INVESTIGATING FACTORS AFFECTING CUSTOMER SATISFACTION AND THE UTILIZATION OF EMARKETPLACES

MONASH University

Submitted by

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Acronyms

AVE	Average Variance Extracted
B2B	Business-to-Business
B2C	Business-to-Consumer
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CSF	Critical Success Factors
Cs	Complementary Services
Cu	Customer Satisfaction
EFA	Exploratory Factor Analysis
GFI	Goodness-of-Fit Index
GOF	Goodness-of-Fit
ICR	Internal Consistency Reliability
ICT	Information and Communication Technology
IS	Information System
IT	Information Technology
KMO	Kaiser Meyer Olkin
MSA	Measure of Sampling Adequacy
PLS	Partial Least Squares
Re	Reliability
Rg	Regulatory Requirements
RMSEA	Root Mean Square Error of Approximation
Sc	Security

SEM	Structural Equation Modelling
Si	Strong Infrastructure
SPSS	Statistical Package for the Social Sciences
SSME	Service Science Management and Engineering
TAM	Technology Acceptance Model
TOE	Technology, Organization, and Environment context
UNCTD	United Nations Conference on Trade and Development

Abstract

The increased use of Internet-based web applications in business organisations today has brought huge opportunities. A major focus of organisations in the volatile business environment, customer satisfaction, has become one of the key measures of service quality outcomes, which in this thesis, is determined by the degree of utilization of the eMarketplace. Although much research has addressed the issues surrounding the adoption of technologies, particularly eMarketplaces, investigations into customer satisfaction and utilization of eMarketplaces are still lacking. For this reason, this thesis aims at answering the following research question: *What are the factors affecting customer satisfaction and the utilization of eMarketplaces?*

A review of the literature on eMarketplaces identified five key factors, which are pivotal to the success of the eMarketplace, namely security, complementary services, strong infrastructure, reliability and regulatory requirements. Six hypotheses were proposed to test the impact of these factors on customer satisfaction and the utilization of eMarketplaces. Employing a multiphase mixed methods design, data was collected in two phases. The first phase of data collection involved surveys of 337 eMarketplace users from Saudi Arabia. The survey participants were divided into two groups based on their age, experience and their involvement with technology. The first group comprised non-fulltime workers (n=156) and the second group comprised fulltime workers (n=181). Outcomes of the first phase of data collection supported the proposed hypotheses with differences between the two groups in relation to the importance of factors relating to eMarketplace infrastructure and regulatory requirements.

There were common uncertainties among the non-full-time group's answers, which in turn resulted in weak support for eMarketplace infrastructure and regulatory requirements. Outcomes of the second phase of data collection using semi-structured interviews further clarified the issues raised from the findings of the first phase whereby participants recommended additional sub-factors, which were used to revise the research model. In addition, the interview findings helped to identify the barriers resulting in the low utilization of eMarketplaces in developing countries such as Saudi Arabia.

This thesis contributes to the existing research on eMarketplaces by providing a theoretical framework involving the factors that positively influence customer satisfaction and utilization of eMarketplaces. It shows how customer satisfaction can be determined and demonstrates its correlation with the utilization of eMarketplaces. The findings further enhance the understanding of eMarketplaces in Saudi Arabia, particularly in terms of factors that ensure customer satisfaction and the desired utilization level. It contributes to building an empirical foundation for understanding the needs of customers from specific cultural backgrounds. Future research is vital to validate the research model in relation to different settings e.g. in countries with similar cultural backgrounds.

Declaration of Authorship

I, Fahad Algarni declare that this thesis contains no material which has been accepted for the award of any other degree or diploma in any university and, to the best of my knowledge and belief, the thesis contains no material previously published or written by another person, except when due reference is made in the text of the thesis.

Signed: **Fahad**

Date: **04/09/2015**

Dedication

To my beloved family members

Acknowledgements

I am grateful to my supervisors for their endless support and encouragement. My foremost thanks goes to my first supervisor, Dr Yen Cheung, for her precious support, which provided me with enthusiasm and encouragement during my PhD candidature. I am really thankful to her for keeping me motivated with a continuous provision of insights and suggestions to improve my thesis. I also would like to extend my deepest gratitude to my supervisor, A/Professor Vincent Lee, for his expert guidance and incredible support during my study. His extraordinary effort guided me to overcome obstacles and enrich my critical thinking and research experience. Producing this thesis under their supervision is a great honour.

My sincere thanks go to my beloved parents for their continuous support, encouragement and supplications. Special and very big thanks go to my wife for her invaluable assistance and continued patience, support and understanding. I will never forget her important role during this journey. I also would like to thank my little daughter Diala. The same is said to all of my brothers, sisters and relatives.

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Chapter 1

Introduction

1.1. Background and Motivation

The digital economy and Internet technologies have grown in use and popularity since the late 1990s, resulting in the disappearance of intermediaries between purchasers and vendors. This revolutionary new business model enables vendors to sell their goods and services direct to consumers without the need for a middle man (Shaffer & Zettlemeyer, 1999; Wigand & Benjamin, 1995; Choi, Stahl, & Whinston, 1997). Subsequently, with the growth of online business technologies, different forms of intermediaries were distinguished in this new virtual world, along with new value added services. This new business model has attracted a large volume of new players for both purchasers and vendors with extra services that sustain the trading process between them (Clarke, 2001; Chircu & Kauffman, 2000; DeSisto, 2000). The eMarketplace is one of the emerging business models developed in the late 1990s and is the result of incorporating innovative technology in business processes. It is believed that the eMarketplace, as a platform for Information and Communication Technologies (ICT), when integrated effectively, can shape a nation's future (Roy, 2009).

The eMarketplace is a part of the online business process. This relationship has resulted in the reengineering of the information systems' model, the formulation of new requirements for training and education, and opening new investment windows for the development of new technologies at both the computer hardware and software application level to meet the needs of newly emerging business models (Bakos, 1991; N. P. Archer & Gebauer, 2000). One of the vital requirements to ensure efficiencies in doing business via the eMarketplace is the use of Internet technologies in everyday business. An organization can enter the eMarketplace as a purchaser or a vendor, however, to ensure successful entry into the eMarketplace arena, organisations should carefully plan every step in advance. By doing so, the organisation will benefit from fully utilizing the resources which are available to establish a virtual trading space that will bring the profits expected from eMarketplaces (N. P. Archer & Gebauer, 2000). Therefore, it is vital to research the factors that an organization needs to consider to effectively integrate into the eMarketplace.

The existing literature in the field of the eMarketplace has indeed left doors open to identify the benefits and opportunities that may be gained in the future (Pucihar & Podlogar, 2003, Gajšek & Pucihar, 2004, S. Standing, C. Standing, & Love, 2010). The current literature presents numerous cases of both the successful and unsuccessful employment and utilization of the eMarketplace, for both end purchasers and vendors. Unsuccessful employment of the eMarketplace might be caused by unsuitable service and/or support from suppliers. If the services provided by eMarketplace systems do not add value for both the purchaser and vendor, in the long term, the eMarketplace may not be the desired platform for a successful business operation, and the organisation may be forced to face early closure if it does not have the desired volume of business. This also applies to purchasers. If there are only a small number of buyers, vendors are likely to lose interest in joining the eMarketplace, as they will not be compensated for their business investment.

The recent literature discusses various models of eMarketplaces (Standing, Standing, & Love, 2010). Today's eMarketplaces support many different processes between a purchaser and a vendor, for example, a number of eMarketplaces support only the accumulation of supply and demand and some only support various forms of auctions and consultations. Not many eMarketplaces support the whole trading process from contracting, logistics, insurance, finances, legal, payments and other services, which are needed (Pucihar, 2003).

The establishment of eMarketplaces as a development of ICT is a somewhat new phenomenon in Saudi Arabia (SA). In this country, the direction in which the eMarketplace will develop is moderately uncertain because of the fast changing environment and rapid development of eCommerce technologies. In the long term, only those eMarketplaces that provide value-added services will continue to exist in the turbulent global economic environment. As eCommerce links local markets into one global market, organizations will have to be able to satisfy worldwide eMarketplace policies. Therefore, business organizations are trying to gain a competitive advantage in different ways, which includes conducting business via the eMarketplace.

An eMarketplace is a way to advertise and exchange products and services via the Internet without being hindered by constraints, such as time and location. Hence, eMarketplaces allow people to perform different tasks and business transactions simultaneously (Wei, Kan, & Zi-gang, 2007).

Many services are offered by eMarketplaces. These include the creation of electronic catalogues detailing the services and goods offered by the business and their prices, structuring of diverse business proposals, business negotiations and other services (Bakos, 1998). The provision of these services depends on consumer demand and the sellers. This is due to the fact that the growth of ICT in recent years has affected many aspects of human life. This technology has changed the way people communicate, the way business is conducted as well as the way people live in contemporary society. It is an undeniable fact that ICT plays an indispensable role in

society. In fact, ICT is the main enabling technology for eMarketplace activities. As the eMarketplace is considered to be one bi-product of ICT, the Saudi Arabian government is currently focusing on coping with this rapid development that has already been experienced by developed nations such as the USA, UK, South Korea and Australia. Aleid, Rogerson, & Fairweather, (2009) are of the view that one major aspect of improving ICT in this country is the development of a feasible infrastructure that can be used to control and support it. Similarly, AlGhamdi, Nguyen, & Drew, (2012) also identified eMarketplaces as one of the major factors that affect the adoption and development of ICT in any country (AlGhamdi, Nguyen, & Drew, 2012).

Another indicator of ICT utilization in most countries around the world is the Internet coverage rate (Amit & Zott, 2001). A high rate of Internet coverage in a country points to a correspondingly high rate of ICT utilization. According to Amit and Zott (2001), Internet coverage is an indication of the segment of the population that can easily access the Internet and the services it offers. In SA, this Internet coverage rate is very low, and this translates into low utilization of eMarketplaces. According to the Saudi Telecom Co. (STC), which is one of the major players in the ICT sector in SA, the portion of Saudi residents who could access the Internet was approximately 3-4 percent in 2003 (Sait, Al-Tawil, & Hussain, 2007), increasing to 25 percent by 2006 (Aleid, Rogerson, & Fairweather, 2009). Given that not all Internet users were accessing eMarketplaces, the rate of access to eMarketplaces is significantly lower compared to other nations around the world, such as the USA. Furthermore, about 75 percent of these Internet users in the country were male. This is due to the fact that majority of businesses in this country are owned and operated by men, many of whom are aged 35 years and below, an indication that the younger population are embracing technology more than the older generation (Algarni, Cheung, & Lee, 2013a).

Overall, the low level of eMarketplace utilization in the kingdom of SA can be appreciated when several aspects such as accessibility to the Internet are compared

with those of other developed nations. For example, the United Nations Conference on Trade and Development (UNCTAD) is of the view that most Internet hosts are found in the developed countries, some of the most developed nations in the world. In fact, 89 percent of all Internet hosts in the world are found in these two regions (UNCTAD, 2003). Subsequently, the rate of eMarketplace access in these countries is also high.

As a platform of eMarketplaces, a typical eMarketplace life cycle (see Figure 1-1) consists of the following key stages: initiation, adoption, implementation, diffusion, utilization, evaluation and improvement stages (Mircea, Micu, & Stoica, 2011; Rahim 2007; Zhao, Huang, & Zhu, 2008; Cheng, Hailin, & Hingming, 2008; Resnick, Manard, Stone,& Alwan, 2009; Shin and Park 2009; MacGregor, Vrazalic, Carlsson, Bunker, & Magnusson, 2007). Previous studies have empirically identified the success factors of some of these stages i.e. the adoption stage (El-Gohary, 2012; Molla & Licker, 2005; Shah Alam, Ali, & Mohd. Jani, 2011; Wymer & Regan, 2005). However, little or no attention has been given to the utilization stage, specifically for the eMarketplace phenomenon and its important determinant, customer satisfaction.

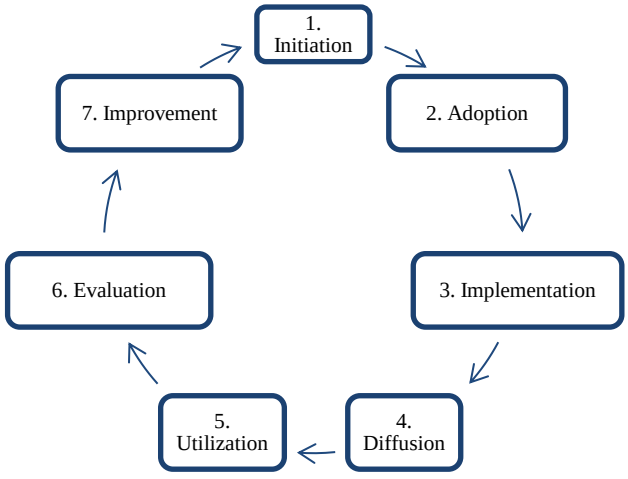


Figure 1-1: The eMarketplace Lifecycle

1.2. Aims and Objectives

The eMarketplace literature can be categorized into four main areas: eMarketplace users, eMarketplace systems, eMarketplace adoption and organisational issues associated to eMarketplaces, as shown in Figure 1-2. However, some important aspects, such as the efficient utilization and functionality of the eMarketplace and its role in improving eMarketplace users' satisfaction require further attention from researchers. This is due to the fact that the utilization of eMarketplaces is considered a key element in a business organization when conducting business online to achieve the desired goals. All four areas are significant and essential for the development of automated eMarketplace theory, the theory that helps developers to develop an eMarketplace application quickly in this rapidly changing business environment.

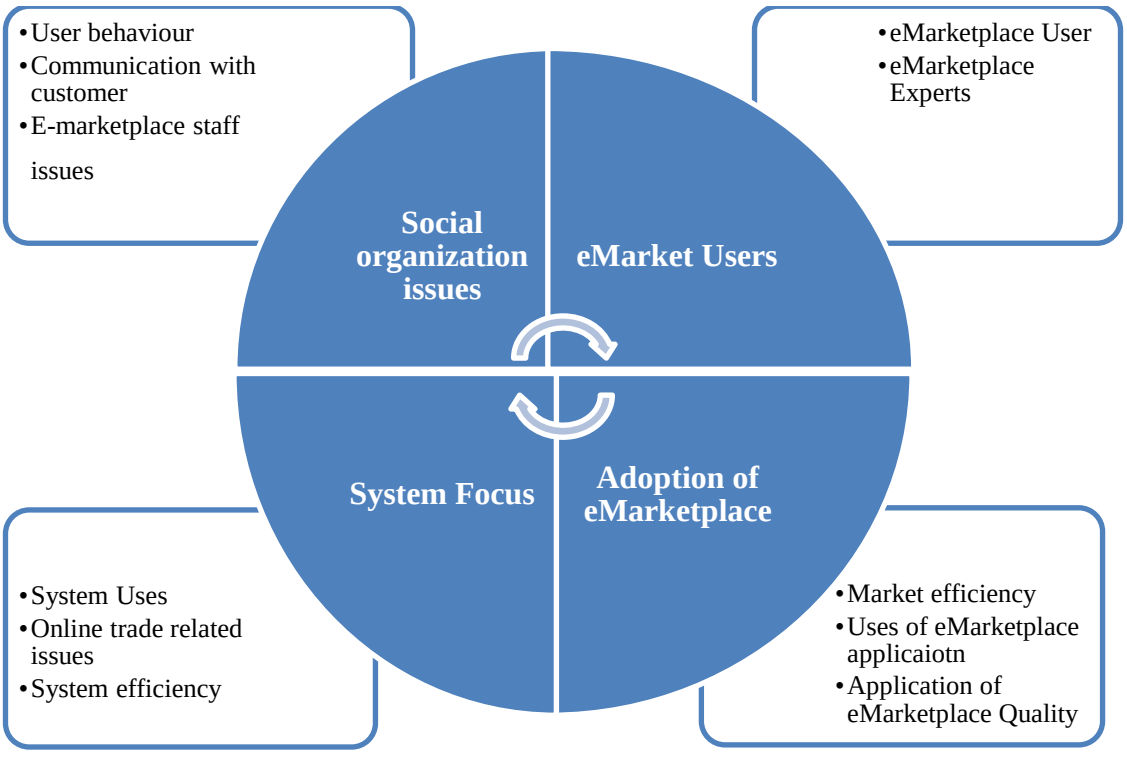


Figure 1-2: The eMarketplace Research Focus

While there have been a substantial number of articles published in key journals (e.g. IJEBR, JeLKS, eSJ etc.)on eMarketplaces, there are still many unanswered questions and areas of this research (see Figure 1-2) that are yet to be investigated. For instance, many studies have focused on auction tools in relation to their effectiveness and efficiency. In terms of assessment, relatively few studies have examined the organisational impact of eMarketplace participation and the problems involved in the utilization of eMarketplace or repeated success or failure of the initiative. Wareham, Zheng and Straub's (2005) review of eMarketplace research found a large proportion of studies examined strategic and business issues and they also found that comparatively few researchers have surveyed the business value creating features of eMarketplace trading. As the acceptance of eMarketplace trading can be a key organisational decision with many related risks, such as the estrangement of the serving suppliers and unfilled or poorly filled orders, there is a need for more research on the organisational and corporate implications of eMarketplace trading. In other words, there should be less attention on the eMarketplace itself and more on the process of organising and dealing with eMarketplace participation to produce effective outcomes.

There is little clarification in the existing literature on the eMarketplace as to why business organisations employ eMarketplaces and why their efforts are successful or otherwise. The utilization of an eMarketplace can bring about change or no change under particular conditions and can have either proposed or unplanned consequences (M. S. Archer, 1995). Appropriate understanding plays a key role in discovering the mechanisms involved in producing outcomes or actions and changing social structures. Technology implementation and changes in technology through use also occurs by the stimulation of causal mechanisms in conjunction with the capability of humans to make decisions and change interpersonal structures among objects. These studies of eMarketplace participation combine both social structures and technology; by taking a realist viewpoint it is possible to discover interactions among social and technological objects and combine financial theories

of the market and social theories. A case study on business processes in the context of eMarketplace research provides the opportunity to discover context, social and technological structures in and among the case organisation and the eMarketplace provider.

The development of eMarketplace operations can bring about organisational change and will have a consequence on organisational adoption decisions and improve its utilization. Participation decisions can also affect how the eMarketplace owner responds by altering their organisational strategies or Information Technology (IT) and how the eMarketplace impacts on business performance. Examination of these mechanisms provides insights into how scientific and social structures interrelate and how they can impact each other. Technology has the power to either bring about business organisational change or constrain it. The use of eMarketplace technology and functional business organisational change can be expected to bring about more short-term than longer-term change, due to rapid change in the business environment. In the long term, it is the relationship between the business organization components and their power to generate either positive or negative consequences from eMarketplace participation that will regulate the sustainability of the eMarketplace participation and utilization.

Qualitative research methods applied to the area of eMarketplaces only produce information on the particular cases or scenario based on the eMarketplace user's point of view, and any more general conclusions are only hypotheses on eMarketplaces. On the other hand, quantitative research methods are widely used to verify whether the hypotheses about the study are true or otherwise. Qualitative researchers aim to understand human behaviour and the reasons that govern such behaviour in relation to eMarketplaces and its related components. The qualitative research method examines the 'why' and 'how' of decision making about eMarketplaces, not just what, where, and when. Qualitative researchers have conducted studies on eMarketplaces in different countries such as the USA, the UK, Germany, France, Australia and the UAE etc. (Al-Shehry, Rogerson, Fairweather, &

Prior, 2006; Al-Somali, Gholami, & Clegg, 2009; Alasem, 2009; Aleid, Rogerson, & Fairweather, 2009; Algarni, Cheung, & Lee, 2011; Allen, Juillet, Paquet, & Roy, 2001; N. P. Archer & Gebauer, 2000; Bygdeson & Gunnarsson, 2000; Byrd & Turner, 2000; Chircu & Kauffman, 1999; Choi, Stahl, & Whinston, 1997; Christiaanse & Markus, 2002; Chua, Straub, Khoo, & Kadiyala, 2005; Dubois, Heymans, Mayer, & Matulevičius, 2010; Emiliani, 2000; Eng, 2004; Gajšek & Pucihar, 2004; Gilliam & Feather, 2004). However, no one has studied eMarketplaces from the viewpoint of utilization and customer satisfaction. This leads to the main research question of this thesis, which is:
What are the factors affecting customer satisfaction and the utilization of eMarketplaces?

A summary of the aims and objectives of the thesis are as follows:

- to study the processes of eMarketplaces and its utilization;
- to identify the Critical Success Factors (CSF) of eMarketplaces in relation to its utilization and customer satisfaction;
- to identify the barriers to the utilization of eMarketplaces;
- to identify the main pillars of eMarketplaces that underpin its successful utilization and contribute to customer satisfaction;

1.3. Contributions

In pursuit of the above research objectives, this thesis makes several contributions to the research area of eMarketplaces and its utilization in the sphere of electronic commerce. This section describes the major contributions of this research.

1.3.1. Development of the research model

The study proposes a research model, which assists the understanding of researchers, customers and investors on the utilization of eMarketplaces and customer satisfaction. It contributes to building an empirical foundation for understanding the factors that influence the utilization of eMarketplaces.

1.3.2. Identification of the critical success factors that influence eMarketplaces

This study empirically examines the factors that influence eMarketplaces and the utilization of the eMarketplace. It contributes to the eMarketplace literature by showing how customer satisfaction can be improved and provides researchers with a model that can be validated on different countries with diverse backgrounds. The study shows that eMarketplace technologies could play significant role in the success of the electronic trade. These technologies offer numerous advantages both to businesses and consumers. According to Alemayehu (2007), businesses can significantly reduce their telecommunications expenses, for example, by making use of eMarketplace technologies, businesses no longer need to print leaflets and post them to customers. Moreover, factors identified in this research contribute to theoretical knowledge on the utilization and customer satisfaction of eMarketplaces.

1.3.3. Development of an eMarketplace research method

The literature shows that the development of eMarketplace models is based on the industrial sector and its particular situation, as every industry and every situation in each industry are different from each other. Therefore, it is important to develop a model or methodology in order to summarize the overall research aims and objectives. In this thesis, a multiphase mixed methods design was used. The multiphase mixed methods design involves a research design/implementation that

employs multiple methods, that is, more than one research method or more than one worldview for instance, employing both quantitative research and qualitative research in one research study.

This thesis is based on a practical paradigm, which allows the use of a multiphase mixed methods approach. Both quantitative data and qualitative data were collected using questionnaires with open-ended questions and semi-structured interviews, which were then analysed. For the quantitative research, a survey was distributed to a sample of eMarketplace users, followed by semi-structured interviews with eMarketplace regulators. Thus, this thesis shows the importance of targeting multiple players involved in the eMarketplace activities in order to gain better and stronger outcomes.

1.3.4. The quantitative validation of the research model

In this phase of the research, the model was quantitatively validated in the Saudi Arabian context. SA is a country where eMarketplace customers and companies are facing various challenges while using the eMarketplace. It has a continuous growing economy compared to most other countries and is dominated by the oil industry which contributes 35% of the gross domestic product (GDP). Although, the level of eMarketplace utilization in this country is below global standards, local authorities support the adoption of modern online business models due to its promising trends for trade in SA (Aleid, Rogerson, & Fairweather, 2009), pledging to assist domestic business operators who are facing competition, both nationally and internationally.

The empirical validation results indicate that all five critical success factors, namely security, complementary services, strong infrastructure, reliability and regulatory requirements are significant in relation to eMarketplace utilization in Saudi Arabia with some uncertainties observed among survey participants regarding the eMarketplaces infrastructure and regulatory requirements. Thus, the quantitative validation of the research model represents a novel contribution. It contributes to the eMarketplace research by demonstrating how conceptual model can be validated

based on specific cultural context and opens up opportunities for future research to apply the model on similar or different cultures.

