Chang and Chen, 2008; Hung and Li, 2007) have found that customers show greater levels of trust towards User-Generated online reviews than they do towards information posted by firms. Moreover, many studies (Kim and Gupta, 2012; Sparks and Browning, 2011; Yang and Mai, 2010) have suggested that eWOM and online reviews have a significant impact on hotel bookings and on levels of trust. The purpose of this research is therefore to investigate the concept of how the website 'atmosphere' can influence customer eWOM and purchase decisions, particularly in the tourism sector, because of the extreme growth of interest in e-marketing from practitioners and academics in today's global economy.

On the other hand, some studies (Perry, 2016; Lu and Rastrick, 2014; Lee and Koubek, 2010; Wan, 2000; Johnson and Mistic 1999; Bell and Tang, 1998) have suggested that website layout and design influence customers' behaviour and purchase decisions. Law et al. (2010) have suggested that few studies have been carried out in the area of website evaluation in the tourism sector. However, Chang and Chen (2008) state that a creative website layout can enhance viewers' impressions of a website and turn them into clients. Likewise, web design and layout builds customer relationships and converts visitors into consumers, in the virtual environment (Hsieh et al., 2014; Hausman and Siekpe, 2009). Moreover, well-organised, high-quality web design reduces the influence of product uncertainty (Luo et al., 2012) and can influence user trust and increase customers' willingness to purchase (Chang and Chen, 2008). Still, however, researchers show that many online shoppers do not finish the buying process online because of weak website design (Mazaheri et al., 2014; Jiang et al., 2010; Hausman and Siekpe, 2009). Thus, for experience goods, such as booking a hotel, high-quality website design is essential as it provides additional value for customers (Luo et al., 2012).

This study is motivated by many issues mentioned in the above studies and is intended to support both the academic and the commercial communities in understanding the problems associated with the web

atmosphere and eWOM. The study is concerned with the effects of virtual environmental factors on e-satisfaction, eWOM and purchase decisions, how these factors influence customers seeking to book a hotel online, and how users are encouraged to recommend products to others. Research has shown that eWOM influences customer purchase decisions (Jalilvand, 2017; Doosti et al., 2016; Confente, 2015; Jalilvand and Samiei, 2012; Olbrich and Holsing, 2011), product sales (Kim et al., 2015; Sun, 2012; Awad and Zhang, 2007; Chevalier and Mayzlin, 2006; Liu, 2006) and other marketing performance measures. As mentioned above, researchers have also reported that web design has an effect on purchase intentions and sales figures. It is believed, therefore, that the results of this study will benefit both hotel companies and the research community.

In conclusion, the literature on eWOM has concentrated on the effects of valence, volume, rating and the number of reviews on customer purchase intentions, customer behaviour and product sales, in the realm of films and books. Literature on web design has focused on components of web design such as website quality, website content, website usability and website aesthetics, and how these affect customer behaviour in different sectors. It can clearly be seen that eWOM and web design can both influence customer behaviour. However, little research has been done to address and analyse the link between website design and generating eWOM (Doosti et al., 2016; Ha and Im, 2012).

### **1.2.3 Research Aim and Objectives**

This study critically investigates and examines the impact of the online shopping environment on eWOM and customer purchase decisions, with respect to online bookings in the hotel industry, and develops a framework. The study aims to assess whether or not this impact is due to customers' web satisfaction and willingness to book a hotel online. Additionally, it looks at the influence of the online tourism environment on eWOM and Saudi Arabian customers' purchase decisions with respect to trust and the perceived risks in the area of hotel bookings made online.

#### **The objectives of the study are as follows:**

1. To critically explore and analyse the existing literature on online shopping environment 'web design' and eWOM in the tourism sector in addition to critically reviewing the online customer behaviour literature.
2. To identify the factors that affect customers' online satisfaction and their willingness to book a hotel online, from the marketing perspective.
3. To examine empirically the effects of certain aspects of web design/quality (i.e. Perceived Ease of Use, Perceived Usefulness, Website Content, Intrusive Marketing Tools 'Pop-up Ads and Banner Ads', Navigation, System Quality, Search Engine, Page Response, Visual Appeal and Enjoyability), on customer satisfaction, eWOM and the purchase decisions of the customers of third-party hotel agencies.

4. To analyse the online shopping of tourism/travel environment on Saudi Arabian customers' purchase decisions including trust and the perceived risks in the area of hotel bookings made online.
5. To develop an e-marketing framework that concerns the relationships between web design, e-satisfaction, eWOM and purchase decision in the tourism sector.

#### **1.2.4 Research Questions**

The research questions have been designed to keeping in mind the significance of the study and its objectives.

**The main research questions for this study are:**

- What are the effects of certain features of web design (i.e. Perceived Ease of Use, Perceived Usefulness, Website Content, Intrusive Marketing Tools 'Pop-up Ads and Banner Ads', Navigation, System Quality, Search Engine, Page Response, Visual Appeal and Enjoyability) on e-satisfaction, eWOM and purchase decisions when making a hotel reservation?
- What is the relationship between website design and eWOM in online purchase decisions?

#### **1.3 Research Methodology**

For an academic study, the choice of a suitable methodology is based on the nature of the problem and the research questions. Therefore, this research applies a deductive approach, an objectivist philosophy, and mainly quantitative approaches. The adopted research design is comprised of several phases. In order to accomplish the research goals, the research methodology addresses five research principles: research philosophy, research method, research design, data collection and data analysis. First, in terms of research philosophy, a positivist stance has been adopted because of its suitability for addressing the research objectives. The study includes quantitative analysis in order to: achieve a more thorough understanding of the topic, improve and revise the initial research model and hypotheses, and purify the measures for the questionnaire (Bryman and Bell, 2015; Churchill, 1979).

Primarily, a new conceptual framework is proposed after evaluating prior studies and recognising a few gaps in the literature. The proposed framework mainly aligns with the Expectation Confirmation Theory (ECT) through placing and positioning satisfaction at the centre of the framework. Satisfaction is the key precursor for the willingness/intention to book a hotel online and leave a review online. Similarly, the framework integrates the two well-known factors from the Technology Acceptance Model (TAM), PEOU and PU, in addition to several other factors from the literature.



Additionally, appropriate website quality parameters are applied along with other significant constructs such as website content, intrusive marketing tools 'Pop-up Ads and Banner Ads', navigation, system quality, search engine, visual appeal, page response and enjoyability. A survey method is used to validate the relationships in the framework. This includes sampling, a pilot study and a data collection technique. Following this, the ethical consideration for the research is highlighted. Then, the data analysis using statistical packages (i.e., SPSS V.20 and AMOS V.20) used, with clarification of the justification for using them. A survey has been developed based on suitable prior validated scales in the literature to measure each construct in the scale. Each construct includes at least five items to measure. Three academics, three tourism managers and a number of online users have confirmed the questions before spreading the survey. The survey has been developed to be accessible online since that suits this study context. After piloting the survey, the main data collection was initiated. A total of 840 valid responses were then subject to the data analysis. The analysis used in this study includes factor analysis as well as Structural Equation Modelling (SEM) to validate the framework and test the hypotheses. In addition to the main analysis, a group analysis used mean differences and invariance analysis techniques; Statistical Package for the Social Sciences (SPSS V.20) and Analysis of Moment Structure (AMOS V.20) software were used.

Therefore, a self-administered online questionnaire to measure each of the study constructs has been developed on the basis of the reviewed literature to measure, supplement and complement this phase. The questionnaire has been distributed among undergraduate students (at a major university in Saudi Arabia) who have booked a hotel online at least once. Additionally, it has been distributed among academic employees to evaluate their most recent online hotel booking. The survey has adopted a Likert scale and has been developed to measure the constructs of the research. Participants have been asked to rate their agreement with each item on a seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree. Questionnaire items have been taken from previous valid scales. Moreover, the research design has delivered the entire structure of the thesis, with strong guidelines and procedures on the tasks needed to achieve the research goal and objectives. In addition, the data has been collected from third-party websites in the tourism sector. The data collection has been used to assess the performance of the conceptual framework in the context of tourism.

The research was conducted in Saudi Arabia. It studied Saudi customers' behaviour towards booking hotels online, because 92% of Saudis who travel go abroad for their vacations (Gholipour et al., 2014). Similarly, in 2011, the number of Saudis involved in outbound tourism (e.g. London, Paris, Los Angeles, etc.) was 15.3 million, which is almost half of the population (Abdelkader, 2013). In 2012, Saudis spent more than US\$16 billion, with the average expenditure per trip being around \$6,666, which means that Saudis spend more than the world average on tourism (Abdelkader, 2013; Khizindar, 2012).

Descriptive statistics for the overall sample have been created using Statistical Software Package for the Social Sciences (SPSS V.20). To test the framework dimension and the research hypotheses, Structural Equation Modelling (SEM) using Analysis of Moment Structures (AMOS V.20) has been performed (Field, 2013). SEM has been widely used as an instrument of validation and model testing in marketing research and other disciplines because it is a multivariate data analysis technique. In this study, SEM has been used to test the 16 hypothesised relationships among latent variables and also to validate the conceptual framework. A detailed discussion of the overall method will be provided in Chapter 4.

#### **1.4 Potential Contribution to the Body of Knowledge of Web Design and eWOM**

The purpose of this research is to make a significant contribution to e-marketing literature by presenting a new conceptual framework for both the academic and marketing management communities. The conceptual framework has been proposed to ease the execution of the e-marketing process by marketing practitioners and analysts. Grounded in academic and practical discussions, the thesis contributes to the literature on research into e-marketing both academically and practically.

##### **In terms of the academic literature, the thesis contributes as follows:**

- Firstly, it supports the understanding of the main ideas of eWOM and web design. This will provide an academic foundation for developing the conceptual framework. In addition, it enriches arguments concerning the e-marketing process.
- Secondly, the thesis adds to e-marketing philosophy by verifying the suitability of several factors relating to web layout and confirming the conceptual framework in third-party tourism websites.
- Thirdly, the research contributes to the literature on e-marketing by clarifying the ideas about eWOM and web atmosphere, as well as identifying their antecedents and consequences. The research is comprised of an investigation of eWOM and web layout constructs within the tourism context, and develops and examines a research framework that clarifies the associations between the constructs of eWOM and the web atmosphere, its antecedents and its consequences in a new background and culture (Saudi Arabia).
- The use of quantitative approach methods ensures more comprehensive data collection procedures and a higher level of data analysis (using SEM).
- Finally, SEM has been used to test the conceptual framework, and its antecedents and consequences. This research, therefore, provides for the extension and strengthening of our understanding of eWOM and web design in the tourism setting.

**In terms of practical management, the thesis contributes as follows:**

- First and foremost, the study is beneficial to executives in the hotel/tourism industry as it enables them to pinpoint how to help customers generate eWOM in order to gain more profit, and to identify which components of web design are important for encouraging customers to stay on their website.
- Secondly, the conceptual framework aims to provide firms with a strong and well-organised process for achieving their e-marketing strategies. This might be used as a basic technique for vendors and experts in order to accomplish a company's e-marketing strategies.

Therefore, the study recognises the critical factors that might keep customers on a website, complete their purchase, and recommend the brand to others. Thus, the research is essential to marketing managers, as they need to carefully apply the factors presented in the research to their e-marketing strategies.

### **1.5 Study Context - Saudi Arabia Overview**

The Kingdom of Saudi Arabia (KSA) is considered to be one of the fastest-developing countries in the Gulf region. It has the second highest oil investments and the sixth biggest natural gas funds in the world. According to the National Power Index (2016), it is one of the 20 most powerful countries. Therefore, in order to fill a gap in the literature, Saudi Arabia is selected as the focus of this study. In general, developing countries have not gained enough attention by scholars when studying online customer behaviour as well as while investigating tourism websites. Conducting this research in Saudi Arabia as a Middle Eastern developing country is appropriate for several motives (e.g. each culture has different behaviour and can provide different outcomes). The the rest of this chapter will discuss an outline about the country profile and its Internet and e-commerce status.

Starting with the profile, according to the last report of Central Department of Statistics and Information (2010), Saudi Arabia has a fairly huge population and has reached above 33,136.971 million. Saudi Arabia covers 2 million square kilometres and is considered to be the 14th biggest country in the world (Nations Online, 2014). Moreover, by land it is the biggest Arab state in western Asia. Foreigners make up 31% of the population of Saudi Arabia; they regularly travel internally within the Kingdom and internationally back to their home countries. The Kingdom is also referred to as "The Land of The Two Holy Mosques" because it contains the two holy cities of Mecca and Medina. These two cities are important religion destinations to Muslims. During the Hajj season (Pilgrimage), they attract more than 2 million Muslims pilgrims from across the world, and during the rest of the year an additional 4 million Muslims visit the Kingdom for Ummrah; it was estimated that

there has been a 2.27% growth in the annual number of visitors (Ministry of Hajj, 2011). The statistics mentioned above show the high demand on this part of the world for booking hotels online.

In regard to Internet usage, according to the Saudi Communication and Information Technology Commission (2010), approximately one-third of the Saudi population are Internet users (11.4 million users). Moreover, although 47% of the registered firms in Saudi Arabia have websites, only 8% of these firms sell products or services online (ibid). On the other hand, the Arab Advisors Group (2014) reports that around 32% of mature Internet users in Saudi Arabia buy and pay for products and services online; that is, almost 12% of the total population. These online users spent an estimated US\$ 4.3 billion on e-commerce transactions in 2013 (ibid). These contradictory figures indicate that e-commerce in Saudi Arabia is still in the early stages; however, it is possible that online services will be adopted by the population (Communication and Information Technology Commission, 2010).

There are four international airports and 23 domestic airports in Saudi Arabia (General Authority Of Civil Aviation In Saudi Arabia, 2013). For the past 60 years, there has been only one airline company, Saudia Airlines; however, lately the Saudi Arabian General Authority of Civil Aviation has released several new licences for companies such as Qatar Air, Gulf Air, Flynas and Kayala Airline to operate domestically within the Kingdom and internationally (Qatar Airways and Gulf Air win domestic air licenses, 2013) This shows the increasing demand for travel both domestically and overseas.

From all the evidence provided above, the significance of the tourism sector in Saudi Arabia for both inbound and outbound travel is clear. This also shows the increasing demand for easy and well-organised ways to book hotels online.

### **1.6 Structure of the Thesis**

This section presents a brief review of the structure and organisation of the thesis. The thesis will be presented in seven chapters.

**Chapter 1** – Introduction – This preliminary chapter introduces and highlights the research topic, the academic background, motivation and the research context (overview of Saudi Arabia). This chapter also includes the research aim and objectives, and the relative methodological approaches. A justification for and the contribution of this research are also discussed in this chapter.

**Chapter 2** – Literature Review – This chapter presents a critical review of the existing literature on customer behaviour online, electronic word of mouth, website quality dimensions, and research that studied the relationship between online customers' behaviour, electronic word of mouth and website

quality with a focus on third-party tourism websites. Thus, it illuminates the research gaps, and draws strong specific conclusions.

**Chapter 3** – Conceptual Framework, Hypotheses Development and Relevant Theories – This chapter presents the research framework by designing a framework that can predict the level of satisfaction and approval of the online purchasers (hotel bookers) and their intention to revisit the website or recommend the site to friends and complete the booking with a hotel tourism website (purchase decision). The framework comprises 13 constructs and 16 hypotheses that are clarified and discussed.

**Chapter 4** – Research Methodology – This chapter provides a review of the philosophical viewpoint and outlines different methodological approaches used in this research; a justification of the methods used is also presented. The research design is exhibited with an organised description of each step. This involves the measurement scale development, validation of scale, development of survey, sampling, and data collection process. This chapter also presents the ethical considerations of the study and classifies the data analysis procedures and statistical packages selected.

**Chapter 5** – Data Analysis and Results – This chapter discusses and describes in detail the data analysis techniques that have been applied. The steps used to test and validate the measurement items, the organisation of the proposed framework, and to examine the hypotheses are outlined. This involves presenting the pilot study outcomes to validate the reliability of the survey instrument. In addition, the principal survey data is analysed in detail, which involves data screening, assessing characteristics of the data sample, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and hypothesis testing using Structural Equation Modelling (SEM). Additional analysis studying the associations and mediation effect in the framework is carried out (i.e. straight, indirect and new proposed).

**Chapter 6** – Discussion of the Research and Findings – This chapter is dedicated to the discussion of the results from the principal framework and the group analysis (Chapter 5). The discussion involves a detailed explanation of all analytical outcomes followed by an analytical review that embeds prior literature. Additionally, it links it to the literature discussed in Chapter 2. First, the result of scale filtering and framework validation is discussed. Second, evaluation of the determinants of purchase decision and e-satisfaction by means of the research hypotheses is performed. Finally, the impact of the modified categories in relation to the conceptual framework is demonstrated.

**Chapter 7** – Discussion, Recommendation and Conclusion– This chapter outlines the novelty of this study by drawing on the unique contributions of the research, its implications and limitations, and suggestions for future research. This chapter starts with a summary of what has been accomplished in this thesis; it then explains how the effort matches the research aim and objectives. The chapter ends

by underlining the novelty of this research in terms of its theoretical contribution, and assessing the whole assignment by arguing and discussing its limitations and possible future research influences.

## **Chapter 2 - Literature Review of Customer Behaviour, Web Design and Tourism**

### **2.1 Introduction**

The literature review is viewed as one of the major elements in research since it provides an insight into the main stream of theoretical literature as well as empirical literature (Saunders et al., 2012; Maylor and Blackmon, 2005).

The previous chapter provided a background to the subject of this thesis and outlined the main aim and objectives this thesis aims to achieve. This chapter is divided into 14 main sections, starting with a presentation of the debates around the influence of electronic word of mouth and online shopping on customer behaviour, in particular, the different customer behaviour theories, as well as the eWOM and web design measurements. In other words, this chapter aims to provide an extensive theoretical view of the research topic, uncover and assess some of the vital studies in this range, classify the numerous perceptions that surround this research topic, underline the existing research context, provide clear and applicable conclusions, and establish the main research gaps.

Sections 2.2 to 2.4 present previous theoretical literature related to customer behaviour studies and theories. This is followed, in sections 2.5 to 2.12, by an extensive review of the empirical literature that has observed eWOM, web design and tourism sectors. Finally, in sections 2.13 and 2.14, the chapter ends by presenting the gaps in the research in relation to the association between eWOM and the online shopping environment, together with the main proposed elements that might influence online users and impact their buying behaviour to book a hotel online and provide an online review.

### **2.2 Background**

Generally, the customer behaviour area has attracted the attention of many scholars (Pappas, 2016; Gao and Bai, 2014; Berkman et al., 1997; Ajzen and Fishbein, 1980; Bettman, 1979 ). This always has been, and will continue to be, critical in terms of achieving a better visualisation of the mind-sets, preferences, fears and incentives behind purchasing. It is understood that many discoveries from such research have been built upon in applied circumstances, for example, to allure customers, improve memorising and raise revenues (Ainin et al., 2015; Park et al., 2014; Lee and Kozar, 2012; Bai et al., 2008; Wirtz, and Lihotzky, 2003).

Following the launch of the Internet and the formation of the e-commerce theory in the 19<sup>th</sup> century, other aspects of customer behaviour research started to appear (Zhang et al., 2014; Cheung and Lee,

2005; Vrechopoulos et al., 2004). This subject of study is clearly researched in journals and conferences in the areas of Marketing, Information Systems, Management and Tourism (e.g. European Journal of Marketing, MIS Quarterly, The International Journal of Management Science, Tourism Management, AMCIS Conference and HICSS Conference). Gao and Bai (2014) and Dennis et al. (2009) have argued that the increase in online purchasing has consequently increased the importance of e-customer behaviour in the latest few years. Furthermore, the setting of the online purchasing method emphasises the necessity to understand technical characteristics in the customer behaviour area. The Technology Acceptance Model (TAM) by Davis (1989), from Information Systems, and the Stimulus-Organism-Response (S-O-R) model by Mehrabian and Russell (1974) were embraced and new frameworks were established. Likewise, the necessity to analyse the effect of online website features (such as structure, response, layout and design) on implementation has since been considered essential. As Ahn et al. (2007) indicate, a website's characteristics influence the customer's assessment of the website, as it is the entrance through which transactions are made.

Moreover, many studies have highlighted the need to study various firms (e.g. tourism companies) or different types of goods (e.g. clothes). For instance, Kim, Jin and Swinney (2009) looked into online shopper gratification and established that scrutinising specific product types or comparing different types is vital as customers have diverse needs and inspirations, which may differ based on the merchandise. Another study by Kim and Stoel (2004) has also recommended that measurements of website characteristics may vary based on the nature of the merchandise or the vendor. This rationalises why several firm/product-specific research has been conducted. A large portion of the literature studying customer behaviour focuses on merchandise such as books, restaurants, electronics and films, and firms in areas such as banking, e-Government and e-learning, and several of these studies will be evaluated in the following sections. In order to build a concrete base for this research and before examining exact associated studies, this literature review will start by presenting the most critical customer behaviour theories, eWOM and web design studies that have been examined in previous studies (e.g. Bronner and de Hoog, 2016; Munar and Jacobsen, 2014; Floh et al., 2013; Bronner and de Hoog, 2011; Cheema and Kaikati, 2010).

### **2.3 Customer Behaviour Theories**

In reviewing and analysing the published literature on customer behaviour, a considerable number of studies (Table 2.2) can be found that focus on the evaluation of major factors that can influence customer buying behaviour. Most of these studies concluded that Expectation Confirmation Theory (ECT) has been used repeatedly, in particular since the emergence of online shopping in the mid-1990s. Additionally, most writers deeply depend on theories such as the Technology Acceptance Model (TAM) and the Theory of Planned Behaviour (TPB) (Cheung et al., 2005). Studies by Al-Qeisi



et al. (2014) and Toufaily et al. (2013) have argued that these models are still essential when it comes to studying online customer behaviour. In addition, several studies have used the Mehrabian and Russell (1974) S-O-R model in e-marketing. These studies showed that aspects of website design such as colour, text, font, music and background are important in attracting customers and in studying customer behaviour (Davis et al., 2008). The next sub-sections review the most distinguished theories that have been applied by online customer behaviour scholars in order to offer a general understanding of the dimensions and constructs used.

### 2.3.1 Expectation Confirmation Theory (ECT)

The Expectation Confirmation Theory (ECT), see Figure 2.1, was first introduced by Oliver (1980) and was initially adopted from the Cognitive Dissonance Theory (CDT) (Festinger, 1957). ECT has been extensively researched in the customer behaviour literature, and indicates that, when deciding to buy a product, customers will go through five major phases. First, they develop a primary expectation towards the product or service before buying it. Second, they use the product or service and form a perception about its performance. Third, they evaluate the actual performance of the product or service to compare it with their expectations and decide if their expectations are confirmed. Fourth, based on their confirmation level, which came from their expectations after the evaluation process, their satisfaction will be formed. Fifth, intention to repurchase or to continue using the product or service will be influenced by their satisfaction (Oliver, 1980). Consequently, from the explanation of the ECT, this theory was developed to clarify consumers' mind-sets towards repeating and continuing purchases. Additionally, it highlights consumer's satisfaction as a principle in the framework (Oghuma et al., 2016; Premkumar and Bhattacharjee, 2008).

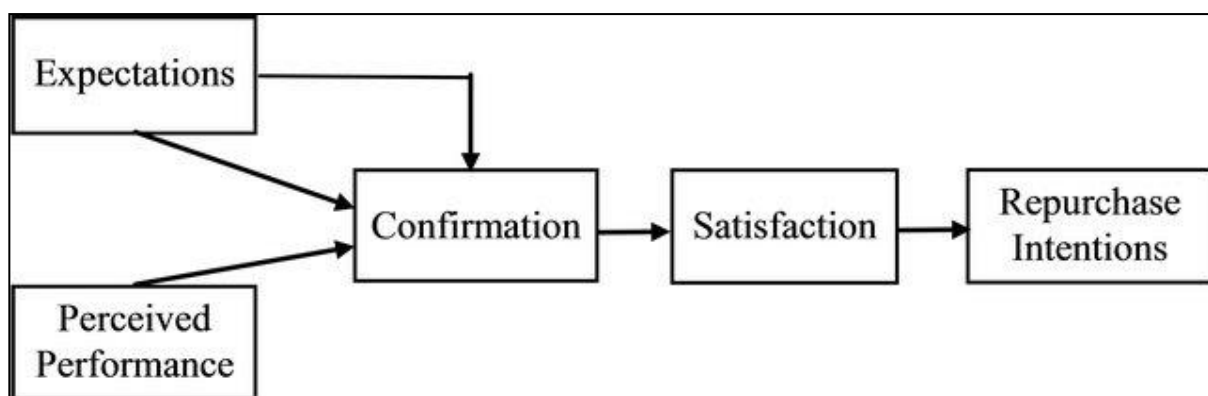


Figure 2.1 Expectation Confirmation Theory (ECT)

Source: Oliver (1980)

The ECT has been extensively used in online customer behaviour studies, especially for clarifying customer satisfaction and post-adoptive behaviour following their first-hand experience with a product (Cheung and Lee, 2005). For example, Bhattacharjee (2001b) has applied the ECT model in

many studies starting with banking users to describe the continued intention to purchase (Bhattacharjee, 2001a) and then online brokerage to describe the continued purchasing (Bhattacharjee, 2001b). In addition, more studies have used two theories, TAM and ECT, suggested by Premkumar and Bhattacharjee (2008) in order to explain the motivations behind long-term use of information technology. Premkumar and Bhattacharjee surveyed students to compare the two models individually as well as to compare them after integrating them as a new model. Hence, the ECT theory can be applied to measure online customers' satisfaction and intention to purchase (e.g. Bai et al., 2008; Premkumar and Bhattacharjee, 2008; Mills and Morrison, 2003).

### **2.3.2 Theory of Reasoned Action (TRA) and Limitations**

The Theory of Reasoned Action (TRA) was originated from previous attitude and behaviour theory by Ajzen and Fishbein (see Figure 2.2), the same authors who developed and improved the TRA (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). According to the TRA theory, a behavioural intention is the essential factor for an individual's behaviour. This means that an individual's intention to perform a behaviour is based on a combination of their attitude towards performing that behaviour and their subjective norms (Ajzen and Fishbein, 1980). After its introduction, TRA gained extensive attention from researchers within the customer behaviour field (Mishra et al., 2014; Sheppard et al., 1988).

Furthermore, the TRA theory argues that behavioural intention measures an individual's willingness to accomplish behaviour. While intention plays as a mediator to measure behaviour, an individual's attitude involves a person's beliefs regarding the results of acting out the behaviour and therefore evaluating these results. Subjective norm is the effect of the surrounding community environment on behaviour (Ajzen and Fishbein, 1980). TRA has been widely applied in many research studies in different areas such as limiting sun exposure, dieting, consuming genetically engineered foods and so on (e.g. Zhang et al., 2014; Hoffman et al., 1999; Sparks et al., 1995; Sejwacz et al., 1980). Many studies have combined the TRA model with other models in order to develop stronger, efficient and more effective measurements (Filieri and McLeay, 2014; Wixom and Todd, 2005; Dzewaltowski et al., 1990).

Since the last two decades, scholars have been using the TRA in the online purchase environment (Mishra et al., 2014; Dennis et al. 2009; Athiyaman, 2002). They have explained the TRA as the individual's intention to buy a product or service online; it also presents the individual's attitude and it is integrated with the individual's subjective norms.

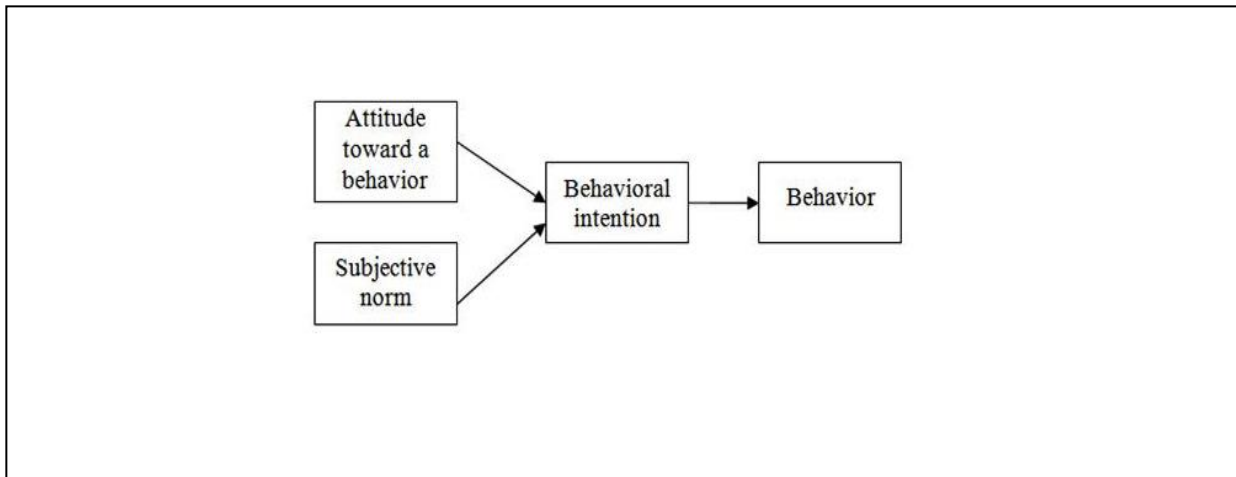


Figure 2.2 Theory of Reasoned Action (TRA)

Source: Ajzen and Fishbein (1980)

Figure 2.2 clearly shows that TRA assumes that the behaviour is under self-desire control. This theory cannot explain illogical decisions, repetitious action or unintended behaviour (Hale et al., 2002). Furthermore, if the intention measure does not match the behavioural measure in terms of action, objective, environment and time frame, this theory cannot expect a voluntary act (Sheppard et al., 1988).

### 2.3.3 Theory of Planned Behaviour (TPB) and Limitations

Ajzen, (1985) presented the Theory of Planned Behaviour (TPB), and also described the theory in his 1985 article based on the limitation acknowledged from the TRA (Ajzen, 1991) (see Figure 2.3). Ajzen (2006) further devoted a web page for demonstrating the theory. Moreover, he stated that the difference between TRA and TPB is perceived behavioural control, as an extra factor of intention and behaviour is included in the TPB. As mentioned previously in section 2.3.2, one of the major assumptions of the TRA theory is that individuals have self-desire control. It is important to note that the perceived behavioural control is considered to be unrelated and the TPB theory decreases the accuracy of the TRA theory.

According to the TPB theory, in order to guide human behaviour there are three kinds of considerations. The first two came from the TRA; they are: behavioural beliefs and normative beliefs; while the third is control beliefs, which is newly added in the TPB. The creation of a behavioural intention is directed by these three elements.

Many scholars such as Dennis et al. (2009) and Ajzen (2006) have identified perceived behavioural control (PBC), as the individual's belief to perform the behaviour based on their ability to perform that particular behaviour. The TPB webpage created by Ajzen (2006) contains a questionnaire

provided by the author himself for measuring this construct, for example, “*I am confident that I am able to purchase my product online*”.

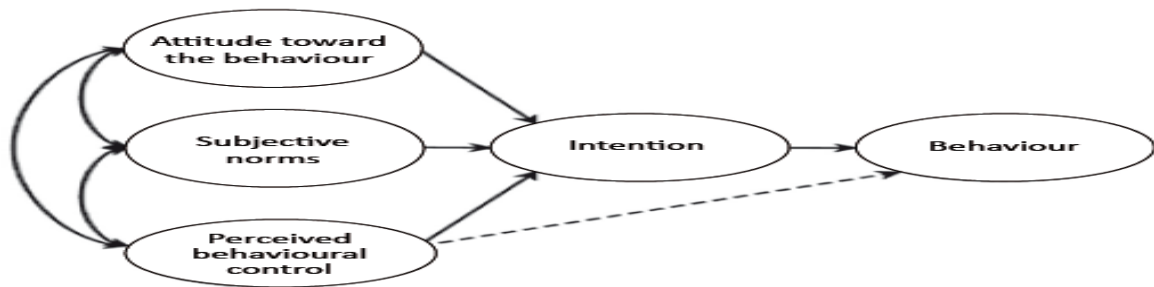


Figure 2.3 Theory of Planned Behaviour (TPB)

Source: Ajzen (1991)

One of the debated issues with the TPB is the speculation that PBC works coherently with Albert's (1986) concept of 'self-efficacy', which is the belief that an individual can perform a behaviour. Even Ajzen (1991) indicates that PBC and self-efficacy are identical. On the other hand, Armitage and Conner (2001) believe that control and self-efficacy are not identical. Later on, Ajzen (2002) reported some issues associated with PBC, where he recognised that there is a difference between self-efficacy and PBC. To avoid such misunderstandings, Ajzen (2002) recommended that perceived behavioural control should be read as perceived control over performance of behaviour. Further, Dzewaltowski et al. (1990) studied TRA, TPB and Social Cognitive Theory (SCT); after comparing them, the authors discovered that self-efficacy indeed does directly influence behaviour more than PBC. Finally, Eagly and Chaiken (1993) stated that TPB did not acknowledge other dimensions that might predict intentions and behaviours such as habits, perceived moral obligations and self-identity. Thus, the authors recommended additional studies that addressed other factors such as the ones mentioned above, in order to obtain a more accurate understanding of customer behaviour.

### 2.3.4 Technology Acceptance Model (TAM) and Limitations

According to Al-Qeisi et al. (2014) and Irani et al. (2009), the Technology Acceptance Model (TAM), developed by Davis (1989) is an extension to the TRA (see Figure 2.4), where the focus was on computer usage in order to explain an individual's acceptance of technology. Davis (1989) added two constructs to the model, 'perceived usefulness' (PU) and 'perceived ease of use' (PEOU), for explaining customers' intention and attitude when using a computer application. TAM is considered to be the most popular research model, which is mainly used in information systems and technology, for the purpose of identifying whether the information system is adopted by the users or not. According to Rauniar et al. (2014), El-Gohary (2012) and Park (2009), many studies have argued that TAM helps in determining the behaviour of the individuals in designing various information systems. This model mainly relies on two important factors, the Usefulness and Ease of Use (ibid). Usefulness can be defined in terms of using the specific application system that helps in improving the

performance of the job. Perceived Ease of Use is the level of a person's perception of the simplicity of operating a specific system (Davis, 1989). Nevertheless, since technology plays a critical role in terms of analysing the behaviour of individuals, thus TAM has been widely used by various researchers in order to identify the behavioural aspects of individuals.

In addition to its usefulness in understanding an individual's behaviour, TAM helps in examining the effect of the technology on various types of users and individuals, taking into account demographics, such as gender, ethnicity and age. Hence, in order to identify the nature of the individual concerning the use of technology, a new model has been designed, which is known as the Electronic Business Technology Acceptance Model (EBTA) (Park, 2009). According to this new model, the factors of the TAM are mainly affected by external variables such as social, cultural and political factors. Beside EBTA model, many other models have been designed to promote the use of technology among users, which have contributed to understanding customer behaviour when shopping online.

In other words, it can be said that the TAM acts as an information system theory that helps in examining the way the users are attracted towards the use of technology. This model also indicates that the new technologies that are being provided to the users are greatly affected by the decision of the individuals. TAM is depicted as the blueprint that helps in describing the acceptance of new technologies by customers; this model has also been used by various researchers for the purpose of identifying the use and recognition of social media and other social networking-based sites (Ronay and Egger, 2013). Furthermore, according to El-Gohary (2012), the TAM has been examined in many different technologies for more than two decades and has been recognised as an effective model in predicting and describing behaviour across many domains. Some examples of such studies are: Amaro and Duarte (2015), Hsu et al. (2014), Irani et al. (2009), Lu et al. (2009), Dembla et al. (2007), Pavlou and Fygenson (2006), Brown et al. (2002), Looi (2005) and Lederer et al. (2000). One of the main purposes of the TAM is to understand the nature of tourists and their intention to use social media sites for travel planning (Law et al., 2014; Ronay and Egger, 2013).

The TAM is significantly effective in analysing the behavioural aspect of individuals in relation to the use of various technologies. The main reason for implementing this model is that it helps in understanding what attracts customers towards the use of various technologies that play a crucial role in increasing online business. Since this model mainly relies on analysing the behaviour of the users, therefore it helps in the online booking of hotels. TAM is quite effective for the purpose of analysing the users' feelings towards online booking and the web content (Gretzel et al., 2015; Cantoni and Xiang, 2013). If the users are using a site more frequently, it indicates that it is a major source in attracting the customers towards purchasing activities.

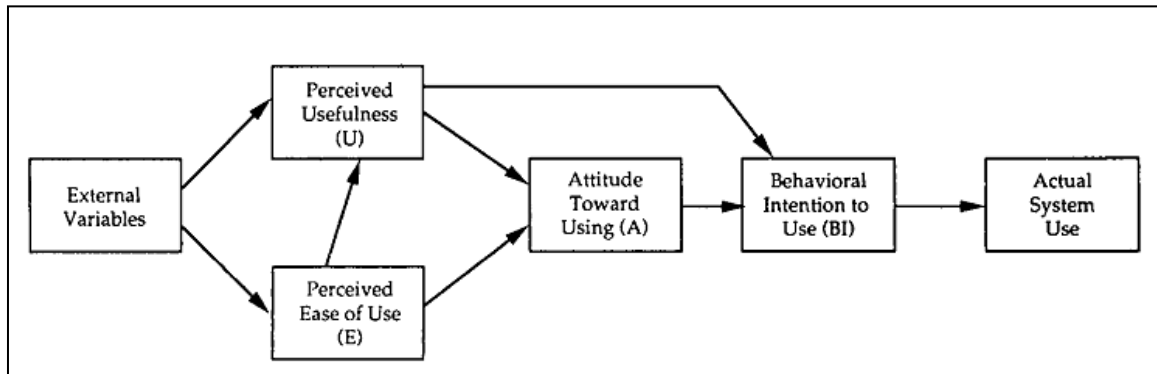


Figure 2.4 Technology Acceptance Model (TAM)

Source: Davis et al. (1989)

However, TAM has been subject to many criticisms; for instance, TAM was criticised for discounting social influence and the characteristics of individuals. That is why Perceived Ease of Use and Usefulness constructs are not enough to describe web users' motives (Ahn et al., 2007). According to Davis (1989), future technology acceptance studies should adopt other factors and show how these factors affect usefulness, ease of use and user acceptance. Table 2.1 presents a summary of the relevant studies on TAM Extensions in addition to several studies who adopted the TAM model.

**Table 2.1 Summary of Relevant Studies on Technology Acceptance Model (TAM) Extensions**

Model	Information	Result	Studies that Adopted the Model
TAM2	<ul style="list-style-type: none"> <li>TAM2 was introduced by Venkatesh and Davis (2000).</li> <li>The researchers conducted four longitudinal studies on four diverse systems during three periods.</li> <li>The model merges five constructs illuminating Perceived Usefulness (PU).</li> <li>The model mediates the association among Subjective Norms (SN) and Intentions in addition to SN and PU.</li> <li>In this model, voluntariness is posited as a moderating factor.</li> </ul>	<ul style="list-style-type: none"> <li>34%-52% of the variance in usage Intention and up to 60% of the variance in Perceived Usefulness.</li> <li>The model did not obtain considerable intention compared to the original TAM.</li> </ul>	<ul style="list-style-type: none"> <li>Ozag and Duguma (2004)</li> <li>Chismar and Wiley-Patton (2003)</li> <li>Hart and Porter (2004)</li> </ul>

TAM3	<ul style="list-style-type: none"> <li>• Introduced by Venkatesh and Bala (2008) by developing the previous work done by Venkatesh and Davis (2000) for investigating the elements of Perceived Ease of Use through conducting longitudinal field studies in four organisations.</li> <li>• Venkatesh (2000) builds on the anchoring and adjustment framing of human decision-making for developing the elements of perceived ease of use, which was then integrated into TAM2 and TAM3.</li> <li>• The centre of the model was employees' adoption and use of IT systems in organisations.</li> </ul>	<ul style="list-style-type: none"> <li>• At all times Perceived Usefulness was a robust predictor of behavioural intention.</li> <li>• Perceived Ease of Use was important for implementation, during the first two months, but not after.</li> </ul>	
UTAUT	<ul style="list-style-type: none"> <li>• This model is called the Unified Theory of Acceptance and Use of Technology (UTAUT), and was developed by Venkatesh and Davis (2000) and Venkateshet et al. (2003) after the announcement of TAM2, through longitudinal data studies in four organisations.</li> <li>• Eight models were integrated to clarify the technology acceptance behaviour: TAM by Davis (1989), TRA by Ajzen and Fishbein (1980), TPB by Ajzen (1985), Motivational Model (MM) by Davis, Bagozzi and Warshaw (1992) and Vallerand (1997), Combined TAM and TPB (C-TAM-TPB) by Taylor and Todd (1995), Model of PC Utilisation (MPCU) by Thompson, Higgins and Howell, (1991), Innovation Diffusion Theory (IDT) by Rogers (1995), Social Cognitive Theory (SCT) by Albert (1986).</li> <li>• These models were linked within-subjects.</li> </ul>	<ul style="list-style-type: none"> <li>• Significant support for UTA</li> <li>• Confirmed the strong moderating impacts of experience, voluntariness, gender and age as essential features of UTAUT.</li> <li>• This model was capable of accounting for 70% of the variance (Venkatesh et al., 2003).</li> </ul>	<ul style="list-style-type: none"> <li>• Wang and Yang (2005)</li> <li>• Li and Kishore (2006)</li> <li>• Carlsson et al. (2006)</li> <li>• Dwivedi et al. (2011)</li> <li>• Raaij and Schepers (2008)</li> </ul>
UTAUT2	<ul style="list-style-type: none"> <li>• Developed by Venkatesh et al. (2012) as an extension to the UTAUT.</li> <li>• This model was developed to include the consumer's point of view, through adding three new</li> </ul>		<ul style="list-style-type: none"> <li>• Escobar-Rodríguez and Carvajal-Trujillo (</li> </ul>

	constructs: hedonic motivation, price value and habit (Venkatesh et al., 2012)		2014)
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As mentioned in the above table, many scholars have adopted TAM in their studies. However, El-Gohary (2012) states that more studies should be conducted from the e-marketing prospective to investigate the TAM. The author also mentioned that, when applying the TAM to examine the adoption of e-marketing, it is necessary to add various factors to the model. These elements could cover economic factors (e.g. cost) and firm characteristics as well (e.g. company size).

### 2.3.5 Stimulus-Organism-Response (S-O-R)

Various studies (e.g. Pantano and Viassone, 2015; Gao and Bai, 2014; Ravens, 2013; Lee and Kozar, 2012; Jiang et al., 2010) have been conducted based on Mehrabian and Russell (1974) Stimulus-Organism-Response (S-O-R) model (see Figure 2.5) as one of the main academic frameworks to investigate the impact of website structures on online customer behaviour. The S-O-R model states that environmental cues, '*Stimuli*', play a motivational role that affects customers' rational and emotional reactions, and therefore customer behaviour. Motivations might appear in several layouts or setups such as a store atmosphere. Nevertheless, '*Organism*' signifies customers' rational and emotional schemes, where the rational system refers to how customers think and believe, while the emotional system refers to how customers feel and react. '*Response*' represents the outcome (Ainin et al., 2015; Lee and Kozar, 2012; Jiang et al., 2010). S-O-R is a model that mainly emphasises the behaviour of the stimuli and the customers in terms of obtaining better results.

According to this model, product diversity, website and the technology-based services are considered as the Stimuli, while the attitude and perceptions of the individuals are considered as the Organisms, i.e. customers (Mosteller et al., 2014; MacKinnon, 2008), and Response indicates the outcomes in terms of purchasing. The model also helps in determining the relationship between the stimulus and response through mediating mechanisms that are operating in the organisms. It is important to mention that mediating mechanism refers to the process that helps in analysing the way that organisms behave to the stimulus. S-O-R was considered by Ravens (2013), as it is the first theory that has been developed as an association between the environment and behaviour.

In addition, the S-O-R model is mainly applied due to many reasons, such as its role in analysing the customers' indirect influences and the stimulus that helps in achieving the outcome; its role in the academic research (Pantano and Viassone, 2015; Ravens, 2013); and for the advantages it offers in designing the theoretical framework related to different models of marketing.



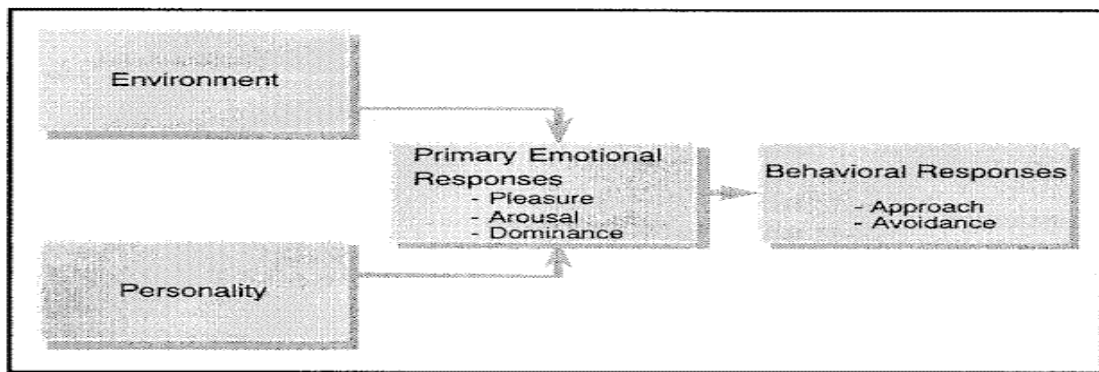


Figure 2.5 Stimulus-Organism-Response Model (S-O-R)

Source: Mehrabian and Russell (1974)

It is important to mention that one of the advantages of using the S-O-R model in this study is to provide an academically proven way of examining aspects of website design such as Ease of Use, Usefulness, Navigation, Search Engine, Web Content, System Quality, Page Response, Visual Appeal, Enjoyability and Pop-up Ads and Banner Ads, as environmental motivations. Another benefit is enabling analysis of the way in which rational and emotional outcomes (e-satisfaction) of website design influence customers to generate eWOM and purchase decisions.

### 2.3.6 Highly Accepted and Used Web Quality Scales and Models

The purpose of this section is to support this PhD study in taking the most essential and relevant dimensions/factors from previous scales and models in order to build the proposed framework for this research and to check the methods used.

- *Service Quality Scale (SERVQUAL):*

Parasuraman et al. (1985) introduced this classical model. It is considered as one of the first models to focus on traditional service and retail institutes' quality of service. The same scholars have investigated quality in services and used four different service businesses to create a service quality model. The original model focused on 10 dimensions; the same researchers later merged these 10 factors into 5, which are: reliability, responsiveness, assurance, empathy and tangibles, and called it the SERVQUAL instrument (Parasuraman et al., 1988). This model was influenced by the ECT in order to measure the gap between what is anticipated and what is provided from a service provider. This model gained a great deal of attention from researchers in many different environments such as IS contexts (Kettinger and Lee, 1994; Pitt et al., 1995). Researchers applied this model to the electronic setting. For example, Iwaarden et al. (2003) converted the 5 dimensions for the online setting. First, website appearance, search options, navigation and general web structures (Tangibles). Second, credibility of the service offered and the organisation performance of the service

(Reliability). Third, the willingness to help consumers and provide a quick service (Responsiveness). Fourth, trust in security and privacy (Assurance). Finally, caring (Empathy).

- *Site Quality (SITEQUAL):*

Yoo and Donthu (2001) evaluated the attributes of an online retailer's website from customers' perceptions of online quality. Based on this they developed 9 scale items that contain 4 factors, ease of use, aesthetic design, processing speed and security, and called the instrument SITEQUAL. Yoo and Donthu surveyed marketing students in the US by asking them to choose three shopping websites and evaluate each one. The scale verified that reliability and validity were appropriate in every aspect. This scale looked at the website quality definition from the customer perspective and not from the academic or technical references' definition. The researchers recommended that SITEQUAL should not be seen as a final measure; however, it could be regarded as a starting measure. In addition, they recommended that, since this research focuses on evaluating consumer goods sites only, future researchers should focus on different types of online transactions.

- *Electronic Service Quality (e-SERVQUAL):*

Zeithaml and Parasuraman, who were members of the team that proposed the SERVQUAL instrument, introduced another instrument that focused on the electronic service quality by using their previous service quality scale and called it e-SERVQUAL. Zeithaml et al. (2000) identified e-SERVQUAL as the level to which a website eases shopping efficiency, buying and delivering (online environment) products and services to customers. The authors acknowledged 11 items, access, ease of navigation, efficiency, flexibility, reliability, personalisation, security/privacy, responsiveness, assurance/trust, site aesthetics, and price knowledge, to clarify the definition of e-SERVQUAL. This model is beneficial because it contains both pre- and post-website service aspects (Zeithaml et al., 2000).

- *Web Quality (WebQual) by Barnes & Vidgen, and by Lioacono:*

Barnes and Vidgen (2000) conducted a study by using WebQual. In their study, the scholars proposed a model to measure website quality. They used the Quality Function Deployment (QFD) framework (Bossert, 1991). In addition, they participated in a workshop to explain website qualities (Barnes and Vidgen, 2000). The researchers used the new model to evaluate the quality of four UK business schools' websites. After evaluating these websites, the researchers introduced a new WebQual model called WebQual 2.0 to examine and evaluate online bookshops (Barnes and Vidgen, 2001a) and small firms (Barnes and Vidgen, 2001b). WebQual 3.0 was introduced for evaluating and examining online housing auctions (Barnes

and Vidgen 2001c). WebQual 4.0 was introduced to examine three online bookstores: Amazon, Bertelsmann Online (BOL) and the Internet Bookstore (IBS) (Barnes and Vidgen, 2002). The instrument for measuring web quality in this model has 3 factors: usability, information quality and service interaction quality. According to the developers Barnes and Vidgen (2002), WebQual 4.0 is best used to provide a benchmark against competitor organisations. In addition, this model can be used to evaluate the effect of e-commerce activities.

Loiacono et al. (2002) used another model WebQual. They publicly announced this model in conference papers and comprehensively tested it empirically in a journal paper (Loiacono et al., 2007). As starting points, the instrument adopted two theoretical models: The Theory of Reasoned Action (TRA) and the Technology Acceptance Model (TAM). Moreover, for developing the scale, interviews with web designers and visitors were conducted. Nonetheless, for refining the constructs, two consecutive samples were used. Finally, validity of the final instrument was examined by using a third sample of web and online users. Loiacono et al. (2002) model contains 12 items: informational fit-to-disk, interactivity, trust, response time, ease of understanding, intuitive operations, visual appeal, innovativeness, flow/emotional appeal, integrated communication, business processes and substitutability. Parasuraman et al. (2005) criticised that the main purpose of the scale is to produce information for website designers rather than to measure service quality as experienced by customers. Additionally, this scale only considers students visiting websites rather than evaluating the experiences of actual purchasers.

- *Electronic Retail Quality (eTailQ):*

Wolfenbarger and Gilly (2003) conducted online and offline focus group studies, a sorting task and an online survey of a customer panel in order to develop a valid scale to measure electronic retailers' quality. The study focused on websites that sell and deliver products to their customers. The researchers stated that 4 elements can influence customer perception of satisfaction and quality: website design, fulfilment/reliability, privacy/security and customer service. The results showed that security/privacy and reliability/fulfilment have robust validity while website design and customer service are less internally reliable and distinct (Parasuraman et al., 2005).

- *Electronic Service Quality (E-S-QUAL):*

E-S-QUAL was developed by Parasuraman and Zeithaml, the same authors of SERVQUAL and e-SERVQUAL, who continued their critical review of websites' service quality (Zeithaml et al., 2002). This instrument is used to measure e-service quality in the online shopping

environment (Parasuraman et al., 2005). This model includes multiple items. Two different measurement scales are required to capture electronic service quality; one is the E-S-QUAL scale, which contains a 22-item scale of four dimensions: efficiency, fulfilment, system availability and privacy. The second scale is E-RecS-QUAL; this is to measure the quality of the recovery service provided by websites. This is only related to customers who had no routine encounters with the sites, and this scale contains 11 items in three dimensions: responsiveness, compensation and contact (Parasuraman et al., 2005). This comprehensive research afforded the most comprehensive scale on online service quality, which is why this scale has gained a good reputation and has been used by many scholars, such as Bauer et al. (2006) and Nusair and Kandempully (2008). However, most of the research on this phase concentrated on websites that sell physical goods. Consequently, the authors themselves recommended evaluating the scales in a pure-service sites context (Parasuraman et al., 2005).

- *Transaction process-based scale for measuring e-Service Quality (eTransQual):*

Bauer et al. (2006) declared that current e-service quality scales did not take hedonic quality facets into account, which is why the authors have developed a new scale and called it a transaction process-based approach for defining the factors that affect online shopping service quality. The same authors classified four elements from the traditional offline transactions: information, agreement, fulfilment and after sales; they then transferred them to the online transaction by using a focus group. The authors studied hedonic and utilitarian e-service quality factors in addition to after-sales support. The same authors randomly spread a questionnaire via a German market research organisation to choose participants from its online panel. This study only used individuals who had already made an online purchase, in order to evaluate all online service elements. Exploratory and confirmatory factor analysis was conducted to classify 5 different quality dimensions: design, enjoyment, process, reliability and responsiveness. In addition, the association between the eTransQual quality and the dependent variable were examined, for example, the website's overall service quality, perceived value and customer satisfaction. A comparison between the eTransQual and other scales such as eTailQ (Wolfenbarger and Gilly, 2003) and E-S-Qual (Parasuraman et al., 2005) was performed. The results from the study showed that hedonic aspects are very important for evaluating online shopping experiences, and the relationship to satisfaction was weak.

- *More website Quality Studies:*

Aladwani and Palvia (2002) established a website quality instrument from the user's perspective. The authors recognised that prior research on web quality concentrates only on subsets of web quality where it is related to website designers rather than to website users.

The scholars carried out two-phased examinations that enclosed 25-item instruments into four measurements of perceived web quality: technical adequacy, specific content, content quality and appearance. In the first study, specific content and content quality were merged into one dimension called Web Content. However, the authors found that these two elements cannot be merged as one-dimensional, but comprises the two dimensions. First, specific content consisted of five items, which are related to discovering particular details about products/services, customer support and other important information. Second, content quality contained five factors related to such attributes as information usefulness, completeness and accuracy. This model clarified a slightly high percentage of the variance in perceived web quality and can be accurate; also, it can be used to assess web quality.

Aladwani (2006) acknowledged a gap from the previous studies: that there is a shortage of research examining the relationship between website quality and adoption. The author showed that studies of website quality are frequently focused on issues related to web design or web usability elements, while website adoption studies are focused on issues relevant to how users accept, adopt and transact online business. In other words, they are focused on online customer behaviour. The author extended the work conducted by Aladwani and Palvia (2002), to examine the effect of the website quality dimensions (technical, general content, specific content and appearance) on online customers' attitudes and purchasing intentions. In addition, the roots of the model have been adopted from Davis's Technology Acceptance Model (Davis et al., 1989). The model by Aladwani (2006) hypothesised that these four web quality dimensions have a direct influence on attitudes and intention to purchase. In addition, the same model acknowledged the straight link between purchase intentions and the actual purchase from the website. However, the research conducted by Aladwani (2006) did not examine this relationship because it asked students to look for a book online from a famous bookstore website and requested them to stop at the last step, which is purchasing or buying the product. The findings of the study showed that technical quality as a web quality dimension is the only factor that directly and indirectly influences users' purchasing behaviour within their attitudes towards the website. Additionally, specific content quality and appearance quality influence and affect website attitudes more than technical quality and general content quality. An example was used to clarify technical quality: security, ease of navigation, search facilities, site availability, valid links, personalisation or customisation, speed of page loading, interactivity and ease of access. In addition, an example for appearance quality: attractiveness, organisation, proper use of fonts, colours and proper use of multimedia (Aladwani 2006).

Lee and Lin (2005) analysed the association between e-service quality and overall service quality, satisfaction and intentions to purchase. They used the SERVQUAL instrument and other prior scales that adapted it to the web environment to evaluate the e-service quality. Website design, responsiveness, reliability, trust and customisation were incorporated into the scale as dimensions of e-service quality. The authors asked students to look at an online bookstore, then choose a book and add it to the shopping cart. They then asked the students to provide payment and delivery information to simulate the buying process. Afterwards, the students were asked to complete a survey. The results of this study stated that website design, reliability, responsiveness and trust impact overall service quality and online users' satisfaction. Moreover, this study discovered that there is a considerable link between satisfaction and intention to purchase. However, customisation is not significantly linked to overall service quality and satisfaction.

### **2.4 Summary of Customer Behaviour Theories and Web Quality Models**

It can be observed from the existing literature that many theories of customer behaviour and website quality scales have been revised and evaluated and that researchers have investigated online customer behaviour relating to Internet usage from different perspectives and in different areas. Different scholars have looked at customer behaviour studies and debated about the features of effective design and layout. Moreover, from the previous research, it is clear that many of the constructs used in different models from different areas have common characteristics. For instance, the term '*ease of use*' has been used in both TAM theory and SITEQUAL (Yoo and Donthu, 2001); however, researchers mentioned it as '*ease of navigation*' in e-SERVQUAL (Zeithaml et al., 2000) while others recognised it as '*ease of understanding*' in WebQual (Loiacono et al., 2002). In addition, some constructs have been used and described by the researchers without any changes to the phenomena, such as usability, reliability and efficiency. Other constructs may not have the same meaning, but in most cases these constructs show parallel ideas in different areas, for example: privacy, security and trust. Hence, from the literature it can be clearly seen that researchers have utilised and focused on some website dimensions such as usability, web quality and trust as well as information quality.

Finally, from the literature it can be clearly observed and identified that researchers into online customer behaviour and website quality used products, books, films and restaurants as examples of traditional e-shopping sites. Studying a specific company/organisation or product is recommended by various scholars as an opportunity for prospective studies (Kim et al., 2009; Qureshi et al., 2009; Nusair and Kandampully, 2008; Kim and Stoel, 2004; Aladwani and Palvia, 2002) Therefore, this current study will focus on third-party hotel websites.

## 2.5 Understanding eWOM for Influencing Customer Purchase Decisions

There are two kinds of eWOM: external eWOM, presented by third-party ‘infomediaries’, and internal eWOM, presented by retailers (Gu et al., 2012). Zhang et al. (2010) stressed that eWOM is one of the most influential channels for providing information and reviews to online customers. The first stage of the buying process is ‘*need recognition*’, followed by ‘*information search*’. It is important to note that eWOM is targeted at customers in the pre-purchase information search stage of the buying process. In the information search stage, eWOM helps customers gather information that will help them make a purchase decision. Studies by Filieri and McLeay (2014) and Gretzel and Yoo (2008) report that many travellers use the recommendations of other customers as evidence and a tool for helping them decide on their journeys and travels. Many studies have found that the recommendations of other customers exerted more influence on product choice than did the reviews from experts or firm-related advisors ( Kim et al., 2015; Xie et al., 2014; Zhu and Zhang, 2010; Chang and Chen, 2008; Hung and Li, 2007). For example, Yang and Mai (2010) presented studies to show that customers rely on reviews given by other customers, especially in the case of experience goods (e.g. booking a hotel). Thus, customers trust user-generated online reviews more than they do traditional informants (Matute et al., 2016; Hu et al., 2012).

In addition to the previous studies, other studies have indicated that eWOM (e.g. online reviews) has a strong impact on hotel bookings and perceived trust (Matute et al., 2016; Hernandez-Mendez et al., 2015; Xie et al., 2014; Kim et al., 2011; Sparks and Browning, 2011; Yang and Mai, 2010). Since nowadays most of the tourists around the world book hotels and flights through websites, online reviews are becoming more useful for selecting the best hotel, and help customers in making the right purchase decisions. Furthermore, Papathanassis and Knolle (2011) state that online customer reviews can reduce both the perceived risk of booking a holiday and the shortage of interpersonal communication.

## 2.6 Relevant Studies on Electronic Word of Mouth (eWOM)

According to Floh et al. (2013), most studies on online behaviour have shown that online reviews and high average ratings positively influence hotel bookings, sales and purchase intentions. The above authors studied the effect of User-Generated (UG) online reviews (positive and negative) on shopping behaviour and found that average to strong online reviews lead to a significant change in online shopping habit and behaviour, while negative reviews have no effect.

In addition, Gu et al. (2012) examined the influence of multiple sources of customer-generated product reviews where trust is of less concern. Furthermore, Ladhari and Michaud (2015), Chen et al. (2015), Cantallops and Salvi (2014), Papathanassis and Knolle (2011), Godes and Mayzlin (2004),

Bickart and Schindler (2001) and Herr et al. (1991) found that UG reviews are generally more trustworthy than traditional channels including advertisements posted by companies.

Other studies have examined the effect of eWOM in terms of valence (Roy et al., 2017; Daugherty and Hoffman, 2014; Lee and Youn, 2009; Park and Lee, 2009; Tsang and Prendergast, 2009), credibility (Hsu et al., 2009; Cheung et al., 2009) and the number of reviews (Cantalops and Salvi, 2014; Park et al., 2007) on customer purchase intentions. The studies also investigated the number and the rating of online reviews on customers' online shopping behaviour (Floyd et al., 2014; Zhu and Zhang, 2010). More specifically, several studies examined two-sided reviews and argued that reviews that have both positive and negative aspects increase the level of credibility in customer communication (Coker et al., 2015; Eisend, 2006; Hunt and Smith, 1987). Some studies, however, showed that negative eWOM had more weight than positive eWOM and that it might change customer behaviour (Rim and Song, 2016; Lee and Koo, 2015; Skpwrnski and Carlston, 1989; Buttle, 1998; Arndt, 1967). In contrast, other studies show that where strong ratings are more effective and beneficial than middle ratings is in terms of their impact on sales (Hong and Pavlou, 2014; Forman et al., 2008; Pavlou and Dimoka, 2006). Others showed that the number of reviews (Mayzlin et al., 2014; Chevalier and Mayzlin, 2006) and the variance of reviews (Sun, 2012) affect product sales and customer decisions. For example, Jang et al. (2012) examined the effect of product reviews on customer purchase decisions and found that customers use reviews at the consideration stage, and therefore concluded that firms should make online reviews clear and available from the early stages. Consequently, most of the previous and older studies considered two dimensions of eWOM – valence and volume – and these have been examined in several studies (Kim et al., 2015; Duan et al., 2008; Liu, 2006).

As mentioned above, several studies have indicated that eWOM significantly influences product sales and customers' purchase decisions (Cork and Eddy, 2017; Yen and Tang, 2015; Lee and Koo, 2015; Daugherty and Hoffman, 2014; Cantalops and Salvi, 2014; Hong and Pavlou, 2014; Zhu and Zhang 2010; Duan et al., 2008; Forman et al., 2008; Dellarocas et al., 2007; Clemons et al., 2006; Liu, 2006; Chen et al., 2003; Godes and Mayzlin, 2004; Chatterjee, 2001) and that customer reviews can have a positive effect on sales (Ladhari and Michaud, 2015; Chen et al., 2008; Chevalier and Mayzlin 2006; Ghose and Ipeiritis, 2006). Some studies have argued that eWOM or online user reviews have a significant effect on sales (Xie et al., 2014; Chen et al., 2004), while others have argued the opposite (Liang et al., 2015; Godes et al., 2006). Scholars have analysed further factors and shown that reviews from customers who did not reveal their identity had no effect on sales (Marchand et al., 2017; Banerjee et al., 2017; Forman et al., 2008; Hu et al., 2008), whereas censored or manipulated reviews do influence product sales (Awad and Zhang, 2007). In addition, several studies have examined the influence of eWOM on product sales and customer decision-making with respect to purchasing films (Duan et al., 2008; Liu, 2006) and on the volume of blogs on Amazon (Gruhl et al., 2005). Other



studies have indicated that positive online review ratings affect film sales (Plotkina and Munzel, 2016; Jacobsen, 2015; Reinstein and Snyder, 2005; Sawhney and Eliashberg, 1996). For example, Liu (2006) examined the impact of eWOM on film sales and found that review volume is associated with film sales while review valence is not. Duan et al. (2008) investigated the effect of online user reviews on films and found that the rating of online reviews has no effect on film sales, while online user reviews content slightly affect customer purchase decisions. In another example, a study by Dellarocas et al. (2007) found that online ratings increase film sales.

Previous studies have clearly confirmed the positive relationship between the quantity of online reviews and their effect on product sales (King et al., 2014; Filieri and McLeay, 2014; Liu, 2006; Godes and Mayzlin, 2004; McFadden and Train, 1996). For example, Chevalier and Mayzlin (2006) reported the impact of online reviews on book sales at Amazon.com and Barnesandnoble.com, and found that an increase in ratings and volumes of positive reviews led to improved book sales. Furthermore, Ye et al. (2009) showed that online reviews have a positive impact on booking hotels. Zhang et al. (2013) investigated the effect of online user reviews on camera sales and found that the characteristics and features of the camera – such as size, the number of pixels, and price – have a significant effect on camera sales. In addition, the same authors found that online review ratings and the number of online reviews are correlated with future sales. In general, studies have verified the fact that online user reviews have a significant impact on sales of experience goods (Mudambi and Schuff, 2010; Ye et al., 2009; Huang et al., 2009; Duan et al., 2008; Chevalier and Mayzlin, 2006; Clemons et al., 2006). In other words, the impact of online customer reviews on experience goods has been extensively studied and it is widely accepted that online customer reviews can help boost the sales of such goods. In slight contrast to this, Chen and Huang (2013) uncovered a positive relationship between the volume of eWOM and product sales, and stated that the relationship between eWOM valence and product sales can be mixed.

Some studies have taken other aspects into account. Cheema and Kaikati (2010), for example, examined the psychosocial cost associated with eWOM, where previous research studied the benefits of eWOM (Sundaram et al., 1998). Leskovec et al. (2007) examined the effect of eWOM on the customer choice process. Another study, by Ye et al. (2009), suggested that the content of eWOM affects the number of hotel bookings. Moreover, Bronner and de Hoog (2011) investigated the customers who post online reviews and why they post reviews in the tourism sector. Significant studies have inspected the incentives for seeking information or posting information, such as Huang et al. (2007) and Bonaccorsi and Rossi (2006). Likewise, Schindler and Bickart (2005) examined the motivations for reading eWOM. In addition, Hu et al. (2012) tested how customers respond to manipulated online reviews through investigating the writing style, rating and sentiments expressed in the reviews. Additionally, Xiang and Gretzel (2010) examined the effect of social media and multimedia sharing of travel information (the posting of videos, photos, and so on) on the Lonely

Planet and IgoUgo sites and its impact on decision-making for travel. Huang et al., (2011) investigated how characteristics of eWOM such as quality, authenticity, authority and interestingness influence customers' diffusion and re-sending intention because eWOM is considered as one of the marketing activities. See Table 2.2, which presents a summary of the relevant eWOM studies, which will be use in chapter 3 in order to accomplish the conceptual framework for this study.

**Table 2.2 Summary of the Relevant Electronic Word of Mouth (eWOM) Studies**

<b>Author (s)</b>	<b>Research Aims</b>	<b>Focus of the Study</b>	<b>Sample</b>	<b>Methodology</b>	<b>Findings</b>
<b>Floh et al. (2013)</b>	The asymmetric effects of open-ended, user-created reviews surrounding consumer shopping behaviours on willingness to pay, intention to purchase and intention to recommend.	Book/Hotel/ Footwear	818	Experiment/ Quantitative	Impact on positive strong and positive medium reviews. No impact for negative views.
<b>Zhang et al. (2013)</b>	The effects of online users' reviews on camera sales.	Digital Camera	Two studies, study one: data from 1,292 cameras and 63,121 online reviews, and study two: 428 products	Secondary/ Qualitative	Sales are impacted by price, product properties and online reviews (study 1). Moreover, future sales are impacted by reviewing sales figures, price changes and average online review (study 2).
<b>Chen and Huang (2013)</b>	Investigating the variables that influence the online reviewers' behaviour.	Books	4,240 reviewers who posted 51,758 reviews	Secondary/ Qualitative	Review comments, review ratings and helpful votes are associated with review frequency and continuity. In addition, the length of the review also is positively influenced with review frequency, but negatively linked with review continuity.

<b>Kim and Gupta (2012)</b>	The impacts of emotional eWOM expressions on product evaluation.	Laptop	Two studies (study one 129, study two 143)	Experiment/ Quantitative	Within a single negative review, negative emotional expressions are likely to reduce the informative value of the view; positive emotional expressions within a single positive review are not considered influential on the product assessments of consumers.
<b>Gu et al. (2012)</b>	The impact of external word of mouth sources on retailer sales of high-involvement products.	Digital Cameras	148	Secondary/ Qualitative	Relationship between company-generated reviews (WOM), which have little effect on sales, and customer-generated reviews (WOM), which can notably impact sales.
<b>Jang et al. (2012)</b>	How consumers use product reviews in the purchase decision process and the impact of the reviews on quality perception.	Hotels	771	Experiment/ Quantitative	Product reviews are considered by the consumer mainly during the consideration phase and less during the choosing phase. Moreover, quality-based customer reviews positively affected the consumer when comparing two competitive products. Based on the reviews, customers are able to perceive the monetary value of a product.

<b>Hu et al. (2012)</b>	Analysis of ratings, readability and sentiments of manipulated online reviews.	Books	4,490 books, with 610,713 online reviews/Amazon.com	Secondary/Qualitative	It was found that about 10.3% of product reviews online consist of some form of manipulation. However, customers can only detect the manipulation through the ratings and not through emotions.
<b>Rose et al. (2012)</b>	To develop a framework that investigates online customer experience in e-retailing, utilising international sampling.	Online Shopping	220	Experiment/Quantitative	Operational measures were created by the researchers of such variables, in addition to OCE's affective and cognitive elements.
<b>Bronner and de Hoog (2011)</b>	The main factors that drive a consumer to post online reviews, why they post, where they post and what they post.	Rating websites for hotels	3,176	Experiment/Quantitative	The results of this study show that the site selected for the publishing of a review is affected, first, by why each consumer decides to post a review, and then by what information the individual chooses to post to the public.
<b>Huang et al. (2011)</b>	Investigating the critical role of WOM information and how it generates the ripple effect.	Digital Camera/Mobile Phone Devices/Toothpaste/Pearl Powder	210	Experiment/Quantitative	The examined eWOM features (authenticity, authority and quality) are positively related to generating the resenders' effect (ripple effect).
<b>Papathanassis and Knolle (2011)</b>	Exploring the adoption and processing of online holiday reviews.	Tourism	22 sessions were conducted in 2007	Secondary/Qualitative	Online reviews play a secondary role in the holiday selection process.

<b>Sparks and Browning (2011)</b>	The impact of online reviews on hotel booking intentions and perception of trust.	Hotel	554	Experiment/ Quantitative	Early negative information can have more influence on customers; positive reviews and high numerical rating can positively impact consumer behaviour. Easy-to-process information is important when booking a hotel online. Trust is formed when positive reviews are directed towards interpersonal services.
<b>Ye et al. (2011)</b>	The influence of user-generated content on traveller behaviour.	Hotel	N/A	N/A	When traveller reviews were increased by 10%, it boosted online booking by 5%.
<b>Cheema and Kaikati (2010)</b>	The effect of need for uniqueness on word of mouth.	Computer and Mattress/Footwear/Apple iPhone or Apple Television/Confectionery (candy bar)	689	Experiment/ Quantitative	Mixed results depending on the product.
<b>Mudambi and Schuff (2010)</b>	Investigating what makes a helpful online review based on a product type.	MP3 Player, Music CD, PC Video Games, Mobile Phone Device, Digital Camera and Laser Printer	1,587 reviews/ Amazon.com	Secondary/ Qualitative	The product type and the level of review can impact the review's perceived value product.
<b>Xiang and Gretzel (2010)</b>	Investigating the role of social media in online travel information search.	Tourism	Urban destinations in nine US cities, ranging from large to small in terms of volume of visitation,	Secondary/ Qualitative	Search engines are likely to steer travellers towards social media platforms. This research further supports the view that social media

			population size		is fundamental in the context of online tourism.
<b>Zhang et al. (2010)</b>	The impact of eWOM on the online popularity of restaurants.	Restaurants	1,242	Secondary/Qualitative	There is a positive relation between a restaurant's online popularity and consumer-created ratings relating to food quality, restaurant service and environment.
<b>Zhu and Zhang (2010)</b>	Impact of online consumer reviews on the rating average.	Games and Consoles	3,330	Secondary/Qualitative	Online reviews are more considered by experienced consumers and also are relevant in the case of less popular games.
<b>Park et al. (2009)</b>	The effect of gender and product categories on consumer online information search.	Book/School	440	Experiment/Quantitative	Females are more likely to be thorough in their evaluations than males when shopping online.
<b>Ye et al. (2009)</b>	The impact of online user reviews on hotel room sales.	Hotel	3,625	Secondary/Qualitative	Association observed between hotel performance and online reviews
<b>Duan et al. (2008)</b>	Examining the individual elements associated with eWOM.	Movies	71 movies	Secondary/Qualitative	The online reviews have an impact on box office sales.

It can therefore be observed from the above table that, most research on eWOM has concentrated on the effect of valance, volume, rating and the number of reviews on customer purchase intention, customer behaviour and product sales for films, hotels and books. However, there appears to be a limited number of studies on the effect of the website atmosphere or environment on generating eWOM in the tourism sector. In other words, as indicated above in this section and from table 2.2, several studies have examined the antecedents and impact of eWOM activity, but few researchers have explored how the virtual environment contributes to generating customer eWOM communication's.

## 2.7 Electronic Word of Mouth (eWOM) and Social Media in Saudi Arabia

It has been argued that the increased use of and the growth in online social networks such as Facebook and Twitter in Saudi Arabia has contributed to raising the significance of the potential impact of eWOM on customer loyalty (Almutairi and Bennett, 2016; Alballaa and Mirza, 2013). According to Almana and Mirza (2013), a number of recent studies have evaluated the impact of eWOM on online purchasing decisions of Saudi Arabian customers. While it has been widely documented that Saudi Internet consumers are very much influenced by eWOM (Saleh, 2016; Sohail and Al-Gwaiz, 2010), the processes that contribute to customers' decision-making have been rarely researched, and therefore this study will assist in filling such a gap.

Nevertheless, a number of studies on social media suggest that increasing numbers of businesses are using social media in Saudi Arabia (Al-Nsour, 2017; Alhidari et al., 2015; Jalilvand et al., 2012; Sohail and Al-Gwaiz, 2010). In particular, it is suggested that many organisations are adopting social software platforms for the purpose of better understanding their customers' needs and to engage them in their business process, as opposed to the traditional marketing tools used in the past (Jalilvand and Samiei, 2012). For most Saudi Arabian companies, the new revolution of eWOM communication is providing an effective marketing tool to attract new customers. The arguments presented by Almana and Mirza (2013) are that social media does not only help in attracting customers, but also can influence customers' decisions via spreading positive word of mouth. In Saudi Arabia, a review of previous research indicated a significant increase (Facebook – 48% in 2009 to 86% in 2012, followed by Twitter – 43% in 2009 to 84% in 2012, followed by LinkedIn – 39% in 2009 to 72% in 2012, followed by YouTube – 26% in 2009 to 69% in 2012) in the presence of various marketing companies as customer engagement through social media (ibid). These indicators/signs suggest the presence and the use of social media by organisations to create meaningful engagement with customers. However, one of the challenges for local companies is in establishing methods for measuring customers' responses and to analyse them (Alballaa and Mirza, 2013). This was confirmed by the Social Clinic (2015, p. 34), which highlights the increase in social media numbers and stressed that:

*“Facebook’s mobile users have increased more than 150%, Saudi’s LinkedIn users have grown 30% since January 2012, and Twitter penetration keeps breaking records, placing Saudi on top Twitter user penetration per Internet capita. Saudi’s universities and Saudi based organizations dominate LinkedIn’s top 5 lists in the region and with no doubt, Saudi Arabia has the highest number of LinkedIn users in the region. The Arabic language is still the most used language on social networks nationwide, and Saudi tweets have grown 300% since last year, reaching an average of 150 million tweets/ month”.*

This suggests that social media has unsurprisingly grown massively in 2013 and this growth has had a direct implication on its usage in Saudi Arabia.

In addition, the study of social media in Saudi Arabia, eWOM in particular, has been applied and researched across many sectors, including education, banking, retail and even tourism. For instances, Albarq (2014) studied the impact of eWOM on the tourism industry by focusing on the empirical and theoretical evidence regarding the causal eWOM relationships between tourists' attitudes towards specific destinations and actual intention to travel. In addition, Al-Khalifa and Garcia (2013) examined the roles of social media in higher education and its usage in different universities/colleges, including the policies formed by the Saudi government in using it. The same authors also questioned the state of social media in the country's top universities, as well as the barriers that exist in some universities to integrate this kind of technology, and the solutions that could overcome those barriers. Ezzi et al. (2014) argued that studies have been labelled as eWOM within the '*connected generation*'. This study, among many others, provides evidence that social media in Saudi Arabia is now being taken seriously in most of the sectors. Sohail and Al-Gwaiz (2013) also examined the impact of online reviews in Saudi Arabian oil industries. Hence, it could be argued that eWOM is not only limited to retail and traditional industries, but also areas that were previously expected to have little involvement in social media.

### **2.8 The Effects of Web Design on Purchase Decisions with Respect to Hotel Agencies**

Several e-retailers are concerned of their websites' designs (Ladhari and Michaud, 2015; Jiang et al., 2010) and are exploring better ways in attracting customers and developing their virtual operations/ website functions (Tsao et al., 2015; Luo et al., 2012). According to Lee and Kozar (2009), customers preferences in terms of online shopping are similar to those for offline shopping. In the case of offline shopping, customers develop a preference for a certain ambiance of a shop. Furthermore, in the case of online shopping, customers develop their preference after navigating, looking at the website design and comparing it with other sites. Similarly, almost half of online surfers pay more attention to web design than to web content when visiting a website (Hausman and Siekpe, 2009). The effects of web design on purchase decisions with respect to hotel agencies are highly important for understanding the effectiveness and impact of eWOM on customer purchase decisions.

Chang and Chen (2008) suggested that creative web design can enrich and enhance viewers' impressions of a website and in many ways convert them into customers. Similarly, web design builds customer relationships and convert visitors into consumers in the virtual environment (Yang, 2017; Hausman and Siekpe, 2009). Moreover, well organised web design decreases the effect of product uncertainty in the case of experience goods (Luo et al., 2012). Likewise, Sparks and Browning (2011) state that trust is one of the main elements for customers while buying online, which can be influenced by the quality of the website design. Chang and Chen (2008) also suggest that high quality website design can affect users' trust and might increase their willingness to make a purchase. The



existing literatures have provided clear evidence to show that most online customers have a change of heart and do not complete their purchase because of poor website design (Yang, 2017; Leung et al., 2015; Jiang et al., 2010; Hausman and Siekpe, 2009) . Thus, website design is very important for experience goods such as booking a hotel, because it provides value to customers (Luo et al., 2012).

Existing research has also highlighted several key aspects of web design that affect customer purchase decisions. For instance, according to Jalilvand et al. (2012), the major focus should be on exploring the relationship between eWOM, images of the destination, tourists' attitudes towards destinations, and travel intentions. For online bookings, these are the key factors that determine the online customers' purchase decisions. According to Treiblmaier and Pinterits (2010), scholarly literatures have used different constructs to analyse websites based on their major and the nature of their research. Mainly it is allocated in terms of ease of use, quality and enjoyment. In contrast, Kim et al. (2011) and Sparks and Browning (2011), highlight the fact that for hotel bookings there are several aspects of web design which influence purchase decisions, which are mainly: ease of use, navigation, search engine optimisation, content, review systems, enjoyability, and pop-up and banner ads.

### **2.9 Relevant Studies on Web Design and Generation Y**

Early studies focused on various website parameters: website quality (Hasan and Abuelrub, 2011; Huang and Huang, 2010; Lin, 2010), website usability (Lee and Koubek, 2010; Şengel and Öncü, 2010; Pearson and Pearson, 2008), website aesthetics (Akbulut and Akbulut, 2010; Moshagen and Thielsch, 2010; Zeng et al., 2009) and website content (Cormany and Baloglu, 2011; Caballero-Luque et al., 2010). These studies demonstrated that each of the design parameters has an effect on web design. Only a limited number of studies focused on website design (atmosphere). For example, Bell and Tang (1998) studied aspects of web design such as access to the website, content, graphics, structure, navigation, usefulness and unique features. Nadeem et al. (2015) and Johnson and Misis (1999) concentrated on speed, uniqueness of functionality, navigation, wording and colour. Wan (2000) divided website design features into four factors: information, friendliness, responsiveness and readability. Lee and Koubek (2010) examined content organisation, visual organisation, navigation and colour.

Other studies in Human-Computer Interaction (HCI) have identified certain aesthetic aspects of web design. Some studies were fairly general (Yang, 2017; Yi et al., 2015; Schenkman and Jonsson, 2000; Lavie and Tractinsky, 2004; Kim et al., 2003), while others considered specific aesthetic design features, such as visual complexity ( Xu et al., 2015; Mai et al., 2014; Tuch et al., 2009; Michailidou et al., 2008; Pandir and Knight, 2006), colour (Huang and Benyoucef, 2017; Yi et al., 2015; Coursaris et al., 2008; Papachristos et al., 2005; Hall and Hanna, 2004) and symmetry (Standing et al., 2016;

Bauerly and Liu, 2008; Bauerly and Liu, 2006; Wilson and Chatterjee, 2005). Additional studies investigated the relationship between website design and gender. For example, Tuch et al. (2010) investigated the effect of symmetry and aesthetics in website design, while taking gender differences into account. Simon and Peppas (2005) found that female users do not like a large variety of graphics on a website, while male users prefer a greater number of animations and graphics. Moss et al. (2006) examined 60 websites at Oxford University with regard to gender differences and website aesthetics. In addition, Lukaitis and Davey (2012) studied web design for mature travellers and cited a study by Nielsen (2005) that stated that illiterate consumers do not have as much ability to scan or skim and read the website content as well-educated consumers.

Sukhu and Bilgihan (2014) and Djamasbi et al. (2010) showed that website aesthetics are important for Generation Y, as this generation has grown up with technology. They showed that several characteristics may be attractive to this generation and may affect the first impressions of Y users: large images, images of superstars or celebrities, search features and 'text-lite' sites. Similarly, Jain et al. (2016) and Oh et al. (2008) showed that Generation Y customers' impressions of online stores are influenced by the way the information is displayed; this generation tends to prefer pictures rather than text-based methods of communication. Djamasbi et al. (2010) cited a study by Tsui and Hughes (2001) that observed that pictures of superstars significantly increase emotional bonds with Generation Y customers, including the finding that having superstars in the advertising can make it more appealing to Generation Y (Bush et al., 2004; Knott and James, 2004). Akbulut and Akbulut (2010) examined the visual elements on educational websites and found that some sites lacked visual elements (e.g. image and colour) in the design.