1.3.5. The qualitative validation of the research model

After validating the initial research framework that links the five critical success factors of eMarketplaces with customer satisfaction, this phase of the research comprises detailed semi-structured interviews with seven eMarketplace regulators from the Ministry of Commerce and Industry in Saudi Arabia. Clarifications on the importance of eMarketplaces' infrastructure and regulatory requirements were obtained. In addition, the interviews provided sufficient explanations of the current and future government plans to foster eMarketplaces in Saudi Arabia. The qualitative validation together with the obtained remarks represents another novel contribution for the eMarketplaces research. It contributes by showing the importance of addressing the regulators of eMarketplaces. It also shows how multiple validations of conceptual models among different eMarketplaces' players in a specific culture could enrich and strengthen the overall outcomes. The findings suggest that businesses, which had stronger customer satisfaction in their eMarketplace, had a greater rate of utilization compared to those with lower customer satisfaction. The study results also indicate the importance of considering additional sub-factors related to the context of this study. Overall, this study helps in building better understanding of the customer satisfaction and the utilization of eMarketplaces in general with particular attention given to the Saudi Arabian context. Thus, other developing, Islamic and Arabic countries with similar cultural background could be benefited by the outcomes of this research, with possible implications for developed nations world-wide to address the vital eMarketplace's players.

1.4. Organization of the Thesis

This section provides an overview of the thesis. The first chapter has presented an introduction covering the background and motivation, aims and objectives and the major contributions of this research. The following chapters are summarized as follows:

- Chapter 2. This chapter provides a survey of the eMarketplace research area and the related work on eMarketplaces. The research articles reviewed are based on the following information: background of eMarketplaces, definitions of eMarketplaces, importance of eMarketplaces and its challenges, advantages and disadvantages of eMarketplaces, categories of eMarketplaces, eMarketplace methodologies and their analysis, the utilization of eMarketplaces, the importance of eMarketplace customer satisfaction, how eMarketplaces help in achieving a better future for businesses, and the role of the business environment in increasing eMarketplace success. In addition, the critical success factors related to eMarketplace utilization were explored. Overall, Chapter 2 aims at presenting a thorough understanding of eMarketplaces in the context of its utilization and customer satisfaction, which addresses the gap in the existing research and the objectives of this thesis. The detailed literature review of existing eMarketplace methodologies leads to the identification of the factors, which are important in the context of eMarketplace utilization, and the gap in the research guided the selection of the research methodology.

- Chapter 3. Research Methodology: the multiphase mixed-methods research methodology that is employed in this research is overviewed in this chapter. It describes the literature on designing a research method to select an appropriate research prototype and methods of enquiry. The chapter also reviews the existing mixed-method designs and its related strengths and

weaknesses. It also describes the data collection methods and data analysis used in the quantitative and qualitative phases of this research.

- Chapter 4. Quantitative Study of eMarketplaces in Saudi Arabia: In this chapter, the proposed research model that links the success factors of customer satisfaction and the utilization of eMarketplaces is empirically validated based on the results obtained from online surveys with Saudi Arabian eMarketplace consumers. In this regard, customer satisfaction is used as a proxy to measure the effectiveness of eMarketplace utilization in Saudi Arabia, which is initially driven by five different factors from the eMarketplace literature. The chapter first discusses the main objective of the chapter, the data collection and the data analysis techniques. It demonstrates the statistical software used and the different tests used. The chapter finally provides a detailed discussion on the results and offers suggestions for further research.

- Chapter 5. Qualitative of the research model: The main objective of this chapter is to further validate the research model with eMarketplaces, regulators in SA. The chapter begins by categorising the main themes of the semi-structured interviews, followed by details on the regulators' opinions and suggestions. It presents in-depth explanations required to clarify uncertainties among participants of the survey regarding the eMarketplace infrastructure and regulatory requirements. The chapter then details other important eMarketplaces' issues such as barriers impacting the development of eMarketplaces. Finally, the chapter presents the revised research framework, based on the results and findings.

- Chapter 6. Discussion: In this chapter, the research contributions and findings, their association with the existing literature, and the significance and implications of each contribution are explained. The chapter divides the discussion into two main phases: phase 1 describes the each contribution of this thesis and phase 2 discusses other relevant general findings on eMarketplaces.

- Chapter 7. Conclusions and Future Research: This chapter concludes the work of the thesis. It also outlines the remaining challenges in the discipline and the possible dimensions that have opened up for future investigation. Both the theoretical and practical aspects for future work in the area of the eMarketplace are summarized.

The thesis contains the following appendices: Appendix A contains Monash University Ethics Committee approval. Appendix B contains the study questionnaire and the interview protocol. Appendix C contains the translated questionnaire and interview protocol. Appendix D contains the explanatory statements of both questionnaire and interviews together with their translation. Appendix E contains the permission obtained from the Ministry of Commerce and Industry in SA to conduct the interviews together with the relevant consent form.

1.5. List of Publications

- Algarni, F., Cheung, Y., & Lee, V. (2011). Towards an explanatory model of eMarketplaces utilization: A case study of Saudi Arabia. Paper presented at the 13th International Conference on Enterprise Information Systems (ICEIS 2011), 63-75.

- Algarni, F., Cheung, Y., & Lee, V. (2012). The Relationship between Complementary Services and Service System Value Creation: A Case Study of eMarketplaces in Saudi Arabia. Paper presented at the Seventh International Conference on Knowledge, Information and Creativity Support Systems (KICSS 2012), 211-215.
- Algarni, F., Cheung, Y., & Lee, V. (2013). An empirical study of eMarketplaces customers' satisfaction: Evidence from Saudi Arabia. Paper presented at the 10th International Conference on Service Systems and Service Management (ICSSSM), 434-439.
- Algarni, F., Cheung, Y., & Lee, V. (2013). An Intelligent Voice-Based eMarketplace for Visually Impaired People. Journal of Software Engineering and Applications, 6(3B), 91-96.
- Algarni, F., Cheung, Y., & Lee, V. (2013). Towards an Explanatory Model of Approaching Critical Mass on eMarketplaces: An Empirical Worldwide Study. Paper presented at the 2013 Frontiers in Service Conference, Taipei, Taiwan.
- Algarni, F., Cheung, Y., & Lee, V. (2015). Customer Satisfaction: Moderator of e-Business Performance and e-Business Liveability. Journal of Software, 10(5), 524-537.

Chapter 2

Literature Review

2.1. Introduction

In today's volatile and competitive environment, eMarketplaces have an important role to play in the digital economy as well as being a vibrant research area. It is considered to be a unique online platform that offers tools and capabilities for marketing, communication and retention of consumers (Uzzi, 1997; AbuAbi, Rahim, & Burgess 2013). Unlike supply chains, an eMarketplace can be defined as an inter-organizational technological and online information system that permits the contributing purchasers and vendors in a number of markets to exchange information about cost and goods assistance and carry out business transactions. It assists possible trading partners to find each other and transact. In addition to being significant from a practical perspective, eMarketplaces have made a key impact on the eBusiness area from both the company and the customer's perspectives, as both have benefited from the emergence of eMarketplaces with its main goal being to facilitate business transactions using an efficient and effective approach. It is clear that eMarketplaces offer a more practical and well-defined business model for organizations to compete in the contemporary digital economy (Bakos, 1997; Choudhury, Hartzel, & Konsynski, 1998). Despite the rapid development of

eMarketplaces, it is noted that in many cases, they are under utilized and face early closure due to various technical or cultural obstacles (Algarni, Cheung, & Lee, 2011; AlGhamdi, Nguyen, & Drew, 2012; Vatanasakdakul & Aoun, 2009).

In general, eMarketplaces can be categorised from various perspectives relating to their utilization: the independent eMarketplace, the buyer-oriented eMarketplace, the supplier-oriented eMarketplace, the vertical eMarketplace, the horizontal eMarketplace and the hybrid eMarketplace. Further information on these is presented in later sections of this chapter.

The aim of this chapter is to provide a comprehensive survey on eMarketplaces in the context of its utilization and customer satisfaction, which will address the research gap in the existing literature and achieve the objectives of this thesis (see Chapter 1). It covers the concept of the eMarketplace, including its background, definitions, challenges, motivations, importance, types and eMarketplaces research trends. The rest of the chapter is structured as follows: 1) section 2 provides the plan of the literature review, section 3 reviews the literature, section 4 presents the research trends in relation to eMarketplaces, section 5 identifies the research gap and presents the proposed research model.

2.2. Literature review planning

In this section, a description of the literature review plan is given, including the research aims and objectives, the questions related to this study and the search strategy employed in literature review.

2.2.1. Search Method and Data Analysis

The search technique used to identify relevant papers for the literature review consists of selected keywords. The selected sources and language are as follows:

Selected sources: ACM digital library, IEEE Xplore, Science Direct (Elsevier), Oxford University Press, JSTOR and Google Scholar.

Premier IS journals and conferences that published articles on eMarketplaces were targeted for the search. These include MIS Quarterly, the European Journal of Information Systems, Electronic Markets, the Journal of Electronic Commerce Research, the Journal of Management Information Systems and Decision Support Systems. In addition, selected conferences include Hawaii International Conference on System Sciences (HICSS), the Pacific Asia Conference on Information Systems (PACIS) and the International Conference on Information Systems (ICIS).

Selected language: The English language is the most popular and commonly used language in the world and most of the available research is written in English. For this study, the English language will be used.

2.3. Analysis of literature

2.3.1. Background

The utilization of the digital economy in the late ’90s caused the disappearance of intermediaries between customers and vendors. A vendor could sell company goods and services directly to a customer without the need for a middle man (Pucihar & Podlogar, 2003; Wigand & Benjamin, 1995). Beside the advance in the growth of the digital economy technologies, novel types of eMarketplaces were established which contributed new value-added services, attracting many new customers and vendors with extra services that facilitate the required business transactions (Algarni, Cheung,

& Lee, 2011; AlGhamdi, Nguyen, & Drew, 2012; Chircu & Kauffman, 1999; Clarke, 2001). The development of eMarketplaces has changed the way traditional business is performed, resulting in new business models, which were developed in the late 1990s. The eMarketplace is the result of employing innovative technology in business processes. Overall, the deployment of eMarketplaces is associated with the eBusiness process of reengineering, linking IT/IS technologies with traditional businesses (Bakos, 1991; N. P. Archer & Gebauer, 2000). It requires a change of management principles and practical alignment between IT/IS technologies and business processes, all of which should be considered for the successful implementation of eMarketplaces.

Whilst there are many advantages and opportunities for eMarketplaces (Pucihar & Podlogar, 2003), cases of the ineffective employment of eMarketplaces, from both the customers' and vendors' side are reported (Pucihar, 2003). If the services of an eMarketplace contractor do not add any value to the customer/vendor, in the long term, they will decide that the eMarketplace is not the best way for them to conduct business. Lacking an adequate critical mass of customers will lead to the eventual shutdown of that particular eMarketplace. Similarly, an insufficient number of buyers in the eMarketplace will reduce the incentive for vendors to join the eMarketplace, as there will not be enough customers to whom they could advertise their goods or services.

The contemporary literature on eMarketplaces describes many different eBusiness models of eMarketplaces (Balocco, Perego, & Perotti, 2010). Today's eMarketplace practices support many different processes between a customer and a vendor. A number of eMarketplaces support only the aggregation of supply and demand, and the searching and matching of customers or vendors (Bakos, 1998). In addition, different eMarketplaces support different types of auctions and negotiations. On the other hand, not many eMarketplaces support the entire trade process such as contracting, logistics, insurance, finances, legal and payments (Pucihar, 2003).

2.3.2. Definitions of eMarketplace

In today's advanced technological world, the problem of eBusiness implementation and utilization remains one of the top concerns of business and IT executives in an organization (AbuAbi, Rahim, & Burgess 2013). There are various definitions of eMarketplace in the existing literature, the most prominent ones from the following authors (N. P. Archer & Gebauer, 2000; Azizi, Salar, & Langroudi, 2012; Bakos, 1991; Chua, Straub, Khoo, & Kadiyala, 2005; Datta & Chatterjee, 2008; Du, Li, & Wei, 2005; Grieger, 2003; Guo, 2007; Hadaya, 2006; Hartley, Lane, & Hong, 2004; Jiang, Dong, & Tang, 2013; Joo & Kim, 2004; Koch & Schultze, 2011; Kudělka, Snášel, Horák, Hassanien, & Abraham, 2010; Matook, 2012; Matook & Vessey, 2008; Segev, Gebauer, & Färber, 1999; Shih, 2004; Soh, Markus, & Goh, 2006; Stockdale & Standing, 2004; Wang, Archer, & Zheng, 2006; Monsuwé, Dellaert, & De Ruyter, 2004). Table 2-1 lists the most commonly used definitions of eMarketplaces.

Generally speaking, the two main players in eMarketplaces are the customer/buyer and the seller/company, as depicted in Figure 2-1.

Figure 2-1: The eMarketplace as an electronic intermediary between company and customer

As shown in Figure 2-1, an eMarketplace is considered as an inter-organizational IT system in which customers and vendors interact to achieve one or more of the following eMarketplaces activities: recognizing possible trading partners, choosing a precise partner, and implementing the transaction.

Table 2-1: Definitions of eMarketplaces

Authors	**eMarketplace definition**	**Comments**
N. P. Archer and Gebauer (2000), Electronic Markets	An eMarketplace is a virtual marketplace where buyers and suppliers meet to exchange information about manufactured goods and service offers, and to discuss and carry out business dealings	This definition suggests buyers and sellers meet online to buy/sell a product
Segev et. Al. (1999), Electronic Markets	An eMarketplace is a process that uses Internet technologies and standards to exchange product data and to make online transactions.	The authors emphasize the importance of the Internet and information technology to be able to access and share information on an online business
Guo (2007), Enterprise Information Systems	An eMarketplace is a process where buyers and sellers from various business organizations use information systems to conduct business online.	The authors focus on the common platform where buyers and sellers do business.
Datta and Chatterjee (2008), European Journal of Information Systems	An eMarketplace is an online portal where sellers and consumers meet in order to conduct business transactions, whether on an individual or organizational level.	The authors suggest that buyers and sellers should focus on one domain for doing business. They also discussed the different levels of business transactions.
Koch and Schultze (2011), MIS Quarterly	An eMarketplace is an organization for selling and buying products online.	Both buyers and sellers are included in this definition and the author concludes that online businesses are always seeking good partners to whom to sell their

		product.
Wang, et. Al. (2006), Electronic Markets	An eMarketplace is defined as an online networked portal that links organizations and facilitate transactions for online customers and sellers to interact effectively.	The authors suggest that business organizations should be linked through a domain which allows them to exchange information.
Matook (2012), Decision Support Systems	An eMarketplace is an online website that assists the process of exchanging manufactured goods among buying and sellers.	This definition highlights the importance of the eMarketplace website for the exchange of information between sellers and buyers.
Matook and Vessey (2008), Journal of Electronic Commerce Research	An eMarketplace is a virtual trading portal that allows online consumers to exchange product information, services and payments in a convenient manner.	The definition is limited to the exchange of information about product and services.
Hadaya (2006), Journal of Electronic Commerce Research	An eMarketplace is a place where a mediator enables online shoppers and suppliers to interrelate on an online portal which depends on the Internet infrastructure for the sharing of information about goods and services.	The author suggests consumers and suppliers interact to conduct success online business.
Stockdale and Standing (2004), Journal of Enterprise Information Management	An eMarketplace is an online portal that joins organizations to allow many purchasers and retailers, and other investors, to interrelate and perform business transactions.	This definition of the eMarketplace refers to the importance of the online portal in the area of the eMarketplace.
Shih (2004), Journal of Information and Management	An eMarketplace is an online platform that facilitates concentrated communication of information among customers and companies.	The author demonstrates the importance of interactive behaviour in relation to the productivity of eMarketplaces.
Kudělka., et al (2010), Computational	An eMarketplace is a web page that is created with an intention of selling products online and	The importance of the functionality of eMarketplaces is the

Social Network Analysis	meeting the high expectations of sellers and buyers.	major factor in the success of eMarketplaces.
Joo & Kim (2004), Journal of Purchasing and Supply Management	An eMarketplace is an electronic space that acts as a mechanism for price offerings. For example auctions, gathering product information from different vendors for easy comparison or exchange and reverse auctions.	The author highlighted three main factors of eMarketplaces, namely; the seller-side eMarketplace, the buyer-side eMarketplace and the third party eMarketplace.
Azizi, et al. (2012), International Journal of Business & Management	An eMarketplaces is an online platform that displays products from many different vendors and charges a commission based on certain agreements.	The author suggests that the quality of services should be given considerable attention while conducting online business.
Jiang, et al. (2013), ICCNCE	An eMarketplace is an online web platform that represents a collection of different vendors or brands with the aim of increasing profits for both eMarketplaces and business executives.	The authors recommend that the quality of services must be considered as the main factor in the success of the eMarketplace.
Du, et al. (2005), Decision Support Systems	An eMarketplace is an innovative online intermediary that facilitates the process of exchanging information, products, services, and related payments.	The authors suggest that a definition of the eMarketplace should include infrastructure that facilitates transactions, and it matches buyers with sellers.
Monsuwé, et al. (2004), International Journal of Service Industry Management	An eMarketplace is an online portal which allows customers to complete the purchasing process from the decisional stage to the transactional stage of ordering the required goods.	This definition highlights customer traits, product characteristics, previous online shopping knowledge and situational factors.
Grieger, (2003); Hartley, et al. , (2004), European journal of operational	An eMarketplace is an online portal that utilizes Internet technologies to facilitate online shopping and supply management.	This definition refers to the process of attaining products required and the importance of keeping costs stable in order to

research & IEEE Transactions		grow the organization's profits.
Soh, et al. (2006), MIS Quarterly	An eMarketplace is an online intermediary that connects buying firms with selling firms.	The authors suggest that firms should connect with each other and share their information.
Chua et al. (2005), Journal of electronic Commerce Research	An eMarketplace is a "virtual space" which is used by customers and sellers to exchange goods and services to conduct business transactions.	The authors suggest the new term "virtual space" for the eMarketplace.

In this chapter, we use the definition of the eMarketplace provided by O'Reilly and Finnegan (2010), who defined it as "an organizational intermediary that electronically provides value-added communication, brokerage and integration services to purchasers and vendors of direct/indirect goods and/or services in specific horizontal or vertical markets by supporting basic market functions, meeting organizational needs for information and process support, and/or operating the required IS and IT infrastructure". This definition of the eMarketplace is apt for a number of reasons. Firstly, it highlights all the factors involved in the eMarketplace research area, representing both 'what' and 'why'. Secondly, it refers to the purpose of these eMarketplace factors, including their aims and objectives. Lastly, the definition involves different important players participating in the utilization of eMarketplaces together with the consideration of its different transactions.

2.3.3. Importance of eMarketplace

It is anticipated that no business today will remain untouched by the emergence of the digital economy. The main role of eMarketplaces in today's rapidly changing business environment is to bring market players together to execute real-time exchange transactions, for example cost and product stipulations, and facilitating teamwork and network synchronization. The key idea is that a group of customers

and vendors transact in a single online platform, allowing member organizations to take advantage of greater economies of scale and liquidity; and to purchase or sell anything easily, quickly and cost effectively. In addition, eMarketplaces can help companies transcend geographical barriers, and grow globally to attain profits in emerging markets that were once unattainable.

Furthermore, the promising roles of eMarketplaces include aggregating and matching customers and venders and providing inter-business organizational market information (Bailey & Bakos, 1997). It performs similar business transactions to conventional marketplaces, such as matching buyers and venders, facilitating transactions, providing institutional infrastructure and offering capability, but with increased effectiveness and reduced transaction expenditure.

The main function of B2B eMarketplaces is to enable information about the market and transactions to flow more efficiently. Usually, a buyer has to set up connections and associations with many suppliers, who frequently use different IS and technologies, and vice versa. By utilizing an eMarketplace, the customer needs to create only one link with the eMarketplace, which provides a link to all the vendors on a system that shares similar standards. The eMarketplace offers a virtual space where customers and venders can come together to discover new business opportunities. The objective of the eMarketplace is to draw together as many buyers and venders as possible. Buyers bring purchase requirements while venders offer products or services. The eMarketplace will then match purchase requirements against selling offers, enabling the participants to undertake new exchanges (Oppel, Hartmann, Lingenfelder, & Gemuenden, 2001; Rask & Kragh, 2004; Roberts & Mackay, 1998; Rosson, 2000; Schmid & Lindemann, 1998; Sculley & Woods, 2001). In Figure 2-1, the arrows illustrate the electronic trade inter-links between suppliers and customers. By joining the eMarketplace, every participant, whether supplier or customer, can be matched with other participants in order to complete transactions, share documents and information as well as engage in business

collaborations. Such collaborations can assist customers and vendors to obtain more advantages from the digital economy.

2.3.4. Strenghts and Limitations of eMarketplace

The development of IT/IS technologies and telecommunication allow the digital economy to flourish, allowing its customers to transact with a minimized cost. The ongoing improvement of IT/IS technologies and telecommunication increases the efficiency of eMarketplaces. For instance, many recent developments in ICT have focused on improving the security of eMarketplace payments, which increase customers' confidence carry out business transactions on eMarketplaces all over the globe.

There is no doubt that the Internet has had an unprecedented impact on the digital business world. This is because of the noticeable advantages for both vendors and customers in comparison with conventional means of engaging in commercial activities. Despite these advantages, there are also disadvantages of conducting digital business on the Internet, such as security breaches to communication or confidentiality (Bucur, 2002; Collin, 1999; Hammond, 1996; Kambil & Short, 1994).

2.3.4.1. Strengths of eMarketplaces

Through the utilization of eMarketplaces, SMEs stand a better chance of competing with larger organisations. Simply being connected to the Internet 'highway' provides the exposure that SMEs are otherwise unable to achieve (Cheung, Scheepers, Swift, Lee, & Bal, 2010). In addition, unlike a physical organisation which employs 'bricks and mortar' employees who need salaries, a work schedule, holidays, etc., an eMarketplace can offer their goods 24 hours a day, 7 days a week with lower costs (Schneider, 2008). Consumers are not restricted to particular business house and are

thus able to attain information and place orders anytime, anywhere (Bucur, 2002; Collin, 1999).

Another advantage of eMarketplaces is the facilitation of International transactions. The networked eMarketplaces are not restricted by borders, nor do they belong to anybody and access and publication material costs are extremely low. Communication between a customer/vendor located at the opposite ends of the world is as simple as one click. Any vendor now can trade goods globally with less effort via the utilization of eMarketplaces (Turban, King, Liang, & Turban, 2010; Algarni, Cheung, & Lee, 2011).

In addition, the reduction of execution costs is also considered an advantage of eMarketplaces. With reduced personnel required in eMarketplaces, the costs of running an eMarketplace will also be lowered. This can provide an opportunity for businesses utilizing the eMarketplace to better optimize their assets (Bucur, 2002; Collin, 1999; Hammond, 1996; Kambil & Short, 1994). Furthermore, eMarketplaces can offer comparison shopping. Customers are able to utilize online search engines and compare prices to select a product at the best price possible.

Another advantage of eMarketplaces is their ability to provide detailed product information. There are limits to the amount of information that can be displayed in physical stores. Customers may need detailed information about certain products that is difficult to provide. Providing such detailed information has been made easy with eMarketplaces (Häubl, & Trifts, 2000). Moreover, eMarketplaces can also create more efficient and targeted advertising to attract consumers. Compared to physical marketplaces, eMarketplaces are able to keep detailed data on consumers as well as information on their shopping preferences to direct future communication and provide relevant offerings based on the customer's data (Mbatha, 2013). Customer information can be obtained by using all available data for example, customer location, the type of browser and operating system, the website they use to access the eMarketplace and their online behaviours/activities. This can help eMarketplace

vendors maintain efficient communication with customers (Turban, King, Liang, & Turban, 2010).

The facilitation of transactions is also considered an important advantage of eMarketplaces (Bakos, 1998; Laudon & Traver, 2009). This involves the process of matching the customers and vendors, for example, a customer with specific interests could easily establish a relationship with a vendor who supplies the desired products. This relationship can be long-term and the customer of the eMarketplace will have the opportunity to receive updates on the desired product. For example, a customer interested in a specific mobile make and model can register on the eMarketplace of the vendor who supplies that specific model to establish a relationship and initiate a transaction. The customer in this scenario will have the advantage of reviewing the product information prior to purchasing, before finalising the transaction. On the other hand, the vendor will be able to record the customer's interests, provide the required services and send future updates. Thus, the ability of eMarketplaces to facilitate transactions in this way could have the potential to build stronger relationships between customers and vendors, thereby resulting in the better utilization of eMarketplaces.