According to Mazaheri et al. (2011), previous web quality studies have generally divided website environmental features into two classes: the first is manipulated (interface) features, such as colour, music, background, font and text size (these features were considered to be 'incentives' and were believed to affect customers' emotional responses); and the second included characteristics such as information and effectiveness. Yi et al. (2015) and Wu et al. (2008) suggested that an appealing and enjoyable website uses colour to boost customer interaction. Schlosser et al. (2006) also reported that website design enhances online purchase intentions. Similarly, Hasan (2016) and Eroglu et al. (2003) indicated that website design affects customer emotions, which in turn enhances shopping gratification. Additionally, Ha and Lennon (2010) examined the effect of clothing website design on customer emotions (pleasure and arousal) and how this had an impact on customer response (purchase intention and approach behaviour). Some studies have examined the effect of website atmosphere on customer behaviour. For example, Hausman and Siekpe (2009) examined language options, gift services, humour, the use of global search features, and security on customer behaviour. Another study, by Mummalaneni (2005), explored, as a measure of the quality of website design, the following opposite characteristics: good or bad display, large or small, colourful or drab, and well-organised or

unorganised layout. Richard (2005) used entertainment, site informativeness, effectiveness and navigational characteristics to measure website atmospherics and design. Environmental psychologists considered the emotions as a significant factor in customer response to the environmental setting and as taking a lead in customer behaviour (Mehrabian and Russell, 1974). Some studies that suggest website design impacts the emotions include Hsu et al. (2015) and Ponte et al. (2015), Morin et al. (2007), Vrechopoulos et al. (2004) and Menon and Kahn (2002). Other studies have focused upon the impact of colours, images and visual design on customer trust, loyalty and satisfaction (Liu et al., 2014; Cyr, 2008; Park et al., 2004).

Chang et al. (2014) and Schenkman and Jonsson (2000) examined users' first impressions when they land on a website, and found that the impression of beauty was the best predictor of overall judgment by website users. Bonnardel et al. (2011) investigated the impact of website colour on users' first impressions. Several other studies have reported on the relationship between colour and emotions (Dael et al., 2016; Tantanatewin and Inkarojrit, 2016; Terwogt and Hoeksma, 1995; Valdez and Mehrabian, 1994). Oh et al. (2008) cited a study by Lohse and Spiller (2003) that compared environmental features in 'brick and mortar' stores (real-life stores) with environmental attributes in 'click and mortar' stores (online stores) as follows: store window displays vs. website home page, store layout vs. screen depth, browse and search functions, indices, image maps, the number of floors in the store vs. hierarchical levels of the store, and sales clerk service vs. product descriptions, information pages, gift services, search functions, and so on.

Several studies have addressed the impact on customer emotions of features such as music, lighting and colour in retail stores (Dael et al., 2016; Hsu et al., 2015; Donovan et al., 1994; Baker et al., 1992; Crowley, 1993), and of background colour, image and animations on websites (Ponte et al., 2015; Chang et al., 2014; Fiore et al., 2005; Eroglu et al., 2003; Menon and Kahn, 2002). Other studies have applied the S-O-R model and found that features of website incentives such as pleasure and arousal can affect purchase intentions (Wu et al., 2008; Fiore et al., 2005) and approach behaviour (Parboteeah et al., 2009; Wu et al., 2008; Hu and Jasper, 2006; Eroglu et al., 2003). Moreover, customer satisfaction can be affected by attractive website design (Hao et al., 2015; Davis et al., 2008) as it enhances customers' intentions to explore and revisit the website (Eroglu et al., 2003). In addition, Jiang et al. (2010) have applied the S-O-R model in order to explain ways of investigating web interactivity and environmental stimuli, and in order to show that cognitive and effective reactions to web interactivity can impact customer purchase intentions. Based on the above, many studies have used the Mehrabian and Russell (1974) S-O-R model in e-marketing. These studies showed that aspects of website design such as colour, text, font, music and background affect customer emotions (Davis et al., 2008). However, Mazaheri et al. (2011), examined how the initial emotions created by the site and site atmospherics affect consumer's attitude, involvement and purchase intentions by comparing the model between Canadian and Chinese cultures. Oh et al. (2008)

have applied the S-O-R model to examine the impact of design factors on store image and customer expectations of merchandise quality. Several studies have adopted and tested the S-O-R model in order to gain greater knowledge about customer shopping behaviour through the store environment. For example, Eroglu et al. (2001) examined how web-based store environments affect customers' emotional and cognitive states. The authors empirically examined their model and found that a higher quality of website design increases the level of online customer or user pleasure.

Some studies have examined how website design and content affect e-commerce. For example, Delone and Mclean (2004) studied the impact of website design, content and service quality on e-commerce. They reported that web quality influences customer purchase decision and increases sales. Rahimnia and Hassanzadeh (2013) examined the impact of website content (information) and design on the effectiveness of e-marketing and trust, and found that website content influences e-marketing and trust. Szymanski and Hise (2000) suggested that customer gratification is based on product information and website design. As stated in this section, many studies have carried out research on website content; for example, Detlor et al. (2003) explored which information is essential for online shopping. Guo and Salvendy (2009) analysed studies of website content and showed that there are several significant factors, including security content, quality content, service content and contact information. Another study conducted in Europe by Halpern and Regmi (2013) indicated that website content and information are important in the case of airport websites. Moreover, Keeney (1999) found that amplifying product information is vital for e-commerce websites. Likewise, Palmer (2002) found that an effective website should have clear and significant content and that website success is based on the website download options, navigation, information, interactivity and responsiveness. Eid and Trueman (2004) suggested five elements that influence the achievement of international (Business-to-Business) B2B e-marketing: the website and its content, marketing strategies, environmental factors, internal factors, and global activities factors. In addition, Hernández et al. (2009) identified factors that should be considered when designing any commercial website, mainly information that is accurate, up to date, informative and relevant to customer needs. Furthermore, Cormany and Baloglu (2011), examined website content and the services offered to potential medical travellers, and cited the study by Perdue (2001) that stated that, in hospitality and tourism websites, content and marketing features result in successful message delivery. Treiblmaier and Pinterits (2010) examined customers' overall opinions of the whole website content and design.

Many features have been examined in Information System (IS) literature in order to measure website content and design, such as speed, usability and usage. Lee and Kozar (2012) examined factors such as system quality, information quality, service quality and relationship quality and their impact on online customer satisfaction. They found that these factors are connected to customer gratification. In addition, McKnight et al. (2002) showed that website quality (information quality and system quality) is an important factor that influences potential customers' trust. Kim et al. (2004) showed that the

quality of information is the only important factor influencing potential and repeat customers. Ahn et al. (2007) investigated the impact of website quality and 'playfulness' on online customer acceptance in online retailing. Liang and Lai (2002) examined website design features that impact online purchase intentions. Wu et al. (2008) found that trust is essential for any online business, as trust diminishes uncertainty and stimulates customers to visit and purchase from a website. Luna-Nevarez and Hyman (2012) examined content, navigation, interactivity, presentation style, use of advertising and the use of social media in the design of travel websites.

Several studies have examined a variety of instruments in order to analyse the different dimensions of the virtual environment, such as ease of use and usefulness (Davis, 1989); the hedonistic dimension has also been taken into account (e.g. Lien and Cao, 2014; Sledgianowski and Kulviwat, 2009; Heijden, 2004). Ahn et al. (2007) studied hedonic quality (playfulness) and found that it has a positive effect on the intention to use online retailing. Furthermore, playfulness, ease of use, usefulness and attitude affect the influence of web quality features on customer behaviour and intentions. Similarly, Bernardo et al. (2012) examined the effect of functional and hedonic quality in online travel agencies and found that both elements have a positive effect on perceived value. Hausman and Siekpe (2009) investigated the effect of web design components such as computer factors (technical aspects, navigation and information content) and human factors (enjoyment, cognitive outcome, user empowerment, credibility, visual appearance and organisation of the content) on online customer purchase intentions and assessed eight hedonic measurements for online user purchase intentions and revisits: human factors, computer factors, usefulness, informativeness, entertainment, irritation, attitude towards the site, and flow. Hausman and Siekpe concluded that these dimensions should be considered by marketing practitioners and website designers. They also cited a study by Alpar (2001), which found that entertainment affects website gratification. Furthermore, Wakefield et al. (2011) showed how hedonic and functional quality in a website affect the use of that website. Lu and Yeung (1998) developed a framework for the evaluation of website performance, where the usefulness of a website is measured on the basis of functionality and usability. Chen et al. (2002) showed that entertainment levels affect attitudes towards a site. Koufaris (2002) argued how entertainment levels affect customers' intentions to revisit a site. Hashim et al. (2007) reviewed articles on website design from the 1990s to 2006 and found five dimensions/factors of website quality (for tourism and hospitality websites): information and process, value added, relationships, trust, design and usability. Law and Bai (2006) found that website design is a highly significant factor that influences customers' behaviour in the field of tourism. Law et al. (2010) provided an updated and complete overview of research into methodological approaches to website evaluation in the tourism industry.

Further studies (e.g. Lee and Kozar, 2009; Fang and Holsapple, 2007; Ahn et al. (2007); Gehrke and Turban, 1999) have classified website usability factors and their effect on customer behaviour in many different areas, such as HCI, marketing and IT. For example, marketing researchers have

established online customer behaviour models examining numerous aspects that affect online purchases, such as demographics, personality and usability variables. HCI researchers have evaluated website design quality by investigating websites from an engineering perspective, such as page loading, navigation, download time, error rates and the time taken to complete tasks (Savoy and Salvendy, 2016; Gehrke and Turban, 1999). Lee and Kozar (2009) have extended the Kaplan Landscape Model by examining how elements such as legibility, coherence, variety and mystery affect cognitive and effective appraisals and their effect on the intention to purchase. In general, this study by Lee and Kozar developed a usability model for understanding web design factors and their effect on online customer behaviour.

Although HCI, marketing and IT researchers have investigated the influence of website design factors on online customer purchases, IS researchers have also examined their exclusive influence on online purchasing (Kumar and Jenamani, 2017; Fang and Holsapple, 2007; Zviran et al., 2006). Several IS studies (e.g. Li et al., 2015; Hasan 2016; Liang and Chen, 2009; Teo et al., 2008; Ahn et al., 2007; Chiu et al., 2007; Liang and Lai, 2002) have studied system quality, information quality and service quality as direct measures of website quality. Moreover, from an IS perspective, Kim et al. (2002) examined security, privacy, ease of navigation, searching, order processing and delight as factors affecting usability. They demonstrated a relationship between these factors and online customer satisfaction and loyalty towards a site. Similarly, Palmer (2002) examined download delays, navigability, site content, interactivity and responsiveness as usability factors. Palmer demonstrated a relationship between website success and these factors. On the other hand, from the HCI perspective, Gehrke and Turban (1999) examined page loading, navigation efficiency, download time, successful search rate, error rates and task completion time as usability factors. In addition to HCI, marketing, IT and IS perspectives, Lee and Kozar (2012) cited a study by Nielsen (2000) and one by Spool et al. (1999) in which, from a website design expert's perspective, ease of use, readability, content quality, fun, productivity, completeness relevance, navigation, response time, credibility and content were examined as website usability factors.

Lee and Lin (2005) examined the association between e-service quality such as web design and purchase intention for online bookstores. Another study, by Heijden (2004), investigated the relationship between system characteristics and purchase intention, whilst Venkatesh and Agarwal (2006) studied the relationship between content relevance and online purchases. These studies demonstrated the influence of website usability on online shopping. According to Lee and Kozar (2012), researchers have examined the relationship between outcomes and website usability factors such as attitude towards the site, the intention to purchase, the intention to revisit, actual purchases, recommendations to friends, satisfaction and loyalty. Lee and Koubek (2010) observed the effect of usability (before actual use, task completion time and preference) and web design attributes on online customer preferences for e-commerce websites by analysing nine online bookstores.

Some studies have taken other aspects into account. Jiang et al. (2010), for example, investigated how mechanical and social interactivity affect purchase intention. The authors also examined the relationship between product type and website interactivity. Liang et al. (2011) investigated how social support and relationship quality affect users' intentions to participate in social commerce websites. The results showed that both factors (social support and website quality) affect users' intentions to use social commerce. Luo et al. (2012) examined the effect of online shopping characteristics such as product uncertainty, online retailer visibility and web design on customer online purchase decisions. The authors found that high product uncertainty and low online retailer visibility affect customers' levels of satisfaction. In addition, website design decreases the effect of product uncertainty for experience goods (ibid). See Table 2.3, which presents a summary of the relevant web design studies, which are relevant to the study and will be discussed in chapter 3 in order to support the conceptual framework of this study.

**Table 2.3 Summary of Relevant Website Design Studies**

<b>Author(s)</b>	<b>Research Aims</b>	<b>Focus of the Study</b>	<b>Sample</b>	<b>Methodology</b>	<b>Findings</b>
<b>Cebi (2013)</b>	Studying the important degrees of website design parameters based on interactions and types of websites.	The individual website design parameters were established in line with the in-depth literature review carried out	An integrated multiple-criteria decision-making method including Delphi and DEMATEL (DECISION-MAKING TRIAL and EVALUATION LABORATORY) techniques	Secondary/Qualitative	Website interaction and website design are two of the most important web design parameters.
<b>Rahimnia and Hassanzadeh (2013)</b>	The impact of website content dimension and e-trust on e-marketing effectiveness.	Online Saffron Wholesalers	134 managers of commercial saffron companies, marketing and foreign sales departments	Experiment/Quantitative	The content revealed by websites in the domains of e-trust and e-marketing is regarded as contributing a crucial connection between e-marketing efficiency and e-trust efficiency.

<b>Bernardo et al. (2012)</b>	To test the possibility of hedonic quality as an individual aspect of the e-service quality. In addition, to create and analyse a scale including factors from hedonic quality and functionality.	Online Travel Agencies Websites	1,201	Experiment/ Quantitative	Hedonic quality and functionality quality have comprised notably positive impacts on perceived value. Furthermore, perceived value has a notable impact with regard to loyalty, hence the link from service quality to perceived value to loyalty in the context of e-commerce is confirmed.
<b>Lukaitis and Davey (2012)</b>	Investigate the impact of web design features and legibility on mature travellers' preferences.	Australian and New Zealand General Tourism Websites	75 tourism websites	Secondary/ Qualitative	Greater transactions come from websites that are perceived to be easier to read compared to websites created by non-commercial entities.
<b>Ha and Im (2012)</b>	To analyse various frameworks that describe the role of website design quality that influences customers' emotional and cognitive response to satisfaction and eWOM.	Two Mock Apparel Websites	804 females	Experiment/ Quantitative	The design quality of the website provided positive direct effects with regard to arousal, perceived information quality and pleasure, and indirect effects on WOM intention and overall satisfaction. Moreover, satisfaction facilitated the connection



					between cognitive and emotional responses, in addition to positive WOM intention.
<b>Lee and Kozar (2012)</b>	To understand website usability by combining the results of previous studies with a focus group study with website usability experts.	Study No. 1: 27 academic journal and conference papers, web documents and industry guidelines. Study No. 2 and No. 3: amazon.com	Study No. 1: 53 Study No. 2: 689 Study No. 3: 711	Experiment/ Quantitative	The research showed that there are 10 crucial factors that comprise the psychometric properties. In addition, various nomological networks between usability constructs were identified, contributing to source identification of purchase intention and purchase behaviour variables.
<b>Luo et al. (2012)</b>	To examine the effectiveness of online shopping characteristics and well-designed websites on satisfaction.	Retailers selling only clothing and those selling books and magazines, excluding mega-retailers such as Amazon	BizRate.com and Alexa.com over a one-month period.	Secondary/ Qualitative	Customer satisfaction is negatively impacted by low retailer visibility and high product uncertainty. However, key elements in confirming negative associations are: service quality, pricing and web design.

<b>Bonnarde I et al.(2011)</b>	The impact of colour on website appeal and users' cognitive processes	Homepage of an Informational Website	Study No.1: 50 webpages; Study No. 2: 36 web pages	Experiment/ Quantitative	Colours were recognised as a primary characteristic in the way users interacted with a website. The use of colours also affected the recollection of information after use of the website.
<b>Waller (2011)</b>	Provide an understanding into a transaction log analysis regarding the subjects and type of search engine questions used in Google Australia.	Google Australia	60,000 different search terms that were typed into Google in 2009	Secondary/ Qualitative	No statistically significant difference was identified in the search subjects or search types by different groups of the online population. Moreover, search engines can only be used as a link for reaching other sites.
<b>Fesenmaier et al. (2011)</b>	Analysing the ways in which online travellers utilise search engines and their impact on the planning process.	15 online information search activities to rate the overall usefulness of 11 different travel websites.	1,288	Experiment/ Quantitative	Provides a clear understanding of how search engines impact travel planning.
<b>Cormany and Baloglu (2011)</b>	To investigate the service offered to travellers on the websites of medical tourism facilitators.	Medical Tourism Facilitator Websites	57 medical websites	Secondary/ Qualitative	Found various differences in the services provided and information available depending on the continent.

<b>Mazaheri et al. (2011)</b>	Comparing Canadian and Chinese website visitors to analyse the effects of different emotions – arousal, dominance and pleasure – on the views of site atmospherics.	Service providers' websites in eight different sectors (Hotels, Online bookstores, Dental Services, Banks, Vacation Destination, Restaurants, Financial Investments and Plastic Surgery)	234 Chinese and 350 Canadian	Experiment/ Quantitative	The effect of pleasure (dominance) on a number of other behavioural factors was found to be greater amongst Canadian website visitors.
<b>Liang et al. (2011)</b>	The impact of quality and social support on the intention of users to be involved in social commerce.	Popular Microblogging Website (www.Plurk.com)	189 males and 222 females	Experiment/ Quantitative	All elements (relationship, quality and social support) are pivotal where user intention to adapt social commerce and participate in the use of social networks is positively affected by website quality and social support.
<b>Treiblmaier and Pinterits (2010)</b>	Developing metrics for websites to highlight the perspectives of users regarding website design and content.	Website	297	Experiment/ Quantitative	The results of the study include items that both students and professionals comprehend, and which can be applied in future studies in order to gauge different website features.
<b>Yang and Mai (2010)</b>	To examine the moderating effect of direct network externalities on WOM and the	Online Video Game (or Virtual World)	1,695 user reviews of seven games.	Secondary/ Qualitative	Negative WOM has been found to have a more significant effect than

	feedback of consumers for presenting users' assessments on search in contrast with experience factors of hedonic products.				positive.
<b>Tuch et al. (2010)</b>	To investigate the impacts of particular design elements on the aesthetic-related perceptions of websites concerning gender differences.	20 World Wide Websites	60 people (30 male, 30 female)	Secondary/Qualitative	Vertical symmetry is recognised as a fundamental element in the design of a website's appearance, while asymmetrically designed websites are less attractive. Additionally, the symmetry impact is recognised only amongst men, while women, do not appear to be affected in this way.
<b>Akbulut and Akbulut (2010)</b>	To study the views of educational website designers regarding website appearances.	Educational Website	Two Lecturers, a Research Assistant and a Teacher	Secondary/Qualitative	Some weaknesses were established regarding visual element design on different educational websites.
<b>Ha and Lennon (2010)</b>	Investigates the effect of low task-relevant cues shown on clothing websites on customer emotions, which effect customer response behaviour. Additionally, focused on the influence of product involvement.	Mock Apparel Website	157 females	Experiment/Quantitative	Low task-relevant web cues account for a greater degree of pleasure between online browsers who have low clothing product involvement, and that emotions facilitated the

					connection between different customer response behaviours and the various web cues.
<b>Lee and Koubek (2010)</b>	The effects of usability and web design attributes on user preference for e-commerce websites.	Nine Online Bookstore Websites	Ten graduate students	Secondary/ Qualitative	Relationship between pre-use usability and task completion time. Design attribute evaluations following utilisation were found to be significantly intercorrelated; business structure and layout were found to have a notable impact on user preference.
<b>Djamasbi et al. (2010)</b>	To identify the most effective and attractive web features that appeal to Generation Y.	Retail Homepages	Study No. 1: 98 students provided with 50 web pages and Study No. 2: 19 employees provided with the three most liked pages from study 1.	Experiment/ Quantitative	Web pages that incorporated many images and minimal text were preferred by Generation Y.
<b>Lee and Kozar (2009)</b>	To develop a usability framework for understanding web design and its impact on the users; this framework can be used as a guideline when	An online electronics site (Amazon.com) and three online travel sites (Orbitz.com, Travelocity.com and Expedia.com)	495 online customers	Experiment/ Quantitative	The developed framework indicates a large degree of variance regarding purchase intention, which is invariant across

	designing online stores.				different subgroups.
<b>Hausman and Siekpe (2009)</b>	The effect of web interface features on consumer online purchase intentions.	Two Panel Websites	Study one: 87 and study two: 154	Experiment/ Quantitative	Human elements and computer elements are related to effective consumer behaviour in revisiting intention and purchase intention.
<b>Oh et al. (2008)</b>	To examine the effects of two different design elements linked with store atmosphere with regard to store image and expectation of merchandise quality in web-based stores.	Khaki Pants (Clothes) Websites	307	Experiment/ Quantitative	Customers responded more positively to websites that were image based as opposed to text based.

In short, it can be seen very clearly that most studies have focused on design parameters of websites such as website quality, website content, website usability and website aesthetics and how they affect customer behaviour in different sectors. As indicated above in this section, many studies have examined the antecedents and impact of web design or store atmosphere activity. However, based on this PhD study, very little research has concentrated on how website design contributes to generating customers' eWOM communication.

## 2.10 The Industry of Tourism

In many countries the industry of tourism is considered as one of the biggest contributors in revenue and one of the quickest-growing economic sectors worldwide (Cooper and Hall, 2013; World Tourism Organization, 2013b). However, scholars have been debating the definition of the industry of tourism, which means there is no particular definition for this sector (Betts and Edgell, 2013). However, the World Tourism Organisation (2013a, p. 1), identified tourism as "*a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business "professional purposes"*". In addition, it has been accepted

universally that there is no name for the industry of tourism (Morrison, 2013). For example, the United Nations World Tourism Organisation (UNWTO) call this sector the '*tourism industry*' (World Tourism Organisation, 2013c), the World Travel & Tourism Council (WTTC) call it the '*tourism & travel industry*' (World Travel & Tourism Council, 2013b), the British Hospitality Association calls it '*the hospitality industry*' (British Hospitality, Association, 2013) and the US Travel Association names it as the '*travel industry*' (US Travel Association, 2013).

The number of overnight visitors known as international tourists has increased from 25 million in 1950 to 1,035 million in 2012. Furthermore, around 298 million international travellers travelled between the months of January and April 2013, which is an increase of 12 million travellers from the same period in 2012 (World Tourism Organisation, 2013b).

One of the main factors that play a key role in tourism is technology, because it makes travelling more accessible (Buhalis and Law, 2008). In addition, technology can assist in developing the needed infrastructure, such as railways and airports, to ease travelling worldwide. Meanwhile, for generating travel information and make bookings, travellers use the convenience of technology, e.g. surfing online through the Internet and electronic media. This feature of technology helps to make travelling much easier to accomplish. A forecast by the UNWTO has provided the amount of international tourist arrivals up to 2030, as shown in Figure 2.6.

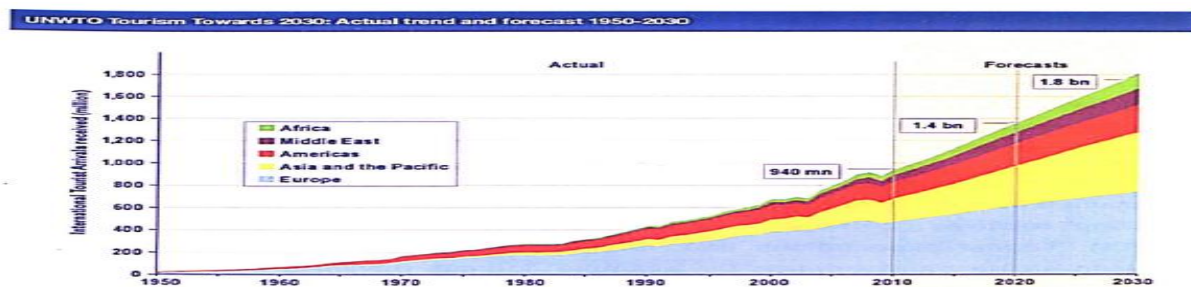


Figure 2.6 Tourism Forecasts for 2030: Actual Trend and Forecast 1950-2030

Source: World Tourism Organisation (2013b)

It can be seen from the figure above that in 2030 the number of international tourist arrivals is estimated to be 1.8 billion. In addition, over the next 10 years the growth forecast is estimated to be 4.4% of the contribution to worldwide Cross Domestic Product (GDP) on average per year (World Travel & Tourism Council, 2013a). Thus, based on the significant increase in numbers of tourists and their economic contribution, both academics and practitioners will be more attracted to this sector (tourism industry) and will give it more attention.

The industry component sectors have two different useful ways, which are the 'demand' and 'supply' (Middleton et al., 2009). The needs and wants of travellers are defined as the industry demands.

Tourism industry customers can be classified as international and domestic tourists based on their geographical movement for tourism activities. International tourism can be defined as travellers who travel to other countries different than their home country of residence and stay for less than one year. This group can be also divided into inbound and outbound international visitors. Therefore, domestic tourism can be defined as travellers who are travelling inside the boundaries of their own country (ibid). This group can also be divided into same day or overnight visits.

Moreover, travellers can be classified based on their purpose for travelling such as travelling for business, travelling to visit friends or relatives, travelling for holiday or pleasure and other reasons. Tourists might have different expectations based on the purpose of their travel. For example, when taking airline transportation, travellers who are travelling for a holiday or pleasure reasons might assume a higher level of service quality and courtesy, while travellers for business will give extra attention to accurate flight timings. Therefore, a tourist's general satisfaction can significantly be affected by various service providers (Song et al., 2011).

There are many different kinds of tourism products and every single tourist during their trip can experience one or more of them, which are offered by different providers (Cooper and Hall, 2013). The evaluation and accumulation process of the travel experience begins straight after the tourist leaves (Middleton et al., 2009). Certain tourism products can be individually sold, whereas others can be merged into one or presented as a new product. For instance, hotel rooms are products that can be sold individually; however, they can also be merged with other services, such as food and beverage services, to provide a complete accommodation experience. Travellers who use various tourism products might have diverse expectations, which can be hard to satisfy.

Products of tourism generally include physical products such as nature parks and hotels, and service products. The characteristics of tourism products can make marketing for the industry more challenging. Certain features are important to all service products, while other features can be unique to tourism products.

Service products have general characteristics: intangibility, inseparability, heterogeneity and perishability (Zeithaml et al., 1985). Intangibility refers to being unobtainable or not easy to access. Inseparability refers to the provision and consumption of the service; this requires customer participation during the process of production. Heterogeneity means that services can be unique, without a standardised process to produce. These characteristics are innate within tourism products; however, they also create difficulties in managing and marketing them. Thus, customers perceive a high risk when buying tourism products.

The unique characteristic of tourism products increases customers' uncertainty during their purchase decision process (Morrison, 2010; Middleton et al., 2009). Tourists require easy access to more



information, to ease their decision-making process when organising their trip. Traditionally, travellers depend on information offered and delivered by organisations or businesses involved in travel. Recently, tourists are surfing online, seeking tourism information, recommendations or opinions from fellow tourists, as this is regarded as more reliable and trustworthy than any other commercials. Therefore, tourism organisations must give more attention to the growth in Internet and electronic media usage amongst tourists.

## 2.11 Usage of Technology within Tourism

The International Telecommunication Union (2013) estimates that more than 2.7 billion users are using the Internet. Moreover, in developed countries around 77% of residents are online, while in developing countries only 31% are online; see Figure 2.7. With regard to regions, users in European countries account for the highest proportion (75%) of the Internet usage population, and then America comes next. The region with the least Internet usage in the world is Africa, with a rate of 16%.

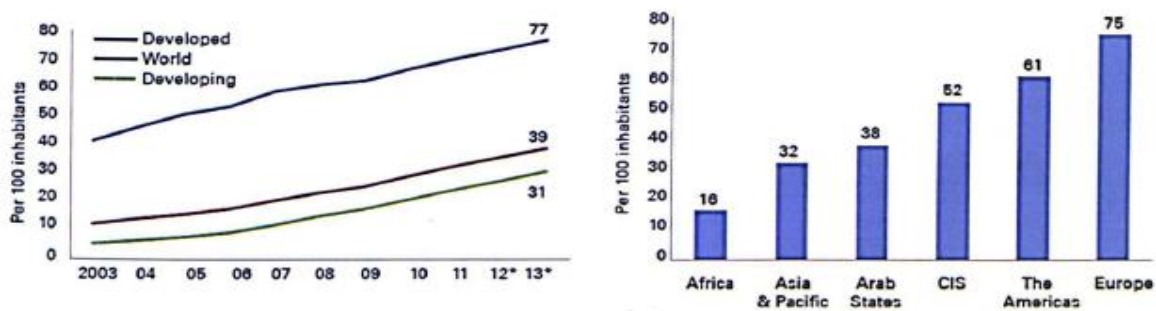


Figure 2.7 Internet Users by Development Level, 2003-2013, and by Region, 2013

Source: International Telecommunication Union (2013)

One of the benefits from using the Internet is that individuals can search for information, send e-mails, and complete online transactions and shopping. One of the relative online activities is social networking (Zickuhr and Smith, 2012). During 2013, one out of four people in the world used electronic media to build their social network (eMarketer, 2013). In addition, eMarketer provided an estimation of the number of social network users from 2011 to 2017; see Figure 2.8. It can be seen that the changes in social network audiences will slowly decline. However, the estimated number in 2017 will reach 2.55 billion.

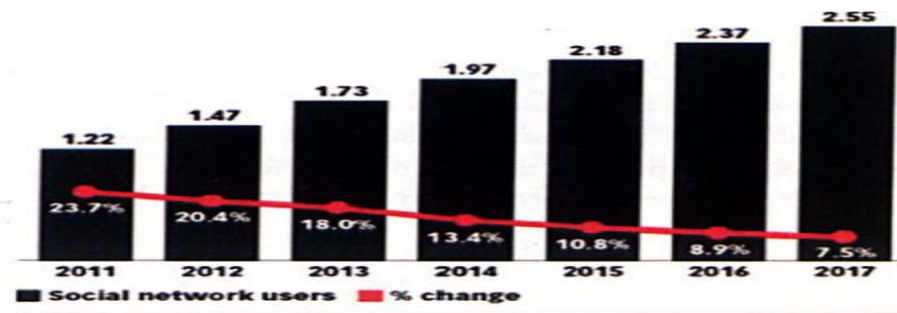


Figure 2.8 Statistics and Estimations of Social Network Users

Source: eMarketer (2013)

Internet and electronic media usage within the tourism industry can change the travellers' behaviour and marketing methods (Sigala et al., 2012). Figure 2.9 presents the effect of WOM upon travellers and businesses.

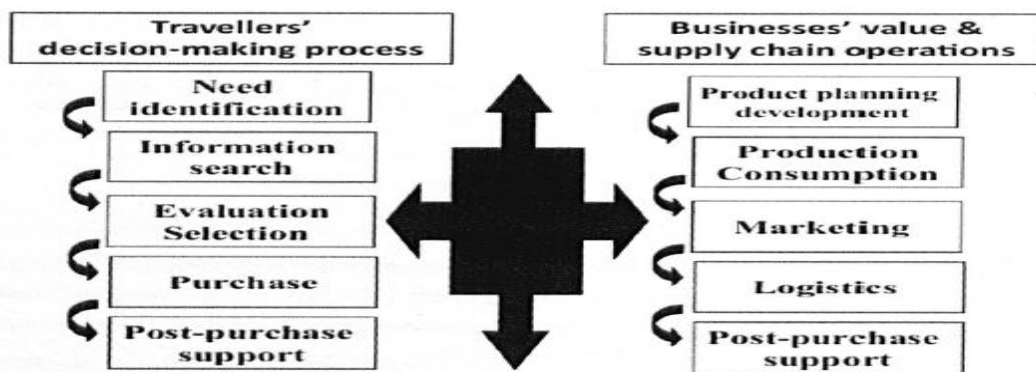


Figure 2.9 The Influence of eWOM on Travellers and Businesses

Source: Sigala et al. (2012, p. 8)

From the figure above, it can be seen that online reviews can affect travellers' decision-making process. This section outlines how tourists use the Internet and electronic media for generating tourism information, booking hotels, exchanging and sharing photos, and posting recommendations or complaints. In addition, tables of summarised articles also show the effect of the Internet and electronic media on customers' behaviour. For instance, more than half of travellers considered online reviews as the main source when planning and booking their trip (Travel Industry Wire, 2011).

One of the main factors that affect the tourism business in its ability to develop, sell and promote its products is eWOM communication. An online method such as electronic media provides a platform to sell and promote tourism products (Sparks and Browning, 2011). It also increases the amount of travellers who organise and book their trip online rather than purchasing it from a travel agency. Therefore, the distribution channels of the tourism industry have become wider and more fragmented. Given the heavy usage and influences of eWOM, organisations involved in tourism and businesses

should carefully manage the online reviews, thus allowing eWOM to be treated as a new marketing tool to promote their products.

## 2.12 Studies within the Tourism Industry

There have been several studies in relation to tourism and the use of technology to attract tourists and individuals. For instance, Law et al. (2010) researched various tourism studies between 1996 and 2009 in relation to their effectiveness in using online technology in order to evaluate website performance in comparison to face-to-face service. Their methodology was based on a literature analysis where different studies were collected from different sources, covering about 23 industries including hotel websites, destination websites, travel agency websites and airline websites. The majority of these previous studies used five primary evaluation methods – counting, automated, numerical computation, user judgment and combined methods – while the minority of the studies investigated the airline industry and the impact of online services on airlines' financial performance.

In terms of the web service quality dimensions of online travel agencies, they have been measured in many different ways. For instance, Kaynama and Black (2000) developed an instrument called 'E-QUAL', which aims to evaluate and measure website quality. They used the traditional SERVQUAL instrument (Parasuraman et al., 1988) as a base instrument and converted it to the online context, by looking at various site evaluation companies and sources such as Argus Clearinghouse, Scout Report, PC World and Gomez Advisors. From this, they developed a preliminary model and developed an E-QUAL scale of specific criteria grouped under seven main headings: content, accessibility, navigation, design and presentation, responsiveness and feedback, background information, and personalisation. Figure 2.10 cited by Kaynama and Black (2000) illustrates the relation between constructs from SERVQUAL and E-QUAL.

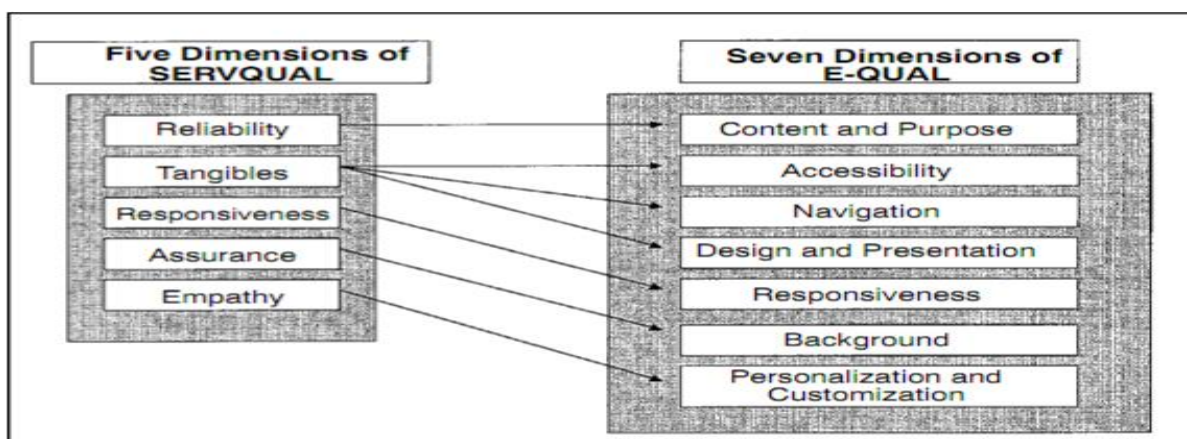


Figure 2.10 Parallelism of SERVQUAL and E-QUAL

Source: Kaynama and Black (2000)

In addition, the model developed a scale of items in the form of a questionnaire; however, it has been criticised by many researchers, such as Ho and Lee (2007), who argued that such a scale is unclear in terms of matching the items to an effective and appropriate scale and dimension. Ho and Lee used the developed scale to compare services provided by online and offline travel agencies (Travelocity, Expedia, Biztravel, etc.). Their conclusion provided a tool that enables the ranking and evaluation of online travel agencies with regard to the service provided. However, such an element is irrelevant to the current thesis and therefore will not be focused on further. However, the instrument's dimensions were built with the assistance of attributes from more of a business practical website evaluation rather than only academic references.

Additional criticism from Ho and Lee (2007) of Kaynama and Black (2000) was that they were using modified versions of a readymade scales, and they argued that there is a need to explore service sector specific attributes and develop a suitable quality measurement for travel websites. Hence, and to complement Kaynama and Black's (2000) model, Ho and Lee (2007) identified eight effective and relevant dimensions that can be used for the evaluation of web-based travel service quality, using a scale with 44 items as proxy for each item. Ho and Lee (2007) developed their measurement model further by investigating the importance of each item through an interview targeting 50 users who were asked to rank each item according to its importance when deciding on an online reservation. This resulted in narrowing the 44 items to 30 items. Additional research using Taiwanese online users shows that the number of items was finally reduced to 27 items representing five main dimensions: information quality, security, website functionality, customer relationships, and responsiveness. Therefore, the secondary research was to validate the development of an evaluation instrument for online travel agencies. Furthermore, the validity and reliability tests have confirmed the adequacy of the instruments identified. Finally, the development of the scale was ended with an examination of the possibility of predicting users' attitudes towards the quality of online travel, based on loyalty and satisfaction. The outcomes reported that the quality of electronic services was identified as one of the major indicators in the process of predicting the satisfaction and loyalty level of the users. A possible disadvantage of Ho and Lee's (2007) study, is the argument that some of the users who were targeted in the interview and questionnaire had not previously used online services and therefore their answers and ranking of the items provided to them were not based on adequate knowledge of alternative sources, and this may have influenced the quality and strength of the instruments that were developed. Nevertheless, Ho and Lee (2007) argued that, despite some of the disadvantages to which the survey was subject, it can be utilised in other measurement development attempts.

It is important to note that perhaps customer satisfaction with regard to services provided by travel websites has attracted a considerable level of attention, since it relates to the level of customer retention and therefore understanding the behaviour of online buying and the attitude towards some online buying factors. A study by Mills and Morrison (2003) investigated the major factors that can

contribute to the level of customer satisfaction in travel websites in the USA, sampling students, and they reported a conceptual model (Figure 2.11) that focused on the interface and the perceived quality and value as general concepts that can influence online buyer behaviour. The three concepts, according to the model, consist of the following sub-factors: Interface: access, loading, appearance, navigation, interactivity, search and security. Perceived quality: incentives, feedback, information and reliability. Perceived value: involvement, shopping convenience, transaction utility and price.

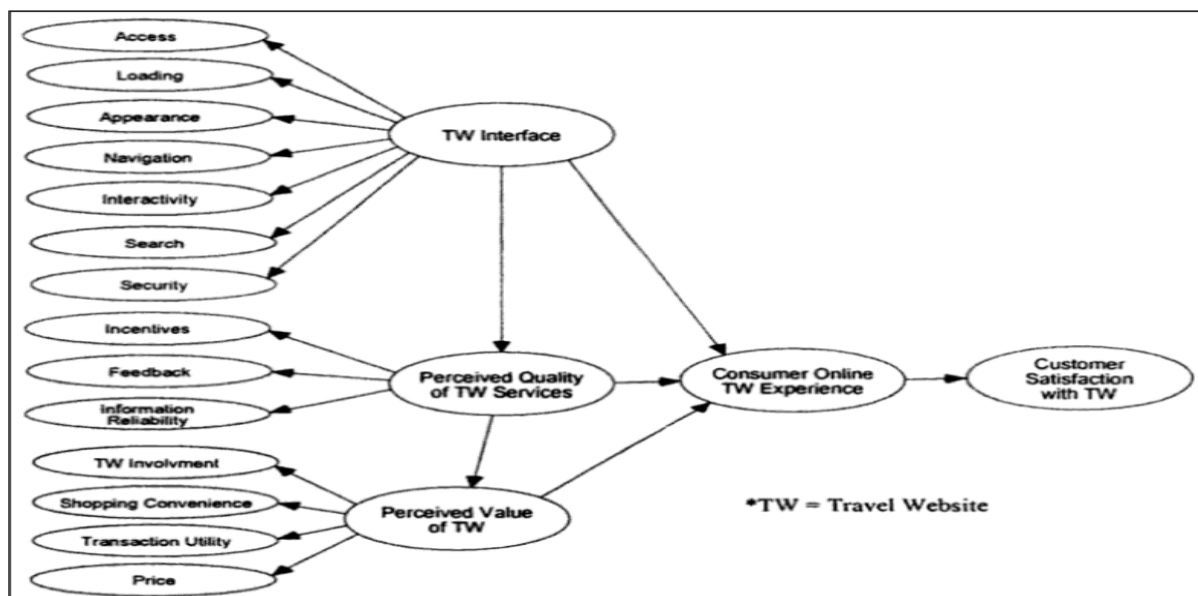


Figure 2.11 Model of Web Quality Factors on Customer Satisfaction

Source: Mills and Morrison (2003)

To begin with, Mills and Morrison's (2003) questionnaire consisted of about 68 items which were adopted from previous literature and empirical research, as well as their own self-development of these items, based on the theories of buying behaviour. A further survey was conducted, which resulted in narrowing these items to 46 items. Their conclusion reported that the top three factors that can indicate the level of customer satisfaction and experience in terms of travel websites are the rewards or incentives, the design or appearance of the website, and the security and protection of personal data.

In addition to Mills and Morrison (2003), Nusair and Kandampully (2008) also investigated the factors that influence customer satisfaction with online travel websites, in order to determine the main dimensions that can indicate and predict their attitude towards using such websites and increase their satisfaction level (Figure 2.12). The authors used a content analysis methodology using five main travel websites (Orbitz.com, Travelocity.com, Hotwire.com, Hotels.com and Priceline.com). The motivation behind their study was to investigate the factors that influence the customer satisfaction level. The study was initiated with 53 factors, which were categorised under six main web quality

dimensions: navigability, playfulness, information quality, trust, personalisations and responsiveness. The major conclusion of their study was that online travel websites are failing to provide effective services that can improve customer satisfaction, and therefore an enhancement is required. However, although the authors made a good contribution to the theoretical and empirical literature on online businesses and customer satisfaction, their model was mainly based on theoretical background and failed to provide strong empirical evidence.



Figure 2.12 Model of Web Quality Factors on e-Satisfaction

Source: Nusair and Kandampully (2008)

Amaro and Duarte (2015) conducted a recent study in which they proposed a model to investigate and measure the intentions of online consumers to purchase an online travel service (Figure 2.13). The model was developed based on several theoretical and empirical backgrounds, such as TPB, TAM and Innovation Diffusion Theory (IDT); however, the model was not designed for a specific travel industry and was generally applied to online travel companies. Amaro and Duarte (2015) reported that the attitude of the customers was identified as a primary element to determine the intention to buy. However, attitude alone is not sufficient to provide an accurate prediction mechanism that determines the online purchase behaviour, and the model has received many criticisms, such as from Cao and Mokhtarian (2005) and Venkatesh et al. (2003). Furthermore, one of the major disadvantages of this model is that it did not clearly define the online travel purchase, which made its results even more unclear.

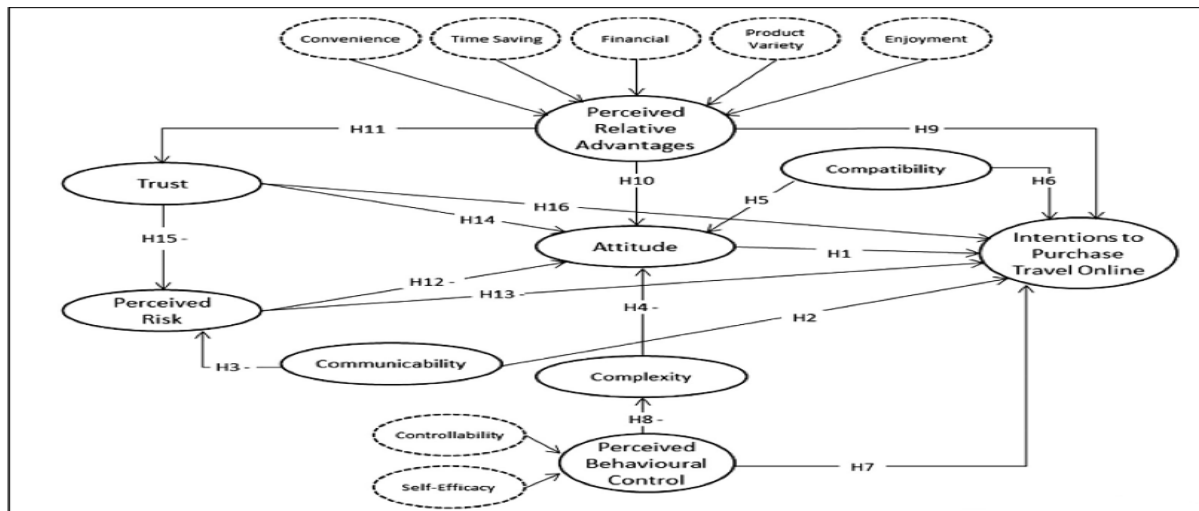


Figure 2.13 Integrative Model of Intentions to Purchase Travel Online

Source: Amaro and Duarte (2015)

### 2.13 Research Gap

Many researches have been conducted to investigate and study online customers' behavioural aspects such as attitude, intention, motivation and other features. Based on classical customer behaviour and IS models, many dimensions have been developed, such as ECT, TRA, TBP, S-O-R and TAM. However, many of these studies were limited and widely confirmed from particular traditional theories. Consequently, it is necessary to investigate online customer behaviour from different perspectives to discover new models and frameworks. According to Fu et al. (2015), Cantalops and Falvi (2014), Law et al. (2010) and Cheung et al. (2005), traditional customer behavioural theories deliver the starting point of acknowledging online customer behaviour. They requested that more factors should be investigated. In addition, Luo et al. (2012, p.1136) indicated that: "*Clearly, more research is needed to better understand what affects customers' evaluations of their online experiences*".

From the customer behavioural dimensions, researchers such as Sparks et al. (2016), Tsao et al. (2015), Gu et al. (2012) and Sparks and Browning (2011) stated that eWOM is key to influencing customers to purchase online. Additionally, several authors have indicated that, in order to make a final decision, customers surf online for more information and apply search strategies such as reviewing sites (Dael et al., 2016; Jain et al., 2016; Hsu et al., 2015; Floh et al., 2013; Gu et al., 2012; Xiang and Gretzel 2010; Zhu and Zhang, 2010; Duan et al., 2008). Furthermore, eWOM is an influential channel because it provides online customers with information and reviews (Ladhari and Michaud, 2015; Zhang et al., 2010). Moreover, many studies have suggested that eWOM and online reviews have a significant impact on hotel bookings and on levels of trust (Sparks et al., 2016; Tsao et

al., 2015; Cantalops and Falvi, 2014; Kim and Gupta, 2012; Sparks and Browning, 2011; Yang and Mai, 2010).

Other researchers, on the other hand, have considered web quality measurement as the main determinant that could affect the online users' behaviour. However, few studies have combined web quality scales such as web atmosphere with behaviour studies, for example, Pappas (2016), Al-Debei et al. (2015), Yoo et al. (2015), Elkhani et al. (2014), Wu (2013), Guritno and Siringoringo (2013), Aladwani (2006), Lee and Lin (2005) and Anderson and Mittal (2000). Law et al. (2010) have suggested that few studies have been carried out in the area of website design in the tourism sector. However, Shukla (2014) and Chang and Chen (2008) state that a creative website layout can enhance viewers' impressions of a website and turn them into clients. Likewise, web design and layout builds customer relationships and converts visitors into consumers in the virtual environment (Chung et al., 2015; Hausman and Siekpe, 2009). Still, researchers show that many online shoppers do not finish their processes online because of weak website design (Dedeke, 2016; Moody and Galletta, 2015; Jiang et al., 2010; Hausman and Siekpe, 2009). The gap between the website atmosphere and the eWOM still needs further investigation by academia. Xue and Harker (2002. p.256) have indicated that the IS success model and similar models "*may not be comprehensive enough to capture the interactive and hedonic capabilities of new technologies, such as e-commerce websites and other related online media*". Accordingly, extending the web quality dimensions to the e-service environment is essential.

It is essential to investigate the features of any industry for establishing a modified framework that fits organisational business models. For instance, one of the most essential variables in the tourism website is the customers' willingness to purchase. Attracting customers to book a hotel and leave a positive review is considered as the basic objective for any tourism web implementation. Nusair and Kandampully (2008) discovered that in 2003 67% of online surfers who travelled in the USA surfed online to find information about destinations or to check expenses and cost. However, less than 5% of the customers who visited a travel website made an online purchase. This percentage currently might have increased in the US, but the same statistics appear if we compare the differences between the US and a developing country like Saudi Arabia. To confirm this gap, Aladwani (2006. p.180) stated that, "*Most organizations still would like to understand more closely the nature of the influence of quality aspects of their websites on purchasing decisions of web consumers*".

Based on the extensive review of the literature provide in this chapter, it can be clearly seen that most studies have focused on developed or Western environments, although the importance of website quality and its meaning could diverge from one culture to another (Mazaheri et al., 2014; Gefen and Straub, 2000). Additionally, Ruiz-Mafe et al. (2013) found that cultural differences affect customer behaviour. Al-Maghrabi et al. (2011) displayed the most current general condition of e-commerce in



Saudi Arabia. However, such research has not fully investigated the online behaviour of travellers or tourism customers, particularly from the Middle Eastern context. In fact, to the best of the researcher's knowledge, no research investigating the effect of web quality or atmosphere on eWOM and purchase decision when booking a hotel online has focused on Middle Eastern behaviour. More specifically, it can clearly be seen that eWOM and web design can both influence customer behaviour. Furthermore, little research has been done to address and analyse the link between website design and generating eWOM (Burgess et al., 2015; Ha and Im, 2012). The purpose of this research is therefore to investigate the concept of how the website 'atmosphere' can influence customers' eWOM and purchase decisions, particularly in the tourism sector, because of the extreme growth of interest in e-marketing from academics and practitioners in today's global economy. Chapter 4 will offer a new research area for this thesis and this will be discussed and justified in more detail.

### **2.14 Rationale of the Study and Conclusion**

In conclusion, the chapter has provided a comprehensive critical overview and analysis of the theoretical background of this thesis. Models related to customer behaviour, eWOM and web design studies have been underlined and examined. More specifically, a demonstration was made where studies have examined website design and adoption within the tourism industry. Thus, this section specified several gaps in the theoretical research, specifically within the online shopping atmosphere for hotel websites: how a hotel website can gratify customers and attract them to complete a booking transaction and leave a review online.

In this chapter current published research has studied eWOM in many areas, including how it affects sales, purchase intention, purchase decisions and actual purchases. It has also covered many external factors, such as satisfaction and trust, and how these affect eWOM, leading to increased sales for experience and search goods.

However, the chapter has provided discussion on limited number of studies that have explored whether or not web design or the online store atmosphere can increase, enhance or influence customers' reliance on eWOM when booking a hotel. Therefore, the relationship between web design and online purchase decisions with and without the reading of peer reviews for booking hotels will be studied on the basis of web design factors.

The critical review and analysis of the literature in this chapter covered different models of customer behaviour containing different perspectives: marketing, HCI and IS. In addition, the review revealed that the majority of these studies were limited to dimensions that were explored with specific classical and traditional theories; however, other industry- or product-specific attributes warrant exploration (Cheung et al., 2005). Moreover, the literature review in Chapter 2, section 2.13 revealed that there is

a gap in the research in relation to the relationship among website design/qualities and website adoption. These gaps are important within the context of the tourism industry. Another recognised gap is the shortage of studies that have taken place in developing countries such as Saudi Arabia, which target Generation Y, and which investigate the moderating role of different classifications of tourist. Consequently, it is significant to recognise and evaluate the elements that could influence the behaviour of tourists who use the Internet in booking their hotels.

The following chapter will fill these gaps by suggesting a new framework to link web design with eWOM and purchase decision (booking a hotel online). The framework must be compatible with the study context and produce a hypothesis that will encourage a clear vision of the behaviour of travellers using online services.

## Chapter 3 - Conceptual Framework and Developed Hypotheses

### 3.1 Introduction

Chapter 2 provided a deep review of the literature that covers the areas of online customer behaviour, eWOM and diverse scales of website quality in the context of tourism. As a result of this review, critical gaps in research were acknowledged. For instance, there is a lack of research discovering the relationship between website design and eWOM when booking a hotel online within tourism services. Moreover, having a quality website that influences customer behaviour is a must for every product or firm. While the tourism industry is an important context in the business sector, it is still under-investigated. It is essential that tourism businesses learn how their own websites can adhere to users' needs and how to attract users to such websites when booking a hotel online. In addition, tourism businesses should learn how to encourage users to generate more eWOM and recommend their sites to others, as reviews can affect sales.

The main goal of this chapter is to develop a framework that is capable of predicting online users' satisfaction level with tourism websites and how this could impact their willingness to adopt them for hotel booking reservations and generate more eWOM. The end of the chapter delivers a deep discussion related to the crucial elements and constructs connected with online customer satisfaction and purchase decision within the tourism context (booking a hotel), along with an appropriate conceptual framework and a proposed related research hypotheses.

### 3.2 Product Type

As mentioned earlier, in Chapter 2, many marketing and IS scholars have suggested that different products or services need to be studied in order to validate customer behaviour theories. This chapter also provides more clarification of product types. Product involvement can be defined as the importance of a customer's interest regarding a product. For a low-involvement product, customers are infrequently involved in a large search for information when purchasing goods. For high-involvement products, in order to make the right decision and avoid mistakes, customers rely on an extensive search process (Gu et al., 2012). In the information process and search, product involvement is important for customers (Jiang et al., 2010). For example, Lu et al. (2013) indicate that restaurants and services are considered as high-involvement products because of their unreachable nature. They also indicate that eWOM is important for high-involvement products. Thus, Papathanassis and Knolle (2011) state that holidays are considered high-involvement products as they are unreachable until consumption and therefore require an extensive search process.

### 3.3 Experience Goods

Luo et al. (2012) categorise products into search products and experience products. They indicate that the quality of search products can be measured prior to purchase, while the quality of experience goods can only be evaluated after purchase. The same authors also confirm that experience products are riskier than search products. According to Mudambi and Schuff (2010), customers are able to gain and collect information about product quality in search products before purchase; but, with experience products, to reach the point of purchase, customers need to buy or order a sample to assess product quality. They conclude that it is difficult and expensive to gain and collect information about the quality of experience products. Yang and Mai (2010) state that eWOM has a great effect on experience products as compared to search products. Therefore, website design has a slight impact on customer satisfaction for vendors of search goods but is extremely important for sellers of experience products (Luo et al., 2012).

### 3.4 Conceptual Framework and Research Constructs

Keeping in mind the aim and objectives of the study and after criticising prior studies extensively, a framework that can be applied for this project is proposed. Consequently, a clarification of each construct or factor proposed is provided in the coming sections, with specific concentration on its significance and how it is incorporated into the framework. The associations between constructs are also investigated and expressed into this research hypothesis. However, before negotiating each factor in the framework separately, it is worth presenting the conceptual framework of Zhu and Zhang (2010). Figure 3.1 displays the three constructs studied by the researchers; they are: the effect of product characteristics, customer characteristics, and other factors such as competition and design of the online review system based on studying experience goods (e.g. books) and on consumer reliance on online reviews (eWOM), and how this influences customer purchase decisions. However, the authors focused more on the customer and product characteristics than on the design construct, which is the starting point of this study. Furthermore, this study intends to apply both the TAM and the S-O-R model as the groundwork for the new framework proposed in this study; this is to provide a theoretically proven way of examining aspects of website design as environmental motivations and how they affect customer purchase decisions. This is because both models have a strong historical background when adopting them for e-commerce and online applications. Combining these two models including additional context-related elements is expected to deliver and contribute better clarification for the present study case.

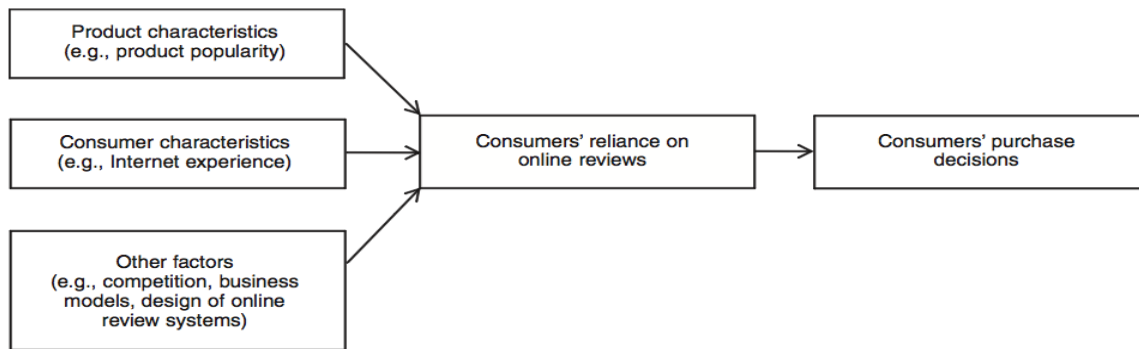


Figure 3.1 Zhu and Zhang's (2010) Original Framework

Source: Zhu and Zhang (2010)

### 3.5 Web Design/Quality

Many studies have concentrated on the key characteristics of web design dimensions from the customer's point of view; one of these was conducted by Aladwani and Palvia (2002). The authors discovered and investigated some website quality dimensions; in their study they identify web quality as *"users' evaluation of a website's features meeting users' needs and reflecting overall excellence of the website"* (Aladwani and Palvia, 2002, p. 469). This provides an easy to explain and understand definition of web design/quality that will be used in the present study. Several scholars have agreed that web quality is unique to the online environment, and web design features are vital mainly during the early online buying stage (Koufaris and Hampton-Sosa, 2004; Yoon, 2002).

A study by Sparks and Browning (2011) focuses on the features of eWOM that provide inspiration for customer decision-making and perception. In other words, their study focuses on answering the question as to how eWOM presented by old or current customers can affect prospective customers' purchase decisions. However, the authors did not examine web design features, and they recommend that *"the area of website design could also add to the growing interest in intention to book, actual bookings and trust perception"* (Sparks and Browning, 2011, p.1319) for future study.

The phrase *Web Quality* has been discussed deeply in Chapter 2. It was clearly shown that many website quality dimensions have been devolved by researchers. In addition, it was clear that scholars did not agree on a web quality measurement tool and that dimensions are inconsistent between scales. In addition, from the literature review it can be indicated that the most common website quality scales referred to usability, web design, navigation, responsiveness and content quality. Kuo et al. (2004) and Liang et al. (2004) claimed that website design depends on the type of website or product that is being sold, such as music, books and clothes.

According to Éthier et al. (2006), who examined the effect of web quality dimensions on users' emotions, website quality is a difficult and multifaceted concept with several dimensions. There is also no universal agreement between scholars on defining web quality. Additionally, the same authors claimed that the majority of the studies on website quality postulated the importance and the effect of web quality scales on website success, effectiveness, preference and customer satisfaction. However, these expectations were not supported with empirical evidence. Moreover, scholars have divided website quality into many constructs in order to deal with its comprehensive description (Ahn et al., 2007; Cao et al., 2005; McKinney et al., 2002). For example, McKinney et al. (2002) developed theoretically acceptable web quality dimensions aiming to measure users' satisfaction for e-shoppers during the browsing stage. The authors indicated that website quality is a factor of website satisfaction and they separated website quality into system quality (SQ) and information quality (IQ). In addition, they conducted a survey in the US, and they gathered a list of user-purchased products online from a travel agency. The outcome of their study showed that the significant dimensions of website information quality were understandability, usefulness and reliability. For website system quality, they were usability, access and navigation.

Another research study, carried out by Cao et al. (2005), was conducted to recognise what constitutes website quality dimensions by applying the TAM and SERVQUAL approaches to develop a suitable framework. From the users' perspective, the authors claim that website quality can be addressed by concentrating on the four components: Information Quality (content), System Quality (functionality), Attractiveness (playfulness) and Service (Trust and Empathy). In their framework, the system quality was measured by responsiveness, search facility and multi-media capability. Information Quality was assessed by relevant information and accuracy of information. In their study, the authors also questioned university students who used three e-bookstores. The outcome of their study showed that accuracy of information and relevant information are closely correlated. Thus, information accuracy and information relevance load as one construct, that is information quality. Moreover, their study argued that information accuracy, responsiveness and search facility are significant constructs.

Ahn et al. (2007) examined the association between web quality and customer behavioural acceptance. In their study, they divided web quality into three constructs: system quality, information quality and service quality. They identified system quality as an engineering-oriented performance that involves characteristics such as interface design, navigation, response time, etc. The characteristics of information quality include content, accuracy, timeliness, information reliability, ads, etc. In addition, the authors identified service quality in their study as the easy accessibility of communication tools for receiving users' complaints and the timely resolution of these complaints through responsiveness, assurance and follow-up services. This construct, '*service quality*', is essential in case of measuring the service provided overall, which includes post-purchase customer support. In this thesis, service quality will be addressed because the focus of the thesis is to measure

online users' satisfaction during the browsing and information stage in addition to the initial purchase decision and looking at the quality of website design. Ahn et al. (2007) distributed an online questionnaire among South Koreans by using an e-retail store as a case study. The outcome of their study verified that web design and quality play a major role in encouraging website use in the e-retailing context. Thus, in this thesis, website design and quality is measured by perceived usefulness, perceived ease of use, web content quality, navigation, pop-up ads and banner ads, system quality, visual appeal, search engine, page response and web enjoyability. This will allow the researcher to measure the effect of each of these qualities individually.

### 3.5.1 Content Quality (CQ)

A study conducted by Nusair and Kandampully (2008) declared that website content quality is the volume, accuracy and amount of information provided by the website regarding the products and services offered. The same authors cited studies by Ranganathan and Grandon (2002) and Perdu (2001), who reported that the website content quality is considered as one of the very significant web quality dimensions that affect tourists' online bookings on a travel websites. Additionally, a study by Bai et al. (2008) examined User Information Satisfaction (UIS) and its relationship between website content quality and users' satisfaction. The authors based their study on Cyert and March (1963), which proposed the UIS theory, and they recommended that an information system would strengthen customers' gratification. In contrast, if the system offers not valuable and unnecessary information, customers will be displeased and subsequently they will go to another system to look for the needed information. Likewise, McKinney et al. (2002) stated that valuable website content quality raises customers' satisfaction during the online purchasing experience. In addition, Delone and Mclean (2003) supported the idea that better information quality is significantly connected to users' satisfaction.

Based on the relevant evidence from the examined literature above, which shows the significant association between website content quality and users' satisfaction, the following hypothesis is constructed (Figure 3.2):

**H.1: Website Content Quality will positively affect e-Satisfaction with a tourism/third-party hotel website.**



Figure 3.2 The First Hypothesis

### **3.5.2 Intrusive Marketing Tools (Pop-up Ads and Banner Ads) (IMT)**

In the online environment, companies are spending enormous sums advertising their products (Huang et al., 2011). Likewise, in terms of eWOM, customers appear to trust information gained from other customers before making their final decision; however, advertising can still play an active part in marketing and influencing their decision (Lu et al., 2013).

Pop-up ads are classified as a type of advertisement that is mainly present in a separate window when the user connects to the web page (Tavor, 2011). When the customer or the user connects with the advertisement page, then all the relevant information is displayed on the advertiser's website. According to Parsons and Oja (2011), this acts as a major source in terms of gathering required information and helps in deciding whether to purchase the product. The same authors stated that pop-up ads also help various companies effectively generate revenue. As for online booking of hotels, pop-up ads are the most appropriate form of gathering all the information related to hotels and booking systems (ibid).

Pop-ups ads attract customers and achieve maximum profits from customers to the companies that place them. In other words, it can be stated that pop-ups ads are quite significant because they create a new browser window instead of being displayed in the site window that is currently being viewed by the user or customer. Moreover, advertisements that are displayed through pop-up ads are also helpful to customers as the information is delivered directly to them without them having to go and search for it. Therefore, pop-up ads are a form of advertising that helps to generate and attract customers to purchase products and services (ibid).

Parsons and Oja (2011) declared that banner advertisements are a different type of advertisement when compared with pop-up advertisements. In banner advertisements, the ads are displayed at the apex of the web page and, by a single click on the banner, the website connects directly with the advertiser's website and helps in collecting all the relevant information about the product. In this way, banner advertisements help in generating and attracting customers. This plays a significant role in the customers' purchasing decision. Scholars such as Turban et al. (2008) have confirmed that brand image is directly linked with banner ads as it is the most important source of strengthening the brands perception to the customer. Banner ads are the most important marketing tool in generating the most customer views of a website; they also help in the recognition of which products are most beneficial to the customers.

Tavor (2011) stated that banner ads are the most effective form of increasing web traffic and help in increasing the number of customers. Moreover, it is considered that banner advertisements are also essential in terms of influencing the customers' expenditure level. In addition, pop-ups and banner advertisements are also essential in terms of retaining customers. The main advantage of banner ads is



that they help in the repeat purchasing of products. Scholars such as Turban et al. (2008) have stated that banner ads are more effective when compared to pop-ups ads. Banner ads directly help the customers and deliver the data in an easier form compared to pop-up ads. These types of ads are very significant in terms of maintaining the brand image and raising consumer brand awareness. Moreover, these marketing tools are the most important tools as they provide websites with the ability to connect customers with the rest of the world. O’Guinn et al. (2014) suggested that banner ads have a great impact on increasing awareness among customers; these advertisements also help individuals in gathering information related to a company’s brand image.

Consequently, Lu et al. (2013) examined the impact of marketing strategies such as online vouchers, sponsored keyword searches and online reviews on product sales using the case of a high-involvement product (restaurants). Their study did not, however, examine intrusive marketing tools. The authors recommended further research on the effect of pop-up and banner ads on third-party websites and on customer behaviour satisfaction towards product sales.

Based on the evidence provided above showing the significant association between website ads as a web quality measurement and users’ satisfaction, the following hypothesis is constructed (Figure 3.3):

**H2: Online Intrusive Marketing Tools (Pop-up Ads and Banner Ads) will positively affect e-Satisfaction with a tourism/third-party hotel website.**



Figure 3.3 The Second Hypothesis

### 3.5.3 Navigation (NV)

Web Navigation is the navigation of World Wide Web content through information sites that are linked via hyperlinks or hypermedia. The interface that is used for navigation is called a Web Browser (Sparks and Browning, 2011; Kim et al., 2011).

Cho and Youn-Kyung (2012) stated that there are many elements that attract a customer to a particular website; these elements are important in making the site more appealing to the user, for example: transaction design and navigation. These particular dimensions direct the user towards having a better attitude and greater satisfaction from their experience on the site; this all leads to customer retention and creates positive customer purchasing decisions.

Kim et al. (2011) and Sparks and Browning (2011) conducted studies on web design factors that affect Hotel Bookings online. The factors that were found to affect purchase decisions are navigation, ease of use, search engine, content, system review, intrusive marketing tools and enjoyability.

Cho and Youn-Kyung (2012) cited studies by Cormany and Baloglu (2011) and Caballero-Luque et al., (2010) which indicated that each design dimension has an effect on web design. The same authors stated in their study that few studies have focused on the web design environment. For example, Bell and Tang (1998) studied some web design elements such as navigation, usefulness, graphics, etc. A study conducted by Johnson and Misic (1999) focused on factors such as navigation, speed, uniqueness of functionality etc., whilst Lee and Koubek (2010) studied navigation, content organisation and visual organisation.

A model that was developed by Lee and Kozar (2009) concentrated on how usability can be used to understand which web design factors affect customer online behaviour. Such a model can provide possible design guidelines on what makes a site user friendly and how to assess the usability in comparison with competitor sites. Website Usability has been examined in many disciplines, which include Marketing, Human-Computer Interaction (HCI) and Information Technology (IT). Marketing researchers have developed several frameworks (e.g. Lee and Kozar, 2012; Hausman and Siekpe, 2009) of online customer behaviour that investigate the factors that affect online customer satisfaction and purchase decisions such as website usability/navigation. An engineering perspective was applied by HCI researchers to assess website design quality as usability factors. Some of these factors are navigation, page loading, download time and task completion time. These are some of the investigated elements that affect customer purchase decisions and satisfaction. From IT and web designers' perspectives, content quality is assessed by navigation, productivity and credibility. Hence, it may be concluded that web quality indeed does effect online customer satisfaction and online purchase behaviour.

Based on the evidence presented above, that shows the significant association between navigation and users' satisfaction, the following hypothesis was constructed (Figure 3.4):

**H3: Website Navigation will positively affect e-Satisfaction with a tourism/third-party hotel website.**



Figure 3.4 The Third Hypothesis

### 3.5.4 System Quality (SQ)

System quality is often reflected in how the website is performing. Many studies have declared that performance measuring might comprise time of page response, visual appeal, functionality and/or availability (Ahn et al., 2007; McKinney et al., 2002). These performance factors have been examined and investigated many times by scholars in terms of their effect on online users' satisfaction (Nusair and Kandampully, 2008; Kim and Stoel, 2004). Although it has been verified that these characteristics have a significant effect on online users' satisfaction, only a limited number of customer behaviour studies have investigated and examined these characteristics as an individual and particular construct (System Quality) and how they impact online users' satisfaction (Bai et al., 2008; McKinney et al., 2002). Thus, it is assumed that system quality might positively affect online customers' satisfaction. As such, the following hypothesis is formed (Figure 3.5):

**H4: System Quality will positively affect e-Satisfaction with a tourism/third-party hotel website.**



Figure 3.5 The Fourth Hypothesis

### 3.5.5 Search Engine (SE)

The process of planning a trip has been acknowledged as users start searching for information by using a search engine (Fesenmaier et al., 2011). Some online customers depend on using search engines as a main search strategy. Many online customers are regular users of a particular search engine (Ho et al., 2012). Fesenmaier et al. (2011) reported that using a search engine can influence customer evaluation and gradually affect their selection of a third-party website. They also concluded that American customers' satisfaction with regard to a search engine is based on whether or not it can be trusted, and whether or not it offers a valuable outcome and supports travellers in making suitable decisions. Thus, as long as customers are happy using a search engine, it can be determined that, customers will select the most trusted, reliable and easy to use search engine.

The existing literature has provided statistical evidence of travellers' use of search engines for trip planning. For example, Sparks and Browning (2011) state that large numbers of travellers use search engines when planning their trips. Xiang and Gretzel (2010) state that 64% of American online travellers use search engines when they are planning their trips, and that search engines are considered as the primary information source for American online travellers. Fesenmaier et al. (2011) indicated that 86% of American online trip planners use search engines when they are planning their trips. Gu et al. (2012) found that 50% of online users use search engines when shopping online.

A search engine is considered to be a software program that mainly emphasises searching for and collecting the information related to the required content and matter. The primary function of the search engine is to make all the information available on the web. This is also useful in terms of identifying the specific websites that are required by the users and which provide the relevant information on the Internet (Hock, 2007). Hook (2007) indicated that there are various types of search engines and their main role is to organise all the information on the web in an appropriate form. A search engine is a type of service that allows users to collect large amounts of data from the web.

Search engines provide various types of search options and these search options vary between different search engines (Hock, 2007). In most search engines, the options are generally visible on the homepage, whereas on advanced search engines more options are available on the home page, such as the profile and the contact numbers. Chehimi (2013) stated that most customers nowadays gather information by the use of search engines in order to make their purchase decisions. The social web activities are also crucial in terms of attracting customers and in influencing them to a large extent. The Internet plays a crucial role in making all the information that is required available to tourists to book the appropriate services (ibid).

Ho et al. (2012) presented a conceptual framework of web tourists' search behaviour and a comparison between online and offline methods. The authors suggest that, nowadays, the majority of tourists use online systems to look for information when purchasing their trips. In addition, one of the issues online tourists face during their search is using multiple search engines. Thus, research into advanced search engines that permit tourists to compare and find all the information they need in a straightforward way is recommended for future study. Not only has the marketing research perspective viewed the importance of search engine and intelligent methods of extracting information, so have other sectors such as IT and Engineering. An example of a study that focused on advanced search tools is the one by Ahmed et al. (2006) on ontology and web semantics in the educational sector.

Thus, from the above evidence, it is assumed that search engines might positively affect online customers' satisfaction. As such, the following hypothesis is formed (Figure 3.6):

**H5: Search Engines will positively affect e-Satisfaction with a tourism/third-party hotel website.**



Figure 3.6 The Fifth Hypothesis

### 3.5.6 Visual Appeal (VA)

As mentioned above in section 3.5.4, visual appeal is considered as one of the primary elements that measure website system quality. A study by Bonnardel et al. (2011) focused on understanding which design features enhanced user interaction and which factors were favoured. This is important as the users' initial impression of a website predetermines whether they will remain on the site or move on to another. Two experimental studies were conducted by Bonnardel et al. (2011); the focal point of the studies was on how web colour (visual appeal) affects customer behaviour and willingness to purchase. The results indicated that website visual appeal, in particular colour, plays a vital role in users' satisfaction and purchase decisions.

Cebi (2013) also studied the effect of website design factors based on interaction and website type on customer behaviour and online purchases. The author also stated that many design dimensions (e.g. aesthetics, web content, and website visual appeal) have been proven to affect the role of web design, some of which have already been studied and addressed in other academic papers. However, there were no publications addressing the interactions within the design dimensions and how the degrees of the design dimensions differ in relation to different types of websites. In addition, Cebi cited other studies in his paper that focused on visual appeal (such as home page colours, visual organisation, etc.) and its effect on users' satisfaction (Bonnardel et al., 2011; Lee and Koubek, 2010; Djasasbi et al., 2010). The findings indicated that web design dimensions such as website visual appeal play an important role on customer e-satisfaction, and the degree varies depending on the website type and interaction between design dimensions (ibid). Thus, from the evidence presented above, it is assumed that website visual appeal positively affects online customer satisfaction. As such, the following hypothesis was formed (Figure 3.7):

**H6: Website Visual Appeal will positively affect e-Satisfaction with a tourism/third-party hotel website.**



Figure 3.7 The Sixth Hypothesis

### 3.5.7 Page Response (PR)

The study by Jiang et al. (2010) aimed at understanding how website interactivity (i.e. how the web page reacts/interacts with the user) impacts customer satisfaction and willingness to purchase and how this varies based on the product type. The authors used the S-O-R model in order to theoretically justify how website interactivity (page response) as an environmental factor affects online customers'

behaviour. Moreover, it allows for the examination of how users react to the page response and how in turn this may impact customer purchase decisions. The results indicate higher levels of customer satisfaction with and purchases from sites that were found to be more systematically interactive as it builds the trust factor.

Harris and Goode (2004) proposed a model that investigated the effect of online store features on customer behaviour (trust, satisfaction and customer loyalty). This model was tested on books and greeting cards through the use of a website with varying levels of interactivity. The results indicated that trust was greatly attributed to how the site interacted with the user, with regard to security and privacy. They also showed that trust levels changed the more the user interacted with a site; however, the level of e-satisfaction remained consistent. The authors suggested reapplying the model in other industries. Furthermore, the same authors cited other studies that examined the influence of page response on customer behaviour (Montoya-Weiss et al., 2003; Wolfenbarger and Gilly, 2003; Loiacono et al., 2002; Yoo and Donthu, 2001).

A study review by Law et al. (2010) of articles on web evaluations of tourism research which was published between 1996 and 2009 cited a study by Hashim et al. (2007), who identified five main factors of website quality that significantly affect customer satisfaction and willingness to purchase in the tourism industry; the factors are: information and process, value added, relationships, trust and design, and usability. They indicated the most important features in a hotel website were reservations, contact information, promotions, and products and services. It was found that the more the page information was organised and the page responsiveness was systematic, the more the customer found the site trustworthy, which leads to greater e-satisfaction and purchases. Based on the above studies, it is assumed that website page response may positively affect online customer satisfaction. As such, the following hypothesis is formed (Figure 3.8):

**H7: Website Page Response will positively affect e-Satisfaction with a tourism/third-party hotel website.**



Figure 3.8 The Seventh Hypothesis

Therefore, the relationships between Web Content (H1), Intrusive Marketing Tools (H2), Navigation (H3), System Quality (H4), Search Engine (H5), Visual Appeal (H6), Page Response (H7) with e-Satisfaction can be presented as in Figure 3.9.



Figure 3.9 The Relationship between Web Content, Intrusive Marketing Tools, Navigation, System Quality, Search Engine, Visual Appeal, Page Response with e-Satisfaction.

### 3.5.8 Enjoyability (EN)

In order to achieve entertainment value, Uses and Gratifications (U&G) researchers found that customers must be pleased with and have a positive outcome from the website. Furthermore, customers will have a positive attitude towards the website if it is highly informative, enjoyable and less complex (Hausman and Siekpe, 2009). Features of enjoyability such as playfulness, amusement and excitement have become essential in website creation. In addition, websites must have both rational and emotional components in order to attract customers (Lee and Kozar, 2009).

According to Cho and Youn-Kyung (2012), enjoyability can be defined as a type of service, which is provided for the purpose of providing customers with an enjoyable environment. The authors also indicated that enjoyability is considered as one of the fundamental terms in attracting customers. Enjoyability is also an important concept in terms of providing and delivering benefits to customers. This term is related to web design: if the main page of any website is attractive and provides entertainment to users, then it attracts high number of customers to make purchases (ibid). In addition to this, enjoyability is also an essential tool in order to deliver full satisfaction to customers. If the content on the website is highly enjoyable, then it acts as a source of entertainment (Sumarjan et al., 2013). Moreover, various facilities such as offers and discounts that are provided to customers when online shopping also help in maintaining the customer satisfaction level (Alboqami et al., 2015; Cho and Youn-Kyung, 2012).

The website quality and its content are also considered as a significant part in online shopping and any kind of online booking system. Many types of services are being delivered to online customers that greatly increase their purchasing activities (Cho and Youn-Kyung, 2012). In order to attract customers, the data on the site should be user friendly (Sumarjan et al., 2013). In online booking

systems, the payment and the transaction system plays a significant role in attracting and retaining customers while purchasing the product (ibid). Information that is displayed through videos and audios profoundly helps in entertaining customers; therefore, it plays a crucial role in making their purchase decision more effective. Cho and Youn-Kyung (2012) stated that there are various important dimensions that play a vital role in terms of making the website more enjoyable, such as the visual content, transactional design and navigation. Websites that use all these elements are more likely to attract customers. These elements play a crucial role in terms of a website achieving the greatest satisfaction for customers and also help in creating positive attitudes among its users. In addition to this, enjoyability acts as a major source in retaining customers and creates a positive platform for product purchasing behaviour. Thus, from the evidence above, it is assumed that enjoyability might positively affect online customers' satisfaction. Hence, the following hypothesis is formed (Figure 3.10):

**H8: Website Enjoyability will positively affect e-Satisfaction with a tourism/third-party hotel website.**



Figure 3.10 The Eighth Hypothesis

### 3.5.9 Perceived Usefulness (PU)

Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) have been discussed earlier, in Chapter 2, section 2.3.4 as the two main constructs of TAM. The importance of these two constructs in predicting and clarifying behaviour was stated. These two constructs have received a broad reputation in research and extensive acknowledgement as strong and valid constructs that are able to predict customer usage willingness. El-Gohary (2012) declared that for more than a decade PU and PEOU have been used in different and diverse contexts including the online environment. Nevertheless, there are many examples of studies that applied the TAM factors in their model and extended as well to the online environment, such as El-Gohary (2012), Rose et al. (2012), Gefen et al. (2003) and Moon and Kim (2001). These studies have validated TAM constructs for online use. A study by Gefen et al. (2003) documented the significant weight of PU and PEOU including the addition of trust as a factor to predict customers' willingness to use online shops when buying products online.

As mentioned earlier in this chapter (section 3.4) this study adopts both TAM and S-O-R to predict online customer behaviour. The original TAM by Davis (1989) included attitude as a mediating factor



between PU and PEOU, while the S-O-R model by Mehrabian and Russell (1974) also included attitude as a mediating factor, between environment and personality constructs. These two models have been adopted by many scholars in different studies individually and have been expanded to measure online customer behaviour. All the above evidence could provide a valid explanation and justification for integrating them into the current study framework to predict customer purchase decisions (in this case, the willingness to book hotels online).

The definition of PU provided by Davis (1989, p.320), is “*the degree to which a person believes that using a particular system would enhance his or her job performance*”. In the hotel website context, PU can be defined as the extent level of online users’ feelings and beliefs that using a website would enrich their hotel booking purchasing experience. Additionally, the web quality literature has identified similar dimensions, for example: *Reliability/Fulfillment* (Bauer et al., 2006; Lee and Lin, 2005; Parasuraman et al., 2005; Aladwani and Palvia, 2002) as well as *Usability* (Barnes and Vidgen, 2002) and *Efficiency* (Parasuraman et al., 2005; Aladwani and Palvia, 2002; Zeithaml et al., 2000). These dimensions have been discussed previously in Chapter 2 in order to recognise the related characteristics of usefulness and how it affects online user behaviour.

E-satisfaction could mediate the link and connection between PU and customer willingness to purchase online. Although the relationship between PU and e-satisfaction especially in the online environment has not provided a lot of empirical evidence, scholars in different fields have examined this relationship. For instance, Zviran et al. (2005) stated that there is a significant relationship between PU and end-user satisfaction. In this study, the authors suggested that PU is one of the elements that impact user satisfaction with Enterprise Resource Planning (ERP) systems. A more recent study, by Wu (2013), discovered a correlation between customer satisfaction and usefulness. Thus, from the evidence, it is hypothesised that (Figure 3.11):

**H9: Perceived Usefulness of the website will positively affect e-Satisfaction with the third-party hotel website.**



Figure 3.11 The Ninth Hypothesis

Additionally, the relationship with customers’ willingness to purchase (purchase decision) can be directly linked to the original TAM. Later studies incorporated this (e.g. Dembla et al., 2007; Looi, 2005; Morris and Dillon, 1997). Thus, it could be hypothesised that (Figure 3.12):

**H10: Perceived Usefulness of the website will positively affect the customer’s willingness to book a hotel online.**



Figure 3.12 The Tenth Hypothesis

Therefore, the relationships between Perceived Usefulness, customer e-satisfaction and customer purchase decision when booking a hotel online can be presented as in Figure 3.13.