2.3.4.2. Limitations of eMarketplaces

Fraud is a rising concern when utilizing eMarketplaces. It is widely accepted that the use of the Internet and eMarketplace systems has created new fraudulent possibilities (Schneider, 2008). This is due to a lack of a direct contact, and in some cases, a customer may deliberately provide an incorrect identity and details to the vendor. Identity theft incidents in 2006, as a result of providing false information on the Internet, cost an estimated $50 billion US dollars to businesses in the USA (Kshetri, 2009). It was also found that with the increased number of online users, it has become difficult to report every incident in a timely manner.

The utilization of eMarketplaces' also raises issues related to security, especially the security of the user's data. Unlike physical markets, eMarketplaces are required to keep customer data safe from being exposed. Similar concerns are raised in relation to connecting to a community network where other users can possibly access private data. It is difficult for new companies which are utilizing eMarketplaces to handle such threats unless they are supported by experienced employees or partners in this field. In addition, the costs involved in employing skilled IT staff and purchasing the hardware/software required to maintain a safer eMarketplace may be prohibitive for some vendors (Bucur, 2002; Kambil & Short, 1994; Schneider, 2008).

According to Mutlaq and Rasheed (2009), 70 percent of consumers in the Kingdom of SA are of the view that security is their major concern when it comes to buying or selling online. This is especially so given the fact that to buy from the eMarketplace, personal details such as name and account details are needed. Of major concern is the disclosing of credit card details. Another study found that the majority of online customers believed that current advancements in security features, including encryption and other techniques, are not sufficient to lower their security concerns (Udo, 2001). Furthermore, potential eMarketplace customers might be worried that vendors can gather sensitive information without their knowledge that could be used in the future to cause discomfort and frustration.

Uncertainty regarding the reliability of eMarketplaces was also found to be a disadvantage for customers (Gommans, Krishnan, & Scheffold, 2001). With a lack of human contact (such as feeling and touching the products being offered), reliability in this sense means the dependability of eMarketplaces, where customers believe that information about the product being offered is accurate and precise. Gommans, Krishnan, and Scheffold (2001) added that such uncertainties could prevent prospective eMarketplace customers from engaging in and transacting with the eMarketplace. Therefore, it is important to consider such concerns in order to gain customers' confidence and meet their expectations.

2.3.5. Categories of eMarketplaces

The literature discusses several different categories of eMarketplaces. An independent eMarketplace is typically a B2B online platform purposed by a third party, which is open to sellers in a specific industry. The B2B eMarketplace involves a wide range of communications between businesses, including sales as well as the purchase of services, business resources, IT, manufactured parts and mechanisms and capital equipment. In order to set up an efficient purchasing environment, an association of buyers may choose to run a buyer-oriented eMarketplace. If buyers are looking to purchase or participate in eMarketplaces' activities, this type of eMarketplace can help lower administrative costs and assist them to obtain the best price from suppliers. A supplier-oriented eMarketplace is set up and operated by a number of suppliers who are seeking to create an efficient sales waterway via the Internet to a large number of buyers. A vertical eMarketplace provides online access/contact to businesses vertically up and down each segment of an industry sector, for example, automotive, chemical, textiles or construction. A horizontal eMarketplace is a set of assorted business and government entities assembled according to a universal need for selected goods and services. Table 2-2 presents a summary of these categories of eMarketplaces.

Table 2-2: Categories of eMarketplaces

Authors	**Category of eMarketplace**	**Focus**
Laudon and Traver (2007), Lucking-Reiley and Spulber (2001), Slyke et al. (2010)	Independent	B2B transactions eliminate those involving homes, such as trade sales, inter customer exchange, and service.
Caillaud and Jullien (2003),	Independent	By registering on an independent eMarketplace, companies can access

Nepal et al. (2011)		top-secret requests for quotes or bids in the business industry.
Popovic (2002), Bakos and Bailey (1997), Yoo et al. (2013)	Independent	The authors categorized B2B eMarketplaces according to their ownership arrangement and their industry focus.
Kaplan & Sawhney (2000), Campbell et al. (2013)	Independent	In disparity, independent eMarketplaces are built by a small number of business industry agents (purchasers or sellers), typically leaders that dictate their particular industries.
Evans (2002), De Castro et al. (2009)	Independent	The idea of two-sided eMarketplaces refers to circumstances where one or many competing platforms give services that are employed by two types of trading business partners to interrelate and facilitate an exchange.
Bakos and Bailey (1997), Mancini et al. (2006), Wu and Hisa (2008)	Independent	Classifies web intermediary services into four categories: aggregation of purchasers and sellers, trust improvement between participants, market facilitation, and matching of purchasers and sellers.
D. Schneider and Schnetkamp (2000), Turban et al. (2002), L.	Buyer oriented	A buyer-oriented eMarketplace is usually run by an association of buyers in order to set up an efficient

Xiao et al. (2014).		purchasing environment.
Kösling (2001), Sila (2013), Y. Wang and Lin (2008), Mesaros (2010)	Buyer oriented	Procurement cycles can be abbreviated and also be supported by auctions and buy volume can be packaged up from interior business departments and from partner business organizations.
Smart and Harrison (2003)	Buyer oriented	Minimizing process costs is the maximum potential of eProcurement.
Singh et al. (2005), Turban et al. (2002)	Supplier oriented	A supplier-oriented eMarketplace is set up and operated by a number of suppliers who are seeking to create an efficient sales waterway via the Internet to a great number of buyers.
Turban et al. (2002), Chein et al. (2012)	Supplier oriented	Products can be sold directly to the consumer without any need for intermediaries.
Bierregaard(2002), McCuiston et al.(2001)	Supplier oriented	Companies sell extra products and business consumers can therefore realize huge discounts.
Bakos and Bailey (1997), Berryman et al. (1998)	Vertical	Vertical eMarketplaces provide online access/contact to businesses vertically up and down each segment of an industry sector, for example automotive, chemical, textiles or construction.
Bygdeson and	Vertical	A vertical eMarketplace spans up

Gunnarsson (2000), Roberts and Mackay (1998)		and down each segment of one specific industry sector.
Roberts and Mackay (1998), Kaplan and Sawhney (2000)	Horizontal	A horizontal eMarketplace is a set of assorted business and government entities assembled according to a universal need for selected goods and services.
Reinking (2000), Andoh-Baidoo et al. (2012)	Hybrid	In this category of eMarketplaces, researchers combine both the vertical eMarketplace and the horizontal eMarketplace to add further value to businesses.
Lee et al. (2014)	Horizontal	In a horizontal eMarketplace, industries can be used for functions for example distribution, management, material, purchasing services etc.
Lee et al. (2014)	Vertical	In a vertical eMarketplace, professional information should support industry work process.

Due to the dynamic business environments, eMarketplaces are not strictly categorised according to Table 2-2. For instance, hybrid eMarketplaces that combines both the vertical eMarketplaces and horizontal eMarketplaces can add further value to businesses.

2.3.6. Analysis of eMarketplace Research

Analysis of the relevant literature published between 1996 – 2013 provided a number of research themes, as shown in Table 2-3:

Table 2-3: Themes of eMarketplaces' Research

No	Research Theme	Publications
1	E-commerce publications relevant to eMarketplaces	(Turban, King, Liang, & Turban, 2010), (G. Schneider, 2008), (Laudon & Traver, 2009), (Carillo & Beaudry, 2006); (Martinsons, 2002); (Ngai & Wat, 2002); (C. Standing & Lin, 2007); (Chu, Leung, Hui, & Cheung, 2007); (Marchewka & Towell, 2000); (Straub & Watson, 2001); (Wareham, Zheng, & Straub, 2005); (B. Xiao & Benbasat, 2007); (Cousins & Robey, 2005)
2	Theoretical studies of eMarketplaces	(AlGhamdi, Drew, & Alshehri, 2011); (Khalifa & Liu, 2007); (Lee & Joshi, 2006); (Bakos, 1998); (Glassberg, 2007); (H. G. Lee, Westland, & Hong 1999); (Grover & Ramanlal, 1999); (Algarni, Cheung, & Lee, 2011); (H. G. Lee & Clark, 1996); (Cordella, 2006); (C. Campbell, Ray, & Muhanna, 2005); (Bakos, 1997); (Levi, Kleindorfer, & Wu, 2003)
3	System: practical aspects related to system functionality of eMarketplaces	(Choudhury, Hartzel, & Konsynski, 1998); (Albrecht, Dean, & Hansen, 2005); (Colucci, Di Noia, Di Sciascio, Donini, & Mongiello, 2006); (C.-B. Cheng, Chan, & Lin, 2006); (MacInnes, 2005); (Adomavicius & Gupta, 2005); (Day & Raghavan, 2008); (Aron, Sundararajan, & Viswanathan, 2006); (Bolton, Katok,

		& Ockenfels, 2004); (Leskelä, Teich, Wallenius, & Wallenius, 2007); (Fahey, Srivastava, Sharon, & Smith, 2001) (Amyx & Luehlfing, 2006); (Charki & Josserand, 2008); (Engelbrecht-Wiggans & Katok, 2006); (Gregg & Scott, 2006); (Ba & Pavlou, 2002); (Sikora & Sachdev, 2008); (Yang, Hu & Zhang, 2007); (Pavlou & Gefen, 2004); (Singh, Salam, & Iyer, 2005)
4	eMarketplace application implementation/ adoption and its related issues	(AbuAbi, Rahim, & Burgess 2013); (Al-Ghaith, Sanzogni, & Sandhu, 2010); (S. Al-Somali, Gholami, & Clegg, 2010); (Wareham, Zheng, & Straub, 2005); (Agrawal, Hariharan, Kishore, & Rao, 2005); (Bakos, 1998); (Christiaanse, 2005); (Damsgaard, 1999); (Gengatharen & Standing, 2005); (Kim & Xu, 2007); (Driedonks, Gregor, Wassenaar, & Wassenaar, 2005); (Campbell, Wells, & Valacich, 2013); (Howard, Vidgen, & Powell, 2006)
5	Strategic, business and organizational implications of the eMarketplace	(Forman, Ghose, & Wiesenfeld, 2008); (Vargo & Lusch, 2011); (Verhagen, Meents, & Tan, 2006); (Hackney, Burn, & Salazar, 2004); Soh, Markus, & Goh, 2006); (Standing, Love, Stockdale, & Gengatharen, 2006); (Ratnasingam, 2005); (H. G. Lee & Clark, 1996)

These five research themes are further categorized into specific topics. A number of sub-topics appear in more than one research theme. This is because the same problem can be analysed from more than one perspective. For instance, trust is relevant to research theme 3 and is also relevant to research theme 5. Moreover,

organizational relationships and strategy which is relevant to research theme 1 and it is also relevant to research theme 5.

Research theme 1: E-commerce publications relevant to eMarketplaces. Under this research theme, there are a number of sub-themes as follows:

A main category of literature in eMarketplace research examines the theoretical foundations of eCommerce and eMarketplace effectiveness. This includes research that focuses on transaction cost theory, price, proficient market fundamentals and relational theory of eCommerce and eMarketplace. The advantages of hierarchy versus eMarketplace methods for conducting online businesses activities shown significant research problem within economic and IT/IS fields. The development of IT has been viewed as a key factor in decreasing transaction costs which are of interest to a greater number of vendors in eMarketplaces. Transaction costs are connected with finding someone with whom to conduct online business, reaching agreement about the cost and other characteristics of the exchange, and guarantees that the terms of the agreement are satisfied (Malone, Yates, & Benjamin, 1987; Uzzi, 1997; Turban, King, Liang, & Turban, 2010; Schneider, 2008; Laudon & Traver, 2009).

Another category of literature in eMarketplace research examines business organization models and techniques. Published papers in this field investigate eCommerce/eMarketplace structures and correlate information technology and information systems and their growth over time. They are included under "information systems and technology systems" rather than business organizational issues, as their focus is eMarketplace structure rather than the consequences of the organizational structure. In a comparison of eMarketplace structures, it is suggested that the purchaser will prefer the latter when the supplier's advantage gained from access to information is not as great as the eMarketplace benefit for the buyer minus the channel costs (Cousins & Robey, 2005). The confidential/private versus public feature of eMarketplaces was examined by Cousins and Robey (2005) who found in

their research that private (metals) exchanges were more successful than public (metals) exchanges because they allowed the continuation of existing traditional relationships involving trust and privacy whereas public exchanges did not (Dai & Kauffman, 2002; G. Schneider, 2008; Laudon & Traver, 2009).

Identifying and examining the structure of eMarketplaces is another category of literature under this theme. A number of research papers examined and identified how a variety of features of online businesses impact on eMarketplace business structures. These features include knowledge transparency artefact design strategies and how eMarketplace ideas can change the structure of administration services (Bhargava & Choudhary, 2004; Grover, Ramanlal, & Segars, 1999; West Jr, 1997).

In addition, eMarketplaces have the potential to rationalize and manage business activities and decrease the transaction prices associated with business' needs compared with hierarchies where a business organization has to manage its suppliers and procurement processes. Relational theory examines the role of embedded structures and proposes that social ties and the associated networks and relationships which are formed are important in market transactions and price is not of dominant importance: "faith, well grained information distribution and joint issue solving" are builds of embedded structures and have a control on eMarketplaces' transactions (Malone et al., 1987; Uzzi, 1997; Turban, King, Liang, & Turban, 2010; Schneider, 2008; Laudon & Traver, 2009).

Research theme 2: Theoretical studies of eMarketplaces. Under this research theme, there are a number of sub-themes as follows:

The eMarketplace literature investigates cost as a main sub-theme under the theoretical studies theme. The prime function of eMarketplaces is to reduce purchaser search costs. Minimized search costs can have an important impact on the eMarketplace equilibrium that may result in minimal prices and increased competitiveness between suppliers. However, it is also disputed that suppliers can

observe every other's prices more and therefore maintains or boost up prices (Campbell, Ray, & Muhanna, 2005).

The literature on theoretical eMarketplaces also investigates buyer and seller mechanisms as another sub-theme. In this research area, dealing and transaction instruments are given important coverage in the literature review of eMarketplaces. It has been noticed that the cooperation part of an eMarketplace transaction can be automated. The cooperation can be viewed as a investigation process for a commonly acceptable agreement. Levi, Kleindorfer, and Wu (2003) found three factors as being relevant: dealer management, characteristic investments in technological systems, and modifiability of transactions. Overall, transaction modifiability could play a primary role in influencing sustainable contracting and IT investments in eMarketplaces and electronic services (Levi , Kleindorfer, & Wu, 2003).

Research theme 3: System: practical aspects related to the system functionality of eMarketplaces. Under this research theme, three main sub-themes are as follows:

The first sub-theme is the operational presentation of eMarketplaces. In the literature, there are three main publications which examine operational eMarketplaces within the supply chain. Singh, Salam, and Iyer (2005) argue for the incorporation of knowledge and intelligence diagonally in the supply chain and Lee and Whang (2002) scrutinize the impact of online inferior eMarketplaces on the operational business performance of producers and sellers. Muylle and Basu (2008) examine the business operational processes that can be maintained by eMarketplace intermediaries and recommend that those intermediaries are likely to advance their business organization performance. However, further research still needs more focus on the fundamental problems related to eMarketplaces and hierarchies as the work to date has raised as many research questions as it has resolved (H. Lee & Whang, 2002; Muylle & Basu, 2008; Singh et al., 2005).

The second sub-theme is the system issues with a technological focus. Selected research papers published in this area mainly focus on the technological aspects of

eMarketplace systems. They investigate the processes of technological development and the maintenance of eMarketplaces. Due to the dynamic nature of the digital environment, eMarketplaces may require different standards, whether technological or information standards and eMarketplace standards may not be well-matched with the business organization's extranet standards. This is considered a main system issue for the acceptance and utilization of eMarketplace systems (Albrecht, Dean, & Hansen, 2005). It has also been documented that eMarketplaces involve complicated technological systems due to the competitive digital nature of its business environment. For instance, eMarketplaces may ensure lower prices for customers but vendors can take action by rising prices if they provide more precise information on products and services (Choudhury, Hartzel, & Konsynski, 1998).

The third sub-theme is related to the knowledge management of eMarketplace systems. Implementing eMarketplace systems that share information is a subject that is under-researched in the IT/IS literature. Gosain (2003) investigated the requirement to facilitate the complexity of knowledge management and the challenges related to the understanding of information within eMarketplaces. A proper understanding and knowledge management of eMarketplace systems could assist both eMarketplaces, customers and vendors to better utilize online platform (Fahey, Srivastava, Sharon, & Smith, 2001).

Research theme 4: eMarketplace application implementation/adoption and related issues. The sub-themes covers under this theme are as follows:

It is widely accepted that connecting to an eMarketplace will require an investment in computer hardware, computer software and employee training which can impose significant costs to vendors. In the context of adoption, there are the challenges of evaluating risk connected with the selection of an eMarketplace and potential implementation issues with suppliers. In an examination of the adoption of an eMarketplace in the world, it was found that societal and political factors also played an important role in influencing levels of adoption. More specifically,

Driedonks, Gregor, Wassenaar, and Wassenaar (2005) found a loss of societal capital, problems with trade supply chain communication channels, and not distinguishing the power brokers in the supply chain all had an influence on the adoption and success of the eMarketplace (Damsgaard, 1999; Driedonks, Gregor, Wassenaar, & Wassenaar, 2005; Wareham, Zheng, & Straub, 2005).

Second, the literature on eMarketplaces shows that the stages of adoption and the associated implementation challenges are a productive subject of research as many businesses find they have little or no knowledge to draw upon in selecting an eMarketplace, and in defining the levels and phases of implementation of the eMarketplace. Dewan, Jing, and Seidmann (2000) examine early adoption advantages, such as increased profit and eMarketplace share that result from a decrease in sellers' costs and the collection of purchaser preference information and managing prices. Companies that customize goods can gain a momentary advantage through eMarketplaces by using different pricing techniques to boost market share. However, the advantages of customization vanish when competing sellers assume the same technique. This is because it tends to lead to over modification, to the disadvantage of profits (Brown & Lockett, 2004; Dewan et al., 2000; Gengatharen & Standing, 2005; Pozzebon & Van Heck, 2006; AbuAbi, Rahim, & Burgess 2013).

The third sub-theme covers the barriers and motivations for eMarketplaces. Barriers and motivations for eMarketplace adoption are presented in several research papers. For example, Howard, Vidgen, and Powell (2006) explore teamwork and interaction by investigating four cases of electronic hub adoption through motor vehicle manufacturers and dealers. A theoretical framework emerges from this assessment that helps to review the real benefits of online platforms by revealing company and business industry stage motivations and barriers. The authors found that frequently, there were differences between the expected advantages and the realized benefits when accepting electronic hubs due to organizational factors, such as issues of IS incorporation with the electronic hubs and increased dealer and buyer mistrust. Additional barriers to realising the advantages of eMarketplaces include

information technological compatibility and outfitted capacity. Future research is required on the eMarketplace selection process to help companies match their business requirements to the most appropriate types of eMarketplaces (Howard et al., 2006; Kaefer & Bendoly, 2004).

The fourth sub-them is the implementation costs of eMarketplaces. Publications in this area are focused on issues related to funding and costs in the context of implementing eMarketplace applications. Gengatharen and Standing (2005) asserted that it is important to consider proper support and funding for successful eMarketplace implementation. Business organizations that implement eMarketplaces could be impacted by issues such as reputation, acquaintance and switching costs (Kim & Xu, 2007; H. G. Lee, Westland, & Hong, 1999).

Research theme 5: Strategic, business and organizational implications of eMarketplace. This thread of the literature considers the strategic, business and organizational implications of eMarketplaces from three main sub-themes as follows:

The first sub-theme is related to business strategy. The literature shows that employing eMarketplaces (including trading products and services) can potentially provide business organizations with important strategic, tactical and operational advantages (Standing, Love, Stockdale, & Gengatharen, 2006), which in some cases result in competitive benefits (Phan, 2003). Regardless of the strategic advantages related to eMarketplace participation, there are issues related to recognizing and evaluating the associated benefits, costs and risks. Senior managers are frequently reluctant to participate in eMarketplaces due to their confusion over unreliable advantages of IS (strategic, operational and tactical) that can be gained and their differing environments (financially touchable, non-financially touchable and intangible) (Pavlou, 2002). In addition, numerous companies that engage in eMarketplace trading still resist developing effectual participation strategies and fail to recognize the advantages and costs associated with doing so (Ratnasingam, 2005).

The second research sub-theme is related to building associations and networks via eMarketplaces. The literature shows that businesses which engage with eMarketplaces can potentially gain better associations and relationships with other strategic partners. Others observe eMarketplace contribution as a way of increasing a network of corporations. For instance, institutional-based belief in estalshing better communication has been observed to have a positive influence on the networks between different organisations. Likewise, Ratnasingam (2005) examined how trust in eMarketplaces leads to an associated trust in partners (Verhagen, Meents, & Tan, 2006). The advantages gained from utilizing eMarketplaces are difficult to assess since the literature discusses several examples of unsuccessful implementation by organizations. Different organizational strategies and methods are required according to the organizational characteristics, for example, firm size, business division and organizational culture to maintain successful engagement with eMarketplaces.

The third research sub-theme considers issues related to eMarketplace competency. Competency in the context of eMarketplaces takes many types or levels. Important work has been conducted on aspects of competencies among organisations engaging in eMarketplaces. Another main focus is related to efficiencies related to transaction costs. Also, it is found that the lack of competency among eMarketplace organisations could increase risk factors, such as digital business environmental uncertainty, information asymmetry and benefit specificity. H. G. Lee and Clark (1996) found most hazards and uncertainties (e.g. privacy, confidentially, authorization) are connected with societal and economic barriers rather than with information technology (Cordella, 2006; H. G. Lee & Clark, 1996).

2.3.7. eMarketplace Research Gap

As seen from the above discussion of the main topics of eMarketplace research, there has been much research on the implementation and adoption of eBusiness systems such as eMarketplaces with little emphasis on its utilization and customer

satisfaction. This could be due to the following two reasons. The first reason is that most of the previous theoretical models are concerned with the adoption stage of eMarketplaces, such as the Technology, Organization and Environment context (TOE), the Technology Acceptance Model (TAM) and the Diffusion of Innovation models (Davis, Bagozzi, & Warshaw, 1989; Rogers, 2003; Tornatzky, Fleischer, & Chakrabarti, 1990). These theoretical models mainly focus on the adoption of technology including customers' willingness to adopt, accept or reject the technology. The second reason could be because of the increased number of eMarketplace users which led to the rapid development of eMarketplace applications to meet this demand, resulting in a greater emphasis on application development (research theme 4) rather than the utilization and customer satisfaction aspects of eMarketplaces (See Table 2-3).

Addressing the gap on the utilization of eMarketplaces may involve detailed investigations of obstacles hindering development of its applications. Algarni, Cheung, and Lee (2011) described several issues that may delay the increased utilization of eMarketplaces. For instance, weak ICT infrastructure, undeveloped services, the absence of clear and effective regulatory requirements could raise concerns for both eMarketplace customers and providers. This thesis proposes a conceptual model of eMarketplace utilization and customer satisfaction, as shown in Figure 2-2.

2.3.8. Research model development

Literature reviews on eMarketplaces have identified several factors (see Table 2-4) that positively impact on eMarketplace utilization and customer satisfaction. These factors lead to the development of the research model for addressing the identified research gap in this thesis

Table 2-4: The proposed research model factors (literature resources)

Factor	Literature Source	Theoretical Focus
Security	(Al-Ghaith, Sanzogni, & Sandhu, 2010), (Sadi & Al-Khalifah, 2012), (AlGhamdi, Drew, & Alshehri, 2011), (Aleid, Rogerson, & Fairweather, 2010), (Ahmad & Agrawal, 2012), (Axworthy, Fallick, Oberlander, & Ross, 2005), (AbuAbi, Rahim, & Burgess 2013), (Ullah & Lai, 2011)	Security in the context of the eMarketplace and its utilization has been discussed in relation to a number of sub-factors such as: threat prevention, user vulnerability, availability, user protection and safety, online business protection etc.
Complementary Services	(Alasem, 2009), (Srinivasan, Anderson, & Ponnavolu, 2002), (Mutlaq & Rasheed, 2009), (Madanmohan, 2005), (M. Wang, 2003), (Innis & La Londe, 1994), (Lu, 2001), (Zeithaml, 2002)	Several researchers have discussed this factor of eMarketplaces from several perspectives such as: additional services, customer support, effective technology, customer satisfaction of eMarketplace portals, customer loyalty to eMarketplaces, successful eMarketplaces.
Strong Infrastructures	(AlGhamdi, Drew, & Alfaraj, 2011), (Mintzberg, Lampel, Quin, & Ghoshal, 2003), (Byrd & Turner, 2000), (Reich & Benbasat, 2000), (Guo, 2008), (Sullivan & Sheffrin, 2003), (Ahmad & Agrawal, 2012), (Lii, Lim, & Tseng, 2004)	Researchers examining this factor focused on the following aspects: customer satisfaction of eMarketplace, performance of eMarketplaces, business/ICT strategy, business/ICT structure, business/ICT culture, etc.
Reliability	(H. J. Wen, Lim, & Huang, 2003), (R. B. Wen, 2000), (Parasuraman, Zeithaml, & Berry, 1988), (Lii, Lim, & Tseng, 2004), (R. J. Anderson & Bezuidenhoudt, 1996), (Kallepalli & Tian, 2001), (Ormandjieva, 2002), (Lai, Yang, & Tang, 2006)	The term reliability in the context of eMarketplaces is defined as the ability to achieve the required functionality under the specified conditions for a quantified period of time. Therefore, this factor has been studied from different perspectives: service deployment, error free services, user-friendly services, dependability etc.

Regulatory Requirements	(Alwabel & Zairi, 2005), (Shoniregun, 2003), (Bond, 2003), (Culnan & Armstrong, 1999), (Culnan & Bies, 2003), (Culnan & Milberg, 1998), (Harper & Singleton, 2001), (Al-Somali, Gholami, & Clegg, 2010), (Al-Shehry, Rogerson, Fairweather, & Prior, 2006)	Regulatory requirements in the context of eMarketplaces have been studied from different perspectives, which include; eMarketplace policies, rules and regulations, legislation, copyright and trademark etc.
Customer Satisfaction	(Eid, 2011), (Kaplan & Norton, 2007), (Al-Shehry, Rogerson, Fairweather, & Prior, 2006), (Lu, 2001), (Liu & Leach, 2001), (Sullivan & Sheffrin, 2003), (Susarla, Barua, & Whinston, 2003), (Anderson & Swaminathan, 2011), (R. B. Wen, 2000), (Zeithaml, 2002), (Doong, Wang, & Shih, 2008), (Sun & Zhang, 2006)	The term, customer satisfaction in the context of eMarketplaces is defined as the degree of fulfilment provided by the services or products or both of an organization. Researchers have studied this factor from the following viewpoints: sufficiency of product information, ease of use, positive rating and feedback, customer retention, enjoyment, etc.

The following sections present the factors and the hypotheses of the research model.

2.3.8.1. eMarketplace Security

It is widely accepted that the additional use of IT/IS systems has increased security threats for businesses employing eMarketplaces. An organization's data is, like any other business resource and it can exist in many forms, for instance: film, video, in writing or on disc etc. Therefore, Internet security is critical in protecting an organization's resources. The term security can be defined as an activity that protects a firm's resources and resource infrastructure assets to prevent misuse, loss and damage (Gilliam & Feather, 2004; Ullah & Lai, 2011). Advanced security measures for eMarketplaces were found to be directly related to customer satisfaction (Axworthy, Fallick, Oberlander, & Ross, 2005). In the context of the eMarketplace, there are four information security threats: first, constraints, which represent the

success or failure of eMarketplace applications, authorized or unauthorized system access, and authorized and unauthorized eMarketplace application modification if required; second, risks, which classify the numbers of threats, their influence on eMarketplace applications and eMarketplace users' vulnerability; third, managing online security goals, which are characterized into accessibility/availability, confidentiality and integrity; and fourth, security requirements in the context of the eMarketplace, which are explored in the form of encryption, control and redundancy (DeMarco & Lister, 2003; AbuAbi, Rahim, & Burgess 2013).

Strong encryption servers which cannot be easily hacked can also be used to ensure the information and data on eMarketplaces is secure (Aleid, Rogerson, & Fairweather, 2010). Security may also build consumers' satisfaction (Hoffman, Novak, & Peralta, 1999). Thus, the first hypothesis of the research model is formulated as follows:

H1: An advanced security system can develop appropriate satisfaction for customers and therefore, increases the utilization of eMarketplaces.

2.3.8.2. Complementary Services of eMarketplaces

Different terms have been used to refer to the development of service offers in business organizations, for example "additional services", "complementary services" "product services", and "combined services". Services in eMarketplaces can be provided in a variety of way as such services that support business organizations in selling activities; services that are offered by industrialists to assist customers in selecting, purchasing and using the company goods; externalization of roles that authorize business organizations to sub-contract high budget specialized services, for example maintenance or informatics (Alasem, 2009; Lu, 2001; Zeithaml, 2002). The term complementary refers to a service that is offered in addition to a business organization's fundamental service to fulfil and satisfy the client's needs.

Complementary services in the context of eMarketplaces come in different forms and have different purposes including: special offerings, delivery facilitation, rewards etc. In order for eMarketplace to flourish, there is a need for supporting services and technologies to be developed (Alasem, 2009; Srinivasan, Anderson, & Ponnavolu, 2002; Mutlaq & Rasheed, 2009). Thus, this leads to hypothesis 2 of the research model as follows:

H2: Developed complementary services of eMarketplaces can positively influence customer satisfaction in eMarketplaces.

2.3.8.3. eMarketplace Strong Infrastructures

The business organization infrastructure refers to a set of shared resources that work together to attain common business goals. It includes structures, services, strategies, planning and other installations that are vital for the business organization to succeed (Mintzberg, Lampel, Quin, & Ghoshal, 2003; Lii, Lim, & Tseng, 2004; Reich & Benbasat, 2000; AlGhamdi, Drew, & Alfaraj, 2011; Sullivan & Sheffrin, 2003). Organization infrastructure requires a large early investment, so it is critical to make correct decisions to ensure the organization receives an adequate return. For example, buying a new production facility requires an enormous preliminary investment, but it will also increase the business organization's overall competence, therefore, the organization needs to ensure that the investment will result in increased productivity before investing in new infrastructure. Information systems are areas that frequently require organization infrastructure changes as a business grows in respect to the required continues development. Growth not only means that the business requires increased equipment software application licenses, but also an increased number of software applications and the use of the IT (Mumford & Weir, 1979). An effective and strong eMarketplace will require an equally efficient and strong infrastructure to obtain better customer satisfaction (AlGhamdi, Drew, &

Alfaraj, 2011; Ahmad & Agrawal, 2012). Thus, hypothesis 3 of the research is as follows:

H3: Strong infrastructure can lead to higher levels of customer satisfaction in eMarketplaces.

2.3.8.4. eMarketplace Reliability

Reliability in eMarketplaces typically refers to dependability and the probability of a failure free system that consumers can rely on (Ormandjieva, 2002; Lai, Yang, & Tang, 2006). Assessing the reliability of eMarketplaces, as a part of the online business process, is still a difficult and time-consuming task (Anderson, Hansen, Lowry, & Summers, 2005). Reliability also refers to consistency. An eMarketplace is considered reliable if it provides the same results in different cases, assuming that the eMarketplace being assessed is found to be consistent. Thus, consistency is vital for the functionality of eMarketplaces' systems in order to obtain the required degree of reliability. In addition, factors such as connectivity (Al-Diri, Hobbs, & Qahwaji, 2007) where eMarketplaces are connected at all times and where consumers have the ability to access them together with accuracy means eMarketplaces have the ability to perform precisely, are trustworthy and dependable for all consumers in all stages of the eMarketplace process (AlGhamdi, Drew, & Alfaraj, 2011).

A study conducted by McKnight, Choudhury, and Kacmar (2003) shows that reliability is considered to be an important factor that increases the satisfaction of online consumers. In addition, they explained that online consumers measure eMarketplaces not in broad terms, but in terms of precise attributes of reliability. Trust can also enhance the reliability of eMarketplaces even in the preliminary stage. In this research, reliability is discussed in the context of eMarketplace system dependability (Lii, Lim, & Tseng, 2004; R. B. Wen, 2000). Thus, this leads to hypothesis 4 of the research as follows:

H4: Reliability of eMarketplace systems can positively influence customer satisfaction in eMarketplaces.

2.3.8.5. Regulatory Requirements of the eMarketplace

Recent development in technology have considerably increased the capability of eMarketplace providers to collect, target, monitor, profile, and even sell individual information about clients to third parties. In response to wide social concerns about privacy and other legal issues, the organization for European Economic Cooperation and the United States government instigated widespread discussions in the 1970s about developing a regulatory outline for privacy and other legal issues (Culnan & Bies, 2003; Culnan & Milberg, 1998; Harper & Singleton, 2001; Alwabel & Zairi, 2005; Shoniregun, 2003). The term 'regulatory requirements' involves rules, regulations, policies and other issues related to systemizing transactions and protecting eMarketplace customers' rights.

The eMarketplaces literature also recommended addressing issues related to the legalization of eMarketplaces. These include guaranteeing online contracts, implementing record retaining obligations, providing original documentation, improving regulations, updating and promoting control regulations and implementing laws to ensure the protection of external data. Alwabel and Zairi (2005) stated that regulatory issues are important for eMarketplaces as it can ensure safer transactions. In addition, other scholars indicated that regulatory requirements can play a key role in ensuring successful eMarketplaces (Ahmad & Agrawal, 2012; S. Al-Somali, R. Gholami, & B. Clegg, 2010; AlGhamdi, Drew, & Alshehri, 2011).

The organizational factors involved in the regulatory requirements are policies, rules and regulations in order to protect all parties involved in eMarketplace transactions. Therefore, the provision of clear policies, rules and regulations could play an important role in ensuring users are satisfied with eMarketplaces (Culnan &

Bies, 2003; Shoniregun, 2003; Al-Shehry, Rogerson, Fairweather, & Prior, 2006; S. Al-Somali, Gholami, & Clegg, 2009). Thus, hypothesis 5 is predicted as follows:

H5: Regulatory requirements can positively influence customer satisfaction in eMarketplaces.

2.3.8.6. Customer Satisfaction and eMarketplaces

Nowadays, the number of eMarketplace users has increased rapidly across the globe. For example, according to a report by Nilson (2010), the number of credit card transactions used for online shopping has increased from 8.4 billion in the year 2000, to 21.6 billion in 2005 and to 36.6 billion transactions in the year 2009, with a total dollar value of $1,421 billion in the USA. Users of the eMarketplace want to transact online quickly and with little effort. Starting a new electronic business can be extremely difficult. Therefore, it is important to ensure compliance with all the government rules and regulations relating to the eMarketplace (Eid, 2011). An eMarketplace makes it possible to perform most types of business in an effective and efficient way (Shoniregun, 2003). However, in the context of consumer satisfaction in the eMarketplace, some researchers suggest the importance of the factor customer satisfaction. For example, Kaplan and Norton (2007) proposed a framework called the balanced scorecard (BSC) that embraces four performance measures of a company: the customer perspective, financial perspective, internal business perspective and the innovation and learning perspective. They found that traditionally, business organizations tend to have a strong focus on the financial perspective. However, they suggested that this alone is inadequate to measure the success of the organization. Rather, this should be supported by other measures such as customer satisfaction, internal processes and the ability to innovate (Kaplan & Norton, 2007).

The term customer satisfaction in the context of eMarketplaces refers to the degree to which customers perceive that the services or products or both offered by an organization fulfil their claims. It could be considered as one of the main goals that encourage business's engagement on eMarketplaces (Al-Shehry, Rogerson, Fairweather, & Prior, 2006; Gilliam & Feather, 2004; Lu, 2001; Doong, Wang, & Shih, 2008). Chang and Wong (2010) have articulated that the utilization of eMarketplaces has taken competition between firms a notch higher. There is a need to have a base of satisfied customers for a business to be sustainable. They added that the current market is very competitive as customers are exposed to various eMarketplaces offering similar or closely related products and customer satisfaction must be made a priority by eMarketplace users, which may lead to higher utilization. Thus, hypothesis 6 of the research model is formulated as follows:

H6: Customer satisfaction can enhance the utilization of eMarketplaces.

2.3.8.7. Utilization of eMarketplaces

The utilization of eMarketplaces concerns the tangible use of technology and is regarded as the post-adoption stage (see Chapter 1). As the eMarketplace has the potential and ability to transform the business procedure of retailers by shaping their business methodologies and thereby contributing to changes in their electronic structure and offering competitive benefits over major competitors, consideration of its utilization has become crucial. With the utilization of eMarketplaces, businesses can gain long term advantages. For example, these days most organizations provide online shopping facilities with little or no staff involvement, thus reducing the organizational overheads of employing staff. Similarly for customers, the utilization of eMarketplaces can provide access to information and different goods without any restrictions (Ratnasingam, 2005). For instance, to purchase handcrafted goods from

Madagascar, it is not necessary to travel to a particular location but only to open a web browser of the desired eMarketplace that is trading such goods.

Moreover, the utilization of eMarketplaces facilitates faster and simpler communication between the customer and the company (Standing, Love, Stockdale, & Gengatharen, 2006, AlGhamdi, Nguyen, & Drew, 2012; Vatanasakdakul & Aoun 2009). In addition, eMarketplaces are significant because of their potential to change organizational structure, for instance, by eliminating or changing the role of conventional intermediaries, leading to the consolidation of fragmented organizations or the fragmentation of consolidated ones (Matook, 2013). This research aims at exploring the successful factors related to customer satisfaction and the successful utilization of eMarketplaces as an important key stage of its lifecycle. Accordingly, such an investigation could make crucial contributions to the field of the eMarketplace especially when this key stage is given adequate investigation together with a verification of all its related success factors.

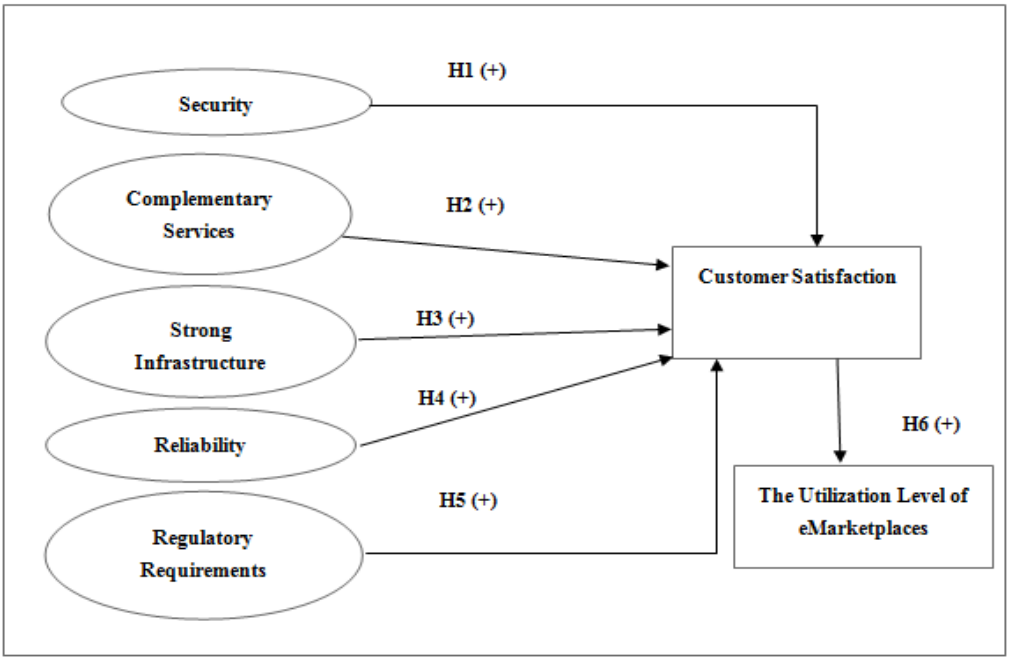


Figure 2-2: Factors influencing customer satisfaction and the utilization of eMarketplaces

2.4. Summary

This chapter has presented a detailed review of eMarketplace research. In the review, different types of eMarketplaces were identified. Categorizing eMarketplaces into different types can assist business owners to make informed decisions as to which is the most appropriate type for their business needs. The hybrid eMarketplace is probably the most flexible type of eMarketplace which utilizes interrelated online marketing multi-dimensional channels. It maintains transactions between eMarketplace platforms in different ways where every channel communicates with each other.

This chapter has further highlighted the current lack of eMarketplace theories. Such theories that can enable the measurement of the effectiveness of eMarketplaces and identify issues related to possible future problems will enhance our understanding of eMarketplaces. In addition, the study found that there is a lack of governance theories for eMarketplaces that, in turn, can help business owners to fully understand the advantages and the potential benefits of conducting business online.

The chapter also identified the research gap and described the proposed research model. It also highlighted the theoretical underpinnings beyond the research model and the proposed hypotheses. Chapter 3 covers the research methods used in this research followed by the validation of the research model (presented in Chapters 4 and 5). After this, Chapter 6 discusses the research findings and finally the conclusion is presented in Chapter 7.

Chapter 3

Research Methodology

3.1. Introduction

This chapter begins with a description of the research design, and a variety of measurement methods used for the analyses eMarketplaces data. The proposed research design follows the multiphase mixed methods approach. It describes the literature on designing a research methodology to select a suitable research method of enquiry. This study comprises two main phases: a survey (phase one) and semi-structured interviews (phase two). The first phase was employed to validate the initial research framework. Results suggested further research that employs detailed interviews with experts who suggested additional sub-factors to the validated research framework (from phase one). The chapter also discusses the data collection and data analysis used in the quantitative and qualitative methods.

3.2. Research design

The literature classifies the mixed methods design into six types, as shown in Figure 3-1 (Morse, (2003); Creswell (2009 and 2013). First, the triangulation mixed methods design is used to "instantaneously accumulate both quantitative and qualitative data, combine the data, and use the results to apprehend

a research problem". Both quantitative and qualitative data is collected separately and at the same time (Creswell, 2009 and 2013). Second, the embedded mixed methods design is used to "collect quantitative and qualitative data instantaneously but to have one form of data play a sympathetic role to the other form of data" (Creswell, 2009 and 2013). Third, the explanatory mixed methods design "consists of first accumulating quantitative data and then accumulating qualitative data to help explain or elaborate on the quantitative results" (Creswell, 2009 and 2013). Fourth, the exploratory mixed methods design is "the technique of first collecting qualitative data to discover a phenomenon, and then gathering quantitative data to clarify associations found in the qualitative results" (Creswell, 2009 and 2013). This design is used to discover a phenomenon, develop a model, "classify themes, design an instrument", and then test it (Morse, 2003; Creswell & Clark, 2007). Fifth, the transformative mixed methods design is "a design that uses a theoretical lens drawn from social justice or power as an overarching perspective". This design can involve both quantitative and qualitative data collected in a concurrent or sequential form (Creswell, 2013). Sixth, the multiphase mixed methods design is a design that involves both quantitative and qualitative data. Using this approach, the researcher is able to start with either the quantitative phase or the qualitative phase followed by the other. This advanced design involves both concurrent and sequential data collection strategies with multilevel sampling (Creswell, 2013). This research employed the advanced multiphase mixed methods design, with data collected sequentially with a multilevel sampling.

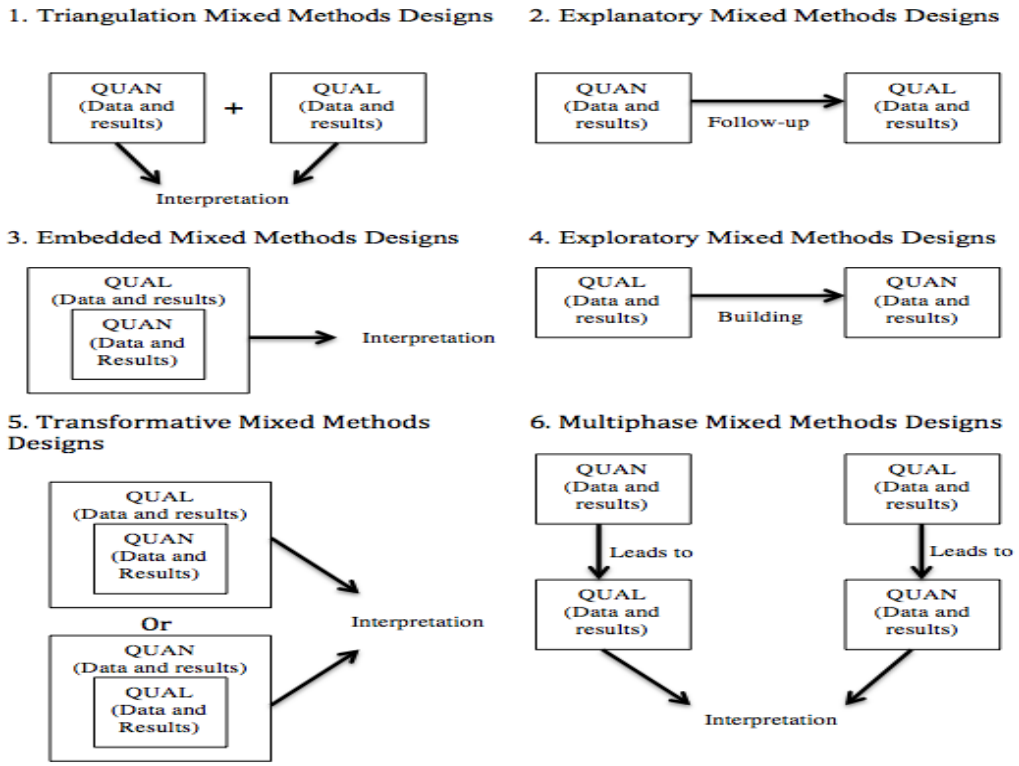


Figure 3-1: Types of Mixed Methods Designs

3.2.1. Mixed Methods Research

In this section, an overview of mixed methods research is provided and a review of mixed methods research in eMarketplaces and IS is presented. Figure 3-2 demonstrates the sequence of methods that has been employed to validate the research model of this research project.