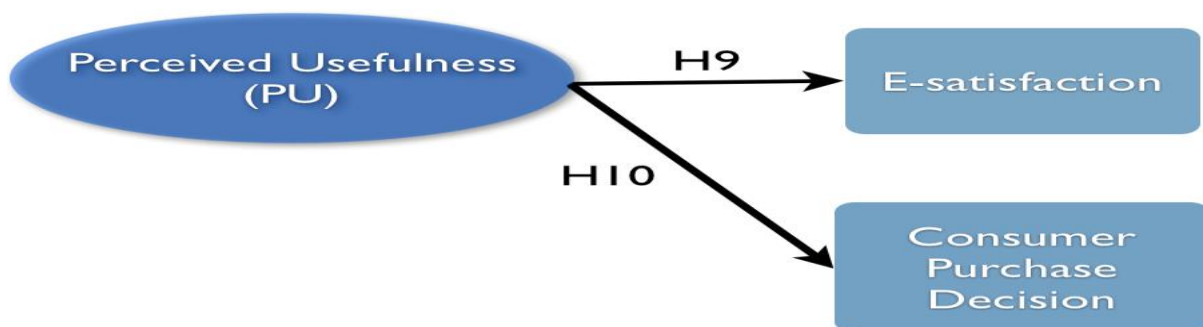


Figure 3.13 The Association between Perceived Usefulness, e-Satisfaction and Customer Purchase Decision

### 3.5.10 Perceived Ease of Use (PEOU)

Davis (1989, p.320) has defined Perceived Ease of Use (PEOU) as the first TAM construct as “*the degree of which a person believes that using a particular system would be free of effort*”. When applied to the hotel website context, the factor indicates the ease of browsing while booking a hotel via a website. According to Zeithaml et al. (2002), PEOU has been examined widely in a technology adoption context in workplace environments. However, the authors suggested that formal research on ease of use (EOU) of websites is also sparse.

A study by Ho and Lee (2007) has reported that virtual customers are deterred by websites that are not easy to access, reach or navigate through. It may be perceived as great evidence for the explanation as to why various website quality scholars have examined the EOU construct and adopted it in their models. As mentioned earlier, in Chapter 2, section 2.3.7, in SITEQUAL by Yoo and Donthu (2001), EOU was considered as a website quality factor. Additionally, in e-SERVQUAL by Zeithaml et al. (2000), the EOU construct was named *ease of navigation*, and in WebQual by Loiacono et al. (2002), the EOU factor was named *ease of understanding*. In the case of hotel websites, designing an easy

website is even more important as the booking process is comprised of several steps including the search for location, the selection of various hotels in that area, looking at and comparing the best prices, entering users’ information, and finishing the transaction payment to book a hotel.

Hence, this study will examine the association between PEOU and e-satisfaction. The support for this is presented in several other studies, for instance, the study conducted by Xue and Harker (2002) stated that PEOU is a critical key construct and is important for customer satisfaction. Thus, it can be hypothesised that (Figure 3.14):

**H11: Perceived Ease of Use of the website will positively affect e-Satisfaction with the third-party hotel website.**



Figure 3.14 The Eleventh Hypothesis

Likewise, with regard to this construct (PEOU) a hypothesis can be constructed, as a straight and direct association with willingness to purchase (purchase decision) as the technology acceptance models did (Figure 3.15):

**H12: Perceived Ease of Use of the website will positively affect willingness to book a hotel online.**



Figure 3.15 The Twelfth Hypothesis

Nonetheless, Davis et al. (1989) and other scholars such as Dishaw and Strong (1999) have empirically confirmed the optimistic link between PEOU and PU. A study by Venkatesh and Davis (2000) stated that an online storefront/website will be considered as a more useful portal if it is designed for easy use. Another study, by Ruiz-Mafé et al. (2009), found that EOU does not directly influence online purchases but does greatly affect the perception of usefulness of online channels. The authors of the study agreed that studies of usability websites have become more essential to measure if their architecture, navigation, designs and layout permit customers to browse the website easily and

find what they need. Thus, this thesis will examine this relationship and it is therefore hypothesised that (Figure 3.16):

**H13: Perceived Ease of Use of the hotel’s website will positively affect the Perceived Usefulness.**

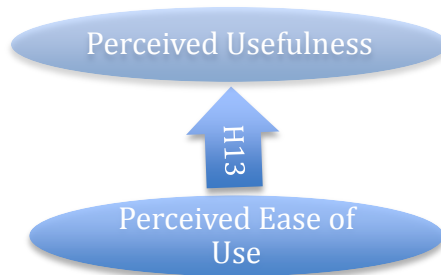


Figure 3.16 The Thirteenth Hypothesis

Therefore, all the relationships between Perceived Usefulness, Perceived Ease of Use, Customer e-satisfaction and Customer Purchase Decision can be presented in Figure 3.17.

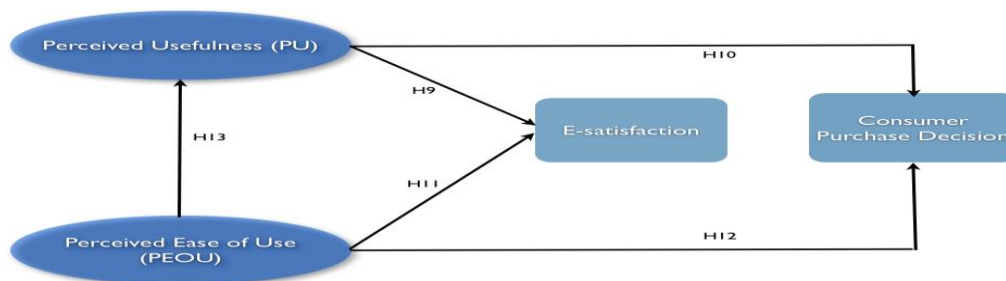


Figure 3.17 The Association between Perceived Ease of Use (PEOU), Perceived Usefulness (PU) with e-Satisfaction (ES) and Customer Purchase Decision (CPD)

### 3.6 Website e-Satisfaction (ES)

Premkumar and Bhattacharjee (2008) stated that a psychological factor such as satisfaction has been examined in different settings, for example: products or services satisfaction, job satisfaction and customers’ satisfaction with many information technology products. As discussed earlier, in Chapter 2, section 2.3.1, in Oliver's (1980) Expectation Confirmation Theory (ECT), satisfaction was central to his framework, as it was defined in the study as product or service evaluation based on the purchasers’ beliefs and desires. Furthermore, Oliver updated the definition of satisfaction in the latest edition of his book (Oliver, 2014 p.300), stating that “*satisfaction is the consumer’s fulfilment response. It is a judgment that product/service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfilment, including levels of under or over-fulfilment*”. In his theory, Oliver suggests that satisfaction impacts customers’ attitude and willingness

to use. Thus, Koppius et al. (2005) stated that this is the reason why ECT has been applied widely in customer behaviour literature for studying user satisfaction, pre-buying behaviour and service marketing in general. Moreover, Kotler (1997) has identified satisfaction as the outcome of consumers' experiences throughout different buying phases. He suggested five phases for buyers to be satisfied or not: need arousal, search for information, compare alternatives as evaluation, buying decision and post-buying behaviour. In addition, many Information System studies have included customer satisfaction in their research and framework (Delone and Mclean, 2004; Delone and Mclean, 2003).

The objective of this thesis as the primary goal is to measure the level of online users' satisfaction with their web surfing experience and how it affects user-generated content when booking a hotel online before the post-purchase behaviour. Ha and Im (2012) have claimed that potential studies should be conducted to investigate how diverse types of web design might impact users' satisfaction. In addition, McKinney et al. (2002, p.305) claimed that there is a particular need for potential studies of web-customer satisfaction. The authors relied on studies by Cadotte et al. (1987) and Oliver (1980), and came up with a definition of online satisfaction as: *“an affective state representing an emotional reaction to the entire web site search experience”*. Their study validated the idea that online satisfaction might depend on the products or services' 'nature' that is presented online. Again, this shows and validates the importance of investigating online customer satisfaction for tourism web portals.

According to Erevelles and Leavitt (1992), marketers and researchers consider purchasers' satisfaction as one of the primary purposes in marketing. In addition, MacQuitty et al. (2000) stated that marketers and researchers consider customer satisfaction as one of the most important constructs. Moreover, Winer (2001) has declared that online customer satisfaction is located at the midpoint of the company's relationship programs, in the context of online retailing. Delone and Mclean (2004) also updated their framework for the online environment by using customer satisfaction as a predictor of the net benefits. Another study, by Mills and Morrison (2003), looked at online customer satisfaction with tourism websites; they found that it is critical to know and understand how to satisfy customers with a travel website.

Additionally, a significant association between customers' satisfaction and their adoption of e-services has been found. For example, Lee (2002) stated that customers purchase online based on the satisfaction level that they feel about the website. Furthermore, Bai et al. (2008) validated that, in the offline environment, satisfaction influences purchase decisions; the authors cited many additional studies that had validated this, for example: Pont and McQuilken (2005) and Oliver (1999). Consequently, Bai et al. (2008) recommended that this affiliation would be valid to the online environment and subsequently tested this relationship in their framework for hotel websites in China.

The outcomes of their research confirmed that online customer satisfaction positively affects short-term and long-term willingness to purchase.

In the suggested framework of this study, travellers/customers' satisfaction is at the centre, and is considered as the main influence on purchase decisions. As such, the hypothesis is as follows (Figure 3.18):

**H14: Tourist's e-Satisfaction with a tourism/third-party hotel website will positively affect the willingness to book a hotel (Purchase Decision) from that tourism/third-party website.**



Figure 3.18 The Fourteenth Hypothesis

Customer satisfaction is linked to perceived service quality, where service quality is the factor of users' satisfaction (Oliver, 1993). In the online context, Wolfinbarger and Gilly (2003) recognised a significant connection between e-service quality features such as design, reliability and customer satisfaction. Thus, it is clear that service quality features contribute to satisfying online customers when they visit a website. A study by Bai et al. (2008) confirmed the need for a future empirical study that investigates how website design, customer satisfaction and willingness to purchase work coherently together in the tourism sector. Another study, by Nusair and Kandampully (2008), argued that, although many studies have discovered that electronic service quality is an important determinant of customers' satisfaction, these studies did not succeed in discovering common quality features that lead to online customers' satisfaction. In their study, the authors conducted a content analysis for travel websites to measure customers' satisfaction towards these websites, and they suggested that the factors and elements of e-satisfaction contain navigability, playfulness, information quality, trust, personalisation and responsiveness.

As mentioned earlier, in Chapter 2, section 2.3.1, Premkumar and Bhattacharjee (2008) combined TAM and ECT and developed a new framework. The outcome of their study presented that both original models have a marginally different explanatory power, with the TAM delivering a better prediction of intention. In addition, they discovered that, although customers' satisfaction had a positive influence on intention in the ECT model, satisfaction had a very weak influence on intention in the combined model compared to that of Perceived Usefulness. These outcomes were described with the assertion that customers' satisfaction can be expressed as a product- or service-oriented transaction affected by a first-hand experience, and consequently for short-term usage decisions it

might be more suitable. The findings of this study might be valuable for shaping the framework for this thesis. In the suggested framework for this study, the association between both Perceived Ease of Use and Perceived Usefulness with satisfaction can be examined as well as other essential and academically supported factors. This has been discussed earlier in this chapter, sections 3.5.9.4 and 3.5.10.

For forming satisfaction, scholars have highlighted that customers' emotional response and cognitive judgments are required (Im and Ha, 2011; Oliver, 1993). Additionally, Oliver et al. (1997) stated that, the more positive the emotions, the higher the customer satisfaction level will be. More recently, a study by Im and Ha (2011) reported that customers' emotional responses such as pleasure and cognitive judgment (e.g. perception of retail environment) are required to increase satisfaction, and the authors considered these elements as the most significant factors of satisfaction. In addition, from the online shopping setting, the literature on online atmosphere has emphasised the significance and the effect of both customers' emotional response and cognitive judgment in evaluating satisfaction in addition to other behavioural intentions (Park et al., 2008; Fiore and Kim, 2007). Moreover, Eroglu et al. (2003) found that customers' emotional response and cognitive judgment are optimistically connected with satisfaction and approach behaviours in the online shopping setting. Thus, most of the prior retail or online store environment research has empirically examined customers' emotional response (e.g. pleasure and arousal) or cognitive judgment (e.g. website quality) as a factor of customer satisfaction and behaviour.

Based on the S-O-R model, scholars have empirically confirmed the positive impact of customers' emotional response on satisfaction such as pleasure and arousal (Ha and Lennon, 2010; Eroglu et al., 2003) in addition to behavioural intentions (Ha and Lennon, 2010; Fiore et al., 2005). Furthermore, Rodgers et al. (2005) found that customers' positive view of a website in general and specifically its content enhance their satisfaction. Another study, by Kim and Niehm (2009), found that information quality is optimistically linked to customers' behavioural intention (e.g. recommending the site to others). Thus, online customers who observe the information delivered to be of high quality will probably be satisfied with the website and therefore generate eWOM.

Because of the significant power of eWOM that has been recognised (Awad and Ragowsky, 2008), scholars have noted the importance of customers' emotional response and cognitive judgment in relation to eWOM communication (Allsop et al., 2007; Jones et al., 2006). Ladhari (2007) found that emotional response was a significant predictor of customer satisfaction and the likelihood of generating WOM. In a study by Jones et al. (2006), the authors found that both emotional response and cognitive judgment could encourage customers to generate positive WOM. Based on the above information, it can be clearly seen that customers' positive emotions and perceptions about a website and its design will increase the e-satisfaction level and lead to the generation of more eWOM.

As mentioned earlier in this section, previous marketing and satisfaction research has emphasised the significant role of satisfaction in forecasting diverse behaviour outcomes such as WOM (Ladhari, 2007; Jones et al., 2006). Moreover, customers engaging in WOM communication are heavily connected with customer satisfaction level (De Matos and Rossi, 2008; Ladhari, 2007). In the online setting, satisfaction is a significant factor of positive eWOM (Jones et al., 2006). Swan and Oliver (1989) reported that customers who are satisfied with a store environment are more willing to recommend the store or its product to others. Another study, by Ladhari (2007), found that satisfied customers are more likely to generate WOM in a film consumption context.

Although many scholars have recommended satisfaction as a straight predictor of WOM, a comprehensive WOM model that includes factors of satisfaction has not been extensively explored. Many scholars have examined the mediating role of satisfaction between emotional response, cognitive judgment and behaviour. Ladhari (2007) found that satisfaction mediates the association between customers' emotions and WOM. In addition, Finn et al. (2009) confirmed that satisfaction mediates the relationship between cognitive judgment and positive WOM intention. Literature on satisfaction recommends that both customers' emotional response and cognitive judgment antecedents need further investigation to explain satisfaction. Thus, it is deemed important to know and learn about how the customers' emotional response and cognitive judgment towards website design produces e-satisfaction and how e-satisfaction enhances or encourages customers to generate positive eWOM. Given the rationale above, the following hypotheses is developed (Figure 3.19):

**H15. Customer e-Satisfaction will influence tourists' eWOM intention.**



Figure 3.19 The Fifteenth Hypothesis

### 3.7 Electronic Word of Mouth (eWOM)

According to Zhu and Zhang (2010), eWOM is expected to affect sales if consumers highly depend on online reviews when making their decision. This reliance depends on several factors such as product and consumer characteristics, in addition to other factors such as web design (e.g. the display of rating, etc.). Scholars have confirmed that searching for information is considered as one of the essential parts of the purchase decision process (Gu et al., 2012; Engel and Blackwell, 1982; Nicosia, 1966). Usually, customers adopt two methods when looking for information: online method, eWOM (e.g., online reviews, blogs), and offline method (e.g., family and friends, sales-people, magazines)



WOM information. The reason behind these two methods is to help structure their purchase decisions (Zhu and Zhang, 2010).

Although customers can find and obtain information regarding products from many sources, User Generated Content (UGC) such as WOM is regarded as more trustworthy than marketing-generated content (Bickart and Schindler, 2001), and it plays an essential role in the purchase decision (Gu et al., 2012). In the past, WOM spread between relatives and friends in face-to-face interactions and exchanges. Then, the appearance of online websites transformed WOM from face-to-face interactions to public online postings (eWOM) that are attainable by any user online (Gu et al., 2012; Dellarocas, 2003). A thorough pre-purchase information search decreases the probability of customers making incorrect purchase decisions (Zhu and Zhang, 2010; Whinston, 2009; Clemons et al., 2006; Bolton et al., 2004; Pavlou and Gefen, 2004; Forsythe and Shi, 2003). That is why customers prefer to gather information regarding products from several information sources, such as eWOM sites that offer access to hard to obtain information such as usage experience, quality and performance (Gu et al., 2012).

From the above arguments, it can clearly be seen that eWOM plays an important role in influencing online customers' purchases decisions if they base their purchase intentions or behaviour on online reviews (Floh et al., 2013; Senecal and Nantel, 2004). Therefore, the following hypothesis is formed (Figure 3.20):

**H16: eWOM will affect Customer/Tourist Purchase Decision (booking a hotel).**



Figure 3.20 The Sixteenth Hypothesis

Therefore, the relationship between organism factors such as e-satisfaction and eWOM and the response factor such as customer purchase decision can be presented as in Figure 3.21.

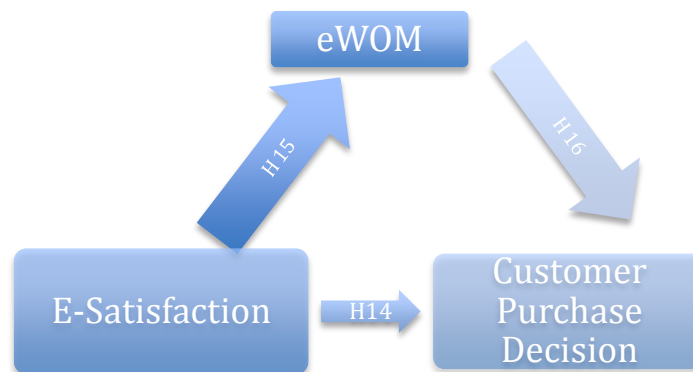


Figure 3.21 The Relation between e-Satisfaction, Electronic Word of Mouth and Customer Purchase Decision

### 3.8 Customer Purchase Decision (CPD)

The aim of any e-business portal is to attract customers, enhance their experience and enable them to complete their online transactions when browsing the company website. Many e-commerce studies have combined purchase behaviour or behavioural purchase decision (willingness) of online users as the last outcome when developing their models (e.g. Wu et al., 2013; San Martín and Herrero, 2012; Wen, 2012; White and Yuan, 2012; Zhu and Zhang, 2010; Munnukka, 2008; Sam et al., 2008). According to Qureshi et al. (2009), studies differ in terms of nomenclature and commonly consider and define purchase decision as intended enquiry, willingness to buy, purchase intention and willingness to transact. The significant value in evaluating this willingness is obvious, as the return on investment for every e-business practice is dependent on the amount of online users who make actual purchases. The case of booking hotels online is even clearer, as mentioned earlier, in Chapter 2, section 2.2. An increasing number of people are booking online due to its practicality in their busy modern life; that is why studying online customer behaviour is essential, as it increases profit. Therefore, purchase decision is considered as the main interest of this study and the last outcome-dependent variable in the proposed framework. The framework proposed in this research is close matched with Lau et al. (2011) and Zhu and Zhang (2010). Moreover, it is worth mentioning that this research aims to evaluate purchase decisions (willingness to book a hotel in addition to willingness to recommend the website to others and leave written reviews) and is not measuring customers' actual purchases. Purchase decision is an adequate measurement that affiliates with widespread research that points out a robust association between purchase behaviour and real behaviour (e.g. Irani et al., 2009; Herrero Crespo and Rodríguez del Bosque, 2008; Fishbein and Ajzen, 1974). Hence, it is easier to measure it methodologically; scholars validate the use of purchase decision behaviour such as willingness and intention as a substitute and replacement for actual behaviour. For the goal of

comparing different online shopping websites, Jarvenpaa et al. (1999) argued that the level and extent of users expressing their willingness to purchase from a certain website is a sensible predictor of actual purchase behaviour.

### 3.9 Conceptual Framework and Proposed Hypotheses

This section presents the conceptual framework of this thesis that includes 16 hypotheses and 13 constructs adopted from previous validated studies (Figure 3.22).

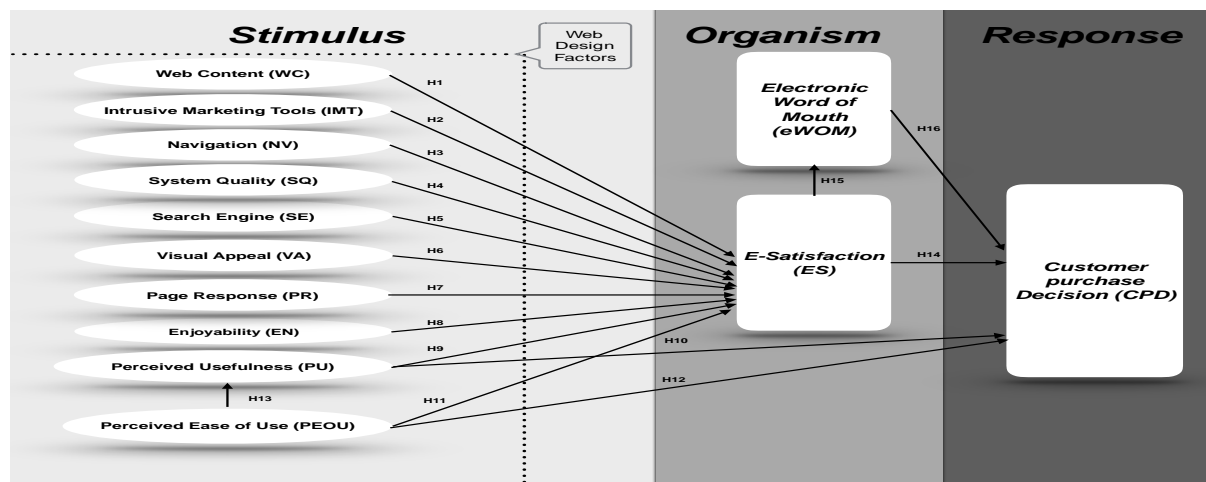


Figure 3.22 The Conceptual Framework of the Study

In addition, this section provides constructs and details of the hypotheses used to develop the conceptual framework as follow:

- **H1: Website content quality will positively affect e-satisfaction with a tourism/third-party hotel website, (Website Content - WC).**
- **H2: Online intrusive marketing tools (Pop-up Ads and Banner Ads) will positively affect e-satisfaction with a tourism/third-party hotel website, (Intrusive Marketing Tools - IMT).**
- **H3: Website Navigation will positively affect e-satisfaction with a tourism/third-party hotel website, (Navigation - NV).**
- **H4: System quality will positively affect e-satisfaction with a tourism/third-party hotel website, (System Quality - SQ).**

- **H5: Search engine will positively affect e-satisfaction with a tourism/third-party hotel website, (Search Engine - SE).**
- **H6: Website visual appeal will positively affect e-satisfaction with a tourism/third-party hotel website, (Visual Appeal - VA).**
- **H7: Website page response will positively affect e-satisfaction with a tourism/third-party hotel website, (Page Response - PR).**
- **H8: Website enjoyability will positively affect the e-satisfaction with a tourism/third-party hotel website, (Enjoyability - EN).**
- **H9: Perceived usefulness of the website will positively affect e-satisfaction with the third-party hotel website, (Perceived Usefulness - PU).**
- **H10: Perceived usefulness of the websites will positively affect the customer's willingness to book a hotel online, (Perceived Usefulness - PU).**
- **H11: Perceived ease of use of the website will positively affect e-satisfaction with the third-party hotel website, (Perceived Ease of Use - PEOU).**
- **H12: Perceived ease of use of the website will positively affect willingness to book a hotel online, (Perceived Ease of Use - PEOU).**
- **H13: Perceived ease of use of the website will positively affect the perceived usefulness, (Perceived Ease of Use - PEOU).**
- **H14: Tourist's e-satisfaction with a tourism/third-party hotel website will positively affect their willingness to book a hotel (purchase decision) from that tourism/third-party hotel website, (Electronic Satisfaction - ES).**
- **H15: Customer e-Satisfaction will influence tourists' eWOM intention, (Electronic Satisfaction - ES).**
- **H16: eWOM will affect tourist/customer purchase decision (booking a hotel), (Electronic Word of Mouth – eWOM).**

Based on the above hypotheses, Table 3.1 provides clear understanding of the factors which are related to the next chapter.

**Table 3.1 Definition of Constructs**

	<b>Factors</b>	<b>Explanation</b>	<b>Source</b>
1.	Purchase Decision	Series of choices created by a customer before actual purchase; it starts when the customer has the willingness to buy. The customer needs to choose where to make the purchase, which brand, which model, when to purchase, the amount he/she should spend, and the method of payment.	Kotler (1997) and Zhu and Zhang (2010)
2.	Word of Mouth	<i>“Oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as non-commercial, regarding a brand, a product, a service or a provider”</i>	Lu et al. (2013, p.597)
3.	Website e-Satisfaction	A positive emotional state that results from the website search experience.	McKinney et al. (2002)
4.	Perceived Usefulness	The extent of the belief that an individual has towards enhancing his/her job function by the use of a specific system.	Davis (1989)
5.	Perceived Ease of Use	The perceived belief that an individual has towards a particular system being simple to use.	Davis (1989)
*	Web design	The individual’s assessment of a website’s aesthetics reflecting the individual’s needs and the general superiority of the website.	Aladwani and Palvia (2002)
6.	Content Quality	The volume, accuracy and amount of information provided by the website regarding the products and services offered.	Nusair and Kandampully (2008)
7.	Intrusive Marketing Tools	Pop-up Ads: The type of advertisement that appears in a separate window when the user connects to a web page.  Banner Ads: Type of advertisement that appears at the apex of a webpage.	Tavor (2011)  Parsons and Oja (2011)
8.	Navigation	The navigation of World Wide Web content through information sites that are linked via hyperlinks or hypermedia. The interface that is used for navigation is called a Web Browser.	Sparks and Browning (2011) and Kim et al. (2011)
9.	System Quality	Often reflected in how the website is performing. Many studies have declared that the performance measurement encompasses: time of page response, visual appeal, functionality, and/or availability.	Ahn et al. (2007) and McKinney et al. (2002)

10.	Search Engine	Considered to be a software program that mainly emphasises searching and collecting the information related to the required content and matter. The primary function of the search engine is to make all the information available on the web.	Sparks and Browning (2011)
11.	Visual Appeal	Considered to be within the system quality parameter; several scholars have indicated that elements such as graphics, website colour and aesthetics in general contribute to visual appeal.	Cebi (2013)
12.	Page Response	How the website interacts with the user as they browse it.	Jiang et al. (2010)
13.	Enjoyability	A type of service provided for the purpose of giving an enjoyable environment to the customers.	Cho et al. (2012)

### 3.10 Control Variables

It is of significant interest to this PhD research to consider the different variables that might play important roles in customer behaviour online. Consequently, this thesis recognises certain demographics and tourism-related characteristics and how they might influence customer booking behaviour online. This kind of examination has yet to gain sufficient empirical results in prior studies. For instance, no other studies have focused on the Middle East as a developing region and distinguished between frequent tourists (e.g. business travellers, who travel frequently on business) and non-frequent tourists (e.g. leisure tourist/travellers, who travel for vacation or during holidays) when it comes to their hotel website experiences. Moreover, to the researcher's knowledge, no studies have been conducted in Saudi Arabia to evaluate Generation Ys' online booking hotel behaviour (see section 2.10), nor have there been any comparisons to other groups such as employees in Saudi Arabia.

#### 3.10.1 Demography

Various studies have indicated that usually marketers study demographic information such as gender, age, income, education, location of residence and occupation (e.g. Yaya et al., 2014; See-To et al., 2014; Hsieh and Yang, 2012; Hansen and Jensen, 2009). Demography can add to and enhance the research, by presenting the characteristics of the sample, in addition to indicating how differences in a demographic variable might influence a given user's behaviour. For example, Yang and Lester (2005) stated that the association between various facets of behavioural outcomes is moderated by gender. Scholars show that men usually take a risk more often than women; men also tend to be more task and system orientated ( Kim et al., 2011; Park et al., 2009; Dennis et al., 2009; Powell and Ansic, 1997). Dennis et al. (2009) examined demographics focusing on education. They declared in their study that

educated individuals (with high education level, e.g. university) are more contented when dealing with or relying on online shopping websites, and they like to gather information online, more than less educated people. The authors examined other demographic factors such as income. The results show that users' income could influence their satisfaction level. Moreover, the authors looked at age, claiming that mature customers rely on fewer decision criteria, while young users seek alternative information such as eWOM.

### **3.10.2 Internet Experience**

Internet experience or buying online has been discovered to influence behaviour as well. For example, a study by Jin et al. (2008) discovered that users who are less experienced depend more on a company's reputation. Another study, by Chang and Chen (2008), examined Internet experience on web quality interface, customer satisfaction and e-loyalty. The authors cited studies by Chang (2006) and Blake and Neuendorf (2003), who claimed that Internet experience plays an important role in understanding online users' attitude and behaviour. In addition, a study by Sam et al. (2009) stated that Internet experience is considered as an essential factor affecting customers' perception of web quality and should be investigated more in future studies.

### **3.11 Conclusion**

In this chapter, and from exploring and examining the relevant literature, a conceptual framework has been developed to address the research gap that depends on various theories such as TAM and S-O-R as well as web quality dimensions. Additionally, this chapter identifies factors obtained from other studies in the tourism field and other contextual research. The framework contains 13 constructs: Perceived Ease of Use, Perceived Usefulness, Website Content, Intrusive Marketing Tools (Pop-up Ads and Banner Ads), Navigation, System Quality, Search Engine, Visual Appeal, Page Response and Enjoyability; these 10 factors first play a role as web design elements and second they indicate the Stimulus (S). e-Satisfaction and eWOM are the factors that indicate the Organism (O). Finally, Purchase Decision indicates the Response (R) in this study

Also in this chapter, 16 hypotheses have been developed on the basis of the conceptual approach to identify the elements that influence online customer satisfaction and electronic word of mouth and willingness to book a hotel from a tourism website. Control variables, for example, demographics and Internet experience, were also identified as characteristics that could moderate the relationship between constructs. The next chapter will discuss the suitable methodology that can be adopted to accomplish this study objectives and validate the stages taken to carry out the research.

## Chapter 4 - Research Methodology

### 4.1 Introduction

The previous chapter outlined the relevant, significant elements and the hypotheses that influence an online user's satisfaction and purchase decision within the tourism sector. Therefore, it proposed a conceptual framework, see section 3.9; also, it listed and explained the hypotheses of this research in relation to the dependent and independent variables. To validate the conceptual framework and to test the anticipated hypotheses, a suitable methodological approach should be adopted. Thus, this chapter mainly presents a review of the philosophical stance that will be adopted in this study, and justifies the adoption of this stance. Then, an overview of the diverse methodological approaches in addition to explanation of the different approaches and methods used for this study will be provided. A research design will be established in order to track the research steps systematically. The study discusses the measurement development scale, which is fully illustrated to include the origin of the items, type of scale, process validation, translation should the need occur, time horizon and the survey development in detail. Thereafter, the procedure of collecting the data and the size of the target sample will be discussed. Additionally, in this chapter the ethical considerations of the study will be covered; see section 4.16. Finally, this chapter will present and discuss the processes of the data analysis and statistical techniques selected.

### 4.2 Research Philosophy

Research philosophy is considered as an over-arching terminology that is related to the knowledge development and the nature of knowledge that comprises vital assumptions about how everybody analyses and views the world (Saunders et al., 2012). Philosophical topics or issues are important for conducting productive research. The research philosophy signifies the technique of how researchers view the world and influences the strategies adopted to investigate the topic (Saunders et al., 2012). Furthermore, it assists in identifying research approaches, clarify accomplished research design and encouraging researchers to discover new approaches (Easterby et al., 2012). Thus, it is essential for any researcher to be conscious and to recognise the philosophical commitments that support their research. Guba and Lincoln (1994) classified the research philosophies into three basic categories: epistemology, ontology and methodology. This methodology assists the theoretical principles and the grounding of a research, by giving direction and guidance on how to conduct a research (Jennings, 2009).

Ontology is connected to the study of the nature of social reality (Saunders et al., 2012). There are two aspects of ontology, objectivism and subjectivism. Objectivism is linked with how social entities exist



independent of social actors. Subjectivism relates to social phenomena that are formed from the insights and consequent actions of social actors. On the other hand, Epistemological is concerned with answering the question of what is regarded as acceptable knowledge in a discipline. Epistemology is usually divided into positivism and interpretivism, which are respectively based on the objective and subjective point of ontology (Collis and Hussey, 2013; Saunders et al., 2012; Weber, 2004). Figure 4.1, adopted from Saunders et al. (2012), validates the *research onion* showing the diverse philosophy, tactics, strategies and choices. Based on this diagram, the philosophy and approaches in this research will adopt positivism as a philosophy, deductive approach, online survey strategy, mono methods and cross-sectional classification for time horizon. However, a justification of these selections will follow. Thus, the coming sections will start to discuss the different paradigms and approaches for conducting the research. This overview will help to present the rationale behind the selection as being the most appropriate for this research study.

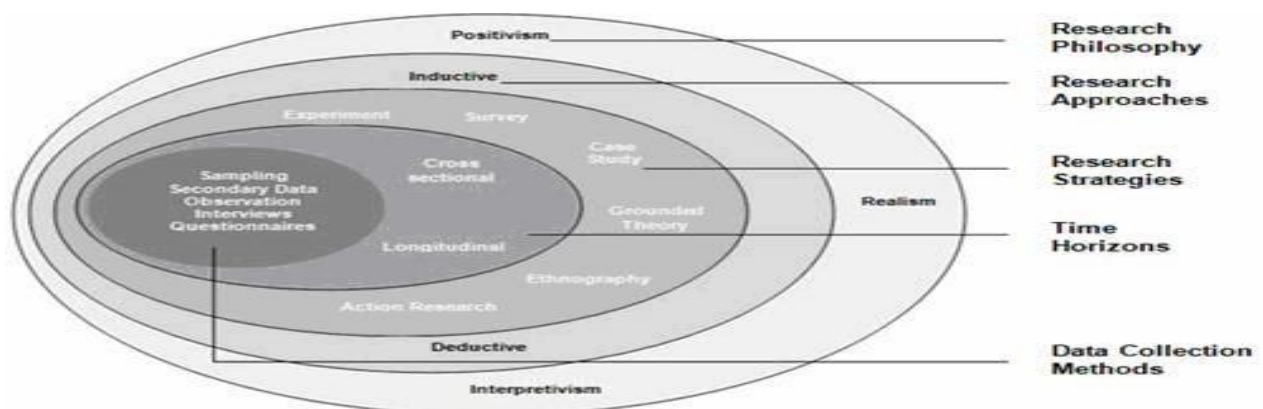


Figure 4.1 Research Onion

Source: Saunders et al. (2012)

### 4.3 Research Paradigms, Strategies and Approaches

It is important to recognise the differences between each paradigm, strategy and approach, in order to select and justify the most appropriate paradigm or approach to apply for this research.

#### 4.3.1 The Difference between Positivism and Interpretivism

Positivism is a philosophy that adopts the viewpoint of the natural scientists. With regard to this, scholars usually deal with an observable social reality and, at the end of their research, findings can be generalised. It is almost like using an accessible theory to develop hypotheses for testing and confirming it (Saunders et al., 2012). Collis and Hussey (2013) declared that using certain theories,

elements and evolving hypotheses were the primary concerns and objectives of positivist research. As mentioned earlier, positivism is closer to the perspective of natural science; therefore, this philosophy carries out research in an objective way. In addition, this philosophy must be independent of the research topic, with no personal values, and must use hypotheses to examine the accessible theory (Bryman and Bell, 2015; Easterby et al., 2012; Saunders et al., 2012). However, several scholars have claimed that the social phenomenon is a complex one and it cannot be theorised by using a framework that can be applied to all cases. Moreover, scholars involved in a society will not be able to fully separate themselves from their research observation (Collis and Hussey, 2013).

In contrast, interpretivism philosophy states that the social world of business and management is far too complicated to be described by a theory or set of laws as it is in the physical sciences. Interpretivism philosophy states that generalisation of the findings is critical and for any researcher it is essential to know the differences among individuals in our role as social actors. Therefore, investigating and discovering the subjective meanings that inspire human actions can be understood and that is because humans do things in different ways based on how they recognise and understand situations (Saunders et al., 2012). An interpretivist strategy stands in the place where authenticity is subjective and multiple. Interpretivist scholars engage, observe and understand what they research. The process of the research is inductive and applies qualitative methods (Bryman and Bell, 2015; Easterby et al., 2012; Saunders et al., 2012). In this strategy, researchers can get involved with and participate in the research process. The findings of the research are developed jointly by researchers and participants together via interactive interviews, observations and interpretation by the researcher (Ponterotto, 2005). Thus, interpretivist researchers can include and add their personal view to the research results. Gilbert and Stoneman (2015) stated that positivism philosophy usually follows a deductive approach, while the interpretivism strategy normally uses an inductive approach. Both deductive and inductive approaches will be explained in more detail in the next section. Table 4.1 illustrates a summary of the assumptions and implications of positivism and interpretivism.

**Table 4.1 The Assumptions and Implications of Positivism and Interpretivism**

	Positivism	Interpretivism
<b>Ontological Assumption</b>	<ul style="list-style-type: none"> <li>Reality is objective and singular</li> <li>The researcher and reality are separate</li> </ul>	<ul style="list-style-type: none"> <li>Reality is subjective and multiple</li> <li>The Researcher interacts with that being researched</li> </ul>
<b>Epistemological Assumption</b>	<ul style="list-style-type: none"> <li>Objective reality exists beyond the human mind</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge of the world is intentionally constituted through live human experiences</li> </ul>
<b>Axiological Assumption</b>	<ul style="list-style-type: none"> <li>Research is value-free and unbiased</li> </ul>	<ul style="list-style-type: none"> <li>Research is value-laden and bias is present</li> </ul>
<b>Rhetorical Assumption</b>	<ul style="list-style-type: none"> <li>Formal writing style</li> <li>Passive voice</li> <li>Quantitative words and set definitions</li> </ul>	<ul style="list-style-type: none"> <li>Informal writing style</li> <li>Personal voice</li> <li>Qualitative terms and limited definitions</li> </ul>
<b>Methodological Assumption</b>	<ul style="list-style-type: none"> <li>Process is deductive</li> <li>Study of cause and effect with a static design</li> <li>Research is context free</li> </ul>	<ul style="list-style-type: none"> <li>Process is inductive</li> <li>Study of mutual simultaneous shaping of factors with an emerging design</li> <li>Research is context bound</li> </ul>
<b>Methods</b>	<ul style="list-style-type: none"> <li>Quantitative</li> <li>Statistics</li> <li>Content analysis</li> <li>Hypotheses testing</li> <li>Large numbers sampling size which are selected randomly</li> </ul>	<ul style="list-style-type: none"> <li>Qualitative</li> <li>Hermeneutics</li> <li>Phenomenology</li> <li>Gathering rich data from which ideas are induced</li> <li>Small numbers sampling size which are chosen for specific reasons</li> </ul>
<b>Validity</b>	<ul style="list-style-type: none"> <li><b>Certainty: data truly measures reality</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Defensible knowledge claims</b></li> </ul>
<b>Reliability</b>	<ul style="list-style-type: none"> <li><b>Replicability: research results can be reproduced</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Interpretive awareness: researchers recognise and address implications of their subjectivity</b></li> </ul>

Source: Collis and Hussey (2013)

### 4.3.2 The Difference between Inductive and Deductive

There are two main approaches for any research: the first is called a deductive (Quantitative) approach and the second is called an inductive (Qualitative). A deductive approach comprises the theory development. Based on what is acknowledged about a certain field, a scholar concludes hypotheses that clarify fundamental associations among variables. The theory then should be examined and empirically validated, which involves data collection. Bryman and Bell (2015) stated that the final stage must involve a movement in the other direction from the direction of the deduction to complement the study; it also includes introduction, as the investigator deduces the implications of the research findings for the theory that encouraged the entire exercise. In contrast, in an inductive strategy, theory is the outcome of research (ibid). Investigators must examine the problem under study, through going into the field themselves to know what is happening; therefore, the nature of the phenomenon or the problem will be clear and easy to understand. To make it easier to understand the two main approaches, Figure 4.2, adopted from Trochim and Donnelly (2006) illustrates their idea on the stages, where each approach must be followed in a research project.

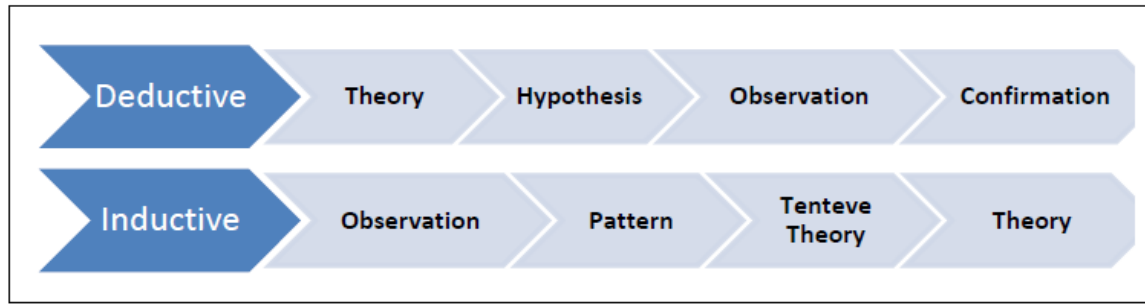


Figure 4.2 Steps of Deductive and Inductive Research

Source: Trochim and Donnelly (2006)

Creswell (2010) declared that, when any research topic has a large body of literature and available materials that can help and allow scholars to explain and develop a theoretical framework and hypothesis, normally the appropriate choice is to use the deductive approach. In contrast, when any research topic is new and there is minimal literature available, the inductive approach is normally the appropriate choice. Thus, according to Bryman and Bell (2015), an essential factor of both philosophies is that a deductive strategy should be linked to a quantitative approach, while an inductive strategy is regularly linked with a qualitative approach. The next section will explain the qualitative and quantitative approaches in more detail.

### 4.3.3 The Difference between Qualitative and Quantitative

In exploratory research designs, a qualitative method is often used to determine and realise ideas and to increase the understanding of human behaviour. This method includes observation and interpretation (Zikmund et al., 2010). The facts and data in this method are usually unstructured and rely on a free form, where the target sample size is generally not large (e.g. interviews, case studies, observations and focus groups). In contrast, in the descriptive and causal research designs a quantitative method is regularly used to examine hypotheses and relationships. This method includes evaluating and examining empirical data (ibid). This method requires a large sample to gain generalised results (e.g. survey, experiments and psychometric tests). Table 4.2, adopted from Bryman and Bell (2015), summarises the primary differences between the quantitative and qualitative methods with regard to the association between theory and research, epistemological and ontological considerations. These differentiations do not mean that some characteristics of the two methods cannot be joined together in some cases; both the qualitative method and the quantitative method can be applied to any research paradigm appropriately and may complement the other (Saunders et al., 2012).

**Table 4.2 Quantitative vs. Qualitative Research Strategies**

	<b>Quantitative</b>	<b>Qualitative</b>
<b>Principal orientation to the role of theory in relation to research</b>	Deductive; testing of theory	Inductive; generation of theory
<b>Epistemological orientation</b>	Natural science model, in particular positivism	Interpretivism
<b>Ontological orientation</b>	Objectivism	Constructionism

Source: Bryman and Bell (2015)

Thus, from the philosophical point of view, research can be considered as either exploratory or confirmatory. The majority of the exploratory research designs generate qualitative data and develop hypotheses, as a result. On the other hand, confirmatory research designs often examine hypotheses by using quantitative data (Zikmund et al., 2010). Additionally, in quantitative research the developed hypotheses will be tested, where in qualitative approaches the propositions should be confirmed.

#### **4.4 Research Approaches Adopted for this Study and the Selection Rationale**

This research is built on the objectivist strategy; positivism is selected through a deductive method with a focus on quantitative data collection and analysis methods. The rationale behind the selection method for this research is based on the nature of the problem addressed and prior literature in the same domain. The principal objective of this study is to investigate and examine the impact of the online shopping environment on eWOM and customer purchase decisions with respect to online bookings in the hotel industry, and develop a framework. The study aims to assess whether or not this impact is due to customers' web satisfaction and willingness to book a hotel online. Investigating the moderating effect of several variables such as demographics and Internet experience was also a point of interest for exploration. As mentioned earlier, in Chapter 2, section 3, a substantial number of existing theories and models address the domain of customer behaviour to test several objectives of website quality and generating eWOM separately. Accordingly, there is comprehensive and up-to-date literature present in the field of online customer behaviour, web design, eWOM and tourism for investigating the constructs and the relationships between these constructs and the hypotheses. Consequently, it was not necessary to propose and develop new variables or to investigate the cause and effect of relationships. As a result, it is possible to propose a justifiable conceptual framework for reaching this study's objectives. Hence, based on the ontological point of view, the positivist method is compatible with this current study. As mentioned earlier in this chapter, the positivist's role is to identify and discover a set phenomenon or reality. This includes examining a set of hypotheses to verify their accuracy, in order to be able to generalise the proposed theory. The proposed framework

and the relationships among dependent and independent variables were presented in Chapter 3, section 3.9, based on studying and evaluating a considerable number of existing current studies that address the same domain.

Based on the above, with a positivism strategy adopted and a theoretical research framework developed, this research will use a deduction method. Collis and Hussey (2013) basically started their research by evaluating the literature in order to determine a suitable theory and hypotheses. Following that, they validated and examined the hypotheses empirically to verify the outcome. Therefore, the validation procedure must include the data collection. For this research, a comprehensive and representative number of valid survey participants must be collected in order to verify and generalise the associations between the variables of the conceptual framework. Thus, for the purpose of this study, it seems that the quantitative approach is more appropriate and applicable than the qualitative method. According to Creswell (2010), the quantitative approach is based on objectivism ontology, positivism epistemology and deductive methodology. Consequently, this is the primary method for this research to follow to achieve the study objectives.

Moreover, Saunders et al. (2012) presented many qualitative data resources, such as secondary data (e.g. raw data and summaries of published studies), structured observation, laboratory experiments and survey questionnaires. Nonetheless, a survey method is consistent with the positivism deductive method and will be suitable for this study. This is because of the fact that a questionnaire is valuable when the results need to be generalised between the entire population and need to be spread geographically with respect to their characteristic, attitude or behaviour (Pinsonneault and Kraemer, 1993). In addition, surveys offer a quick, cheap, well-organised and accurate means of assessing information about a targeted population (Zikmund et al., 2010). Koppius et al. (2005) state that the survey method is the best available strategy for any researcher whose main interest is to collect original data to describe a large target population that is too large to detect directly.

Although the quantitative approach was considered as the main source for collecting data in this study, the qualitative approach can also be applied in a narrow part of this study. In more detail, the qualitative method in this research will be used to validate the items used to evaluate and measure each element in this research model; this will be discussed later in this chapter. The motivations behind including this method of research are: first, as mentioned earlier, in Chapter 3, section 3.4 on the development process of the research model, it is clearly seen that all the selected factors for this study have been investigated and examined in an atmosphere that is not connected or related to the industry of focus (i.e. hotels/tourism industry). Next, this study will investigate a developing country (i.e. the Kingdom of Saudi Arabia), which probably has many cultural differences from the countries that have been previously researched and examined; also, a large percentage of the variable items might not have been studied in the targeted context. Thus, dedicating a small amount of the research

to the qualitative method will add value in the validation of the measurement items chosen. Gathering qualitative data can be accomplished by applying a small focus group or interviews to review the items.

In addition, one important factor that must be accounted for while adopting certain research methods is the methods applied by prior scholars who covered and investigated the same topic area. From Chapter 2, sections 2.6 and 2.9, it was found that most researchers into customer behaviour, web designers, IT, information systems and eWOM have the intent to apply and adopt a positivist, deductive method when investigating and testing the attitude or behaviour of customers. The following are some examples from the literature who have adopted and applied a positivist, deductive strategy, with a survey method: Ruiz-Mafé et al. (2013), Rahimnia and Hassanzadeh (2013), Cebi (2013), Floh et al. (2013), Bernardo et al. (2012), Rose et al. (2012), Gu et al. (2012), Kim and Gupta (2012), Lee and Kozar (2012), Lau et al. (2011), Sparks and Browning (2011), Akbulut and Akbulut (2010), Qureshi et al. (2009), Kim et al. (2009), Bai et al. (2008), Premkumar and Bhattacharjee (2008), Ahn. et al. (2007), Ethier et al. (2006), Cao and Mokhtarian (2005), Koppius et al. (2005), Mills and Morrison (2003), Aladwani and Palvia (2002), McKinney et al. (2002), and Moon and Kim (2001).

Based on what has been found in the previous literature available, other scholars match this view. For instance, Verschuren et al. (2010) state that knowing and exploring what a chosen group of people think and feel is the aim of a survey and its application is very common in business and management research. Moreover, Chen and Hirschheim (2004) declared that the majority of information systems studies rely on the methods and strategies that empirically reply to their research questions with hypotheses testing. Thus, adopting and applying a positivist, deductive, quantitative, survey method is very compatible and parallel with methods used in previous research in order to accomplish compatible objectives, and hence it is relevant to this study.

### **4.5 Research Design**

For any research it is essential to develop the entire design that shows the way the study is going to be conducted, focusing on every stage that is going to be carried on throughout the study. According to Saunders et al. (2012), research design is defined as a general plan that shows the way the study is conducted in answering study questions. Another definition of research design, by Creswell (2010), is a whole process for expressing research problems, illuminating the domain selected for data collection, addressing ethical requirements when entering into the field, the procedures used for data collection and analysis, and the researcher's findings and discussion. Moreover, the research design covers a wide range of topics that involve the research purpose, research time frame, research

procedures, sampling, data collection and data analysis methods (Sekaran and Bougie, 2016; Bloomberg et al., 2011). Additionally, when referring to research design, several scholars specifically address the techniques of data collection and analysis methods (e.g. Bryman and Bell, 2015; Zikmund et al., 2010). Despite covering diverse topics, the purpose of research design is "to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible" (De Vaus, 2001, p. 9).

This study developed the research design shown in Figure 4.3 in order to demonstrate the overall design used for this study. In the previous chapters, after evaluating the literature, this study has shown that there are gaps in the previous research, for example, in identifying the deterrents of online tourist satisfaction with hotel websites and the purchase decision, in addition to what encourages online users to read other reviews or post a review online. Therefore, a conceptual framework was proposed and developed to explain the associations between web design, e-satisfaction, eWOM and willingness to purchase (book a hotel online) and their antecedents. A positivist/deductive method is adopted which will empirically validate the hypothesis and the data gathering instrument.

Applying a survey method is comprised of developing a suitable instrument or scale for measuring every construct, granting of ethical approval, questionnaire validating, structuring the complete survey, piloting, defining the target sample and, lastly, conducting data collection. Then, the empirical data collected should be analysed to provide empirical evidence of the framework relationships and group differences (e.g. travel habit, Internet experience and employment status). At this point, the results will be discussed and mirrored to the literature discussed in Chapter 2 and any relevant issues will be highlighted. The next sections (4.6 - 4.17) will demonstrate every phase in this study design and clarify how the researcher addressed each of them.

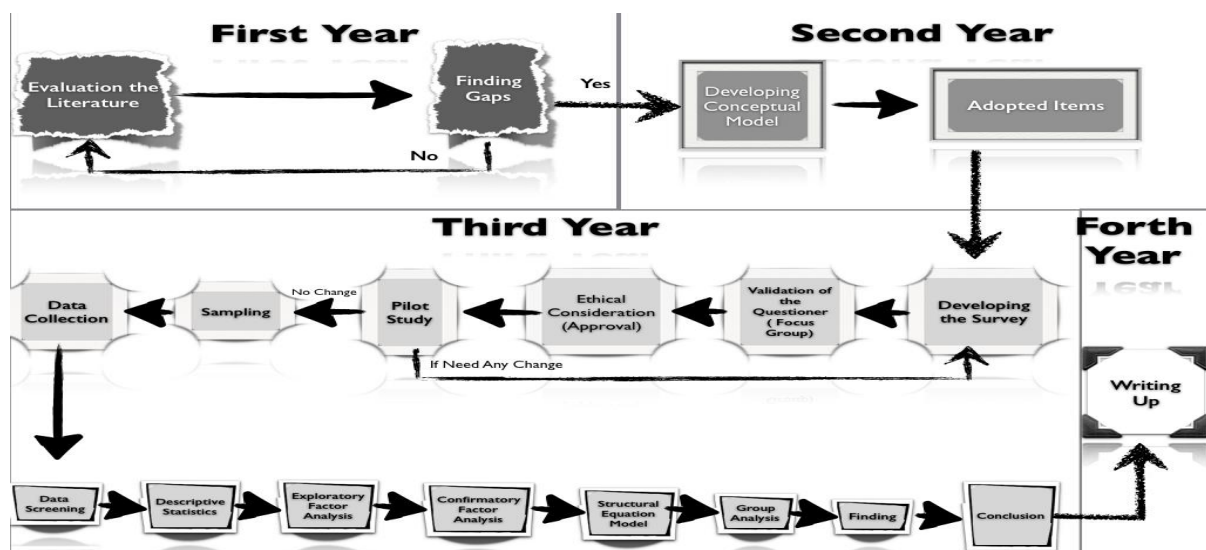


Figure 4.3 Research Design



## 4.6 Instrument Development

The framework developed in Chapter 3 shows the associations between 13 factors: Web Content, Intrusive Marketing Tools, Navigation, System Quality, Search Engine, Visual Appeal, Page Response, Enjoyability, Perceived Usefulness, Perceived Ease of Use, e-Satisfaction, Electronic Word of Mouth and Purchase Decision. In order to measure these factors empirically, they must be transferred to operational items. The best way to measure these constructs is by tapping and pointing each construct proposed after evaluating the literature to adopt suitable previously tested items. Then, the constructs will be verified if it is appropriate for the context by using both interviews and a focus group. This section will classify the factors used in this research to measure each construct of the developed framework. Hair et al. (2010) suggested that, during the Structure Equation Modelling (SEM) analysis, there should be a minimum of three items for every construct. Thus, in this study it was decided to have no fewer than three items for each factor in the framework. The tables below list the questions adopted, codes, wording and scale used, after modifying parts of the original text to fulfil the study context (Third-Party Hotel Websites).

**Website Search Engine and Navigation** – items are adopted from Lee and Kozar (2012) and Srinivasan et al. (2002) which are validated and their scale anticipated to measure the degree to which an individual believes that an e-retail website is easy to navigate through and use in terms of findings things, getting around and placing orders. Table 4.3 shows each item's explanation with the coding used.

**Table 4.3 Items for Website Search Engine (SE) and Navigation (NAVI)**

Code	Statements	Source	Scale
<b>Search Engine</b>			
<b>SE1</b>	The website provides multiple search features (e.g., search engine, menu bar, go-back-and-forward button, etc.) to obtain the target information.	Lee and Kozar (2012)	Seven-Point Likert Scale
<b>SE2</b>	The web page that I am looking for can be reached through multiple pathways (e.g. Google and Yahoo).		
<b>SE3</b>	There are multiple ways to access the web page that I am looking for and/or return to shopping menus.		
<b>SE4</b>	It is very easy to locate what is needed in this website.		

<b>SE5</b>	The website keeps the user oriented as they shop.		
<b>Navigation</b>			
<b>NAVI1</b>	Navigation through this website is not very intuitive	Srinivasan et al. (2002)	Seven-Point Likert Scale
<b>NAVI2</b>	A first-time buyer can make a purchase from this website without much help.		
<b>NAVI3</b>	It takes a long time to shop at this website.		
<b>NAVI4</b>	This website is a user-friendly site.		
<b>NAVI5</b>	This website is very convenient to use		

**Intrusive Marketing Tools ‘Pop-up Ads and Banner Ads’** – items are adopted from Edwards et al. (2002) which are reliable; their scale is used to measure the degree that a person perceives an advertisement as being helpful and useful. Table 4.4 shows each item’s explanation with the coding used.

**Table 4.4 Items for Intrusive Marketing Tools ‘Pop-Up Ads and Banner Ads’ (IMT)**

<b>CODE</b>	<b>Statements</b>	<b>Source</b>	<b>Scale</b>
*	The Hotel Banner ads or pop-up ads I saw were:	Edwards et al. (2002)	Seven-Point Likert Scale
<b>IMT1</b>	Helpful.		
<b>IMT2</b>	Important.		
<b>IMT3</b>	Informative.		
<b>IMT4</b>	Useless.		

**Website Content** – items are adopted from Lee and Kozar (2012) which are validated; their scale focused on measuring the degree to which an individual believes that an e-retail website interface is easy to understand and use in terms of searching and looking for things, getting around and placing orders. Table 4.5 shows each item’s explanation with the coding used.

**Table 4.5 Items for Website Content (WC)**

<b>Code</b>	<b>Statements</b>	<b>Source</b>	<b>Scale</b>
<b>WC1</b>	The contents provided by the website are easily understood.	Lee and Kozar (2012)	Seven-point Likert Scale
<b>WC2</b>	The website is designed for easy understanding.		
<b>WC3</b>	I can easily remember how to reach the same page when I visit next time.		

<b>WC4</b>	As time passes, I am more accustomed to the website with less effort.		
<b>WC5</b>	The website's wording is clear and easy to understand.		
<b>WC6</b>	The website has enough white space (or margins) to make it readable.		
<b>WC7</b>	Every page contains the appropriate amount of components to fit into a page.		
<b>WC8</b>	The website uses colours and structures that are easy on the eyes.		

**System Quality/Visual Appeal and Page Response** – items in Tables 4.6 and 4.7 are based on the work of two research projects. First, Table 4.6 is based on Mathwick et al. (2002), who measured how visually appealing an individual believes a website to be. Second, Table 4.7 is based on Harris and Goode (2004), who measured page response and the overall system quality of a website.

**Table 4.6 Items for Visual Appeal (VA)**

<b>Code</b>	<b>Statements</b>	<b>Source</b>	<b>Scale</b>
<b>VA1</b>	The way the hotel's website displays its products is attractive.	Mathwick et al. (2002)	Seven-Point Likert Scale
<b>VA2</b>	The hotel's website I have just visited is aesthetically appealing.		
<b>VA3</b>	I like the way the website looks.		

**Table 4.7 Items for Page Response (PR)**

<b>Code</b>	<b>Statements</b>	<b>Source</b>	<b>Scale</b>
<b>PR 1</b>	Providing services as promised.	Harris and Goode (2004)	Seven-Point Likert Scale
<b>PR 2</b>	Dependability in handling customers' service problems.		
<b>PR 3</b>	Performing services right the first time.		
<b>PR 4</b>	Providing services at the promised time.		
<b>PR 5</b>	Keeping customers informed about when services will be performed.		
<b>PR 6</b>	Prompt service to customers.		
<b>PR 7</b>	Willingness to help customers.		

<b>PR 8</b>	Readiness to respond to customers' requests.		
<b>PR 9</b>	Making customers feel safe when booking online.		

**Enjoyability** – items are adopted from Vrechopoulos et al. (2004); their scale is used to measure the degree to which an individual believes that a website for a particular store that he/she has just visited is fun and attractive. Table 4.8 shows each item's explanation with the coding used.

**Table 4.8 Items for Enjoyability (EN)**

Code	Statements	Source	Scale
<b>EN1</b>	The website I have just visited was lots of fun to browse.	Vrechopoulos et al. (2004)	Seven-Point Likert Scale
<b>EN2</b>	I thought that the website I have just visited was clever and quite entertaining.		
<b>EN3</b>	I liked the look and feel of the website I just visited.		
<b>EN4</b>	The website I have just visited was not just selling; it was entertaining me and I appreciated that.		

**Perceived Ease of Use and Perceived Usefulness** - items in Tables 4.9 and 4.10 were adopted from Gefen et al. (2003), which is considered one of the most commonly cited articles that extend TAM factors to the online background; the outcome of the study shows a significant validity for both elements. Tables 4.9 and 4.10 show each item's explanation with the coding used.

**Table 4.9 Items for Perceived Ease of Use (PEOU)**

Code	Statements	Source	Scale
<b>PEOU1</b>	The website that I have just visited is easy to use.	Gefen et al. (2003)	Seven-Point Likert Scale
<b>PEOU2</b>	It is easy to become skilful at using the website I have just visited.		
<b>PEOU3</b>	Learning to operate the website I have just visited is easy.		
<b>PEOU4</b>	The website that I have just visited is flexible to interact with.		
<b>PEOU5</b>	My interaction with the website I have just visited is clear and understandable.		
<b>PEOU6</b>	It is easy to interact with the website that I have just visited.		

**Table 4.10 Items for Perceived Usefulness (PU)**

Code	Statements	Source	Scale
PU1	The hotel website that I have just visited is useful for searching and booking.	Gefen et al. (2003)	Seven-Point Likert Scale
PU2	The hotel website that I have just visited improves my ability in product searching and booking.		
PU3	The hotel website that I have just visited enables me to search and book faster.		
PU4	The hotel website that I have just visited enhances my effectiveness in product searching and booking.		
PU5	The hotel website that I have just visited makes it easier to search and book.		
PU6	The hotel website that I have just visited increases my productivity in searching and booking.		

**E-Satisfaction** – items in Table 4.11 were adopted from two research projects: first, McKinney et al. (2002), who observed online customer satisfaction throughout the entire website search experience, and, second, Qureshi et al. (2009), who observed online customer satisfaction throughout the entire website search experience in two developed countries.

**Table 4.11 Items for e-Satisfaction (ES)**

Code	Statements	Source	Scale
ES1	Overall, I am satisfied with the hotel's website.	McKinney et al. (2002) and Qureshi et al. (2009)	Seven-Point Likert Scale
ES2	Overall, I am pleased with the hotel's website.		
ES3	I would recommend this hotel's website to a friend.		
ES4	I would use the hotel's website again.		
ES5	Overall, my expectations of the hotel's website were exceeded.		

**Electronic Word of Mouth**– Online User Review – items in Table 4.12 are adopted from Ko et al. (2005); their scale is used to measure how significantly an individual would cooperate and interact in the future with a website, because of its features that allow users to post reviews and communicate with others.

**Table 4.12 Items for Electronic Word of Mouth (eWOM)**

Code	Statements	Source	Scale
eWOM1	I would participate in customer discussions.	Ko et al. (2005)	Seven-Point Likert Scale
eWOM2	I would provide my feedback or post to the site.		
eWOM3	I would sign in at the site for information.		

**Customer Purchase Decision** - Jiang et al. (2010) adopted the items from Li et al. (2002), who focused on online retailers and merged diverse measures for covering all aspects of customer purchase decision and willingness, including: continuance, frequency, prefer to use and recommendation. Table 4.13 presents each item's explanation with the coding used.

**Table 4.13 Items for Customer Purchase Decision (CPD)**

Code	Statements	Source	Scale
*	How likely/probable/certain/definite is it that you are going to Book a Hotel from this Website?:	Jiang et al. (2010)	Seven-Point Likert Scale
CPD1	Unlikely (1) / likely (7)		
CPD2	Improbable (1) / probably (7)		
CPD3	Uncertain (1) / certain (7)		
CPD4	Definitely not (1) / definitely (7)		

#### 4.7 Focus Group

In collecting data to develop a conceptual framework and measurements, many qualitative methods can be used. According to Morgan (1996, p.130), a focus group can be defined as "*a research technique that collects data through group interaction on a topic determined by the research*". This method is not only a debate and argument within a group of individuals; it must have a particular purpose, process and composition (Bryman and Bell, 2015; Zikmund et al., 2010). The goal of conducting this method is to produce data from a set of individuals who have similar characteristics or experiences.

Nowadays, focus groups are extensively used in many studies (Sekaran and Bougie, 2016). In the late 1930s, social scientists realised that focus groups could help combat the issues associated with closed-ended surveys, for example, predetermination and the narrow choices offered to respondents (Krueger and Casey, 2014). Thus, using open-ended surveys permits participants to respond with no limitations or clues. This method of data collection can be conducted by using an open-ended survey through facilitator who simplifies the discussion for a particular topic or purpose. Additionally, this method is frequently used to screen or improve concepts (Zikmund et al., 2010).

In addition, focus groups must be conducted within a guided interview procedure in a formal setting by asking formatted and structured questions (Morgan, 1996). Since this method is a group discussion, interaction between participants who are all interested in the topic under discussion is vital, as opposed to individual interviews. The advantages of using group discussions are that the researcher can gather diverse viewpoints at the same time, and collaboration can inspire respondents to recall their memories and check their original thinking (Krueger and Casey, 2014; Zikmund et al., 2010). Such discussion will be a useful and helpful brainstorming session, which sparks and generates thoughts and ideas, while it is quite difficult to stimulate interest in an individual interview because there are only two individuals participating in the activity (i.e. the participant and the questioner). Furthermore, one of the most critical considerations when collecting data by using focus groups is time and monetary costs (Zikmund et al., 2010). When using the group discussions method, researchers can collect many thoughts from several participants at the same time. This is not the case with an in-depth interview, which requires extra time and money to reach possible participants one after another.

Since there is limited research that examines the relationship between web design and the antecedents of eWOM on customer purchase decisions within the tourism sector, the goal of using this method is to reform the conceptual framework and measurements. Therefore, tourists who have booked a hotel online at least once and have online communication experience are suitable to provide valid information. Thus, focus groups can produce more information in a short time in comparison to in-depth interviews; also, they offer an efficient method of data collection. Another goal of using the focus group method is to find if there are any factors or elements that have been left out of the literature review.

### **4.7.1 Conclusion of the Questionnaire**

This research at the early stage of the data collection utilises a qualitative method in order to discuss the instrument (i.e. focus groups and interviews) with three kinds of specialists: scholars, hotels e-commerce professionals and Saudi tourists. The validation procedure with scholars involved a focus group with 10 PhD students, studying at Brunel Business School in London, in addition to three academics at Brunel Business School in London. The measurement items that were selected for the survey were given to the Brunel group, who reviewed them one by one. Then, the validation procedure with the industry professionals was carried out. The survey has been reviewed with three experts in the area of e-commerce tourism departments. The first one is the general manager at Grosvenor House Apartments, London. The second is the general manager at Al Ghurair Rayhaan by Rotana in Dubai, in the United Arab Emirates. The last is an expert who works at the Inter-Continental hotel in Jeddah, Saudi Arabia. The results of this step will be explained in more details in section 4.8.2.

## 4.8 Survey Development

After each construct in the conceptual framework has been identified, the comprehensive survey questions can be created. This comprises the elements concerning the survey layout and respondent characteristics. According to Zikmund et al. (2010, p. 197), *"A questionnaire is a pre-formulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives"*. The survey method is a less costly yet efficient technique for producing information in a short time (Bloomberg et al., 2011). Participants should respond to all of the questions in the survey by themselves; this method is also called a self-completion questionnaire (Bryman and Bell, 2015).

There are certain advantages in using a survey method: first, the survey can be distributed to several possible participants at the same time, which allows the researcher to gain more responses in a short time (Simmons, 2008). Second, it is easy to keep respondents anonymous. Some respondents have concerns about their identity being exposed (Bloomberg et al., 2011); however, when a survey method is used, respondents have no physical interaction with the researcher. Third, respondents are able to control their answering process (ibid). This means that they have time to think about each question if they need to; they also can decide when and where to fill in the survey. Thus, respondents may feel less anxiety when participating.

On the other hand, there are some disadvantages in using this method: first, the survey length must be limited (Saunders et al., 2012; Zikmund et al., 2010). If the questionnaire is too long, fewer participants will complete the survey. Second, the wording level of the survey must be easy and not complex (Zikmund et al., 2010). Finally, since the survey method gives access to a large amount of respondents at the same time, the access to a suitable sample and accuracy of responses are more important than the amount of responses.

Lately, the Internet has been utilised by researchers as a tool for generating data (Hewson and Laurent, 2012). Researchers are not only searching for information online; they can also spread surveys online (Simmons, 2008; Vehovar and Manfreda, 2008). The survey can be presented as a Word or PDF file in 'electronic format' (Tuten et al., 2002). This electronic format can be sent to possible respondents as an attachment so they can complete the survey and return it. Moreover, there are several website platforms such as SurveyMonkey, Smartsurvey.com, Google document and Qualtrics.com that offer a platform for developing an online questionnaire (Tuten et al., 2002). These online platforms allow researchers to develop and present their survey. A direct hyperlink is easy to send to participants. With the growth of electronic media usage, social media including professional networks such as LinkedIn and many online platforms provide several paths for data collection. For



instance, any researcher is able to post her/his survey on Facebook, Twitter or Instagram in order to attract and reach more participants. However, the data collected might not be as accurate as anticipated.

There are some advantages in using the online survey technique: first, it is not expensive as attachments or links can be delivered to participants via email, which saves on photocopying and postage costs (Bandilla, 2002). In addition, many online survey platforms are free of charge or charge a minimal amount for the survey layout design (Hewson and Laurent, 2012). Second, compared to conventional surveys, online surveys enhance anonymity. A conventional survey needs a set of possible participants, giving researchers the chance of identifying a certain respondent. The Internet is a mechanism that reduces such a consideration. The online survey method gains the researcher more chance of accessing the 'hidden population', based on the research topic sensitivity, such as a criminal issue (Rhodes et al., 2003). Lastly, one more advantage in using online survey platforms is data entry (Tuten et al., 2002). Most online survey platforms offer a convert function to transfer data collected to statistical software such as SPSS V.20. This converting tool saves time and offers data entry accuracy for researchers.

On the other hand, there are some disadvantages in using online survey platforms: first, for researchers, security of online data is an essential issue (Best and Krueger, 2008). The online database of an online survey platform (e.g. SurveyMonkey), is simple for other people or third parties to access. Second, the response rate is lower than that of the conventional survey (Saunders et al., 2012; Tuten et al., 2002). There are some different elements that affect the participants' willingness to respond, such as the time of data collection, the layout of the survey, etc. According to Kwak and Radler (2002), the rate of response is lower compared to the mail questionnaire when confirming data collection time. In addition, the same authors found that the follow-up reminder survey has fewer effects when used for a web questionnaire. Additionally, in another study, Shih and Fan (2008) compared online and mail surveys using a meta-analysis of 39 studies in the period of 1998 to 2006; they concluded that the average response rate for the online survey was 34% and for the paper survey it was 45%. Third, sampling representativeness creates several arguments through the use of online surveys (Fricker, 2008; Kwak and Radler, 2002). While online surveys can be delivered to more participants, people who have no computer or network access are excluded automatically from the pool of research numbers. Moreover, it is quite difficult to control participants, who may complete the survey repeatedly (Fricker, 2008).

The questionnaire welcome sheet is to present the questionnaire's purpose and objective. For more details, it should identify the whole content of the questionnaire, the type of participant, and the researcher's information on the first page. Furthermore, this page presents the ethical considerations and any ethical forms and approval from the university. Section 4.16 looks at these in more detail.

The survey used in this study has three different parts, as it is similar to other survey studies. The first section identifies the respondents' demographic information and their Internet usage and experience; it also asks the participants about their tourism experiences and habits. The second part of the survey asks participants to select the hotel website that they frequently and normally use when booking a hotel online. In addition, it reminds the participants that their responses must be carefully based on their experiences with the chosen hotel website. The third section of the survey comprises the main measurement items. The final layout/design of the survey is available in Appendix 1.

#### 4.8.1 Selection of the Measurement Scale

Many different styles of scales have been used in Marketing and Information Systems studies, for example, Likert scale, Thurstone scale, Guttman scale and Semantic differential scale (Chisnall, 2004). Every scale has its own use and characteristics. However, Rensis Likert in 1932 established the Likert-style rating (Likert, 1932). This scale gained more popularity and a great reputation from Marketing, Human-Computer Interaction and Information Systems scholars. Moreover, it is a method that is not complicated to administer and which has been used frequently in business research (Zikmund et al., 2012). In the Likert scale, participants' attitude can be revealed by examining whether they strongly agree or disagree via constructing statements normally of four-, five-, six-, seven-, or 10-point rating scale. According to Cox III (1980), deciding which Likert scale points to select is a matter of debate, although, applying a five- or a seven-point Likert scale frequently gives very close outcomes with regard to means and correlation coefficients (Neumann, 1983).

This research selected and applied a seven-point Likert scale method (1=strongly disagree to 7=strongly agree, with a mid-point of neutral) for collecting the data from the main measurement items. The primary aim behind the chosen method is because this questionnaire mainly selects measurement items that were adopted from studies that applied a seven-point Likert scale, as presented in section 4.6. Therefore, a seven-point Likert scale method was applied to be consistent with the original studies.

As mentioned earlier in this chapter, section 4.8, the first section of the questionnaire contains questions about the participant's demographic information, Internet usage and experience, and tourism experience/habits. The selection of the control variables was discussed previously, in Chapter 3, section 3.6. The questions used to evaluate these variables are as follows:

**Demographics:** This section of the questionnaire consists of five questions. These questions refer to gender, age group, education level, marital status and profession.

**Internet experience:** The customer's experience level of using the Internet is measured by self-assessment of one's general Internet knowledge and if the respondent has this knowledge. A second

question asks about the length and time period of their Internet usage. This part of the survey mainly comprises two questions.

**Travel experience:** This section asks the participants to provide information about their tourism/travel habits, by asking them about how many times they usually travel per year, the reason for travelling (e.g. leisure, business, study or medical treatment), type of travel or destination (domestic or international) and type of fund (self-funded or funded by someone else).

The selection of the final questions in this section was determined as an outcome of the focus group discussion conducted during the validation process; this will be discussed in the coming section, 4.8.2.

#### **4.8.2 Instrument Validation**

When designing the questionnaire items from prior studies, items were selected that have been proven valid and which were also related to the study context. However, the industry of focus (Third-Party Hotel Websites) was not similar to the industry of focus that the other studies used. Moreover, it can be clearly seen from measurement items that they have been proposed and examined in cultures like America, China and Europe, and very few and limited studies have tested these measurement items outside the above-mentioned cultures. According to Saunders et al. (2012, p.110), “*Construct validity refers to the extent to which your measurement questions actually measure the presence of those constructs you intended them to measure*”. Thus, the validation procedure is needed to declare and confirm that the instrument is demonstrating the accurate constructs for the audience. This can be a part of what is known as the procedure of face validity.

The survey content review was carried out over the phone, which took approximately 20 minutes, and also by sending a draft of the survey to the experts by post. Using the above procedure eased the process as it saved the time that would have been taken in going through the survey in person, as the professionals were each located in a different country. Finally, to confirm the ease of comprehension of the questionnaire to the main targeted group (Saudi undergraduate students and academic employees), an additional discussion was conducted with 10 Saudi students and Saudi tourists/visitors in London who have experience of using hotel websites.

The focus group and the debated results were then appraised and some changes were made to the developed survey, as follows:

- To simplify some questions related to a single construct: it was recommended that a description and an explanation of the construct should be inserted before the construct was listed. This exercise has been applied in other survey studies.
- To combine certain questions within a certain construct as the questions had the same meaning (e.g. Page Response with System Quality). Based on the suggestions, the researcher

re-evaluated the constructs/hypotheses; this will be explained in more detail in chapters 5 and 6.

- Explanations for some expressions were added in brackets to provide clarity.
- It was recommended that the order of some items be changed, to make it easier for the readers to follow and understand (e.g. Items 15 and 22 in Website Content, Items 39 and 43 in Perceived Ease of Use, and Items 45 and 50 in Perceived Usefulness).
- Rather than adding wide-ranging questions about the participants' tourism experience and habits, it was recommended to have more specific questions that are directly related to the participants' experience with the hotel website that they selected when they started the survey.
- Some of the reviewers' notes were about the length of the survey; they indicated that certain questions sounded repetitive and similar. Consequently, it was decided to add an explanation within the survey to present the academic reason behind the repetition of the questions. The note indicates that scholars sometimes have to evaluate an item by asking the same question in different ways as it validates the results of the study. Therefore, this comment makes the respondents more willing to accept the similar items. A descriptive sentence was added before the participants begin to answer the questions; an example from the survey is: *“Some expressions might seem similar or duplicated; for statistical purposes, the questionnaire might have to ask about your view and belief by asking more than one question, kindly answer us with your comments on all questions”*.

### 4.8.3 Survey Translation into Arabic

The target sample for this study is Saudi Arabian undergraduate students and academic employees at a major university in Jeddah. The first language for these participants is Arabic. Therefore, an Arabic version of the questionnaire was made available along with the original English version. Translating the original version from English to an Arabic version was a challenging process because the original version has been developed and validated in another language and culture. Therefore, it was a challenge to keep the new Arabic version consistent with and as reliable as the English version. One of the fears relating to translated questionnaires is that participants will misunderstand the translated questions, as sometimes meanings are lost in translation. Therefore, careful application of a number of translating procedures and methods was necessary in order to ensure that the Arabic translation reflected the exact meaning of the English version. One of the most commonly used techniques is the Back-Translation method developed by Brislin (1970).

In this research, a bilingual researcher at Brunel Business School London translated the English survey into the Arabic version. Then, the Arabic version was given to a bilingual worker who works at a private academic institution that offers translation services in the UK and in the Kingdom of Saudi Arabia [Named: UK Marketing and Communication Academy (MarCom Academy)] to check

the survey terminology, proofread the survey, and confirm the consistency of the two versions. This institution (MarCom Academy) provided a certification letter, as attached in Appendix 2. For added assurance, the researcher included the back-translation step, which was completed by an accredited bilingual researcher who also works at Brunel University London; this person has an interest in translation. To successfully achieve the back-translation method, the Arabic version was delivered to the bilingual researcher to translate the Arabic version back to an English version. The new English copy was then compared to the original English survey to check the validity of the translation process. Some slight differences were noticed and minor modifications were made. This translation method applied the guidelines of Brislin (1970, 1986) for producing the most accurate results from both versions. Appendix 3 provides the survey context with the translation and back translation. This has been also verified by the author's supervisor, who is bilingual in the Arabic and English languages.

The English version of the questionnaire was distributed to the target sample because the survey targets undergraduate students who are studying for their bachelor's degree in the English language and the curriculum and the lectures are all in English. In addition, most of the major accredited universities in Saudi Arabia require all new students to pass the TOEFL. Otherwise, a compulsory two-year English foundation course must be completed prior to starting any major courses. However, the Arabic version of the survey was ready on standby should the target sample not understand the English version properly; this was to save the researcher's time while collecting data.

### **4.8.4 Online Survey Development – Web-Based Questionnaire**

The elements in the web-based survey were developed based on the research outcomes of the literature and revised and modified by the outcome of the focus groups. An examination by two pilot groups was conducted; the first was a group of five Saudi students at Brunel University London, followed by the primary group of 100 Saudi students at a major university in Saudi Arabia. This was carried out in order to check the proper functionality of the online survey prior to officially launching it. The link to the online survey was posted on a number of social media sites such as Facebook, Instagram, etc. The disadvantages inherent in the survey method were taken into account and strategies to address them were adopted, as discussed below.

The security issue is always of importance for any online research. This research used the SmartSurvey.com platform to develop the web-based survey. This online web-based platform is a well-known interface for developing online surveys because it offers a great security (SSL) system for protecting data. Moreover, this online platform is more popular and reliable for participants as it reduces their concerns regarding data storage. In addition, this online platform allows several methods of data collection, for instance, the survey link can be e-mailed to prospective participants, posted on any website, and it can also be shared with friends on Facebook or Twitter.

This study aims to critically investigate and examine the impact of the online shopping environment on eWOM and customer purchase decisions, with respect to online bookings in the hotel industry, and develops a framework. The study aims to assess whether or not this impact is due to customers' web satisfaction and willingness to book a hotel online. Additionally, it looks at the influence of the online tourism environment on eWOM and Saudi Arabian customers' purchase decisions with respect to trust and the perceived risks in the area of hotel bookings made online. So this study investigates and examine the behaviour of tourists/travellers who book a hotel online; therefore, the most appropriate method of collecting response inputs was to use an online questionnaire. Online tourist/traveller customers will be capable out of filling in an online survey, as they are familiar with the technology. As the current research target sample is the online tourist/traveller customer, the application of the online questionnaire method assures the researcher that the outcome truly represents the target sample; in the opinion of the researcher, this sample should be a general representation of the targeted context culture.

The target sample will be discussed in detail in section 4.11. Szymanski and Hise (2000, p. 313) investigated online purchasers and applied online survey methods. The scholars acknowledged that, *“An online survey is consistent with the context of our investigation. We are studying online shoppers using an online approach. Hence, consumers are in a relevant setting when completing the survey”*. Another study, by Ahn et al. (2007), outlined some valuable advantages of using online surveys over traditional paper-based surveys. They stated that applying the online survey method will make it easier to spread the survey to a wider geographical area and will be less costly, in addition, it will have faster responses.

The author of this study reviewed several of the available online survey platforms on the market (e.g. SurveyMonkey, Qualtrics, SmartSurvey, etc.) to discover which platform would be the most suitable for this study. Then, as mentioned earlier in this section, the SmartSurvey.com platform was chosen for the questionnaire developed for this study. The selected platform is a paid service that offers many convenient features, which allows the researcher to be fully in control of the development of the questionnaire and the raw data.

As mentioned earlier in this chapter, the survey for this study has three different sections that have been integrated into the survey platform. When the participant starts the survey, he/she will be asked about their nationality (only Saudis can continue with the survey) and age. The participants who fill in and pass the survey's first criterion will be asked if they have used a hotel website in the past. The online platform survey will prevent the participant from continuing at this point should they not meet the second criterion (previous experience of using a hotel website) and a thank you page will appear. The participants who meet the objectives of the survey will be asked to select the hotel website that they visit frequently and intend to rate. The next section of the questionnaire will keep reminding the

respondents of their choice at the beginning of each new section and this will also happen when any new set of questions appears. This will allow the researcher to confirm that the respondent is consistent with the feedback given and that it is based on the same hotel website experience for every question. This feature is available on the selected platform.

A fail to respond feature is also made available on the platform, which forces the respondents to fill in all questions; this is important as it avoids the possibility of having any missing data. In addition, to make an easy and friendly online survey, some adjustments and changes to the setting of the online platform were programmed. These adjustments will encourage more participants to fill in and answer the full survey. For instance, the standard error message that appears by default on the platform when the respondent misses a question seemed annoying. Therefore, the researcher re-phrased it to say: *“Sorry, it seems that you did not complete one or more questions; for getting better results for the study we appreciate that you could please response to all questions. Please revisit the following questions.”*

Moreover, this research considered the increased use of smartphones and similar devices as platforms for Internet browsing nowadays. Therefore, the online survey is designed in a way that can be accessible from any type of smartphone or similar device such as (iPad/iPod). Having an adaptable interface eases the completion process as it allows the participant to access the survey at any time and from anywhere. A special version of the online questionnaire was designed and tested to be compatible with IOS (iPhone/iPad), Android smartphones and tablets. The online survey platform setting was programmed to collect information about which device each participant used when they filled in the survey.