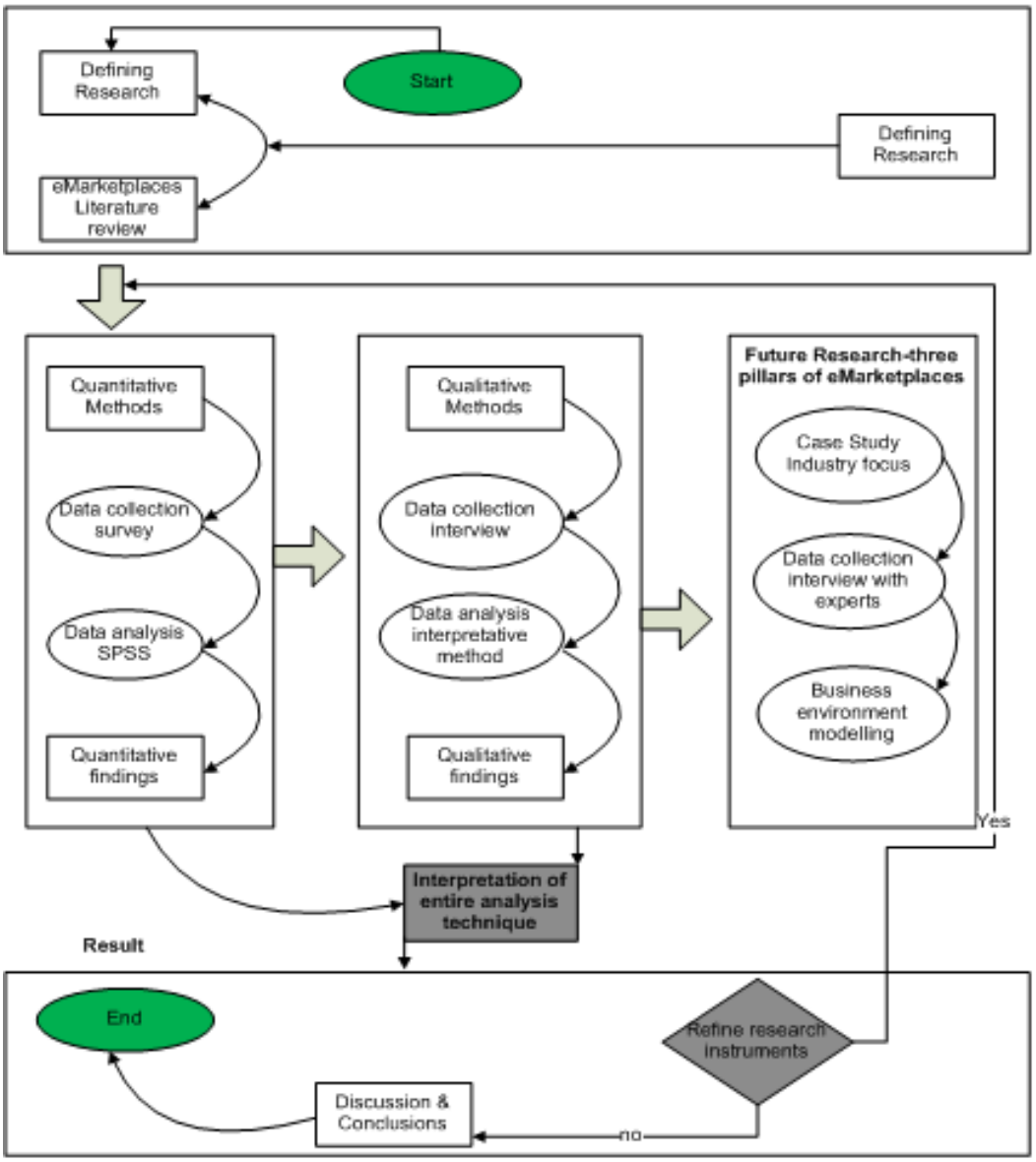


Figure 3-2: Research Process Diagram

It is widely accepted that the centre of the mixed methods research approach is a research design/implementation that employs multiple research methods or more than one worldview. Tashakkori and Teddlie (2003a, 2003b) identified two key types of multiple methods research: first, mixed methods research; and second, multi-method research. Even though the terms *mixed methods* and *multi-method* have been

used interchangeably in many sectors such as social sciences, ecommerce, eMarketplaces and behavioural sciences including information systems, there are important theoretical differences between the two. In a multi-method research design, researchers employ two or more research methods, but may (or may not) restrict the research to a particular worldview. For example, a researcher may use the participant's observation and verbal history to study the design and implementation of a new information system in an organization. A different researcher may use ethnography to appreciate the same trend. In both cases, the researchers are limited to a particular worldview, for example the qualitative research method but using multiple methods of data collection and analysis. Mingers and Brocklesby (1997) present the combination methodology which combines two or more approaches. For instance, a survey and interviews in a research investigation or multi-methodology with more than two approaches can be used. In addition, combining two dissimilar approaches within qualitative paradigms as two separate types of multiple methods research is considered multi-methodology. They suggested that multi-methodology research can be demeaned using either a single approach or multiple individual approaches. In contrast, mixed methods research by description is more in line with methodology combination, which fundamentally requires multiple worldviews, for example a combination of qualitative and quantitative research methods (Tashakkori & Teddlie, 2003a, 2003b; Mingers, 2001, 2003; Mingers & Brocklesby, 1997; Teddlie & Tashakkori, 2003, 2009).

Multi-method research is not restricted to a qualitative worldview. In fact, in the quantitative method, Campbell and Fiske (1959) developed the notion of the Multi-trait Multi-method Matrix (MTMM) to evaluate construct validity and to test a set of measures. They recommended the use of multiple methods to accumulate and examine data to guarantee a high degree of dependability and validity in quantitative analysis, for example, surveys and direct observations. While this methodology of using multiple methods is in line with the strength of multi-method research, another methodology of multi-method research within a quantitative worldview would be the

use of two dissimilar quantitative methods, for example, experimentation and a field study to develop a better understanding of a phenomenon of interest. For instance, Sun and Zhang (2006) conducted a multi-method study using two dissimilar quantitative methods to understand the fundamental relationships between perceived pleasure and perceived ease of use in the context of an eMarketplace and information systems adoption (Sun & Zhang, 2006).

In contrast, mixed methods research uses quantitative and qualitative research methods and designs concurrently, which could be collected autonomous of each other or sequentially to understand an experience of interest. For example, Ang and Slaughter (2001) conducted a chronological mixed methods study (a quantitative study followed by a qualitative study) to identify differences in work attitudes, behaviours, and presentation across two groups of IT professionals. Consequently, all mixed methods research studies are, by description, multi-method research, but literature shows that not all multi-method approaches are using mixed methods research technique (Ang & Slaughter, 2001).

Exponents of mixed methods research highlight the value of combining both quantitative and qualitative research worldviews to develop a detailed understanding of a phenomenon of interest. For instance, an academic may use interviews (a qualitative data collection method) and surveys (a quantitative data collection method) to accumulate data about the implementation of a new eMarketplace technology and information system. Another academic might use ethnography (a qualitative technique) and field experimentation (a quantitative technique) to understand the same phenomenon. A general overview of quantitative and qualitative research in the context of mixed methods is as follows:

3.2.1.1. Quantitative Research

Quantitative research is a research method that involves the employment of structured questions where the answer options have been programmed and a large number of respondents are involved. Commonly, quantitative study postulates

statistical assignments to the studied phenomena (Creswell, 2009). By definition, measurement in quantitative research must be objective, enumerative and statistically effective and valid. Mathematicians use formulas to determine what sample size will be desirable from a given population in order to attain findings with a satisfactory degree of accuracy and to calculate the sample size for assessment. Usually, researchers seek sample sizes which vintage findings with at least a 95 percent confidence interval, which means that if researchers re-conducted the survey 100 times, 95 times out of one hundred, researchers would get the same answer with a marginal 5 points in sideline error. The literature shows that many surveys are designed and developed to produce a smaller sideline of error.

The research methods employed in eMarketplace research are often divided into two key types: quantitative and qualitative research methods. This section discusses quantitative research methods and explains what differentiates it from qualitative research methods. Aliaga and Gunderson (1999) defined quantitative research methods as a clarifying and illuminating approach that collects arithmetical data that are analysed by mathematically-based methods. This definition explores some important elements. The first element is illustrating phenomena. This is a main element of all research methods. In quantitative research, researchers collect the data mainly in numeric form to identify differences, measure correlations and test the validity of the conceptual models.

3.2.1.2. Qualitative Research

The qualitative research approach pursues answers to a question and is conducted methodically. However, the individuality of qualitative research is that researchers may produce results that were not determined, which may be suitable beyond the instant boundaries of the study. It is particularly effective if researchers want to gain culturally imprecise information about the subjects under investigation. However, the term qualitative research is a broad one that comprises many different methods

employed in understanding and explaining social phenomena. The following are some definitions by prominent scholars in the field:

- Denzin and Lincoln (2009) defined qualitative research as research which clarifies phenomena in their typical settings to understand people's interpretations. Qualitative research includes collecting information about individual experiences, including self-examination, life stories, interviews, explanations, historic details, interactions and visual text which are important moments in people's lives.
- According to Patton (2005), qualitative research endeavours to understand people's interactions in a specific situation. The determination of understanding is not essentially to predict, but somewhat to understand in depth the physiognomies of the condition and the meaning brought by the participants and what is happening to them at that point in time.

Qualitative research accepts the view that there are numerous ways of understanding and making sense of the world. In this research method, researchers are not attempting to envisage what may happen in the future (Bogdan & Biklen, 1992).

3.2.2. Value of Mixed Methods

With the rapid development of new and intricate information technologies and eMarketplace technologies, organizations continually face new challenges associated with understanding eMarketplace capabilities, practices and impact. Additionally, the dissemination of information over the Internet, the propagation of frequent non-work connected systems and social media, and the accessibility of numerous devices enabled with eMarketplace technologies has resulted in technology being an essential part of people's lives. As a consequence of this rapidly changing environment, information systems and eMarketplace researchers often encounter situations in

which available theories and findings do not appropriately explain or offer important insights into a phenomenon of interest. Mixed methods design research strategies provide a mechanism for information systems and eMarketplace investigators to deal with such situations and consequently make contributions to theory and its implementation.

In this thesis, three key strengths of mixed methods research is discussed to illustrate the value of conducting such research for the eMarketplace literature. Specific examples are provided to show where mixed methods research is more advantageous than using a single method to make a sufficient contribution. First, mixed methods research has the capability to address different research questions concurrently (Teddlie & Tashakkori, 2003, 2009). Though both qualitative and quantitative methods can arguably be used to address comparable research questions, qualitative methods have classically been used more in eMarketplace research and other social sciences to develop a detailed understanding of a phenomenon and/or to inductively produce new theoretical perceptions (Walsham, 2006). In contrast, quantitative methods have classically been used more in eMarketplace research for confirmatory studies, such as theory testing and evaluating. AbuAbi, Rahim, & Burgess (2013) used a qualitative method for theory testing and evaluation. Mixed methods research, by merging both qualitative and quantitative methods, has the capability to address both experimental and confirmatory questions within the same investigation inquiry.

For example, when eMarketplaces were an emerging phenomenon and academics commenced their studies, they used exploratory qualitative studies to uncover factors connected to a person's perceptions of eCommerce and eMarketplaces. In one of the previous studies on eCommerce and eMarketplaces, Keeney (1999) conducted interviews to identify people's perceptions of the advantages and disadvantages of eMarketplaces and eCommerce. An exploratory approach was essential at that time because existing theoretical models did not provide satisfactory insights on eMarketplace technologies. Consequently, there was

a sequence of empirical quantitative studies to test theoretical models of eMarketplace (Algarni, Cheung, & Lee, 2013a; Aladalah, Cheung, & Lee, 2014). Though these were mainly single method studies, AlGhamdi, (2014) used mixed methods research to study the adoption of eMarketplaces. The study first conducted an examination of trust elicitation to extract the factors that people consider when making a decision about eMarketplace adoption. It employed a qualitative research method for this trust elicitation study. Given that eMarketplaces were still an evolving phenomenon, with issues related to confidentiality, security, and website abilities, and present theories were still missing in terms of offering an inclusive set of factors that academics might study when making an acceptance decision, a qualitative study was an ironic mechanism to determine these factors.

Secondly, mixed methods research has the capability to provide more comprehensive inferences than a single method or world view (Teddlie & Tashakkori, 2003, 2009). It is believed that eMarketplace and IS research that employs laborious qualitative or quantitative methods offers valuable insights on various eMarketplace phenomena. Joining extrapolations from both quantitative and qualitative studies can offset the difficulties and deepen the understandings of the studied issue (Creswell, Plano Clark, Gutmann, & Hanson, 2003). Mixed methods research can improve the understanding of a specific topic via incorporating both qualitative and quantitative methods, and offer superior insights on a phenomenon that each of these methods independently cannot offer (Johnson & Turner, 2003). For instance, interviews, a qualitative data gathering method, can provide depth to research by enabling researchers to gain deep insights from different viewpoints. It can also bring extensiveness to a study by providing researchers with data about dissimilar aspects of a phenomenon from many contributors. Together, these two data gathering methods can help eMarketplace researchers make better and more precise "meta-inferences". Meta inferences characterize an integrative view of outcomes from qualitative and quantitative strands of mixed methods research,

design/ implementation and are considered vital mechanisms of mixed methods research (Venkatesh, Brown, & Bala, 2013).

For instance, in the eMarketplace literature, a significant area of investigation is eMarketplace implementation in organizations. Previous research on the implementation of eMarketplace technologies using both qualitative and quantitative methods offered insights into how employees respond to new eMarketplaces. However, researchers believe that a lot of the qualitative research on eMarketplace implementation did not provide insights into the breadth of problems and the reactions from a large number of stakeholders due to the limited number of shareholders who could be interviewed and the subjects that could be covered throughout the interviews. Likewise, quantitative studies failed to offer detailed insights into the context of an eMarketplace implementation and failed to capture the depth of responses from stakeholders. In this circumstance, mixed methods research can possibly offer a holistic view of eMarketplace implementation by simplifying high quality detailed and meta inferences (El-Gohary, 2012; Azizi, Salar, & Langroudi, 2012).

Lastly, mixed methods research offers a chance for a greater variety of divergent and/or complementary views (Teddlie & Tashakkori, 2003, Teddlie & Tashakkori, 2009). When viewing mixed methods research, an investigator may find different, for example inconsistent and complementary assumptions, from the quantitative and qualitative strands. Such differing findings are appreciated in that they lead to a reappraisal of the theoretical framework and the expectations underlying each of the two strands of mixed methods research and design. These outcomes not only supplement the overall understanding of the studied issue but also help researchers evaluate the boundaries of a phenomenon or the associations between its components and open new avenues for future inquiries. Corresponding findings are similarly valuable in the quest to generate utilitarian theories because these outcomes offer an all-inclusive view of a phenomenon and supplementary insights into the interrelations between its mechanisms.

For instance, Venkatesh, Morris, Davis, & Davis (2003) hypothesized and found, by a quantitative method, that performance anticipation and effort anticipation are two key determinants of technology adoption and use which involves the eMarketplace. Lapointe and Rivard (2005) conducted a qualitative study of three different online platforms implementations and collected a variety of employee reactions to new technologies from acceptance to aggressive confrontation. They found that different levels of perceived threat play a serious role in determining an employee's situation regarding resistance to adoption and subsequently the utilization.

3.2.3. Purposes of Mixed Methods

Even though a mixed methods methodology is clearly a valuable methodological choice for eMarketplace researchers due to its benefits, as discussed in this chapter, researchers note that such a method is not a panacea and does not always lead to the detection, development, or extension of a substantive theory. The employment of a mixed methods approach in a research inquiry serves certain purposes. In this chapter, seven purposes for a mixed methods were investigated based on previous research on the IS field (Greene & Caracelli, 1997; Creswell, 2009; Tashakkori & Teddlie, 2008), namely completeness, complementarity, developmental, expansion, corroboration, compensation and diversity, as shown in Table 3-1. Tashakkori and Teddlie, (2008) noted that the motives for using mixed methods approaches are not always "explicitly delineated and documented" by researchers who conduct research using a mixed methods approach. Providing an explanation for using a mixed methods research approach is the responsibility of the investigators conducting and reporting their efforts.

Accepting the reasons to mix quantitative and qualitative methods in a research inquiry is significant for three reasons. Firstly, researchers discuss that unlike qualitative and quantitative methodologies, a mixed methods approach is characteristically not a natural methodological choice in social and behavioural

science studies. Investigators have to overcome considerable paradigmatic, social, cognitive, and physical problems to be able to conduct mixed methods research (Mingers, 2001). Therefore, eMarketplaces researchers suggest that a mixed methods research methodology would help cover diverse issues more than single approaches in order to draw sufficient conclusions. Hence, investigators who are thinking about using a mixed methods approach would be aware of the different reasons for using this methodology in their research. Table 3-1 offers an inclusive set of reasons for using a mixed approach instead of a single method technique.

Table 3-1: Mixed Methods Approach Purposes

Mix Methods Purposes	**Explanation**	**Prior eMarketplace Research**	
		Authors	Description
Complementarily	Mixed methods are employed in order to gain a complementary point of view about the same phenomena or relationships.	(Soffer & Hadar, 2007)	A qualitative study was employed to gain supplementary insights on the findings from a quantitative approach.
Completeness	This design is employed to make sure a complete picture of a phenomenon is gained.	(Piccoli & Ives, 2003)	The qualitative data and results provided ironic descriptions of the findings from the quantitative data and analysis of the data.

Developing	Questions for one strand emerge from the inferences of a previous one (sequential mixed methods), or one strand provides hypotheses to be tested in the next	(Grimsley & Meehan, 2007; Ho, Ang, & Straub, 2003)	A qualitative study was used to develop constructs and hypotheses and a quantitative study was con- ducted to test the hypotheses.
Growth	IT was employed in order to clarify or expand upon the understanding obtained in an earlier strand of a study.	(Ang & Slaughter, 2001; Koh, Ang, & Straub, 2004)	The findings of a quantitative study were expanded or expounded by examining the findings from a different study, for example a qualitative study
Confirmation	This was employed in order to evaluate the reliability of inferences obtained from one approach.	(Bhattacherje e & Premkumar, 2004)	A qualitative study was developed to validate the findings from a quantitative study.
Recompense	It compensates for the weakness of one approach by employing the other.	(Dennis & Garfield, 2003)	The qualitative analysis approach compensated for the small sample size of data in the quantitative approach.
Variety	IT is employed to gain divergent views of the same phenomenon.	(Chang, 2006)	Qualitative and quantitative approaches were conducted to associate observations of a phenomenon of interest by two different types of contributors.

Secondly, the explicit explanation by investigators using a mixed methods approach may assist the reader to gain a clear appreciation of the goals and results of mixed methods research articles. For instance, if the purpose for conducting mixed methods research is for wholeness, the reader can imagine that a mixed methods approach will provide a more all-inclusive view of the phenomenon of interest than will qualitative and quantitative mechanisms alone. Lastly, a thorough understanding of mixed methods research will assist researchers to make well-informed decisions about the design and examination of a mixed methods review. If, for example, the purpose for conducting mixed methods research is observing the development of eMarketplace applications over a period of time from a systematic prospective, a consecutive mixed methods methodology is perhaps more appropriate than a concurrent or comparable approach.

3.3. Study Context

Although there is a noticeable diversity in the literature, most eMarketplace research was undertaken in developed countries, with little focus on developing countries like Saudi Arabia (Algarni, Cheung, & Lee, 2011). SA is a world leading producer of oil and natural gas, a member of the G-20 and so far has the largest growth in ICT marketplaces in the Arabic region (Alfuraih, 2008; AlGhamdi, Nguyen, & Drew, 2012). Despite the current low utilization of eMarketplaces in SA, it is expected that the future of technology may flourish once the required developments are achieved. In this thesis, the proposed conceptual model of eMarketplace utilization and customer satisfaction (see Chapter 2) is tested in the Saudi Arabian context ,as it is considered to be characteristic of other Islamic countries that implement Islamic law (Vogel, 2000).

When the Internet was introduced into the Kingdom of SA, it brought with it new problems for the government. The government did not want to create a situation where the new technologies interfered with the beliefs of the country and the

eMarketplace activities had no formal regulations. SA is a Muslim country which is under Sharia law, which has an influence on the eMarketplace in Saudi Arabia, because Sharia law stipulates particular regulations for businesses. It has exclusive terminologies which cannot be ignored in a trading environment, for example, processes for the contract of sale, the meeting place and desired purchases (Al-Shehry, Rogerson, Fairweather & Prior, 2006; Alwabel & Zairi, 2005).

Moreover, in the context of the Saudi Arabia eMarketplace, ICT is one issue which the Saudi Arabian government is currently focusing on and planning to improve. Aleid, Rogerson and Fairweather (2009) are of the view that one major aspect of improving ICT in this country is the development of a feasible infrastructure that can control and support it. This is given the fact that infrastructure has been identified as one of the major factors that affect the adoption and development of ICT in any country (Steinbrook, 2009). Another indicator of ICT consumption in most countries around the world is the Internet coverage rate (Amit & Zott, 2001). A high rate of Internet coverage in a country points to a correspondingly high rate of ICT consumption.

3.4. Design of the Instrument

Phase 1 of this study employs a questionnaire as an instrument for the collection of quantitative data. The questionnaire was translated into Arabic and revised to better match the eMarketplace and customer satisfaction contexts. To avoid any bias, the back translation method (Geal-Dor, Jbarah, Meilijson, Adelman, & Levi, 2011) was used to assure identical or a highly similar meaning. The Arabic and English versions were validated and proofread for final approval of the content, wording and clarity of the questions by four experienced academics. A pilot study then was carried out for several Saudi participants to evaluate the effectiveness of the research instrument. The pilot study suggested some clarifications to the questionnaire instrument.

The questionnaires were divided into the following five sections on aspects of eMarketplaces: security, strong eMarketplace infrastructure, complementary services, eMarketplace reliability and regulatory requirements. The term *eMarketplace security* refers to activities that relate to the protection of company resources and assets to reduce the risk of misuse, loss and damage. The eMarketplace security factor was further categorized into three sub-factors: threat prevention, vulnerability and availability. The term *eMarketplace infrastructure* refers to a set of shared resources that work together to achieve common goals. This factor is further categorized into three sub-factors: eMarketplace/ICT strategy, eMarketplace/ICT structure and eMarketplace/ICT culture.

The term *complementary service* refers to a service that is obtainable from a business organization that supports the client by the service. This factor is further divided into three sub-factors: additional services, customer support and effective technology. The term *reliability* in the context of an information system is defined as the capability to achieve the required functionality under the specified conditions for a quantified period of time. This factor is further divided into three sub-factors: service deployment, error-free services and user-friendly services. The term *regulatory requirements* signifies the exponential development of Internet access and online activity and increases the number of emerging eMarketplace requirements and other legal issues which are related to copyright and digital content, national laws for cyberspace, privacy and data protection, the security of electronic transactions and cyber trade. This factor is also further divided into two sub-factors: eMarketplace policies, rules and regulations.

This study also employed semi-structured interviews and questionnaires as a means to collect data, because, as May (2011) pointed out, the interview method is the most suitable communication method since it provides both control and flexibility during discussion which helps to stimulate valid responses from the interviewees. Williamson and Bow, (2002) stated that a semi-structured interview is closer to a unstructured in-depth interview than to a structured standardized form,

having a standard list of questions, but permitting the interviewer to follow up on leads provided by the participants. The use of semi-structured interviews in this thesis allowed a comprehensive range of questions to be directed to eMarketplaces' regulators in order to address the research aims and objectives.

The interviews with eMarketplaces' regulators in SA were divided into the following five factors: security, strong ICT infrastructure, complementary services, eMarketplace reliability and regulatory requirements with more focus on infrastructure and regulatory issues. Several open-ended questions were asked in relation to each factor together with a five point Likert-scale to rate the strength of correlation among dependent and independent constructs of the research framework. In the five-point Likert scale, 1 indicated no correlation, 2 indicated weak correlation, 3 indicated neutral correlation, 4 indicated strong correlation and 5 indicated extremely strong correlation.

3.5. Instrument Implementation

Both the questionnaires and the interview questions were heavily guided by the literature. Study questions were first developed in the English language, then translated into Arabic, where required, as this was the language of the some interviewees and selected participants. To guarantee the accuracy and legitimacy of the translation, a representative of the Office of Translation checked the translated version and a Certificate of Conformity for both the Arabic and English versions was issued.

In both the quantitative and qualitative data collection instruments, questions relating to the interviewee, their qualifications, training, and experience, particularly in relation to the research subject, were asked first. The questionnaire began with general questions, then more specific questions were asked to elicit the required information. Five topics were covered in the interview and survey: eMarketplace

security, eMarketplace infrastructure, complementary services, eMarketplace reliability and regulatory requirements.

Upon completion of both the questionnaire and the interview, the participants were invited to add comments or suggestions to improve the utilization of eMarketplace platforms and eMarketplace competency standards. These questions were not asked in any specific order, and were employed as a guide only. Other open-ended questions could have been employed depending on how the conversation unfolded.

For the qualitative research, the interviews were held at a place that was suitable to both the researcher and interviewee. An appropriate time for the interview was also determined with the participants. To minimize any bias that could negatively impact the data collection, there had been no previous relationship between the researcher and the participants. The interviews for this study were conducted at the Ministry of Commerce and Industry in SA. A total of seven eMarketplace regulators were interviewed; five of the seven were male and the interviews were held in each person's office. For the interviews with the female senior experts, my wife accompanied me because Saudi Arabian culture does not permit men to communicate with non-related females alone.

At the beginning of each interview, the following issues were explained: the objectives of the study, the anticipated time to complete the interview was 40 to 60 minutes, the identity of the interviewee would not to be revealed, that the meeting could be terminated by the interviewee at any time, and that the interviewee would have access to the final PhD research report. After receiving permission from the participant, audio equipment including spare batteries, audio cassettes and a recorder was used to record the interview. Further, every interviewee signed a consent form.

When conducting semi-structured interviews, Patton (2005) recommends certain guidelines for audio recording the interviews. During the interview with the regulators, the respondent and the interviewer spoke clearly, the recorder was turned off if the participant wished it, and breaks were taken as required. Handwritten notes

were also used during the interview process: "when a tape recorder is being employed during the meeting, notes will be comprised principally of key phrases, lists of key points made by the respondent" (Patton, 2005). Patton adds the following benefits of note-taking during the interview process: such field notes assist the investigator to articulate new questions, assist in concentrating transcription, simplify later analysis, and establish an additional record in the case of recorder malfunction.

All the above ethical considerations were observed when conducting the interviews, including the recording and transcription of the data in Arabic and in English. According to Lichtman (2006), the researcher should transcribe most of the interview data, not summarize it. In this thesis, the seven interviews were fully transcribed and then translated from Arabic to English by the investigator. Kapborg and Bertero (2002) stated that "interpreting from one language to another can be very intricate because of indirect differences in meaning, some languages are comparable to the English language but others are not". Therefore, to guarantee that the translation of the interview was reliable in both languages, the text of the original interview and its English translation were examined and certified by an accredited interpreter.

3.6. Data Analysis

In the quantitative research, the statistical analysis procedures involved the following quantitative research techniques: skewness, which used to measure the symmetry of data distribution; Kurtosis, which was used to measure the tail and peakiness of the data distribution; Cronbach's Alpha was used to measure data reliability, i.e. items relate to the same factor and therefore are highly correlated within the same construct; Bartlett's Test of Sphericity was used to assure the appropriateness of data to be considered for factor analysis; Kaiser-Meyer-Olkin Measure of Sampling Adequacy was used to ensure that both the items and each related individual construct were suitable for appropriate factor analysis; and convergent validity was

used to measure the relationship between the items of the other related factors, whether the item correlates with other like items and is free from random error. The two statistical packages used are SPSS and SmartPLS (see Chapter 4). The hypotheses were tested using structural equation modelling.

Data analysis in the qualitative method can occur during data collection. Creswell (2009) specifies that in numerous qualitative methods, some analysis of data is undertaken as it is collected, so that gathering and analysing data are completed in the same process. Sarantakos (2005) suggested that analysis can take place throughout and after data collection in the interviews: analysis during data collection is the most common practice and is the one that is most reliable in terms of the principles of qualitative analyses. In this case, data are collected, coded, theoretically organized, analyzed, assessed and then employed.

Moreover, analysing the data during data collection plays a major role in the reliability of the findings of qualitative studies (Lichtman, 2006). On the day of each interview, a summary report for that interview was written as an explanatory analysis. The objective/aim of the summary report was to accumulate and construe the information obtained that was collected from the CD recording and the notes taken during the interview. Additionally, during the introductory analysis of the data, the transcriptions were read while the interview records were played (Creswell, 2009). The seven interviews with the regulators of eMarketplaces in SA were transcribed and translated. The Mathematical Mean values was used to analyse the relationship between customer satisfaction and eMarketplaces, then the mean value of all the sub-factors was taken and the average is assigned to the relevant factor.

3.7. Summary

This chapter described the multiphase mixed methods design used for this thesis. This thesis is based on a practical paradigm which allows the use of a mixed methods

approach. The first method was the quantitative data collection. The second was the qualitative data collection and analysis using semi-structured interviews/questionnaires and open-ended questions. After explaining the research methods for the study, the next chapter focuses on the quantitative data collection and analysis, commencing with the types of tests and techniques employed to statistically validate the proposed research framework based on the results obtained from eMarketplace users in Saudi Arabia. In Chapter 5, the development of the semi-structured interviews and findings are presented.

Chapter 4

Survey Analysis

4.1. Introduction

The main objective of this research is to identify the factors that determine customer satisfaction and the utilization of eMarketplaces. The extensive literature review (see Chapter 2) has directed the development of the conceptual research model for this proposed research. The review suggested five key factors: security, complementary services, strong infrastructure, reliability and regulatory requirements of eMarketplaces. Then, six hypotheses were postulated as a result of the literature review. This chapter provides a statistical validation for the conceptual research model.

The following section of this chapter provides a brief description of the demographic background of the survey participants followed by the data preparation process, which includes the normality and reliability testing. The following sections cover data analysis procedures including exploratory factor analysis, confirmatory factor analysis and the testing of the proposed model using Structural Equation Modelling (SEM) and goodness-of-fit indices (Mooi & Sarstedt, 2011).

4.2. Questionnaire

The survey comprises background questions and success factors questions. The questionnaire was translated into Arabic and revised to better match the eMarketplace context. To avoid any bias, the back translation method (Geal-Dor, Jbarah, Meilijson, Adelman, & Levi, 2011) was used to ensure an identical or highly similar meaning. The Arabic and English versions were validated and proofread for final approval of the content, wording, and clarity of the questions by four experienced academics. A pilot study then was carried out using 35 participants to evaluate the effectiveness of the research instrument. The pilot study suggested some clarifications to the survey instruments.

The population of interest in this study is eMarketplace users in SA (18 years old and above) who have previously engaged in eMarketplaces activities. An online survey using a Likert five-point scale ranging from strongly disagree (1) to strongly agree (5) was used to validate the proposed research hypotheses.

Since Saudi Arabia is a large country with multiple traditions and subcultures, this online survey is suitable for targeting eMarketplace customers and collecting data from large geographical areas. Compared with traditional surveys, online surveys incur lower costs, enable faster responses, and need less data entry effort. The non-fulltime workers, including students, were differentiated in this research because online customers commonly are younger and more active than conventional customers, making the younger sample (non-fulltime workers) more representative of the online customer population (Al-Diri, Hobbs, & Qahwaji, 2007; Al-Maghrabi, Dennis, Halliday, & BinAli, 2011). Furthermore, the younger sample may better represent the future eMarketplace patterns of the larger population.

4.3. Participants Demographic Background

The questionnaire was distributed to 500 active Saudi online users (e.g. social network members, electronic mail users) from which 337 provided answers (response rate 67.4 %, see Table 4-3). The survey participants were divided into two different groups based on their age, experience and their involvement in technology. The first group was non-fulltime workers (156 participants), as shown in Table 4-1 (46.3 %) and the second group was fulltime workers (181 participants), as shown in Table 4-2 (53.7 %).

The majority of non-fulltime workers were aged from 18 to 25 years. The frequency of use of eMarketplaces for the non-fulltime workers' was as follows: daily (2.6%), weekly (18.6%), monthly (37.2%), and more than a month (41.7%), whereas the frequency of use of eMarketplaces for the fulltime workers was marginally lower as follows: daily (0.6%), weekly (23.2%), monthly (35.4%), and more than a month (40.9%).

Previous research found that the younger population is more likely to utilize the Internet in Saudi Arabia, including engaging in eMarketplace activities (Al-Maghrabi, Dennis, Halliday, & BinAli, 2011). Thus, in this research, the total number of participants aged from 18-33 is 240 as shown in Tables 4-1 & 4-2, respectively.

Table 4-1: Non-fulltime Workers Sample

		Gender		**Total**
		Male	**Female**	
Age	18 - 25	49	42	91
	26 - 33	40	20	60
	34 - 41	5	0	5
Total		94	62	156

A total of 45.5% of the non-fulltime workers group had high school degree, (16.7%) had a diploma degree, (1.9%) had a high diploma degree, (24.4%) had a bachelor degree, (10.9%) had a master degree and 0.6% had a Ph D degree. Whereas, a total of 14.4% of the fulltime workers group had high school degree, (20.4%) had a diploma degree, (0.6%) had a high diploma, (43.6%) had a bachelor degree, (14.9%) had a master degree and (6.1%) had a PhD degree.

Table 4-2: Fulltime Workers Sample

		Gender		Total
		Male	**Female**	
Age	18 - 25	6	8	14
	26 - 33	46	29	75
	34 - 41	32	31	63
	42 - 49	16	11	27
	50 and over	2	0	2
Total		102	79	181

The responses from both samples were checked for consistency and fifteen invalid responses were excluded. This resulted in a final dataset of 337 responses. Table 4-3 provides the statistics on the completed questionnaires.

4.4. Statistical tools used in this study

Two different software packages were used to validate the statistical data obtained. The first software was IBM SPSS (the Statistical Package for the Social Sciences) which helped the researcher in the early stages of the statistical analysis, including data preparation, descriptive analysis and the reliability test which will be explained in the following sections. The second statistical software package was Smart PLS 2.0

(Partial Least Squares) which assisted the researcher to carry out the later stages of the statistical analysis, including the factor analysis and the full model testing with structural equation modeling (SEM). Both software packages were carefully selected to facilitate the interpretation of the statistical results. For example, SPSS is usually used to demonstrate a clear descriptive analysis together with conducting other major statistical tests such as reliability and normality tests (Mooi & Sarstedt, 2011). On the other hand, the Smart PLS version 2.0 was employed for its efficiency when conducting advanced statistical model tests. Many previous scholars have employed the Smart PLS tool that utilizes the partial least squares path analysis approach to obtain concise factor analysis and full model testing with SEM (Ahmad & Afthanorhan, 2014; Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014; Islam, 2012; Lowry & Gaskin, 2014; Yi & Gong, 2013).

Table 4-3: Statistics Related to Questionnaire Distribution

Item	**Number**
The number of questionnaires distributed	500
The number of emails returned as unreachable	13
The total of completed questionnaires	337
The percentage of completed questionnaires	67.4%
The total of removed invalid responses	5
Final dataset	337

Table 4-4 provides a summary of the statistical tests used in this research together with the recommended thresholds to validate the research model and test the related hypotheses.

Table 4-4: A summary of the statistical tests used

Statistical test **(Tools used)**	**Purpose**	**Values**	**References**
Skewness	To measure the regularity of data distribution curve.	-2 to +2: acceptable	(Hair, Black, Babin, & Anderson, 2006); (Lewis-Beck, Bryman, & Liao, 2003); (Pallant, 2011); (Blanca, Arnau, López-Montiel, Bono, & Bendayan, 2013).
Kurtosis	To measure whether the shape of data distribution is peaked or flat.	-2 to +2: acceptable	(Hair, Black, Babin, & Anderson, 2006) ;(Kline, 2011);(Blanca, Arnau, López-Montiel, Bono, & Bendayan, 2013).
Reliability-Cronbach's Alpha	To measure the data reliability, i.e. items relate to the same factor and therefore are highly correlated within the same factor.	>0.6: acceptable for EFA; >0.7:acceptable for CFA; >0.9: excellent for both.	(Hair, Black, Babin, & Anderson, 2006); (Li, Yen, Hu, Lu, & Chiu, 2012); (Cronbach & Shavelson, 2004).
Bartlett's Test of Sphericity	To measure the suitability of data for conducting factor analysis.	>0.50: data considered appropriate	(Williams, Brown, & Onsman, 2012).

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	Measures whether both the entire data and each individual variable is considered appropriate for good factor analysis	> 0.50: is appropriate for factor analysis	(Hair, Black, Babin, & Anderson, 2006); (Williams, Brown, & Onsman, 2012).
Convergent validity	To measure the relationship between each factor and other related factors, ensuring that each construct represents one dimension to avoid errors.	>0.5: when using the variance extracted estimates, it indicates strong items loading on their related factors, Or >0.7: when	(Hair, Black, Babin, & Anderson, 2006); (Bagozzi & Yi, 1988).
Discriminant validity	To ensure that each indicator or item can be distinguished from other unrelated factors, and only measures the related construct.	The square root of average variance extracted for each item loads stronger on its related construct than on any other	(Fornell & Larcker, 1981): (Hair, Black, Babin, & Anderson, 2006).

Factor Analysis	Measures how items are internally linked to each other to represent one factor or latent variable.		(Cudeck & MacCallum, 2012).
Goodness-of-fit index (GFI)	Identifies the absolute fit of the model.	≥ 0.90: Model considered fit	(Bagozzi & Yi, 1988); (Hair, Black, Babin, & Anderson, 2006).
Comparative fit index (CFI)	Identifies the incremental fit of the model.	≥ 0.90: Model considered fit	(Bagozzi & Yi, 1988); (Hair, Black, Babin, & Anderson, 2006).
Root mean square error of approximate (RMSEA)	Measures the fit of the model and help identify whether the model fit is different among different groups or study samples.	0.08 to 0.05: acceptable fit, ≤ 0.05: indicates good model fit	(Kline, 2011)

4.5. The measurement model

Due to the nature of this research which requires model validation on various levels i.e. individual factor level, factors analysis level and the whole model level using the structural equation modeling technique, it is important to clearly decide which measurement model to use. The two major types of measurement models are formative or reflective. Prior to deciding which measurement model to employ, three theoretical aspects must be considered: firstly, the nature of the factor

(construct or independent variable) (see Figure 4-1. The factor presented as construct). With reflective models, the latent factor can be independent from the related items or indicators (See Figure 4-1. Items presented as X1, X2, X3 and X4) such as in cases of measuring attitudes (Stenner, Burdick, & Stone, 2008). On the other hand, with formative models, which are more commonly used, the latent factor is usually dependent upon the interpretation of the researcher. Secondly, the direction of connections or arrows that exist between the items and the latent factor is entirely opposite. In formative models, the connection or arrow flows from the items to the factor. However, in the reflective models, the connections or arrows flows in the opposite direction i.e. from the latent factor to the related items (MacKenzie, Podsakoff, & Podsakoff, 2011). Figure 4-1 demonstrates the differences between the formative and reflective model.

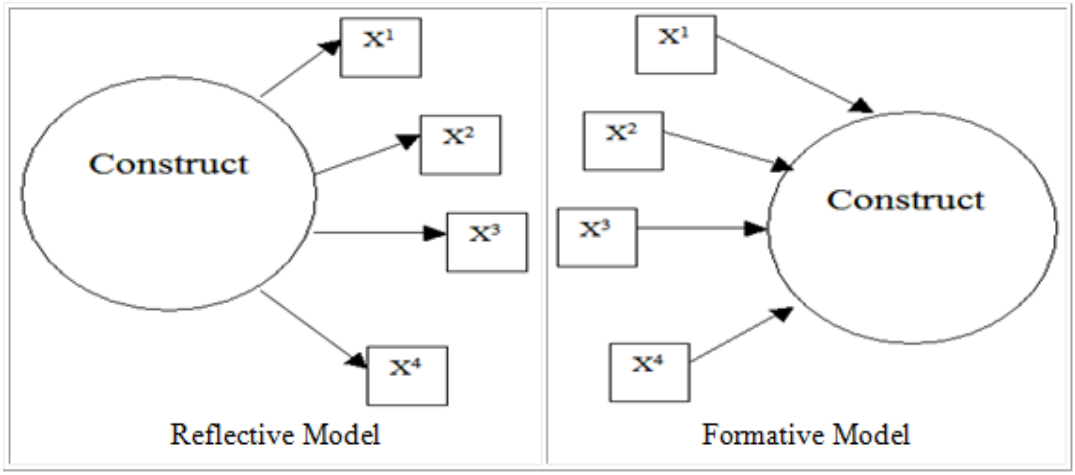


Figure 4-1: The direction of Causality Difference between Reflective and Formative Models (Stenner, Burdick, & Stone, 2008)

The third theoretical aspect to be considered is the characteristics of the items (indicators). In the reflective model, all items share a common subject or theme which allows the researcher to use them in an interchangeable manner. This means the researcher is able to measure the relevant factor by selecting fewer items. In contrast, the number of items in the formative model is very sensitive. Increasing or

decreasing the number of items can significantly alter the meaning of the defined factor or construct (Coltman, Devinney, Midgley, & Venaik, 2008).

In light of this, the researcher decided to select a reflective research measurement model. The reflective measurement model is widely employed in current research trend that investigate and determine the success factors of various phenomena, such as eMarketplace success factors (Coltman, Devinney, Midgley, & Venaik, 2008; MacKenzie, Podsakoff, & Jarvis, 2005). Table 4-5 summarizes the constructs (including the independent and dependent variables) with their scale items that represent the sub-factors.

4.6. Data Preparation

Prior to conducting the statistical analysis, data were checked and screened following the guidelines suggested by Pallant (2011). This process involves two main steps. The first step was to check for errors by observing any values that fall outside the range of the previously set range of values for each variable. The second step involves the process of correcting the detected errors. Five errors were detected and excluded from the data file in order to obtain a clean error-free dataset. Frequencies were repeated to ensure that there was no possible error that may cause analytical mistakes.

Following the data checking and screening processes, two statistical tests were conducted in order to ensure that the data are usable and can represent the targeted populations of this research. These two approaches are called normality testing and reliability testing. The following two sections discuss both approaches and demonstrate the relevant results. Following the process of preparing data, each factor with its relevant items was ready for the validation process, as presented in the next sections. Figure 4-2 demonstrates all five critical success factors (independent variables) together with their relevant items (sub-factors) and dependent variables.

Table 4-5: Research Model Scale Items

Construct	Item
Security	Sc-1: I prefer shopping online if online threats are prevented.
	Sc-2: Security can help eMarketplace customers overcome vulnerability.
	Sc-3: I prefer shopping online if eMarketplaces have available advanced security systems.
Complementary Services	Cs-1: I prefer to use an eMarketplace that provides additional services.
	Cs-2: I prefer to use an eMarketplace that offers customer support services anytime.
	Cs-3: It is important for eMarketplace systems to be effective.
Strong Infrastructure	Si-1: For better infrastructure, it is important for eMarketplaces to be aligned with business/ICT strategy.
	Si-2: It is important for eMarketplaces to be aligned with business/ICT structure, in the context of its infrastructure.
	Si-3: It is important for eMarketplaces to be aligned with business/ICT culture to obtain stronger infrastructure.
Reliability	Re-1: The consistency of eMarketplace service deployment (which means achieving similar, capable and adaptive performance continuously) makes it reliable.
	Re-2: It is crucial that eMarketplaces provide error-free services.

	Re-3: I prefer eMarketplaces that afford user-friendly service.
Regulatory Requirements	Rg-1: It is better if governments provide updated eMarketplace policies.
	Rg-2: Government rules and regulations for eMarketplaces can protect customers and businesses from online hazards.
Customer Satisfaction	Cu-1: I am satisfied if eMarketplaces provide sufficient product information.
	Cu-2: I prefer eMarketplaces that are easier to use while shopping online.
	Cu-3: Positive rating feedback from previous eMarketplace customers makes me more confident to use it.
	Cu-4: I usually prefer to revisit an eMarketplace which satisfied me in a previous transaction.
	Cu-5: I prefer eMarketplaces that provide enjoyment and a pleasant experience.
Utilization Level	Ul-1: The higher the number of completed transactions the better utilization level of eMarketplaces.
	Ui-2: I prefer to use eMarketplaces that have a high number of satisfied customers.

4.6.1. Normality testing of data

A normality of distribution test is an essential measure to ensure that the data collected are usable and representative of the target population prior to data analysis.

According to Hair, Black, Babin, & Anderson, (2006), the normality test is considered as a key assumption of multivariate data analysis as it can measure if data are normally distributed without any excessively low or high scores or values. These low or high scores may occur from a few participants and can skew the overall outcome. A normality test is conducted by checking the shape of the distribution of values or scores across the sample.

Table 4-6: Normality Test

Item	**Valid N**		**Skewness**		**Kurtosis**	
	N	F	N	F	N	F
Sc-1	156	188	-.577	.076	-.700	-.883
Sc-2	156	188	-.409	-.531	-.648	.275
Sc-3	156	188	-.334	-.560	-.805	-.591
Si-1	156	188	.570	-.104	-.255	-.268
Si-2	156	188	.306	-.192	.621	.405
Si-3	156	188	.065	-.291	.614	.217
Cs-1	156	188	-1.287	-.682	1.058	.199
Cs-2	156	188	-1.046	-.377	.959	-.657
Cs-3	156	188	-.815	-.608	.326	-.057
Re-1	156	188	-.673	-.569	-.220	.042
Re-2	156	188	-.729	-.601	-.419	.043
Re-3	156	188	-.625	-.324	-.577	-.807
Rg-1	156	188	.149	-.173	.049	-.096
Rg-2	156	188	.328	-.048	-.572	-.691
Valid N (listwise)	156	188				

Non-fulltime workers (N), Fulltime workers (F)

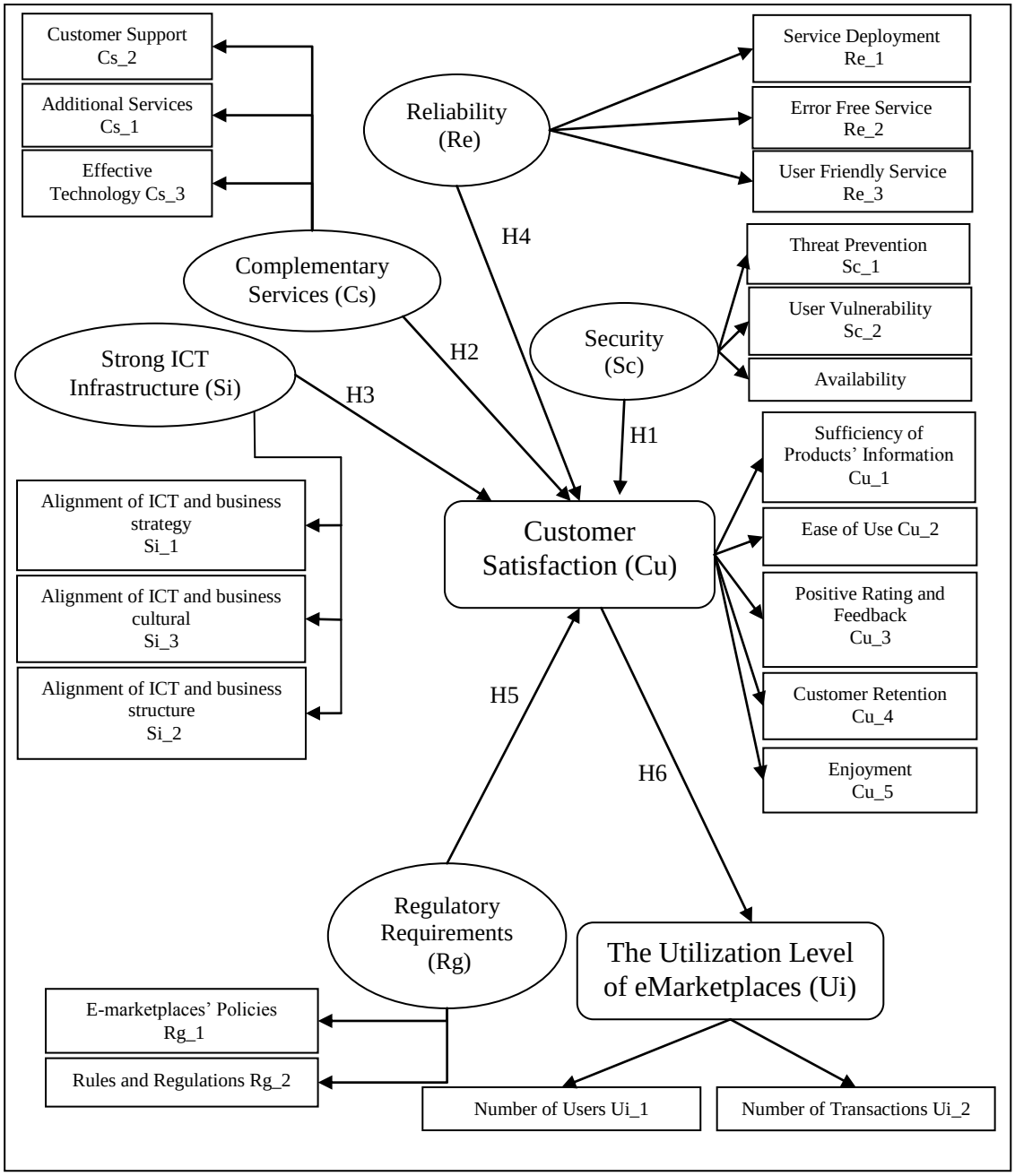


Figure 4-2: The Research Model with the Measurement Items

There are two different measures involved in the normality testing procedure. These measures are skewness and kurtosis. Skewness represents the direction of the curve or distribution whether it is positively skewed to the left or negatively skewed

to the right or centered whereas kurtosis explains the peak and tail of the distribution curve (Hair, Black, Babin, & Anderson, 2006). Both tests assist in ensuring the normality of the distribution for the tested data. A positive skewness value signifies a clustered distribution towards the left side with lower scores, whereas negative skewness values represent a clustered distribution towards the right side with higher scores. On the other hand, if the Kurtosis value is positive, this means that the distribution is peaked and tall, whereas a negative Kurtosis value indicates a flatter distribution curve between its tail and its highest scores (Byrne, 2010). In order for the distribution to be considered normal, the values of skewness and kurtosis should range from +2 to -2 (Pallant 2011). Both normality tests were conducted employing IBM SPSS. The results of the kurtosis and skewness tests are displayed in Table 4-6.