After the data was collected, the statistics showed that 82% filled in the online questionnaire using their smartphone device (iPhone, iPad, Android, Nokia, etc.). Therefore, this study shows that more than two-thirds of the online participants used this new platform for data collection. The questionnaire is obtainable for demonstration purpose at: <http://www.smartsurvey.co.uk/s/6G138/>. In addition, Appendix 1 illustrates the online survey layout in English. Lastly, before starting the process of any data collection for the main study, the pilot for testing the online questionnaire was technically tested many times by five students using different operating systems, Internet browsers, PCs, Macs and different smartphones. The raw data collected on file was also verified.

### **4.9 Time Horizon**

Several scholars have declared that the time horizon is an essential consideration in shaping the design of any research (Sekaran and Bougie, 2016; Saunders et al., 2012). There are two time horizon classifications: Cross-Sectional and Longitudinal study. With regard to the cross-sectional study, it

suggests that data should be collected at one point in time to demonstrate a snapshot image of a specific phenomenon. This data collection time can be a few minutes, days or months (Sekaran and Bougie, 2016; Saunders et al., 2012). With regard to the longitudinal study, it is a *diary perspective*, for understanding more about the topic of the research over an extended period of time (Sekaran and Bougie, 2016; Saunders et al., 2012). The benefit of using the longitudinal study is to discover any changes or any improvements in research objects over several periods of time (minimum two points in time). This research aims to investigate the impact of the online shopping environment on eWOM and customer purchase decisions with respect to online bookings in the tourism industry. In addition, it aims to assess whether or not this impact is due to the customer's web satisfaction and willingness to book a hotel online, at a certain point in time. There is no intention to check either how those factors developed or if tourists'/travellers' attitudes vary or differ over a period of time. Thus, this research is classified as a cross-sectional study.

#### **4.10 Units of Analysis**

According to Sekaran and Bougie (2016, p.104), units of analysis can be identified as "*the level of aggregation of data collected during the subsequent data analysis stage*". It is essential to decide on the units of analysis because they are specifically related to the research objectives, and influence the data collecting techniques, size of sample and analysis techniques. According to Sekaran and Bougie (2016), units of analysis can be individuals, groups, organisations, industries, nations and cultures. In this research, the main question addresses the factors of web design and eWOM communication by tourists/ travellers. Data is produced from the individuals' point of view, to know which web design factors affect their satisfaction level, in addition to knowing the reasons why they would like to generate and post an online review, and what encourages them to join an online community. Thus, in this current research individuals are the unit of analysis.

#### **4.11 Population and Sampling**

Researchers must communicate as much as possible with individuals who may influence their research topic, in order to gain as much information as possible that satisfies the research objectives. This process is called *census*. However, reaching a wide population and questioning every unit seems like a difficult or almost impossible achievement (Saunders et al., 2012; Baker, 2002). This is why researchers use the sampling method because it helps in estimating the actual characteristics of the whole population. According to Zikmund et al. (2010, p. 387), the word sample refers to "*a subset, or some part of a large population*" where population is "*any complete group of entities that share some common set of characteristics*". In other words, sampling is selecting representable target participants



who have an opinion that can contribute to the study questions and objectives (Zikmund et al., 2010). Sampling is essential for any study because it affects, represents and generalises the data outcomes. The sample selection leads directly to the achievement or failure of the study.

According to Bryman and Bell (2015), population is a word that refers to the universe of units from which the sample is to be chosen. Therefore, sampling contains every procedure that gives a result based on measurements of the quantity or number of the population (Zikmund et al., 2010, p.106). *“If certain statistical procedures are followed, a researcher need not select every item in a population because the results of a good sample should have the same characteristics as the population as a whole”* (ibid). Accordingly, the sample must be cautiously selected to give a result that can be generalised to the entire targeted population.

When classifying the population, it is essential to select the suitable sampling technique that will be used. There are two types of sampling technique: probability and non-probability sampling (Saunders et al., 2012; Zikmund et al., 2010). In probability sampling, the chance or possibility of every case being chosen from the population is known and normally it is equal for all cases; also, the sample can be called a representative sample. In probability sampling, the population must be known (Zikmund et al., 2010). Anyone can be chosen randomly in the sampling and their contribution is equal to everyone in the population. A suitable sampling technique can be chosen according to the research objectives, for instance, simple systematic, stratified and cluster sampling techniques (Saunders et al., 2012). In non-probability sampling, the chance of each case being chosen from the overall population is unknown; the sample will not be a representative sample in this case but, rather, judgmental. In the non-probability sampling technique, the population is unknown or the population cannot be randomly chosen. Alternative techniques for collecting the data must be considered, for instance, quota, purposive, volunteer and haphazard. According to Saunders et al. (2012), the most suitable sample must be chosen based on many considerations, for example, the research type, representativeness, costs and the sample's controllability. Table 4.14 presents the definition, advantages and concerns relating to sampling techniques.

Table 4.14 Sampling Techniques

Definition	Advantages	Concerns
<b>Probability Sampling</b>		
<b>Simple random</b>		
All elements in the population have equal chance to be selected	High representativeness and generalisability; easy to analyse and compute error	The population should be known; uneconomical to achieve
<b>Systematic</b>		
Every $n^{\text{th}}$ element in the population is chosen	Simple to draw sample; moderate cost	The sample frame is required; possible systematic biases
<b>Stratified</b>		
Random sample from identifiable groups (strata), subgroups, etc.	Most efficient among all probability designs	High cost; the "strata" should be meaningful
<b>Cluster</b>		
Random samples of successive clusters of subjects (e.g., by institution) until small groups are chosen	Low cost, particularly in the geographic clusters; only need individuals in the selected cluster	Less reliability and efficient among the probability sampling technique
<b>Non-Probability Sampling</b>		
<b>Quota</b>		
Select individuals as they come to fill a quota by characteristics proportional to populations	Do not require the list of population; very useful for minority participation	Lower generalisability; Potential bias of defining classification
<b>Snowball</b>		
More participants are referred by the initial participants who may be introduced by other participants	Useful for investigating in a sensitive topic or unique population	High bias because of the independence of sampling
<b>Judgment</b>		
Subjects are selected by an expertise	Samples fulfil some specific requirements	Lower / questionable generalisability;
<b>Volunteer</b>		
Asking for volunteers, or approaching the easily accessible subjects	Very low cost; easier way to get sufficient data	Lower generalisability

Source: Sekaran and Bougie (2016)

Although in these two types of sample techniques (probability and non-probability sampling) the investigator is able to answer the research questions and generalise about the population (Saunders et al., 2012), to adopt the probability, the investigator must be capable of identifying the sample frame. This means listing all the people in the population from which the sample will be chosen.

Moreover, there are four different types of sample in probability sampling: simple random sample, systematic sample, stratified random sample and cluster sample, whereas there are three different types in non-probability sampling: convenience sample, quota sample and snowball sample. This research uses a different data collection technique. Different sampling techniques are essential to satisfy the purpose of the study. Selection of and justification for the sampling will be discussed in the following sections. Furthermore, Zikmund et al. (2010, p. 287) stated that size of the sample is an important concern throughout each technique and that is because *"a reliable and valid sample should enable to generalize the findings from the sample to the population under investigation"*.

In this research, the primary population is any Saudi undergraduate student who has used a hotel website for their hotel arrangements at least once. The sample frame is very difficult to achieve within the huge range of the Saudi population. Consequently, for this study the following sampling methods have been selected: non-probability sampling, convenience sampling and snowball sampling. In more

detail, the convenience sampling method depends on reaching people who are conveniently available, whereas snowball sampling comprises preliminary selection of participants and then the primary participants select additional participants (Zikmund et al., 2010). The procedure used to reach the target sample will be discussed in this chapter, section 4.15.

### 4.12 Sample Size

Before starting the data collection, it is important to know and determine the suitable sample size for this study. This is because of many factors such as model complexity, analysis methods and the software used for analysis. Scholars like Hair et al. (2010) stated that, when using Structural Equation Modelling, the size of the sample must be between 150 to 400 participants; this depends on the amount of variables in the framework. The same authors suggested that, if the framework has six factors or more, an immense sample size is required (approximately up to 500 respondents). In addition, other scholars like Tabachnick and Fidell (2007) stated that a minimum of 300 cases for factor analysis is more reassuring, while Field (2013) recommended basing it on the number of items used in the analysis, and suggested 5–10 respondents per item.

The conceptual framework in this study started with 13 constructs and 55 items; therefore, to apply the same suggestions as above, this research is targeting a sample size of 1000 participants divided between male and female students equally, and also among academic employees; this is to be compatible with the most established recommendations.

### 4.13 Pilot Survey

Piloting is important for examining and validating the developed questionnaire before distributing it to the participants. The main purposes of the pilot study are to investigate and examine the actual web tool design, rating the response, time taken to complete the survey and data collection format. Moreover, another purpose of the pilot survey is to check the evaluation level of content reliability and validity; this is to confirm that the order, the questions and their scales are not difficult to understand (Sekaran and Bougie, 2016). Piloting is very important for two reasons: to decrease the chance of participants running into difficulties while responding to the survey questions, and to guarantee that no issues occur when recording the data (Saunders et al., 2012).

The pilot study for this research has been divided into two sections: **Pilot 1**, as part of the qualitative method, was to verify and test the original survey as a hard copy. During this stage a hard copy of the developed survey was distributed among 10 Saudi PhD students at Brunel University London, three academics, three experts in the study area and some random Saudi tourists, to evaluate the content

reliability and validity. **Pilot 2**, as part of the quantitative method, was the testing of the online survey. This stage was divided into two segments: first five volunteer Saudi students also studying at Brunel University London tested the platform functionality and interface before the distribution of the final survey. They gave their opinions and views about the survey, and the researcher addressed any difficulties and problems that these volunteer participants had observed. The second stage of Pilot 2 was the retesting of the instrument by 100 undergraduate Saudi students at a major university in Saudi Arabia (the primary target university); this was the primary pilot test. This step will be further discussed in Chapter 5, section 5.2.

As mentioned earlier in this chapter, the participants should have used hotel websites to organise their journey at least once. Thus, all those who participated and volunteered in the pilot study present a conventional range of the required sample. According to the guidelines in literature, a small piloting sample is recommended, of not more than 100 participants (Diamantopoulos and Siguaw, 2000) and a minimum of 10 to 30 participants (Luck and Rubin, 1987). Therefore, the pilot study for this research has been completed, resulting in a good outcome for the correlation analysis and the reliability. Chapter 5 will present more details about the process of the pilot data collection, data analysis and results under section 5.2.

### **4.14 Research Medium**

Internet and electronic media are largely and repeatedly used by people every day, and a tremendous amount of research has been conducted with regard to this matter. This interests both academics and practitioners because it provides a new environment for conducting research and new opportunities for expansion (Vehovar and Manfreda, 2008; Hewson et al., 2003). This study aims to discuss the following: web quality, online communication by tourists and e-satisfaction. In addition, it intends to conduct fieldwork studying the benefits of Internet usage.

Some of the benefits of conducting an online study are that online methods save the researcher time, in addition to financial considerations (Hewson and Laurent, 2008). The Internet can deliver fast/speedy responses and ease the study process; at the same time, no funding support is needed (Hewson et al., 2003). Moreover, data is easily produced through both primary and secondary data collection methods. Furthermore, respondents can be approached easily for primary data collection, even though they are based in dispersed places or possibly have sensitive issues (Hine, 2008).

With regard to secondary data research, researchers are attracted to the vast and easily obtainable data available online. Nonetheless, anonymity is a unique feature that is available within the online research medium; this enables respondents' privacy to be maintained, therefore improving their motivation to participate in the survey (Hewson and Laurent, 2008).

Nevertheless, before conducting a study online the following drawbacks should be considered. First, because of the Internet's characteristics, ethical issues must be carefully taken into account (Eynon et al., 2008). The participant must consent to participate in the study before the research is conducted, usually by signing a consent form. However, there was no consent form drafted for this study; in its place respondents were constantly reminded online of the possibility of withdrawing from the study at any time, should they feel uncomfortable about any aspect of the questions. The completion of the survey is considered to be their automated consent. Second, the possible sampling bias that is inherent to users of the Internet influences and affects the validity and reliability of Internet-generated data (Schmidt, 1997). Third, another problem regarding online data collection is controllability (Hewson and Laurent, 2008). The majority of data acquired using online collection methods does not require physical contact or interactions between the researchers and respondents (Bryman and Bell, 2015). This is a drawback when collecting qualitative data, as it is difficult to observe the facial expressions or the body language of respondents, all of which give vital information to the researcher. In the case of quantitative data collection, the drawback to online data collection is that the researcher has less to no control over the respondents completing the survey.

### **4.15 Data Collection Procedure**

The author of this research managed to approach two schools in a major university in Saudi Arabia for the distribution of the online survey for this study. These schools are the School of Medicine and the School of Economic and Business Administration. The survey was administered to undergraduate students as they represent Generation Y (target sample), who were virtually born using technology. The researcher decided to circulate the survey to undergraduate students in the School of Medicine because all the courses in this school are taught in English; also, the students must pass the TOEFL to be accepted to study in this school. Moreover, major universities only accept students with very good High School GPAs, a 'minimum of 95% out of 100%', in the School of Medicine. The author believes that distributing the survey among this target sample will ease the data collection process and save time because of the students' qualifications. The author decided to spread the survey to undergraduate students studying in the School of Business because the curriculum and teaching in this school is also in English, and also because of the students' business background. Therefore, the author believes that the distribution of the survey among these students will ease and speed up the data collection process and will save time as well.

Another reason for choosing these two main schools is, as mentioned earlier, the author decided to use the English version of the survey and only to resort to the Arabic version should the need arise. Based on the fact that the curriculum for both these schools is in English, it was assumed that the Arabic version of the survey would not be required. Additionally, these schools were chosen due to the

personal contacts who facilitated accesses. The researcher discussed the main purpose and objectives of this research in addition to the survey content with the Dean of the Business School and the Dean of the School of Medicine, along with the schools' academics. As a result, they all agreed to assist and support the distribution of the online survey to their students and members of the academic faculty.

In addition, in order to reach a larger number of participants for this study, the survey was sent to academics and faculty members working in each school, kindly asking them to fill in the survey, and then send it to others (snowball technique). The reason behind this target sample is to compare the result between unemployed (students) and the employed (members of academic in both faculties) segments and to see if income has an effect on the customers' behaviours and decisions. Although all Saudi students studying at a major government university receive a monthly income from the Saudi government (the income varies from one school to another), this income is not comparable to the normal employees' income as it is only a reward to motivate Saudi students to complete their education in order to raise the country's education level.

Three months were spent on collecting the data, where the online survey tool was running and receiving responses on a daily bases. The number of participants who received an invitation to fill the online questioner was almost 2,000. In addition, SmartSurvey.com showed that 1,002 users reached the first page of the questionnaire and viewed or started the survey. The following chapter will discuss in detail the data collection and the response rate.

### **4.16 Ethical Considerations**

For any study conducted with people, ethical considerations play an essential role. In business studies, ethics represent the set of behavioural principles and norms starting with the research's first stage to the end phase (Sekaran and Bougie, 2016). In any research survey, problems and issues must be addressed during, before and after the data is conducted. Before conducting the research it is very important to ensure that the study follows ethical considerations. Based on Saunders et al. (2012), the following ethical considerations should be incorporated into this study:

- Participation in this study must be voluntary.
- Respondents to this research have the total right to withdraw at any time. In addition, they can decline to take part in a specific aspect of the study.
- The respondent agrees to the research subject and must keep to the purpose of the research project when he/she is granted access to the survey.
- No exercising of any subjective selectivity (as it is not allowed) in what has been recorded, and objectivity must be maintained throughout the data collection stage.

- It is essential to guarantee that the data collected remains confidential since this has been promised.

All these ethical considerations were followed during the research phases. The first sheet of the questionnaire can be considered as an agreement form. This page explained the research topic and the main goal of the study in addition to what the survey involved. The respondents were asked to volunteer in this research and they are allowed to withdraw from participating if they decide to do so. Participants were assured that the anonymity and confidentiality of their responses were guaranteed and were told that a reward would be given to participants who voluntarily provided their names or a form of identity. The survey began only when a participant agreed to participate by clicking on the button *Continue*.

Finally, following the completion of the relevant forms and submission, ethical approval was granted for the research from the Brunel Business School Ethics Committee; all mandatory forms were completed and signed by the principal supervisor and the author. Then, the school's ethics committee checked them and approved the conduction of this study. Appendix 4 shows the agreement form. Thus, this research followed Brunel Business School Ethics Committee Policy Guidelines.

#### **4.17 Analysis Techniques and Statistical Packages**

After establishing the requirements of the research design and data collecting procedures, the following step in the research design is to classify the data analysis procedures that will permit the researcher to obtain empirical evidence and findings. Therefore, choosing which software application to use is important. This analysis is comprised of many phases, which will be explained in this section. A brief picture of the analysis tests and phases is explained in this section; however, a full description and the process of each analysis will be presented in the next chapter. Chapter 5 includes an examination of the quality of the collected data and will end by testing the hypotheses; the Groups' Differences analysis is presented in Appendix 5.

##### **4.17.1 Preliminary Analysis and Data Screening**

Before processing the data, data screening is an essential procedure in all studies (Hair et al., 2010; Tabachnick and Fidell, 2007). Data screening can recognise precise prospective issues in the dataset that might distort the analysis outcomes and the study's generalisability. There are four problems that should be addressed by the researcher prior to data analysis: incomplete data/unqualified data, missing values, normality and outliers.

With regard to the incomplete of unqualified responses, the first step is to filter and delete them from the process. Examples of surveys that are deemed unsuitable for data analysis in this study are when

respondents answer questions with no prior experience of booking hotels online or of web design and eWOM. Additionally, various participants might not complete answering the survey questions, leaving a partially completed survey; this distorts the analysis outcomes acquired from the sampling. In addition, some participants may skip some questions because they feel uncomfortable in responding to them.

One of the most common complications faced in research is missing data (Hair et al., 2010; Tabachnick and Fidell, 2007; Acock, 2005). This problem can lead to two primary issues in data analysis outcomes: reducing statistical power and biasing parameter estimates (Roth, 1994). According to Acock (2005), researchers expend additional effort in the different approaches for estimating missing values in order to generate better analysis outcomes. In addition, misuse of the process to remedy missing data may lead to distorted estimations for missing values and reduction or exaggeration of statistical power (Allison, 2009; Acock, 2005). Consequently, it is essential to choose the most suitable method for estimating missing values. There are two issues that have surfaced from the discussion of missing values: the number of missing values and how to remedy them.

During the analysis of missing values, the first and most important consideration is the amount of missing values. Many different methods can be selected to remedy the missing values: deletion, substitution, non-stochastic imputation and stochastic imputation (Schlomer et al., 2010; Allison, 2009; Huisman, 2000). According to Allison (2009), substitution means estimating the missing value and assigning a new value based on an estimation by the researcher. The advantage of using this method is that it is easier than imputation methods that need statistical techniques and software. In addition, there are three basic techniques that encompass the substitution method: mean substitution, regression substitution and hot-deck substitution (Hair et al., 2010). Mean substitution is a frequently applied method because it retains the original mean, while it decreases the scale correlations (Little, 1988). The other methods of substitution (regression and hot-deck substitution) are similar in their approach (Downey and King, 1998).

Hair et al. (2010, p.64) defined outliers as "*observations with a unique combination of characteristics identifiable as distinctly different from other observations*". The occurrence of outliers can be valuable or problematic for data analysis because it might weaken the outcome of the statistical analysis (Tabachnick and Fidell, 2007). Therefore, it is fundamental to detect and remedy any outliers that may have taken place, in order to ensure the accuracy of the outcome. Hair et al. (2010) and Frane (1976) stated that a univariate outlier occurs in the case of a high score on a single variable, while a multivariate outlier is a multiple set of values (two or more variables).

Hair et al. (2010) stated that a univariate outlier is inspected by the standard score (2 score), which has a mean of 0 and a standard deviation of 1. Any case with a total Z score in excess of 3.29 is an outlier



(Tabachnick and Fidell, 2007). Any detected outliers were deleted and used to detect the multivariate outliers. Tabachnick and Fidell (2007, p. 74) identified multivariate outliers as “*the distance of a case from the centroid of the remaining cases where the centroid is the point created at the intersection of the means of all the variables*”. A high score of D2 means that the case is not close to the general distribution of other observations and is a potential multivariate outlier (Hair et al., 2010). The same authors recommended the use of D2 divided by the involved amount of variables (df) to identify potential multivariate outliers.

Hair et al. (2010) stated that normality is an important assumption of much multivariate analysis. Normality is classified as univariate normality and multivariate normality. The difference between them is whether the normality is related to a single variable or a set of variables (Hair et al., 2010).

Univariate normality is simple to apply and easily examined by using the skewness and kurtosis of a single variable, while multivariate normality testing is not easy to apply (Kline, 2015). To ensure the statistical power of analysis outcome, this research requires the SEM to have quite a big sample. In the case of a large sampling, multivariate normality is limited in its testing when applying SEM (Kline, 2015). Moreover, a large sample produces less concern with regard to irregular or strange data because large samples tend to reduce the detrimental effects of abnormality (Hair et al., 2010). Scholars have suggested that univariate normality assessment is appropriate when the size of the sample is quite large (Kline, 2015; Hair et al., 2010).

After finalising the data collection, all collected answers must be subject to data screening tests to confirm the correctness of the data and omit missing answers.

The use of the online questionnaire method for this research forces participant to fill out the entire survey, therefore avoiding missing values or data entry mistakes. However, it is still essential to go through all the answers and make sure that there are no mistakes in the records or odd values such as out-of-range values (Pallant, 2013). Then, the data must be reviewed again for outliers; these values are well under or above the other marks and in several cases it is strongly recommended that these values should be removed, because certain analyses are extremely sensitive to outliers (Pallant, 2013). After filtering the data, the researcher must be content with the pre-request assumptions in order to accomplish effective factor analysis and use of SEM (Hair et al., 2010). These analyses are normality, homoscedasticity and multicollinearity. Chapter 5 describes and then performs each one of these analyses for this study, in the data analysis section, 5.4. Once it is guaranteed that the sample shows no errors and is ready for analysis, identifying the characteristics of the sample is a must. Hence, descriptive statistics of the answers will be presented. Then, three types of sample information will be presented, which are comprised of demographic information, Internet experience, and travel

experience and habits. The information will be displayed in frequency tables that will be produced by SPSS V.20.

Once data is collected, it must be coded, interpreted and analysed based on a scientific process, in order to answer the research questions (Sekaran and Bougie, 2016). SEM was used to test the conceptual framework and proposed hypotheses. The following section discusses the justification of the analysis method and its advantages/disadvantages.

#### **4.17.2 Analysis of Quantitative Data**

The online survey method aims to test hypotheses through identifying the impact of web design, eWOM, e-satisfaction and purchase decision. Processes such as reliability and validity are withheld to confirm the quality of questions prior to launching the questionnaire. To further prepare the data for analysis, the data cleaning process was administered after the data collection had been completed; this processes comprised remedying missing data, outlier detection and assumption checking. SEM was used as the principal analysis method.

#### **4.17.3 Exploratory Factor Analysis (EFA)**

According to Pallant (2013), as a first step, researchers usually use Exploratory Factor Analysis (EFA) to discover inter-relationships between a group of variables; this method is loaded onto a group to remove underlying latent factors. In addition, this method shows statistically what the raw data produces when combining factors together under one factor or the accurate amount of factors, although, before the factor loading swapped component matrix is produced, many criteria can be used. In this study, three were chosen to support the measurement items; these are: **Communality**, which is the percentage of variance criterion, **Eigenvalues**, which is the latent root criterion, and the **Scree Test** criterion. Chapter 5 presents these tests in sections 5.6.1, 5.6.2 and 5.6.3 in addition to the results for the current research.

#### **4.17.4 Reliability, Correlation and Validity**

Reliability and validity are used to check the goodness fit of the measurement and to confirm the accuracy of the questions in the survey. Figure 4.4 presents a list of many forms of reliability and validity.

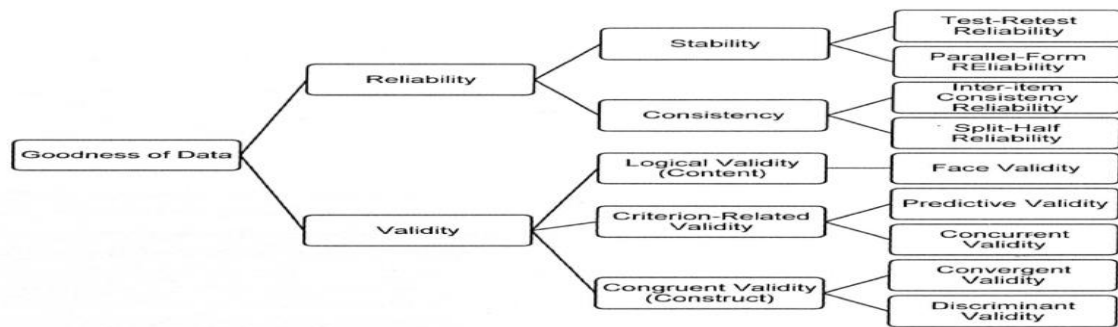


Figure 4.4 Reliability and Validity of Data

Source: Sekaran and Bougie (2016)

Bryman and Bell (2011, p. 158) defined reliability as “*the consistency of a measure of a concept*”. A reliable survey must obtain consistent outcomes even if it is repeatedly used in a different context, replicated by other researchers, or written at a different time point. Stability and consistency are two forms that examine the reliability. Sekaran and Bougie (2016, p. 229) defined stability as “*an instrument remains the same over the time*”. There are two forms to measure the stability of instruments: test-retest reliability and parallel-form. Sekaran and Bougie (2016, p. 229) also stated that the internal consistency of measures is “*indicative of the homogeneity of items in the measure that taps the construct*”. In addition, they stated that inter-item consistency reliability and split-half reliability are two tests of consistency of measures. Cronbach's  $\alpha$  is a popular test for measuring the inter-item consistency reliability. However, reliability is not enough to ensure the quality of the measures; validity can deliver more information. Bryman and Bell (2015, p. 159) identify validity as “*the issue of whether or not an indicator (or a set of indicators) that is devised to gauge a concept really measures that concept*”. Likewise, the validity is whether the survey items correctly explain what the researcher wants to ask. Face validity aims to confirm whether the instruments measure what they are intended to measure. Sekaran and Bougie (2016, p. 226-227) identified the criterion-related validity as “*established when the measure differentiates individual's on a criterion it is expected to predict*”. The same authors observed that construct validity “*testifies to how well the results obtained from the use of the measure fit the theories around which the test is designed*”.

According to Peter (1979), reliability (Cronbach's coefficient alpha ( $\alpha$ )) confirms that there is no measurement error. Therefore, it yields consistent results. Moreover, it checks the stability of individual measurement items across repetitions from the same source of information (Straub, 1989). According to Pallant (2013), correlation is used to design the linear relationship strength and direction between two variables in the framework. Having more than one correlation measures the level to which a dependent variable is associated with and linked to a group of other independent variables (Hair et al., 2010).

Before circulating the survey, both reliability and validity were examined, in order to ensure the accuracy of the collected data. Then, the pilot test was conducted to check the reliability by calculating Cronbach's  $\alpha$ . Pallant (2013) recommended having a score higher than 0.7 for each Cronbach's Alpha, which is a satisfactory standard of reliable scale. Moreover, because of the adjustments made to the adopted scales, face validity can be applied in order to ensure that all statements retain the focus of the research topic. To confirm the face validity of the instruments, the survey draft was reviewed by individuals with different backgrounds, such as academics and non-academics, native English speakers and non-English speakers.

When selecting the items that should remain and which items must be removed from the EFA, it is essential to conduct a reliability and correlation test. Moreover, these tests are repeated during the analysis steps. When piloting, these tests are used for the primary evaluation of the developed measurement items. During the Confirmatory Factor Analysis (CFA), these tests are used for recording the construct validity and final Cronbach's  $\alpha$  results for each factor in the framework (which will be presented in more detail in Chapter 5, section 5.8).

#### **4.17.5 Rationale for Structural Equation Modelling (SEM)**

According to Hair et al. (2010), SEM is highly advisable when analysing multivariate variables. Hair et al. (2010) and Weston and Gore (2006) stated that SEM is an old statistical technique and it is a hybrid of confirmatory factor analysis and path analysis. SEM does not validate the theory only; it empirically tests the inter-relationship among variables (Hair et al., 2010). This technique has recently gained more attention because it allows the researcher to *"test a wide range of hypotheses concerning the relationships among any combination of manifest and latent variables"* (McQuitty, 2004, p. 175). In addition, SEM can deal with many problems that comprise the impact of sample size on model fit, the form of correlation modelled, the use of covariance vs. correlation matrices, the optimal number of items per factor and the handling of missing data (McQuitty, 2004).

Hoyle (1995, p. 1) identified SEM as *"a comprehensive statistical approach to testing hypotheses regarding relations among observed and latent variables"*. It has been designed to evaluate the linear association among the observed constructs (named as a measured variable or manifest variable) and among unobserved variables (named as latent variables). Measuring or observing the latent variables is impossible, while measured constructs serve as indicators that represent them (Hair et al., 2010). Measured constructs and latent variables can serve both exogenous (independent) or endogenous (dependent) variables; and associations between latent variables signify proposed hypotheses in a research model. Consequently, SEM is a hybrid of factor analysis, which offers a parsimonious analysis between latent and observed constructs, and path analysis, which examines the hypotheses between variables (Weston and Gore, 2006).

According to Tabachnick and Fidell (2007), SEM is an assortment of statistical methods that permit the researcher to test the relationships between one or more elements, either continuous or discrete. Moreover, it is a multivariate method that merges both factor analysis and the multiple regression method in order to test the interrelationships between constructs (Hair et al., 2010). SEM is desirable in social science studies for several reasons: SEM delivers a suitable and most professional estimation analysis for a series of relationships anticipated concurrently. It is distinct to the use of separate multiple regressions as this technique usually considers the impact of the whole model. Another reason is that, in SEM, dependent and independent variables can be tested and also can be tested when the dependent variable converts to an independent variable in other relationships. Moreover, SEM allows any researcher to estimate indirect, direct and mediation effects. Lastly, using SEM can ease the performance of conducting an invariance analysis. SEM is comprised of many statistical methods such as factor analysis. Scholars consider EFA as a primary step for SEM, whereas CFA is part of SEM for examining the structural model and for examining the hypotheses (Hair et al., 2010).

When simultaneously applying univariate and bivariate statistical techniques for analysing variables, some limitations can exist (Crowley and Fan, 1997). A multivariate statistical technique is applied for solving complex research issues (Nunkoo and Ramkissoon, 2011). A study by Weston and Gore (2006) compared SEM with correlation, multiple regression and analysis of variance (ANOVA) and found some similarities which related to the linear model, assumptions and causality testing. In this study the proposed hypotheses relationships are tested statistically. Multiple regression or SEM can be appropriate techniques in discovering the answer. Churchill and Iacobucci (2002) also observed that SEM and multiple regressions are very similar. Researchers are able to conduct and compare many multiple regression models until they establish the best one, or they can use SEM analysis, which requires more amendments in order to identify the best model fit (Weston and Gore, 2006). Another study, by Nunkoo and Ramkissoon (2011), came up with four advantages that SEM has over multiple regression: comprising unexplained variances, testing relationships simultaneously, linking micro- and macro-perspective ability, and best-fitting model and theory development. In addition, SEM has a number of disadvantages, such as choice of SEM software, complexity and ambiguity, limitations in exploratory research and incapability of dealing with categorical variables.

Moreover, certain assumptions must be satisfied prior to the SEM analysis process. First, assumptions for most of the analysis techniques such as normality of data, a certain number of sample sizes (e.g. more than 200), and independence of error (Hair et al., 2010). Second, linear relationships; that is, the use of interval or ratio scales for measuring all data and discriminant and convergent validity of all constructs. Lastly, when using SEM analysis the supporting theories are very important: *"All aspects of SEM modelling must be directed by theory, which is critical for model development and modification"* (Reisinger and Mavondo, 2007, p. 71).

According to Anderson and Gerbing (1988), SEM incorporates CFA for data. The measurement framework is used to describe the measured constructs and latent variables, where the CFA is applied to examine the measurement framework. The measurement framework is developed before data collection based on theories found in the literature. Every latent variable is represented by a group of measured constructs (Hair et al., 2010). Three or more measured constructs can raise the estimation accuracy of the latent constructs. Those latent variables only have one or two measured variables and must be avoided for CFA analysis (Bollen, 1989). In addition, the correlations between measured constructs are important. Weakly correlated constructs might estimate the latent variables poorly and can affect framework testing further. Subsequently, reliability and validity of constructs can be evaluated and measured.

SEM tests the associations among latent constructs (Hair et al., 2010). Not only does it examine the associations among latent variables, it also shows the significance between measured constructs, latent constructs and the variables' disturbance error. Associations amongst latent variables represent the hypotheses. Based on existing literature, the hypotheses are developed by direct and indirect (mediated) effects and covariance (Weston and Gore, 2006). Covariance is the non-directional association among exogenous latent constructs that will have a direct or indirect impact on endogenous constructs. While the direct and indirect impacts are presented as directional arrows in the SEM model, it does not imply a causal association except when analysing experimental data.

According to Hair et al. (2010), model estimation must be decided after stating the measurement and structural models. The goal of estimation is to recognise values of the free parameters (Chou and Bentler, 1995). Many estimation techniques are obtainable in SEM, for example, maximum likelihood (ML), generalised least squares (GLS) and unweighted least squares (ULS), etc. The underlying assumption of every estimation method is not similar (Hair et al., 2010). A suitable technique must be selected depending on the nature of the model, data distribution and sample size, etc. (Tabachnick and Fidell, 2007; Chou and Bentler, 1995). Moreover, accessibility to the computer program is essential as well, because not every program employs all the different estimation techniques.

There is another significant issue when assessing the proposed framework (theory) and gathered data (reality), which is model assessment. Goodness-of-fit (GOF) indices are the values created via mathematical comparison between the theoretical covariance matrix and observed data covariance matrix (Hair et al., 2010). Three categories have been recognised to assess the GOF of a framework: absolute fit indices, incremental fit indices and parsimony fit indices. Each of these categories offers different facets of the ability of the framework. Thus, researchers are advised not to depend on any single index. Table 4.15 presents a short explanation and the threshold of the above-mentioned indices.

Table 4.15 Goodness-of-Fit Indices

Index	Threshold
<b>Absolute Fit Indices</b>	
Measures of overall goodness-of-fit for both the structural and measurement models	
Chi-Square Statistic ( $X^2$ ) is a statistical measure of difference used to compare the observed and estimated covariance matrices. This is the most fundamental absolute fit index, but less meaningful of a big sample size or the number of observed variables becomes large.	$p > 0.05$
Goodness of Fit Index (GFI) is an early attempt to produce a fit statistic that was less sensitive to sample size.	$> 0.90$
Root Mean Square Error of Approximation (REMEA) is most widely used measures that attempts to correct or the tendency of the $X^2$ of GOF test to reject models with a large sample or a large number of observed variables	$< 0.08$
Standardised Root Mean Square Residue (SRMR) is the standardised value of average of the residuals. Lower SRMR value represents a better fit that this index is also called badness-of-fit index.	$< 0.08$
<b>Incremental Fit Indices</b>	
Group of goodness-of-fit indices that assesses how well a specified model fits relative to some alternative baseline model	
Normed Fit Index (NFI) is one of the original incremental fit indices and is a ration of the difference in the $X^2$ value for the fitted model and a null model divided by the $X^2$ value for the null model	$> 0.90$
Comparative Fit Index (CFI) is improved version of the normed fit index	$> 0.90$
<b>Parsimonious Fit Indices</b>	
Measures of overall goodness-of-fit representing the degree of model fit per estimated coefficient	
Adjusted Goodness of Fit Index (AGFI) tries to take into account differing degrees of model complexity, by adjusting GFI by a ratio of the degree of freedom used in a model to a total degrees of freedom available.	$> 0.90$
Parsimonious Goodness-of-Fit Index (PGFI) adjusts the NFI by multiplying it times the parsimony ratio.	$> 0.50$

Source: Hair et al. (2010)

There are many reasons for using SEM; these are summarised as the following: first, this study developed an integrative conceptual framework involving 13 principal variables and 16 hypotheses. As mentioned earlier, it is suggested that SEM be used in examining complex frameworks and in order to cope with latent variables. Second, each variable in the proposed framework consists of a solid theoretical background. Associations among variables have been tested in different contexts. However, these constructs have never been examined within web design or quality, eWOM or e-satisfaction. The proposed framework and the supporting theories have fully supported the role of theory in the development and analysis of SEM. Third, SEM is able to deal with direct and indirect

associations, in addition to finding the inter-relationship among variables at the same time. As the developed framework combines many different theories, the interaction between each variable is still unidentified. SEM is capable of recognising if the proposed hypotheses significantly exist (Hair et al., 2010). Many statistical analysis programs for SEM analysis are available, such as LISREL and AMOS (Shaughnessy et al., 2012). For any researcher, selecting the program depends on the institution's resource availability.

#### **4.17.6 Confirmatory Factor Analysis (CFA) and Hypotheses Testing**

According to Pallant (2013), Confirmatory Factor Analysis (CFA) is used in the next phase of the study method in order to examine the hypotheses or theories that concern the structure that underlies a group of variables. This will measure the measurement and structural framework fit, and construct validity for conducting and examining the hypotheses. Since CFA can be conducted with no previous knowledge of the sum of elements or which items belong to which construct, it requires the researcher to know the number of elements within a group of variables. Therefore, CFA allows the researcher to accept or decline the recommended and developed theory. The CFA process and results will be discussed in more detail in Chapter 5, section 5.9.

#### **4.17.7 Post Hoc Analysis (PHA)**

Post Hoc Analysis (PHA) can deliver more information about a framework. This information can help in understanding more about the description of the proposed associations between constructs, as it clarifies the image. This study first will discover possible un-hypothesised relations that are empirically supported (proposed new associations between constructs). Moreover, this study will show more information about direct and indirect impacts between each variable in the framework. In addition, the mediation impact will be examined to better understand the role of the central intermediate variables in the framework. Chapter 5 will present all these conducted analyses.

#### **4.17.8 Group Analysis**

This study focuses on discovering and classifying the differences between segments of customers; this is comprised of the impact of demographics, Internet usage and experience, and travel experiences and habits, all of which are considered as secondary objectives. By looking through the differences between different groups, the author will be able to deliver primary information about the way each group sees the constructs and the way it varies in terms of the association between each construct. The analysis outcome can be used as a primary step for any prospective study that focuses on different types of users. This study used two types of analysis. One is a simple mean comparison t-test, to understand the way each group sees each measured variable in the framework. The second is invariance analysis using CFA-SEM techniques to examine the relationship differences between two or more groups in the framework. Scholars such as Hair et al. (2010) collected a few tests for showing and presenting the group invariance analysis. This stage is comprised of examining the framework fits



for each group independently, to continue with confidence. Then, it looks at and makes sure that both participant groups have understood the questions similarly. After this, it examines the structural weights for both groups. If any significant differentiation is found, the analysis will continue to examine every relationship individually, in order to establish hypotheses that are significantly varied between the two groups. Full details about the group analysis will be presented in chapters 5 and 6.

#### **4.17.9 Statistical Packages Used for Data Analysis**

All the primary analyses are carried out by using the Statistical Package for Social Sciences (SPSS V. 20) for Windows, such as descriptive statistics, exploratory factor analysis, reliability and correlation tests. Zikmund et al. (2010) stated that SPSS is commonly used by academics and businesses to provide different statistical measures. In addition, business researchers prefer to use SPSS over other statistical software tools due to its statistical sophistication in providing statistical measures.

There is another software tool, called the Analysis of Moment Structure (AMOS V.20), which is used to accomplish the CFA and the structural model testing. The post hoc and invariance analysis can also use this tool. Moreover, Partial Least Squares regression (PLS) or LISREL statistical packages can also be chosen to accomplish SEM. Choosing AMOS for this study is justified because of its relevance to the current study and also due to its popularity in most recent studies. In addition, AMOS is a user-friendly tool because it permits any user to draw the framework with the items. Furthermore, it makes graphical interfaces rather than syntax or computer codes (Hair et al., 2010). According to the results and suggestions from existing studies that focused on the subject of SEM, scholars recommend the use of AMOS as it is the most suitable analysis tool. *“This is not just because it is the most available of the software programs, but because of the numerous benefits and advantages highlighted from previous studies”* (Oke et al., 2012 p. 89).

#### **4.18 Conclusion**

This chapter has explained in detail the methodology approach that has been adopted in this study and justification for using such a method. This study adopts mainly a quantitative method, an objectivist philosophy, positivism strategy and deductive approach. The choice of which methods to use was based on the nature of the present research objectives, in addition to the literature acceptance for solving similar research questions. This chapter has briefly presented the research design adopted for this study. This was followed by a comprehensive explanation of each stage of the design, which is comprised of the instrument and online questionnaire development, population and size of sampling, the pilot study, and the data collection process. This chapter has also highlighted the ethical considerations for this study. Lastly, this chapter identified the data analysis stages and statistical

packages used, clarifying the reasons for using them. The next chapter (Chapter 5) will address in more detail the data analysis processes for this study.

## Chapter 5 - Data Analysis

### 5.1 Introduction

The previous chapter (Chapter 4) reviewed different methodological philosophies and approaches to conduct this study. Appropriate methods for this research were identified, and development of the measurement scale and the data collection methods were explained. Data analysis processes and appropriate statistical tools were also discussed.

This chapter is divided into 13 main sections. The chapter presents the results of the data analysis performed to validate the measurement framework proposed in this study and to test the hypotheses conceived. The pilot study result to verify the reliability and validity of the survey instrument is presented in section 5.2. This chapter presents the summary of all testes conducted for this study in section 5.3. Then the main survey data analysis is described in section 5.4. This involved data screening, assessing characteristics of the data sample, CFA, EFA, reliability and correlation and hypothesis testing, which are discussed in sections 5.5, 5.6, 5.7, 5.8 and 5.10. In addition, the suggested relationships between constructs, composite scale models and bootstrapping are described in sections 5.10, 5.11 and 5.12. Finally, this chapter ends with a conclusion in section 5.13.

### 5.2 Pilot Study

Prior to acquiring the main data collection and after the focus group feedback adjustments to the constructs and hypotheses, a pilot study was conducted before finalising the questionnaire and building the conceptual framework. Pilot studies facilitate improvements in the questionnaire design, and its form and content. Furthermore, they enhance confidence in obtaining the expected results.

The primary online-based pilot study survey was conducted by meeting 100 randomly chosen Saudi undergraduate students studying at a major university in Saudi Arabia. Out of the primary 100, only 76 students completed the entire set of questions. Out of these respondents, 43% were female and 57% male. A complete descriptive analysis of the pilot sample is available in Appendix 6. The approximate time taken to complete the survey was between 10-15 minutes; this approximate time duration was used as a guideline for designing the final questionnaire and data collection.

As the questions for this research were adopted from widely used literature, and the instrument had already been validated by a number of experts, only minor corrections were needed, which were suggested by some of the pilot respondents. This confirmed the instrument's face validity. The data was then used to conduct a reliability and correlations analysis. Both tests are useful for helping the

researcher judge whether the instrument is reliable and valid prior to completing the data collection process. The overall reliability of the instrument within the pilot was  $\alpha=0.964$ , which is well above the recommended threshold of 0.7 (Hair et al., 2010; Nunnally and Bernstein, 1994). The individual construct reliability ranged from 0.960 to 0.979 (Table 5.1).

The correlations between constructs were between 0.304 and 0.975. These results are well above the rule of thumb minimum value of 0.3 (Hair et al., 2010). The two pairs that were most strongly correlated were, Overall System Quality and Page Response (SQPR) with Content Quality (CQ) (0.975). All the results of the reliability and correlations are shown in Table 5.1.

**Table 5.1 Inter-Item Correlation Matrix and Reliability for Pilot Study**

	SQSE	NAVI	CQPOA	CQ	SQVA	SQPR	EN	PEOU	PU	ES	eWOM	CPD	Cronbach's Alpha if Item Deleted
SQSE	1.000	.753	.524	.750	.671	.742	.720	.672	.717	.710	.350	.696	0.967
NAVI	.753	1.000	.622	.917	.868	.917	.869	.892	.895	.879	.336	.888	0.963
CQPOA	.524	.622	1.000	.645	.646	.632	.629	.680	.637	.635	.347	.596	0.969
CQ	.750	.917	.645	1.000	.906	.975	.927	.945	.929	.931	.396	.939	0.960
SQVA	.671	.868	.646	.906	1.000	.923	.937	.918	.925	.893	.315	.875	0.961
SQPR	.742	.917	.632	.975	.923	1.000	.922	.964	.936	.933	.386	.949	0.960
EN	.720	.869	.629	.927	.937	.922	1.000	.895	.911	.901	.304	.901	0.961
PEOU	.672	.892	.680	.945	.918	.964	.895	1.000	.924	.949	.339	.915	0.960
PU	.717	.895	.637	.929	.925	.936	.911	.924	1.000	.917	.335	.915	0.960
ES	.710	.879	.635	.931	.893	.933	.901	.949	.917	1.000	.359	.879	0.961
eWOM	.350	.336	.347	.396	.315	.386	.304	.339	.335	.359	1.000	.347	0.979
CPD	.696	.888	.596	.939	.875	.949	.901	.915	.915	.879	.347	1.000	0.963

\*The yellow shaded cells display correlation values more than 0.900

Overall Reliability = 0.964

It can be concluded from the table above that the reliability and correlation tests show good results from the pilot study, with several results above the recommended value. This confirms that the scale is valid and reliable, and that it can be adopted for larger scale data collection. Additional analysis of the above table will be provided in Chapter 6, section 6.2.

### 5.3 Tests Conducted

Table 5.2 presents the entire range of tests conducted including commented summaries. The following 27 tests will be conducted as Hair et al. (2010) recommended when conducting SEM.

**Table 5.2 Adequacy and Reliability Tests Conducted at a Glance**

S. No	Tests Performed	Nature of Test	Remarks
1	MAHALANOBIS Distance	Outliers detected and removed (162 removed entries)	Done
2	Cross Checking With Online Sample Size Calculator	Used A-priori Sample Size Calculator for SEM	Done
3	Kurtosis And Skewness	Some sets of questions indicated out-of-range values	OK
4	CITC & Cronbach's Alpha	Acceptable levels	OK
5	Reliability Analysis And Positive Definiteness	Established from the Value of Determinant of the Correlation Matrix not equal to Zero	Done
6	KMO And Bartlett's Test	BARTLETT'S Test-Sphericity, KMO-sampling accuracy	Acceptable
7	Collinearity and Variance Inflation Factor (VIF) Tests	Values of VIF slightly more than 10	Not OK
8	Univariate Normality Linear Fit	Fits obtained from SPSS	OK
9	Homoscedasticity: Loess Fit Using Epanechnikov Kernel	Linear Regression Plots drawn – Loess fits	OK
10	Loess Fit Using Gaussian Kernel	Fits are acceptable	OK
11	Levene's Test – Variance Tests	Within permissible limits except for a few items.	OK
12	Variance Testing (and t-Test or Levene's Test)	Within permissible limits except for a few items.	Acceptable
13	Factor Analysis Extraction – Rotation	Total variance explained and factors extracted	Acceptable
14	Communalities, Scree Plot	Extraction Values OK; Scree plot	Acceptable
15	Rotated Component Matrix	Factor loadings computed	OK
16	Component Transformation Matrix	Obtained from SPSS	Done
17	Factor Loading of Items	Drawn as a table	Presented

18	Histograms	All Histogram Plots are indicating Normality	Drawn
19	Confirmatory Factor Analysis	Structural Models developed; developed several models	Done
20	Model Building and Measures of Fit	Measures of fit for each fit were examined and modifications suggested incorporated as much as possible while developing the next best model. It was mainly the Chi-Square value, which was taken as the basis and the covariances.	Done
21	Significance Tests of Individual Parameters	Checked based on the p-values obtained	Done
22	Model Specification Complexity & Identification	AVE, CR and Convergent Validity done	OK
23	Convergent & Discriminant Validity	AVE, CR and Convergent Validity done	OK
24	Composite Reliability (Cr)	AVE, CR and Convergent Validity done	OK
25	Nomological Validity	Multi-level and higher-order model development has been established	Established
26	Composite Scale Model Structures	Composite models by averaging the parameter values were developed	Done
27	Bootstrap Method to Find Mediation Variables	Models redesigned and tried, new paths tested and found insignificant; found eWOM is not an efficient mediating path	Done

#### 5.4 Main Survey

The next step after successfully completing the pilot tests was to conduct a complete data collection from the specified sample (Saudi tourists/travellers). Full details of data collection procedures have been presented in Chapter 4, section 4.15. The first phase of the data analysis for this study was to download the full responses using SPSS version 20.0. The following sections will discuss in detail all the analyses and statistical tests that were conducted on the main set of data for this study.

#### 5.5 Data Screening and Characteristics of the Data Sample

Prior to the analysis, the research instrument items were examined through SPSS statistical package version 20.0, this is to check the accuracy of data entry, missing values and outliers. Then, pre-

requests assumptions were explored, such as normality, homogeneity and multicollinearity, in order to achieve effective factor analysis.

### 5.5.1 Accuracy of Data and Missing Values

The data was collected online and the respondents were asked to complete all the questions for each variable's item. A friendly error message appeared if respondents skipped some questions in order to encourage them to answer all questions. Therefore, the final data set is free of any missing data. This is an advantage of using the online survey method. As mentioned in Chapter 4 in the data collection section, 4.15, approximately 2,000 users viewed the survey, while 1,002 have responded and completed the questionnaire, from which only 840 responses were viewed as valid. The responses to the survey were filtered by running a routine descriptive exploratory analysis; therefore, the responses that appeared invalid were removed. An example of some rejected surveys is that six responses were excluded from the data set because, when they were asked to select the hotel website they most frequently visited, they chose *Other*, and wrote irrelevant websites such as Amazon and Budget car rental, etc.

### 5.5.2 Outliers

An outlier is a case with such an extreme value on one variable (*'univariate outlier'*) or such an abnormal combination of scores on two or more variables (*'multivariate outlier'*) that it distorts statistics (Tabachnick and Fidell, 2007). However, according to Hair et al. (2010), outliers should be retained unless there is proof that they are truly aberrant and do not represent any observations in the population. This is to ensure the generalisability of the entire population. Deleting the outliers might improve the multivariate analysis but limit the generalisability.

However, the most commonly used technique for determining outliers in large data samples is using Mahalanobis Distance (MD), which is related to Chi-Square distribution. Large values of MD indicate the distance from the centroid of the data set. Therefore, high values of MD mean that there is a low probability of the values being within the acceptable range. In this study, MD values and their Chi-Square probabilities were computed; any Chi-Square probability values that were less than 0.001 were eliminated from the data set. The outlier analysis for this study showed 162 outliers out of the 1,002 valid responses; the omission of the discovered outliers from the sample resulted in a final sample size of 840. The respondent record rate is displayed in Table 5.3.

**Table 5.3 Respondents Record Rate**

Respondents	No. of Records	% Out of the People Reviewed
Viewed or started the survey	2000	
Completed the survey	1050	53
Valid Responses	1002	50.1
Outliers according to Mahalanobis Distance	162	16.17
After removal of Outliers	840	42

### 5.5.3 Normality

Many statistical techniques such as multivariate procedures assume that the distribution of scores on the dependent variable is ‘normal’. Normal refers to a symmetrical, bell-shaped curve, which has the greatest frequency of scores in the middle and the smaller frequencies at the extremities (Pallant, 2013). Normality may be measured using several methods; skewness and kurtosis scores are two such methods. If the distribution is perfectly normal, the skewness and kurtosis value should be 0; however, this is an uncommon occurrence in social sciences (Pallant, 2013). In addition, many scholars recommend inspecting the shape of distribution in the case of a large sample (200+) by using a histogram or P-P plot (Field, 2013; Hair et al., 2010; Tabachnick and Fidell, 2007).

Normality was first assessed in this study through descriptive analysis using skewness and kurtosis outputs of all items in the dataset. The skewness and kurtosis results indicate an acceptable level of normality, except for the items Q13.1, Q13.2 and Q15.4, where the values were above the suggested level (see Table 5.4).

**Table 5.4 Skewness and Kurtosis for All Items**

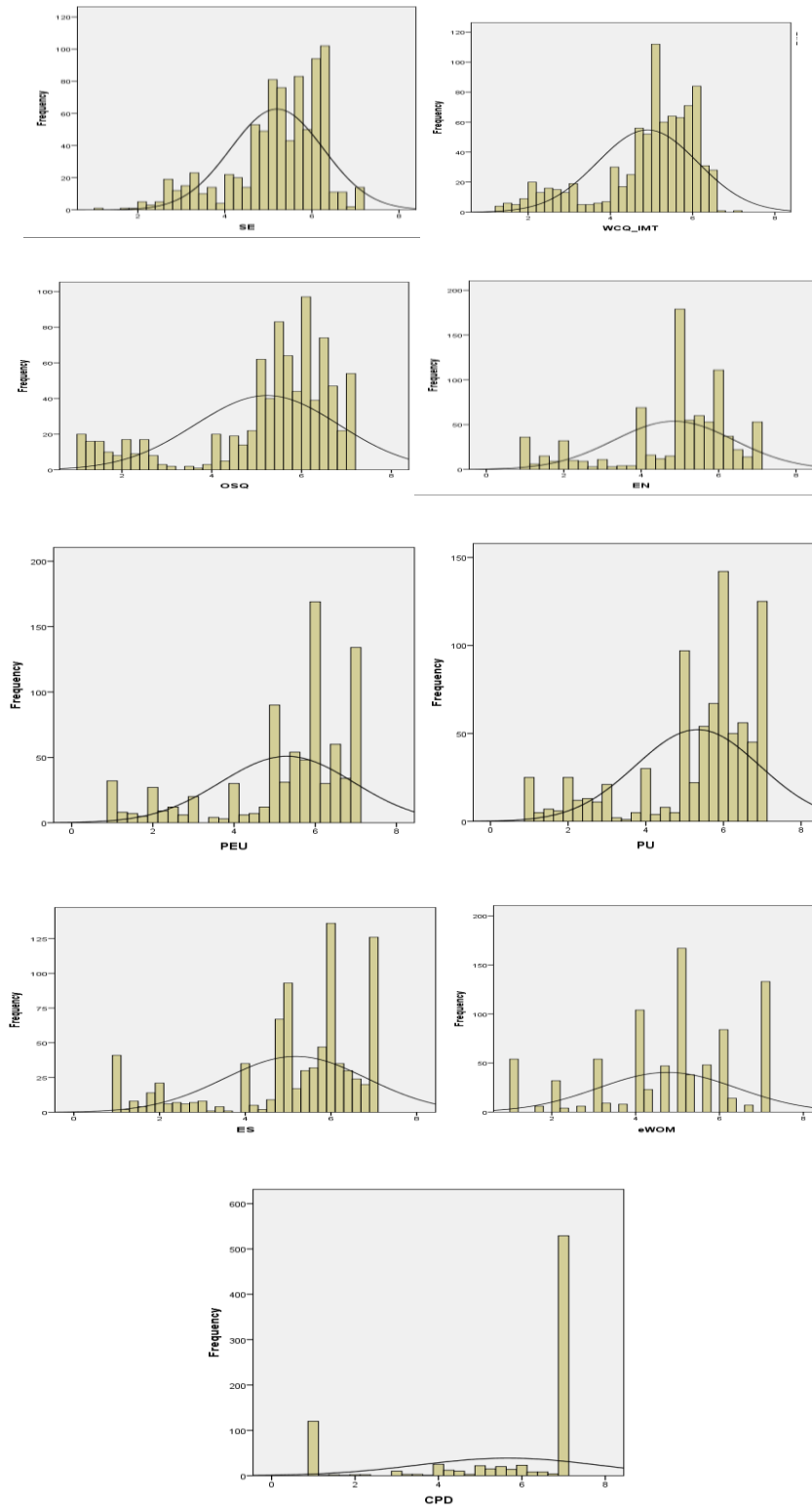
Items	Mean	Std. Deviation	Skewness		Kurtosis		Items	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error		Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q13.1	5.8869	1.10058	-1.329	.084	3.216	.169	Q19.1	4.8262	1.59058	-.980	.084	.304	.169
Q13.2	5.9298	1.05332	-1.178	.084	2.485	.169	Q19.2	4.8548	1.59793	-1.002	.084	.316	.169
Q13.3	5.3345	1.79690	-1.177	.084	.440	.169	Q19.3	4.9012	1.58990	-1.034	.084	.469	.169
Q14.1	5.0524	1.85007	-.861	.084	-.381	.169	Q19.4	4.8286	1.62274	-.902	.084	.129	.169
Q14.2	5.2714	1.65286	-1.176	.084	.627	.169	Q20.1	5.3071	1.64949	-1.207	.084	.606	.169
Q14.3	3.4369	1.81000	.334	.084	-.821	.169	Q20.2	5.3345	1.68955	-1.225	.084	.643	.169
Q14.4	5.2976	1.62944	-1.171	.084	.635	.169	Q20.3	5.3036	1.68269	-1.190	.084	.571	.169
Q14.5	5.3452	1.65710	-1.238	.084	.764	.169	Q20.4	5.2845	1.69870	-1.174	.084	.534	.169
Q15.1	4.4476	1.82803	-.402	.084	-.757	.169	Q21.1	5.3571	1.63574	-1.191	.084	.593	.169
Q15.2	4.4726	1.82270	-.382	.084	-.783	.169	Q21.2	5.2988	1.63761	-1.136	.084	.492	.169
Q15.3	4.5476	1.81442	-.410	.084	-.746	.169	Q21.3	5.3738	1.63273	-1.212	.084	.694	.169
Q15.4	3.5631	1.90372	.240	.084	-1.019	.169	Q21.4	5.3107	1.67571	-1.139	.084	.490	.169
Q16.1	5.2036	1.59864	-1.132	.084	-.544	.169	Q22.1	5.1905	1.66415	-1.180	.084	.588	.169
Q16.2	5.2869	1.66284	-1.211	.084	.599	.169	Q22.2	5.1976	1.66690	-1.168	.084	.581	.169
Q16.3	5.2738	1.65175	-1.160	.084	.500	.169	Q22.3	5.0893	1.75098	-.993	.084	.181	.169
Q16.4	5.3060	1.65151	-1.186	.084	.509	.169	Q22.4	5.2690	1.70926	-1.178	.084	.550	.169
Q16.5	5.3774	1.64319	-1.228	.084	.636	.169	Q22.5	5.1524	1.70552	-1.082	.084	.375	.169
Q16.6	5.2738	1.67682	-1.105	.084	.378	.169	Q23.1	4.7583	1.68423	-.619	.084	-.230	.169
Q16.7	5.2881	1.68789	-1.156	.084	.482	.169	Q23.2	4.7750	1.70901	-.635	.084	-.288	.169
Q17.1	4.9845	1.59214	-1.031	.084	.482	.169	Q23.3	4.7643	1.72043	-.576	.084	-.361	.169
Q17.2	5.0310	1.61385	-1.077	.084	.549	.169	Q24.1	5.7024	2.18391	-1.430	.084	.390	.169
Q17.3	5.0452	1.67085	-1.044	.084	.422	.169	Q24.2	5.6821	2.16653	-1.412	.084	.378	.169
Q18.1	5.3440	1.78311	-1.209	.084	.466	.169	Q24.3	5.6286	2.20145	-1.326	.084	.133	.169
Q18.2	5.2857	1.77904	-1.099	.084	.223	.169	Q24.4	5.6333	2.18595	-1.336	.084	.181	.169
Q18.3	5.2929	1.71092	-1.178	.084	.499	.169							
Q18.4	5.2643	1.67621	-1.152	.084	.461	.169							
Q18.5	5.3214	1.68539	-1.170	.084	.523	.169							
Q18.6	5.2893	1.68238	-1.143	.084	.453	.169							
Q18.7	5.2607	1.69128	-1.111	.084	.375	.169							
Q18.8	5.3345	1.72239	-1.174	.084	.454	.169							
Q18.9	5.3250	1.74960	-1.196	.084	.533	.169							

However, according to Tabachnick and Fidell (2007), in a reasonably large sample, skewness will not make a substantive difference in the analysis. Kurtosis can result in an underestimation of the variance, although this risk is reduced with a large sample. Hair et al. (2010) confirmed that, if the sample size is large, the researcher can be less concerned about abnormal variables. In the case of this study the sample size is 840, which means that there should be no significant difference in the main



analysis. Thus, based on Hair et al. (2010), no transformation remedy is required at this stage, which means that all factors in this study were accepted because of the large sample size (i.e 840). Additionally, the histograms that were generated indicate acceptable yet not ideal normality for all variables (see Figure 5.1).

**Figure 5.1 Variables Histograms for Normality**



### 5.5.4 Homoscedasticity

Homoscedasticity refers to the assumption that dependent variable(s) exhibit equal levels of variance across the range of predictor variable(s) (Hair et al., 2010). This assumption is considered as a pre-requisite in multiple regressions (Field, 2013). According to Hair et al. (2010), the failure of homoscedasticity, also known as heteroscedasticity, can create serious problems in multivariate analysis. The most common method for assessing homoscedasticity is Levene's test of Equal Variance (Field, 2013; Pallant, 2013; Hair et al., 2010; Tabachnick and Fidell, 2007). Levene's test, presented in Table 5.5, shows from checking the null hypotheses that variances in different groups are equal (i.e. difference between the variances is zero). If Levene's test value is insignificant (i.e.  $p > 0.05$ ), with variances that are roughly equal, then the homoscedasticity assumption is tenable (Field, 2013; Pallant, 2013). In Table 5.5 the p-values of all variables are significant and above 0.05.

**Table 5.5 Levene's Test for Equality of Variances**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
SE	Equal variances assumed	2.660	.103	-.223	838	.823	-.016	.074	-.161	.129
	Equal variances not assumed			-.224	837.972	.823	-.016	.074	-.161	.128
WCQ_IMT	Equal variances assumed	.943	.332	.010	838	.992	.001	.084	-.165	.166
	Equal variances not assumed			.010	834.969	.992	.001	.084	-.164	.166
OSQ	Equal variances assumed	1.718	.190	-.259	838	.795	-.029	.111	-.246	.189
	Equal variances not assumed			-.260	836.374	.795	-.029	.110	-.246	.188
EN	Equal variances assumed	4.126	.053	.632	838	.528	.068	.107	-.143	.279
	Equal variances not assumed			.635	837.998	.526	.068	.107	-.142	.278
PEU	Equal variances assumed	1.003	.317	.049	838	.961	.006	.114	-.217	.229
	Equal variances not assumed			.049	834.457	.961	.006	.113	-.217	.228
PU	Equal variances assumed	2.229	.136	-.012	838	.990	-.001	.111	-.219	.216
	Equal variances not assumed			-.012	837.516	.990	-.001	.110	-.218	.215
ES	Equal variances assumed	2.006	.157	-.369	838	.712	-.042	.115	-.268	.183
	Equal variances not assumed			-.370	836.658	.712	-.042	.115	-.267	.182
eWOM	Equal variances assumed	.466	.495	.735	838	.463	.084	.114	-.140	.308
	Equal variances not assumed			.734	825.067	.463	.084	.115	-.141	.309
CPD	Equal variances assumed	.309	.578	-.057	838	.955	-.008	.149	-.302	.285
	Equal variances not assumed			-.057	833.989	.955	-.008	.149	-.301	.284

If Levene's test value is insignificant (i.e.  $p > 0.05$ ), with variances that are roughly equal, then the homoscedasticity assumption is tenable. It can be found from the Table 5.5 that p-values of all variables are significant and above 0.05. However, the p-value of EN with  $p = 0.053$  is close to the limiting value of 0.05. In two-tailed t-tests all t-values are well above 0.05. Therefore, as the variables considered in this study meet the pre-requisite, they are suitable for regression analysis.

### 5.5.5 Multicollinearity

Multicollinearity is measured in terms of tolerance; this signifies that two or more independent variables are highly correlated. This indicates that one variable can be highly explained or predicted by the other variable(s) and thus it has a limited contribution to the explanatory power of the entire set (Hair et al., 2010). Therefore, multicollinearity is problematic in multiple regressions (Pallant, 2013). According to Field (2013), the presence of multicollinearity limits the size of the regression (R) value and makes it difficult to understand the contribution of each individual independent variable.

Multicollinearity exists when the independent variables are highly correlated  $R \geq 0.9$  (Pallant, 2013; Hair et al., 2010; Tabachnick and Fidell, 2007). One way of identifying multicollinearity is by scanning the correlation matrix of all the predictor variables and seeing if any correlate very highly (Field, 2013). Another test is the Variance Inflation Factor (VIF), which indicates whether a predictor has a strong linear relationship with the other predictor(s). The suggested acceptable value of VIF should be more than 0.1 and less than 10 (Pallant, 2013; Tabachnick and Fidell, 2007).

The most widely used diagnostic for multicollinearity is VIF. The problem with multicollinearity occurs when there are high correlations among predictor variables, leading to unreliable and unstable estimates of regression coefficients. VIF estimates how much the variance of a coefficient is '*inflated*' because of linear dependence with other predictors. The VIF has a lower bound of 1 but no upper bound. Most data analysts know that multicollinearity is not a good thing. But many do not realise that there are several situations in which multicollinearity can be safely ignored. According to Allison (2012), there are at least three situations in which a high VIF is not a problem and can be safely ignored:

1. The variables with high VIFs are control variables, and the variables of interest do not have high VIFs.

If collinear variables are used as control variables, and if they are not collinear with other variables, there is no problem, because the coefficients of these variables are not affected, and the performance of the control variables will not be impaired. Referring to Tables 5.6 and 5.7, OSQ, PEU and PU have VIF values more than 10, which is the upper limit suggested by Pallant, (2013) and Tabachnick and Fidell (2007), and correlation values less than 0.9. All other variables have VIF values within limits. Hence, the issue of multicollinearity can safely be ignored in this case. Furthermore, according to Pallant (2013), Hair et al. (2010) and Tabachnick and Fidell (2007), multicollinearity exists when the independent variables are highly correlated  $r \geq 0.9$ .

**Table 5.6 Pearson Correlation for Observing Multicollinearity**

	SE							
<b>WCQ_IMT</b>	.828	<b>WCQ_IMT</b>						
<b>OSQ</b>	.856	.894	<b>OSQ</b>					
<b>EN</b>	.797	.876	.893	<b>EN</b>				
<b>PEU</b>	.838	.834	.856	.899	<b>PEU</b>			
<b>PU</b>	.838	.895	.883	.899	.897	<b>PU</b>		
<b>ES</b>	.824	.891	.873	.881	.865	.872	<b>ES</b>	
<b>eWOM</b>	.325	.385	.359	.388	.372	.362	.389	<b>eWOM</b>
<b>CPD</b>	.793	.837	.886	.820	.865	.871	.835	.273

**Table 5.7 Variance Inflation Factor (VIF) Test of Multicollinearity**

	Collinearity Statistics	
	Tolerance	VIF
SE	.254	3.941
WCQ_IMT	.117	8.530
OSQ	.053	10.356
EN	.148	6.768
PEU	.057	11.527
PU	.067	10.502
eWOM	.825	1.213
ES	.107	9.361

a. Dependent Variable: CPD

- The high VIFs are caused by the inclusion of powers or products of other variables. This issue does not arise in this study because powers or products of variables are not considered in the framework. This fact also supports the argument for ignoring multicollinearity.
- The variables with high VIFs are indicator (dummy) variables that represent a categorical variable with three or more categories.

Various recommendations for acceptable levels of VIF have been published in the literature. Perhaps most commonly, a value of 10 has been recommended as the maximum level of VIF. The VIF recommendation of 10 corresponds to the tolerance recommendation of .10 (i.e.  $1/0.10=10$ ). However, it may be noted that scholars like O'Brien (2007) and Stine (1955) have argued that the most important consideration should be for the lower limiting value of VIF. Richard (2015) argued that extreme multicollinearity does not violate Ordinary Least Squares (OLS) regression assumptions. In other words, OLS estimates are still unbiased and Best Linear Unbiased Estimators (BLUE). However, Richard comments that greater multicollinearity can lead to larger standard errors.

## 5.6 Sample Characteristics

In the following sections, a descriptive analysis of the response sample will be presented. Demographic information, Internet usage experience and travel experience were part of the online questionnaire. Some of these characteristics will be used to conduct invariant group analysis in Appendix 5.

### 5.6.1 Demographic Information

The below information is based on the total valid responses of 1,002 surveys. The demographic information obtained from the survey was extremely useful in developing the conceptual framework.

#### 5.6.1.1 Age and Gender Classification

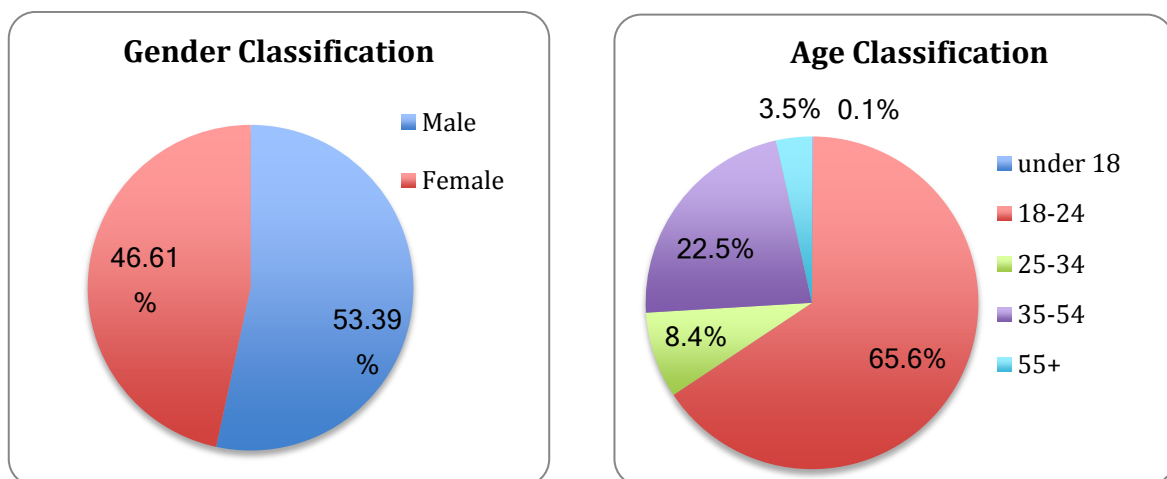


Figure 5.2 Gender and Age Classification

Based on gender classification (Figure 5.2), the demographic data shows that males comprised 53.39% (n=535) of the total sample size of 1,002, while females comprised 46.61% (n=467). The largest age group was 18-24 years (65.6%, n=657), followed by 35-54 years (22.5%, n=225), 25-34 years (8.4%, n=84) and 55+ (3.5% n=35).

### 5.6.1.2 Education and Employment Level

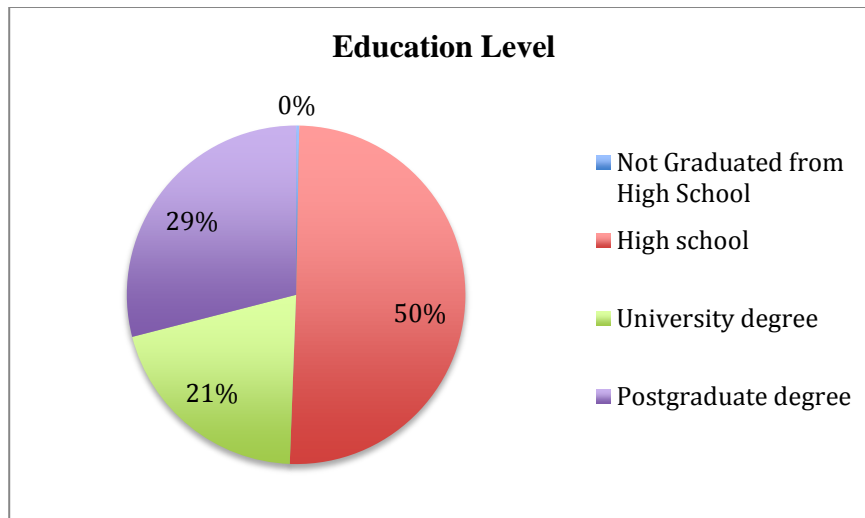


Figure 5.3 Education Level

The population selected for this study showed a relatively high level of education (Figure 5.3), with 28.04% (n=281) holding a ‘postgraduate degree’ and 21.36% (n=214) holding a ‘university degree’. The majority of respondents (50.6%) came from high school level (n=507). The author had distributed the questionnaire among university undergraduate students and academic employees.

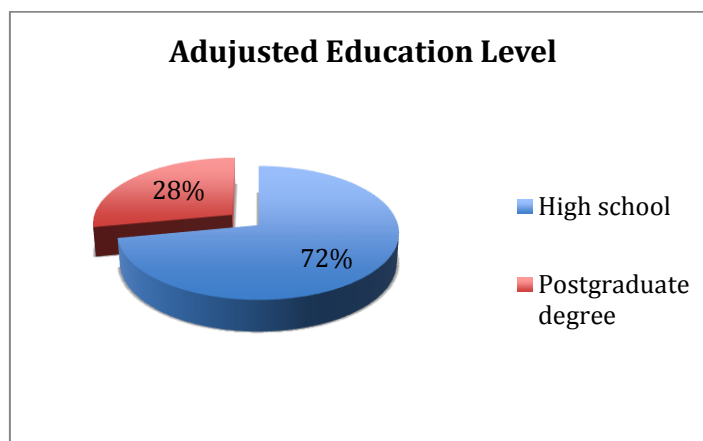


Figure 5.4 The Education Level after Adjustment

However, the percentage that indicated they had acquired a bachelor degree, had answered inadvertently as they were still studying and had not finished their degrees. Therefore, it may be

specifically noted that, at the time of the survey, the majority of the population (72%) were really only at high school level. The academic employees held either a postgraduate or doctoral degree. With regard to employment status, 28% of the respondents were employed personnel. Only one self-employed respondent participated (Figure 5.4).

### 5.6.1.3 Internet Experience and Third-Party Websites

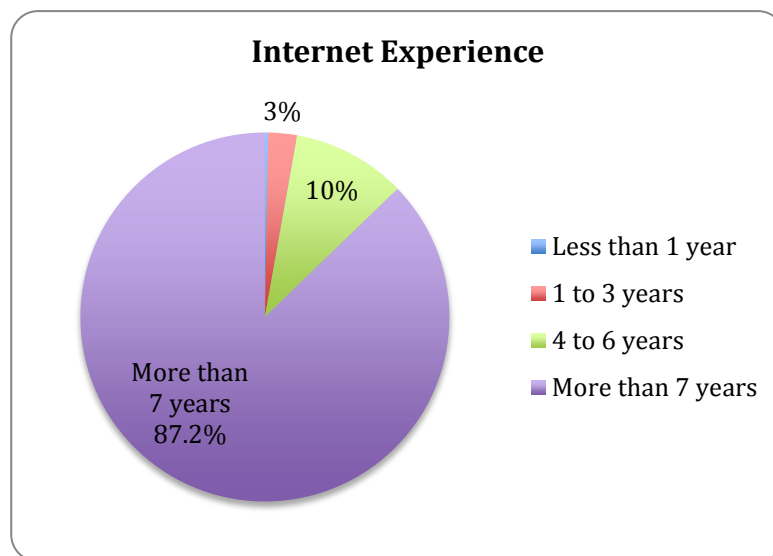


Figure 5.5 Internet Experience

It was refreshing to note that all participants have Internet usage experience (Figure 5.5): nearly 87.2% (n=874) have more than 7 years' Internet experience, 10% (n=100) have 4 to 6 years of experience, and 3% (n=28) have 1 to 3 years of experience.

The information on the participants' Internet experience was particularly important and influential on the survey results, as it enhanced the researcher's confidence in the accuracy of the information extracted from the data.

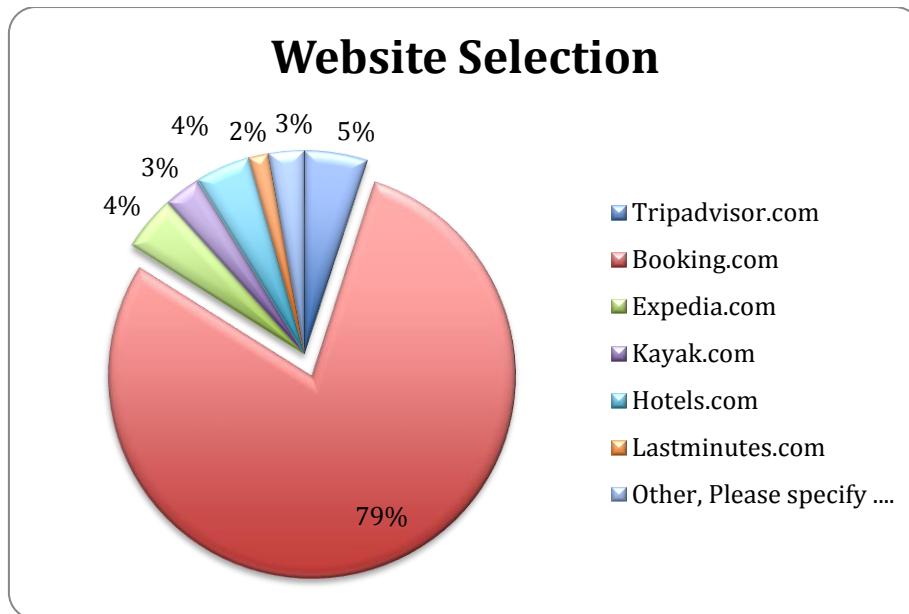


Figure 5.6 Favoured Website Selection/Most Visited Website

It was found that 79% were using Booking.com website, while 5% used Tripadvisor.com, 4% used Expedia.com, Hotels.com 4%, Kayak.com 3%, lastminute.com 2% and Other 3% (Figure 5.6).

#### 5.6.1.4 Reasons for Travel and Marital Status

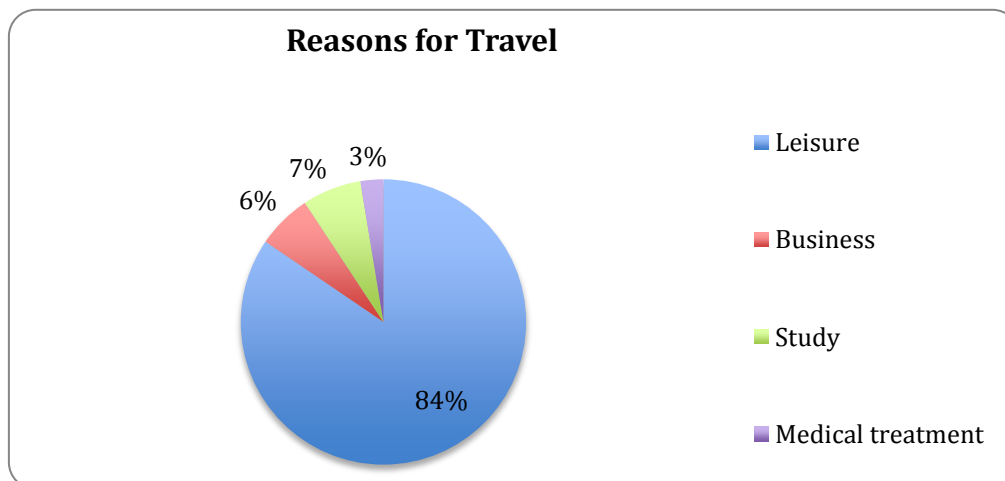


Figure 5.7 The Reasons for Travelling

With regard to reasons for travel (Figure 5.7), 84% of the respondents indicated that they travelled for leisure purposes, while 7% travelled for studies, 6% for business, and 3% for medical treatment.



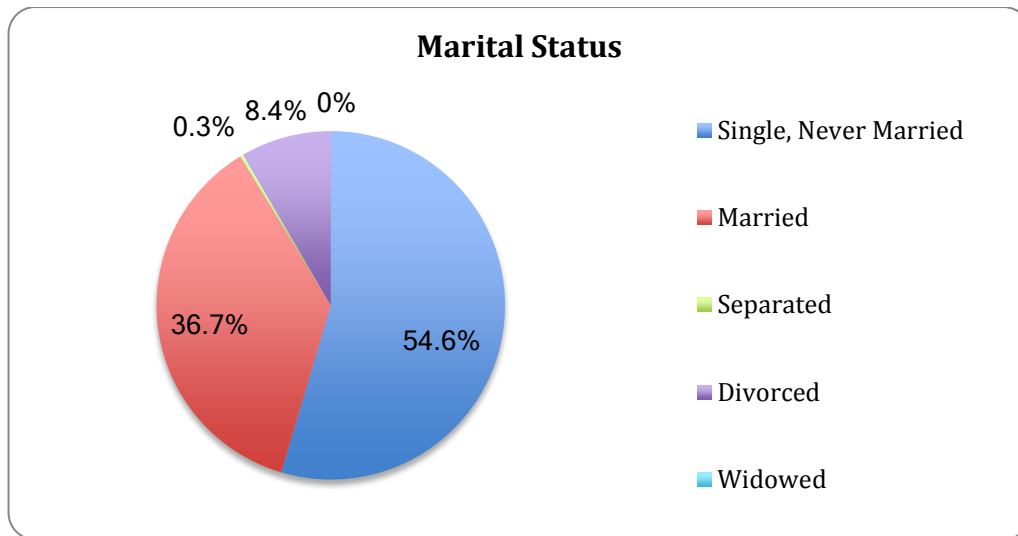


Figure 5.8 Marital Status

Marital status is a very important factor in purchase decisions (Figure 5.8). It was found that 36.73% of the participants were married, while 54.6% had never married. The other section combines divorced, separated and widowed respondents, who made up 8.68%. More demographic details of the sample population are presented in Table 5.8.