As shown in Table 4-6, the values of the kurtosis and skewness tests are within the rigorous range of -2 to +2 recommended by Pallant (2011). Thus, the distribution for all scale items is considered normal and appropriate for analysis.

4.6.2. Reliability testing of data

A reliability test is an important measure as it assesses the degree of consistency among various items of each construct or factor (Straub, Boudreau, & Gefen, 2004). The most widely used measure to assess reliability is Cronbach's alpha (Hair, Black, Babin, & Anderson, 2006). It specifically measures the internal consistency among different items of each construct or factor tested. The Cronbach's alpha values range from 0 to 1, however the minimum acceptable threshold value of .70 and maximum of .90 is required for items to be considered internally consistent and reliable (Hair, Black, Babin, & Anderson, 2006; Nunnally & Bernstein, 1994). In order to measure the constructs' internal consistency, a Cronbach's alpha test was initially performed for each construct or factor (Churchill Jr, 1979). Table 4-6 presents the Cronbach's alpha values for both non-fulltime workers and fulltime workers.

As seen from Table 4-7, for both groups, the Cronbach's alpha values met the minimum threshold of 0.7 and did not exceed the value of 0.9 suggested by Hair, Black, Babin, & Anderson (2006). This indicates appropriate internal consistancy among the items that represent each factor. The internal consistency reliabilities (ICR) shown in Table 4-6 also showed some differences among the studied groups. For the fulltime group, the ICR values for strong infrastructure and regulatory requirements factors were higher, whereas the ICR values for the non-fulltime group were higher in the security, complementary services and reliability factors. Overall, for both groups, each construct consisting of two items or more and each were reliably measured by the reliability Cronbach's alpha values ranging from 0.733 to 0.828. Therefore, the data is considered acceptable and statistically significant for further analysis including factor analysis.

Table 4-7: Reliability Test

Factor	**Item**	**Valid N**		**Cronbach's Alpha**	
		N	F	N	F
Security	Sc-1	156	188		
	Sc-2	156	188	.755	.733
	Sc-3	156	188		
Strong Infrastructure	Si-1	156	188		
	Si-2	156	188	.828	.871
	Si-3	156	188		
Complementary Services	Cs-1	156	188		
	Cs-2	156	188	.818	.789
	Cs-3	156	188		
Reliability	Re-1	156	188		
	Re-2	156	188	.823	.817
	Re-3	156	188		
Regulatory	Rg-1	156	188	.798	.827

Requirements	Rg-2	156	188		
	Valid N (listwise)	156	188		

Non-fulltime workers (N), Fulltime workers (F)

4.7. The appropriateness of data for factor analysis

Prior to conducting factor analysis, it is recommended that the suitability of the data is checked by applying two important measures called Bartlett's test of sphericity and the Kaiser Meyer Olkin (KMO) Measure of Sampling Adequacy (MSA). Bartlett's test of sphericity shows the numerical probability that the relationship matrix has substantial correlation between at least some of the tested items with the recommended threshold of (p<.05) for each construct, whereas for items and constructs, the KMO/MSA minimum values must be higher than 0.50 (Williams, Brown, & Onsman, 2012). Both tests were applied to the data using SPSS. The results are outlined in Table 8.

Table 4-8: Results of Bartlett's and KMO/MSA Tests

Test	**Score**	
	N	**F**
Bartlett's Test of Sphericity	**.000*** **	**.000*** **
Kaiser Meyer Olkin Measure of Sampling Adequacy (MSA)	**.799**	**.867**

Non-fulltime workers (N), Fulltime workers (F), *p<0.05; **p<0.01; ***p<0.001

As seen from Table 4-8, the Bartlett's test of sphericity scores for both groups is statistically significant with p values less than .000, demonstrating the statistical relationship between the tested variables with a confidence level of 95% (Williams, Brown, & Onsman, 2012). In addition, the results of KMO/MSA were .799 for the non-fulltime group and .867 for the fulltime group representing creditable values.

These results confirm the appropriateness of both group's data for performing factor analysis.

4.8. Data Analysis

The data analysis in this research comprises four distinct stages. The first stage involves the descriptive statistics for each construct of the research model. The second stage involves the initial exploratory factor analysis (EFA) which assists in identifying the suitability of the factors in the model for further analysis stages. The third phase involves the confirmatory factor analysis (CFA) which validates the correlation among the factors. The fourth stage involves structural equation modelling (SEM) which estimates the path coefficients in the research model which indicates the strength of the correlations between the dependant and independent variables.

4.8.1. Descriptive Statistics

This section presents an overview of the participants' responses for the scale items and its relevant constructs (see Figure 4-2). The data collected from both groups were assessed individually in order to support our research model findings.

4.8.2. Security

This construct has three items (see Table 4-5). The scores for the security items for the non-fulltime workers of were left skewed and the mean values ranged from 4.37 to 4.51, as shown in Figure 4-3. This indicates strong agreement among participants towards the importance of the security construct and its relevant items.

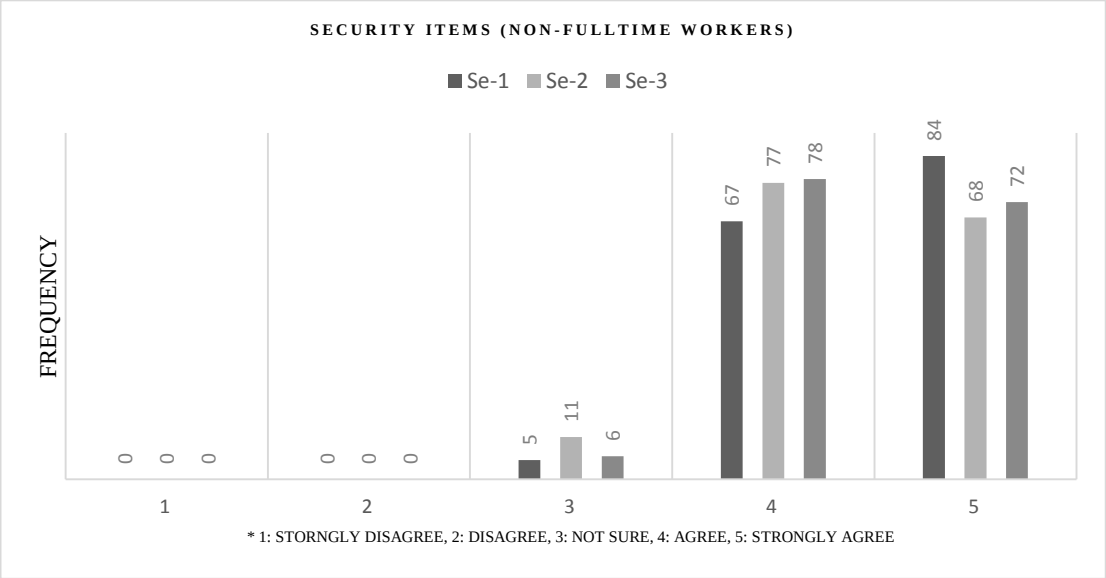


Figure 4-3: Non-fulltime Workers Group Answers to Security Items

Similar results were obtained for the fulltime workers regarding the security factor. The mean statistics ranged from 4.35 to 4.43 indicating strong agreement among the fulltime worker participants (Figure 4-4).

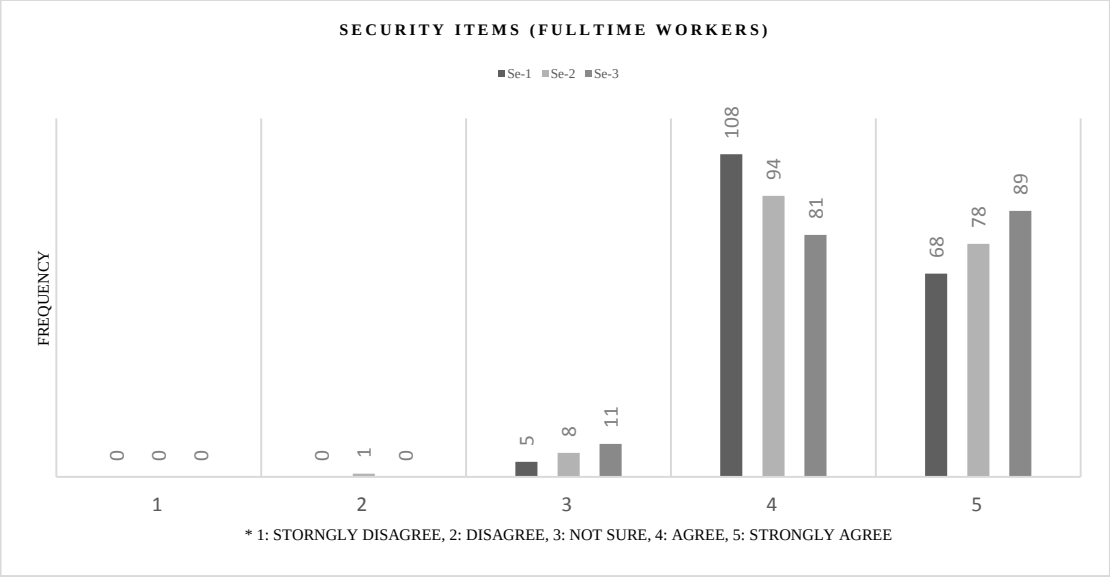


Figure 4-4: Fulltime Workers Group Answers to Security Items

As seen from Figure 4-4, the majority of the fulltime workers agreed on the importance of the security items. For instance, for item 1, 108 participants selected agree and 68 participants selected strongly agree, whereas only 5 participants were not sure about the item and no one selected the disagreement options. Thus, the security factor was strongly supported by both groups.

4.8.3. Complementary Services

Three items were included in the complementary services construct (see Table 4-5). The non-fulltime workers expressed common agreement on the importance of complementary services while utilizing eMarketplaces. The mean scores for the non-fulltime workers regarding complementary service items ranged from 4.39 to 4.44. Figure 4-5 demonstrates the answers of the non-fulltime workers to the complementary services items.

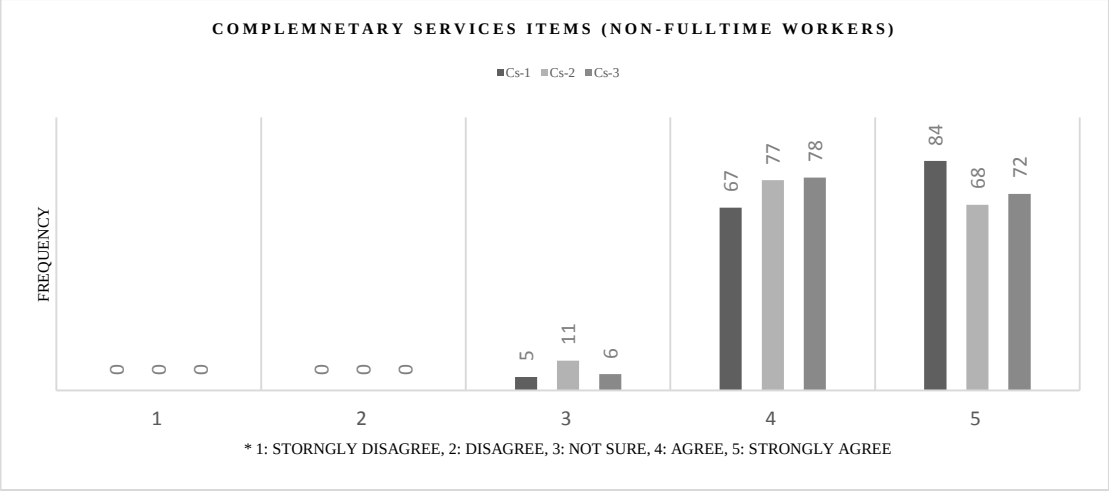


Figure 4-5: Non-fulltime Workers Group Answers to Complementary Services Items

The mean scores for the fulltime workers were slightly lower compared to the non-fulltime workers, ranging from 4.30 to 4.34. However, these scores still represent strong agreement among the fulltime workers towards the importance of

the complementary services as a factor. Figure 4-6 illustrates the answers of the fulltime workers to complementary services items.

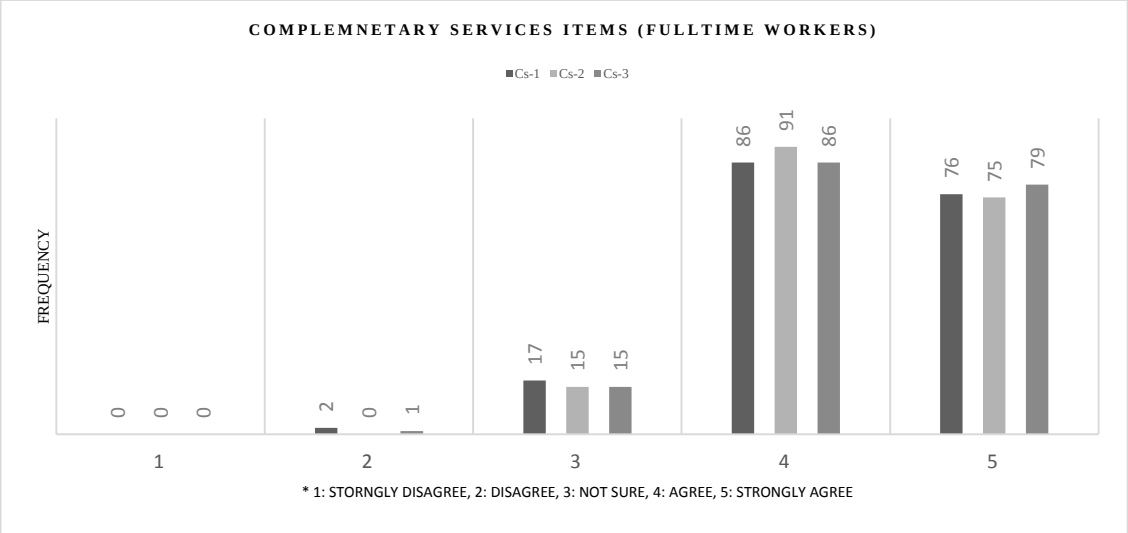


Figure 4-6: Fulltime Workers Group Answers to Complementary Services Items

4.8.4. Strong Infrastructures

In contrast to the previous two constructs, the non-fulltime workers, scored the infrastructure items lower, indicating that most of the participants in this group were not sure about the importance of the strong infrastructure items. For the non-fulltime workers, the mean scores for this factor ranged from 3.38 to 3.51, indicating overall weak support for this construct. Figure 4-7 illustrates the answers of the non-fulltime workers to the strong infrastructure items.

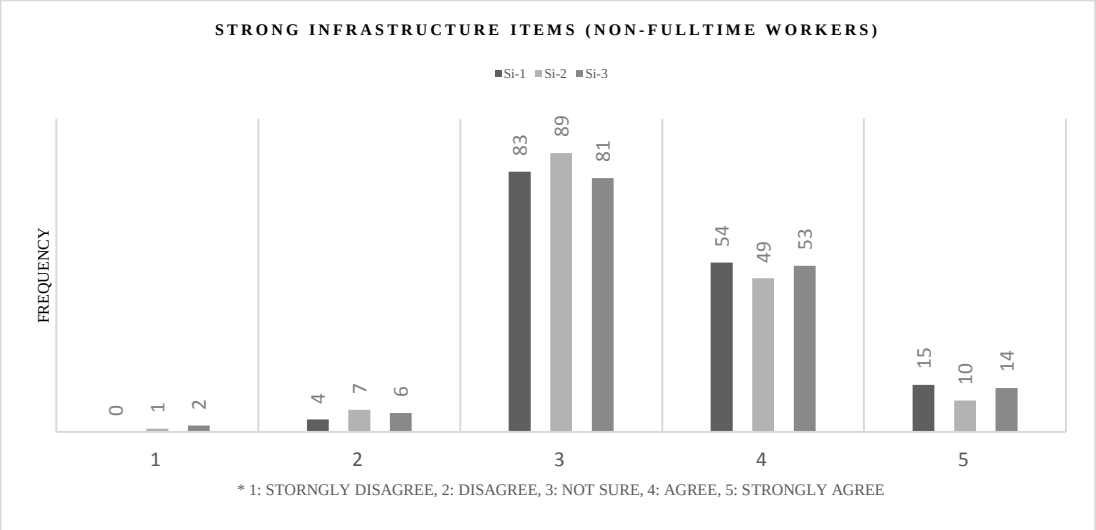


Figure 4-7: Non-fulltime Workers Group Answers to Strong Infrastructure Items

On the other hand, the mean scores for the fulltime workers were higher, ranging from 4.30 to 4.40. This indicates common agreement among the fulltime workers towards the strong infrastructure items. The answers to these items are illustrated in Figure 4-8.

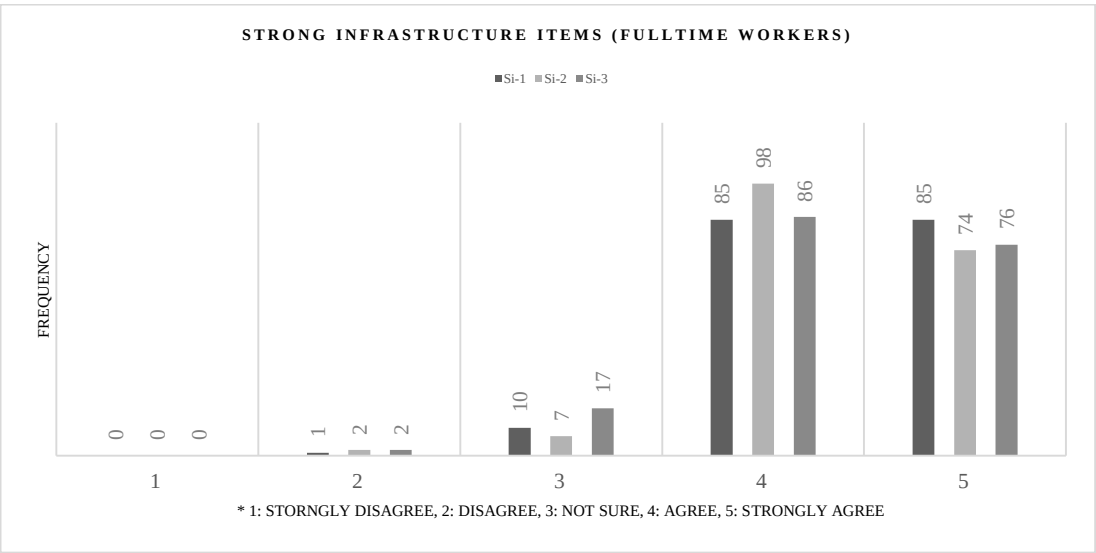


Figure 4-8: Fulltime Workers Group Answers to Strong Infrastructure Items

4.8.5. Reliability

The reliability construct included three items (see Table 4-5). Overall, most participants from both groups agreed on the importance of the reliability items. For instance, the mean scores ranged from 4.33 to 4.41 for the non-fulltime workers. The answers to each reliability item for this group are presented in Figure 4-9.

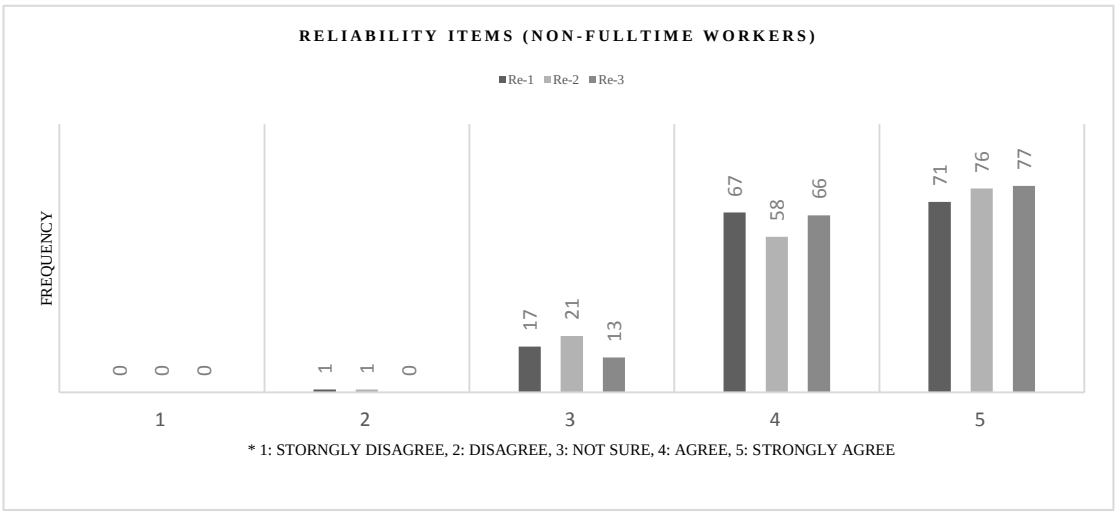


Figure 4-9: Non-fulltime Workers Group Answers to Reliability Items

The mean scores of the reliability items for the fulltime workers ranged from 4.34 to 4.42. This means that most participants saw reliability as a critical success factor for eMarketplaces. Figure 4-10 presents the answers of the fulltime workers to the reliability items.

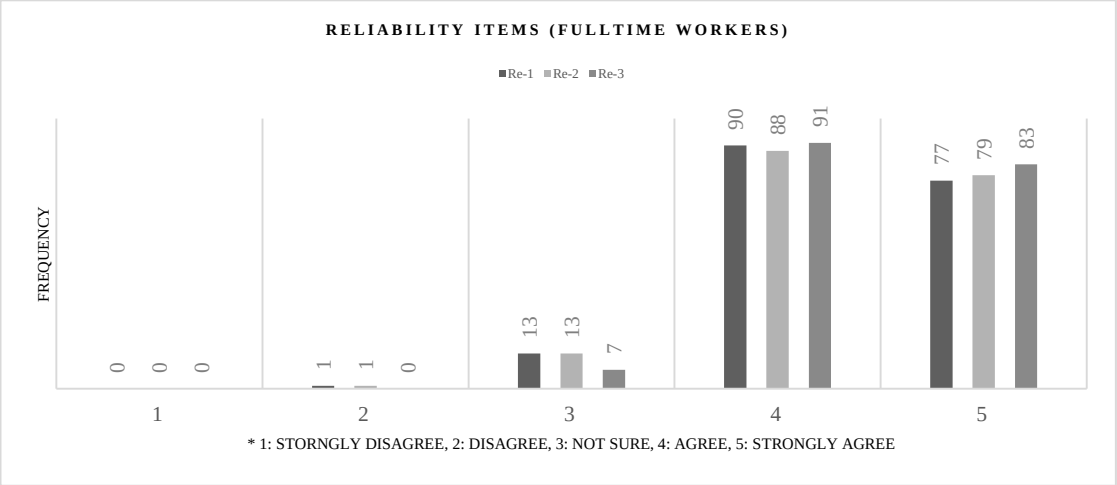


Figure 4-10: Fulltime Workers Group Answers to Reliability Items

4.8.6. Regulatory Requirements

Two items were included in this construct (see Table 4-5). Unlike the previous construct, the non-fulltime workers scored this construct lower, with mean scores of 3.38 and 3.53, respectively. This means that most of the non-fulltime workers were not aware of the importance of eMarketplace rules, regulations and policies. Figure 4-11 illustrates the answers to the regulatory requirements items by the non-fulltime workers.