**Table 5.8 Demographics of the Sample**

<b>Employment status of respondents</b>		
<b>Category</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Male Employed	171	17.07%
Female Employed	133	13.27%
Female Students	335	33.43%
Male Students	362	36.13%
Male Self-employed	0	0.00%
Female Self-employed	1	0.10%
<b>Total</b>	<b>1,002</b>	<b>100.00%</b>
<b>Educational Status of respondents</b>		
<b>Category</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Male completed high school	270	26.95%
Female completed high school	237	23.65%
Male studying for university bachelor's degree	113	11.28%
Female studying for university bachelor's degree	101	10.08%
Male Postgraduate	152	15.17%
Female Postgraduate	129	12.87%
<b>Total</b>	<b>1,002</b>	<b>100.00%</b>
<b>Age distribution of respondents</b>		
<b>Category (Years of Age)</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Female under 18 years	1	0.100%
Male 18 to 24 years	345	34.431%
Female 18 to 24 years	312	31.138%
Male 25 to 34 years	36	3.593%
Female 25 to 34 years	48	4.790%
Male 35 to 54 years	128	12.774%
Female 35 to 54 years	97	9.681%
Male 55+ years	26	2.595%
Female 55+ years	9	0.898%
<b>Total</b>	<b>1,002</b>	<b>100.000%</b>

### 5.7 Exploratory Factor Analysis (EFA)

As discussed earlier, in Chapter 4, section 4.17.3, the EFA technique is used to explore the data and provide information to the researcher about the number of possible factors that best represent the data. CFA techniques are used to validate/confirm the measurement factors that exist within sets of variables involved in a theoretical model in order to test hypotheses (Hair et al., 2010). Thus, this study applied EFA first, then CFA, before examining the hypotheses. In order to examine the structure of the measurement items corresponding to the variables presented in the conceptual framework, EFA was applied using SPSS (version 20.0 for Windows). EFA was applied to the 55 items adopted from the literature, contributing to nine theoretically established constructs from the 12 constructs, as having the 12 full constructs increased the Eigenvalue from the acceptable percentage. This will be explained in further detail in the coming sections and in Chapter 6.

Numerous procedures are available for factor extraction and rotation, such as Principal Component Analysis (PCA), Principle Factors, Maximum Likelihood Factoring, Image Factoring, Alpha Factoring, Un-Weighted and Generalised Weighted Least Squares Factoring. Among these, the PCA method was selected because it is the most common, and is a default setting in SPSS used to extract the maximum variance from the data set with each component (Tabachnick and Fidell, 2007). The PCA extracts the maximum variance from the data set, in a way in which the first component extracts the highest variance and the last component extracts the least variance. In addition, the Orthogonal Varimax Rotational method for the extraction was selected because it is the most common variance-maximising procedure, and has higher generalisability and reliability power compared to other rotational methods (Pallant, 2013; Tabachnick and Fidell, 2007).

To achieve appropriate factor analysis results, two statistical measures are recommended first, to assess the factorability of the data. These are Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. Bartlett's Test of Sphericity should be significant ( $p < .05$ ) to indicate that the correlation among the measurement items is higher than 0.3 and EFA can be considered appropriate. The KMO index should be above 0.6 to indicate that the relationship between items is statistically significant and appropriate for factor analysis (Pallant, 2013; Hair et al., 2010; Tabachnick and Fidell, 2007).

Table 5.9 shows the result for the current data. The KMO value is .966 and Bartlett's Test is significant ( $p = .000$ ); therefore, EFA is confirmed to be appropriate in the case of the current study.

**Table 5.9 The Kaiser-Meyer-Olkin (KMO) and Bartlett's Test**

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		.966
<b>Bartlett's Test of Sphericity</b>	Approx. Chi-Square	12058.708
	DF	36
	Sig.	.000

The next step is to assess the adequacy of extraction and the number of factors. Among the several criteria that could be used, three were selected in this research, namely: percentage of variance criterion (Communality), latent root criterion (Eigenvalues) and the Scree Test criterion.

### 5.7.1 Percentage of Variance Criterion – Communality

The total variance of an original variable shared with other variables is also known as communality (Hair et al., 2010). According to Tabachnick and Fidell (2007), if the communality values are equal to or exceed 1, this indicates problems with the solution. For example, it might suggest that there is not enough data, that the starting communality values are wrong, or that the number of factors extracted is wrong. On the other hand, very low communality values indicate that the variables with these values are unrelated to others in the set. Items that exhibit communality lower than 0.5 (50%) are considered to be weak items (Hair et al., 2010). With respect to a large sample size, a cut-off value of 0.3 communality is also accepted (Pallant, 2013). For improving or refining a scale, it is recommended to remove items with low communality (Hair et al., 2010) (Table 5.10)

**Table 5.10 Item Communalities**

Item	Initial	Extraction	Item	Initial	Extraction	Item	Initial	Extraction
Q13.1	1.000	.859	Q17.1	1.000	.880	Q21.1	1.000	.908
Q13.2	1.000	.864	Q17.2	1.000	.891	Q21.2	1.000	.895
Q13.3	1.000	.823	Q17.3	1.000	.888	Q21.3	1.000	.896
Q14.1	1.000	.802	Q18.1	1.000	.910	Q21.4	1.000	.884
Q14.2	1.000	.896	Q18.2	1.000	.892			
Q14.3	1.000	.978	Q18.3	1.000	.920	Q22.1	1.000	.929
Q14.4	1.000	.897	Q18.4	1.000	.905	Q22.2	1.000	.928
Q14.5	1.000	.900	Q18.5	1.000	.890	Q22.3	1.000	.891
			Q18.6	1.000	.905	Q22.4	1.000	.920
Q15.1	1.000	.950	Q18.7	1.000	.896	Q22.5	1.000	.909
Q15.2	1.000	.970	Q18.8	1.000	.904			
Q15.3	1.000	.950	Q18.9	1.000	.880	Q23.1	1.000	.954
Q15.4	1.000	.998				Q23.2	1.000	.956
Q16.1	1.000	.856	Q19.1	1.000	.918	Q23.3	1.000	.925
Q16.2	1.000	.888	Q19.2	1.000	.935			
Q16.3	1.000	.862	Q19.3	1.000	.934	Q24.1	1.000	.935
Q16.4	1.000	.871	Q19.4	1.000	.909	Q24.2	1.000	.943
Q16.5	1.000	.881				Q24.3	1.000	.946
Q16.6	1.000	.856	Q20.1	1.000	.917	Q24.4	1.000	.950
Q16.7	1.000	.869	Q20.2	1.000	.914			
			Q20.3	1.000	.912			
			Q20.4	1.000	.919			

Table 5.10 presents the information of communalities explained by each item. Q13.1 to Q14.5 present the Search Engine construct (SE), Q15.1 to Q16.7 present the Web Content construct (WC), Q17.1 to Q18.9 present the Overall System Quality construct (OSQ), Q19.1 to Q19.4 present the Enjoyability construct (EN), Q20.1 to Q20.4 present the Perceived Ease of Use construct (PEOU), Q21.1 to Q21.4 present the Perceived Usefulness construct (PU), Q22.1 to Q22.5 present the e-Satisfaction construct (ES), Q.23.1 to Q23.3 present the Electronic Word of Mouth construct (eWOM) and Q24.1 to Q24.4 present the Customer Purchase Decision construct (CPD). All of the items shared above 0.5 communality with their components. Therefore, no items needed to be removed. [N.B: The weakest in the list are: Q14.1 and Q13.3 under the Search Engine Construct (SE)].

### 5.7.2 Latent Root Criterion – Eigenvalues

Eigenvalues are the variances of the factors. When factor analysis is conducted based on the correlation matrix, the variables are standardised, which means that each variable has a variance of 1, and the total variance is equal to the number of variables used in the analysis. Eigenvalue is a principal component extraction method that indicates the substantive importance of that factor. An estimate of the number of factors can be obtained from the size of the eigenvalues reported as part of a run with principal component extraction (Tabachnick and Fidell, 2007). According to Hair et al. (2010), if an Eigenvalue is more than 1, it satisfies the latent root criterion, but if it is less than 1 it is considered unimportant and can be disregarded. This means a solution that accounts for 60% or above of the cumulative variance satisfies the criterion of variance percentage (variability in score).

As factor analysis is an explanatory tool that should be used as a guide, decisions to be made should not be entirely left to the computer (Field, 2005). An important decision here is the number of factors to extract. SPSS provides two options for factor extraction, by choosing Eigenvalue >1 or by specifying the number of factors. In the latter case, the KMO index should not be less than 0.7. A KMO-based decision is especially accurate when the number of variables is less than 30 and communalities after extraction is > 0.7 or when a sample size is more than 250. Furthermore, average of communalities should not be less than 0.7. Table 5.11 represents an examination of factors extracted from the current data. Going by the criterion of Eigenvalues more than 1, it will result in only eight factors. Thus, the SPSS option for extracting nine factors was chosen and the calculation was performed again. Thus, nine components were extracted, eight factors with Eigenvalue more than 1 and the 9th factor with Eigenvalue close to 1, i.e. 0.997. These nine components together explained a total variance of 91.315% (see column Cumulative %), which is higher than the recommendation.

**Table 5.3 Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	40.440	73.527	73.527	40.440	73.527	73.527	34.977	63.595	63.595
2	2.744	4.989	78.516	2.744	4.989	78.516	4.957	9.012	72.607
3	2.459	4.472	82.987	2.459	4.472	82.987	3.419	6.216	78.823
4	1.386	2.519	85.507	1.386	2.519	85.507	2.349	4.271	83.094
5	1.235	1.767	87.274	.972	1.767	87.274	1.296	2.356	85.450
6	1.201	1.217	88.492	.670	1.217	88.492	1.160	2.109	87.559
7	1.147	1.057	89.549	.582	1.057	89.549	1.145	1.448	89.007
8	1.126	.901	90.450	.495	.901	90.450	1.115	1.361	90.368
9	.997	.865	91.315	.476	.865	91.315	.986	.948	91.315
10	.875	.764	92.079						
11	.786	.544	92.623						
12	.563	.495	93.118						
13	.345	.474	93.593						

KMO value was recalculated and found to be 0.986 ( $p$ -value = 0.000). This suggests that the current data can have nine constructs, as proposed, though the loading on the 9th factor will be weak. The average value of communalities was found to be  $49.049/55 = .892 > .7$ .

### 5.7.3 Scree Test Criterion

The third criterion applied for determining the number of factors is the Scree test. The Scree test (Cattell, 1966) plots the graph for the latent roots against the number of factors in their extraction order (Tabachnick and Fidell, 2007). The shape of the curve within the plot is used to determine the cut-off point (Hair et al., 2010). The shape decreases from the first factor having the highest eigenvalue towards the lowest one until it reaches the last factor with the lowest eigenvalue (Tabachnick and Fidell, 2007). The change in the shape of the plot (usually an elbow shape) indicates a clear distinction between factors of interest having an eigenvalue  $>1$  and disregards factors having an eigenvalue  $<1$  (Pallant, 2013; Hair et al., 2010). In this study, inspection of the Scree plot (Figure 5.9) confirms a similar number of factors extracted using latent root criterion. The graph clearly reveals a point between 8 and 9. Therefore, extracting nine components that explain 91.315% of the variance is appropriate.

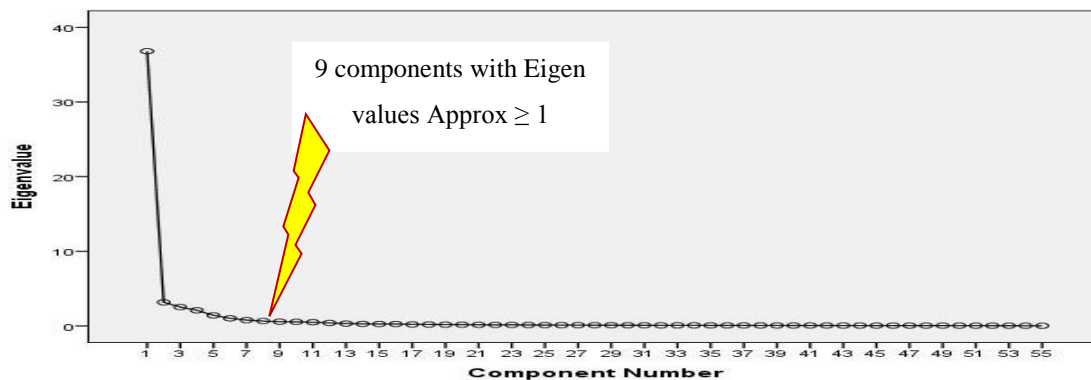


Figure 5.9 Scree Plot of Factors

Thus, the choice of nine factors instead of eight is justified by these points:

- Scree plot shows the arrow pointing to the inflexion at the concave downward point. It is clearly very close to 9.
- KMO is  $.986 > .7$ .
- Sample size in this case is 840, which is much greater than 250.
- Average value of communalities =  $.892 > .7$ .

#### **5.7.4 Rotated Component Matrix Factor Loading**

The interpretability of the factors can be improved through factor rotation. In other words, the number of factors could be assessed using the rotated component matrix. Rotation has the effect of optimising the factor structure. In rotation, the absolute values of the variables are changed while keeping their differential values constant. Varimax, quartimax and equamax are orthogonal rotations while direct oblimin and promax are oblique rotations. If the factors are required to be independent, then orthogonal rotation should be selected. Varimax is the most commonly used method and was adopted in this study.

The items with factor loading of  $<.40$  or cross-loading of  $>.40$  represent weak consistency within the scale, and it is recommended that these should be removed (Hair et al., 2010). In the extraction of the factors, the number of factors is selected to be based on Eigenvalue. This is the default setting of SPSS and can help to decide the number of factors that should be considered. It can be clearly seen from the rotated component matrix in Table 5.12 that, once again, a nine-factor solution is confirmed, with few items cross-loaded. This is consistent with the earlier findings for the number of factors.

Table 5.4 Un-Rotated Component Matrix

	Component									Consistency	
	1	2	3	4	5	6	7	8	9		
Q13.1 With multiple search features	.484										
Q13.2 Found thro' multiple pathways	.462			.737							
Q13.3 Easy to locate what I need	.836								.484		Weak
Q14.1 Navigation not intuitive	.692								.462		Weak
Q14.2 Easy for first-time buyer	.848										
Q14.3 Takes long time to shop	-.345										
Q14.4 User-friendly.	.882		.361		.488		.617				Weak
Q14.5 Convenient to use.	.887										
Q15.1 Helpful	.513	.733									
Q15.2 Important	.453	.746									
Q15.3 Informative	.526	.719									
Q15.4 Unhelpful	-.379	-.659	.391								Ok
Q16.1 Easiness of Understanding	.873										
Q16.2 Design easy to understand.	.895										
Q16.3 Can remember the page	.880										
Q16.4 Can get Accustomed Easily	.887										
Q16.5 Language is clear and easy	.890										
Q16.6 Appropriate Components fit	.885										
Q16.7 Apt use of colours & structures	.893										
Q17.1 Display of deals attractive.	.876										
Q17.2 Beautiful Appeal	.876										
Q17.3 Good website looks.	.883										
Q18.1 Provides services Promised	.907										
Q18.2 Dependability for Customer Services	.890										
Q18.3 Performing services right the first time.	.912										
Q18.4 Provide services at promised time	.900										
Q18.5 Keeping customers informed	.889										
Q18.6 Willingness to help customers	.905										
Q18.7 Readiness to respond	.892										
Q18.8 Customers feel safe in Browsing	.890										
Q18.9 Easy to pay & complete online transaction	.887										
Q19.1 Lots of fun to browse	.858										
Q19.2 Clever and quite entertaining	.869										
Q19.3 Look and Feel likeavie	.870										
Q19.4 Not just selling—Entertaining	.843										
Q20.1 Easy to use.	.908										
Q20.2 Easy to become skilful	.915										
Q20.3 Navigation Learning Easy	.916										
Q20.4 Clear Interaction	.904										
Q21.1 Useful for searching& booking	.900										
Q21.2 Improved awareness in product searching	.905										
Q21.3 Makes it easier to Browse	.908										
Q21.4 Enhance Interest in Browing	.893										
Q22.1 I am satisfied	.894										
Q22.2 I am pleased	.893										
Q22.3 I'd recommend the Site	.860										
Q22.4 I'd use website again	.882										
Q22.5 My expectations were More	.887										
Q23.1 I'd participate in cust.discussions	.401	.406	.724							.513	Weak
Q23.2 Will provide feedback	.397	.418	.731							.513	Weak
Q23.3 I'll sign in to view the info	.408	.323	.739								
Q24.1 Likely (7) / Unlikaly (1)	.860										
Q24.2 Probably (7) / Improbable (1)	.852										Ok
Q24.3 Certain (7) / Uncertain (1)	.851										Ok
Q24.4 Definitely (7) / Definitely not (1)	.842										Ok

a. 9 components extracted.

From Table 5.12, the matrix reveals that there are five cross-loaded items. Following the suggestion of Hair et al. (2010), these need to be removed. Negativity of the correlations can be neglected and only the values are considered.

Based on the earlier findings, it was decided to perform the EFA again but this time without the cross-loaded items, and indicating nine factors only. The number of factors was forced to be loaded as nine factors, rather than basing it on Eigenvalues in SPSS. This approach, suggested by Pallant (2013) and Blunch (2008), can help in assessing the new nine factors solution (Table 5.13)



Table 5.5 Rotated Component Matrix

Item No.	Question No. and Item Name	Component								
		1	2	3	4	5	6	7	8	9
1	Q13.1	With multiple search features	.860							
2	Q13.2	Found thro' multiple pathways	.871							
3	Q13.3	Easy to locate what I need	.730							
4	Q14.1	Navigation not intuitive	.518							
5	Q14.2	Easy for first-time buyer	.750							
6	Q14.3	Takes long time to shop	.785							
7	Q14.4	User-friendly.	.815							
8	Q14.5	Convenient to use.	.812							
9	Q15.1	Helpful		.888						
10	Q15.2	Important		.906						
11	Q15.3	Informative		.876						
12	Q15.4	Unhelpful		-.813						
13	Q16.1	Easiness of Understanding	.803							
14	Q16.2	Design easy to understand.	.832							
15	Q16.3	Can remember the page	.804							
16	Q16.4	Can get Accustomed Easily	.821							
17	Q16.5	Language is clear and easy	.835							
18	Q16.6	Appropriate Components fit	.808							
19	Q16.7	Apt use of colours &structures	.819							
49	Q23.1	I'd participate in cust.discussions			.911					
50	Q23.2	Will provide feedback			.920					
51	Q23.3	I'll sign in to view the info			.889					
32	Q19.1	Lots of fun to browse				.788				
33	Q19.2	Clever and quite entertaining				.797				
34	Q19.3	Look and Feel likeavle				.801				
35	Q19.4	Not just selling–Entertaining				.742				
20	Q17.1	Display of deals attractive.					.788			
21	Q17.2	Beautiful Appeal					.806			
22	Q17.3	Good website looks.					.808			
23	Q18.1	Provides services Promised					.861			
24	Q18.2	Dependability for Customer Services					.820			
25	Q18.3	Performing services right the first time.					.874			
26	Q18.4	Provide services at promised time					.878			
27	Q18.5	Keeping customers informed					.874			
28	Q18.6	Willingness to help customers					.872			
29	Q18.7	Readiness to respond					.837			
30	Q18.8	Customers feel safe in Browsing					.872			
31	Q18.9	Easy to pay &complete online transaction					.868			
36	Q20.1	Easy to use.						.868		
37	Q20.2	Easy to become skilful						.881		
38	Q20.3	Navigation Learning Easy						.873		
39	Q20.4	Clear Interaction						.870		
40	Q21.1	Useful for searching& booking							.866	
41	Q21.2	Improved awareness in product searching							.841	
42	Q21.3	Makes it easier to Browse							.859	
43	Q21.4	Enhance Interest in Browing							.823	
44	Q22.1	I am satisfied								.852
45	Q22.2	I am pleased								.852
46	Q22.3	I'd recommend the Site								.834
47	Q22.4	I'd use website again								.844
48	Q22.5	My expectations were More								.816
52	Q24.1	Likely (7) / Unlikely (1)								.735
53	Q24.2	Probably (7) / Improbable (1)								.718
54	Q24.3	Certain (7) / Uncertain (1)								.712
55	Q24.4	Definitely (7) / Definitely not (1)								.694

As a result of the second round, the rotated component matrix loaded in a much better and clearer structure, as seen in Table 5.13. The output shows the component matrix before rotation. It shows loadings of each variable on each factor. By default, SPSS displays all possible loadings above 0.3, which was the value specified. This value is 0.1 by default. However, this value can be up to 0.4. This matrix is not particularly important for interpretation.

SPSS has extracted nine factors; all the items provided loadings above 0.3 in this round. It was found that many variables were loading on the first factor. Cross-loadings were observed in the case of Q13.1, 13.2, 13.3, 13.4, Q23.1 and Q23.2. Heavy cross-loading was observed in the case of Q14.3. Q15.1, Q15.2, Q15.3 and Q15.4 did not show loadings on the first component. Out of these, Q14.3 and Q15.4 had also shown weakness in consistency in the reliability test. These two items were marked for deletion from the structural model. The final measurement items were used to repeat the EFA. The results indicate that the five-component solution explained 91.315% of the total variance. Other tests (e.g. KMO and Bartlett's Test, Communality, Eigenvalue) were also repeated.

As a result of EFA, two items, namely Q14.3 and Q15.4, were marked to be dropped from the original measurement items. Thus, the number of variables became 53 instead of 55. Strictly based on Eigenvalues, we have only eight factors with values greater than 1. However, based on Cronbach's Alpha, nine factors are extracted and the final Alpha value is 0.987.

Table 5.14 presents all the nine constructs (i.e. Search Engine, Web Content, Overall System Quality, Enjoyability, Perceived Ease of Use, Perceived Usefulness, e-Satisfaction, Electronic Word of Mouth and Customer Purchase Decision) and their items. Highly loaded items are presented first, along with the wording of each item. The items for each construct are between 3 and 12 items, which respects the rule of thumb for using AMOS software for SEM using the CFA approach.

**Table 5.6 Factor Loadings of All Items**

Item No.	Item Code	Item Name	Construct Name	Symbol used	No.of Items	Component
1	Q13.1	With multiple search features	Search Engine	MSE	8	.860
2	Q13.2	Found thro' multiple pathways				.871
3	Q13.3	Easy to locate what I need				.730
4	Q14.1	Navigation not intuitive				.518
5	Q14.2	Easy for first-time buyer				.750
6	Q14.3	Takes long time to shop				.785
7	Q14.4	User-friendly.				.815
8	Q14.5	Convenient to use.				.812
9	Q15.1	Helpful	Web Content Quality	MWQ/IT	11	.888
10	Q15.2	Important				.906
11	Q15.3	Informative				.876
12	Q15.4	Unhelpful				-.813
13	Q16.1	Easiness of Understanding				.803
14	Q16.2	Design easy to understand.				.832
15	Q16.3	Can remember the page				.804
16	Q16.4	Can get Accustomed Easily				.821
17	Q16.5	Language is clear and easy				.835
18	Q16.6	Appropriate Components fit				.808
19	Q16.7	Apt use of colours &structures				.819
49	Q23.1	I'd participate in cust.discussions	eWord of Mouth	MeWOM	3	.911
50	Q23.2	Will provide feedback				.920
51	Q23.3	I'll sign in to view the info				.889
32	Q19.1	Lots of fun to browse	Enjoyability	MEN	4	.788
33	Q19.2	Clever and quite entertaining				.797
34	Q19.3	Look and Feel likeavle				.801
35	Q19.4	Not just selling—Entertaining				.742
20	Q17.1	Display of deals attractive.	Overall System Quality	OSQ	12	.788
21	Q17.2	Beautiful Appeal				.806
22	Q17.3	Good website looks.				.808
23	Q18.1	Provides services Promised				.861
24	Q18.2	Dependability for Customer Services				.820
25	Q18.3	Performing services right the first time.				.874
26	Q18.4	Provide services at promised time				.878
27	Q18.5	Keeping customers informed				.874
28	Q18.6	Willingness to help customers				.872
29	Q18.7	Readiness to respond				.837
30	Q18.8	Customers feel safe in Browsing				.872
31	Q18.9	Easy to pay &complete online transaction				.868
36	Q20.1	Easy to use.	Perceived Ease of Use	MPEU	4	.868
37	Q20.2	Easy to become skilful				.881
38	Q20.3	Navigation Learning Easy				.873
39	Q20.4	Clear Interaction				.870
40	Q21.1	Useful for searching& booking	Perceived Usefulness	MPU	4	.866
41	Q21.2	Improved awareness in product searching				.841
42	Q21.3	Makes it easier to Browse				.859
43	Q21.4	Enhance Interest in Browing				.823
44	Q22.1	I am satisfied	e-Satisfaction	MES	5	.852
45	Q22.2	I am pleased				.852
46	Q22.3	I'd recommend the Site				.834
47	Q22.4	I'd use website again				.844
48	Q22.5	My expectations were More				.816
52	Q24.1	Likely (7) / Unlikely (1)	Purchase Decision	MCPD	4	.735
53	Q24.2	Probably (7) / Improbable (1)				.718
54	Q24.3	Certain (7) / Uncertain (1)				.712
55	Q24.4	Definitely (7) / Definitely not (1)				.694

### 5.7.5 Anti-Image Correlation Matrix

Anti-image correlation matrix is a test that can help identify unsuitable items in the construct items. SPSS output given in Table 5.15 shows the anti-image correlation matrix. It can be seen that some identified items do not correlate with any of the factors. Examining the diagonal entries, which are called the Sampling Adequacy of Individual Items, when these values are less than 0.5, the corresponding item should be removed (Hair et al., 2010). It can be seen that all diagonal entries are above 0.5, except for Q15.4 and Q14.3, which are 0.380 and 0.482 respectively. Therefore, the

variable Q15.4 is to be removed. In the case of Q14.3, the value is marginal, although it can be removed based on previous tests.

Furthermore, this matrix can uncover items that correlate with other items above and beyond the factors. In particular, each of the non-diagonal entries represents the correlation between the corresponding items after controlling the other items and then multiplying by -1. Values that exceed 0.3 or so represent items that are correlated with each other above and beyond the factors. Hence, one of these items should be eliminated.

**Table 5.7 Anti-Image Correlation Matrix**

	Q13.1	Q13.2	Q13.3	Q14.1	Q14.2	Q14.3	Q14.4	Q14.5	Q15.1	Q15.2	Q15.3	Q15.4	Q16.1	
Anti-image Correlation	Q13.1	.937 <sup>a</sup>	-.637	-.074	-.028	-.041	.042	-.007	-.009	.126	-.102	.002	.008	-.004
	Q13.2	-.637	.937 <sup>a</sup>	-.112	-.001	-.025	.007	.023	-.002	-.097	.119	-.061	.008	-.006
	Q13.3	-.074	-.112	.995 <sup>a</sup>	-.081	-.132	-.036	-.051	-.141	-.054	-.041	.087	-.039	-.082
	Q14.1	-.028	-.001	-.081	.989 <sup>a</sup>	-.267	-.009	-.055	-.081	-.025	.005	-.017	-.024	.010
	Q14.2	-.041	-.025	-.132	-.267	.992 <sup>a</sup>	-.034	-.283	-.160	.024	-.009	-.004	.026	-.033
	Q14.3	.042	.007	-.036	-.009	-.034	.482 <sup>a</sup>	.066	-.024	.084	-.053	.044	.058	-.007
	Q14.4	-.007	.023	-.051	-.055	-.283	.066	.987 <sup>a</sup>	-.492	.063	-.012	-.004	.010	-.086
	Q14.5	-.009	-.002	-.141	-.081	-.160	-.024	-.492	.989 <sup>a</sup>	-.035	.041	-.025	-.001	.051
	Q15.1	.126	-.097	-.054	-.025	.024	.084	.063	-.035	.957 <sup>a</sup>	-.588	-.183	-.005	-.043
	Q15.2	-.102	.119	-.041	.005	-.009	-.053	-.012	.041	-.588	.930 <sup>a</sup>	-.630	.008	.061
	Q15.3	.002	-.061	.087	-.017	-.004	.044	-.004	-.025	-.183	-.630	.960 <sup>a</sup>	.000	-.064
	Q15.4	.008	.008	-.039	-.024	.026	.058	.010	-.001	-.005	.008	.000	.380 <sup>a</sup>	-.040
	Q16.1	-.004	-.006	-.082	.010	-.033	-.007	-.086	.051	-.043	.061	-.064	-.040	.991 <sup>a</sup>

## 5.8 Reliability and Correlation

After deciding which items should remain and which should be deleted, a reliability and correlation examination was conducted on each item variable. Using a reliability test, each loaded factor was assessed by Cronbach's Alpha measure. Table 5.16 presents the reliability test for each construct, showing that all are above the recommended minimum value of 0.7. This confirms that items in each factor were internally consistent (Bryman and Bell, 2015).

**Table 5.8 Cronbach's Reliability for Each Factor**

Construct Name	Code	No. of Items	Cronbach Alpha	Remarks
Search Engine	SE	7	0.920	Q14.3 Removed
Web Content Quality	WCQ_IMT	10	0.958	Q15.4 Removed
Overall System Quality	OSQ	12	0.983	
Enjoyability	EN	4	0.980	
Perceived Ease of Use	PEU	4	0.985	
Perceived Usefulness	PU	4	0.981	
e-Satisfaction	ES	5	0.989	
eWord of Mouth	eWOM	4	0.970	
Customer Purchase Decision	CPD	4	0.993	
		54		

The correlation between individual items and the constructs also provides acceptable intervals between 0.273 and 0.956, as shown in Table 5.17.

**Table 5.9 Correlation between Constructs**

	SE	WCQ_IMT	OSQ	EN	PEU	PU	ES	eWOM	CPD
SE	1	.828**	.856**	.797**	.838**	.838**	.824**	.325**	.793**
WCQ_IMT	.828**	1	.931**	.876**	.914**	.913**	.891**	.385**	.837**
OSQ	.856**	.931**	1	.913**	.956**	.947**	.925**	.359**	.886**
EN	.797**	.876**	.913**	1	.899**	.899**	.881**	.388**	.820**
PEU	.838**	.914**	.956**	.899**	1	.955**	.932**	.372**	.865**
PU	.838**	.913**	.947**	.899**	.955**	1	.926**	.362**	.871**
ES	.824**	.891**	.925**	.881**	.932**	.926**	1	.389**	.835**
eWOM	.325**	.385**	.359**	.388**	.372**	.362**	.389**	1	.273**
CPD	.793**	.837**	.886**	.820**	.865**	.871**	.835**	.273**	1

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

These results indicated that these factors with their items could be considered as the basis for the CFA application. According to Anderson and Gerbing (1988), causal relations between the underlying constructs and their related indicators should be specified properly by CFA before imposing any causal relations among the constructs. In the next stage, CFA is performed to assess the convergent and construct validity of scales.

## 5.9 Confirmatory Factor Analysis (CFA)

As mentioned earlier in the previous chapter, section 4.17.6, CFA will be used to build and verify the SEM. This will include assisting the measurement and structural model, conducting construct validity and then testing the hypotheses. The following sections will present the results, and modifications made to the framework.

### 5.9.1 Measurement Model

The items resulting from EFA were used as the input for the model in AMOS (version 20). CFA is run with all variables linked together with covariances drawn between them all (Search Engine, Web Content, Overall System Quality, Enjoyability, Perceived Ease of Use, Perceived Usefulness, e-Satisfaction, Electronic Word of Mouth and Customer Purchase Decision), as shown in Figure 5.10. It may be noted that there are nine constructs and 53 measured items. Items Q15.4 and Q14.3 were removed from the model.

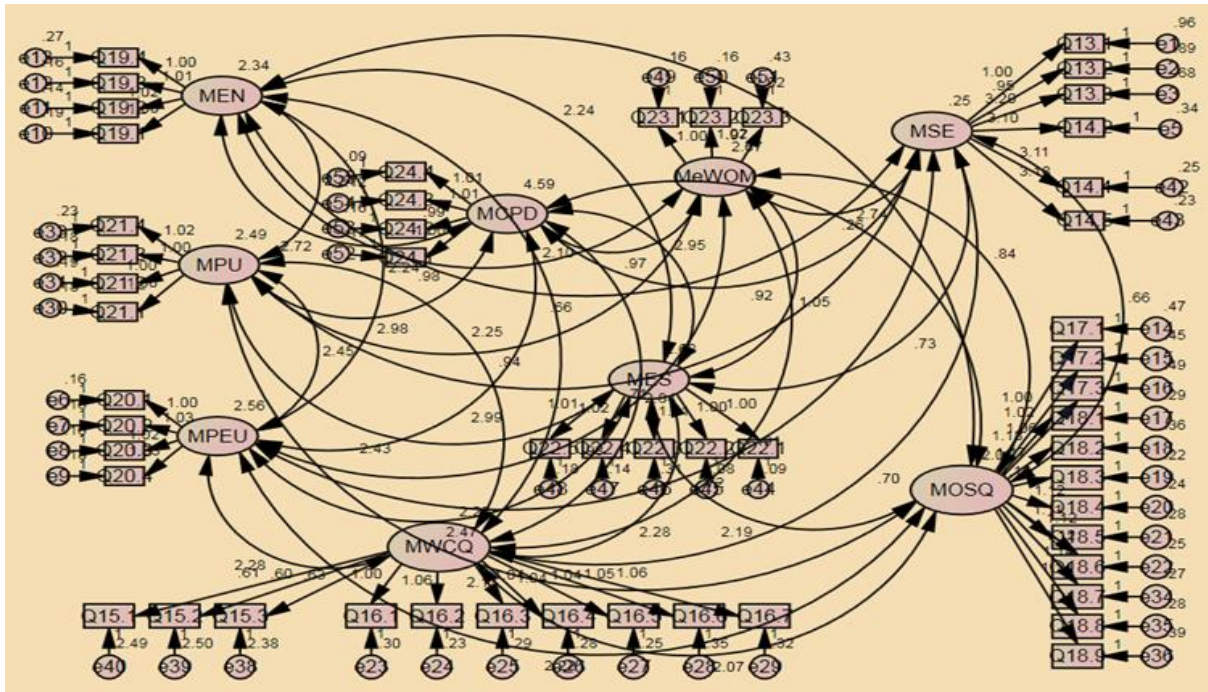


Figure 5.10 Original Multiple Indicator Model after EFA

Running the measurement AMOS model allows the researcher to assess the overall model fit. ‘*Model Fit*’ refers to how well the proposed framework accounts for the correlations between variables in the data set. Any SEM software generates many fit indices. However, it is hard to depend on a single fit index to identify the correct model (Byrne, 2016). It can also be difficult to identify the threshold values of the goodness-of-fit indices, because it is not usually the same for different research models. Generally, when assessing the model, the complexity of the framework, the number of items and the size of the sample should be considered. The author lists a description for the highly recommended and cited model fit indices below.

The Chi-Square statistic  $\chi^2$  is the most common fit test in SEM. The Chi-Square for a statistical model is also called the discrepancy function, likelihood ratio Chi-Square, or Chi-Square Goodness of Fit. In AMOS, the Chi-Square value is called CMIN. The relative Chi-Square is also called the Normed Chi-Square. This value equals the Chi-Square index divided by the degrees of freedom. This index might be less sensitive to sample size. The criterion for acceptance varies across researchers, ranging from less than 2 (Ullman and Bentler, 2003) to less than 5 (Schumacker and Lomax, 2010). Having a larger value for Chi-Square compared to the degrees of freedom suggests that the observed matrices and estimated matrices are significantly different. On the other hand, an insignificant Chi-Square (CMIN) ( $p > 0.05$ ) indicates a satisfactory fit of the model (Blunch, 2008). However, with large samples, this is not usually expected and the use of raw Chi-Square is not applicable (Hair et al., 2010; Tabachnick and Fidell, 2007). Therefore, Relative Chi-Square or Normed Chi-Square

(CMIN/DF), which is a simple ratio of  $\chi^2$  to the Degrees of Freedom (DF), is used. Generally, values of CMIN/DF less than 2 or 3 are associated with better-fitting models (Iacobucci, 2010).

Higher values of incremental fit indices indicate larger improvement over the baseline model in fit. Values in the .90s (or more recently  $\geq .95$ ) are generally accepted as indications of good fit. (Lei and Wu, 2007). According to Browne and Cudeck (1993), Root Mean Square (RMS) values less than .08 are ideal and ideally should be less than .05 (Steiger, 1990,2007). Alternatively, the upper confidence interval of the RMS should not exceed .08 (Hu and Bentler, 1999). Root Mean Square Residual (RMR) and Standardised Root Mean Square Residual (SRMR) measure the average of the residuals between individual observed, estimated covariance and variance terms. Both are considered as types of badness-of-fit indices in which high values are indicative of poor fit. A general assumption is that an SRMR over 0.1 suggests a problem with the fit.

Root Mean Square Error of Approximation (RMSEA) is a type of badness-of-fit indices absolute index that estimates the lack of fit in a model compared to a perfect (saturated) model. Thus, it represents how well a model fits a population, not just a sample used for estimation. Lower RMSEA values indicate a better fit. According to Hair et al. (2010), as samples become larger RMSEA is one of the best measures to use. A value less than .05 is widely considered to represent a good fit. A value below .08 indicates an adequate fit.

Goodness-of-Fit Index (GFI) is still sensitive to sample size. The possible range of GFI values is 0 to 1, with higher values indicating better fit. GFI that exceeds .90 is better (Byrne, 2016). Recent developments of other fit indices have led to a decline in usage of GFI (Hair et al., 2010). Normal Fit Index (NFI) is a type of incremental index that represents the ratio of difference in the  $\chi^2$  value for the fitted model. Hair et al. (2010) and Schumacker and Lomax's (2004) guidelines indicate that the NFI should be  $> 0.90$ . Comparative Fit Index (CFI) is an improved version of the NFI. It is among the most widely used indices. CFI values above .93 are usually associated with a good model fit (Byrne, 2016).

Running the maximum likelihood estimate for the current data file revealed significant Chi-Square statistics where  $\chi^2 = 3005.319$  with 961 degrees of freedom and a  $p = 0.000$  indicating a significant  $\chi^2$  which is expected in large samples. Therefore, other fit indices must be evaluated. Hair et al. (2010) developed a summary for their recommendation for the characteristics of different fit indices across different model situations, as can be seen in Table 5.18 (Hair et al., 2010). In addition, they recommend reporting the Chi-Squared statistics with another absolute index such as RMSEA and an incremental index such as CFI. According to the same authors, using the RMSEA and the CFI satisfies the rule of thumb that both a badness-of-fit index and a goodness-of-fit index be evaluated (ibid).

Others also suggest looking at other measures such as Normed Chi-Square, AGFI, and NFI (Tabachnick and Fidell, 2007). HOETLER's 'Critical N' is the largest sample size for which one would accept the hypothesis that a model is correct. In other words, it is the sample size above which the Chi-Square goodness-of-fit test would go from non-significant to significant. HOETLER suggests that models that would be rejected only with 200 or fewer items, a number of 200 or higher in the HOETLER section of the output are an adequate fit for the data. Numbers smaller than 200 suggest an inadequate fit. Some researchers disagree with the use of this criterion, and it is not one of the more commonly reported statistics for SEM, but other experts may use it. Expected Cross-Validation Index (ECVI) is reported only when CMIN has a Chi-Square distribution under the assumption that the fitted model is correct. This assumption is necessary for the calculation of a confidence interval for ECVI. Therefore, smaller values are preferred. PCLOSE is reported only when CMIN has a Chi-Square distribution under the assumption that the fitted model is correct. Otherwise, PCLOSE cannot be determined.

**Table 5.10 Characteristics of Fit Indices across Different Model Situations**

No. of Stat Vars (m)	N < 250			N > 250		
	m ≤ 12	12 < m < 30	m ≥ 30	m < 12	12 < m < 30	m > 30
$\chi^2$	Insignificant, p-Values expected	Significant p-values even with good fit	Significant p-values expected	Insignificant p-values even with good fit	Significant, p-values expected	Significant p-values expected
CFI or TLI	0.97 or better	.95 or better	Above .92	.95 or better	Above .92	Above .90
RNI	May not diagnose misspecification well	.95 or better	Above .92	.95 or better, not used with N > 1000	Above .92, not used with N > 1000	Above .90, not used with N > 1000
SRMR	Biased upward, use other indices	.08 or less (with CFI of .95 higher)	Less than .09 (with CFI above .92)	Biased upward use other indices	.08 or less (with CFI above .92)	.08 or less (with CFI above .92)
RMSEA	Values < 0.08 with CR = .97 or higher	Values < .08 with CFI of .95 or higher	Values < .08 with CFI above .92	Values .07 with CFI .97 or higher	Values < .07 with CFI = .92 or higher	Values < .07 with CFI of .90 or higher

Note: m = Number of variables, N = applies to number of observations per group when applying CFA to multiple groups at the same time.

Source: Hair et al. (2010)

The AMOS model for this research has 53 observed variables and 840 observations. Therefore, the last column in the table by Hair et al. (2010) in Table 5.18 above provides a guide to the most appropriate limiting values of fit indices.

The results for the indices for this AMOS model show CFI (0.916 > 0.9) and RMSEA (0.085 > 0.07), but Normed Chi-Square (7.12 > recommended value, 3) and NFI (0.904 > recommended value 0.9). Therefore, it can be suggested that the values of RMSEA and CFI are just within acceptable levels, whereas other indices such as Normed Chi-Square, GFI, NFI, and AGFI (0.685 < 0.8) are slightly below. PCLOSE = 0.000 is much less than 0.05, the recommended value. HOETLER fit index is computed as 182, which is close to the best-fit value of 200. The value of ECVI 4.964 is very low, as it should be as low as possible. These results show that there is scope for improvement of the model in terms of enhancing the fit.

Being recursive inherently, in CFA the most fitting model may be obtained after several iterations. Each time, Modification Indices (MI) are suggested by AMOS. Standardised Regression Weights (SRW) and Squared Multiple Correlation (SMC) values are displayed by AMOS in the Estimate option. SRWs represent the amount of change in the dependent variable that is attributable to a single standard deviation unit's worth of change in the predictor variable (Byrne, 2016; Hair et al., 2010).

The AMOS model is run each time the suggested modifications in the paths are incorporated in SRWs and SMCs. The recommended values are above 0.5 or ideally above 0.7 for Standardised SRWs and above 0.5 for SMCs. The current results show that this is the case, with values well above 0.7 for Standardised Regression Weights (SRW) (see Table 5.20) and values above 0.6 for Squared Multiple Correlations (SMCs). The next step is to look at both Modification Indices and Standardised Residuals. Modification Indices are the amount that the overall Chi-Square values would be reduced, by freeing (estimating) any single particular path that is not currently estimated. This involves deleting any path that impacts the Chi-Square values. This can be found by observing high covariance between measurement errors accompanied by high regression weights between these errors' constructs (Byrne, 2016). Standardised Residuals refer to the individual differences between observed covariance terms and the estimated covariance term divided by the standard error of the residual. The smaller the standardised residual covariance values, the better the fit (Hair et al., 2010). According to Byrne (2016), residuals should not exceed  $|2.58|$ , while Hair et al. (2010) suggest that residuals with values above  $|4|$  should cause concern. With regard to the current research, in investigating and exploring the above values for the current data set, it can be suggested that there are five items that might participate in reducing the fit, and they were removed in order to enhance the overall fit.

Being recursive, problems arise when the model runs converge with optimal results. Referring to Table 5.18, it can be seen that the 6th iteration yield better results as far as CMIN is concerned. The Normed Chi-Square value is increased. Furthermore, other indices such as RMSES, CFI, GFI, NFI, etc., are showing lower values. More insignificant regression weights appear too. Consequently, the model fit found to be the best is the 5th iteration, with CMIN/DF (2.091), RMSEA (0.036), GFI (0.946), AGFI (0.928), NFI (0.987), RFI (0.983) and CFI (0.993). Therefore, this measurement model can be regarded a good fit model. Table 5.19 summarises the index values before and after the model modifications and shows the recommended levels that were adopted from Byrne (2016), Hair et al. (2010), Iacobucci (2010) and Hooper et al. (2008). Although the table displays only six iterations, more model runs were executed following the modification indices, regression weights and correlation values.



**Table 5.11 Model Fit Indices for the Measurement Model**

Model fit indices	Acronym	Limiting Value	Model after EFA	Iteration I	Iteration II	Iteration III	Iteration IV	Iteration V	Iteration VI	Comments on the Fit
$\chi^2$ minimum discrepancy	CMIN	p < .05 but this is expected with a large	8814	3862.736	2553.53	1232.1	1065.74	679.532	671.791	Not perfect
Degree of freedom	DF		1238	1280	1003	541	475	325	275	-
p-Value	p		0	0	0	0	0	0	0	Not perfect
Normed Chi-Square	CMIN/DF	< 3	7.12	3.018	2.546	2.277	2.244	2.091	2.443	OK
Root Mean Square Error for Approx.	RMSEA	< .07	0.085	0.049	0.043	0.039	0.039	0.036	0.041	OK
Goodness of Fit	GFI	> .9	0.717	0.849	0.861	0.922	0.929	0.946	0.94	OK
Adjusted Goodness of Fit	AGFI	> .8	0.685	0.823	0.845	0.904	0.911	0.928	0.924	OK
Normed Fit Index	NFI	> .9	0.904	0.958	0.967	0.981	0.982	0.987	0.985	OK
Relative Fit Index	RFI	> .9	0.897	0.955	0.964	0.977	0.979	0.983	0.982	OK
Comparative Fit Index	CFI	> .9	0.916	0.972	0.979	0.989	0.99	0.993	0.991	OK
p of Close Fit	PCLOSE	>0.05	0	0.811	1	1	1	1	1	OK
Expected Cross-validation Index	ECVI	Smaller the better	4.964	3.409	2.801	1.781	1.573	1.094	1.025	Not perfect
HOETLER	HOETLER	<75 Poor fit >200 Good fit	182	297	355	406	415	455	394	OK

Note: Recommended level based on Hair et al. (2010) Iacobucci (2010) and Hooper et al. (2008)

A good model fit provides an insignificant  $\chi^2$  value at a 0.05 threshold (Barrett, 2007). Thus, the  $\chi^2$  statistic is often referred to as either a ‘*badness-of-fit*’ (Kline, 2015) or a ‘*lack of fit*’ (Mulaik et al., 1989) measure. There are a number of limitations in its use. Chi-Square statistic is sensitive to sample size, which means that the Chi-Square statistic nearly always rejects the model when large samples are used (Jöreskog and Sörbom, 1993; Bentler and Bonnet, 1980). Gustafson (1980) remarks that, with a sufficiently large sample sizes, usually any model would have to be discarded.

In the current study, because the sample size is very large (840), it is practically impossible to achieve an optimal measurement model fit with a non-significant Normed Chi-Square value (with  $p > 0.05$ ). Even if the CMIN/DF value is very low, due to the lower values of DF, the determinant appears to be significant. Therefore, in such cases the acceptable values of other indicators are considered. Thus, based on RMSEA, CFI, RFI, etc., it can be concluded that the AMOS model shown in the 5th iteration gives a good fit.

### 5.9.2 Construct Validity

In CFA, quality of the measures can be checked with construct validity tests. A very important test in CFA is checking the validities, namely: Convergent Validity, Discriminant Validity, Nomological Validity and Face Validity.

According to Hair et al. (2010, p.816), “*Construct validity is the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measure*”. It can be assessed through convergent validity, discriminant validity, nomological and face validity.

**Convergent Validity** is the extent to which indicators of a specific construct converge or share a high proportion of variance. Convergent validity can be estimated by factor loadings, Average Variance Extracted (AVE) and reliability. Hair et al. (2010) suggest that Standardised loading estimates should ideally be 0.7 or above. AVE should be 0.5 or greater and reliability should be 0.7 or higher.

**Discriminant Validity** is the extent to which a construct is truly distinct from other constructs. This validity can be tested by comparing the AVE for a construct’s scale items with the Squared Inter-Scale correlation for that construct. If the AVE is higher than the Squared Inter-Scale correlations of the construct, discriminant validity is supported (Hair et al., 2010).

**Nomological Validity** refers to the degree that the summated scale makes accurate predictions of other concepts in a theoretical-based model. Nomological validity is tested by examining whether the correlations among the constructs in the measurement theory make sense. The matrix of construct correlations can be useful in this assessment. Therefore, to demonstrate nomological validity the constructs must be positively related based on the suggested relations in the model (Hair et al., 2010).

**Face Validity** is the extent to which the content of the items is consistent with the construct definition; this must be established prior to theoretical testing using CFA. This was discussed and confirmed in section 4.17.4.

By exploring the result from the analyses of the current research data set, the following was observed: all the Standardised Loading Estimates or Regression Weights (SRWs) were significant and well above the recommended value of 0.7 (see Table 5.20).

**Table 5.20 Standardised Regression Weights (Group Number 1 – Default Model)**

			Estimate				Estimate
Q16.1	<---	MCQMT	0.936	Q20.4	<---	MPEU	0.969
Q16.4	<---	MCQMT	0.946	Q20.3	<---	MPEU	0.972
Q16.2	<---	MCQMT	0.957	Q20.2	<---	MPEU	0.971
Q16.7	<---	MCQMT	0.937	Q20.1	<---	MPEU	0.970
Q16.3	<---	MCQMT	0.948	Q21.2	<---	MPU	0.961
Q19.1	<---	MEN	0.964	Q21.1	<---	MPU	0.970
Q19.2	<---	MEN	0.974	Q14.1	<---	MSE	0.781
Q19.3	<---	MEN	0.962	Q14.2	<---	MSE	0.931
Q22.1	<---	MES	0.986	Q14.4	<---	MSE	0.959
Q22.2	<---	MES	0.987	Q14.5	<---	MSE	0.960
Q22.4	<---	MES	0.970				
Q22.5	<---	MES	0.964				
Q18.4	<---	MOSQ	0.957				
Q18.5	<---	MOSQ	0.955				
Q18.9	<---	MOSQ	0.939				
Q18.6	<---	MOSQ	0.954				

### 5.9.3. Composite Reliability (CR)

In this work there are nine constructs and 53 parameters to be handled. In such cases, the use of Cronbach’s Alpha is somewhat meaningless. Furthermore, if there are error covariances or cross-loadings then Alpha may be different from CR. Also known as McDonald’s Coefficient, the value of CR is obtained by combining all of the true score variances and covariances in the composite of indicator variables related to constructs, and by dividing this sum by the total variance in the

composite. The AVE and CR are not provided by the AMOS software. That is why MS Excel is used to calculate them and Table 5.21 is generated by using formulae cited by Hair et al. (2010).

CR is calculated as follows: let SFL = Sum of all factor loadings, SSI = square this sum and SEV = sum of all error variances of each indicator. Then,  $CR = SSI/(SSI+SEV)$ , the value of CR should be greater than 0.7. Similarly, AVE is calculated as the Sum of each Squared Factor Loading, divided by the Number of Indicators. AVE should be greater than the square of the correlation for each construct, i.e. (Correlation) <sup>2</sup>. Table 5.21 gives the CR and AVE values for the model components. It can be seen that all AVE values > 0.5 and reliabilities CR > 0.7.

**Table 5.12 Composite Reliability (CR) and Average Variance Extraction (AVE) Values**

Constructs	SFL	SSI = SFL <sup>2</sup>	SEV	SSI+SEV	CR = SSI/(SSI+SEV)	AVE
MSE	4.273	18.259	0.804	19.063	0.958	0.793
MWCQ	7.767	60.326	0.242	60.568	0.996	0.873
MOSQ	10.8	116.64	0.292	116.932	0.998	0.857
MEN	3.702	13.705	0.057	13.762	0.996	0.845
MPEU	3.747	14.04	0.052	14.092	0.996	0.889
MPU	3.724	13.868	0.054	13.922	0.996	0.868
MES	4.701	22.099	0.065	22.164	0.997	0.888
MeWOM	2.743	7.524	0.042	7.566	0.994	0.756
MCPD	3.821	14.6	0.041	14.641	0.997	0.894

SFI = Sum of All Factor Loadings

SSI = Square of SFI

SEV = Sum of All Error Variances

CR = SSI/(SSI+SEV) > 0.7

AVE = Average Variance Extraction

Table 5.22 shows that AVE extracted from each construct is higher than the corresponding squared inter-construct correlation and confirms discriminant validity is at construct level.

**Table 5.13 Factor Correlation Matrix with Square Root Values of AVE**

	MSE	MWCQ	MOSQ	MEN	MPEU	MPU	MES	MeWOM	MCPD
MSE	0.891								
MWCQ	0.686	0.934							
MOSQ	0.733	0.867	0.926						
MEN	0.635	0.767	0.834	0.919					
MPEU	0.702	0.835	0.914	0.808	0.943				
MPU	0.702	0.834	0.897	0.808	0.912	0.932			
MES	0.679	0.794	0.856	0.776	0.869	0.857	0.942		
MeWOM	0.106	0.148	0.129	0.151	0.138	0.131	0.151	0.869	
MCPD	0.629	0.701	0.785	0.672	0.748	0.759	0.697	0.075	0.946

### 5.9.4 Model Identification

Model identification is an important concern in SEM, because it provides the best model fit idea. A statistical model is 'identified' if there is one best value for each parameter in the model whose value is not known. In SEM, the 'known' are the variances and covariances of the measured variables, and the unknowns are model parameters. The right numbers of both the *known* and *unknown* contribute to the best 'Model Fit'. Over-identified models have more *knowns* than *unknowns*. Models that are just

identified yield an insignificantly perfect fit. Models that are over-identified that have positive degrees of freedom may not fit well either.

In Table 5.23, ideally all residual covariances must be zero, if the model is perfectly identified (Bryman and Bell, 2015). It can be seen that, though the covariance values are very low, none is zero. The values range from 0.007 to 0.494. Therefore, it can be clearly seen that the AMOS model did not fit well.

**Table 5.14 Standardised Residual Covariances (Group Number 1 – Default Model)**

	Q16.7	Q18.9	Q14.5	Q14.4	Q16.4	Q19.3	Q19.2	Q19.1	Q21.1	Q21.2	Q20.1
Q16.7	0										
Q18.9	0.289	0									
Q14.5	0.014	0.107	0								
Q14.4	0.007	0.132	0.074	0							
Q16.4	-0.234	0.247	0.003	-0.139	0						
Q19.3	0.362	0.322	0.051	0.239	0.183	0					
Q19.2	0.246	0.153	-0.27	-0.165	-0.005	-0.03	0				
Q19.1	0.378	0.297	-0.09	0.169	-0.114	-0.056	0.066	0			
Q21.1	0.328	0.201	-0.09	-0.062	-0.165	0.132	-0.171	-0.052	0		
Q21.2	0.275	0.135	-0.048	-0.194	0.047	0.216	0.042	-0.046	0	0	
Q20.1	0.318	0.478	0.123	0.119	0.183	0.377	0.092	0.052	-0.037	-0.078	0.059
Q20.2	0.021	0.351	-0.223	-0.252	0.045	0.163	-0.101	-0.031	-0.197	0.001	0.2
Q20.3	0.037	0.335	-0.111	-0.286	-0.029	0.097	-0.081	-0.038	0.067	0.057	-0.03
Q20.4	0.279	0.494	0.106	0.018	-0.094	0.167	-0.192	-0.202	0.152	0.144	-0.092
Q16.3	-0.063	-0.022	-0.263	-0.245	0.261	0.169	-0.092	-0.41	-0.207	-0.339	-0.036
Q16.2	-0.058	0.244	-0.012	-0.018	-0.043	-0.008	-0.254	-0.274	0.045	0.02	0.121

Model specification complexity arises out of the degrees of freedom and the number of parameters used in the model. As a rule of thumb, model specification is calculated as  $DF = (\text{Number of observations} - \text{Number of parameters})$ . Each time the AMOS model is modified recursively, the parameter values change. Considering the last model,  $\text{Number of observations} = (\text{Number of items} * (\text{Number of Items} + 1)) / 2 = (53 * 54) / 2 = \text{Number of parameters} = \{(\text{Number of Variances} + \text{Number of error terms}) + \text{Number of Regression coefficients} + \text{Number of Number of Covariances}\}$ . Therefore,  $\text{number of parameters} = \text{number of rectangles} + \text{number of circles representing error terms for each rectangle} + \text{number of regression arrows} + \text{number of covariance arrows or number of exogenous variables}$ . Therefore, degree of freedom, as per the calculations of this study, is approximately = 1431, which means that the AMOS model is over-identified. Finally, for the suggested relationships between constructs in the framework, all correlations are positive and significant. This confirms nomological validity.

### 5.9.5 Structural Model

Having established a reliable and validated measurement/outer-model, the next step is to estimate the assumed causal and covariance linear relationships among the exogenous (independent) and endogenous (dependent) latent variables.

5.9.5.1 Structural Model Fit

In a CFA model a change in each latent trait predicts a large change in responses for each contributing variable. However, a relatively low proportion of unexplained changes is observed; this is required for good measurement in CFA. In SEM, only statistically significant paths are kept in the model. The structural model from AMOS shown in Figure 5.11 is obtained after eliminating all insignificant variables including error variables, item variables, regressions and covariance paths. AMOS draws the structural model with all the proposed paths between constructs and the items that were remaining from CFA. A structural model representation in AMOS can be seen in Table 5.24; the inset table displays the number of variables currently inserted in the SEM model. Examining the regression coefficients of the paths, it may be seen that further modifications in the AMOS model is possible by removing more insignificant paths.

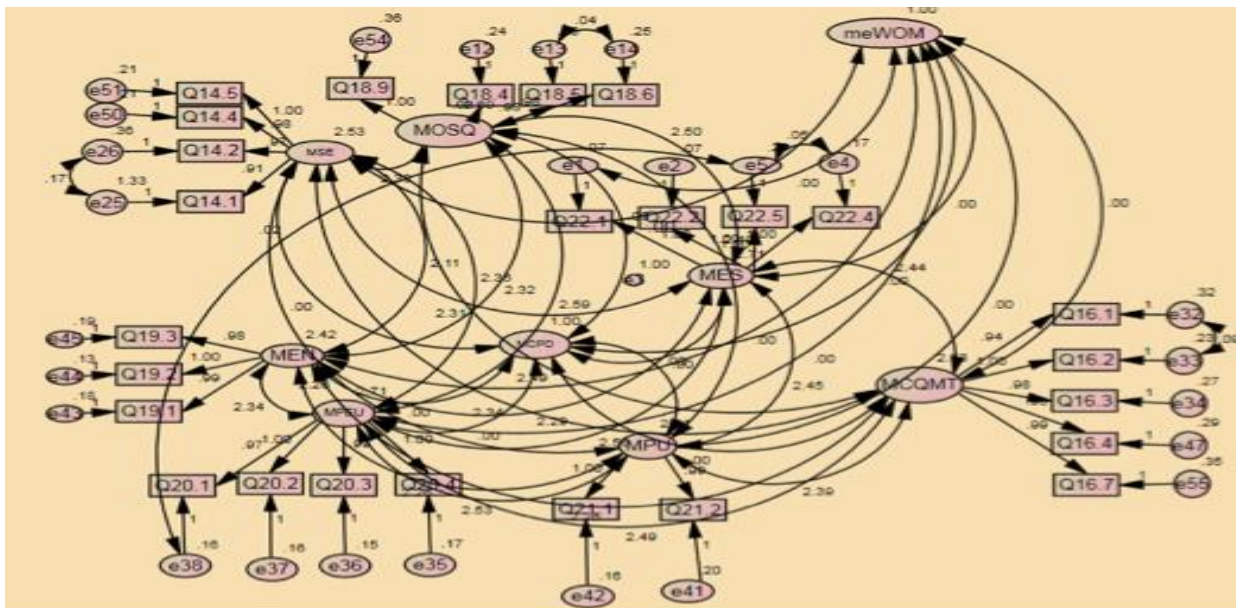


Figure 5.11 The Structural Model Obtained after Eliminating All Insignificant Variables Including Error Variables, Item Variables, Regressions and Covariance Paths

Table 5.15 The Number of Variables Inserted into the SEM Model

Variable Name	Number of Variables
Variables in the SEM model	63
Observed Variables	26
Unobserved Variables	37
Exogenous Variables	37
Endogenous Variables	26

Testing the fit for the structural model provided the following indices values: CFI (0.993), RMSEA (0.036), Normed Chi-Square (2.091) and NFI (0.987), as displayed in Table 5.25. As mentioned before, the significance of the Normed Chi-Square value cannot be determined because the sample size is large. This confirms that the AMOS model still has good fit and all fit indicators are within the acceptable levels. As an additional step recommended by Hair et al. (2010), the results of the structural model were tested again to highlight any significant differences between the loading estimates of the SEM and CFA model. In addition, standardised residuals and modification indices values were checked again to indicate that all values were within acceptable levels.

**Table 5.16 Model Fit Indicators for the Final Structural Model**

Model fit indices	Acronym	Recommended Values	Structural Model
$\chi^2$ minimum discrepancy	CMIN	p < .05 but this is expected with a large sample	679.532
Degree of freedom	DF		325.000
p-Value	p		0.000
Normed Chi-Square	CMIN/DF	< 3	2.091
Root Mean Square Error for Approximation	RMSEA	< .07	0.036
Goodness of Fit	GFI	> .9	0.946
Adjusted Goodness of Fit	AGFI	> .8	0.928
Normed Fit Index	NFI	> .9	0.987
Relative Fit Index	RFI	> .9	0.983
Comparative Fit Index	CFI	> .9	0.993
p of Close Fit	PCLOSE	>0.05	1.000
Expected Cross-validation Index	ECVI	Smaller the better	1.094
HOETLER	HOETLER	<75 Poor fit >200 Good fit	455.000

Note: Recommended level based on Byrne (2016); Hair et al. (2010); Iacobucci (2010); Hooper et al. (2008)

### 5.9.5.2 Hypotheses Testing

After the analysis of the pilot and the other tests (e.g. checking the accuracy of the data and missing values, EFA, reliability and correlation, and CFA), the researcher also combined some of the hypotheses as suggested by the professional opinions of the focus group. The Navigation construct and its items were combined under Search Engine (H3 with H5). Visual Appeal and Page Response constructs and their items were combined under Overall System Quality (H6 and H7 with H4). The adjusted conceptual framework consisted of 13 hypotheses instead of the original 16 hypotheses as three hypotheses were removed since the three constructs had been combined. Table 5.26 represents the combined and renamed hypotheses.

**Table 5.17 Summary of Combined and Renamed Hypotheses with Test Results**

Null Hypotheses	Statement	Factor Loading	p-Value	Results	
H1	Website Content Quality will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.195	0.001	Accept	Based on the p-Value, $0.001 < 0.05$
H2	Online Intrusive Marketing Tools (Pop-up-Ads and Banner Ads) will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.195	0.001	Accept	Based on the p-Value, $0.001 < 0.05$
H3	Overall System Quality (Visual Appeal and Page Response) will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.01	0.868	Reject	Based on the p-Value, $0.868 > 0.05$
H4	Search Engine/Navigation will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.164	0.065*	Accept	Based on the Two-Tailed p-Value ( $0.065/2$ )= $0.033 < 0.05$
H5	Website Enjoyability will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.087	0.014	Accept	Based on the p-Value, $0.014 < 0.05$
H6	Perceived Usefulness of the third-party hotel website will positively affect e-Satisfaction with the Third-Party Hotel Website.	0.193	0.008	Accept	Based on the p-Value, $0.008 < 0.05$
H7	Perceived Usefulness will positively affect the customers' Willingness to book a hotel online.	-0.39	0.11*	Accept	Based on the p-Value ( $0.11/2$ ) = $0.055 \approx 0.05$ - a borderline case
H8	Perceived Ease of Use of the third-party hotel website will positively affect e-Satisfaction with the Third-Party Hotel Website.	0.449	***	Accept	Based on the p-Value, $0.000 (***) < 0.05$
H9	Perceived Ease of Use of the website will positively affect the Willingness to Book a hotel online.	0.682	0.01	Accept	Based on the p-Value, $0.01 < 0.05$
H10	Perceived Ease of Use of the website will positively affect the Perceived Usefulness.	0.954	***	Accept	Based on the p-Value, $0.000 (***) < 0.05$
H11	Tourists/Travellers' e-Satisfaction with the third-party hotel website will positively affect the Willingness to book a hotel (Purchase Decision) from the Third-Party Hotel Website.	-0.277	0.039	Accept	Based on the p-Value, $0.039 < 0.05$
H12	Customers' e-Satisfaction will influence Tourists/Travellers' eWOM intention.	0.392	***	Accept	Based on the p-Value, $0.000 (***) < 0.05$
H13	eWOM will affect Tourists/Travellers' purchase decision (booking a Hotel).	0.011	0.789	Reject	Based on the p-Value, $0.789 > 0.05$

\* According to Hair et al. (2010), this is acceptable in Two-Tailed Hypothesis Testing

Referring to the table above, the empirical results support almost all of the hypothetical paths presented in the framework. H1, H2, H4, H5, H6, H8, H9, H10, H11 and H12 are all highly significant and supported with p-values <0.05. On the other hand, hypotheses H3, H7 and H13 were found to be unacceptable as p-values are all above 0.05. Table 5.27 displays all the results of the tested hypotheses in detail.

The most significant result in the AMOS model is that between Perceived Ease of Use (MPEU) and Perceived Usefulness (MPU) (H10 with  $\beta = .954$ ). This is followed by the relationship between Perceived Ease of Use (MPEU) and Customer Purchase Decision (MCPD) (H9 with  $\beta = .682$ ). The effect of Perceived Ease of Use (MPEU) on e-Satisfaction (MES) is also found to be highly significant (H8 with  $\beta = .449$ ). It is also found that e-Satisfaction (MES) has a significant effect on Electronic Word of Mouth (MeWOM) (H12 with  $\beta = 0.392$ ). The influence of e-Satisfaction on customers' purchase decision (MCPD) is found to be less significant than the effect of Perceived Ease of Use (MPEU). Thus, H11 is acceptable with p-value = 0.039.

It can be observed that the hypothesis H4, i.e. the effect of Search Engine (MSE) on e-Satisfaction (MES), is acceptable as per the two-tailed significance test, with  $\beta=0.038$  and p-value =  $0.065 > 0.05$ . However, the p-values obtained in AMOS from a two-tailed test would be  $0.065/2 = 0.033 < 0.05$  (Hair et al., 2010). Therefore, as it is marginally significant, the relationship could be accepted with caution. If this rule is accepted, it may be observed that the influence of Perceived Usefulness (MPU) on customer purchase decision (MCPD) as per H7 is also marginally acceptable (H7 with  $p=.11/2 = 0.055$  slightly more than 0.05). If a significance level of 10% is accepted, H7 can also be accepted.

**Table 5.18 AMOS Model Hypotheses Test Results**

Null Hypotheses	Paths			Std. Regn Wts ( $\beta$ )	Std.Error	Critical Ratios	p-Value	Hypothesis Findings
H1, H2	MES	<--	MCQMT	0.195	0.06	3.27	0.001	Accept
H3	MES	<--	MOSQ	0.01	0.063	0.166	0.868	Reject
H4	MES	<--	MSE	0.164	0.038	1.71	0.065*	Accept
H5	MES	<--	MEN	0.087	0.036	2.449	0.014	Accept
H6	MES	<--	MPU	0.193	0.073	2.654	0.008	Accept
H7	MCPD	<--	MPU	-0.39	0.244	-1.598	0.11*	Accept
H8	MES	<--	MPEU	0.449	0.102	4.421	***	Accept
H9	MCPD	<--	MPEU	0.682	0.266	2.563	0.01	Accept
H10	MPU	<--	MPEU	0.954	0.015	63.418	***	Accept
H11	MCPD	<--	MES	-0.277	0.134	-2.063	0.039	Accept
H12	MeWOM	<--	MES	0.392	0.033	11.938	***	Accept
H13	MCPD	<--	MeWOM	0.011	0.042	0.268	0.789	Reject

\* According to Hair et.al (2010) this is acceptable in Two-Tailed Hypothesis Testing



In order to determine the level of contributions in ‘variance explained’ by the empirically obtained observed items and in turn latent constructs, coefficient of determination R2 values were checked. R2 provides the percentage of variation in endogenous variable(s) explained by independent variable(s) (Keil et al., 2000). According to Chin (1998), models possessing an R2 of 0.67 are to be considered substantial, 0.33 = moderate and 0.19 = weak.

The current AMOS model explained variance R2 =76% in e-Satisfaction, MES; 42% in Customer Decision to Purchase, MCPD; 51% in MeWOM; and 39% in Perceived Usefulness, MPEU. These results point to a substantial explanation for e-satisfaction and high-to-moderate explanation for the rest. Figure 5.12 illustrates the results for the structural model from the output of the AMOS software. The author developed a simpler representation for the final AMOS model with the path coefficients, coefficient of determination (R2) and the model fit.

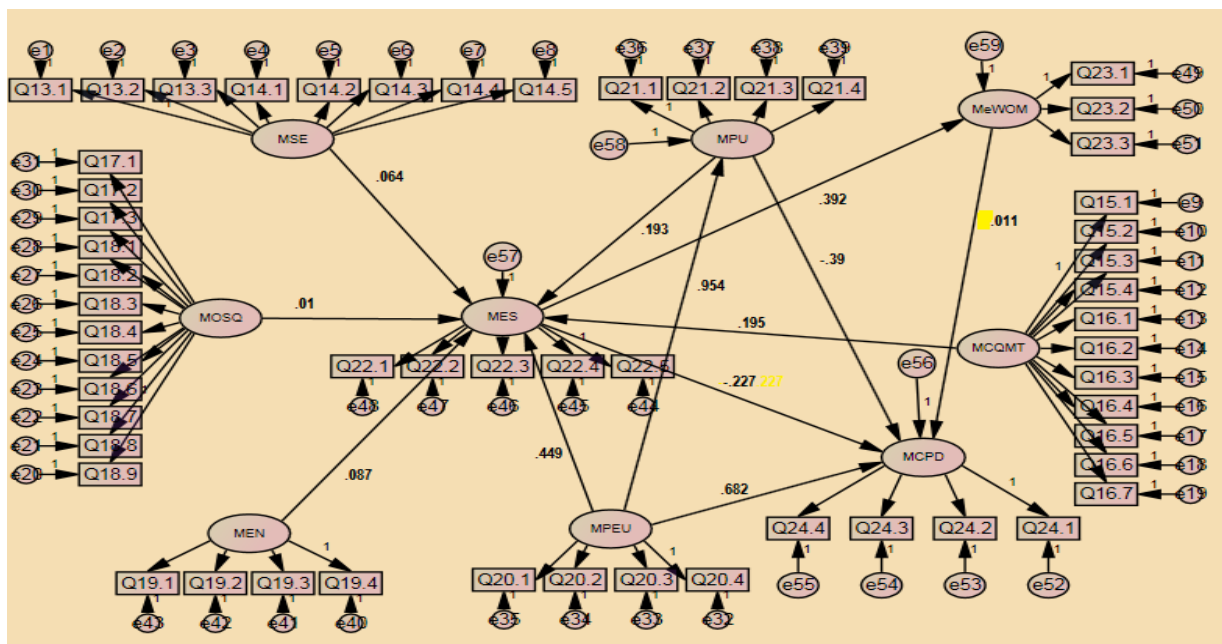


Figure 5.12 Refined Model and Hypotheses Results

### 5.9.5.3 Hypotheses in Order of Strength and the Final Model.

In Table 5.28, the hypotheses are presented in the order of the strength of their loading on the dependent variables. H10, which states that PEOU has a positive effect on PU, has the maximum effect of all the hypotheses. The weakest loading is that of Website Enjoyability (EN) on e-Satisfaction (ES), stated by H5. H3 and H13 are rejected outright.

**Table 5.19 Star Rating of Hypotheses Based on Strength of Loading**

Null Hypotheses	Factor Loading	Rating based on Strength of Loading
H10	0.954	*****
H9	0.682	****
H8	0.449	***
H12	0.392	***
H7	0.39	***
H11	0.277	**
H1	0.195	**
H2	0.195	**
H6	0.193	**
H4	0.164	*
H5	0.087	*
H13	0.011	X
H3	0.01	X

Table 5.28 above displays the star rating of the hypotheses based on the strength of factor loadings. The highest-ranking hypothesis was given a rating of five stars and lowest, one star. Therefore, H10, which had the highest factor loading of 0.954 based on the analysis, was given 5 stars. Hypotheses with factor loadings between 0.6 and 0.8 were given 4 stars, those with factor loading between 0.3 and 0.6 were given 3 stars, those with factor loading between 0.15 and 0.3 were given 2 stars, and all factor loadings below 0.15 were given one star. Thus, it is found that H5 with a factor loading of 0.087 is given a ranking with a single star.

### 5.10 Suggested Relationships between Constructs

As an additional step when looking at the output of the SEM model, AMOS provides a suggestion for other relationships that might be found between constructs in the model. The suggested paths can be seen by looking at the modification indices regression weight in Table 5.26. According to Hair et al. (2010), a general rule is that a high Modification Index (MI) between constructs suggests that the model fit could be improved by freeing the corresponding path. Table 5.29 from the AMOS output represents the suggested paths with the MI values and the changes in Chi-Square.

**Table 5.20 AMOS Output of Modification Indices on Regression Weights (Group Number 1- Default Model)**

			M.I.	Par Change
Q18.9	<---	Q22.4	4.035	0.027
Q16.4	<---	MCPD	4.475	0.044
Q19.2	<---	MCPD	5.177	0.038
Q19.1	<---	MCPD	16.202	-0.073
Q21.2	<---	Q14.1	10.198	0.031
Q16.1	<---	MCPD	4.234	-0.041
Q18.4	<---	MCPD	4.538	0.043
Q22.5	<---	Q14.1	10.874	0.027
Q22.4	<---	Q18.9	5.097	0.018

If, for example, AMOS suggested a positive relationship path from Customer Purchase Decision (MCPD) to the parameter Q19.2 of Enjoyability (MEN) is added, the Chi-Square will fall by at least 5.177. As a result, its estimate will become larger (by approximately 0.038) than it is in the present analysis. Some examples of the incorporation of suggested paths in the AMOS model are presented in Table 5.30.

**Table 5.30 Changes in Chi-Square Values on Addition of Suggested Paths**

<b>CMIN</b>					
Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	98	577.884	257	0	2.249
Saturated model	351	0	0		
Independence model	26	44962.994	325	0	138.348

<b>Aftre Adding Path from MCPD to Q19.2</b>					
<b>CMIN</b>					
Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	99	566.542	254	0	2.23
Saturated model	351	0	0		
Independence model	26	44962.994	325	0	138.348

<b>After dding path from MCPD to Q19.1</b>					
<b>CMIN</b>					
Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	99	559.454	254	0	2.203
Saturated model	351	0	0		
Independence model	26	44962.994	325	0	138.348

This step is widely used if exploring relationships between variables is part of the research objectives. New relationships might be added only if there is a theoretical justification. However, the author examined the suggested paths by adding each one to the structural model and re-running the AMOS model to check the change in the model fit indices. However, there was no noticeable improvement in the model fit (sample results are available in Appendix 7). As such, it was decided for the current research not to add the suggested relationships to the initial framework. Yet, these paths represent possible avenues for future research, especially the ones with high MIs and previous theoretical justification.

### 5.11 Composite Scale Models

Validity evidence based on Nomological Validity is a form of construct validity. It is the degree to which a construct behaves as it should within a system of related constructs (Liu et al., 2012). The nomological validity of the SEM models can be verified through the construction of higher-level models and composite models. In the present case, there are several options available. In the AMOS model, all exogenous and endogenous variables (represented by ellipses) are measured by item variables (represented by rectangles). Interrelationships are established with regression lines to measured parameters represented by rectangles or covariance lines between constructs.

In the composite model structure, all measured items related to both exogenous and endogenous variables such as MSE, MPEU, MPU, MOSQ, MES, MeWOM, MCPD, etc., are combined by

averaging their values. For example, the construct Enjoyability (EN) has four measured items, Q19.1, Q19.2, Q19.3 and Q19.4. Values of all these items are averaged to obtain the value of the combined construct EN in the composite model. Furthermore, an error variable ‘e2’ is added to EN. Figure 5.13 shows the complete composite scale model for the current study, where measures of exogenous and endogenous variables are averaged. All item values of the nine constructs are averaged and inserted as a single measured variable. The AMOS model shows exogenous variables as ellipses and endogenous variables as rectangles. The measurements associated with these variables are averaged and these values are inserted into the rectangles and ellipses. The error terms for the endogenous variables e1, e2, e3, e4, e5 and e6 are also drawn.

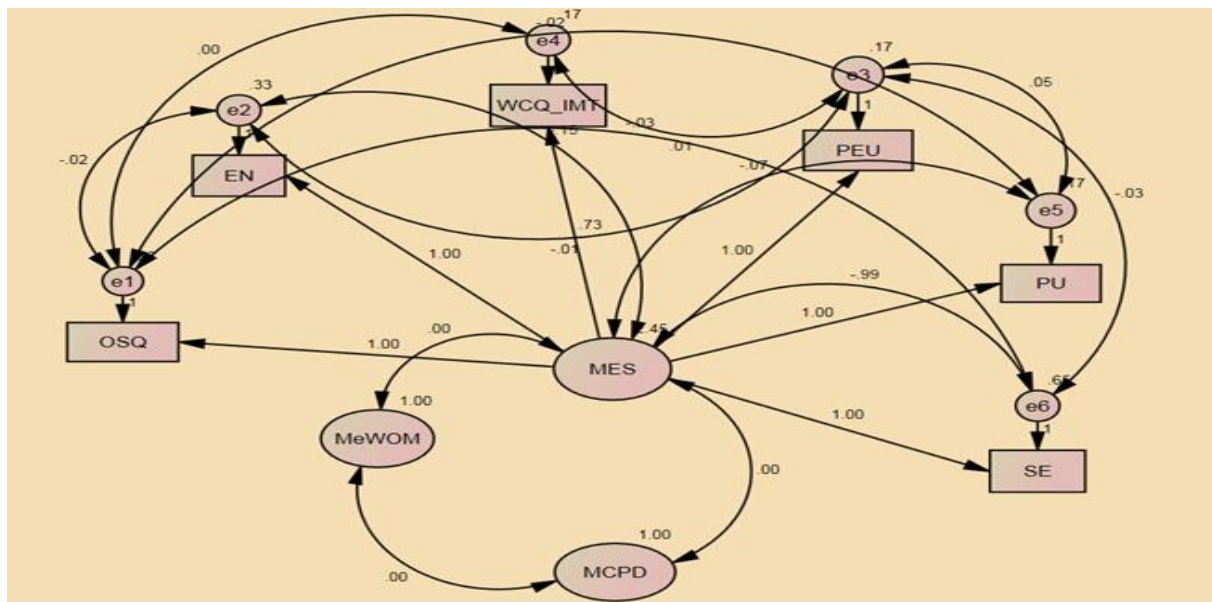


Figure 5.13 Initial Composite Scale Model for the Current AMOS Model

This model was run in AMOS and resulted in the fit indices for the composite scale model, which are presented in Table 5.31.

Table 5.21 Model Fit Indices for Composite Scale Models

Fit Index	Composite Scale Model	Recommended values	Remarks
CMIN	8.04	Small with $p < 0.05$ ; but this is expected only in large samples	
DF	2		
CMIN/DF	4.02	< 3	Not Acceptable
p-Value	0.018	<0.05	Acceptable
GFI	0.997	>.9	Acceptable
AGFI	0.966	>.8	Acceptable
NFI	0.999	>.9	Acceptable
RFI	0.993	>.9	Acceptable
RMSEA	0.06	<.07	Acceptable
ECVI	0.067	smaller the better	Acceptable
HOETLER	626	> 200	Acceptable
PCLOSE	0.283	> 0.05	Acceptable

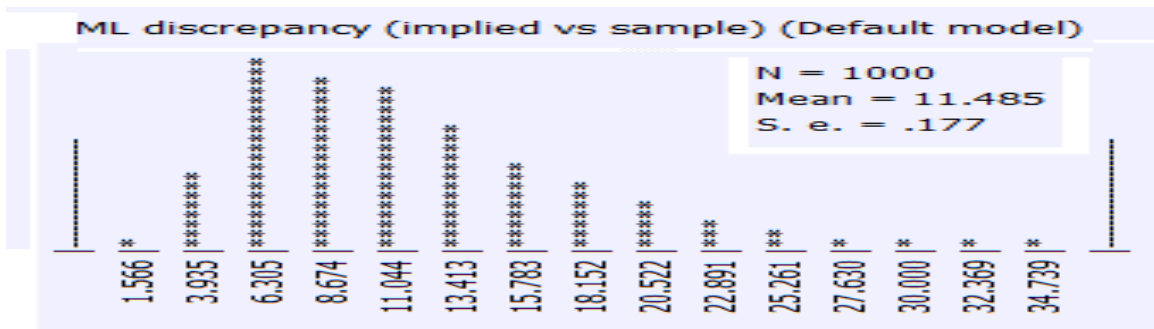
The  $\chi^2$  value of 8.04 with 2 degrees of freedom and  $p = 0.018 < 0.05$  is significant and  $CMIN/DF = 4.02 > 3$  does not suggest an acceptable fit of the model. However, values of the other indices suggest that the AMOS model fits the data sufficiently well in the population from which the sample was drawn. Corroborating evidence is provided by the RMSEA fit statistic; the value obtained was  $.060 < 0.07$ . Similarly, the values of GFI, AGFI, NFI, RFI, PCLOSE, and HOETLER are all within the acceptance levels, signifying a satisfactory model fit. Just as in the case of models discussed previously, once the model fits well and is theoretically consistent, the researcher may interpret the parameter estimates and individual tests of significance.

### 5.12 Bootstrapping

The AMOS models discussed so far consider eWOM as an independent variable. It may be possible that eWOM is a mediator between CPD and ES. This can be checked by bootstrapping. In statistics, bootstrapping generally refers to any test or metric that relies on random sampling with replacement. It is a straightforward way to derive estimates of standard errors and confidence intervals for complex estimators of complex parameters of the distribution, such as percentile points, proportions, odds ratio and correlation coefficients. Bootstrap is also an appropriate way to control and check the stability of the results. However, the bootstrap has its own shortcomings, including the fact that it may require fairly large samples. Bootstrapping is basically a re-sampling method, where sampling distributions are created to estimate standard errors and confidence intervals. The method can be used to confirm the mediation effect, because of its accuracy in computing confidence intervals for mediation effect. If the variables have measurement errors, the significance of the mediation effect is likely to be underestimated. Thus, it can deal with measurement error problems and assess the stability of parameter estimates. Bootstrapping can be applied when the assumptions of a large sample size and multivariate normality may not hold. Bootstrapping needs at least a moderate sample size for analysis. The author applied the AMOS bootstrap facility to explore mediation variables in the structural models (Zhang and Savalei, 2016; Ievers-Landis et al., 2011).

In this study, bootstrapping was performed with the AMOS model discussed above. Slight changes in the AMOS model were inevitable to suit the unique modelling concepts. The purpose was to check if MeWOM is a good mediator between MCPD and ES or not. Bootstrap samples were selected as 500 and 50 iterations were performed, to identify the Bootstrap distributions and significant paths.

Figure 5.14 displays the resulting sampling distribution, which is an approximate  $\chi^2$  distribution with maximum likelihood estimation. The mean  $\chi^2$  value was 11.485 with standard error = .177. This works as the sampling distribution based on which the effects are computed. The Bollen Stine Bootstrap method, which is commonly used (Kim and Millsap, 2014), was employed in this study.

Figure 5.14 Bootstrap ( $\chi^2$ ) Distribution

In addition, Table 5.32 shows the model fit indices obtained from the bootstrapping exercise.

Table 5.22 Model Fit Indices for the Measurement Model

Model fit indices	Acronym	Recommended Values	Model after Bootstrapping
$\chi^2$ minimum discrepancy	CMIN	p < .05 but this is expected with a large sample	8.04
Degree of freedom	DF		2
p-Value	p		0.018
Normed Chi-Square	CMIN/DF	< 3	4.02
Root Mean Square Error for Approx.	RMSEA	< .07	0.06
Goodness of Fit	GFI	> .9	0.997
Adjusted Goodness of Fit	AGFI	> .8	0.966
Normed Fit Index	NFI	> .9	0.904
Relative Fit Index	RFI	> .9	0.993
Comparative Fit Index	CFI	> .9	0.999
p of Close Fit	PCLOSE	>0.05	0.283
Expected Cross-validation Index	ECVI	Smaller the better	0.067
HOETLER	HOETLER	<75 Poor fit >200 Good fit	626

It is found that all indices except CMIN/DF are well within the recommended limits. As discussed before in the case of structural models, the acquired results must be due to the bootstrap sample taken (i.e. 500). Therefore, this AMOS model's results can be used for further analysis, which is based on the standardised total, direct and effect effects.

### 5.12.1 Mediation Paths

The significant paths were checked based on the results obtained from the AMOS model run under the specified bootstrap conditions; this is represented in Table 5.33, which shows the paths to paths standardised effects obtained. This is based on Kim and Millsap's (2014) recommendation.

**Table 5.23 Standardised Total, Direct and Indirect Effects of Bootstrapping**

Standardized Total Effects (Group number 1 - Default model)									
	eWOM	CPD	ES	MPU	MSE	MEN	MOSQ	MWCQMT	MPEU
MPU	0.364	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MSE	0.312	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEN	0.180	<b>0.779</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOSQ	<b>0.003</b>	0.000	<b>0.923</b>	0.000	0.000	0.000	0.000	0.000	0.000
MWCQMT	0.137	<b>0.846</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MPEU	0.375	0.000	0.000	<b>0.963</b>	0.000	0.000	0.000	0.000	0.000

Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)									
	eWOM	CPD	ES	MPU	MSE	MEN	MOSQ	MWCQMT	MPEU
MPU	0.003	...	...	...	...	...	...	...	...
MSE	0.005	...	...	...	...	...	...	...	...
MEN	0.004	0.005	...	...	...	...	...	...	...
MOSQ	<b>0.898</b>	...	0.006	...	...	...	...	...	...
MWCQMT	0.004	0.004	...	...	...	...	...	...	...
MPEU	0.042	...	...	0.003	...	...	...	...	...

Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)									
	eWOM	CPD	ES	MPU	MSE	MEN	MOSQ	MWCQMT	MPEU
MPU	...	...	...	...	...	...	...	...	...
MSE	...	...	...	...	...	...	...	...	...
MEN	...	...	...	...	...	...	...	...	...
MOSQ	...	...	...	...	...	...	...	...	...
MWCQMT	...	...	...	...	...	...	...	...	...
MPEU	0.004	...	...	...	...	...	...	...	...

All of the significant paths that are presented in Table 5.33 are based on standardised total effects, standardised direct effects and standardised indirect effects. It may be noted that MeWOM is considered as a Mediator. It was also found that effects of MCPD to MWCQIMT (0.846) and MEN (0.779) are more significant than MeWOM to MWCQIMT (0.137) and MEN (0.18). This means that, compared to the effect of MCPD to MEN and MWCQMT, paths from eWOM to other variables are not significant. (see Table 5.34).

**Table 5.24 Summary of Bootstrap Run**

From	To	Significant	Not Significant
MeWOM	MSE, MPU, MWCQIMT, MPEU, MOSQ	significant	
MeWOM	MEN		Not Very Significant
MES	MSE, MPU, MWCQIMT, MPEU, MEN		Insignificant
MES	MOSQ	Significant	
MCPD	MSE, MPU, MOSQ		Insignificant
MCPD	MPEU		Not Very Significant
MCPD	MWCQIMT, MEN	significant	

Similarly, it is possible to check the significance of the paths from each construct to other constructs. To summarise, the paths from eWOM to MSE, MPU, MWCQIMT, MPEU and MOSQ are more significant than from ES to MSE, MPU, MWCQIMT, MPEU and MOSQ. However, path from ES to MOSQ is also significant as displayed in Table 5.34. Using AMOS to check the direct and indirect effects, it was found that eWOM is not a good mediator, as it was found to be a significant construct on its own.

### 5.13 Conclusions

This chapter has focused on and discussed in detail the analysis of the main data collected for this study. It comprises mainly the techniques of SEM and analysis used in this study. SEM has been used to confirm the validity of the survey items and verify the appropriateness of the initial framework proposed and tests the suggested hypotheses. The pilot study conducted by the author prior to the main data collection was discussed first. The pilot consisted of 100 respondents from which only 76 were valid; the results provided evidence that the items and the structure of the survey were appropriate, with minor modifications relating to the wording of a few items.

The main data analyses consisted of the EFA and CFA on the SEM models developed using SPSS V.20 and AMOS V.20 software. There is many other software available such as SAS PROC CALIS, R packages SEM, LAVAAN, OpenMx, LISREL, EQS and Mplus. The latest is Onyx, which runs a free software environment for SEM. Onyx runs on UNIX, Mac and Windows. However, AMOS is the most popular and one of the most powerful SEM software packages available. AMOS V.20 and SPSS V.20 were used in this study. Exploratory tests were performed using SPSS to check assumptions and pre-requisites demanded by SEM, with regard to the main data collected. This included checking for outliers, determination of final acceptable sample size, and checking for multivariate normality, multicollinearity and positive definiteness.

The AMOS model was found to be good; even though it was found that, while the model fit indicator CFMIN/DF was not satisfactory, all other measures were acceptable. During the data reliability tests it was found that Q.15.4 and Q14.3 needed to be deleted or considered for deletion, because of low Cronbach's Alpha values.

Table 5.33 listed all tests conducted. All statistical tests under EFA were conducted using SPSS V.20. The structural modelling exercises were conducted using AMOS V.20. Thus, out of all the tests performed under EFA and CFA only VIF tests were not satisfactory. The main problem experienced was with the VIF values. All other tests were more or less satisfactory and some tests were highly successful. As discussed before, in section 5.4.5, attempts to reduce VIF values may invite problems in biasing and un-biasing of SSE values, etc. Therefore, it was decided to conduct other tests with the data. Skewness and kurtosis tests showed up some marginal discrepancies. Levene's Test was also found to be somewhat unsatisfactory. Overall, it can be concluded that the framework developed after some modifications is acceptable.

CFA starts by looking at the measurement model first. In order to achieve a better model fit, a few items were removed. Construct validity was also examined to obtain a better understanding of the quality of the measures. This was assessed through convergent validity, discriminant validity and nomological validity. The outcomes supported the measurement model and allowed for the movement



to the structural model. The structural model fit indices were within acceptable levels, so path relationship testing was conducted. By examining the factor loadings and their significance levels, the 13 hypotheses (i.e. after combining the hypotheses) proposed were tested. Two hypotheses were rejected outright and one was accepted as being insignificant. The strongest predictor of Customer Purchase Decision (CPD) was found to be Perceived Ease of Use (PEOU). Perceived Ease of Use (PEOU) also affected e-Satisfaction (ES) significantly with factor loading of 0.449. The most important relationship found was between PEOU and PU (PU = 0.954). The most significant predictor of ES after PEOU was Web Content Quality (MCQMT).

Bootstrapping run of the AMOS models was conducted to find the mediating effects of eWOM. As a result, statistically suggested paths in the AMOS model were revealed and the direct/indirect effects of constructs were demonstrated by the use of bootstrapping. The AMOS model was found to be valid based on the validity tests conducted. The nomological validity was established with the help of seeking higher-order models; this was possible by rearranging and modifying some of the variables like composite scale models. The sample size in this study was quite unwieldy while conducting some analyses, especially with regard to the degree of freedom in the structural model runs. In order to make the model identifiable with low values of  $\chi^2$ , CMIN and CMIN/DF, a large number of constraints in the form of covariance and regression lines had to be added or deleted.

In conclusion, hypotheses H3 and H13 were rejected; this means that the effect of Overall System Quality (OSQ), which comprises the Visual Appeal (Questions 17.1, 17.2 and 17.3) and Page Response (Questions 18.1 to 18.9) does not have a significant impact (factor loading = 0.01 with p-value = 0.868) on the e-Satisfaction. Similarly, the impact of Electronic Word of Mouth (eWOM) on the Consumer Purchase Decision (CPD), which is covered by questions Q23.1, 23.2 and 23.3, is also negligible (factor loading 0.011, with p-value = 0.789). H4 and H7 are borderline cases for rejection, implying that the effect of Search Engine (SE), covered by Q14.1 to Q14.5, on e-Satisfaction (ES) and the effect of Perceived Usefulness (PU), covered by questions 21.1 to 21.4, on CPD are not significant. However, according to Hair et al. (2010), these two cases (H4 and H7) are on the boundary of acceptance in a two-tailed hypothesis testing. H4 has factor loading = 0.164 with p-value = 0.065 > 0.05 and H7 has factor loading = 0.39 with p-value = 0.11. But in a two-tailed test the p-values will be half of the current values, which means H4 has the p-value = 0.0325 = 0.033 and for H7 the p-value = 0.11 = 0.055. Therefore, the author decided to accept H4 and H7 being on the border of acceptance in a two-tailed hypothesis test. This choice is the prerogative of the researcher, because many researchers feel that deletion of factor components from a structural model might affect the truthfulness of the output and quality. Agre et al. (2015) and Rahm and Do (2000) highlight various problems associated with data cleansing, when it is not performed judiciously. Additionally, it is quite possible that two researchers will arrive at two different structural models, because the subjectivity content involved in the choice of determinants cannot be ignored.

It was determined that H10, which states that PEOU has a positive effect on PU, has the maximum effect out of all the hypotheses. The weakest loading is that of EN on ES, stated by H5. H3 and H13 were rejected.

## Chapter 6 - Discussion of the Results and Findings

### 6.1 Introduction

Data analysis and results have been provided in the previous chapter (Chapter 5). In addition, the measurement items and framework were discussed, and the hypotheses were tested. Thus, this chapter discusses the findings and results of the data analysis; also, the study findings will be related to the results provided from previous literature will be discussed. This chapter starts with a discussion of the results from the scale purification and the framework validation. Then, the evaluation of the research hypotheses and their significance is presented. Finally, this chapter examines the effect of the 13 constructs in relation to the developed framework. The chapter also includes a justification and review of the outcomes of the study in light of the literature existing in this area.

### 6.2 Discussion of Scale and Framework

A focus group (part of Pilot 1) consisting of three expert hotel managers and Business PhD students, three academics and random Saudi tourists was conducted, followed by the primary pilot test for the survey. Initially, the survey was conducted by meeting 100 randomly chosen Saudi students studying at a major university in Saudi Arabia; out of these respondents, 43% were female and 57% male. Only 76 students completed the entire survey and their responses were found to be valid.

There were 12 factors considered in the pilot study: Website Search Engine (SQSE), Navigation (NAVI), Pop-up & Banner Ads (COQPA), Website Content Quality (CQ), System Quality/Visual Appeal (SQVA), Page Response, Service and Overall System Quality (SQPR), Enjoyability (EN), Perceived Ease-of-Use (PEOU), Perceived Usefulness (PU), e-Satisfaction (ES), Electronic Word of Mouth (eWOM) and willingness to Book a Hotel/Customer Purchase Decision (CPD).

In the current study, the data was used to conduct a reliability, validity and correlation analysis. Referring to Table 5.1 presented in Chapter 5, the correlations between constructs are found to vary between 0.304 and 0.975; these cells are shaded in blue. These results are well above the rule of thumb minimum value of 0.3 suggested by Hair et al. (2010). In addition, the results show some constructs to be highly correlated; all the highly correlated constructs, which are those above 0.900, are shaded in yellow.

Both the reliability and correlation analysis tests are useful for helping the author to judge whether the instrument is reliable and valid prior to completing the data collection. The overall reliability of the instrument within piloting was Cronbach's  $\alpha = 0.964$ , which is well above the recommended threshold value of 0.7 (Hair et al., 2010; Nunnally and Bernstein, 1994). The individual construct reliability

ranged from 0.960 to 0.979. Some of the most strongly correlated pairs of constructs were found to be:

- SQPR with CQ = (0.975), where SQOPR is the Page Response, Service and Overall System Quality and CQ is the Website Content Quality.
- PEOU with SQPR = (0.964), where PEOU is the Perceived Ease of Use and SQPR is the Page Response, Service and Overall System
- PEOU with ES = (0.949), where PEOU is the Perceived Ease of Use and ES is the e-Satisfaction.
- PU with SQPR = (0.936), where PU is the Perceived Usefulness and SQPR is the Page Response, Service and Overall System Quality
- SQPR with ES = (0.933), where SQOPR is the Page Response, Service and Overall System Quality and ES is the e-Satisfaction
- SQPR with CPD = (0.949), where SQOPR is the Page Response, Service and Overall System Quality and CPD is the Customer Purchase Decision
- ES with PU = (0.917), where ES is the e-Satisfaction and PU is the Perceived Usefulness

It can be concluded from the data analysis tests that eWOM is weakly correlated with all other constructs. However, because the correlation values were above the limiting value of 0.3, the construct eWOM was included. Furthermore, it was also expected that through a bootstrap analysis the mediating effect of eWOM could be explored; however, even the bootstrap analysis found that eWOM was a poor mediator. The Item-Total Statistics shown in Appendix 6 show that all the constructs are highly reliable, with values of Cronbach's  $\alpha$  reliability above 0.960. The value of Reliability Statistics Cronbach's  $\alpha$  is also shown in Appendix 6, and was found to be 0.969, which again is far above the limiting value.

The pilot study exhibited good results, showing some values of measurement indices that were much higher than the recommended limiting values in the literature. This confirms that the scale used in this study was valid and reliable, and that it could be safely adopted for larger-scale data collection. It may be noted that the instrument had already been validated by a number of experts; however, some respondents suggested a few alterations that were incorporated into the final instrument. This confirms the instrument's face validity.

The scale used in the study was developed primarily on the basis of previous research; nonetheless, validation was still required. As a result of the pilot study, a few refinements were made to the survey items as described in Chapter 5, section 5.2. The developed framework was then tested through statistical reduction techniques, such as EFA and CFA. The EFA revealed that the developed framework would be ideal when 10 instead of 12 constructs were used; this was initially suggested by the experts as well. The final measurement items were used to repeat the EFA. The results indicate that the solution explained 91.315% of the total variance. Adequacy of extraction and the number of factors were tested based on O'Boyle et al. (2011).

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity.
- Communalities Tests.
- Scree Test based on Eigenvalues.
- Component Rotation Method.

KMO and Bartlett's tests revealed that KMO value was  $0.966 > 0.700$  and Bartlett's Test was highly significant ( $p = .000$ ); therefore, EFA confirmed the appropriateness of the instrument in the case of the current study. These results are displayed in the previous chapter, Table 5.9, on KMO and Bartlett's Test.

The test of Communalities discussed in Chapter 5, Table 5.10, presented the relevant information on communalities for each item. All of the items shared above 0.5 communality with their components. The weakest in the list of the constructs' items were Q14.1, and Q13.3 under Search Engine Construct (SE). Therefore, no items were removed, since none of them were below the recommended value.

In the Scree Test strictly based on Eigenvalues, only eight factors with Eigenvalues greater than 1 could be extracted. This is displayed in the Scree plot given in Chapter 5, Figure 5.9.

Based on Cronbach's  $\alpha$ , the nine factors listed below were extracted, and the final  $\alpha$  value was found to be 0.987:

1. Search Engine (SE)
2. Content Quality/Intrusive Marketing Tools or Web Content Quality (WCQ)
3. Overall System Quality (OSQ)
4. Enjoyability (EN)
5. Perceived Usefulness (PU)
6. Perceived Ease of Use (PEOU)
7. E-Satisfaction (ES)
8. Electronic Word of Mouth (eWOM)
9. Customer Purchase Decision (CPD)

Because of the weak factor loading revealed in EFA, two items, Q14.3 and Q15.4, under the constructs Navigation (NAVI) and Pop-up & Banner Ads (CQPOA), were dropped from the original measurement items. Thus, the total number of item variables became 53 instead of 55.

It was found pertinent to combine some of the initial constructs because of the strong correlation and their obvious similarities; the experts also recommended the combination of certain constructs, as follows:

- The constructs Navigation (NAV) and Website Search Engine (SE) were combined to form Search Engine (SE). Therefore, the construct components (questions that covered these constructs) were combined. Thus, Questions 13.1 to 13.3 under the construct Search Engine (SE) and 14.1 to 14.5 under the construct Navigation (NAVI) were combined to obtain the stimulus Search Engine (SE).

- Similarly, construct items represented by questions Q15.1 to Q15.4 under the construct Intrusive Marketing tools ‘Pop-up Ads & Banner Ads’ (IMT) and Q16.1 to Q16.7 under Content Quality (CQ) were also combined to obtain the stimulus Web Content Quality (WCQ), because of the similarities that the items presented.

Table 6.1 shows the 12 initial constructs conceived and the nine final constructs after combining certain items and constructs. The next step was to repeat the EFA as a pre-runner Web Content Quality (WCQ) to SEM modelling, the results of which revealed nine constructs. Hence, the validity of the instrument was confirmed.

Tables 6.1 and 6.2 show the combination described above. These tables display how 12 constructs were combined to generate the final constructs and the hypotheses statements related to these constructs; they also list all the remaining items (the survey questions). These items were empirically supported at different stages of the analysis and can be confidently adopted for future research under similar scenarios. Hence, this adds to the body of existing literature, especially in the context of measurement scales for constructs within Third-Party Booking Hotel Websites.

**Table 6.1 List of Initial Constructs Used for EFA and Final Constructs after EFA**

Construct Name	Questions	Initial Constructs	S-O-R Type	Final Constructs
Q13.Website Search Engine	Q13.1.With multiple search features	(SE)	Stimulus	Search Engine (SE)
	Q13.2. Found through multiple pathways			
	Q13.3. Easy to locate what I need			
Q14. Navigation	Q14.1. Navigation not intuitive	(NAVI)		
	Q14.2. Easy for first-time buyer			
	Q14.3. Takes long time to shop			
	Q14.4. User-friendly			
	Q14.5. Convenient to use			
Q15. Intrusive Marketing	Q15.1. Helpful	(IMT)	Stimulus	Web Content Quality
	Q15.2. Important			

Tools 'Pop-up & Banner Ads'	Q15.3. Informative			(WCQ)
	Q15.4. Unhelpful			
Q16. Content Quality	Q16.1. Easiness of Understanding	(CQ)		
	Q16.2. Design easy to understand			
	Q16.3. Can remember the page			
	Q16.4. Can get Accustomed Easily			
	Q16.5. Language is clear and easy			
	Q16.6. Appropriate Components fit			
	Q16.7. Apt use of colours and structures			
Q17. Visual Appeal	Q17.1. Display of deals is attractive	(VA)		
	Q17.2. Beautiful Appeal			
	Q17.3. Good website looks			
Q18. Page Response	Q18.1. Provides services Promised	(PR)	Stimulus	Overall System Quality (OSQ)
	Q18.2. Dependability for Customer Services			
	Q18.3. Performing services right the first time.			
	Q18.4. Provide services at promised time			
	Q18.5. Keeping customers informed			
	Q18.6. Willingness to help customers			
	Q18.7. Readiness to respond			
	Q18.8. Customers feel safe in Browsing			

	Q18.9. Easy to pay & complete online transaction			
Q19. Enjoyability	Q19.1. Lots of fun to browse	(EN)	Stimulus	Enjoyability (EN)
	Q19.2. Clever and quite entertaining			
	Q19.3. Look and Feel likeable			
	Q19.4. Not just selling–Entertaining			
Q20. Perceived Ease of Use	Q20.1. Easy to use.	(PEOU)	Stimulus	Perceived Ease of Use (PEOU)
	Q20.2. Easy to become skilful			
	Q20.3. Navigation Learning Easy			
	Q20.4. Clear Interaction			
Q21. Perceived Usefulness	Q21.1. Useful for searching & booking	(PU)	Stimulus	Perceived Usefulness (PU)
	Q21.2. Improved awareness in product searching			
	Q21.3. Makes it easier to Browse			
	Q21.4. Enhances Interest in Browsing			
Q22. e- Satisfaction	Q22.1. I am satisfied	(ES)	Organism	e- Satisfaction (ES)
	Q22.2. I am pleased			
	Q22.3. I'd recommend the Site			
	Q22.4. I'd use the website again			
	Q22.5. My expectations were higher			
Q23. Electronic Word of	Q23.1. I'd participate in cust_discussions	(eWOM)	Organism	Electronic Word of Mouth
	Q23.2. Will provide feedback			



Mouth	Q23.3. I'll sign in to view the info			(eWOM)
Q24. Customer Purchase Decision	Q24.1. Likely (7)/Unlikely (1)	(CPD)	Response	Customer Purchase Decision (CPD)
	Q24.2. Probably (7)/Improbable (1)			
	Q24.3. Certain (7)/Uncertain (1)			
	Q24.4. Definitely (7)/Definitely not (1)			

Table 6.2 shows the combined items for measurement of constructs, the items of each construct and the related hypotheses formulated.

**Table 6.2 Combined Items for Measurement of Constructs**

*	Measurement Questions	Initial Construct names	Initial Hypotheses	Final Hypotheses (after Qualitative and Quantitative Tests)	Final Construct names	Final Construct names	Symbols	Final Measurement Questions
1	Q13.1 to Q13.3	Website Search Engine (SE)	H5	H4	Website Search Engine (SE)	Search Engine	SE	Q13.1 to Q13.3
	Q14.1 to Q14.5	Navigation (NAV)	H3		Navigation (NAV)			Q14.1 to Q14.5
2	Q15.1 to Q15.4	Intrusive Marketing Tools (IMT)	H2	H2	Intrusive Marketing Tools (IMT)	Website Content and Intrusive Marketing Tools	WCQ	Q15.1 to Q15.4
	Q16.1 to Q16.7	Website Content (WC)	H1	H1	Website Content (WC)			Q16.1 to Q16.7
3	Q17.1 to Q17.3	Visual Appeal (VA)	H6	H3	<del>Visual Appeal (VA)</del>	Overall System Quality	OSQ	Q17.1 to Q17.3
	Q18.1 to Q18.9	Page Response (PR)	H7,H4		Page Response (PR)			Q18.1 to Q18.9
		System Quality (SQ)						
4	Q19.1 to Q19.4	Enjoyability (EN)	H8	H5	Enjoyability (EN)	Enjoyability	EN	Q19.1 to Q19.4
5	Q20.1 to Q20.4	Perceived Ease of Use (PEOU)	H11, H12, H13	H8, H9, H10	Perceived Ease of Use (PEOU)	Perceived Ease of Use	PEOU	Q20.1 to Q20.4
6	Q21.1 to Q21.4	Perceived Usefulness (PU)	H9, H10	H6, H7	Perceived Usefulness (PU)	Perceived Usefulness	PU	<del>Q21.1 to Q21.4</del>
7	Q22.1 to Q22.5	e-Satisfaction (ES)	H14, H15	H11, H12	e-Satisfaction (ES)	e-Satisfaction	ES	Q22.1 to Q22.5
8	Q23.1 to Q23.3	Electronic Word of Mouth (eWOM)	H16	H13	Electronic Word of Mouth (eWOM)	eWOM	eWOM	<del>Q23.1 to Q23.3</del>
9	Q24.1 to Q24.4	Consumer Purchase Decision (CPD)	-	-	Consumer Purchase Decision (CPD)	Consumer Purchase Decision	CPD	Q24.1 to Q24.4

### 6.3 Determinants of Customer Purchase Decision (CPD)

One of the main objectives of this research was to investigate the factors that most influenced CPD when booking a hotel online. Hypothesis testing was performed in order to find the most influential factors. Table 5.26 presented in Chapter 5 summarises the test results. The p-values were considered as the main criterion for checking the strength of influence of the factors. The acceptance or rejection of the hypotheses was based on the limiting values of the significance levels ' $p$ '. Following the suggestion of Hair et al. (2010), the cut-off value of the ' $p$ ' is taken as 0.05; all hypotheses were accepted except H3 and H13. The following hypotheses that determine customer purchase decision were tested:

- **H7: Perceived Usefulness will positively affect the consumer's willingness to book a hotel online.**
- **H9: Perceived Ease of Use of the third-party hotel website will positively affect the willingness to book a hotel online.**
- **H10: Perceived Ease of Use of the third-party hotel website will positively affect the perceived usefulness.**
- **H11: Tourists/Travellers' e-Satisfaction with the third-party hotel Website will positively affect the willingness to book a hotel (Purchase Decision) from the third-party hotel website.**
- **H12: Customer e-Satisfaction will influence Tourists/Travellers' eWOM intention.**
- **H13: eWOM will affect Tourists/Travellers' purchase decision (booking a Hotel).**

The results are as follows:

- Overall System Quality (OSQ), which comprises the Visual Appeal (Questions 17.1, 17.2 and 17.3) and Page Response (Questions 18.1 to 18.9), did not have a significant impact (factor loading = 0.01 with p-value = 0.868) on e-Satisfaction. System Quality (SQVA) did not have a positive impact on e-Satisfaction (H3) with tourism website.
- Electronic Word of Mouth (eWOM) did not have a positive influence on Customer Purchase Decision (CPD) or willingness of customers to book a hotel from a website. The p-values obtained were very large (0.868 and 0.789 respectively), indicating that the impact of these factors on e-Satisfaction and Customer Purchase Decision is negligible.
- H4, related to Search Engine, Page Response and Service/System Quality and H7, related to Perceived Usefulness, were borderline cases for rejection; this implied that the effect of Search Engine (SE, covered by Q14.1 to Q14.5) on e-Satisfaction (ES) and the effect of Perceived Usefulness (PU, covered by Questions 21.1 to 21.4) on CPD are not significant. However, as mentioned in the previous chapter, based on Hair et al. (2010) two-tailed

hypothesis testing method, these two cases on the boundary were accepted. The Two-Tailed Test of the p-values were H4, p-value= 0.0.325 = 0.033 and for H7, p-value = 0.11 = 0.055.

- The ‘Star Rating’ of Hypotheses based on strength of loading presented in Chapter 5, Table 5.28, shows the relative impact of factors on e-Satisfaction and Customer Purchase Decision directly or indirectly. These findings will be discussed individually in the following sections by looking specifically at the hypotheses.

### 6.3.1 E-Satisfaction (ES)

It may be noted at this point, that all the acronyms for the constructs have had the letter ‘M’ (Model) added to them to distinguish them as the factors used while constructing the Structural Equation Models with AMOS V.20. The results showed that the most significant result in the AMOS model is the impact of Perceived Ease of Use (MPEOU) on Perceived Usefulness (MPU), i.e. H10 with factor loading  $\beta = .954$ . This was followed by the impact of Perceived Ease of Use (MPEOU) on Customer Purchase Decision (MCPD), i.e. H9 with factor loading  $\beta = .682$ . The effect of Perceived Ease of Use (MPEOU) on e-Satisfaction (MES) is also found to be highly significant (H8 with  $\beta = .449$ ). It was also found that e-Satisfaction (MES) had a significant effect on Electronic Word of Mouth (MeWOM) (H12 with  $\beta = 0.392$ ). The influence of e-Satisfaction on Customer Purchase Decision (MCPD) was found to be less significant than the effect of Perceived Ease of Use (MPEOU); however, H11 had an acceptable p-value = 0.039.

In order to determine the level of contributions in ‘*variance explained*’ by the empirically obtained observed items and in turn latent constructs, coefficient of determination R<sup>2</sup> values were checked. R<sup>2</sup> provides the percentage of variation in endogenous variable(s) explained by independent variable(s) (Keil et al., 2000). According to Chin (1998), models possessing an R<sup>2</sup> of 0.67 are to be considered substantial, 0.33 = moderate, and 0.19 = weak. The current AMOS model explained variance R<sup>2</sup>=76% in e-Satisfaction, MES; 42% in Customer Decision to Purchase, MCPD; 51% in MeWOM; and 39% in Perceived Usefulness, MPU. These results point to a substantial explanation for e-Satisfaction and high to moderate explanation for the rest.

Compared to other studies (e.g. Floh et al., 2013; Bernardo et al., 2012; Jang et al., 2012) that have used SEM to examine customers’ willingness to book hotels online, the results showed that the current research framework was well able to explain customers’ reasons for making a purchase decision. The current findings regarding willingness to book a hotel online provide important results and support the existing literature in the context of the hotel industry. The developed framework suggests that there are four direct influencers on Customer Purchase Decision (CPD): PU, PEOU, ES and eWOM. These suggestions on the potential impact of these factors on online purchase decisions are hypothesised by H7, H9, H11 and H13. However, the empirical findings revealed that three of the factors (Perceived Ease of Use, Perceived Usefulness and e-Satisfaction) satisfactorily explain

Customer Purchase Decisions (CPD), whereas the fourth, Electronic Word of Mouth (e-WOM), does not have a noticeable impact on customers' willingness to book a hotel online. This suggests that one of the most important factors that attract customers to book a hotel online is e-Satisfaction. The more the user feels satisfied with the hotel web portal when performing their booking arrangements, the more ready they will be to continue with a purchase transaction. This positive relation is not an unexpected result and is consistent with previous research (Lau et al., 2011; Bai et al., 2008; Zeithaml et al., 1993; Cronin and Taylor, 1992; LaBarbera and Mazursky, 1983). The following tables 6.3 and 6.4 present the percentage of purchase decision by undergraduate students and academic employees.

**Table 6.3 Online Hotel Booking Decision by Employed and Student Respondents (A)**

Respondents	Answer given	No	%	Total	Decision on CPD	%
students	Students answering Entirely disagree	76	11.08%	127	Students Unlikely to make CPD	18.22%
	Students answering Mostly disagree	17	2.48%			
	Students answering somewhat disagree	34	4.96%			
	Students answering NA or DA	59	8.60%	490	Students Likely to make CPD	70.30%
	Students answering Somewhat agree	62	9.04%			
	Students answering Mostly agree	62	9.04%			
	Students answering Entirely agree	366	53.35%			
	697	100.00%				
employed	Employed answering Entirely disagree	62	20.33%	62	Employees Unlikely to make CPD	20.33%
	Employed answering Mostly disagree	0	0.00%			
	Employed answering somewhat disagree	0	0.00%			
	Employed answering NA or DA	3	0.98%	240	Employees Likely to make CPD	78.69%
	Employed answering Somewhat agree	7	2.30%			
	Employed answering Mostly agree	14	4.59%			
	Employed answering Entirely agree	219	71.80%			
	305	100.00%				
<b>Total</b>		<b>1002</b>				

From Table 6.3, a very important finding based on the analysis of the entire valid responses of this survey was that, while 78.69% of the employed respondents answered positively concerning the online hotel booking decision, only 70.30% students answered that they would opt for such a decision. About 8.6% of the students were undecided about online purchase, whereas only 0.98% of employed respondents were not in a position to provide a definite answer about online hotel booking decision. Therefore, the author feels strongly that being employed has a positive effect on making an online purchase decision.

**Table 6.4 Online Hotel Booking Decision by Employed and Student Respondents (B)**

Respondents	Answer given	No	%	Total	Decision on CPD	%
students	Students answering Entirely disagree	23	7.54%	40	Students Unlikely to make CPD	13.11%
	Students answering Mostly disagree	5	1.64%			
	Students answering somewhat disagree	12	3.93%			
	Students answering NA or DA	23	7.54%	242	Students Likely to make CPD	79.34%
	Students answering Somewhat agree	34	11.15%			
	Students answering Mostly agree	28	9.18%			
	Students answering Entirely agree	180	59.02%			
	305	100.00%				
employed	Employed answering Entirely disagree	62	20.33%	62	Employees Unlikely to make CPD	20.33%
	Employed answering Mostly disagree	0	0.00%			
	Employed answering somewhat disagree	0	0.00%			
	Employed answering NA or DA	3	0.98%	240	Employees Likely to make CPD	78.69%
	Employed answering Somewhat agree	7	2.30%			
	Employed answering Mostly agree	14	4.59%			
	Employed answering Entirely agree	219	71.80%			
	305	100.00%				

From Table 6.4, a very important finding (based on randomly selecting 305 undergraduate student responses and comparing them with 305 employee responses to this survey) was that, while 78.69%

of the employed respondents answered positively about the online hotel booking decision, 79.34% students also answered that they would opt for such a decision. About 7.54% of undergraduate student respondents were undecided about making an online purchase, whereas only 0.98% of the employed respondents were not in a position to provide a definite answer about the online hotel booking decision. Therefore, the author feels strongly that Generation Y (students) has a positive effect on making an online purchase decision, which is in agreement with results obtained by previous researchers discussed in Chapter 2, section 2.9.

### **6.3.2 Perceived Ease of Use (PEOU)**

Perceived Ease of Use (PEOU) is defined as the perceived belief that an individual has towards a particular system as being simple to use. Out of the three factors that influence purchase decision in booking a hotel, PEOU was found to be a significant individual positive contributor. Hypothesis H9, which states that PEOU of the website will affect positively the customers' willingness to book a hotel online, is accepted based on a high value of  $\beta = 0.682 (> 0.5)$  and a very low significance level of  $p = 0.000 (< 0.05)$ . This suggested that the customer or website visitor is always encouraged to proceed with booking a hotel, provided the website and its contents are easy to use and browsing is considered comfortable. Therefore, an important factor that attracts customers to book a hotel online is Perceived Ease of Use.

As mentioned earlier in this chapter, section 6.3.1, the more the customers are satisfied with the website, the keener they will be to proceed with the purchasing process while booking a hotel online. This positive relationship is not a surprising result and is consistent with previous research (Lau et al., 2011; Bai et al., 2008; Zeithaml et al., 1993; Cronin and Taylor, 1992; LaBarbera and Mazursky, 1983). This finding demonstrates that PEOU is more significant than other factors, i.e. Perceived Usefulness (PU), e-Satisfaction (ES) and Electronic Word of Mouth (eWOM). The results suggest that increasing the level of customer expectations on ease of use and satisfaction whilst using a hotel website is an important factor for customers. Furthermore, the finding from this study supports the adopted original Expectation Confirmation Theory (ECT) by Oliver (1980), in addition to all his later studies regarding ECT (Oliver, 1993, 2014).

Thus, this study was able to demonstrate a positive relationship between Perceived Ease of Use and Purchase Decision. Hypotheses H9: PEOU  $\rightarrow$  PD was supported with a beta value of  $\beta = 0.682 (> 0.5)$  and a very low significance level of  $p = 0.000 (< 0.05)$ . Accordingly, the study reveals that an easy to use website has a significant effect on the willingness to book a hotel online. Thus, this study supports the literature and findings of other scholars such as Gefen et al. (2003) and Venkatesh and Davis (2000).

Online shopping is the modern trend in the field of e-Business. Traders and customers in the future may heavily depend on cyber shopping, with the arrival of delivery drones. The Internet business portals have totally changed people's perceptions about shopping. Most companies are running online portals to sell their products/services online. In the hotel industry, online booking is closely associated with tickets sales in the airline industry. There are several determinants influencing people to refrain from or adopt online shopping. These determinants include Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Perceived Risk (PR), Profession, Age, Sex, etc. Perceived Usefulness (PU) is defined by Davis (1989) as the extent of the belief that an individual has that the use of a specific system will enhance his/her job function. Similarly, Perceived Ease of Use is defined as the degree to which a person believes that using a particular Information System will be easy and free of effort. In fact, researchers differ in assessing the exact impact of these determinants on the online shopping intentions of customers.

It may be noted that the results from research studies conducted in this area are not in complete agreement with each other; this may be because of cultural and ethnic differences. It is understandable that a customer's perception of privacy, his/her background, upbringing, schooling, etc., can have positive and significant effects on his/her online shopping intention. It is recommended that these factors also be included in the list of determinants. In a study conducted on 200 customers from Pakistan, Rizwan et al. (2014) concluded that Prior Online Shopping (POS) experience did not have any effect on PU, PEOU and PR, while PU and PEOU have a positive significant effect and PR has a negative effect on Attitude Towards Online Shopping Intention (ATOSI).

As explained earlier in detail in Chapter 5, section 5.12, a Bollen-Stein bootstrapping exercise was performed in order to understand the mediating effect of e-Satisfaction (ES). The direct and indirect effects of the determinants of e-Satisfaction on Customer Purchase Decision (CPD) were obtained as shown in Tables 5.32 and 5.33 in Chapter 5. A summary of the bootstrap result (adopted from Chapter 5) is shown in Table 6.5.

**Table 6.5 Summary of Bootstrap Run**

From	To	Direct Effect	Two-Tailed Significance	Indirect Effect	Two-Tailed Significance	Total Effect	Two-Tailed Significance
ES	CPD	<b>0.769</b>	<b>0.000</b>	0.025	0.003	<b>0.745</b>	0.005
ES	EWOM	<b>0.378</b>	<b>0.005</b>	0.000	0.000	<b>0.378</b>	0.005
eWOM	CPD	0.065	0.003	0.000	0.000	0.065	0.003
PEOU	ES	<b>0.342</b>	0.003	<b>0.391</b>	0.005	<b>0.733</b>	0.004
PEOU	CPD	<b>0.067</b>	0.230	<b>0.768</b>	0.003	<b>0.700</b>	0.005

PU	ES	0.233	0.008	0.000	0.000	0.233	0.008
PU	CPD	<b>0.162</b>	0.012	<b>0.173</b>	0.007	<b>0.335</b>	0.006

It can be seen that some of the determinants of ES have significant indirect effects on CPD. For example, PEOU has a direct impact on CPD with  $\beta=0.067$  and an indirect effect with  $\beta=0.768$  in the bootstrapping exercise. The total effect of PEOU on CPD is found to be 0.700 while, in the hypothesis testing for H9, it was found to be 0.682. To conclude, the current research reveals that, if an Internet user considers a hotel website easy to use, then it will positively influence his/her purchase decision.

### 6.3.3 Perceived Usefulness (PU)

While Perceived Ease of Use (PEOU) measures an individual's belief that using a particular system is effortless, Perceived Usefulness (PU) is the degree to which somebody believes that using a particular system would enhance his/her job performance. The current discussion refers to the impact of Perceived Usefulness (PU) on Customer Purchase Decision (CPD) and the impact of Perceived Ease of Use (PEOU) on Perceived Usefulness (PU).

Out of these, hypothesis H7, which states that PU significantly affects CPD, was established in this study. However, the impact is weak though significant and supported by  $\beta$  and p-values. The  $\beta$  value was obtained as 0.39 ( $< 0.5$ ) and  $p = (0.11/2)^* = 0.055 \approx 0.05$ , and therefore is a borderline case. Hair et al. (2010) argues that in a Two-tailed Hypothesis testing this is acceptable. Thus, it may be concluded that PU has an effect on CPD, though it is weak. In the star rating, H7 is ranked fifth out of 13 hypotheses. The significance of H7 confirms that, if a customer believes that using a search engine website is useful and will enhance his/her hotel booking experience, then he/she will proceed with the booking process.

One of the most important finding of this study is the impact of PEOU on PU, represented by H10. The  $\beta$  value is 0.954, close to 1 and the p-value is 0.000. This clearly indicates that the impact of PEOU on PU as stated by H10 is highly significant; H10 ranks first in the star rating of the hypotheses. H10 also demonstrates a positive significant relationship between perceiving booking a hotel online is useful and that a website is easy to use. In fact, this particular relationship demonstrated the highest significance score within the developed framework. Again, both these results were consistent with the original TAM theory (Venkatesh and Bala, 2008; Venkatesh and Davis, 2000; Davis, 1989), in addition to other previous research (e.g. Ahn et al., 2007; Lederer et al., 2000; Moon and Kim, 2001).

Another study that reveals similar findings within the hotel booking context is a recent one by Guritno and Siringoringo (2013). Using TAM, their empirical result shows that PU influences the attitudes

towards usability of online hotel room reservation websites more than PEOU. However, although the relationship between PEOU and PU was confirmed in their study, it showed a very weak influence ( $\beta = .04$ ,  $p < 0.001$ ) (ibid). The current framework has only one antecedent, PU, and the AMOS model explains it by 39% ( $R^2 = .39$ ). Therefore, the results of this study corroborate the findings of a large amount of previous work in this field and further provide support for the context of the hotel industry. Lim and Ting (2012) discuss TAM, which is the framework of their study. The authors drew up four hypotheses: H1 [PEOU of online shopping sites will positively influence Attitude Towards Online Shopping (ATOS)], H2 [PU of online shopping sites will positively influence ATOS], H3 [PEOU of online shopping sites will have a positive influence on PU] and H4 [ATOS will positively influence intention to engage in online shopping]. All the above four hypotheses were supported by their study. The findings of these researchers are in agreement with the current study.

As discussed in the previous section, PU has direct and indirect effects on CPD. The indirect effect is when ES acts as a mediator between PU and CPD. Referring to Table 6.5, it can be seen that PU has a direct impact on CPD with  $\beta = 0.162$  and an indirect effect with  $\beta = 0.173$  in the bootstrapping exercise. Thus, the total effect of PU on CPD is found to be 0.335 while, in the hypothesis testing for H7, it was found to be 0.390, which means it is marginally significant; however, it was accepted in this study.

#### **6.3.4 Electronic Word of Mouth (eWOM)**

From the hypotheses that were originally formulated, H3 and H13 were rejected –H3 related to the impact of System Quality on e-Satisfaction and H13 related to the impact of Electronic Word of Mouth on Customer Purchase Decision. The construct eWOM was covered by item questions Q23.1, 23.2 and 23.3. It was found that eWOM did not have any effect on CPD when booking a hotel online. This observation is supported by the very low value of  $\beta = 0.011$  and high value  $p = 0.789$ . Similarly, H12, which states that ES of a tourism website will affect eWOM positively, was found to be highly significant ( $p\text{-value} = 0.000$  and  $\beta = 0.392$ ). This observation suggests that customers are more inclined to be enthusiastic about the website if they have a good experience while browsing.

In the bootstrapping exercise described in Chapter 5, section 5.12, similar results for H13 were obtained. The author used the Bollen-Stein bootstrap method. Bootstrapping runs of the AMOS models were run to find the mediating effects of eWOM. Statistically suggested paths in the framework were revealed and direct and indirect effects of constructs were demonstrated using Bootstrapping. AMOS computed the two-tailed significance of the direct, indirect and total effects of the constructs during the Bootstrap run. It was seen that the direct, indirect and total effect of eWOM on CPD (0.065, 0.000 and 0.065) were very low, whereas ES has a significant direct effect (0.769), but no indirect effect (0.025). Therefore, it can be concluded that eWOM does not have a significant impact on CPD, either directly or indirectly.



The literature review revealed that there is limited research on the impact of online customer reviews on online purchasing decisions in Saudi Arabia. In one study conducted in Saudi Arabia, Almana and Miza, (2013) conclude that the phenomenal growth of online social networks has widened the potential impact of eWOM on customer purchasing decisions. The results they obtained show that Saudi Internet shoppers are very much influenced by eWOM. The authors argue that the majority of online shoppers are dependent on online forums. They surf the web to read online comments and read reviews about products/services in which they are interested. Such comments and reviews are important factors that help Saudi customers in making purchasing decisions. About 80% of their respondent participants indicated that they read online reviews before making an online purchase (ibid).

In another remarkable study, Cheung et al. (2009) observe that, even with extensive use of online review forums to promote trust and purchase decisions, no empirical evidence supports the view that eWOM plays a positive role in promoting purchases. However, eWOM might strengthen the relationship between customers' emotional trust and their purchase intention and between the perceived integrity and attitudes of customers. The authors suggest that marketers should adopt procedures to habitually monitor and encourage customers' opinions. The results obtained by Cheung et al. (2009) are in full agreement with the current study where eWOM was found to have very weak negative correlation with other constructs, very low Cronbach's Alpha value and weak factor loadings. Thus, a few researchers have arrived at a consensus concerning an important deduction, with regard to the impact of eWOM on customer online purchase decisions.

Just as PEOU and PU, eWOM was expected to have both a direct and an indirect effect on CPD. The indirect effect is because ES acts as a mediator. Referring to Table 6.5, it can be seen that eWOM has a direct impact on CPD with  $\beta=0.065$  and an indirect effect with  $\beta=0.000$  in the bootstrapping exercise. Thus, the total effect of eWOM on CPD is found to be 0.065, which is highly insignificant, while, in the hypothesis testing for H13, it was found to be 0.011. Therefore, it was concluded that eWOM does not have an effect on CPD and H13 was rejected, as explained earlier, in Chapter 5, section 5.9.5.2.

### **6.3.5 Web Design/Quality: Search Engine, Web Content, Pop-up Ads and Banner Ads, and Enjoyability**

Website Design quality is of prime importance in customers' online purchase decisions. Websites should focus on the quality of their content, as this has been identified as one of the main factors contributing to continued or repeated customer visits. Content on the web includes text, pictures, graphics, layout, sound, motion and, someday, even smell, so making the right web content decisions is critical to effective web design. While studies have started to explore marketing strategies that attract visitors to websites, how to convert web surfers to repeat visitors is a not well understood

(Rosen and Purinton, 2004). Rosen and Purinton (2004) identify underlying dimensions of effective website design and provide insight into site design characteristics that lead to a higher likelihood of revisits. Website features such as hyperlinks, navigation bars and sitemaps provide flexible features by allowing users to browse in a non-linear fashion, and the ability to jump to different parts of the website without backtracking. However, this is a double-edged sword, because it also makes the website more sophisticated and difficult for the user to learn and remember their movements on it. Furthermore, frequent changes of web pages mean a repeat visitor will have to re-learn their way about the website. Moreover, as websites expand in size and complexity, their designs need to reduce the user's browsing efforts in completing the task. Generally, research on website design suggests that providing richer media with a more real environment has more positive influence on users' involvement (Hausman and Siekpe, 2009). Hence, it was concluded based on previous literature and the current study results that Web Design Quality is measured by:

- Search Engine.
- Web Content.
- Pop-up Ads and Banner Ads.
- Enjoyability.

In the current study, several hypotheses were formulated to cover the effect of these four component constructs on e-Satisfaction (ES), as discussed below.

#### 6.3.5.1 Web Design/Quality: Search Engine

Hypothesis H4 states that Search Engine (SE) will positively affect e-Satisfaction (ES) with a Third-Party Hotel website. The tests of the hypothesis showed that in a Single-Tailed Hypothesis testing SE did not have much effect on ES, because the p-value obtained was  $0.065 > 0.05$ . However, because the p-value was just above 0.05, a Two-Tailed Significance Test was conducted, and the Two-Tailed p-value was found to be less than 0.05. Thus, the p-value obtained was  $(0.065/2)^* = 0.033 < 0.05$ . According to Hair et al. (2010), this is an acceptable value in marginal cases. Moreover, the Standard Regression Weight, or  $\beta$  - Value = 0.164, was above the limiting value. Hypothesis H4 was found to be in the acceptance region and hence it was concluded that SE has an effect on ES; obviously, this in turn will have an effect on CPD as well.

This conclusion is in line with the findings of many researchers, despite the fact that in the current study it was found that the effect was not highly significant. Palanisamy (2013) states that, once the user leaves the website, the satisfaction or dissatisfaction in using the search engine should take over. The author suggests that there are many components of *search engine* that decide whether a search engine is effective or not. The conceptual model developed by the author consists of the environmental influence (brand and brand equity, brand awareness, brand images, etc.), User-Related Influences, User Experience of Search Engines, Faith (Trust) of a Search Engine, Learning Cost of

Current Search Engine, Current Browser, Effectiveness Related Criteria Privacy of Web Searches, Response Time and so on. Thus, it is apparent that the search engine effect is a highly complex phenomenon, which is also indicated by the results obtained in the current study.

#### *6.3.5.2 Web Design/Quality: Website Contents*

Website content quality is a crucial element of Web Design/Quality. In addition to the Website Quality, ease of Navigation will also positively affect the e-Satisfaction with a Third-Party Hotel Website. This is stated in Hypothesis H1: Website Content Quality (WCQ) will positively affect ES with a Third-Party Hotel website. The hypothesis tests resulted in acceptance of H1, with  $p\text{-value} = 0.001 < 0.05$  and  $\beta$  value = 0.195. Therefore, it can be safely stated that Website Content has a significant effect on e-Satisfaction (ES). It turns out that Web Content will have an effect on CPD as well.

Ranjbarian et al. (2012) conducted a study on 200 e-shoppers in Esfahan, Iran, and found that website design and its component factors such as web contents, speed of exploration, information displayed, aesthetics, etc., have a significant effect on e-Satisfaction.  $\beta$  values of each component factor ranged from 0.51 to 0.68. The overall Cronbach's Alpha was obtained as 0.71. Bt Khalifah et al. (2014) studied customer e-Satisfaction among low-cost airline passengers; 397 local passengers in the Low-Cost Carrier Terminal (LCCT), Sepang, Kuala Lumpur, were chosen for the survey. The authors found that the five determinant factors of website quality for Air Asia were information content, navigation, responsiveness, personalisation and security and privacy. The results revealed that there is a positive relationship between these five dimensions of website quality and customer e-satisfaction, and also information content was the most significant contributor to customer e-satisfaction. Thus, the two cited studies are in agreement on the effect of website content being a major component of web design quality. Thus, the findings of the current study are supported unequivocally by such studies.

#### *6.3.5.3 Web Design/Quality: Pop-up Ads and Banner Ads (Intrusive Marketing Tools).*

Another major component of Website Design/Quality is Pop-up Ads and Banner Ads (Intrusive Marketing Tools). Hypothesis H1 was related to Web Content and Hypothesis H2 was related to (Intrusive Marketing Tools) Pop-up Ads and Banner Ads. H2 was formulated to represent the effect of Online Intrusive Marketing Tools (IMT) – Pop-up Ads and Banner Ads on the e-Satisfaction with a

Third-Party Hotel Website. Both hypotheses H1 ( $p = 0.001$ , and  $\beta = 0.195$ ) and H2 ( $p = 0.001$  and  $\beta = 0.195$ ) were accepted, though the impact of these factors on e-Satisfaction is not very strong.

Furthermore, Ranjbarian et al. (2012) observe that *Site design/quality* is strongly dependent upon ease of browsing, standard language use, interface design, information content in virtual stores, page actualisation, clarity of information, organised presentation, etc. However, they found that some customers reacted negatively to web banners, because they interrupt and slow down a web page. In another interesting study, Bahr and Ford (2011) found that the average online customer reacts to pop-ups with responses ranging from mild irritation to vocal annoyance. High levels of negativity associated with pop-ups, especially annoyance, were observed. Response patterns and total time spent viewing the pop-ups suggest that customers dismiss them after a brief spell of time. Therefore, there is clear justification for the low significance of the effect of Pop-up Ads, and Banner Ads (IMT) on e-Satisfaction. Because of the impact of e-Satisfaction on Customer Purchase Decision (CPD), it may be deduced that IMT will definitely have an indirect effect on CPD.

It is relevant to note that, because of the inter-relatedness of the two factors involved in H1 and H2, the two constructs Content Quality, covered by Q15.1 to Q15.4, and Intrusive Marketing Tools (IMT), covered by Q16.1 to Q16.7, were combined in this study during the CFA. Therefore, the combined construct Content Quality and Intrusive Marketing Tools (WCQ) was used in the AMOS models.

#### 6.3.5.4 Web Design/Quality: Enjoyability

Enjoyability (EN) of a website is of primary concern for online shoppers. Visual aesthetics means the beauty or the pleasing appearance of things. In the field of Human-Computer Interaction (HCI), this factor is of cardinal importance because it is pivotal to the success of website quality. The effect of the important factor Enjoyability on e-Satisfaction was tested using Hypothesis H5: Website Enjoyability (EN) will positively affect e-Satisfaction with a Third-Party Hotel Website. The hypothesis was supported in the current study ( $p$  value = 0.014 and  $\beta = 0.087$ ). The low value of  $p$  and high value of  $\beta$  point to the fact that Enjoyability has a significant effect on e-Satisfaction.

Most of the related research studies have revealed that Enjoyability (EN) is a factor that positively influences e-Satisfaction (ES). In the current study, it was found to be marginally significant in hypothesis testing of H5, with factor loading = 0.087. However, the Bootstrapping exercise discussed in chapter 5, section 5.12 reveals that the direct effect of ES as a mediator between EN and CPD is insignificant ( $\beta = 0.000$ ) while the indirect effect has a loading  $\beta = 0.124$ , which is only marginally significant. Wong et al. (2014) used TRA and TAM to investigate the impact of perceived usefulness, perceived ease of use and enjoyability on customer e-loyalty and e-satisfaction in the Malaysian context using 395 respondent shoppers. They concluded that, though PU and PEOU had significant

effects on ES, EN had an insignificant impact; hence, the hypothesis relating EN and ES and E-Loyalty was rejected by the authors. Table 6.6 shows their results.

**Table 6.6 Path Coefficient and Hypothesis Testing**

<b>H<sub>y</sub></b>	<b>Relationship</b>	<b>Coefficient e-loyalty</b>	<b>Coefficient e-sat</b>	<b>t-value e-loyalty</b>	<b>t-value e-sat</b>	<b>Supported</b>
<b>H1</b>	<b>PU → e-loyalty and e-satisfaction</b>	<b>0.422</b>	<b>0.399</b>	<b>3.296</b>	<b>2.964</b>	<b>YES</b>
<b>H2</b>	<b>PEOU → e-loyalty and e-satisfaction</b>	<b>0.248</b>	<b>0.331</b>	<b>2.042</b>	<b>2.528</b>	<b>YES</b>
<b>H3</b>	<b>ENJ → e-loyalty and e-satisfaction</b>	<b>0.188</b>	<b>0.135</b>	<b>1.491</b>	<b>1.491</b>	<b>NO</b>

*Note: \*P < 0.01, p < 0.05*

Source: Wong et al. (2014)

Even the Bootstrapping exercise revealed that the role of ES as a mediator between EN and CPD is insignificant, because of the effect of EN on ES and the effect of ES on CPD. Therefore, EN can have an effect on CPD indirectly.

#### **6.4 Determinants of e-Satisfaction (ES)**

Referring to the developed framework designed by the author, it can be seen that e-Satisfaction is a major component of the Organism part of the Stimulus-Organism-Response (S-O-R) model. In fact, e-Satisfaction is set as a centralised component in the developed framework. The concept of e-Satisfaction is originally adopted from the satisfaction idea in the Expectation Confirmation Theory (ECT) by Oliver (1980) and the IS Success Model by DeLone and McLean (1992). As suggested by Chang et al. (2011), three characteristics (i.e. ambient, design and social) of the retail environment influence customers towards positive emotional responses leading to impulse-buying behaviour. The following hypotheses that determine customer e-satisfaction were tested:

- **H1: Website Content Quality will positively affect e-Satisfaction with a Third-Party Hotel Website.**
- **H2: Online Intrusive Marketing Tools (Pop-up-Ads and Banner Ads) will positively affect e-Satisfaction with a Third-Party Hotel Website.**
- **H3: Overall System Quality (Visual Appeal and Page Response) will positively affect e-Satisfaction with a Third-Party Hotel Website.**
- **H4: Search Engine/Navigation will positively affect e-Satisfaction with a Third-Party Hotel Website.**
- **H5: Website Enjoyability will positively affect e-Satisfaction with a Third-Party Hotel Website.**

- **H6: Perceived Usefulness of the Website will positively affect e-Satisfaction with a Third-Party Hotel Website.**
- **H8: Perceived Ease of Use of the Website will positively affect e-Satisfaction with a Third-Party Hotel Website.**

The individual factors based on hedonic motivation, such as PEOU, PU and ES, can balance the relationship between these characteristics and customers' positive emotional responses. This is evident from the results of the hypotheses tests. In the current study, out of all the determinants of ES the most significant one was found to be PEOU, stated by H8, with factor loading  $\beta = 0.449$ . The next factor is WCQ, whose impact is represented by H1, with  $\beta = 0.195$ . The impact of IMT on ES is represented by H2, which also has the same  $\beta$  coefficient = 0.195. PU, SE and EN have a comparatively weak effect on e-Satisfaction, though they fall within acceptable ranges.

Referring to Chapter 5, section 5.9.5.2, on hypotheses testing, it can be seen that the current AMOS model explained variance  $R^2 = 76\%$  in ES, 42% in CPD, 51% in eWOM and 39% in PU. These results point to a substantial explanation for the effect of determinants of ES, and high to moderate explanation for the rest. Based on these results, the author developed a simpler representation for the final AMOS model with the path coefficients, coefficient of determination ( $R^2$ ) and the SEM model fit, as seen in Chapter 5, Figure 5.12. This means that 76% of customer's e-Satisfaction with the third-party hotel website is explained in this framework. This is compared to the work of Lau et al. (2011) that examined customer satisfaction and to the work of Koppius et al. (2005) that examined e-satisfaction upon answering the question: why are customers coming back to buy their airline tickets online? In order to determine the level of contributions in '*variance explained*' by the empirically obtained observed items and in turn latent constructs, coefficient of determination  $R^2$  values were checked.  $R^2$  provides the percentage of variation in endogenous variable(s) explained by independent variable(s) (Keil et al., 2000). According to Chin (1998), models possessing an  $R^2$  of 0.67 can be considered '*substantial*', 0.33 = '*moderate*' and 0.19 = '*weak*'.

It can be observed that hypothesis H4 [i.e. the effect of Search Engine (SE) on e-Satisfaction (ES)] is acceptable as per the Two-Tailed significance test, with  $\beta=0.038$  and  $p\text{-value} = 0.065 > 0.05$ . However, the  $p\text{-value}$  obtained in AMOS from a Two-Tailed test was  $0.065/2 = 0.033 < 0.05$  (Hair et al., 2010). Therefore, as it is marginally significant, the relationship could be accepted with caution. If this rule is accepted, it may be observed that the influence of PU on CPD as per H7 is also marginally acceptable (H7 with  $p=.11/2 = 0.055$  slightly more than 0.05). If significance level of 10% is accepted, H7 can also be accepted.

In the current research, initially there were seven factors as the determinants of e-Satisfaction. The most significant contributor to ES was found to be PEOU, stated by H8, with factor loading  $\beta = 0.449$ . The next factor is WCQ, whose impact is represented by H1, with  $\beta = 0.195$ . The impact of IMT on

ES is represented by H2 which also has the same  $\beta$  coefficient = 0.195. PU, SE, and EN, have comparatively weak effect on e-Satisfaction, though they fall within acceptable ranges.

Thus, the empirical results revealed that out of these seven determinants six were found to be having a positive effect on e-Satisfaction. The seven factors are listed in Table 6.7 in the order of significance by p-values or weights by  $\beta$ -Values. The determinant with the highest impact on e-Satisfaction was found to be Perceived Ease of Use (PEOU), with Enjoyability (EN) having the least impact. Website Content Quality has the same effect as Intrusive Marketing Tools (IMT). The effect of System Quality/Visual Appeal (SQ/VA) was found to be insignificant and hence Hypothesis H3 was rejected.

**Table 6.7 Most Influential Determinants of e-Satisfaction**

S.No	Hypothesis	Statement of Hypothesis	Significance Level, p-Value	Std Regrn Wts, $\beta$ -Values	Status
1	H8	Perceived Ease of Use (PEOU) will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.000 < 0.05	0.449	Accepted
2	H1	Website Content Quality will positively affect e-Satisfaction with a Third-Party Website.	0.001 < 0.05	0.195	Accepted
3	H2	Online Intrusive Marketing Tools (IMT) – Pop-up Ads and Banner Ads will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.001 < 0.05	0.195	Accepted
4	H6	Perceived Usefulness of the website (PU) will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.008 < 0.05	0.193	Accepted
5	H4	Search Engine/Navigation, will positively affect e-Satisfaction with a Third-Party Hotel Website.	(0.065/2)* = 0.033 < 0.05	0.164	Accepted
6	H5	Website Enjoyability (EN) will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.014 < 0.05	0.087	Accepted
7	H3	System Quality/Visual Appeal/Page Response will positively affect e-Satisfaction with a Third-Party Hotel Website.	0.868 > 0.05	0.01	<b>Rejected</b>

\* According to Hair et.al. (2010), this is acceptable in Two-Tailed Hypothesis testing

It may be noted here that the final CFA model used constructs Search Engine (SE) and Navigation (NAVI) combined to make Search Engine (SE); System Quality/Visual Appeal (SQVA) and System Quality/Page Response (SQPR) were combined to form Overall System Quality (OSQ); and Content Quality (CQ) and Pop-Up & Banner Ads (COQPA) were combined to form Web Content Quality (WCQ). Out of these six constructs, the construct related to H3, i.e. System Quality, was insignificant.

#### 6.4.1 Perceived Ease of Use (PEOU)

In some of the previous research studies, PEOU was found to have an insignificant impact on CPD, though it had indirect effects. In the current study, it has been statistically proven that, of all the framework constructs, PEOU is the most significant factor influencing PU, ES and CPD.

Some previous studies linked PEOU with ES and CPD. According to TAM (Davis, 1989), PEOU and PU are important perceptions determining IT adoption. In a later study that expanded on the original TAM studies, Davis et al. (1992) explained the role of these beliefs, suggesting that user intention to adopt a new IT is affected by both extrinsic and intrinsic motivations. In a similar study by Gefen and Starub (2000), five hypotheses were formulated involving PEOU, PU and Intended Inquiry and Intended Purchase (CPD); all the five hypotheses (H1a, H1b, H2a, H2b and H3) (see Figure 6.1) were supported, proving that PEOU has a significant effect on PU and Intended Inquiry. However, they found that PEOU has a weaker effect on CPD (Intended Purchase) than PU. Using a table summarising the results of about 23 TAM-related research studies from 1989-2000, they prove that PU has more effect than PEOU on Purchase Decision.

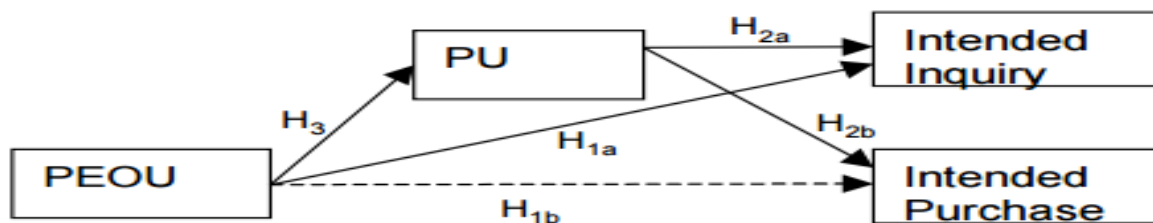


Figure 6.1 Gefen and Straub's (2000) Model and Hypotheses

Source: Gefen and Straub (2000)

In a study that adopted the TAM constructs (PEOU and PU) to examine the effect on what they called 'Satisfaction with E-Commerce channel' rather than intention, Devaraj et al. (2002) found strong support to suggest a relationship between PEOU and ES and between PU and ES. The current study has explored these links and the result supports previous findings, which means that it statistically validates that PEOU positively influences online user satisfaction whilst using a third-party hotel website. Hypotheses H8: PEOU and ES with ( $\beta = .449$ ,  $p < 0.05$ ) demonstrated a significant relationship.



It has already been mentioned in this chapter that, out of the three determinant factors that influence CPD when booking a hotel online, PEOU was the most significant individual positive contributor. In the current study, hypothesis H9, which states that PEOU of the website will positively affect the customers' willingness to book a hotel online, is accepted based on a high value of  $\beta = 0.682 (> 0.5)$  and a very low significance level of  $p = 0.000 (< 0.05)$ .

Hypothesis H7, which states that PU has a significant effect on CPD, was established with  $\beta = 0.39$  and Two-Tailed Significance Value of  $p = (0.11/2)^* = 0.055 \approx 0.05$ . When taken on a One-Tailed Significance Test basis, PU has no effect on CPD. Thus, in contrast to the results obtained by Gefen and Straub (2000), the current study established that PEOU has a more significant effect on CPD than PU does. This suggests that the customers or website visitors are always encouraged to proceed with booking a hotel, provided the website and its contents are easy to use and browsing is found to be comfortable. Therefore, the most important factor that attracts customers to book a hotel online is Perceived Ease of Use.

Alternatively, while booking a hotel online, the more the customers are satisfied with the website, the more they are keen on proceeding with the hotel booking process. This positive relationship is not a surprising result and is consistent with previous research (Lau et al., 2011; Bai et al., 2008; Zeithaml et al., 1993; Cronin and Taylor, 1992; LaBarbera and Mazursky, 1983). However, the importance of this finding demonstrates that PEOU is much more significant than other factors (i.e. PU, ES and eWOM). This result suggests that the most important factor that encourages customers to complete the booking processes is the perception of how easy the site is to use and how satisfied the customer is with their experience with it. Furthermore, the finding supports the adopted original ECT (Oliver, 1980) and all of Oliver's later work in support of this theory (Oliver, 1993 and 2014).

Thus, this study was able to demonstrate a positive relationship between Perceived Ease of Use and Customer Purchase Decision. Hypotheses H9: PEOU  $\rightarrow$  CPD was supported with a beta value of  $\beta = 0.682 (> 0.5)$  and a very low significance level of  $p = 0.000 (< 0.05)$ . Accordingly, the study reveals that an easy to use website has a significant effect on the user's willingness to book a hotel online. In addition, this study was able to demonstrate a positive relationship between PEOU and ES. Hypothesis H8: PEOU  $\rightarrow$  ES was supported with value of  $\beta = .449$  and very low significance level of  $p = 0.000 (< 0.05)$ . Accordingly, the study reveals that an easy to use website has a significant effect on customer satisfaction when booking a hotel online.

#### **6.4.2 Perceived Usefulness (PU)**

It was found that PU has a significant relationship with ES and CPD. This was established through testing of hypotheses H6 and H7 respectively. Hypothesis H6, which states that PU has an effect on ES with a third-party hotel website, was found to be significant with  $\beta = 0.193$  and value of  $p = 0.008$ ,

indicating that using a hotel website is perceived as a useful way of making online booking arrangements. Such a facility generates a feeling of satisfaction with the website and directly influences customers' willingness to book a hotel online from the website. Therefore, it can also be deduced that e-Satisfaction plays a mediating role between Perceived Usefulness and Customer Purchase Decision.

This finding is in full agreement with other previous research studies in different contexts, for example, Devaraj et al. (2002) who found a strong relationship between PU and ES with e-commerce channels in general, in addition to Zviran et al. (2005), who found that PU was one of the factors affecting user satisfaction with Enterprise Resource Planning (ERP) systems. Perhaps using an ERP system is directly related to a task that users are required to do, and hence does not reflect the same concept that this research is attempting to test.

Furthermore, Bhattacharjee (2001a) tested the relationship between PU and ES in an online banking context and confirmed that there is a positive, although weak, prediction of ES. However, in another study that focused on online brokerage, the author did not even predict this relationship in his modified model, even with the presence of both constructs in his model (Bhattacharjee, 2001b). The reason for the unsupported relationship could potentially be related to a remark in his article, where he suggested that PU captures the rationale component of the user's decision in contrast to the affective component embodied in satisfaction, stating that "*In case the rationale and affective components oppose each other, relative strengths of the two components determine the outcome of the decision process*" (Bhattacharjee, 2001b, p.208). For instance, users may continue using the hotel website if they consider it useful, even if they are dissatisfied with the website itself.

This argument is supported by the fact that in the current study H7, which states that PU will positively affect customers' willingness to book a hotel online, was found to be more significant than H6, which states that PU will affect ES with a third-party hotel website. Thus, the effect of PU on CPD is more significant ( $\beta = 0.39$ , and two-tailed p-value =  $0 (0.11/2)^* = 0.055 \approx 0.05$  showed it was a borderline case. Assessing on the basis of  $\beta$  value, the effect of PU on CPD is more significant than the effect of PU on ES. Therefore, it may be stated that the current study adds to the general conclusions of researchers on the relationships existing among PU, ES and CPD.

#### **6.4.3 Web Content Quality (CQ)**

In this study, Web Quality was found to have a moderate influence on e-Satisfaction. Hypotheses H1 (Website Content Quality will positively affect e-Satisfaction with a Third-Party Hotel Website) and H2 (Online Intrusive Marketing Tools 'Pop-up Ads and Banner Ads' will positively affect e-Satisfaction with a Third-Party Hotel Website), which represent the Web Quality described by Website Content (CQ) and Pop-up Ads and Banner Ads (CQPOA), were tested and accepted because

the values of  $\beta$  and  $p$  were within the limiting values. Both H1 ( $\beta=0.195$  and  $p$ -value 0.001) and H2 (0.195 and  $p$ -value = 0.001) were found to have a moderate effect on ES.

The previous literature supports the positive link between website characters and qualities of e-satisfaction. However, most studies adopt similar, though not the same constructs, or multi dimensions instead of a single web quality construct. Examples of similar constructs can be found in the work of Lau et al. (2011), who looked at the web design elements, and Mills and Morrison (2003), who looked at hotel website interfaces. The authors empirically demonstrate that the relationship does exist.

Web quality as the individual's assessment of a website's aesthetics reflects the individual's needs and the general superiority of the website (Aladwani and Palvia, 2002). Studies that separate the web quality into more than one construct have also demonstrated this relationship. For example, McKinney et al. (2002) looked at information and system quality, Nusair and Kandampully (2008) used information quality only, and Bai et al. (2008) looked at functionality and usefulness as components of web quality.

This observation is relevant to the current study because web quality in this present context has several components, namely Website Content Quality, Online Intrusive Marketing Tools (Pop-up Ads and Banner Ads), Navigation and Search Engine. These initial constructs were combined into two constructs in CFA, as discussed in Chapter 5, section 5.9.

In the current study, Website Content Quality items were initially combined with the Pop-up Ads & Banner Ads 'Online Intrusive Marketing Tools' items for the CFA. The construct, Web Content Quality, became more comprehensive as a definition, containing items that related to sufficiency, timeliness, accuracy and website-specific information, in addition to items that related to the functionality and the visual aspect of the website. These items fit the description of Web Quality provided by Aladwani and Palvia (2002) that was discussed in Chapter 2, section 2.9.

The current study demonstrates that Web Quality is a significant predictor of e-Satisfaction and the strongest factor of willingness to book a hotel online is PEOU. This provides support to suggest that the main aspects of the developed framework are correct. The better the information on the website, the higher the level of satisfaction felt with the website. This feeling of satisfaction increases the willingness to book a hotel online.

#### **6.4.4 Electronic Word of Mouth (eWOM)**

Hypothesis H13 states that eWOM positively affects CPD to book a hotel online. The construct eWOM was covered by item questions Q23.1, Q23.2 and Q23.3.

It was found that eWOM did not have any effect on CPD to book a hotel online. This observation is supported by the very low value of  $\beta = 0.011$  and high value  $p = 0.789$ . Similarly, H12, which states that e-Satisfaction (ES) with a Third-Party Hotel Website will affect eWOM positively, was found to be highly significant ( $p$  Value = 0.000 and  $\beta = 0.392$ ). This observation suggests that customers will be more inclined to talk about a website if they have a good experience when using it.

In the Bootstrapping exercise described in Chapter 5, section 5.12, similar results were obtained. The author used the Bollen-Stein bootstrap method. Bootstrapping runs of the AMOS models were run to find the mediating effects of eWOM. Statistically suggested paths in the AMOS model were revealed and direct and indirect effects of constructs were demonstrated using Bootstrapping. AMOS computed the Two-Tailed significance of the direct, indirect and total effects of the constructs during the Bootstrap run. It was seen that the direct, indirect and total effects of eWOM on CPD (0.065, 0.000 and 0.065) were very low, whereas ES has a significant direct effect (0.769), but not an indirect effect (0.025). Therefore, it can be concluded that eWOM does not have a significant impact on CPD, either directly or indirectly. However, ES has a significant impact on eWOM.

#### **6.4.5 Enjoyability (EN)**

As mentioned earlier in this chapter, Hypothesis H5 is concerned with EN and states that it will positively affect ES with a Third-Party Hotel Website. The hypothesis was supported in the current study ( $p$  value = 0.014 and  $\beta = 0.087$ ). The low value of  $p$  and high value of  $\beta$  point to the fact that Enjoyability significantly affects e-Satisfaction.

Previous studies (e.g. Sumarjan et al., 2013; Cho and Youn-Kyung, 2012) have proved that EN has a positive impact on ES. However, the results mostly indicate weak impact. In the current study, EN → ES was marginally significant in the hypothesis testing of H5, with  $\beta = 0.087$ . This result is very close to the findings in other studies and is supported by the earlier publications and literature. For example, Wong et al. (2014) applied TRA and TAM to explore the impact of Enjoyability on e-satisfaction and found that PU and PEOU significantly affected ES, while EN had an insignificant impact on ES. Hence, in their study the authors rejected the hypothesis relating to EN and ES.

#### **6.5 Group Differences and Generalisability**

One of the important objectives of this study was to investigate the major driving forces that differentiate customer segments, such as: demographics, Internet experience and travel habits. Certainly this will help in understanding how unique characteristics of each group affect the framework. Additionally, this will be useful for the researcher to generalise the study across different groups. It will also provide initial findings that could be a start for future research within the third-party hotel industry.

The analysis of the group differences in Appendix 5 involved two types of analyses. The first one involves comparing the mean scores between different groups in order to understand how each group of respondents perceived the different variables; t-test analysis was used for this purpose. Although the t-test show differences under the  $p < 0.05$  significant level, the discussion will only involve the critical differences under the stricter Bonferroni corrected p-value  $P < 0.0063$ . The second analysis focuses on the framework and the relationships between the different variables, i.e. invariance analysis. This will answer the question about how different groups affect the relationships.

The following sections provide the findings for the 12 different types of group under three main categories: Demographic Characteristic (gender, age, education level, employment status and marital status), Internet Experience and Travel Habits (details of the hotel used most often, actual booking, frequency of visits, motivation for visits, type of travel and type of funding). The discussion is based on the finding in Appendix 5, with results for both types of analyses, including mean differences and invariance analysis.

A secondary objective of this study was to explore and identify changes between diverse segments of customers, including the role of demographics, Internet experience and online hotel booking habits. This helps with understanding how each group affects the framework, and will further allow the author to discover the generalisability of the study across different groups. In addition, it provides initial findings that could be a start for future research within the third-party hotel industry.

### 6.5.1 Demographic Groups

The study adopted five different characteristics to investigate: gender, age, education level, employment status (student/employed) and marital status. The mean comparison for all demographic variables (t-test) revealed that there were no differences in the perceptions of all of the groups. With regard to the invariance analysis, gender, age and education level did not demonstrate any significant difference. However, other factors such as employment status and marital status revealed differences in some relationships.

### 6.5.2 Employment Status

Table 6.8 shows the percentage of total response rate of undergraduate students, academic employees, self-employed and unemployed on e-satisfaction level.

**Table 6.8 Percentage of Response Rates to e-Satisfaction**

Answer Choice		Response Percent	Response Total
1	Undergraduate Student	68.5%	682

2	Academic Employees	30.3%	305
3	Self-employed	0.1%	1
4	Unemployed	1.1%	14
<i>Answered</i>			<b>1,002</b>

In relation to Table 6.8, e-Satisfaction was found to be more important for undergraduate students than professionals/academic employees. The most logical deduction possible here is that undergraduate students have less income from the government and, for the majority of students, payments are made through their parents. According to Cao and Mokhtarian (2005), student customers may consider price more heavily in their online booking decisions, more so than the rest of the online shopper population. Thus, the money aspect plays a more important role in their satisfaction with the hotel website.

Table 6.9 shows the purchase decisions by undergraduate students as well as academic employed staff. Taking into account the fact that the total number of undergraduate students who participated was 683 and the total number of academic employees who participated was 319, it can be seen that, while 78.68% of academic employees make a definite decision to book hotel online, only 70.38% of undergraduate students make such a positive decision. Furthermore, 11.14% of the undergraduate students are uncertain about booking a hotel online while this is only 1.88% from the academic employed respondents. The number who replied Definitely Not to Purchase Decision is almost the same among undergraduate students (18.48%) and academic employed (19.44%) staff.

**Table 6.9 Percentage of Students and Employees Making a Hotel Booking Decision**

<b>Purchase Decision</b>	<b>Undergraduate Students</b>	<b>Percentage of Students</b>	<b>Purchase Decision</b>	<b>Academic Employees</b>	<b>Percentage of Employed</b>
<b>Definite</b>	480	70.38%	<b>Definite</b>	251	78.68%
<b>Uncertain</b>	77	11.14%	<b>Uncertain</b>	6	1.88%
<b>Definitely Not</b>	126	18.48%	<b>Definitely Not</b>	62	19.44%
<b>Total</b>	683	100%	<b>Total</b>	319	100%

Another relationship that was found to be significantly different for undergraduate students was the relationship between PEOU and PU. Students consider PEOU as important in order to feel that the hotel website is useful. The majority of previous research into both TAM constructs used students in the surveys (Al-Qeisi, 2009). Therefore, this research also supports these findings. A possible explanation for this might be that undergraduate students usually have less travelling experience. Thus, for undergraduate students, the hotel website has to be easier to use and the travel arrangement steps should be clearer in order for them to perceive it as being useful.

Table 6.10 on the statistics of PEOU reveals interesting information. The response pattern of both undergraduate students and academic employed groups are shown. The Perceived Ease of Use (PEOU) is found to be stronger among academic employees than undergraduate students. While 25.79% of employees found such websites easy to use, only 19.18% of students found this to be the case. Only 0.63% of academic employees were in an uncertain state of mind about PEOU, while 7.61% of undergraduate students could not decide whether to agree or disagree about the Ease of Use of these websites. In addition, 26.42% of academic employees had a clear understanding of PEOU relating to such websites, whereas only 21.96% of undergraduate students clearly understood the concept.

**Table 6.10 Percentage of Response Rates to Perceived Ease of Use (PEOU)**

Response Pattern	Students				Response Pattern	Employees			
	Easy to Use	%	Clear Understanding	%		Easy to Use	%	Clear Understanding	%
Entirely Agree	131	19.18%	150	21.96%	Entirely Agree	82	25.79%	84	26.42%
Mostly Agree	233	34.11%	211	30.89%	Mostly Agree	125	39.31%	104	32.70%
Somewhat Agree	148	21.67%	143	21.08%	Somewhat Agree	45	14.15%	65	20.44%
Neither agree/Nor Disagree	53	7.61%	71	10.25%	Neither agree/Nor Disagree	2	0.63%	3	0.63%
Somewhat Disagree	48	7.03%	44	6.44%	Somewhat Disagree	21	6.60%	18	5.66%
Mostly Disagree	40	6.00%	37	5.42%	Mostly Disagree	22	6.92%	18	5.66%
Entirely	30	4.39%	27	3.95%	Entirely	22	6.60%	27	8.49%

<b>Disagree</b>					<b>Disagree</b>				
	683	100.00%	683	100.00%		319	100.00%	319	100.00%

However, academic employees were superseding the undergraduate students in disagreeing with the easiness of use of websites and understanding the websites and in turn the overall idea of PEOU.

Very few studies (e.g. Cho and Sagynov, 2015) have specifically addressed the response patterns of the student and employed communities with regard to the easiness of use and the understanding on PEOU of websites. Cho and Sagynov (2015) concluded that PEOU had a great effect on purchase decision ( $\beta = 0.922$ ). The author of the current study also felt that the employment status influenced the perception about ease of use marginally.

It was also seen that, while 92.1% of academic employed respondents were going on self-funded trips, only 26.68% of undergraduate students were going on such trips. Similarly, while 73.32% of undergraduate students were sponsored during their travels (funded by parents, etc.), only 7.91% of the academic employed respondents were sponsored.

### 6.5.3 Internet Experience

Quite naturally, it was expected that there would be a significant difference between experienced and less experienced Internet users in terms of their perception of influencing factors. However, the results indicated that there was no significant difference between Internet users and non-users. This is in disagreement with published research studies which put forth the argument about the moderating effect of Internet experience. For example, according to Jarvenpaa et al. (2000), past experience with the Internet, or online shopping, generates knowledge and consequently that reinforces the customer’s behaviour and moderate their beliefs, attitudes and willingness to purchase online.

However, even though the current result does not indicate any significant differences between the two groups, a possible explanation for this may be that a very large percentage (99.1%) of the respondents already had adequate experience with the Internet. While separating the data into two groups for comparison, the researcher used a strict condition by using the two Internet Experience survey questions, which are:

- Do you use the Internet?
- If yes, how long have you been using the Internet?

However, the second Internet usage question from the survey revealed that 89% of the respondents indicated that they had been using the Internet for more than six years. Therefore, this result must be taken with caution.



#### 6.5.4 Travel Experience and Habits

The study adopted four different experiences and habits related to travel, to investigate. They are as follows:

- How many times do you travel abroad per year?
- What is the reason for your journey?
- What is the type of your travel?
- How do you pay for your trip?

These types of travelling habits and characteristics are underrepresented in the literature, even though they can play an important role in affecting web experience for different groups. The t-test revealed that there are differences in the perception of four of the habit groups. Nevertheless, with regard to the invariance analysis, only one relation (i.e. type of funding) shows a significant difference. This is clearly because the academic employed respondents pay for their own travel, while the undergraduate students' travel is paid for by their parents or they are sponsored by the government.

#### 6.5.5 Travel Frequency

Quite expectedly, those who travel less are tempted to seek online help for booking hotels. However, the empirical results show that there was not much difference between the groups in travel frequency. Most of the respondents (36.7%) travel twice a year. The individuals who travel less may consider the website's reputation more than the more frequent travellers do. The observed decrease in the perceived reputation from frequent travellers could be attributed to their experience of using third-party hotel websites more often. Generally, individuals who travel frequently also tend to ignore booking hotels online, because they have already established brand equity and are adequately satisfied with their booking methods. Individuals who do not travel as frequently are more prone to investigate a hotel's reputation, whereas experienced travellers are less likely to change or reconsider their hotel choices. This shows that frequent travellers are underestimating the hotel's reputation but that they are not considering it or not relying on it.

There is only a marginal difference between the travel frequency of undergraduate students and the academic employed staff. While 78.69% of the academic employed community make a positive online purchase decision, only 70.3% of undergraduate students opt for an online purchase. However, it may be noted that the travel frequency among the undergraduate student community (30% travel three times a year) is slightly more than among the academic employed staff (only 20% travel three times a year) (see Table 6.11).

**Table 6.11 Percentage Rate of Travel Frequency**

	Frequency of Travel			Total
	Once a Year	Twice a Year	Three Times a Year	
Undergraduate Students	232 (33.3%)	251 (36.7%)	200 (30%)	683
Academic Employed	124 (39%)	130 (41%)	65 (20%)	319
<b>Total</b>				1,002

Thus, it may be concluded that, though the travel frequency of the academic employed community is less than that of the undergraduate students, they make purchase decisions more positively. Literally no noteworthy research has been conducted to highlight the relationship of travel frequency with customers' online hotel booking decisions. This is partially supported by Murphy and Chen (2014), who suggested that hoteliers should encourage customers to write more reviews and should personalise the needs of their customers, as it will enhance the customer experience and attract new potential clients.

### 6.5.6 Motivation for Travel

According to Kitching (2016), Saudi Arabia – along with Australia and China – has the unique status of being at the top of the list of the largest number of tourists travelling abroad. Recently, the Saudi government has taken measures to encourage domestic tourism; however, this has not affected the number of Saudis who travel internationally.

The current study shows that almost 85% of the total respondents were travelling on leisure trips. The research found that, regardless of the reason for travelling, in the sense of it being for a serious visit (e.g. business, study or medical treatments) or less serious (e.g. vacations, visiting friends), no difference exists in terms of their perception of each construct. However, these findings support the previous literature that indicates that Saudis spend their vacations abroad, and Saudis are at the top of the list of the largest number of tourists travelling abroad (e.g. Kitching, 2016; Gholipour et al., 2014; Abdelkader, 2013; Khizindar, 2012).

Table 6.12 shows in more detail the motivation for travel for both undergraduate students and the academic employed respondents. Once again, the differences between the undergraduate students and academic employed communities are marginal. However, it can be noted that, while 11.71% of the

academic employed staff travel for study purposes, only 3.6% of undergraduate students travel to study abroad. This unexpected difference could be because the employed usually travel for higher education, such as Master's or Doctoral studies. However, the undergraduate student respondents for this study were already studying at a Saudi university; therefore, it may be interpreted that the 3.6% of the undergraduate students who travel for education may be going for short courses, e.g. summer school. Therefore, it was found that the motivation for travel did not have any influence on tourists/travellers' perceptions or within the relationships between constructs.

**Table 6.12 Percentage Rate of Motivation**

	Motivation				Total
	Leisure	Business	Study	Medical	
Students	587 (86%)	62 (9%)	24 (3.6%)	10 (1.4%)	683
Employed	259 (81.96%)	6 (1.58%)	38 (11.71%)	16 (4.75%)	319
<b>Total</b>					1,002

### 6.5.7 Domestic or International Travellers

Compared to domestic travellers, internationals travellers are likely to perceive hotel website quality, e-satisfaction, visual appeal, etc., more seriously. This study also found that the travellers were mostly targeting Middle Eastern countries (61%), followed by Europe (44%), then the USA (25%) and lastly Asia (17%). International tourists are more likely to be concerned with the services they receive from the third-party hotel websites, when compared with domestic travellers.

### 6.5.8 Type of Funding

Most of the studies (e.g. Floh et al., 2013; Xiang and Gretzel, 2010) conclude that travellers who sponsor themselves have a higher intention to book hotels online. Moreover, they have a significantly better-cost perception than those who did not pay for their booking (sponsored or paid by others). This may be because the self-funding individual has more at stake financially than a sponsored customer; besides, self-funding imposes comparatively more responsibility on the customer. As suggested by many researchers, it may be related to the idea that, when someone is using another person's money, they are usually more hesitant to accept the price and conduct the transaction. When companies pay for employees' business trips, the employees might not have the authorisation to complete the transactions. Approval comes from their superiors; therefore, even if they care about the price, they may not complete the purchase. On the other hand, when parents sponsor the trip and accommodation, customers are likely to be extra cautious before accepting the price and booking the hotel.

Another result in relation to the type of funding that has been found from the invariant analysis, is that an honest website is more important in attracting a customer to book a hotel. Because privacy and security are of higher concern to customers when giving personal details online, they look for secured websites, while a sponsored individual need not be as concerned.

In the current study there was no evidence to prove that there is a significant difference between sponsored travel and self-funded travel abroad. In other words, sponsored individuals (52.6%) did not differ significantly from self-funded customers (47.4%). In fact, no earlier comparisons have been made in relation to this issue. Thus, this finding can act as a starting point for further research about the moderating role of type of funding.

### **6.5.9 Website Selection**

The respondents were asked to choose the most visited third-party hotel website – the one with which they had maximum experience. There were six specific website options, and a 7th option of ‘Other, please specify’ was included, in the case a respondent preferred a website that was not listed. The websites are:

- Tripadvisor.com
- Booking.com
- Expedia.com
- Kayak.com
- Hotels.com
- Lastminute.com
- Other, please specify...

It was evident from the survey that customers had definite preferences regarding which websites they used when booking hotels. Surprisingly, 78.9% of the total respondents preferred booking.com while only 20.1% preferred the other booking websites such as Tripadvisor.com, lastminute.com, etc. Booking.com is aesthetically more pleasing than Tripadvisor.com and the other third-party hotel websites. Booking.com also has more entry options such as number of accompanying children, ads for flights with commercial offers, and so on. Tripadvisor.com also displays many attractive features. However, Booking.com is a plainer website, which is preferred by customers who do not have time to play with the available options. When comparing Booking.com with other websites it can be seen that Booking.com carries more information at a glance. With regard to Booking.com, 78.3% of the total respondents had experience with this website. With regard to TripAdvisor.com, 5.0% of the total respondents had experience with this website. The website lastminute.com appears to be attractive, with many colours. However, only 1.6% of the total respondents had experience with this website.

## 6.6 The Final and Developed Framework

Figure 6.2 shows the final research framework of this study with nine constructs and 11 hypotheses after the adjustment of the minor qualitative method (i.e. focus group, interviews and pilot test) in addition to the main quantitative method (i.e. EFA, CFA and SEM).

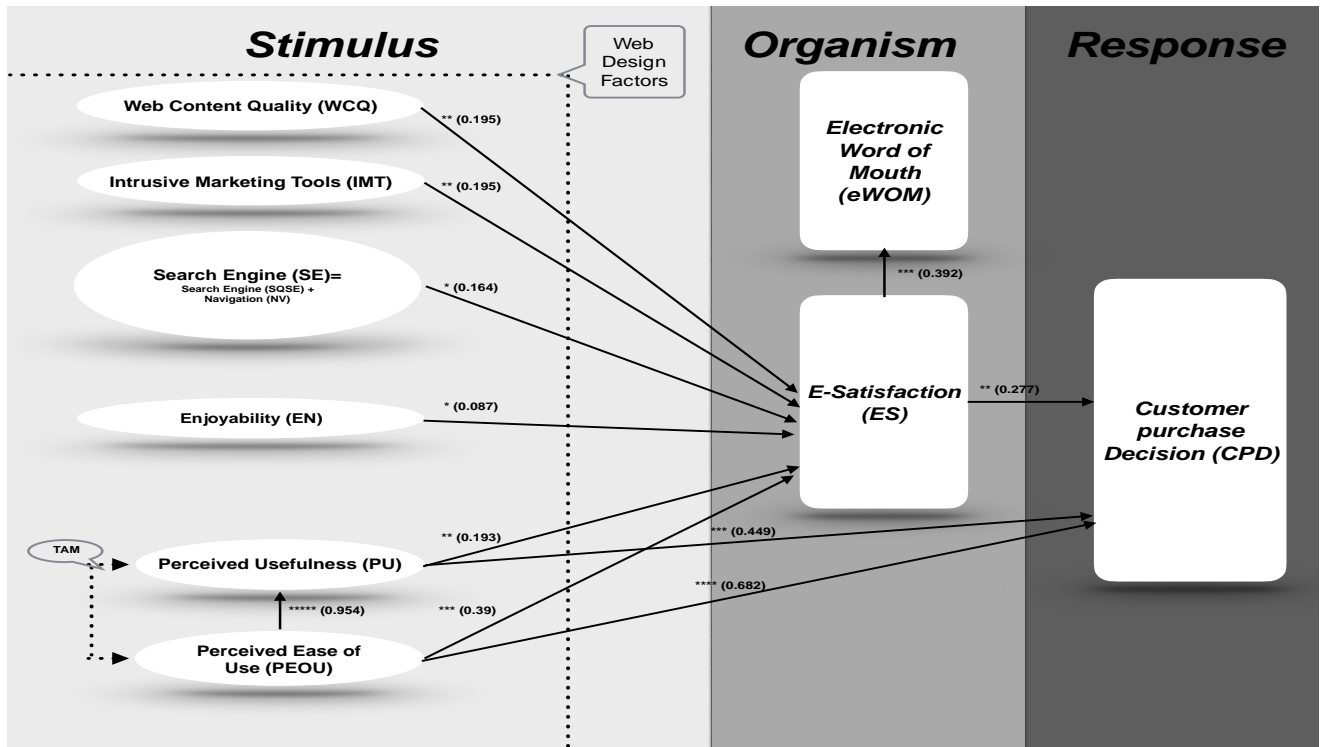


Figure 6.2 Final and Developed Framework

## 6.7 Conclusion

This chapter has interpreted indepth the outcomes from the data analysis and discussed its findings, by considering its relation to previous research and providing justification for the results. Firstly, the AMOS model structure and the validation of the scale used in the study were discussed. It was found that the appropriate scale items consisting of 53 items and nine constructs framework was better for the context of this study.

With regard to the framework relationships, three determinants of willingness to purchase and in turn Customer Purchase Decision (CPD) were confirmed and sorted by strength as: Perceived Ease of Use, (PEOU, with Factor Loading = 0.682), Perceived Usefulness (PU, with Factor Loading = 0.39) and e-Satisfaction (ES, with Factor Loading = 0.277).

Similarly, six determinants of e-Satisfaction were explained in the following order: Perceived Ease of Use (PEOU, with Factor Loading = 0.449) had the maximum effect on e-Satisfaction whilst Enjoyability had the least effect (EN, with Factor Loading = 0.087). Web Content Quality (WCQ), with Factor Loading = 0.195, had an effect on e-Satisfaction. The other factors that influenced e-

Satisfaction were Intrusive Marketing Tools (IMT), with Factor Loading = 0.195, Perceived Usefulness (PU), with Factor Loading = 0.193, and Search Engine (SE), with Factor Loading = 0.164.

The findings of the group difference analysis were also discussed. The main purpose of the group analysis was to explore and identify differences between segments of customers including the role of demographics, Internet experience and travel habits. It was found that the developed framework could be confidently generalised among five of these segments, namely: gender, age, education, marital status and employment status.

The Internet experience of the respondents was more or less the same in both the undergraduate students and academic employed communities: 87% of the respondents had more than four years' browsing experience with the Internet. The questions on exposure to the Internet and years of experience in browsing revealed the results.

The travel habits were addressed by four segments, namely: frequency of travel, purpose of travel or motivation for travel, type of travel (domestic or international), funding for the travel and the website most-often used for booking a hotel.

Table 6.11 in this chapter shows the frequency of travel of both undergraduate students and the academic employed individuals. It can be seen that there is a marginal difference between undergraduate students and academic employed people in travel frequency. This is mainly because 73.3% of the undergraduate students travel with support from others (e.g. parents), whilst among the academic employed 95.7% self-fund their travel.

In addition, Table 6.12 showed the motivation for travel of undergraduate students and the academic employees is marginal, with the main motivation for travel being leisure.

Another interesting observation was about the willingness to purchase and make a purchase decision. It was seen that, while 78.69% of the academic employed respondents answered positively about the online hotel booking decision, among the undergraduate students only 70.30% were willing to book online. Therefore, the study reveals that the academic employment status definitely has a positive effect on making an online purchase decision.

Another useful observation was the perception of each variable for every segment of customers. The study demonstrated that demographics and Internet experience did not show significant difference in perception. On the other hand, the majority of travel habit groups (all of them except motivation for travel) demonstrated differences across some of the variables in the framework, but the relationship remained supported.

Currently, there is a dearth of in-depth research on the travel habits and Internet experience and other related factors and their impact on travellers/tourists' decision-making behaviour in relation to online hotel booking. It is expected that this research fills this gap and extends an opportunity for further exploration in this area.

## **Chapter 7 – Discussion, Recommendation and Conclusion**

### **7.1 Introduction**

Chapter 6 presented an extensive analytical discussion of the results, comprised of the findings based on the developed framework, the research hypotheses proposed, and the effects of the groups' differences. These findings were supported and linked to the context of the current published literature.

In this chapter, a summary of what has been accomplished and achieved in relation to the aim (i.e., critically investigates and examines the impact of the online shopping environment on eWOM and customer purchase decisions, with respect to online bookings in the hotel industry, and develops a framework. The study aims to assess whether or not this impact is due to customers' web satisfaction and willingness to book a hotel online) and the five objectives of this thesis are satisfied. In addition, this chapter outlines the novelty of this study and its contributions to both knowledge and practice. Finally, this chapter presents the limitations of this research and recommends future research topics.

### **7.2 Summary of the Study**

This current research investigated and explored a variety of literature that was associated with the topic of third-party hotel booking online customer behaviour from diverse perspectives. It extensively explored prior studies that focused on the field of marketing and customer behaviour, with a specific focus on the online users' behaviour. In addition, this study investigated the effect of numerous web design/quality scales, which were developed mainly from an Information Systems (IS) perspective and from Human-Computer Interaction (HCI) on e-satisfaction, eWOM and customer purchase decision. Through its extensive literature review, this study offers a thorough and substantiated insight within the context of the tourism and hotel industry. Several gaps in this study were acknowledged based on the extensive literature consulted. First, developing a new framework to measure online customer behaviour with no dependency on the traditional theories has been identified as a gap. There is a need to combine new elements to cover emerging aspects of new web features and user needs (Law et al., 2010; Cheung et al., 2005). Second, the need for the extension of web design dimensions and scales to the e-service background, in addition to the association between web design factors and web adoption requires more investigation (Xu et al., 2013; Fassnacht and Koese, 2006).

Since the two gaps mentioned deal with online customer behaviour and web qualities in general, the need for a study became obvious when selecting a certain type of e-commerce or e-service. Thus, the third gap, which many other scholars have identified as well, is extending the online customer



behaviour and web design elements for a specific industry or product (e.g. Kim et al., 2009; Qureshi et al., 2009; Nusair and Kandampully, 2008; Kim and Stoel, 2004; Aladwani and Palvia, 2002). The reason is each industry/product has its own characteristics, which could result in different web design elements or behaviour.

Fourth, is the gap that emerged from the idea of group differences: the exploration of potential differences between several types of hotel website users has been found to be under-investigated (Murphy and Chen, 2014; Aksoy et al., 2003; Kim et al., 2009). The factors that might affect customer behaviour and which need further exploration are demographics, Internet experience and travel habits. Fifth, is the gap associated with the location of research studies, since cultural differences affect online customer behaviour (Ruiz-Mafe et al., 2013), but studies have been mainly carried out and conducted in developed or Western countries. New under-investigated cultures that have big e-commerce potential need to be further explored.

As such, the main aim of this research was to apply and extend the available theories on customer behaviour and the scales within web design, to develop and validate a new framework to measure the effect of web design elements on eWOM and online users' satisfaction when booking a hotel online. Initially, this study set out with five objectives and these have been met. The following section, 7.3, will support and confirm the objectives of this research.

Based on the theoretical findings and to fill the gaps mentioned above, a conceptual framework was developed which originally consisted of 13 constructs and 16 hypotheses. The conceptual framework applied several theories and models. The Technology Acceptance Model (TAM), The Stimulus-Organism-Response Model (S-O-R) and web quality dimensions are the fundamental foundations of the conceptual framework of this study. The current study expected that (e-satisfaction) tourists/travellers' satisfaction with a third-party hotel web portal is a main factor in terms of its influence on eWOM and purchase decisions, and that web design dimensions (stimulus or environmental factors) do play an important role in influencing e-satisfaction positively (organism).

An initial qualitative approach (a focus group and interviews with three experts in the hotel industry) was used to validate the constructs and the survey items, from which it was decided to combine some constructs and hypotheses. However, quantitative methodology, positivist philosophy and deductive approaches were mainly applied in this study to empirically examine the proposed framework. Based on the feedback from the quantitative stage of this study, it was decided to add the construct Page Response under System quality; this resulted in 12 constructs. The survey items for the 12 constructs were established based on well-validated previous research. For additional validation of the constructs and survey items, piloting studies were applied before commencing the main data collection procedures.

The main data collection included a sample of Saudi respondents (undergraduate students and academic employees) who had previous experience using third-party hotel booking websites at least once. A total of 840 usable responses were used for the analysis. To validate the conceptual framework, the technique of SEM was applied; also, SPSS V.20 was used for the EFA. To test the hypotheses relationships, AMOS V.20 was applied to perform the invariance analysis. During the EFA, some of the initial constructs were combined because of their strong correlation and obvious similarities. Then, the CFA further combined some variables in order to achieve a good model fit. The modified AMOS model comprises 53 items, nine constructs and 13 relationships. The research found that 11 hypotheses were supported and two were rejected, as mentioned in Chapter 5, section 5.8.5.2. In order to explore the AMOS model generalisation and the differences across groups, an invariance analysis was conducted between different groups, which comprised demographics, Internet experience and travel habits. The findings of the invariance analysis on this research showed some significant differences between some groups, as mentioned in Chapter 6, section 6.5. This study conducted a full discussion of the results and linked it with prior findings from other researchers. Thus, the current chapter outlines the novelty of this research, study contributions to theory and research, implications and applications, and, finally, the limitations and recommendations for future studies.

### 7.3 Research Objectives Fulfilment

This study set out to achieve five objectives by the end of the research. The next sections will remind the reader of the defined objectives and describe how they have been accomplished in this thesis.

- **Objective 1**

*“To explore and analyse the existing literature on the online shopping environment ‘web design’ and eWOM in the tourism sector in addition to critically reviewing the online customer behaviour literature”.*

The first objective was accomplished in Chapter 2, following an extensive description, and a systematic and critical review of the theoretical background of this research. Studies pertaining to customer behaviour, electronic word of mouth and web environment or design were discussed and highlighted. Studies that focused on eWOM within the tourism industry and other contexts were demonstrated. In addition, studies that looked at website design and web adoption within the tourism industry and other industries were also detailed. This allowed the author to recognise the gaps in academic research (especially within web environment ‘design/quality’ perspectives of third-party hotel websites) and how web environment can affect users’ satisfaction and how eWOM attracts online users and encourages them to complete the hotel booking transaction.

- **Objective 2**

*“To identify the factors that affect customers’ online satisfaction and their willingness to book a hotel online, from the marketing perspective.”*

The discussion and identification of the external factors that affect customer e-satisfaction and purchase decision were presented in Chapter 2, section 2.4, and Chapter 3, section 3.8. Based on the literature review, it was initially suggested that there are several factors of web environment ‘design/quality’ that ‘play as stimulus factors’ positively affect online customer satisfaction and electronic word of mouth ‘play as organism’ which affect customer purchase decisions ‘play as a response’. In this study, the author selected four direct variables that positively affect purchase decisions. These variables were: e-Satisfaction, eWOM, Perceived Ease of Use and Perceived Usefulness. In addition, the author selected nine variables that were proposed to positively affect e-Satisfaction. These variables were: Website Search Engine (SQSE), Navigation (NAVI), Pop-up Ads & Banner Ads (COQPA), Website Content Quality (CQ), Visual Appeal (VA), Page Response (PR), System Quality (SQ), Enjoyability (EN), Perceived Ease of Use (PEOU) and Perceived Usefulness (PU). The study then validated these theoretical suggestions, as presented in the following sections.

- **Objective 3**

*“To examine the effects of certain aspects of web design/quality (i.e. Perceived Ease of Use, Perceived Usefulness, Website Content, Intrusive Marketing Tools ‘Pop-up Ads and Banner Ads’, System Quality, Page Response, Visual Appeal, Navigation, Search Engine, and Enjoyability), on customer satisfaction, eWOM and the purchase decisions of the customers of third-party hotel agencies.”*

In both chapters 5 and 6 of this thesis, the author examined the effect of each variable of the web design on e-Satisfaction, eWOM and Purchase Decision. The result of the modified AMOS model indicated that two hypotheses, H3 under System Quality/Visual Appeal and H13 under eWOM, were rejected because of the weak p-value. However, the other variables – H1, H2, H4, H5, H6, H7, H8, H9, H10, H11 and H12 – have been accepted. Table 7.1 (adopted from Chapter 5) shows the summary of all hypotheses tests. According to this table, it can be clearly seen that web environment ‘design/quality’ plays an important role in affecting online customer satisfaction, in addition to helping online users read or participate in online reviews, which also affects online purchase decision. These results also support other scholars’ findings.

**Table 7.1 Summary of Hypotheses Tests**

Hypothesis	Statement of Hypothesis	p-Value	Status
H1	Website Content Quality will positively affect e-Satisfaction with a Third-Party Hotel Website.	$0.001 < 0.05$	Accept
H2	Online Intrusive Marketing Tools – Pop-up Ads and Banner Ads will positively affect e-Satisfaction with a Third-Party Hotel Website.	$0.001 < 0.05$	Accept
H3	System Quality, Page Response and Visual Appeal will positively affect e-Satisfaction with a Third-Party Hotel Website.	$0.868 > 0.05$	<b>Reject</b>
H4	Search Engine and Navigation, will positively affect e-Satisfaction with a Third-Party Hotel Website.	$(0.065/2)^* = 0.033 < 0.05$	Accept
H5	Website Enjoyability will positively affect e-Satisfaction with a Third-Party Hotel Website.	$0.014 < 0.05$	Accept
H6	Perceived Usefulness of the website will positively affect e-Satisfaction with a Third-Party Hotel Website.	$0.008 < 0.05$	Accept
H7	Perceived Usefulness will positively affect customers' willingness to book a hotel online (Purchase Decision).	$(0.11/2)^* = 0.055 \approx 0.05$ - a borderline case	Accept
H8	Perceived Ease of Use will positively affect e-Satisfaction with a Third-Party Hotel Website.	$0.000 < 0.05$	Accept
H9	Perceived Ease of Use of the Third-Party Hotel website will positively affect customers' willingness to book a hotel online (Purchase Decision).	$0.010 < 0.05$	Accept
H10	Perceived Ease of Use of the website will positively affect Perceived Usefulness.	$0.000 < 0.05$	Accept
H11	Tourists/Travellers' e-Satisfaction with the Third-Party Hotel Website will positively affect customers' willingness to book a hotel online (Purchase Decision).	$0.039 < 0.05$	Accept
H12	e-Satisfaction with a Third-Party Hotel Website will positively affect Electronic Word of Mouth.	$0.000 < 0.05$	Accept
H13	e-WOM will positively affect customers' purchase decision to book a hotel online.	$0.789 > 0.05$	<b>Reject</b>

\* According to Hair et al. (2010), this is acceptable in Two-Tailed Hypothesis testing

- **Objective 4**

*“To analyse the online shopping of tourism/travel environment on Saudi Arabian customers’ purchase decisions including trust and the perceived risks in the area of hotel bookings made online.”*

To empirically assess the conceptual framework, several assessments were conducted. First, three experts evaluated the questionnaire. Second, a back-translation technique was applied: the survey was translated from English to Arabic via a bilingual academic researcher at Brunel University London, then the Arabic survey was once again translated back to English via the UK Marketing and Communication Academy (MarCom Academy). Third, Pilot 1(Qualitative) was used to assess the instrument: hard copies of the survey were distributed among 10 Saudi PhD students at Brunel University London, three academics, three professionals and some Saudi tourists. Fourth, using the platform Smartsurvey.com, an online survey was developed; this platform was then used for the fifth step, Pilot 2 (Quantitative), which consisted of two stages. The first stage was the testing of the platform’s functionality and interface by five Saudi students from Brunel University. The second stage (the main testing of the instrument) required 100 Saudi undergraduate students from a major university in Saudi Arabia to test the validity of the survey. The sixth step was the distribution of the survey for the main data collection among Saudi undergraduate students studying at a major university in Saudi Arabia along with some academic employees.

All the data analysis techniques used to empirically validate the conceptual framework have been demonstrated in Chapter 5. This involved data screening, characteristic of data sample, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and hypothesis testing. Based on the extensive data analysis, the findings were discussed in chapters 5 and 6. In short, because of the different stages of the analysis, some constructs were combined. This achieved good model fit and established discernment and validity. Eleven out of the 13 suggested hypotheses were supported. Ease of Use acted as a strong predictor for e-Satisfaction and purchase decision. In addition, statistically suggested paths in the AMOS model were revealed and direct and indirect effects of constructs were demonstrated. The findings of this study supported the concept of culture differences that other scholars have mentioned in their research (e.g. Ruiz-Mafe et al., 2013).

Adding to the above main objectives, this study set a secondary goal that aimed to identify any differences among segments of customers including the role of demographics, Internet experience and travel habits towards the factors and the framework for future study. This allowed the author to also evaluate the generalisation of the framework and learn about the role each group plays.

As mentioned in chapters 5 and 6, the effect of the different respondent groups on the final developed framework is examined in Appendix 5. Twelve respondent characteristics were examined as part of

three main categories: Demographic Characteristic (gender, age, education level, employment status and marital status), Internet Experience and Travel Habits (details of the hotel used, actual booking, frequency of visits, motivation for visits, type of travel and type of funding). Two types of tests were conducted for the different groups. The first one involved comparing the mean scores between different groups in order to understand how each group of respondents perceived the different variables. T-test analyses were used for this purpose. Although the t-test showed differences under the  $p < 0.05$  significant level, the discussion only involved the critical differences under the stricter Bonferroni corrected p-value  $P < 0.0063$ . The second analysis focused on the framework and the relationships between the different variables, i.e. invariance analysis. This answered the question about how the different groups affect the relationships.

- **Objective 5**

*“To develop an e-marketing framework that concerns the relationships between web design, e-satisfaction, eWOM and purchase decision in the third-party hotel industry.”*

In Chapter 3, section 3.4, this objective was accomplished. A conceptual framework has been developed, research variables and constructs were defined, and associations between constructs have been justified. Chapter 4, section 4.6, customised the framework and set the measurement items for each construct. The modified framework comprises 53 items, 9 constructs and 13 relationships. The building of the proposed framework and the developed hypotheses can be seen in Chapter 3, section 3.4, while the final developed framework is shown in Chapter 6, section 6.6.

## **7.4 Research Questions**

This study set two questions that led to achieving the objectives mentioned and discussed above. The next sections will remind the reader of the questions for this study. The research questions were designed keeping in mind the significance and objectives of the study.

### **7.4.1 Research Question 1**

*“What are the effects of certain features of web design (i.e. Perceived Ease of Use, Perceived Usefulness, Website Content, Intrusive Marketing Tools ‘Pop-up Ads and Banner Ads’, System Quality, Search Engine, Page Response, Visual Appeal, Navigation and Enjoyability) on e-Satisfaction, eWOM and purchase decisions when making a hotel reservation?”*

According to Tan (2015), certain attributes and characteristics of websites can influence customer reservations. Most of the previous research has shown that opinions differ on website quality and

online reservations. However, it is clear that customers' perception of website design/quality influences the e-satisfaction and the purchase decision for online bookings. Furthermore, customers generally prefer online reservation systems that have low-density content, perform at high speeds, adapt to behaviour and have features that can be customised.

This study has shown that there is a positive relationship between perceived ease of use of the website and customer purchase decision, as stated in hypothesis H9. Furthermore, perceived usefulness also strongly influences customer purchase decisions. More importantly, the study presented the different factors through which a hotel website may influence customer bookings. Perceived Ease of Use is also influential on e-Satisfaction. It was found that web content quality and intrusive marketing tools do have a significant effect on customer purchase decisions, which led to the acceptance of H1 and H2. The web design feature that had the least influence on customer purchase decisions was Enjoyability. This may be because these days people prefer quick shopping and therefore customers prefer ease of use and usefulness of the sites rather than enjoyability.

eWOM does not have a noticeable effect on customer purchase decision; however, it may be noted that researchers like Fan and Miao (2012) have argued that customers acknowledge that online reviews help in determining eWOM credibility and in making purchasing decisions. The authors also used surveys and multiple regression analysis to create an extended Elaboration Likelihood Model that describes the relationship between customer expertise, involvement and rapport to acceptance and use of electronic word of mouth in making purchasing decisions. Their study specifically focused on the cultural effects of gender and involvement, which have a significant effect on perceived eWOM credibility (ibid). In this study, the author found that the influence of eWOM on purchase decision is not significant and hence hypothesis H13 was rejected.

### **7.4.2 Research Question 2**

*“What is the relationship between website design and eWOM in online purchase decisions?”*

The study by Fan and Miao (2012) showed that customer involvement has the most significant effect on perceived eWOM credibility, and in turn purchase decision. Customers deeply involved with a product are more likely to accept, use and respond to positive customer reviews. Additionally, the perceived eWOM credibility has a significant effect on acceptance and use of eWOM. The authors conclude that female customers and those who are not involved with products may be more reluctant to make purchasing decisions. In this study, the majority of the respondents are undergraduate students. Hence, their involvement with products and websites can be very low. In this study, H13 was rejected because of the weak influence of eWOM on purchase decision. The study results could support other results if the main focus was on another segment group such as office-going employees.

Ganguly et al. (2010) argues that security issues with online transactions and web quality are the main reasons for people's dislike or distrust of online shopping. The authors feel that enhancing trust and improving quality in online transactions in an online store can positively influence purchase decision and reduce the perceived risk. Similarly, in relation to e-commerce, the individual's culture is relatively important among website design factors. In this research, the study involved mainly undergraduate students; therefore, what influences them most will be the perceived ease of use and perceived usefulness. This was proved by the fact that these two factors are the most influential components on purchase decisions.

### **7.5 Research Novelty (Contributions and Implications)**

The novelty and uniqueness of this study lies within the development of a comprehensive theoretical framework achieved from several disciplines (i.e. Customer Behaviour, Information Systems, Human-Computer Interaction and Tourism). The framework of this study is capable of investigating and examining empirically the environmental elements that affect online users' satisfaction and eWOM when booking a hotel online (Purchase Decision). This is in contrast to other studies that have tended to investigate either other types of websites such as banks, restaurants and clothing or simply recommended a conceptual framework. This research is considered as one of the first studies on the topic of hotel online booking behaviour, and which has examined developing countries in order to develop an appropriate conceptual framework and to empirically examine customer experience using Structural Equation Modelling. The structure and relations in the framework developed for this study are novel as they have not been tested previously. Moreover, an original addition to the knowledge obtained came from the different group analysis that this research has conducted. The next sections will discuss the theoretical and methodological contributions in addition to the practical implications that were drawn from the findings of this research.

#### **7.5.1 Theoretical Contribution**

The systematic review of the customer behaviour literature in the current study pointed out what has been conducted in this area from different angles. First, it went through various customer behaviour theories used in commonly cited studies. Second, it discovered Information Systems and Human-Computer Interaction scales used to evaluate web design and web environment. Third, it investigated what has been accomplished already in the field of tourism academic research with regard to the evaluation and adoption of hotel web portals to make bookings. Combining different fields is suggested by several scholars and considered as an approach that leads to better models and frameworks; for example, Cheung et al. (2005) recommended this approach in a systematic and critical literature review of studies on online customer behaviour in general. Another example is Law



et al. (2010), who also suggested this approach at the end of a critical review of the progress of tourism studies in the last decade. Thus, the Expectation Confirmation Theory has been used widely and successfully in the customer behaviour literature (Oliver, 1980) and the IS Success Model has been used widely and successfully in e-commerce studies (DeLone and McLean, 1992). Both customer behaviour and IS models are generally used to clarify and justify customer satisfaction, and satisfaction is at the centre of these models (Premkumar and Bhattacharjee, 2008; Cheung et al., 2005; Delone and Mclean, 2004). However, the Technology Acceptance Model (Davis, 1989) has a great reputation as a robust and valid instrument for measuring the acceptance of using different kinds of technologies. In addition, the Stimulus-Organism-Response Model (Mehrabian and Russell, 1974) has gained a huge reputation as a robust and valid instrument for measuring the impact of website structures (external environment) on online customer behaviour. In this study, TAM and S-O-R theories were applied in the framework along with other significant constructs such as web content, enjoyability, search engine and intrusive marketing tools.

- This encouraged the development of a new framework to be able to measure the factors that satisfy tourists/travellers using hotel websites, and that encourage customers to read or participate in the online reviews and book a hotel online via third-party hotel websites. To the best of the researcher's knowledge, this is one of the first empirical studies that synthesise concepts from two leading theories to investigate users' perceptions of and behaviour in relation to the online services offered by hotel websites in the context of a developing country and within a Middle Eastern country.

Additionally, throughout the development of the study framework, the author highlighted two key relations in the framework: how web environment/design elements affect e-satisfaction, and how e-satisfaction affects eWOM and purchase decision. It is empirically proven that e-satisfaction influences purchase decision, while the most important influencer towards e-satisfaction was the ease of use of a website. In addition, the author has proven that eWOM has no influence on purchase decision. The majority of prior studies either examined the determinants of e-satisfaction alone (e.g. Nusair and Kandampully, 2008; Ethier et al., 2006; Kim and Stoel, 2004; McKinney et al., 2002; Mills and Morrison, 2003; Szymanski and Hise, 2000) or extended it to the influence of e-satisfaction on willingness or purchase decision but not with web environment or design as the highest influencer (e.g. Lau et al., 2011; Premkumar and Bhattacharjee, 2008; Koppius et al., 2005). A study by Lau et al. (2011) is an example which shows that the most important contributor to users' satisfaction is website ease of use. As mentioned in Chapter 6, section 6.3, the wider definition of web design adopted for this research provided a better influencer of satisfaction. The current AMOS model explained variance  $R^2=76\%$  in e-Satisfaction, MES;  $42\%$  in Customer Decision to Purchase, MCPD;  $51\%$  in MeWOM; and  $39\%$  in Perceived Usefulness, MPEU. These results point to a substantial explanation for e-satisfaction and high to moderate explanation for the rest.

- Therefore, to the best of the researcher's knowledge, this research is the first to develop and empirically verify the significance of this direct link between these constructs. This finding contributes significantly to current understandings of e-satisfaction, eWOM, booking hotels (purchase decision), and their associations and relationship with web design.

Another contribution is the claim of a positive influence from perceived ease of use on purchase decision, which has gained long-standing contradictory opinions in the literature. Many scholars have confirmed it (e.g. Gefen et al., 2003; Venkatesh and Davis, 2000), while other scholars (e.g. Ruiz-Mafé et al., 2009; Van Raaij and Schepers, 2008) have found that these factors do not directly affect purchase decision but do so only indirectly, through usefulness. This current study supports the first opinion in that there is a strong direct influence of perceived ease of use on purchase decision, and of perceived usefulness on purchase decision.

Moreover, many scholars verify and approve that perceived usefulness affects satisfaction in many contexts (e.g. Zviran et al., 2005; Devaraj et al., 2002; Bhattacharjee, 2001a). However, very few researchers have investigated this relationship in the context of the third-party hotel booking industry. The current research empirically found that this relation is accepted within this context. Perceiving a hotel website as useful is still necessarily linked to web satisfaction. Bhattacharjee (2001b) stated that customers might still use a website if they find it useful. This study empirically supports this view in the context of third-party hotel websites.

- Another important contribution to theory develops from investigating whether the proposed framework can be generalised across 12 different groups.

Although examining the conceptual framework within groups is considered to be extremely stringent for generalisation of the result across different characteristics (Byrne, 2016), the literature found the need for research in this area. Many of the existing literature suggests different models. However, the existing literature does not consider whether these models can be generalised across different groups or not. The group analysis for the tourists'/travellers' experience and habits made this study unique in the generalisation of the framework.

- To the best of the researcher's knowledge, no research to date has examined all of the six travel-related habits that this current research considers in the context of third-party hotel booking websites. They are: Details of The Hotel Used, Actual Booking, Frequency of Visits, Motivation for Visits, Type of Travel and Type of Funding.

It has been found that the framework can be generalised within all different types of tourists/travellers' habits with few difficulties in relation to the Type of Funding. The current research found that travellers who were self-funded give more attention to the security and privacy aspects

when they decide to book their hotel online than those who are sponsored [e.g. by their parents' money (mainly students) or company's money (mainly academic employees)]. This may be because the self-funding customer has more at stake financially than do sponsored individuals, and also self-funding imposes comparatively more responsibility on the customer. As suggested by many researchers, when someone is using another person's money, they are usually more hesitant to accept the price and conduct the transaction. When companies pay for employees' business trips, approval comes from their superiors. Therefore, even if they care about the price, they may not intend to complete the purchase. On the other hand, when parents sponsor the trip, students are likely to be extra cautious before accepting the price and booking the hotel. Thus, trusting the website is very important in influencing users' decision to complete the online purchase. However, these findings should be used with caution. It is better to use a new data set or larger amount of responses for each group. Hence, this is considered as an initial step only towards further future research.

In addition, applying and using AMOS V.20 software for analysing the framework permits the researcher to assess and measure all relationships expected in the framework including any relationships initially suggested in the research framework. In addition, the current research provides potential enhancement to this framework through suggesting empirically some new relations that might exist in the framework. These suggested relationships have been described in Chapter 5, sections 5.10. The author suggests future investigation of these relationships, especially those that have theoretical foundations. For example, during the analysis AMOS provided suggestions for other relationships that may be found between the constructs in the framework. The suggested paths can be seen by looking at the modification indices regression weight in Table 5.29. AMOS suggests that, if a positive relationship path from Customer Purchase Decision (MCPD) to the parameter Q19.2 of Enjoyability (MEN) is added, the Chi Square will fall by at least 5.177. As a result, its estimate will become larger (by approximately 0.038) than it is in the present analysis. Table 5.30 showed some examples of suggested paths that can be incorporated into the AMOS model; those relationships can be part of future research suggestions.

Lastly, this study also expands on examining the direct and indirect effects between the constructs as well as the mediating effect of satisfaction. The findings provide additional endorsement and confirmation for the concept of adding e-satisfaction to the centre of the framework, which affects purchase decision. For example, the web design elements selected for this study except Ease of Use and Usefulness have no direct effect on purchase decision; the effect is indirect via e-satisfaction. Thus, the current research provides many justifications that tourists/travellers' e-satisfaction must be considered as the most significant factor influencing their adoption of a website because this factor can affect eWOM and purchase decisions.

### 7.5.2 Practical Contribution

The framework developed and validated in this research was found to be affecting users' behaviours when booking hotels online. The measurement scales and the relationships in the framework that is proposed can assist third-party hotel websites to tailor and customise their web portals to meet users' needs and to generate more revenue.

Based on the study analysis and hypotheses testing results, it can be confirmed that web design factors (stimulus factors or environmental factors) such as web content, search engine, pop-up ads and banner ads, enjoyability, ease of use and usefulness affect users satisfaction (organism) when booking a hotel online (response). In other words, a high percentage of hotel booking users are willing to adopt a third-party hotel website for their trip and hotel needs based on their satisfaction with the website quality and features offered. In contrast, eWOM has a very small influence on purchase decision. Thus, third-party hotel websites should concentrate on web design elements or environmental factors in general to satisfy their customers by providing a good online experience; they should also keep in mind the safety and security of the website as well. This can be reached and accomplished by enhancing the environmental factors (web design) relating to e-satisfaction, as will be seen next.

One of the most important constructs for customers was ease of use; therefore, it is recommended that third-party hotel websites provide more advance search engines within the website, using ontologies and semantic web systems to help the customer find specific search descriptions instead of just names, destinations or things to do. This eliminates the search engine phase, easing the booking process for the customer (i.e. the customer does all his/her search directly on the third-party hotel booking website instead of via an information search engine such as Google, which will then lead the customer to a third-party website). The author observed that most of the third-party hotel websites give specific destinations or hotel names; however, if a customer is searching for something generic such as 'I want a hotel with a mountain walk', the platform will either give locations with the phrase 'mountain walk' or will pick up customer reviews that quote this phrase, forcing the customer to use an information search engine such as Google or Yahoo. Furthermore, in using advanced/smart search engines which allow the industry to predict customer preferences and behaviour with information extracted from the searches on their platform, the websites can offer smart packages which are only available on the platform itself. For example, if a customer searches for hotels in two or three different destinations, the site will offer a package for the searched destinations (e.g. if the user searches for hotels in Paris and London, then the platform can smartly offer a customised package such as stay three nights at *X hotel* London and get half price for three nights in *X hotel* Paris).

The majority of the environmental dimension (web design) in the current research proved to be a tremendous predictor of e-satisfaction. The results of this study support the criticality of the quality of third-party hotel websites as a main and significant component in affecting and raising the satisfaction

level of users booking hotels online. For any online hotel booking company or third-party website, the department in charge must create and develop a website that offers clear, accurate, complete, reliable, timely, sufficient, enjoyable and up-to-date content. Because online users only rely on what they see in a website, it is essential that information is transparent and easily absorbed. Moreover, as part of the web environmental dimension (design), the performance of the website, the website functionality and the website visual appeal experience must be reviewed constantly to maintain hotels booking users' satisfaction level with the website, in order to encourage users to complete the booking process.

One of the important factors that managers must take into account is the reputation of the website. To achieve this, companies should care about their website security and safety; third-party websites must clearly present the measures that they are taking to keep personal data confidential and safe. It is also very important to display the third-party SSL certificate logo. In addition, it is important to show policies for redress procedures in the event that something goes wrong during the transaction process. Encouraging customers to rate the services provided or to leave a review can also help new users to trust that the site is safe for them to complete their transaction. Thus, senior managers must be aware that the overall reputation of the hotel's website is a main factor in encouraging customers to continue with the transaction process. Making extra efforts towards improving the services provided by the website will boost online sales.

Another important factor that managers should keep in mind is the price comparison and competitiveness of other service providers. Most of the respondents, around 78.9%, preferred to use Booking.com when booking a hotel online for their trip; this is because booking.com provides many services such as price comparison, sometimes providing the best deal '*competitive price*' promotions via the pop-up ads or the banner ads, etc. Third-party hotel websites must keep in mind that travellers are expecting better value when using their websites; if a user receives a better quotation for the same hotel from an offline vendor (e.g. *travel agent*) or online (e.g. *competitor website*), it may result in them never using the site again. Therefore, ensuring the best deals and promotions via ads is important in retaining customers. One of the web solutions in the market is the ability to trace and compare prices and offers available in a particular sector. The incorporation of such a service can be of great help.

Moreover, the group analyses of the study's hypotheses revealed that the importance values of the attributes in hotel websites might change based on the demographics and travel habits of the users. As such, hotels companies (third parties) must keep in mind the characteristics of their target customers. For example, the empirical findings reveal that website ease of use is more important in terms of motivating users to book hotels online. Worldwide, hotel third-party companies and policy makers must focus their attention towards easing the browsing process in meeting Generation Y's needs; this generation was born with technology and many of their dealings and purchases are conducted online.

Additionally, companies should keep in mind that the trust factor is an important factor for older generations, those who are trying to adapt to new technology. However, security/privacy issues are of importance to most users regardless of age. Hence, it is recommended that e-commerce managers should provide special payment processes, ease the browsing process and provide 24/7 assistance (because of the time difference between countries).

Lastly, as mentioned earlier, in Chapter 4, section 4.12, Saudi undergraduate students who are studying at a public 'governmental' university receive a monthly salary; however, this is a symbolic figure when compared to a proper employment salary, and this may be a reason why undergraduate students are more sensitive to price, paying more attention to offers and promotions than academic employees or those who are government funded. Thus, it is recommended that third-party hotel websites offer students special rates, for example, a room with breakfast/free meal/drinks or free massage session for two guests, or airport transportation could be included with the hotel price, or pay one night and get the next one half price, etc. Such offers might increase the booking percentage, encouraging users to complete the transaction and recommend the site to others.

### **7.6 Research Limitations and Directions for Future Research**

Similar to any research project, this research has several limitations. This section will present the theoretical and methodological limitations related to this study and will suggest a few recommendations for future research. It is hoped that, by following this part of the thesis, future studies will be able to extend the current body of knowledge in the literature on online customers' web behaviour and tourism marketing.

Firstly, the study was conducted within the third-party hotel websites industry. It is not clear if the analytical results can be applied and generalised to direct hotel websites or other online services. Nevertheless, this research adopts and uses the literature available on the travel and tourism industry; therefore, it is recommended to further investigate the relationships in other travel and tourism industries such as hotels, restaurants, car rentals and online travel agents in addition to other e-commerce industries.

Secondly, a limitation was related to the website selection involved in this study. The research provided seven third-party hotel websites and asked the respondents to select the website they mainly visit when booking a hotel online. Surprisingly, it was found that 79.3% of the undergraduate students and 78.1% of the academic employed respondents had experience with Booking.com, while a minute percentage of the respondents preferred the next most-preferred booking websites. Of course, there are many other third-party hotel websites operating worldwide that have not been included in this

study. Thus, this study could usefully be extended to other third-party hotel websites or maybe to direct hotel websites.

Thirdly, the majority of the respondents were highly Internet experienced, where 89% of the respondents indicated that they had been using the Internet for more than six years. This is because this research targeted mainly Generation Y. Therefore, this study might not fully reflect other generations or the segment of less-experienced Internet users. Thus, it is suggested that future research targets a sample of respondents from other generations and/or have less Internet experience.

Forth, while the participants of the survey were only Saudis who are living in Saudi Arabia, the determinants of e-satisfaction, eWOM and purchase decision in 'booking a hotel online' might be affected by other factors unique to this culture. The Kingdom of Saudi Arabia is located at the centre of the Arabian Gulf and the Arab world, with which many common cultural characteristics are shared, so further study is suggested to investigate and confirm the generalisability in the Middle East. It is also suggested that this framework be reapplied in different countries in the Middle East such as Jordan, UAE, Bahrain, Iraq, etc., and to globally extend it to Asian, European and American cultures, as each culture will most probably have unique results. Correspondingly, it is recommended that future studies apply and use cross-culture studies for testing and extending the generalisability of the framework.

Fifth, there were some unexpected results in this study; for example, the direct effect of system quality under H3 which comprises the visual appeal (Questions 17.1, 17.2 and 17.3) and page response (Questions 18.1 to 18.9) does not have a significant impact on e-satisfaction, in addition to the direct effect of eWOM on purchase decision under H13 being found to be not significant. Future research might empirically retest and investigate these relations to confirm the findings and explore possible reasons, some of which may be due to essential factors such as cultural differences and personalities; such investigation is beyond the scope of this research. Future studies can also include other constructs for discussing eWOM communication behaviour.

Sixth, future study recommendations can include investigating and examining the generalisation of the findings in a longitudinal study. The framework proposed in this research was investigated and tested at a single point in time. Travellers/Tourists' behaviour can vary and change periodically and seasonally depending on things like technology development, holidays and occasions, etc. Thus, it may be of interest and value to reinvestigate and retest the proposed framework at different periods of time to better understand the stability of travellers'/tourists' behaviour over time.

Finally, the framework proposed in this study can be expanded by adding more constructs, such as loyalty, trust, culture, ontology, semantic web and social media (e.g. Twitter, Instagram and

Facebook) because these new constructs may reveal additional factors that affect online customers' behaviour.



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## APPENDICES

### Appendix 1 – Main Online Survey in English



#### Dear Participant

I am a Ph.D. student studying at Brunel Business School, Brunel University London. My research focuses on investigating the influence of web design on electronic word-of-mouth (eWOM) “customer’s online review based on their actual experience” and the customer purchase decision for booking hotel online. Participating in this research is highly appreciated. Your contribution will be on voluntary bases. The questionnaire should only take about 10-15 minutes to complete. All the information provided by the participants will be confidential. If you decide that you no longer want to be involved in this study, you are free to withdraw at any time without any adverse consequences. If you would like to obtain a summary of the results of this research, please provide your information below.

Please feel free to contact me at [Yasser.Baeshen@brunel.ac.uk](mailto:Yasser.Baeshen@brunel.ac.uk) with regard to any queries you may have. Your contribution and time to this study are greatly appreciated and will contribute to the success of this study.

Thank you for your participation.

Participant Name:  
Organization:  
Email:

Yours faithfully,

Yasser Baeshen  
Brunel Business School  
Brunel University  
Eastern Gateway Building,  
Second Floor Room 201  
Brunel University, Uxbridge, UB8 3PH, UK



**Section 1: DEMOGRAPHY, Internet Usage and Tourism Experience and Habit**

1- What is your gender?

Male	Female

2- Which age group you belong to?

16 – 24 Years Old	25 – 39 Years Old	40 – 65 Years Old	66 Years old and over

3- What is the highest education level you achieved?

Not graduate from high school	High school	University degree (Bachelor Degree)	Post graduate degree

4- What is your marital status?

Single	Married	Widowed	Divorced

5- Are you? Please tick one.

Student	Employed	Self employed	Unemployed

6- Do you use Internet?

Yes	No

7- If yes, how long have you been using the Internet?

Less than 1 year	1 to 3 years	4 to 6 years	More than 7 years

8- How many times do you travel abroad per year?

Once a year	Twice a year	Three or more per year

9- What is the reason for your journey? Please tick one.

Leisure	Business	Study	Medical treatment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10- What is the type of your travel?

Domestic (Inside KSA)	International				
	Middle East	USA	Europe	Asia	Australia
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11- How do you pay for your trip?

Self-funded	Someone else (e.g: government, family etc)
<input type="checkbox"/>	<input type="checkbox"/>

**Section 2: WEBSITE Selection**

Please select one website from the following Hotel Booking Websites that you have had experience with it. Please tick only one from the options below:

- Tripadvisor.com
- Booking.com
- Expedia.com
- Kayak.com
- Hotels.com
- Lastminutes.com
- Secretescapes.com
- Skyscanner.com
- Other, Please specify -----.

***Instruction: Taking into account the choice of the website from the list above, your answer should be related to the website. Below there are several statements about you with which you may agree or disagree. Using the response scale below, indicate your agreement with each item by placing the appropriate number on the line preceding those items.***

<b>Section 3.A: TECHNICAL Adequacy / Web Design</b>		<b>Stimulus:</b> (Motivations that help consumers to book a hotel online)						
<b>A1</b>	<b>Website Search Engine</b>							
		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree
1	The hotels' website provides multiple search features (e.g., search engine, menu bar, go-back-and-forward button, etc.) to obtain the target information.	1	2	3	4	5	6	7
2	The hotels' website that I am looking for can be found through multiple pathways. (e.g. Google and Yahoo)	1	2	3	4	5	6	7
3	It is very easy to locate what I need in this hotels website.	1	2	3	4	5	6	7
<b>A2</b>	<b>(Navigation)</b>							
4	Navigation through this hotels' website is not very intuitive. (finding information in this web site is difficult)	1	2	3	4	5	6	7
5	A first-time buyer can make a booking from this hotels' website without much help.	1	2	3	4	5	6	7
6	It takes a long time to shop at this hotels' website.	1	2	3	4	5	6	7
7	This hotels' website is a user-friendly.	1	2	3	4	5	6	7
8	This hotels' website is very convenient to use.	1	2	3	4	5	6	7

<b>B</b>	<b>Pop-Up &amp; Banner Ads</b>	Pop up advertising: (any advertising appear or open in different page or link) Banner advertising: (any advertising located in the right, left, up or bottom side of the page)						
		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree
*	The Hotel Banner ads or Pop-up ads I saw were:							
9	Helpful.	1	2	3	4	5	6	7
10	Important.	1	2	3	4	5	6	7
11	Informative.	1	2	3	4	5	6	7
12	Unhelpful.	1	2	3	4	5	6	7

<b>C</b>	<b>Website content</b>							
		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree
13	The contents provided by the hotels' website are easily understood.	1	2	3	4	5	6	7
14	The hotels' website design is easy to understand.	1	2	3	4	5	6	7

15	I can easily remember how to reach the same page when I visit second time.	1	2	3	4	5	6	7
16	As time passes, I am more accustomed to the hotels' website with less effort.	1	2	3	4	5	6	7
17	The hotels' website language is clear and easy to understand.	1	2	3	4	5	6	7
18	Every page contains the appropriate amount of components to fit into a page (not busy or full with information).	1	2	3	4	5	6	7
19	The hotels' website uses colours and structures that are easy to identify things.	1	2	3	4	5	6	7

<b>D</b>	<b>System quality</b>							
<b>D1</b>	<b>Visual Appeal</b>							
		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree
20	The way the hotels' website displays its deals is attractive.	1	2	3	4	5	6	7
21	The hotels' website I have just visited is beautifully appealing.	1	2	3	4	5	6	7
22	I like the way the website looks.	1	2	3	4	5	6	7
<b>D2</b>	<b>Page Response, service and Overall System Quality</b>							
23	Providing services as promised.	1	2	3	4	5	6	7
24	Dependability in handling customers' service problems.	1	2	3	4	5	6	7
25	Performing services right the first time.	1	2	3	4	5	6	7
26	Providing services at the promised time.	1	2	3	4	5	6	7
27	Keeping customers informed about when services will be performed. (e.g. by email)	1	2	3	4	5	6	7
28	Willingness to help customers.	1	2	3	4	5	6	7
29	Readiness to respond to customers' requests.	1	2	3	4	5	6	7
30	Secure, making customers feel safe when booking online.	1	2	3	4	5	6	7
31	It is easy to pay and complete the transaction online	1	2	3	4	5	6	7

<b>E</b>		<b>Enjoyability</b>						
		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree
32	The hotels' website I have just visited was lots of fun to browse.	1	2	3	4	5	6	7
33	I thought that the hotels' website I have just visited was clever and quite entertaining.	1	2	3	4	5	6	7
34	I liked the look and feel of the hotels' website I just visited	1	2	3	4	5	6	7
35	The hotels' website I have just visited was not just selling – it was entertaining and I appreciated that.	1	2	3	4	5	6	7

<b>F</b>		<b>Perceived Ease-of-Use</b>						
		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree
36	The hotels' website that I have just visited is easy to use.	1	2	3	4	5	6	7
37	It is easy to become skilful at using the hotels' website that I have just visited	1	2	3	4	5	6	7
38	Learning to navigate the hotels' website I have just visited is easy.	1	2	3	4	5	6	7
39	My interaction with the hotels' website I have just visited is clear and understandable.	1	2	3	4	5	6	7

<b>G</b>		<b>Perceived Usefulness</b>						
		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree
40	The hotels' website that I have just visited is useful for searching and booking.	1	2	3	4	5	6	7
41	The hotels' website that I have just visited improves my awareness in product searching and booking.	1	2	3	4	5	6	7
42	The hotels' website that I have just visited makes it easier to search for and book a room.	1	2	3	4	5	6	7

43	The hotels' website that I have just visited increases my interest in searching and booking.	1	2	3	4	5	6	7
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<b>Section 3.B : Users Attitude Toward the Website</b>		<b>Organism:</b> (how the consumer feel based on the motivations offered by the website)						
<b>A</b>	<b>e-Satisfaction</b>	Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewh at Agree	Mostly Agree	Entirely Agree
44	Overall, I am satisfied with the hotels' website.	1	2	3	4	5	6	7
45	Overall, I am pleased with the hotels' website.	1	2	3	4	5	6	7
46	I would recommend this hotels' website to a friend.	1	2	3	4	5	6	7
47	I would use the hotels' website again.	1	2	3	4	5	6	7
48	Overall, my expectations of the hotels' website were exceeded.	1	2	3	4	5	6	7

<b>B</b>	<b>User Online Review / eWOM</b>	Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewh at Agree	Mostly Agree	Entirely Agree
49	I would participate in customer discussions	1	2	3	4	5	6	7
50	I would provide my feedback by posting on the hotels' website	1	2	3	4	5	6	7
51	I would sign in at the hotels' website to view the information	1	2	3	4	5	6	7

<b>Section 3.C: Purchase Decision</b>		<b>Response:</b> ( consumer final decision based on the motivations and the feelings )						
<b>A</b>		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewh at Agree	Mostly Agree	Entirely Agree
*	How likely/probable/certain/definite are you going to (Book a Hotel) from this Website:							
52	Likely (7) / Unlikely (1)	1	2	3	4	5	6	7
53	Probably (7) / Improbable (1)	1	2	3	4	5	6	7
54	Certain (7) / Uncertain (1)	1	2	3	4	5	6	7
55	Definitely (7) / Definitely not (1)	1	2	3	4	5	6	7

-End-

**Thank you**

## Constructs Definition:

**User Internet Search Skill:** To measure a person's belief about his/her knowledge and ability to find information on the web.

**Website Search Engine (Navigation) 1:** to measure the degree to which a person believes that an e-retail website is easy to use in terms of finding things, getting around, and placing orders.

**User Attitude Toward the Pop-Up & Banner Add:** to measure the degree that a person perceives an advertisement was helpful and useful.

**Website Content:** to measure the perceived interactivity of a website with the focus on the site having content that can be managed and keeps the user's attention.

**Website Ease-of-Use:** to measure a person's attitude regarding the effort required to learn and use something.

**Website Usefulness:** to measure the degree to which a consumer believes that a particular online store she/he recently used is helpful in searching for and purchasing products.

**System Quality (Visual Appeal):** to measure how visually attractive a person believes a website to be, often reflected in how the website is performing. Many studies declared that performance measuring might comprise time of page response, navigation, visual appeal, functionality, and/or availability. Also, it measures the overall quality of a website.

**Website Engoyability (Entertaining):** to measure the degree to which a consumer believes that the website for a particular store that he/she has just visited is fun and visually appealing.

**Store Atmosphere Evaluation Web design in general:** to measure the degree to which a person believes that an e-retail website is pleasing to look at and use.

**E-Satisfaction:** to measure the degree of satisfaction to which a person thinks websites of retailers are doing a good job of helping customers to navigate easily and find desired information quickly.

**User Online Review (eWOM):** to measure how much a person says s/he would interact with a website in the future because of its features that enable communication with others.

□

Appendix 2 – Translation of Certificate Letter



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!

18!December!2015!

**Certificate of Translation**

**Document Title:** “Survey to measure Saudi tourists’ satisfaction of using hotels websites (Third Party websites) when booking a hotel online”

We, UK Marketing and Communication Academy (MarCom Academy) declare that we provide translation service by experts whom are fluent in and understand the English language and the Arabic language. We are qualified to translate the study documents.

We hereby certify that the identified [Arabic] translated document is, a true and accurate translation of the original source [English] document titled “Survey to measure Saudi tourists’ satisfaction of using hotels websites (Third Party websites) when booking a hotel online”

**Translator Name [print]:** UK Marketing and Communication Academy (MarCom Academy)

**Address:** MarCom Academy, Hillingdon, Middlesex, UB8 3WT, United Kingdom

**No:** 08197647

**E-mail:** info@MarComAcademy.co.uk

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**Dr. Talal Almaghrabi (MBA, PhD, MCIM, & HEA) & Chairman of Marketing and Communication Academy (MarCom)!**

**London!**

**United Kingdom!**

**[Talal.Almaghrabi@MarComAcademy.co.uk!](mailto:Talal.Almaghrabi@MarComAcademy.co.uk)**

!

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## Appendix 3 – Survey Context with Back Translation

جامعة برونييل

لندن

عزيزي المشارك

أنا طالب في مرحلة الدكتوراه بكلية برونييل لإدارة الأعمال، بجامعة برونييل في لندن. يركز البحث الخاص بدراساتي على دراسة تأثير تصميم المواقع الإلكترونية على المحادثة الإلكترونية و إتخاذ القرار الشرائي للعملاء لحجز الفنادق عبر الإنترنت. وأقدم لك بالغ التقدير بمشاركتك في هذا البحث. وستكون مساهمتك بشكل تطوعي. ولن يستغرق الاستبيان سوى 10-15 دقيقة تقريبا لإكماله. وتعتبر جميع المعلومات المقدمة من قبل المشاركين سرية. وإذا قررت أنك لم تعد ترغب في المشاركة في هذه الدراسة، فلك كامل الحرية في الانسحاب في أي وقت دون حدوث أي نتائج سلبية. وإذا كنت ترغب في الحصول على ملخص لنتائج هذا البحث، فيرجى منك تقديم المعلومات الخاصة بك أدناه.

بخصوص أي [Yasser.Baeshen@brunel.ac.uk](mailto:Yasser.Baeshen@brunel.ac.uk) ارجو عدم التردد في الاتصال بي على البريد الإلكتروني استفسارات لديك.

مقدم أقدر لك بالغ التقدير بمساهمتك في هذه الدراسة مما سيساهم في نجاح هذه الدراسة.

اسم المشارك:

المؤسسة:

البريد الإلكتروني:

فائق الاحترام،

ياسر باعشن

كلية برونييل لإدارة الأعمال

جامعة برونييل

ايسترن جيتواي بيلدينج،

الطابق الثاني غرفة 201

، المملكة المتحدة UBS 3PH جامعة برونييل، أوكسبريدج،

## القسم 1: الديموجرافيا، استخدام الإنترنت والعادات السياحية

1- ما هو جنسك؟

أنثى	ذكر

2- إلى أي فئة عمرية تنتمي إليها؟

66 عاما أو اكبر	65-40 عاما	39-25 عاما	24-16 عاما

3- أعلى درجة علمية حصلت عليها؟

دراسات عليا	درجة جامعية (بكالوريوس)	المدرسة الثانوية	لم أخرج من الثانوية

4- حالتك الاجتماعية؟

مطلق	أرمل	متزوج	أعزب

5- هل أنت؟ (يرجى الاختيار)

عاطل	تعمل لحسابك الخاص	موظف	طالب

6- هل تستخدم الإنترنت؟

لا	نعم

7- إذا كانت الإجابة نعم, منذ متى تستخدم الانترنت؟

أكثر من 7 أعوام	4 إلى 6 أعوام	عام إلى 3 أعوام	أكثر من عام

8- كم عدد المرات التي تسافر فيها إلى الخارج كل سنة؟

3 مرات أو أكثر كل عام	مرتين كل عام	مرة كل عام

9- ماهو الغرض من رحلاتك؟ (يرجى الاختيار)

ترفيه	عمل	دراسة	علاج طبي

10- ما نوع سفرياتك؟

محلية	دولية				
داخل السعودية	الشرق الأوسط	أمريكا	أوروبا	آسيا	استراليا

11- كيف تقوم بالسداد (دفع) مقابل رحلاتك؟

تمويل شخصي	شخص آخر (مثال: حكومي)

عائلي الخ	

## القسم 2: اختيار الموقع الإلكتروني لغرض الدراسة

يرجى اختيار موقع الكتروني من مواقع حجز الفنادق التالية والتي كان لديك تجربة معها. يرجى اختيار واحد فقط من الخيارات التالية:

- Tripadvisor.com
- Booking.com
- Expedia.com
- Kayak.com
- Hotels.com
- Lastminutes.com
- Secretescapes.com
- Skyscanner.com
- آخر، يرجى تحديده

مع مراعاة اختيار الموقع الإلكتروني من القائمة الموضحة أعلاه، ينبغي أن: تعليمات ترتبط إجابتك بهذا الموقع. وفيما يلي عدة أسئلة والتي قد تتفق أو تختلف معها. وباستخدام مقياس الاستجابة التالي، وضح اتفاقك مع كل بند عن طريق اختيارك للرقم المناسب في المربع المناسب.

القسم 3.أ: الكفاية الفنية / تصميم الويب							1 أ
الحافز: (الحوافز التي تدفع العملاء على حجز الفنادق عبر الانترنت)							
أوافق تماماً	أوافق غالباً	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالباً	لا أوافق تماماً	
7	6	5	4	3	2	1	1 يوفر الموقع الإلكتروني الخاص بالفنادق ميزات بحث متعددة (مثل، محرك البحث، شريط القوائم،

							زر الانتقال إلى الخلف وإلى الأمام، الخ) للحصول على المعلومات المستهدفة
7	6	5	4	3	2	1	2 يمكن إيجاد الموقع الإلكتروني الخاص بالفنادق الذي أبحث عنه من خلال العديد من المسارات (مثل، جوجل وياهو)
7	6	5	4	3	2	1	3 من السهل جدا تحديد ما أحتاج إليه في هذا الموقع الإلكتروني الخاص بالفنادق.
							أ2 (التصفح)
7	6	5	4	3	2	1	4 التصفح عبر هذا الموقع الإلكتروني الخاص بالفنادق ليس بديهيا (حدسيا) جدا.
7	6	5	4	3	2	1	5 يمكن للمشتري للمرة الأولى إجراء الحجز من هذا الموقع الإلكتروني الخاص بالفنادق دون الحصول على قدر كبير من المساعدة.
7	6	5	4	3	2	1	6 يستغرق التسوق على هذا الموقع الإلكتروني الخاص بالفنادق وقتا طويلا.
7	6	5	4	3	2	1	7 هذا الموقع الإلكتروني الخاص بالفنادق سهل الاستخدام.
7	6	5	4	3	2	1	8 هذا الموقع الإلكتروني الخاص بالفنادق مريح جدا في الاستخدام.

							ب	الإعلانات المنبثقة والبنارات
أوافق تماما	أوافق غالبا	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالبا	لا أوافق تماما		
							*	البنارات أو الإعلانات المنبثقة للفندق التي رأيتها

							كانت:	
7	6	5	4	3	2	1	مفيدة	9
7	6	5	4	3	2	1	هامية	10
7	6	5	4	3	2	1	غنية بالمعلومات	11
7	6	5	4	3	2	1	غير مفيدة	12

							ت	محتوى الموقع الإلكتروني
أوافق تماما	أوافق غالباً	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالباً	لا أوافق تماما		
7	6	5	4	3	2	1	يسهل فهم المحتوى المقدم من الموقع الإلكتروني الخاص بالفنادق	13
7	6	5	4	3	2	1	تصميم الموقع الإلكتروني الخاص بالفنادق سهل الفهم	14
7	6	5	4	3	2	1	أستطيع بسهولة تذكر كيفية الوصول إلى نفس الصفحة عند زيارتي في المرة الثانية	15

7	6	5	4	3	2	1	بمرور الوقت، أصبح أكثر تعوداً على الموقع الإلكتروني الخاص بالفنادق مع بذل جهد أقل	16
7	6	5	4	3	2	1	لغة الموقع الإلكتروني الخاص بالفنادق واضحة وسهلة الفهم	17
7	6	5	4	3	2	1	تحتوي كل صفحة على كمية مناسبة من المكونات تناسب الصفحة (ليست مزدحمة أو	18

							مكتظة بالمعلومات)	
7	6	5	4	3	2	1	يستخدم الموقع الإلكتروني الخاص بالفنادق ألوان وهياكل تسهل التعرف على الأشياء	19

المستخدم من قبل الشركة							جودة النظام	ث
							وسائل الجذب البصرية	ث1
أوافق تماما	أوافق غالبا	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالبا	لا أوافق تماما		
7	6	5	4	3	2	1	يعرض الموقع الإلكتروني للفنادق صفقاته بطريقة جذابة	20
7	6	5	4	3	2	1	موقع الفنادق الإلكتروني جذاب بشكل رائع	21
7	6	5	4	3	2	1	أحب الشكل الذي يبدو عليه الموقع	22
							جودة استجابة الصفحة وخدماتها والنظام ككل	ث2
7	6	5	4	3	2	1	تقديم الخدمات التي وعدوا بها	23
7	6	5	4	3	2	1	الثقة في التعامل مع مشاكل خدمات العملاء	24
7	6	5	4	3	2	1	أداء الخدمات المناسبة في المرة الأولى	25
7	6	5	4	3	2	1	تقديم الخدمات في الوقت الذي وعدوا به	26
7	6	5	4	3	2	1	إخبار الزبائن بموعد تنفيذ الخدمات (بالإيميل مثلا)	27
7	6	5	4	3	2	1	الجاهزية لمساعدة العملاء	28
7	6	5	4	3	2	1	الجاهزية للاستجابة لطلبات العملاء	29
7	6	5	4	3	2	1	أمن، يشعر العملاء بالأمان عند الحجز عبر	30

							الإترنت	
7	6	5	4	3	2	1	من السهل أن تقوم بالسداد وإتمام المعاملة على الإترنت	31

							المتعة	ج
أوافق تماما	أوافق غالبا	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالبا	لا أوافق تماما		
7	6	5	4	3	2	1	كان من الممتع جدا تصفح موقع الفنادق الذي استخدمته او تعاملت معه	32
7	6	5	4	3	2	1	أعتقد أن موقع الفنادق الذي استخدمته او تعاملت معه حاليا كان ملائما ومسليا جدا	33
7	6	5	4	3	2	1	لقد أحببت شكل ومظهر موقع الفنادق الذي استخدمته او تعاملت معه	34
7	6	5	4	3	2	1	موقع الفنادق الذي استخدمته او تعاملت معه لم يكن مجرد بيع, بل كان مسليا وأنا أقدر ذلك	35

							الإحساس بسهولة الاستخدام	ح
أوافق تماما	أوافق غالبا	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالبا	لا أوافق تماما		
7	6	5	4	3	2	1	من السهل استخدام موقع الفنادق الذي استخدمته او تعاملت معه	36



7	6	5	4	3	2	1	من السهل أن أصبح ماهرا في استخدام موقع الفنادق الذي استخدمته او تعاملت معه	37
7	6	5	4	3	2	1	من السهل تعلم تصفح موقع الفنادق الذي استخدمته او تعاملت معه	38
7	6	5	4	3	2	1	كان تفاعلي مع موقع الفنادق الذي استخدمته او تعاملت معه واضحا ومفهوما	39

الإحساس بالفائدة							خ	
أوافق تماما	أوافق غالبا	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالبا	لا أوافق تماما		
7	6	5	4	3	2	1	موقع الفنادق الذي استخدمته او تعاملت معه مفيد في عملية البحث والحجز	40
7	6	5	4	3	2	1	موقع الفنادق الذي استخدمته او تعاملت معه زاد معرفتي بالبحث عن المنتجات وحجزها	41
7	6	5	4	3	2	1	موقع الفنادق الذي استخدمته او تعاملت معه يجعل عملية البحث عن غرفة وحجزها أمرا سهلا	42
7	6	5	4	3	2	1	موقع الفنادق الذي استخدمته او تعاملت معه زاد من اهتمامي بعملية البحث والحجز	43

النظام: (شعور العملاء بناء على الحوافز التي يقدمها الموقع)							القسم 3.ب: موقف المستخدمين تجاه الموقع	
							الرضا الإلكتروني	أ
أوافق تماما	أوافق غالبا	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالبا	لا أوافق تماما		
7	6	5	4	3	2	1	في المجمل، أنا راض عن الموقع الإلكتروني	44

							للفنادق	
7	6	5	4	3	2	1	في المجمل، أنا مسرور بالموقع الإلكتروني للفنادق	45
7	6	5	4	3	2	1	يمكن أن أوصي الأصدقاء بهذا الموقع الإلكتروني للفنادق	46
7	6	5	4	3	2	1	ارغب في استخدام الموقع الإلكتروني للفنادق مرة أخرى	47
7	6	5	4	3	2	1	في المجمل، لقد تجاوز الموقع الإلكتروني للفنادق توقعاتي	48

							ب	استعراض المستخدم للانترنت/المحادثة الإلكترونية
أوافق تماما	أوافق غالبا	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالبا	لا أوافق تماما		
7	6	5	4	3	2	1	ارغب في المشاركة في مناقشات العملاء	49
7	6	5	4	3	2	1	ارغب في تقديم التغذية الراجعة الخاصة بي عن طريق النشر على الموقع الإلكتروني للفنادق	50
7	6	5	4	3	2	1	ارغب في تسجيل الدخول إلى الموقع الإلكتروني للفنادق لمعاينة المعلومات	51

الاستجابة: (قرار العملاء النهائي بناء على الحوافز والشعور)							القسم 3.ت: القرار الشرائي	
							أ	
أوافق تماما	أوافق غالبا	أوافق إلى حد ما	لا موافق ولا غير موافق	لا أوافق إلى حد ما	لا أوافق غالبا	لا أوافق تماما		

		ما	موافق	ما				
								* ما درجة قرارك في حجز غرفة بفندق من هذا الموقع (ممكن/محتمل/مؤكد/حاسم)
7	6	5	4	3	2	1	محتمل (7) / غير محتمل (1)	52
7	6	5	4	3	2	1	ممكن (7) / غير ممكن (1)	53
7	6	5	4	3	2	1	مؤكد (7) / غير مؤكد (1)	54
7	6	5	4	3	2	1	حاسم (7) / غير حاسم (1)	65

### – نهاية الاستبيان وشكرا لك

#### تعريف التركيبات:

مهارة البحث لمستخدمي الإنترنت: لقياس اعتقاد الشخص حول معرفته وقدرته على إيجاد المعلومات على شبكة الإنترنت.

محرك البحث للموقع (التصفح) 1: لقياس درجة اعتقاد الشخص أن الموقع الإلكتروني للبيع بالتجزئة سهل الاستخدام من حيث إيجاد الأشياء، وتجنبها، وإجراء الطلبات.

موقف المستخدم نحو الإعلانات المنبثقة والبانرات: لقياس درجة إدراك الشخص أن احد الإعلانات كان مساعدا ومفيدا.

محتوى الموقع: لقياس إدراك التفاعل مع موقع ما مع التركيز على امتلاك الموقع لمحتوى يمكن إدارته ويجذب انتباه المستخدم.

سهولة استخدام الموقع: لقياس موقف الشخص فيما يتعلق بالجهد اللازم لتعلم شيء واستخدامه.

فائدة الموقع: لقياس درجة اعتقاد المستهلك أن احد المتاجر على الانترنت التي قد استخدمها مؤخرا مفيد في البحث عن المنتجات وشرائها.

جودة النظام (وسائل الجذب البصرية): لقياس درجة الجاذبية البصرية لموقع ما حساب اعتقاد الشخص، وغالبا ما ينعكس في كيفية أداء الموقع. وقد أعلنت العديد من الدراسات أن قياس الأداء قد يحتوي على وقت استجابة الصفحة، والتصفح، ووسائل كما انه يقيس أيضا الجودة الجذب البصرية، والأداء الوظيفي، و/أو إتاحة الوصول. الشاملة لموقع ما على الانترنت.

إمتاعية الموقع (الترفيه): لقياس درجة اعتقاد المستهلك أن الموقع الإلكتروني لمتجر معين قد زار مؤخرا هو ممتع ويحتوي على وسائل جذب بصرية.

تقييم مناخ المتجر تصميم الويب بشكل عام: لقياس درجة اعتقاد الشخص أن الموقع الإلكتروني للبيع بالتجزئة يبعث السرور عند النظر إليه واستخدامه.

الرضا الإلكتروني: لقياس درجة رضا شخص يعتقد أن مواقع تجار التجزئة تقوم بعمل جيد لمساعدة العملاء على التصفح بسهولة وإيجاد المعلومات المطلوبة بسرعة.

استعراض المستخدم للانترنت (المحادثة الإلكترونية): لقياس درجة قول شخص انه سوف يتفاعل في المستقبل مع موقع ما على الانترنت بسبب ميزاته التي تمكن من التواصل مع الآخرين.

**Brunel University London**

**Dear participant**

I am a Ph.D. student at the Business school, Brunel University London. My thesis focuses on studying the effect of websites design on electronic word of mouth and the purchasing decision of customers who are booking hotels via the internet. I really appreciate your volunteer contribution to this thesis. The questionnaire shall take just 10-15 minutes to be completed. The information submitted by the participants shall be secret and if you decided that you would stop participating in this questionnaire, you have the complete freedom to withdraw at any time. If you want to have a conclusion summary for this thesis, please feel free to fill in the information below:-

Please do not hesitate to contact me via e-mail: [Yasser.Baeshen@brunel.ac.uk](mailto:Yasser.Baeshen@brunel.ac.uk) for any inquiries you have.

I appreciate your contribution to this thesis as it shall help to complete this thesis.

Participant name:

Organization:

E-mail

Regards,

Yasser Baeshen – Brunel Business School

Brunel University – Eastern Gateway Building – 2<sup>nd</sup> Floor –Room 201

Brunel University – Oxbridge UBS 3PH – UK.

**Section 1: Demographic – Using the internet and touristic habits.**

1-What is your sex?

Male	Female

2-What is your age category?

16-24 years	25-39 years	40-65 years	Equal or older than 66 years

3- The highest university degree you acquired?

Higher school	Secondary school	University degree (B.Sc.)	Post graduate

4- Marital status

Single	Married	Widower	divorced

5- Are you.... (Please specify)

Student	Employed	Work for your interest	unemployed

6- Do you use the internet?

Yes	No

7- If your answer is "yes" , How long do you use the Internet?

More than 1 year	From1-3 years	From4-6 years	More than 7 years

8- How often do you travel abroad per year?

Once a year	Twice a year	3 times a year

9- Why do you travel? Please specify

Leisure	Business	Studying	Medical treatment

10- What the type of your trips?

Domestic Inside KSA	International				
	Middle east	America	Europe	Asia	Australia

11- How do you pay for your trips?

Personal financing	Another person (governmental- family...etc)

**Section 2: selecting website “According to the study”**

Please select one of the websites used for booking hotels that you ever experienced. Please select one only:-

- **Tripadvisor.com**
- **Booking.com**
- **Expedia.com**
- **Kayak.com**
- **Hotels.com**
- **Lastminutes.com**
- **Secretescapes.com**
- **Skyscanner.com**
- Others , please to specify

Instructions: your answers should be related to the website you choose. Below, you will find a number of questions with which you may agree or disagree. Using the following response scale, show your agreement with every item by selecting the proper number:

A1	Section3a: TECHNICAL Adequacy / Web Design	The motive that drive customers to book hotels via the internet.						
	Website search engine	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
1	The hotels website offer several search advantages (search engine, menu toolbar, back and forward button..etc) for getting the required information	1	2	3	4	5	6	7
2	The hotels website I'm searching for can be reached by using different search engines such as Google and Yahoo	1	2	3	4	5	6	7
3	It's easy to find what I need in this hotels website	1	2	3	4	5	6	7



<b>A2</b>	<b>Browsing</b>							
4	Browsing via this hotels website is not easy	1	2	3	4	5	6	7
5	A buyer can, for the first time, book from this hotels website without asking for much help.	1	2	3	4	5	6	7
6	online shopping via the hotels website takes a long time	1	2	3	4	5	6	7
7	The hotels website is very easy to use.	1	2	3	4	5	6	7
8	This hotels' website is very convenient to use.	1	2	3	4	5	6	7

<b>B</b>	<b>Pop up ads and banners</b>	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
*	The pop up ads and the banners for the hotels website that I saw were:-							
9	Beneficial	1	2	3	4	5	6	7
10	Important	1	2	3	4	5	6	7
11	Full of information	1	2	3	4	5	6	7
12	Unhelpful	1	2	3	4	5	6	7

<b>C</b>	<b>The content of the website</b>	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
13	The content offered by the hotels website is easy to understand	1	2	3	4	5	6	7
14	The design of the hotels website is easy to understand.	1	2	3	4	5	6	7
15	I can easily remember how to reach the history pages on browsing for the second time.	1	2	3	4	5	6	7
16	I get more used to using the hotels website after some time and get access to it with less effort.	1	2	3	4	5	6	7
17	The hotels website language is clear and easy to understand	1	2	3	4	5	6	7

**Dear participant**

18	Every page includes a lot of elements that suit the page (not overcrowded with information and data).	1	2	3	4	5	6	7
19	The hotels website uses distinguished colors and frames that make it easy to identify.	1	2	3	4	5	6	7
<b>D</b>	<b>The system quality</b>							
<b>D1</b>	<b>Visual attraction aids</b>	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
20	The hotels website shows its offers and deals attractively	1	2	3	4	5	6	7
21	The hotels website is attractive	1	2	3	4	5	6	7
22	I like the way the hotels website looks like	1	2	3	4	5	6	7
<b>D2</b>	<b>The quality, page response and the services offered by the website</b>	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
23	Offering the services as promised before	1	2	3	4	5	6	7
24	Trust in dealing with the problem of customer services.	1	2	3	4	5	6	7
25	providing the proper services at the first time	1	2	3	4	5	6	7
26	Providing services at the time they promised	1	2	3	4	5	6	7
27	Informing clients about when services will be performed. (via e-mail for example)	1	2	3	4	5	6	7
28	Being prepared for helping customers	1	2	3	4	5	6	7
29	Being prepared for responding to customers' request.	1	2	3	4	5	6	7
30	Clients feel safe on booking via the internet	1	2	3	4	5	6	7
31	It is easy to pay for the booking via the internet and complete the process.	1	2	3	4	5	6	7
<b>E</b>	<b>Enjoyability</b>	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
32	It was very interesting to browse hotels website that you used or	1	2	3	4	5	6	7

	vested.							
33	I think that the hotels website I used was very amusing and quite entertaining.	1	2	3	4	5	6	7
34	I liked the design of the hotels website I used or dealt with.	1	2	3	4	5	6	7
35	The hotels website that I used was not just for purchasing, it was very interesting either.	1	2	3	4	5	6	7
<b>F</b>	<b>Ease-of-Use</b>	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
36	It is easy to use the hotels website that I used	1	2	3	4	5	6	7
37	It is easy to be skilled at using the hotels website that I used	1	2	3	4	5	6	7
38	It is easy to browse the hotels website.	1	2	3	4	5	6	7
39	My interaction to the hotels website I used was clear and understood.	1	2	3	4	5	6	7
<b>G</b>	<b>Usefulness</b>	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
40	The hotels website that I used was very useful for search and booking.	1	2	3	4	5	6	7
41	The hotels website I used increased my knowledge of search for products and how to purchase them.	1	2	3	4	5	6	7
42	It is very easy to search for and book a room by dealing with this hotels website.	1	2	3	4	5	6	7
43	The hotels website I used increased my interest in searching and booking.	1	2	3	4	5	6	7
	<b>Section 3 part B – the viewpoint of users towards the website</b>	<b>(The impressions the customers have according to the motives offered by the website)</b>						
		<b>Electronic satisfaction</b>						
<b>A</b>	<b>Online satisfaction</b>	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
44	In general, I'm satisfied with the hotels website	1	2	3	4	5	6	7
45	In general, I'm pleased with the hotels website	1	2	3	4	5	6	7
46	I will recommend the hotels website to my friends	1	2	3	4	5	6	7

47	I would like to use the hotels website again.	1	2	3	4	5	6	7
48	In general, the hotels website exceeded my expectations	1	2	3	4	5	6	7
<b>B</b>	<b>User Online Review / eWOM</b>	Completely disagree	Do not often agree	Disagree to some extent	Neutral	Agree to some extent	Often agree	Completely agree
49	I want to take part in customers' discussions	1	2	3	4	5	6	7
50	I want to present my feedback to the hotels website.	1	2	3	4	5	6	7
51	I want to log on to the hotels website for getting much information	1	2	3	4	5	6	7
<b>Section 3 part C :the purchasing decision</b>		<b>(Customer final decision according to motives)</b>						
**	How likely, probable, certain, definite are you going to book a room from this Website:	1	2	3	4	5	6	7
52	Likely (7) / Unlikely (1)	1	2	3	4	5	6	7
53	Probably (7) / Improbable (1)	1	2	3	4	5	6	7
54	Certain (7) / Uncertain (1)	1	2	3	4	5	6	7
55	Definitely (7) / Definitely not (1)	1	2	3	4	5	6	7

**\*\*\* The End \*\*\***

**Thank You**

## Appendix 4 – Ethical Consent Form



College of Business, Arts and Social Sciences Research Ethics Committee  
Brunel University London  
Kingston Lane  
Uxbridge  
UB8 3PH  
United Kingdom  
www.brunel.ac.uk

21 January 2016

### LETTER OF APPROVAL

Applicant: Mr yasser baeshen

Project Title: Understanding the factors of web design that attract tourists to book a hotel and generate online review

Reference: 1889-LR-Jan/2016-1383

Dear Mr yasser baeshen

The Research Ethics Committee has considered the above application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that the conditions of approval set out below are followed:

- The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment.

#### Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee
- Approval to proceed with the study is granted subject to receipt by the Committee of satisfactory responses to any conditions that may appear above, in addition to any subsequent changes to the protocol.
- The Research Ethics Committee reserves the right to sample and review documentation, including raw data, relevant to the study.
- You may not undertake any research activity if you are not a registered student of Brunel University or if you cease to become registered, including abeyance or temporary withdrawal. As a deregistered student you would not be insured to undertake research activity. Research activity includes the recruitment of participants, undertaking consent procedures and collection of data. Breach of this requirement constitutes research misconduct and is a disciplinary offence.

A handwritten signature in black ink, appearing to read 'James Knowles', written over a horizontal line.

Professor James Knowles

Chair

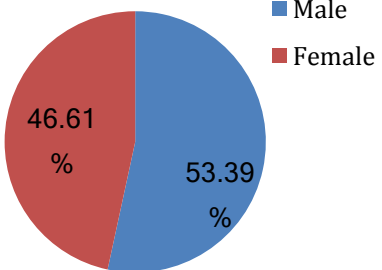
College of Business, Arts and Social Sciences Research Ethics Committee  
Brunel University London

**Appendix 5 – Group Differences**

<b>Q1. Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review</b>			
<b>Answer Choice</b>		<b>Response Percent</b>	<b>Response Total</b>
1	Name:	99.9%	876
2	Organisation:	91.6%	803
3	Email:	95.4%	837
<i>answered</i>			<b>877</b>
<i>skipped</i>			<b>125</b>

<b>Q2. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review</b>			
<b>What is your gender?</b>			
<b>Answer Choice</b>		<b>Response Percent</b>	<b>Response Total</b>
1	Male	53.4%	535
2	Female	46.6%	467
<i>answered</i>			<b>1,002</b>
<i>skipped</i>			<b>0</b>

Q2. What is your gender?

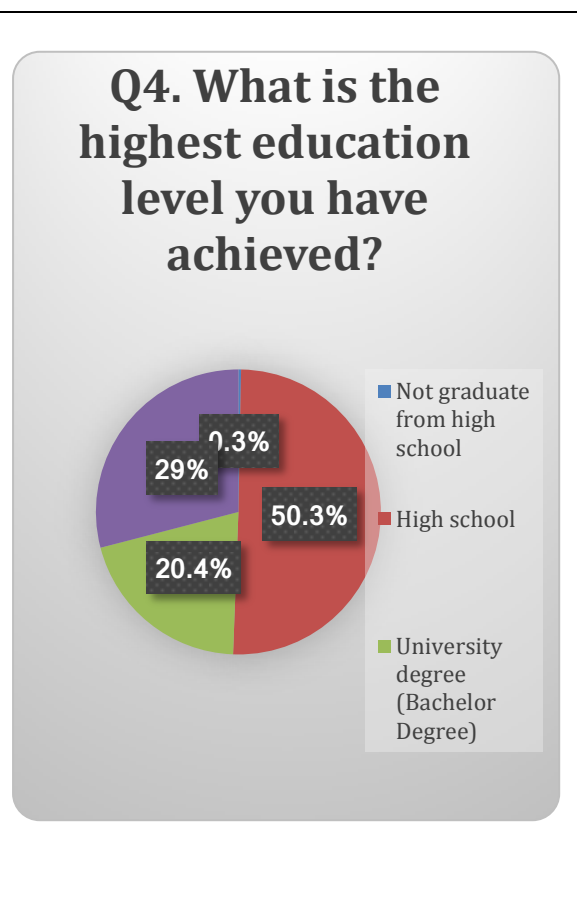


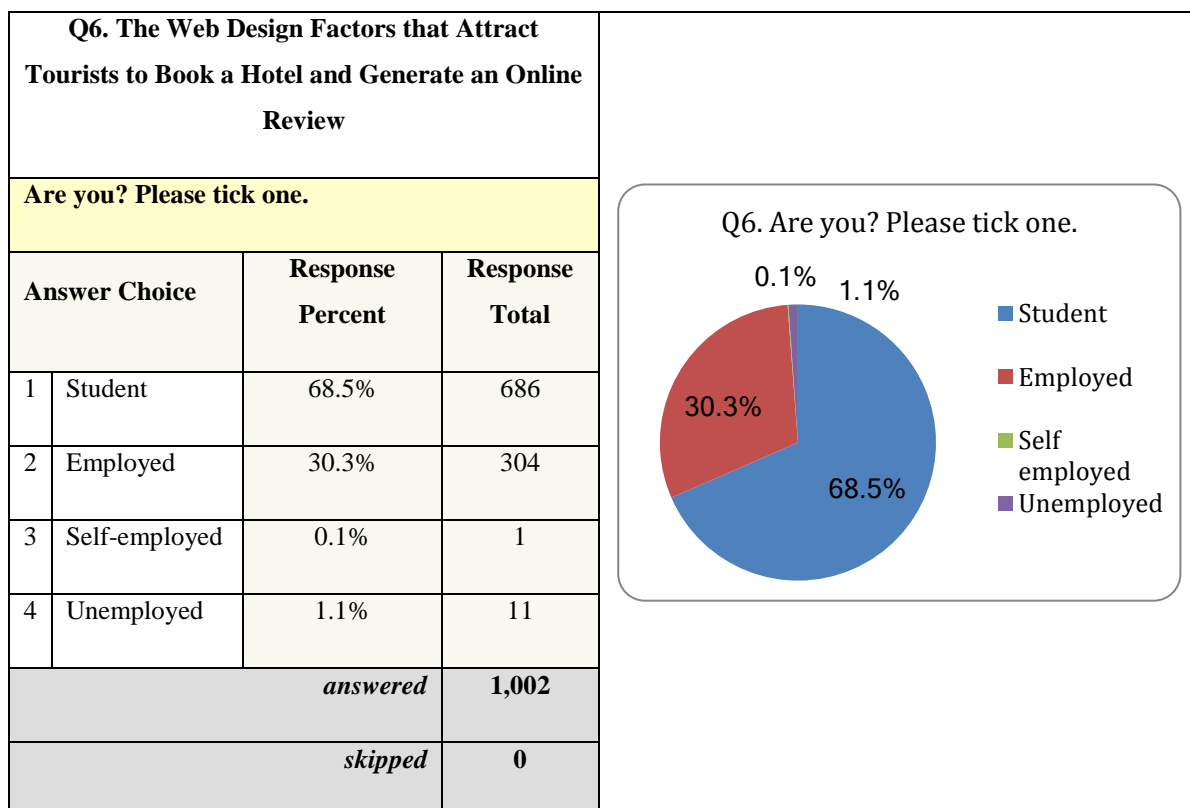
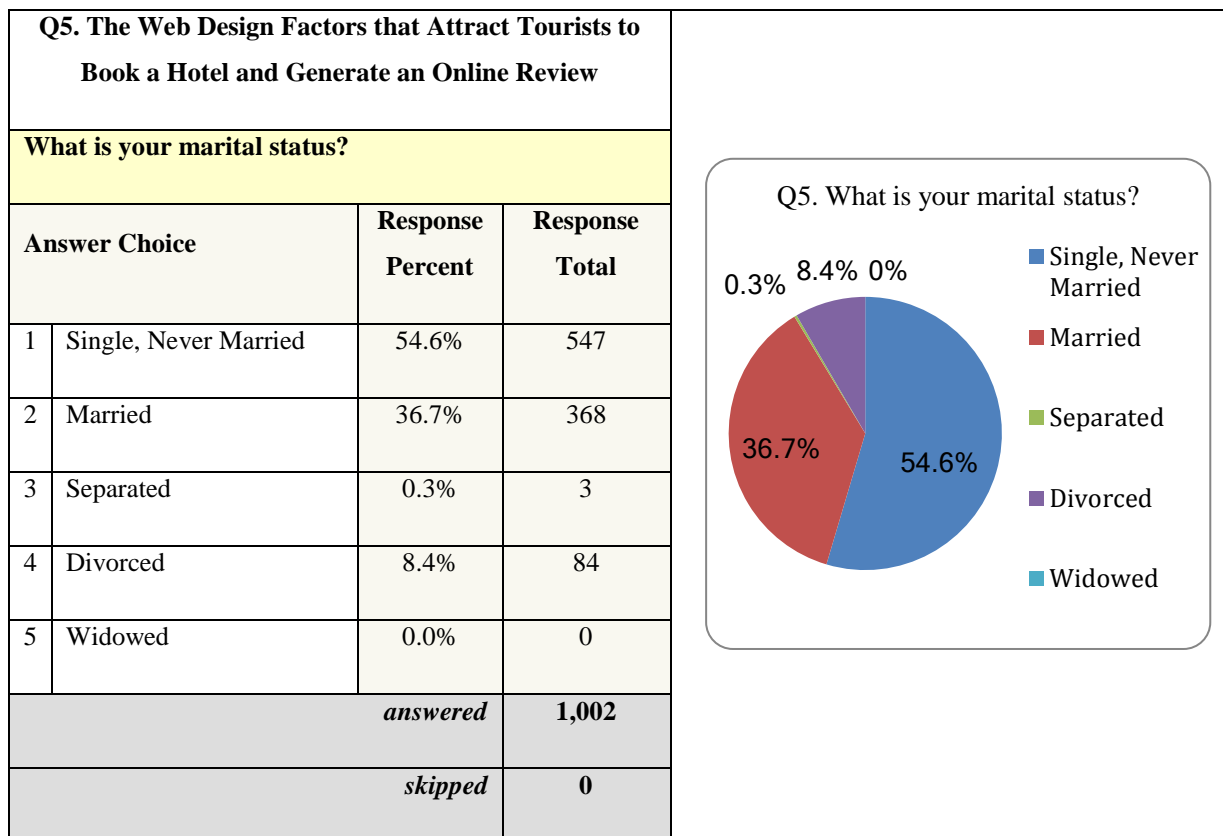
Legend: ■ Male (53.39%), ■ Female (46.61%)

<b>Q3. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an</b>		<b>Q3. Which age group do you belong to?</b>	
		3.5%	0.1%

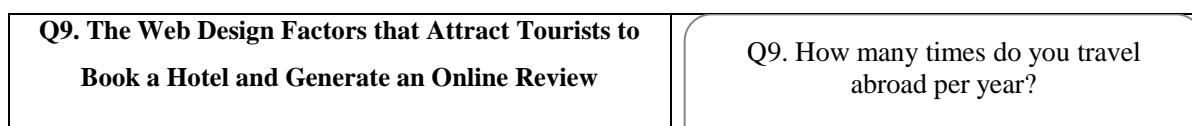
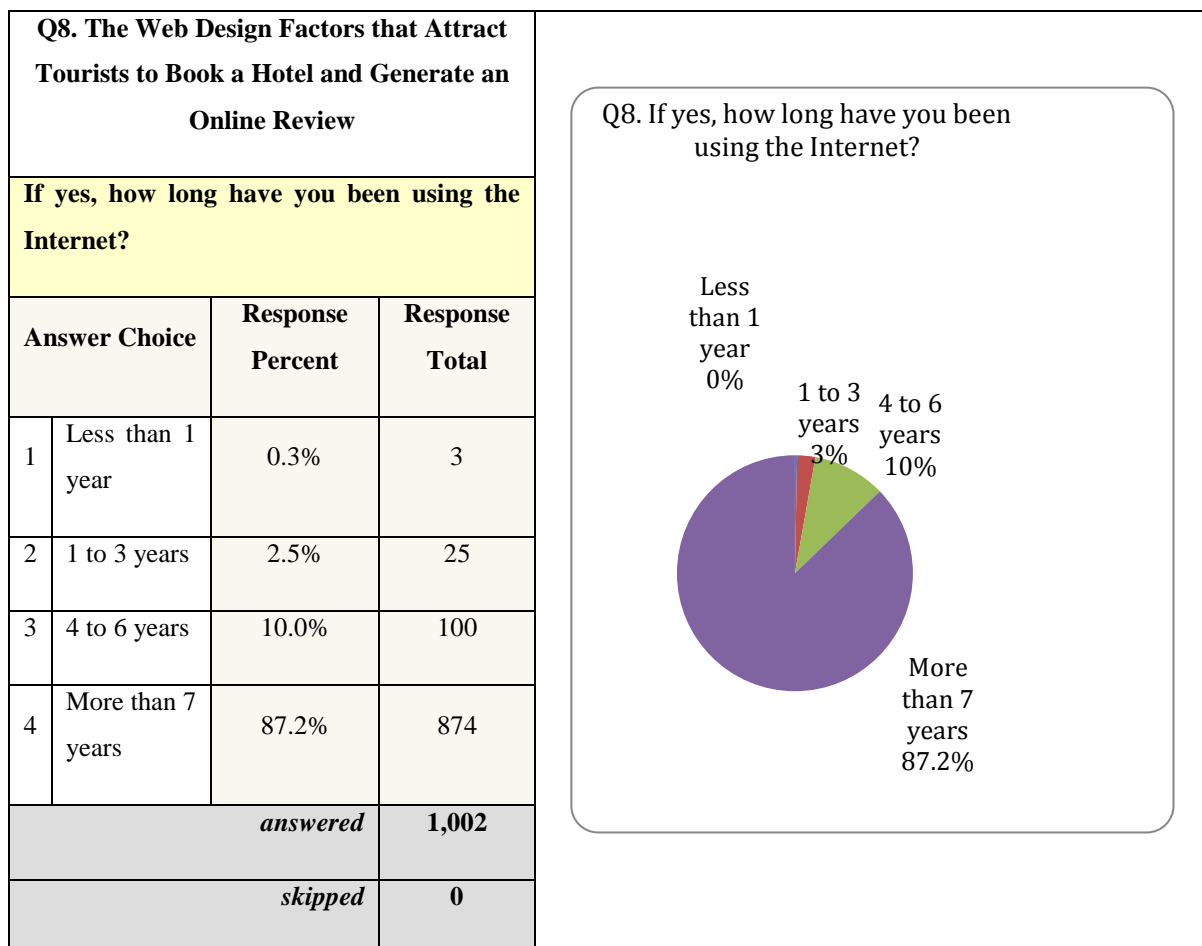
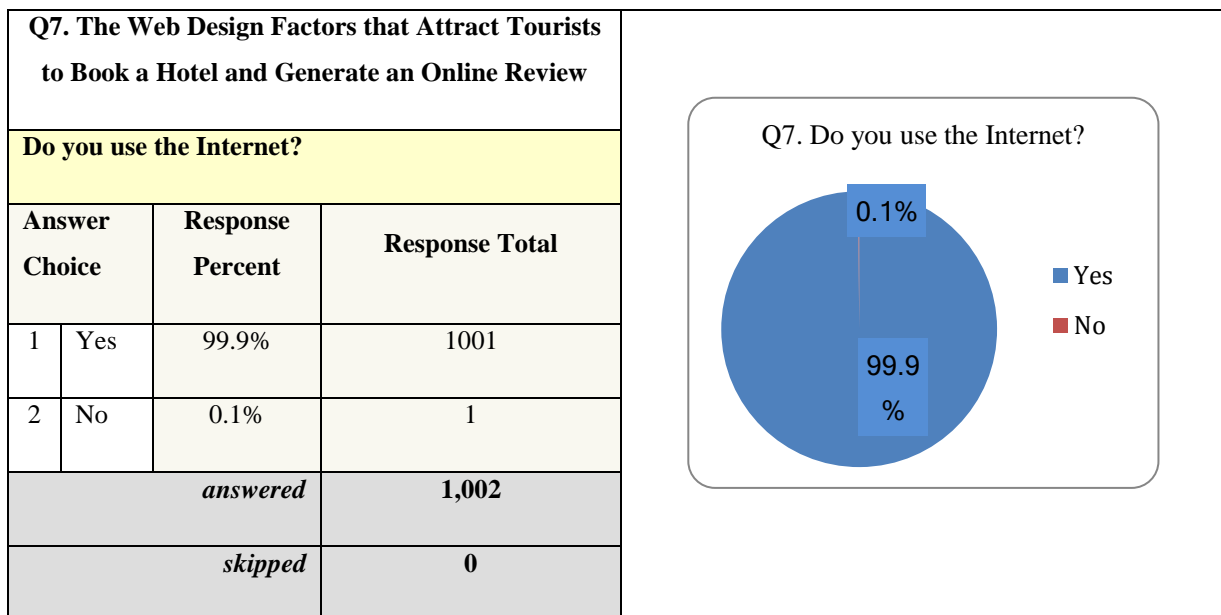
Online Review			
Which age group do you belong to?			
Answer Choice		Response Percent	Response Total
1	under 18	0.1%	1
2	18-24	65.6%	657
3	25-34	8.4%	84
4	35-54	22.5%	225
5	55+	3.5%	35
<i>answered</i>			<b>1,002</b>
<i>skipped</i>			<b>0</b>

Q4. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review			
What is the highest education level you have achieved?			
Answer Choice		Response Percent	Response Total
1	Not graduated from high school	0.3%	3
2	High school	50.3%	504
3	University degree (Bachelor's Degree)	20.4%	204
4	Postgraduate degree	29.0%	291
<i>answered</i>			<b>1,002</b>
<i>skipped</i>			<b>0</b>









How many times do you travel abroad per year? Please tick one.			
Answer Choice		Response Percent	Response Total
1	Once a year	35.6%	356
2	Twice a year	38.0%	380
3	Three times or more per year	26.5%	266
<i>answered</i>			<b>1,002</b>
<i>skipped</i>			<b>0</b>

Q10. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review			
What is the reason for your journey? Please tick one.			
Answer Choice		Response Percent	Response Total
1	Leisure	84.5%	846
2	Business	6.2%	62
3	Study	6.7%	67
4	Medical treatment	2.6%	27
<i>answered</i>			<b>1,002</b>
<i>skipped</i>			<b>0</b>

Q10. What is the reason for your journey?

Reason	Percentage
Leisure	84%
Business	6%
Study	7%
Medical treatment	3%

Q11. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review	
	Q11. What is the type of your travel?

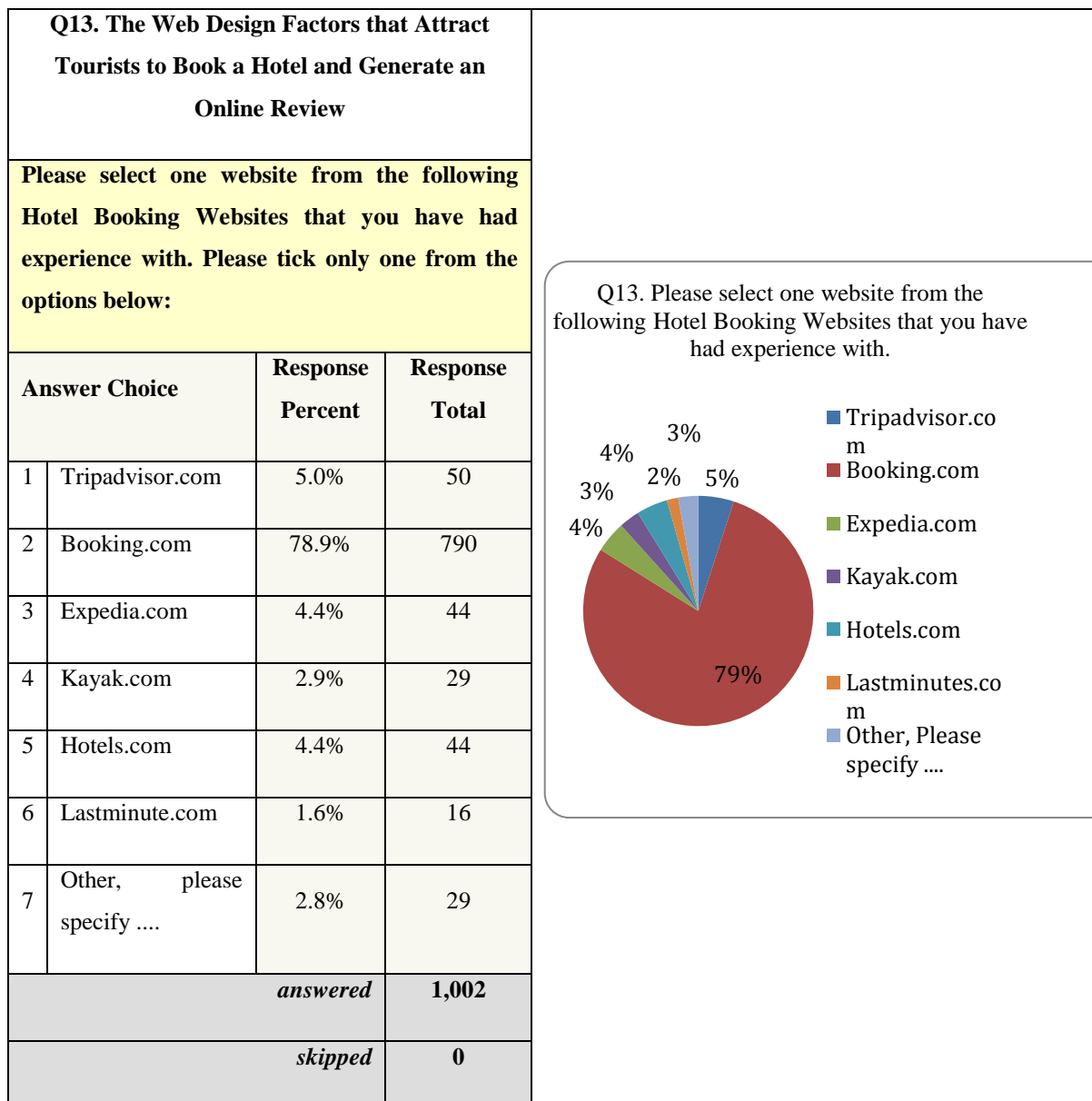
<b>What is the type of your travel? Please tick one or more.</b>			
<b>Answer Choice</b>		<b>Response Percent</b>	<b>Response Total</b>
1	Domestic (Inside KSA)	49.0%	490
2	International: 1. Middle East	60.6%	607
3	International: 2. USA	24.5%	245
4	International: 3. Europe	44.7%	447
5	International: 4. Asia	17.0%	170
6	International: 5. Australia	4.1%	42
<i>answered</i>			<b>1,002</b>
<i>skipped</i>			<b>0</b>

<b>Q12 The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review</b>			
<b>How do you pay for your trip? Please tick one.</b>			
<b>Answer Choice</b>		<b>Response Percent</b>	<b>Response Total</b>
1	Self-funded	47.4%	474
2	Someone else (e.g. government, family etc.)	52.6%	528
<i>answered</i>			<b>1,002</b>
<i>skipped</i>			<b>0</b>

Q12. How do you pay for your trip?

The pie chart displays the distribution of payment sources for the trip. The 'Someone else' category, represented by a red slice, accounts for 53% of the responses. The 'Self-funded' category, represented by a blue slice, accounts for 47% of the responses.

- Self-funded
- Someone else (e.g: government, family etc)

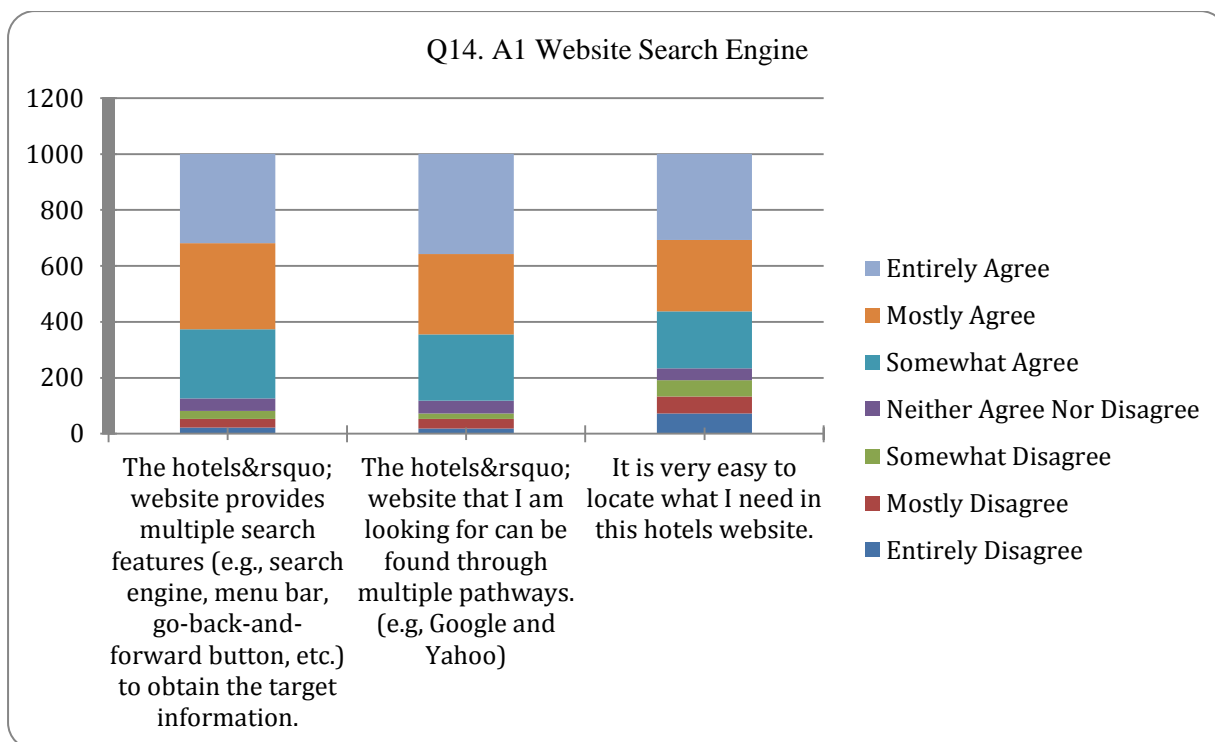


**Q14. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review**

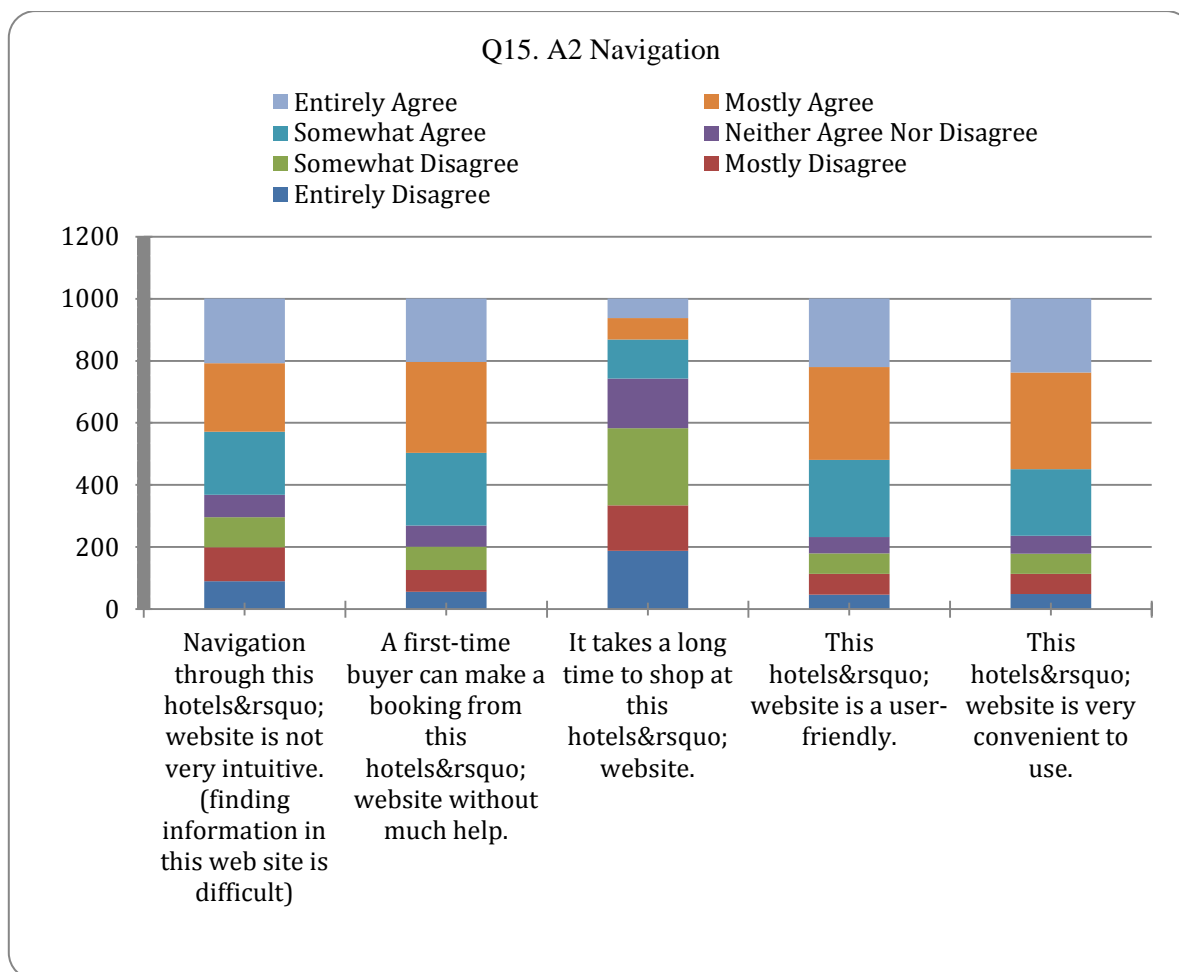
**A1 Website Search Engine**

Answer Choice	Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total

1	The hotels website provides multiple search features (e.g. search engine, menu bar, go-back-and-forward button, etc.) to obtain the target information.	22	31	29	44	248	307	320	1002
2	The hotels website that I am looking for can be found through multiple pathways. (e.g. Google and Yahoo)	19	34	19	46	237	287	359	1002
3	It is very easy to locate what I need in this hotels website.	72	61	59	42	204	255	308	1002
<i>answered</i>									<b>1,002</b>
<i>skipped</i>									<b>0</b>



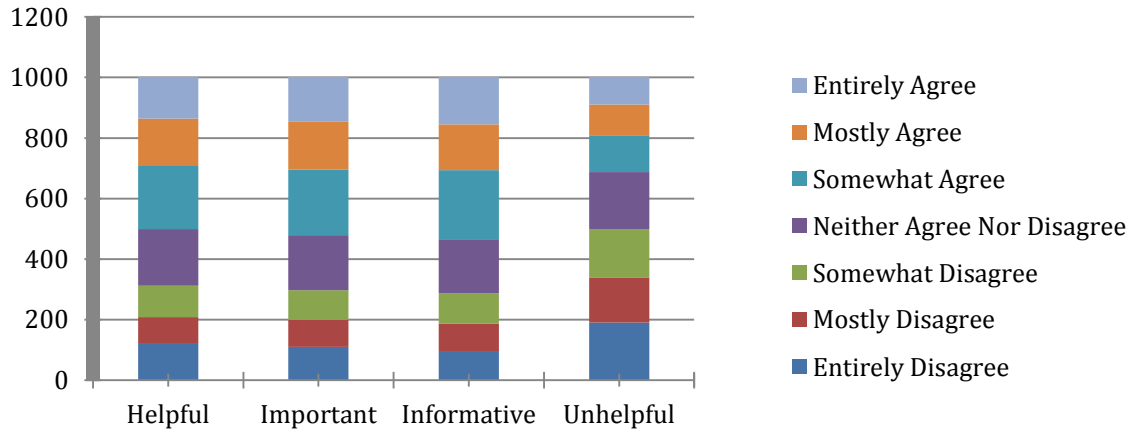
Q15. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review									
A2 Navigation									
Answer Choice		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total
1	Navigation through this hotels website is not very intuitive (finding information in this website is difficult).	90	109	97	72	204	220	209	1002
2	A first-time buyer can make a booking from this hotels website without much help.	56	70	75	68	235	292	205	1002
3	It takes a long time to shop at this hotels website.	188	146	249	160	126	69	63	1002
4	This hotels website is user-friendly.	47	67	66	52	249	299	221	1002
5	This hotels website is very convenient to use.	49	65	65	57	215	311	239	1002
<b>answered</b>									<b>1,002</b>
<b>skipped</b>									<b>0</b>



Q16. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review								
B Pop-up Ads & Banner Ads: Pop up advertising: (any advertising that appears or opens on a different page or link)								
Banner advertising: (any advertising located in the right, left, up or bottom side of the page)								
* The Hotel Banner ads or Pop-up ads I saw were:								
Answer Choice	Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total
1 Helpful	123	85	104	187	209	156	137	1002
2 Important	110	89	98	182	217	157	148	1002
3 Informative	96	91	100	176	231	151	156	1002
4 Unhelpful	190	150	159	188	122	102	90	1002
<i>answered</i>								1,002

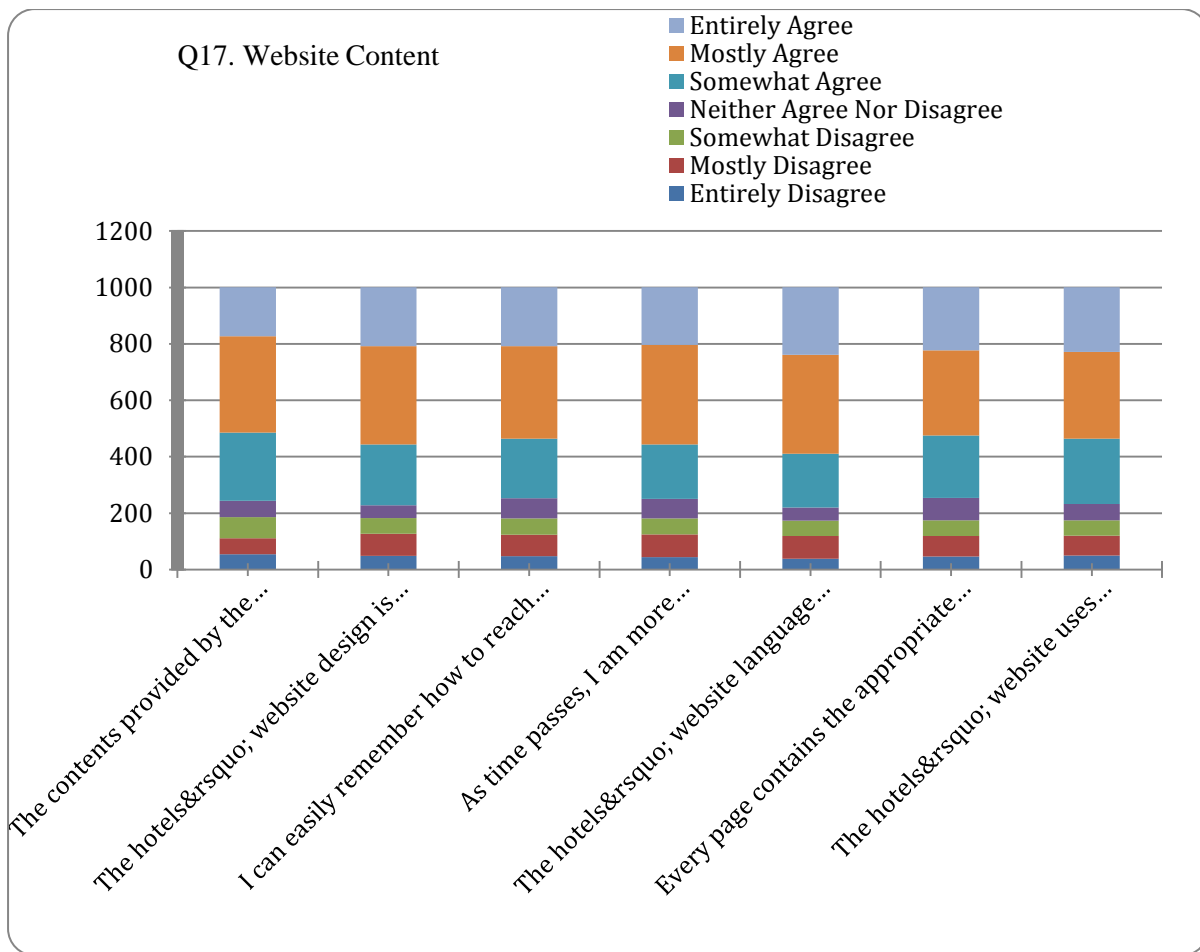
<i>skipped</i>	0
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Q16. AB. Pop-Up & Banner Ads: Pop-up advertising: (any advertising that appears or opens on a different page or link)  
 Banner advertising: (any advertising located in the right, left, up or bottom side of the page)  
 \* The Hotel Banner ads or Pop-up ads I sa

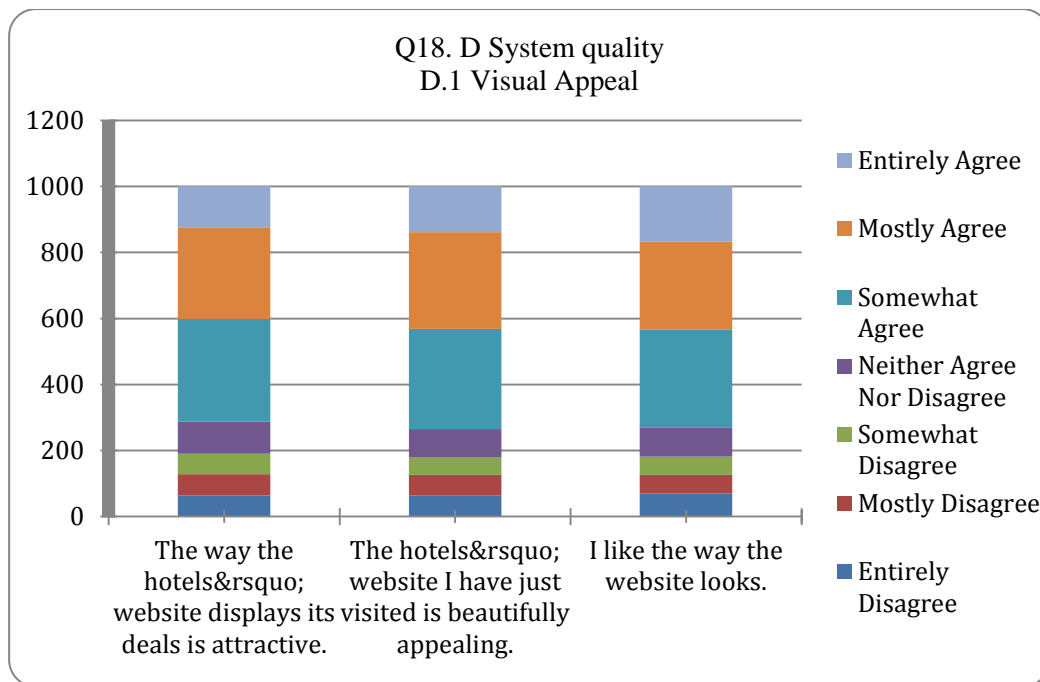




Q17. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review									
C Website content									
Answer Choice	Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total	
1	The contents provided by the hotels website are easily understood.	54	57	75	58	242	341	174	1002
2	The hotels website design is easy to understand.	49	78	55	46	215	349	209	1002
3	I can easily remember how to reach the same page when I visit a second time.	47	76	58	72	211	328	209	1002
4	As time passes, I become more accustomed to the hotels website with less effort.	44	81	56	69	194	352	205	1002
5	The hotels website language is clear and easy to understand.	38	81	54	47	190	351	240	1002
6	Every page contains the appropriate amount of components to fit into a page (not busy or full of information).	46	73	56	79	221	302	224	1002
7	The hotels website uses colours and structures that are easy to identify things.	50	70	54	58	232	307	230	1002
<i>answered</i>								<b>1,002</b>	
<i>skipped</i>								<b>0</b>	

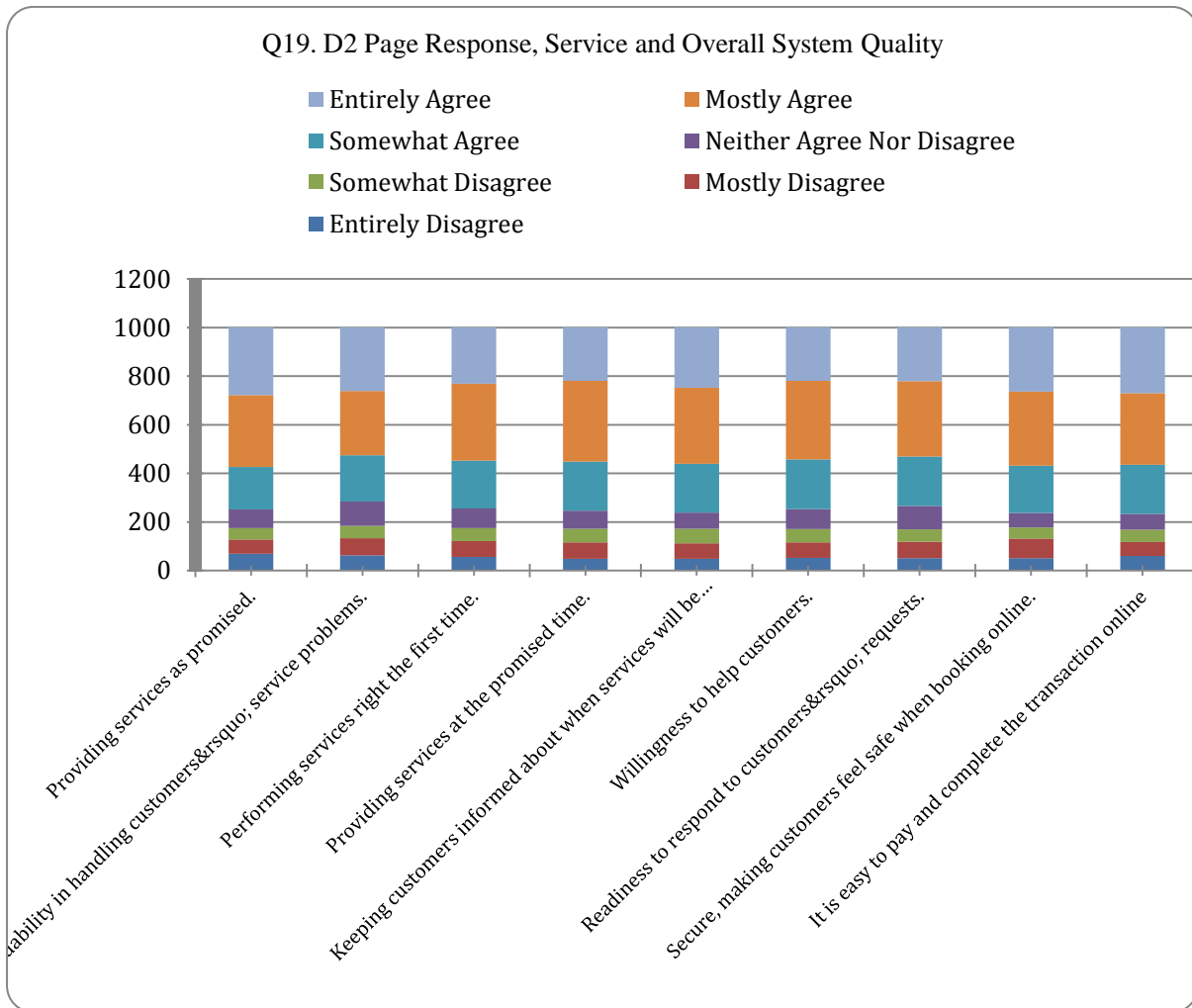


Q18. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review									
D		System							quality
D.1 Visual Appeal									
r		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total
1	The way the hotels website displays its deals is attractive.	64	64	62	97	312	277	125	1002
2	The hotels website I have just visited is beautifully appealing.	63	63	53	86	304	293	139	1002
3	I like the way the website looks.	70	56	56	87	297	267	168	1002
<i>answered</i>									1,002
<i>skipped</i>									0



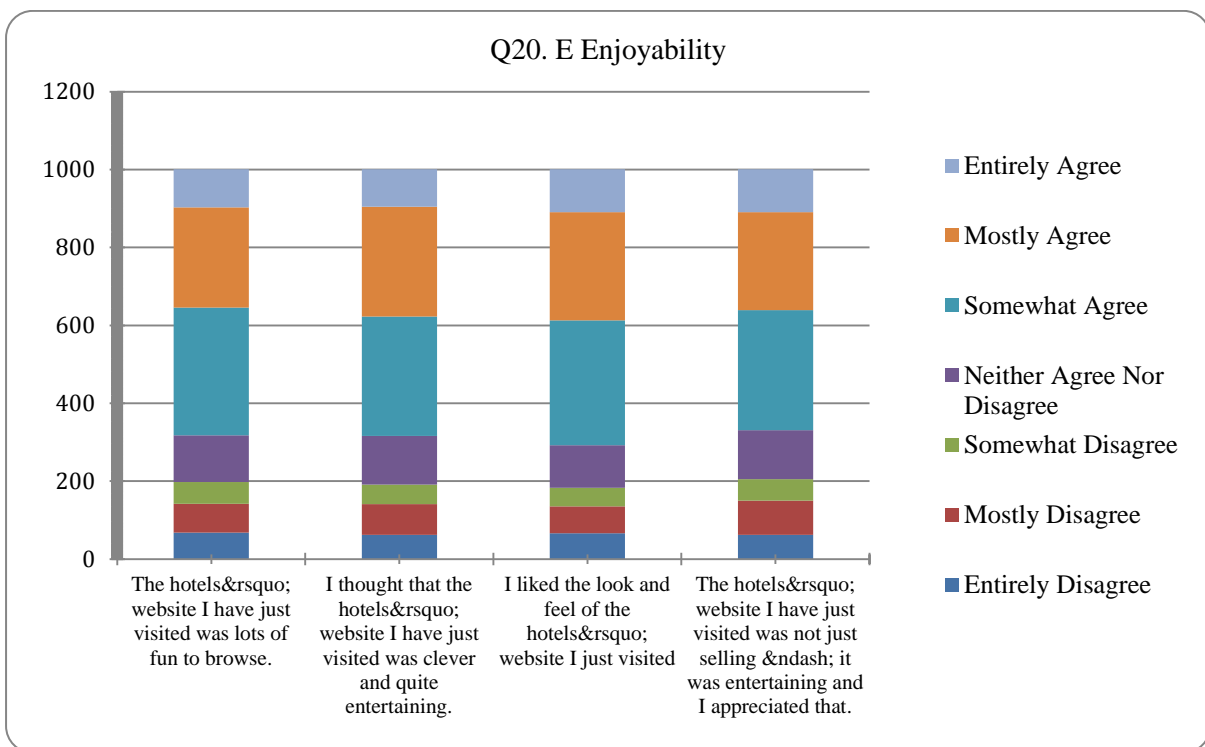
<b>Q19. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review</b>									
<b>D2 Page Response, Service and Overall System Quality</b>									
Answer Choice		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total
1	Providing services as promised.	70	58	47	77	175	295	279	1002
2	Dependability in handling customers service problems.	63	70	51	101	190	264	262	1002
3	Performing services right the first time.	57	65	53	81	196	317	232	1002
4	Providing services at the promised time.	49	68	55	75	201	333	220	1002
5	Keeping customers informed about when services will be performed. (e.g. by email)	49	63	60	67	201	312	249	1002
6	Willingness to help customers.	53	64	54	82	204	324	220	1002
7	Readiness to respond to customers requests.	51	68	51	96	203	311	221	1002
8	Secure, making customers feel safe when booking online.	51	81	45	60	195	305	264	1002
9	It is easy to pay and complete the transaction online	61	57	50	65	203	294	271	1002

	<i>answered</i>	1,002
	<i>skipped</i>	0



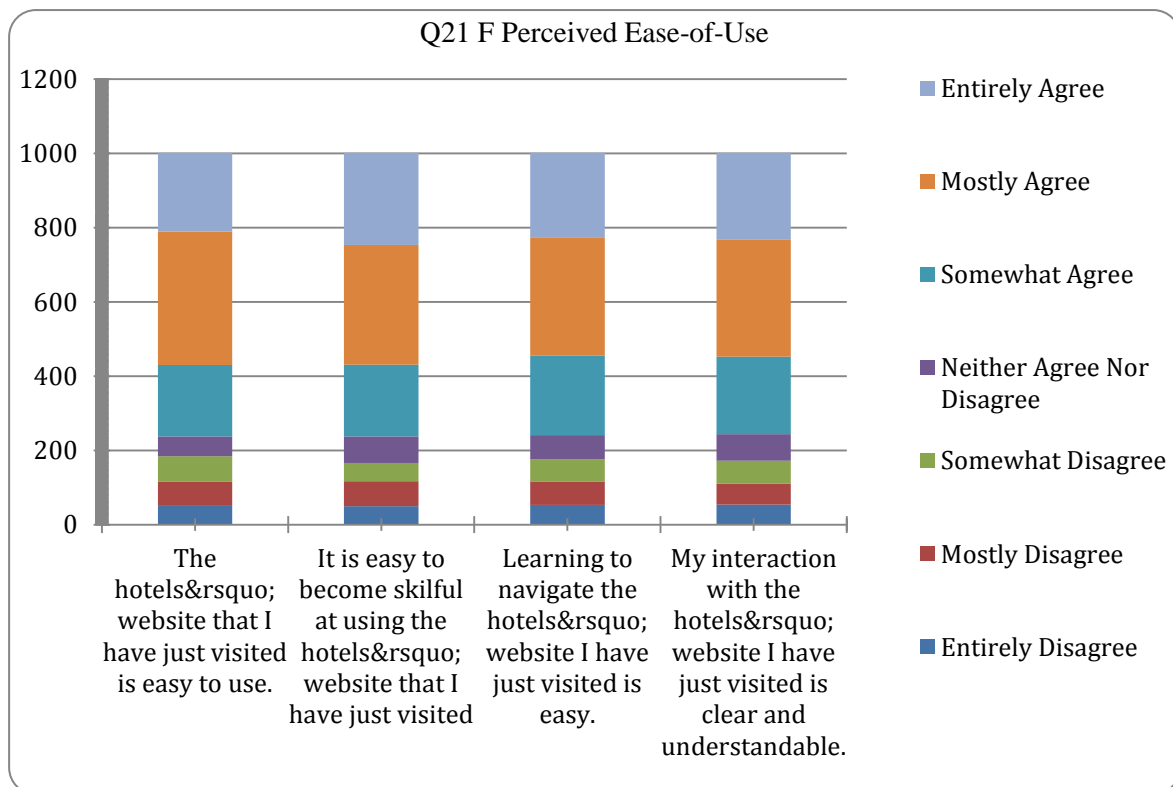
Q20. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review								
E Enjoyability								
Answer Choice	Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total
1 The hotels website I have just visited was lots of fun to browse.	68	74	56	120	328	257	98	1002

2	I thought that the hotels website I have just visited was clever and quite entertaining.	62	79	50	125	307	282	96	1002
3	I liked the look and feel of the hotels website I just visited	66	69	48	109	321	278	110	1002
4	The hotels website I have just visited was not just selling. it was entertaining and I appreciated that.	62	88	55	126	308	252	110	1002
<b>answered</b>									<b>1,002</b>
<b>skipped</b>									<b>0</b>



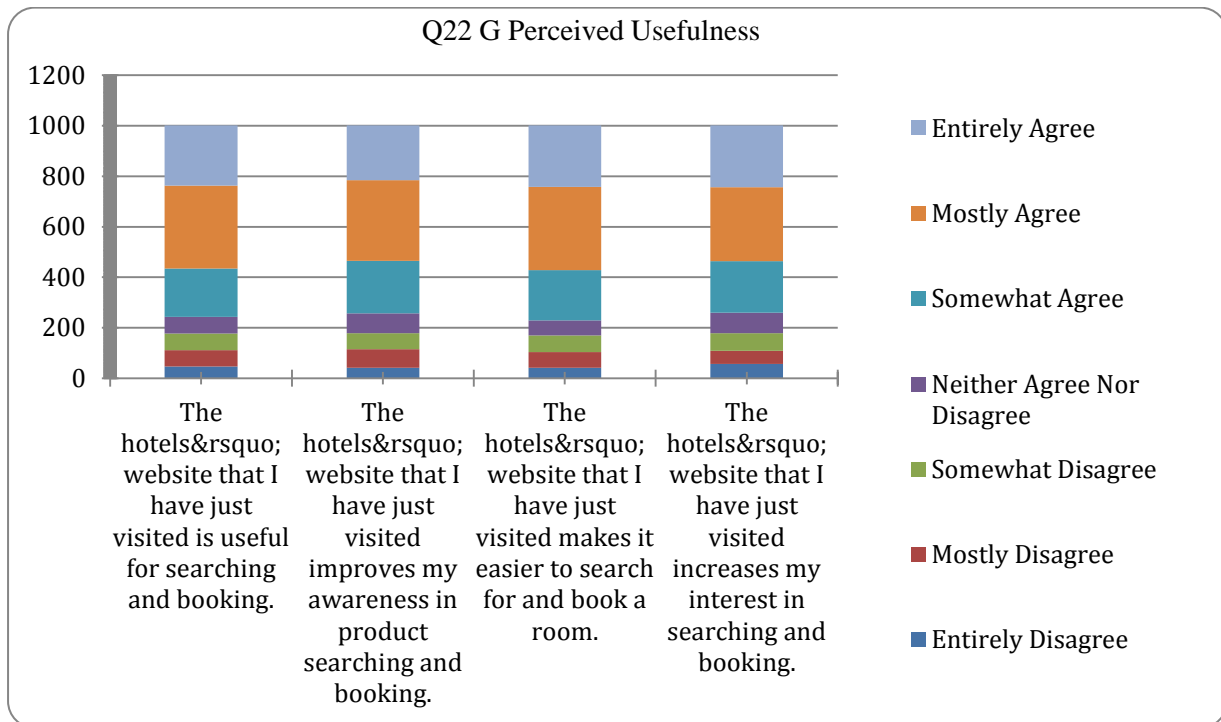
<b>Q21. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review</b>								
<b>F Perceived Ease-of-Use</b>								
Answer Choice	Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total
1 The hotels website that I have just visited is easy to use.	51	64	69	54	192	359	212	1002

2	It is easy to become skilful at using the hotels website that I have just visited	50	67	49	72	193	322	248	1002
3	Learning to navigate the hotels website I have just visited is easy.	53	62	61	65	215	318	227	1002
4	My interaction with the hotels website I have just visited is clear and understandable.	54	56	62	72	208	315	234	1002
<i>answered</i>									<b>1,002</b>
<i>skipped</i>									<b>0</b>



<b>Q22. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review</b>									
<b>G Perceived Usefulness</b>									
Answer Choice	Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total	
1 The hotels website that I have just visited is useful for searching and booking.	46	65	66	66	191	329	238	1002	

2	The hotels website that I have just visited improves my awareness in product searching and booking.	41	74	64	78	208	320	216	1002
3	The hotels website that I have just visited makes it easier to search for and book a room.	41	62	66	60	199	330	243	1002
4	The hotels website that I have just visited increases my interest in searching and booking.	57	52	70	81	204	293	244	1002
<i>answered</i>									1,002
<i>skipped</i>									0



**Chi-Square Test Statistics**

	Entirely_ Disagree	Mostly_ Di sagree	Somewhat_ Disagree	NeitherAgree _Nor Disagree	Somewhat_ Agree	Mostly_ Agree	Entirely _Agree
Chi-Square	.500 <sup>a</sup>	.000 <sup>b</sup>	.500 <sup>a</sup>	.000 <sup>b</sup>	.000 <sup>b</sup>	.000 <sup>b</sup>	.000 <sup>b</sup>

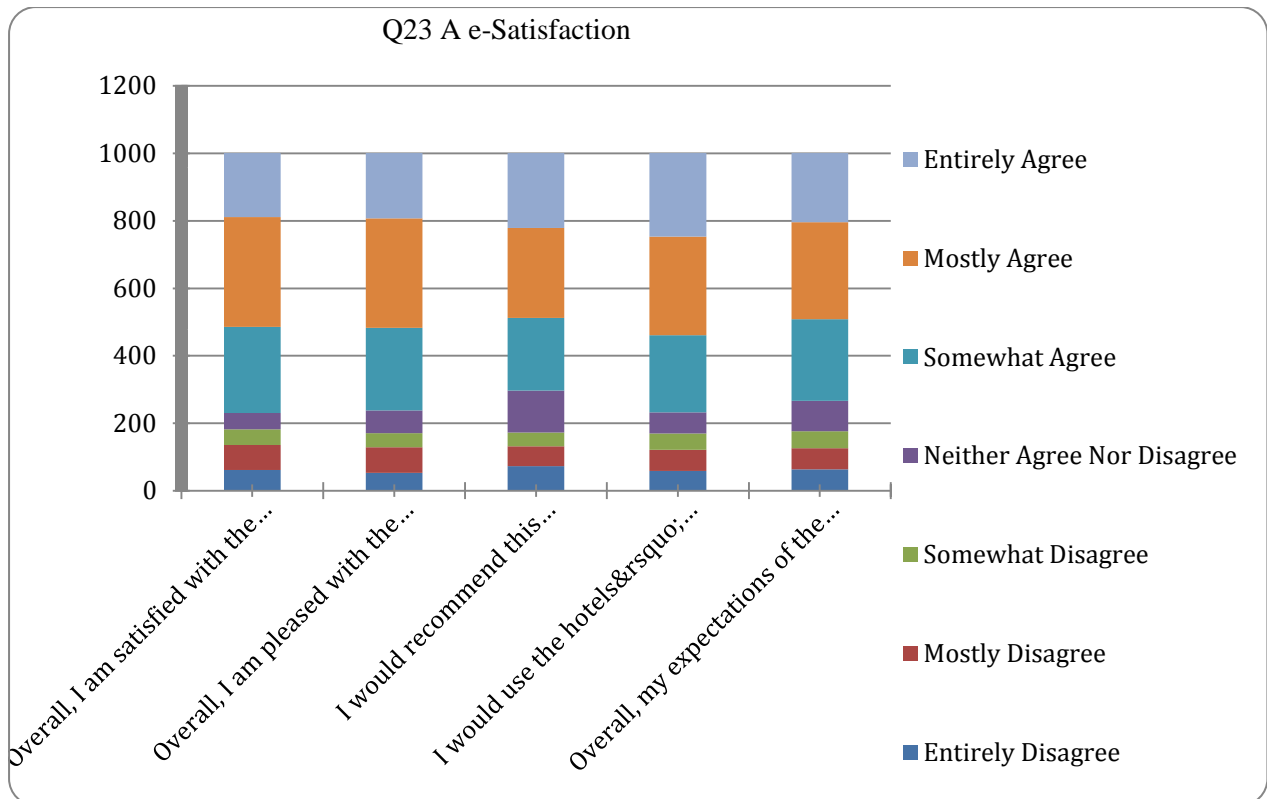
df	2	3	2	3	3	3	3
Asymp. Sig.	<b>.779</b>	<b>1.000</b>	<b>.779</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>

a. 3 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.3.

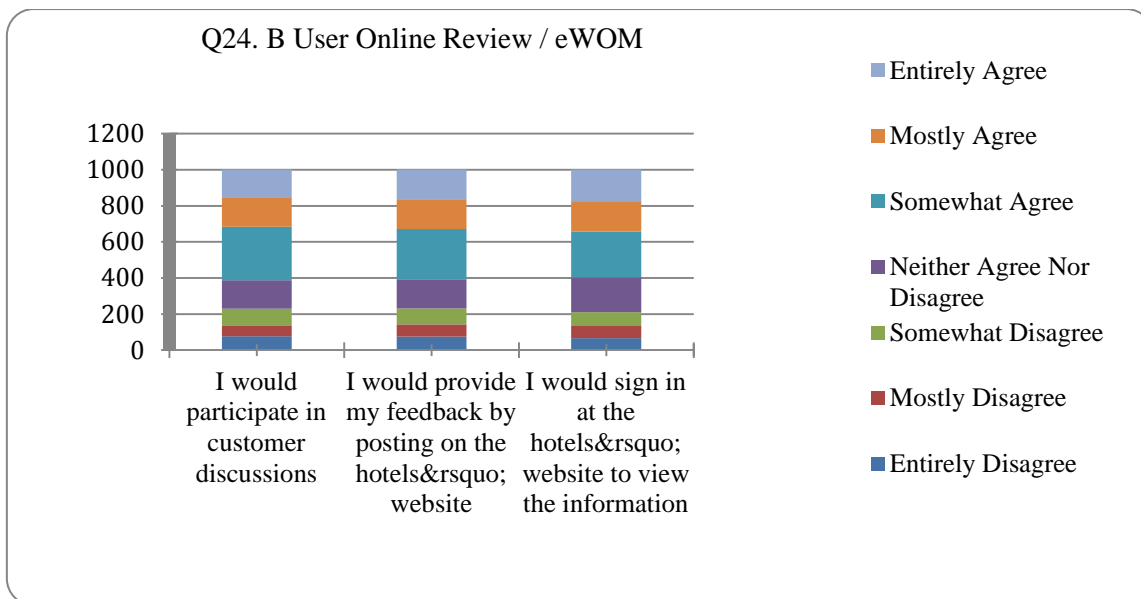
b. 4 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.0.

Q23. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review									
A e-Satisfaction									
Answer Choice		Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total
1	Overall, I am satisfied with the hotels website.	61	74	47	48	256	325	190	1002
2	Overall, I am pleased with the hotels website.	53	76	42	67	245	324	194	1002
3	I would recommend this hotels website to a friend.	73	59	40	125	215	267	222	1002
4	I would use the hotels website again.	59	62	49	62	229	292	248	1002
5	Overall, my expectations of the hotels website were exceeded.	63	63	50	90	242	288	205	1002
<i>answered</i>									<b>1,002</b>
<i>skipped</i>									<b>0</b>

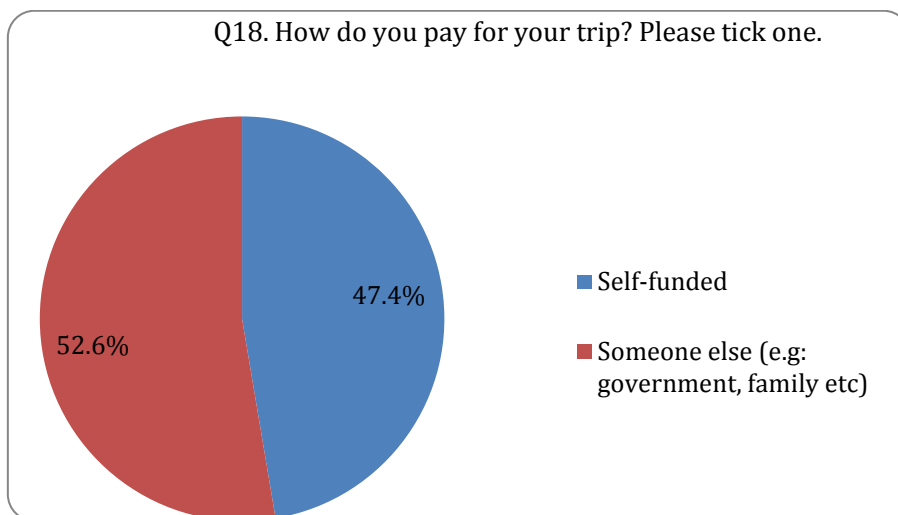
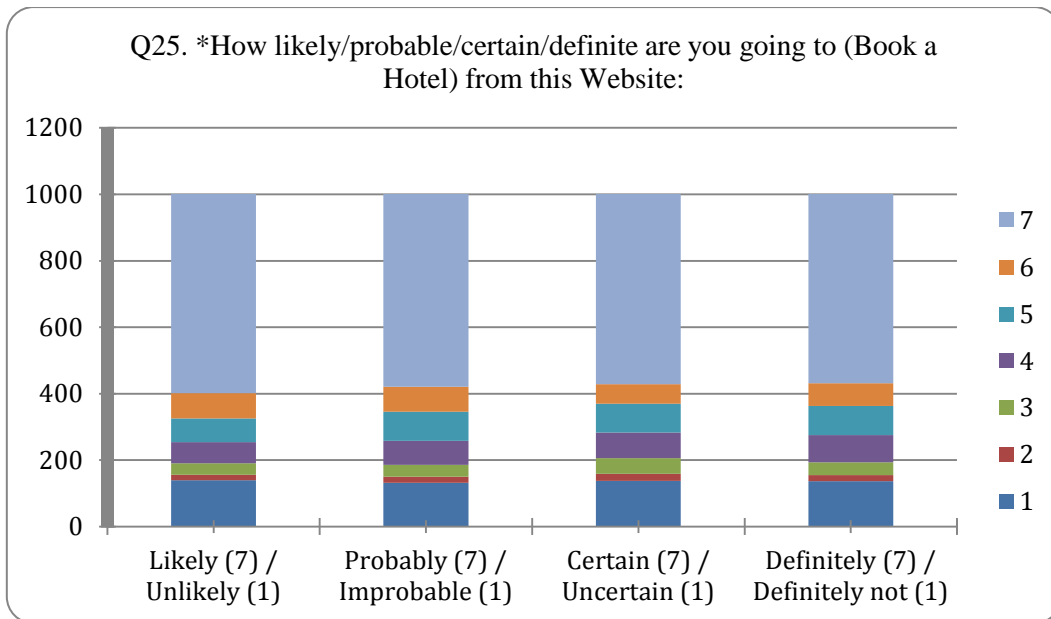




<b>Q24. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review</b>								
<b>B User Online Review/eWOM</b>								
<b>Answer Choice</b>	Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree	Response Total
1 I would participate in customer discussions	76	62	91	158	296	161	157	1002
2 I would provide my feedback by posting on the hotels website	75	68	88	159	282	164	165	1002
3 I would sign in at the hotels website to view the information	67	66	77	193	255	168	175	1002
<i>answered</i>								<b>1,002</b>
<i>skipped</i>								<b>0</b>



<b>Q25. The Web Design Factors that Attract Tourists to Book a Hotel and Generate an Online Review</b>									
<b>* How likely/probable/certain/definite are you going to Book a Hotel from this Website:</b>									
<b>Answer Choice</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Response Total</b>
1	Likely (7)/Unlikely (1)	139	17	35	63	71	77	599	1002
2	Probably (7)/Improbable (1)	132	18	36	72	88	75	580	1002
3	Certain (7)/Uncertain (1)	138	21	47	77	87	59	572	1002
4	Definitely (7)/Definitely not (1)	137	18	38	82	88	68	570	1002
<i>answered</i>									<b>1,002</b>
<i>skipped</i>									<b>0</b>



**Appendix 6 – Descriptive Analysis of the Pilot Sample**

**Pilot Sample Details: Data on 12 Constructs used in Pilot Study**

S.No	SQSE	NAVI	CQPOA	CQ	SQVA	SQPR	EN	PEOU	PU	ES	eWOM	CPD
1	6.33	5.00	5.75	6.29	6.00	6.33	5.00	6.50	6.00	5.80	5.00	7.00
2	5.67	3.20	3.00	1.43	1.00	1.11	1.75	1.00	2.50	1.00	4.00	1.00
3	7.00	5.40	5.50	6.00	7.00	6.33	6.00	7.00	6.75	7.00	5.00	7.00
4	3.67	2.00	2.25	1.43	3.00	2.33	2.00	3.00	2.00	2.00	5.00	1.00
5	4.33	2.80	3.50	2.29	2.67	2.22	1.00	3.00	3.00	2.00	5.00	1.00
6	5.33	3.40	3.75	1.00	3.00	1.00	3.00	1.00	2.00	1.00	7.00	1.00
7	4.67	2.00	3.50	1.71	2.00	1.44	2.00	1.00	3.00	1.00	5.00	1.00
8	5.67	3.40	2.50	2.71	2.00	2.78	1.00	3.00	2.00	2.80	6.00	1.00
9	4.67	2.80	2.75	2.29	1.67	1.89	1.50	1.00	1.75	1.20	1.00	1.00
10	4.67	2.80	4.00	2.57	1.00	1.33	1.00	1.75	1.00	1.80	5.33	1.00
11	4.33	2.80	3.75	2.71	2.00	2.67	2.00	3.00	2.00	2.60	6.00	1.00
12	4.67	2.80	2.50	2.57	1.00	2.33	1.00	2.00	1.00	1.80	3.00	1.00
13	6.33	5.20	5.50	6.43	7.00	6.78	6.00	7.00	7.00	6.00	5.00	7.00
14	4.00	2.80	2.50	1.43	1.00	1.89	1.00	1.75	1.25	1.80	6.00	1.00
15	4.33	2.20	3.75	2.86	3.00	2.78	2.00	3.00	2.75	2.00	1.00	1.00
16	5.67	4.40	5.75	5.86	6.00	6.56	6.00	6.75	6.25	5.00	4.67	7.00
17	3.67	2.20	2.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
18	5.33	5.80	4.25	6.43	6.00	6.33	5.00	6.00	7.00	6.00	5.00	7.00
19	3.67	3.20	2.75	2.29	3.00	2.33	1.00	2.50	3.00	1.00	6.00	1.00
20	3.67	2.40	2.50	2.43	1.00	1.00	2.00	1.00	3.00	1.00	7.00	1.00
21	4.00	1.80	4.00	1.57	1.00	1.44	1.00	2.00	1.00	1.80	4.00	1.00
22	5.33	5.40	4.50	6.57	6.00	6.78	5.00	6.00	6.00	4.80	7.00	7.00
23	5.00	5.80	5.50	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
24	7.00	5.00	4.25	5.57	5.00	5.78	6.00	5.00	6.00	4.80	2.00	7.00
25	6.00	5.40	4.75	7.00	5.00	6.22	6.00	7.00	5.00	6.00	7.00	7.00

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26	6.00	4.60	4.50	5.43	5.00	6.00	5.00	6.00	6.00	4.80	4.67	7.00
27	7.00	5.80	4.25	5.57	6.00	6.22	5.00	7.00	6.00	5.80	5.00	7.00
28	6.67	6.40	5.50	7.00	7.00	7.00	7.00	7.00	7.00	7.00	1.00	7.00
29	5.33	4.60	3.50	5.00	6.00	5.44	5.00	6.00	6.00	5.00	7.00	7.00
30	7.00	5.80	5.50	6.71	7.00	6.44	6.00	7.00	7.00	7.00	4.00	7.00
31	7.00	6.20	4.00	7.00	6.00	7.00	6.00	7.00	7.00	6.00	5.00	7.00
32	5.00	4.80	4.50	5.00	5.00	6.00	5.00	6.00	5.00	4.80	3.00	7.00
33	7.00	5.80	5.00	7.00	6.00	6.44	6.00	7.00	6.50	6.00	5.00	7.00
34	6.67	5.20	3.50	5.86	6.00	6.33	5.00	5.00	6.50	5.00	6.00	7.00
35	7.00	6.20	5.75	6.57	5.00	7.00	5.00	7.00	6.00	6.80	7.00	7.00
36	6.33	5.40	4.50	5.29	5.00	5.33	5.00	5.00	6.00	4.80	7.00	7.00
37	6.00	5.60	4.25	6.57	5.00	6.56	5.00	6.25	6.25	5.80	6.00	7.00
38	7.00	6.00	3.75	5.71	5.00	6.56	5.25	6.00	6.25	5.40	6.00	7.00
39	5.00	4.60	3.00	5.43	5.67	5.22	5.75	5.00	5.00	4.80	4.00	7.00
40	7.00	6.40	4.50	6.57	6.00	6.56	6.00	7.00	7.00	6.80	7.00	7.00
41	5.67	5.00	4.00	5.29	5.00	5.89	5.00	6.00	5.00	4.80	6.00	7.00
42	7.00	5.60	4.00	6.43	5.33	6.00	5.50	6.00	5.00	6.00	4.67	7.00
43	6.00	5.60	4.00	5.71	5.00	5.67	4.00	5.00	5.00	4.00	6.00	7.00
44	4.67	6.00	5.75	6.29	6.00	6.89	6.25	7.00	7.00	7.00	7.00	7.00
45	5.33	4.20	4.50	5.86	5.00	5.78	5.75	5.75	5.25	5.60	5.00	7.00
46	6.67	5.80	3.50	6.00	5.00	6.11	6.00	6.00	6.00	5.60	5.33	7.00
47	7.00	6.20	5.50	6.71	6.00	7.00	6.25	7.00	7.00	7.00	6.00	7.00
48	6.00	5.60	4.50	5.29	4.00	5.44	4.00	5.75	6.00	4.00	3.00	7.00
49	6.33	5.00	4.00	6.43	5.00	5.67	5.00	5.75	5.75	4.80	7.00	7.00
50	7.00	5.80	4.50	6.71	6.00	6.78	5.00	6.00	6.75	6.00	1.00	7.00
51	5.67	4.60	4.50	5.57	4.00	6.00	4.00	6.00	5.00	4.80	5.33	7.00
52	7.00	6.40	4.25	6.43	6.00	7.00	6.00	7.00	7.00	6.80	7.00	7.00
53	5.33	5.00	3.75	5.57	5.00	5.78	5.00	5.00	5.75	4.00	2.00	7.00

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54	6.67	6.20	4.50	6.86	6.67	6.56	6.75	6.50	6.50	6.60	7.00	7.00
55	5.00	4.60	2.50	5.29	5.00	5.44	5.00	6.00	5.75	4.80	6.33	7.00
56	6.00	5.60	4.00	6.00	5.33	6.22	5.25	5.25	5.00	5.00	3.00	7.00
57	7.00	5.80	4.50	6.86	6.00	7.00	6.00	7.00	6.00	7.00	6.00	7.00
58	5.00	4.80	4.00	5.00	4.00	5.00	4.00	5.00	5.00	4.80	3.00	7.00
59	6.33	5.60	5.50	6.00	7.00	6.33	5.75	6.50	6.50	5.00	5.00	7.00
60	7.00	5.80	5.50	7.00	7.00	7.00	7.00	7.00	7.00	7.00	5.67	7.00
61	5.00	4.60	3.50	5.71	5.00	5.67	5.00	6.00	5.25	5.00	4.00	7.00
62	6.33	5.80	5.75	6.43	6.00	6.44	6.00	7.00	7.00	6.00	7.00	7.00
63	6.33	6.20	3.00	6.71	5.00	7.00	5.50	6.00	6.50	6.00	5.00	7.00
64	6.67	5.40	4.00	5.71	5.00	6.00	5.00	5.50	5.75	4.80	1.00	7.00
65	7.00	5.40	5.75	6.57	5.00	6.56	5.00	7.00	7.00	6.20	5.00	7.00
66	5.33	4.40	4.00	5.43	5.00	5.78	5.25	6.00	6.00	6.20	3.00	7.00
67	7.00	5.60	5.25	6.57	6.00	7.00	6.00	7.00	7.00	7.00	6.00	7.00
68	6.00	5.40	5.25	6.86	6.00	6.22	6.50	6.50	6.00	5.20	3.00	7.00
69	7.00	5.00	3.00	6.71	7.00	7.00	7.00	6.00	7.00	7.00	7.00	7.00
70	6.33	4.80	3.50	6.43	6.00	6.56	6.50	6.75	6.50	7.00	5.67	5.50
71	3.00	3.00	2.75	2.57	2.00	2.00	2.00	3.00	3.25	3.40	3.00	3.00
72	5.67	4.40	2.50	5.00	5.00	5.22	5.00	5.25	5.00	4.60	4.00	4.00
73	7.00	3.40	3.50	4.29	3.33	3.67	4.25	2.75	3.50	3.60	4.67	4.50
74	4.67	4.20	3.50	4.14	4.00	4.44	4.00	3.75	2.25	1.80	2.33	3.75
75	6.33	4.20	3.00	5.86	4.33	6.22	3.75	6.00	6.00	6.00	4.33	7.00
76	3.67	5.40	3.75	4.57	5.67	4.44	4.00	6.00	5.25	5.80	6.00	4.50

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**Inter-Item Correlation Matrix and Reliability**

	SQSE	NAVI	CQPOA	CQ	SQVA	SQPR	EN	PEOU	PU	ES	eWOM	CPD	Cronbach's Alpha if Item Deleted
SQSE	1.000	.753	.524	.750	.671	.742	.720	.672	.717	.710	.350	.696	0.967
NAVI	.753	1.000	.622	.917	.868	.917	.869	.892	.895	.879	.336	.888	0.963
CQPOA	.524	.622	1.000	.645	.646	.632	.629	.680	.637	.635	.347	.596	0.969
CQ	.750	.917	.645	1.000	.906	.975	.927	.945	.929	.931	.396	.939	0.960
SQVA	.671	.868	.646	.906	1.000	.923	.937	.918	.925	.893	.315	.875	0.961
SQPR	.742	.917	.632	.975	.923	1.000	.922	.964	.936	.933	.386	.949	0.960
EN	.720	.869	.629	.927	.937	.922	1.000	.895	.911	.901	.304	.901	0.961
PEOU	.672	.892	.680	.945	.918	.964	.895	1.000	.924	.949	.339	.915	0.960
PU	.717	.895	.637	.929	.925	.936	.911	.924	1.000	.917	.335	.915	0.960
ES	.710	.879	.635	.931	.893	.933	.901	.949	.917	1.000	.359	.879	0.961
eWOM	.350	.336	.347	.396	.315	.386	.304	.339	.335	.359	1.000	.347	0.979
CPD	.696	.888	.596	.939	.875	.949	.901	.915	.915	.879	.347	1.000	0.963

The yellow-shaded cells display correlation values more than 0.900

Overall Reliability =

0.964

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SQSE	53.911	300.429	0.737	0.656	0.967
NAVI	54.927	287.993	0.926	0.872	0.963
CQPOA	55.575	305.708	0.658	0.519	0.969
CQ	54.516	268.940	0.966	0.963	0.960
SQVA	54.941	271.853	0.933	0.928	0.961
SQPR	54.456	264.717	0.970	0.977	0.960
EN	55.102	270.652	0.937	0.925	0.961
PEOU	54.457	265.382	0.959	0.963	0.960
PU	54.526	267.669	0.952	0.921	0.960
ES	54.921	266.881	0.945	0.929	0.961
eWOM	54.792	312.955	0.217	0.149	0.979
CPD	54.14434	251.072	0.925	0.921	0.963

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**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.967	.969	12

**ANOVA**

		Sum of Squares	df	Mean Square	F	Sig
Between People		2060.473	75	27.473		
Within Sample Respondents	Between Items	167.771	11	15.252	16.740	.000
	Residual	751.663	825	.911		
	Total	919.434	836	1.100		
Total		2979.907	911	3.271		
Grand Mean = 4.97173						

**Appendix 7 – Changes in Chi-Square Values on Addition of Paths**

**Regression Weights: (Group number 1 - Default model)**

			M.I.	Par Change
Q18.9	<---	Q22.4	4.035	0.027
Q16.4	<---	MCPD	4.475	0.044
Q19.2	<---	MCPD	5.177	0.038
Q19.1	<---	MCPD	16.202	-0.073
Q21.2	<---	Q14.1	10.198	0.031
Q16.1	<---	MCPD	4.234	-0.041
Q18.4	<---	MCPD	4.538	0.043
Q22.5	<---	Q14.1	10.874	0.027
Q22.4	<---	Q18.9	5.097	0.018

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	98	577.884	257	0	2.249
Saturated model	351	0	0		
Independence model	26	44962.994	325	0	138.348

**After Adding Path from MCPD to Q19.2**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	99	566.542	254	0	2.23
Saturated model	351	0	0		
Independence model	26	44962.994	325	0	138.348

**After Adding path from MCPD to Q19.1**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	99	559.454	254	0	2.203
Saturated model	351	0	0		
Independence model	26	44962.994	325	0	138.348

**Appendix 8 – List of Fit Indices**

MODEL FIT INDICES	ACRONYM	LIMITING VALUE
Chi-Square Minimum Discrepancy	CMIN	p < 0.05 but this is expected with a large sample
Degree of Freedom	DF	
p-Value	P	
Normed Chi-Square	CMIN/DF	< 3
Root Mean Square Error for Approximation	RMSEA	< 0.07
Goodness-of-Fit Index	GFI	> 0.9
Adjusted Goodness-of-Fit Index	AGFI	> 0.8
Normed Fit Index	NFI	> 0.9
Relative Fit Index	RFI	> 0.9
Comparative Fit Index	CFI	> 0.9
p for Close Fit	PCLOSE	> 0.05
Expected Cross-validation Index	ECVI	Smaller the better
HOETLIER	HOETLIER	< 75 poor Fit; > 200 Good Fit

Model Fit Indices for the Measurement Model

Model fit indices	Acronym	Limiting Value	Model after EFA	Iteration I	Iteration II	Iteration III	Iteration IV	Iteration V	Iteration VI	Comments on the Fit
$\chi^2$ minimum discrepancy	CMIN	p < .05 but this is expected with a large	8814	3862.736	2553.53	1232.1	1065.74	679.532	671.791	Not perfect
Degree of freedom	DF		1238	1280	1003	541	475	325	275	-
p-Value	p		0	0	0	0	0	0	0	Not perfect
Normed Chi-Square	CMIN/DF	< 3	7.12	3.018	2.546	2.277	2.244	2.091	2.443	OK
Root Mean Square Error for Approx.	RMSEA	< .07	0.085	0.049	0.043	0.039	0.039	0.036	0.041	OK
Goodness of Fit	GFI	> .9	0.717	0.849	0.861	0.922	0.929	0.946	0.94	OK
Adjusted Goodness of Fit	AGFI	> .8	0.685	0.823	0.845	0.904	0.911	0.928	0.924	OK
Normed Fit Index	NFI	> .9	0.904	0.958	0.967	0.981	0.982	0.987	0.985	OK
Relative Fit Index	RFI	> .9	0.897	0.955	0.964	0.977	0.979	0.983	0.982	OK
Comparative Fit Index	CFI	> .9	0.916	0.972	0.979	0.989	0.99	0.993	0.991	OK
p of Close Fit	PCLOSE	>0.05	0	0.811	1	1	1	1	1	OK
Expected Cross-validation Index	ECVI	Smaller the better	4.964	3.409	2.801	1.781	1.573	1.094	1.025	Not perfect
HOETLER	HOETLER	<75 Poor fit >200 Good fit	182	297	355	406	415	455	394	OK

Note: Recommended levels based on Hoop e.al (2008); Hair et.al., (2009); and Iacobucci (2010)

**The End**