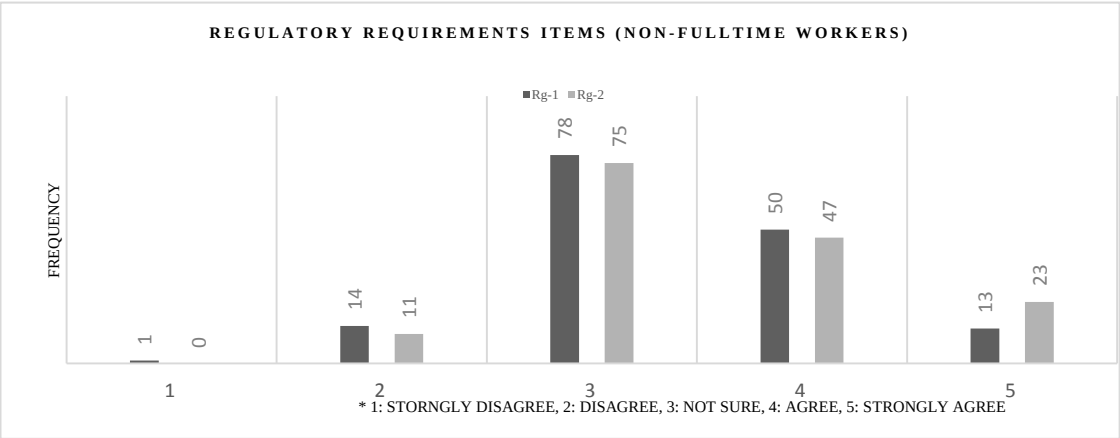


Figure 4-11: Non-fulltime Workers Group Answers to Regulatory Requirements Items

In contrast to the non-fulltime workers, the mean scores for the regulatory requirements items were marginally higher for the fulltime workers group. With mean scores of 3.73 and 3.74, this group expressed their agreement on the importance of regulatory requirements for eMarketplaces. The answers of the fulltime workers to the regulatory requirements items are presented in Figure 4-12.

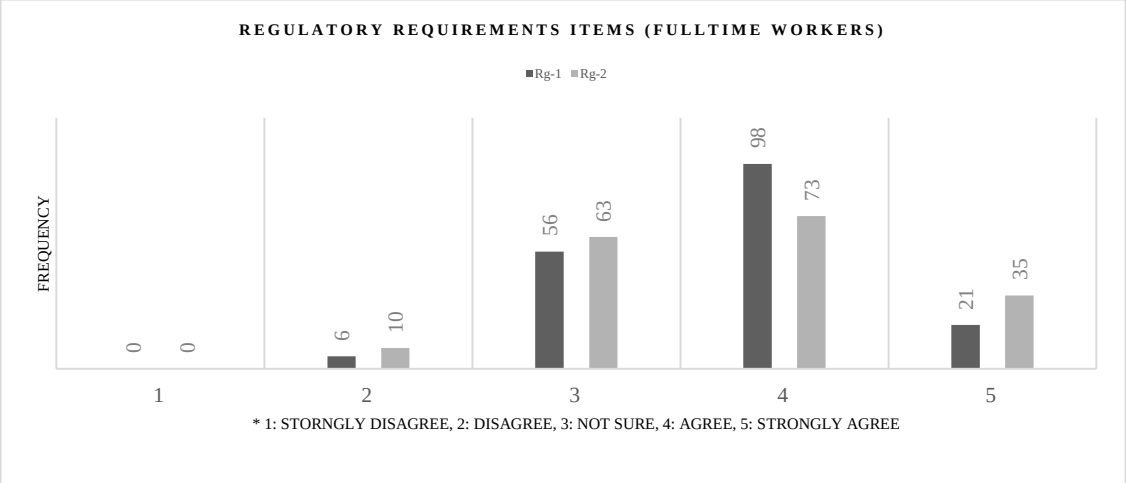


Figure 4-12: Fulltime Workers Group Answers to Regulatory Requirements Items

4.8.7. Customer Satisfaction

Five items were included in this construct (see Table 4-5). For the non-fulltime workers, the means scores were 4.56, 4.48, 4.48, 4.42 and 4.51, respectively. This means most participants in this group strongly agreed with the customer satisfaction items. Figure 4-13 shows the answers of the non-fulltime workers to the customer satisfaction items.

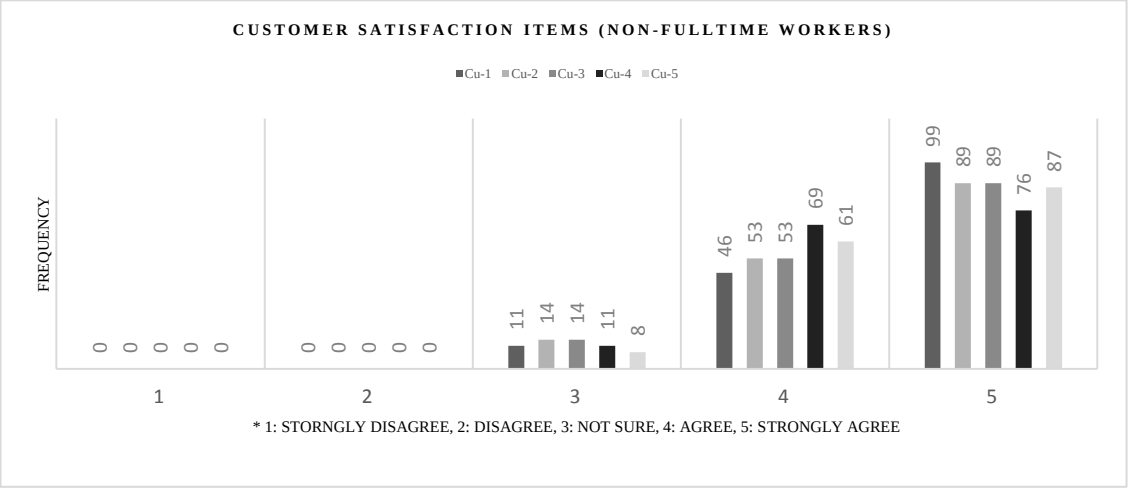


Figure 4-13: Non-fulltime Workers Group Answers to Customer Satisfaction Items

Similarly, the means scores for the fulltime workers to the customer satisfaction items were 4.45, 4.44, 4.40, 4.47 and 4.42, respectively. Figure 4-13 illustrates the answers of the fulltime workers to the customer satisfaction items.

Figure 4-14: Fulltime Workers Group Answers to Customer Satisfaction Item

Overall, both groups expressed strong agreement on the importance of customer satisfaction and its related items for eMarketplaces.

4.8.8. The Utilization of eMarketplaces

Two items were included in this construct (see Table 4-5). Most of the non-fulltime workers indicated that they are more likely to utilize an eMarketplace which has a higher number of consumers with good reputations. For the non-fulltime workers, the mean scores for this construct were 4.42 and 4.50, respectively. The answers of the non-fulltime workers to the utilization level items are shown in Figure 4-15.

Figure 4-15: Non-fulltime Workers Group Answers to the Utilization Level Items

In addition, the items of this construct scored high value of means for the fulltime workers group. Figure 4-16 illustrates their answers and shows that both items were left skewed. The means scores were 4.52 and 4.50, which are slightly higher than the non-fulltime workers group.

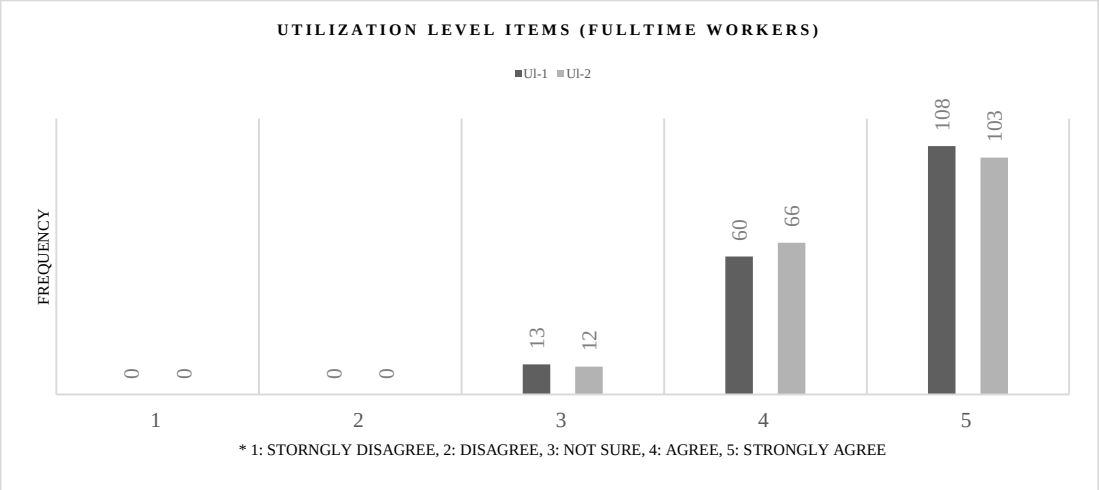


Figure 4-16: Fulltime Workers Group Answers to the Utilization Level Items

In summary, the descriptive analysis revealed some differences between the non-fulltime workers and the fulltime workers mainly in regard to the strong infrastructure and regulatory requirements factors. The other factors were positively supported by both groups with common agreement on the importance of the customer satisfaction and the utilization level. The next section will provide the results of the exploratory factor analysis followed by the confirmatory factor analysis. This will be followed by the subsequent analyses of SEM.

4.9. Exploratory Factor Analysis

Exploratory factor analysis (EFA) is the first step in the factor analysis technique, which is used to identify the number of factors from many measurement items. EFA is specifically used when researchers are not certain about the number of factors which exist in their study of interest (Field, 2009). Another important reason for conducting EFA is to develop an instrument to validate the collected data (Costello & Osborne, 2005). According to Holmes-Smith (2007), EFA is an applied statistical procedure that helps researchers to identify whether the studied factors are one-dimensional or multidimensional. As the factors identified in this research were

identified from an extensive literature, the EFA was conducted to ensure the robustness of the measures. The measurement items for each construct were tested to ensure overall construct validity.

Table 4-9: Factor analysis results (Non-fulltime workers)

	SC	**CS**	**SI**	**RE**	**RG**	**CU**	**UL**
Sc-1	**0.878251**	0.581420	0.613567	0.583195	0.471086	0.600037	0.652148
Sc-2	**0.915732**	0.647882	0.561158	0.514851	0.453074	0.641982	0.604528
Sc-3	**0.895771**	0.613362	0.532153	0.523352	0.502448	0.543325	0.592485
Cs-1	0.512238	**0.936104**	0.402245	0.680429	0.482369	0.550134	0.581719
Cs-2	0.642834	**0.918750**	0.443258	0.510987	0.452237	0.604256	0.581234
Cs-3	0.583419	**0.873261**	0.431254	0.692749	0.421597	0.693019	0.601457
Si-1	0.645731	0.446523	**0.817352**	0.451973	0.391374	0.554193	0.451522
Si-2	0.584173	0.434696	**0.801334**	0.494086	0.440248	0.632544	0.534821
Si-3	0.632491	0.403354	**0.851258**	0.480129	0.432215	0.573157	0.492579
Re-1	0.513718	0.691225	0.491897	**0.920851**	0.450294	0.542846	0.595428
Re-2	0.632967	0.605512	0.562056	**0.948760**	0.471328	0.580047	0.542317
Re-3	0.665791	0.633325	0.520234	**0.921358**	0.513364	0.562193	0.582175
Rg-1	0.553419	0.453318	0.440512	0.491394	**0.837613**	0.663341	0.593274
Rg-2	0.537182	0.516634	0.401670	0.513358	**0.806374**	0.490129	0.526423
Cu-1	0.584561	0.674352	0.642546	0.611039	0.504003	**0.911385**	0.602542
Cu-2	0.612264	0.694838	0.570015	0.602047	0.562546	**0.897546**	0.624521
Cu-3	0.646683	0.649657	0.591425	0.520348	0.491983	**0.873756**	0.654245
Cu-4	0.594423	0.605681	0.613025	0.563158	0.461307	**0.910957**	0.652344
Cu-5	0.635586	0.562740	0.620125	0.542294	0.523309	**0.886750**	0.685534
Ul-1	0.635427	0.586580	0.524371	0.571240	0.502418	0.642571	**0.927845**
Ul-2	0.642351	0.642318	0.503426	0.553428	0.492571	0.512456	**0.931524**

Table 4-10: Correlation among variables and squared root of average extracted (Non-fulltime workers)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Security (1)	**0.90**						
Complementary Services (2)	0.62	**0.91**					
Strong Infrastructures (3)	0.55	0.42	**0.83**				
Reliability (4)	0.74	0.73	0.48	**0.93**			
Regulatory Requirements (5)	0.49	0.47	0.42	0.49	**0.82**		
Customer Satisfaction (6)	0.79	0.81	0.60	0.76	0.53	**0.90**	
Utilization Level (7)	0.73	0.64	0.51	0.68	0.57	0.79	**0.93**

Table 4-11: Factor analysis results (Fulltime workers)

	SC	CS	SI	RE	RG	CU	UL
Sc-1	**0.831427**	0.574418	0.632548	0.503241	0.495821	0.690253	0.573421
Sc-2	**0.890129**	0.594012	0.598742	0.485523	0.552375	0.635236	0.632418
Sc-3	**0.913328**	0.604058	0.642318	0.603258	0.526480	0.664219	0.624178
Cs-1	0.603178	**0.911458**	0.593941	0.663538	0.623510	0.525536	0.584217
Cs-2	0.523091	**0.863307**	0.563210	0.583642	0.574238	0.598752	0.571423
Cs-3	0.670014	**0.880371**	0.586327	0.574415	0.610048	0.683517	0.621278
Si-1	0.571480	0.524418	**0.891120**	0.642354	0.583215	0.583276	0.481572
Si-2	0.591364	0.553691	**0.913275**	0.542368	0.573524	0.668321	0.524681
Si-3	0.623217	0.567784	**0.864018**	0.570015	0.523014	0.623518	0.651257
Re-1	0.532178	0.634890	0.613258	**0.913267**	0.602235	0.660235	0.524673
Re-2	0.490950	0.593347	0.643250	**0.895234**	0.583245	0.562348	0.574213
Re-3	0.594012	0.644089	0.560014	**0.934521**	0.635480	0.594231	0.634527
Rg-1	0.574128	0.642258	0.492235	0.592541	**0.841127**	0.601429	0.582634
Rg-2	0.634017	0.574458	0.563258	0.692301	**0.893017**	0.542358	0.515428
Cu-1	0.640018	0.503058	0.563250	0.601427	0.594236	**0.911385**	0.552436
Cu-2	0.670546	0.552194	0.623581	0.551028	0.603265	**0.884034**	0.534122
Cu-3	0.680349	0.693485	0.631205	0.571236	0.663520	**0.934017**	0.581245
Cu-4	0.501988	0.585510	0.463025	0.543328	0.670152	**0.873429**	0.574125
Cu-5	0.629214	0.575032	0.623584	0.621145	0.595582	**0.923157**	0.593415
Ul-1	0.662341	0.554812	0.582341	0.612453	0.631245	0.534512	**0.948632**
Ul-2	0.657234	0.534128	0.694215	0.542317	0.742135	0.612458	**0.949115**

Table 4-12: Correlation among variables and squared root of average extracted (Fulltime workers)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Security (1)	**0.88**						
Complementary Services (2)	0.59	**0.89**					
Strong Infrastructures (3)	0.62	0.57	**0.90**				
Reliability (4)	0.44	0.62	0.59	**0.91**			
Regulatory Requirements (5)	0.51	0.58	0.54	0.64	**0.87**		
Customer Satisfaction (6)	0.72	0.74	0.64	0.61	0.67	**0.91**	
Utilization Level (7)	0.66	0.71	0.69	0.71	0.69	0.81	**0.95**

The construct validity involves two distinct types, namely convergent validity and discriminant validity. Both convergent validity and discriminant validity help in examining the relationship between the items of one construct with the other constructs. The main difference is that convergent validity concerns related constructs whereas discriminant validity concerns unrelated constructs (Pallant, 2011).

To conduct the EFA, the principal component analysis method employing the varimax rotation method showed a consistent combination for the identified five factors, confirming the preciseness of the proposed research framework. Tables 4-9 and 4-11 demonstrate the results of the factors analysis for both groups.

In assessing the convergent validity of the factors, the criterion of Fornell & Larcker (1981) of the average variance extracted (AVE) was followed. They suggested that an AVE value of 0.50 is considered satisfactory as it shows that the relevant construct is able to clarify more than 50% of the variance of its items on average. The AVEs in this research for both groups, as shown in Tables 4-10 and 4-12, were consistently above 0.5.

As seen from Tables 4-9 and table 4-11, convergent validity is achieved for all items in both groups as the AVEs are steadily higher than the minimum threshold value of 0.5 recommended by Fornell and Larcker (1981). This is also supported by

Chin (2003), who mentioned that when each measurement item load was higher on its respective construct than on any other related constructs in the research framework, then the convergent validity for the studied items is obtained.

In addition, testing for discriminant validity involves checking whether the items measure the factor in question or other related factors. There are two distinct levels of discriminant validity. They are on the construct/factor level and on the item level. The guidelines suggested by Gefen and Straub (2005) were followed in order to verify the discriminant validity for both correlation analysis for the construct level and factor analysis for the item level. Discriminant validity is ensured if the square root of AVE for each factor is greater than the correlation between the measures of potentially related factors (Fornell & Larcker, 1981). As Tables 4-10 and table 4-12 depict, the square root of the average variance extracted value for the variables for both groups is consistently higher than the corresponding correlation values for that variable, suggesting satisfactory discriminant validity between the variables/construct (Fornell & Larcker, 1981; Hair, Black, Babin, & Anderson, 2006).

Furthermore, Tables 4-9 and table 4-11 illustrate that all items have cross loading coefficients less than the factor loading on their respective assigned latent variable for the non-fulltime workers, signifying that discriminant validity on the item level is met for all the constructs of both groups. Thus, conducting EFA for the research data has verified both convergent and discriminant validities. Overall, the measurement items employed for this research show appropriate levels of reliability and convergent and discriminant validities, which help in conducting further confirmatory factor analysis and hypotheses testing for the research framework.

4.10. Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is an advanced approach that examines the correlations on a specific hypothesized model. It specifically tests whether the different items proposed are correlated with the relevant factors or latent variables

(Cudeck & MacCallum, 2012). CFA is conducted for four distinct reasons. These are psychometric evaluation of measures, construct validation, testing method effects and testing measurement invariance (Harrington, 2008). To conduct CFA, both the statistical package Smart PLS 2.0 (Partial Least Squares) and AMOS were employed. Smart PLS was developed by Ringle, Wende, and Will (2007), having a simple and powerful interface and analytical tools. It combines both linear regression and CFA, which enables its users to run the measurement and structural models concurrently. On the other hand, the statistical package AMOS assists in identifying the model goodness of fit indices. There are three common indices that are used to measure the model goodness of fit. These are the goodness-of-fit index (GFI), the root mean square error of approximation (RMSEA) and the comparative fit index (CFI). The selection of these indices was based on their distinct purposes. For instance, GFI is common in the absolute fit of the model whereas CFI is commonly used as an incremental fit measure. In addition, RMSEA assists in validating the model fit among different samples to observe the similarities and differences (Bagozzi & Yi, 1988; Hair, Black, Babin, & Anderson, 2006; Kline, 2011). Therefore, these three indices were found to be the most appropriate measures to examine the model fit for both groups from different goodness-of-fit techniques. Table 4-13 presents the results of the goodness-of-fit measures together with the recommended threshold of accepted values for both groups.

As seen from Table 4-13, the goodness of-fit for both groups was assessed and analyzed as the first step of the structural equation model (SEM). The results for the non-fulltime workers' model show that the observed values of GFI, CFI and RMSEA (0.913, 0.925 and 0.063, respectively) meet the recommended values suggested by Bagozzi and Yi (1988), Hair, Black, Babin, and Anderson (2006) and Kline (2011), whereas the results of the fulltime workers' model show that the observed values of GFI, CFI and RMSEA (0.937, 0.959 and 0.054, respectively) were within the recommended thresholds by Bagozzi and Yi (1988), Hair, Black, Babin, and Anderson (2006) and Kline (2011). Hence, both models fitted the observed data

reasonably well, with an advantage for the fulltime workers' model over the non-fulltime workers' model, as the results of the goodness-of-fit measures indicated.

Table 4-13: Goodness-of-fit indices

Confirmatory Factor Analysis CFA (Goodness-of-fit measures)	**Recommended Values**	**Value**	
		N	**F**
Goodness-of-fit index (GFI)	Greater than or equal to 0.90 (Bagozzi & Yi 1988; Hair, Black, Babin, & Anderson, 2006)	0.913	0.937
Comparative fit index (CFI)	Greater than or equal to 0.90 (Bagozzi & Yi, 1988; Hair, Black, Babin, & Anderson, 2006)	0.925	0.959
Root mean square error of approximate (RMSEA)	From .08 to .05 acceptable fit, Values of 0.05 or less indicate good model fit (Kline, 2011)	0.063	0.045

In addition, CFA involves another important measure, which is factor loading. This research follows the criteria recommended by (Hair, Black, Babin, & Anderson, 2006) in deciding the relative importance and significance of the factor loading of each item, (i.e., loadings greater than 0.30 are considered significant; loadings greater than 0.40 are considered important; and loadings 0.50 or greater are considered to be very significant). Figures 4-17 through to 30 show models of both groups tested for the CFA model and demonstrates each item loading on its related constructs with the measurement errors (e1, etc.). These measurement errors are separated from the factor loadings as they do not affect the latent variable/factor directly rather, they affect the related item on reflective models (Kline, 2011; Rouse & Corbitt, 2008). If the results of these measurement errors exceed 0.5, it can then result in the exclusion of its related items (Fornell & Larcker, 1981). The items are presented in rectangles (see Figure 4-2).

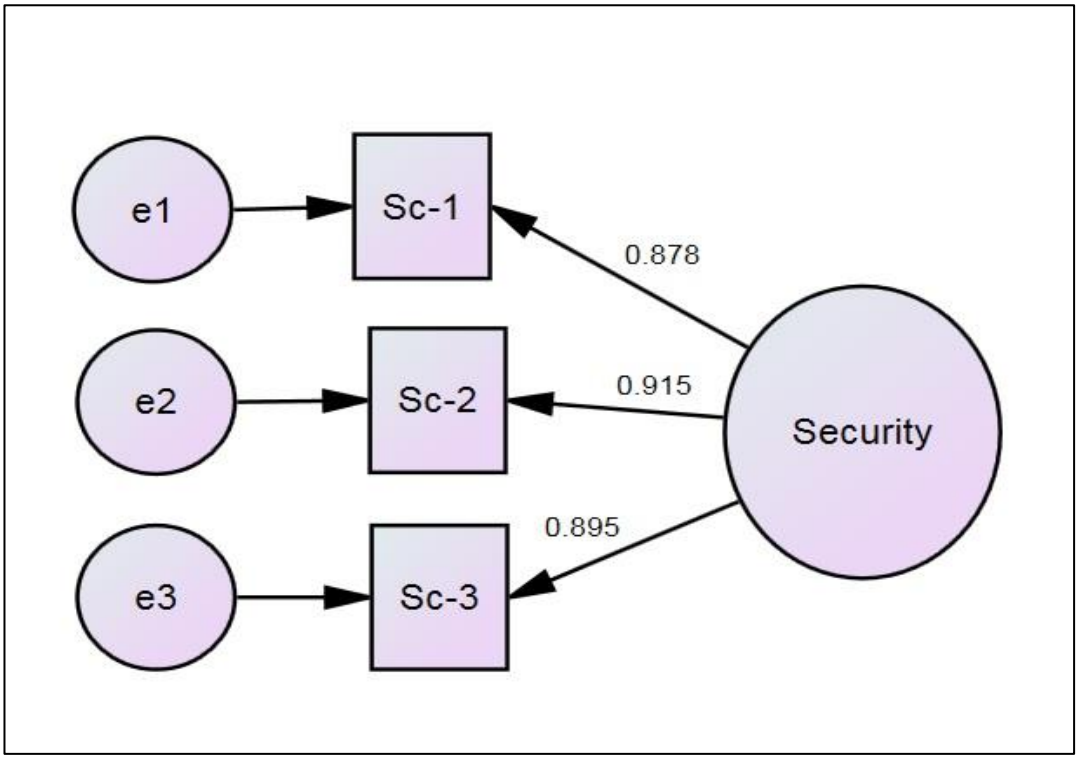


Figure 4-17: CFA for the Security construct (Non-fulltime workers Group)

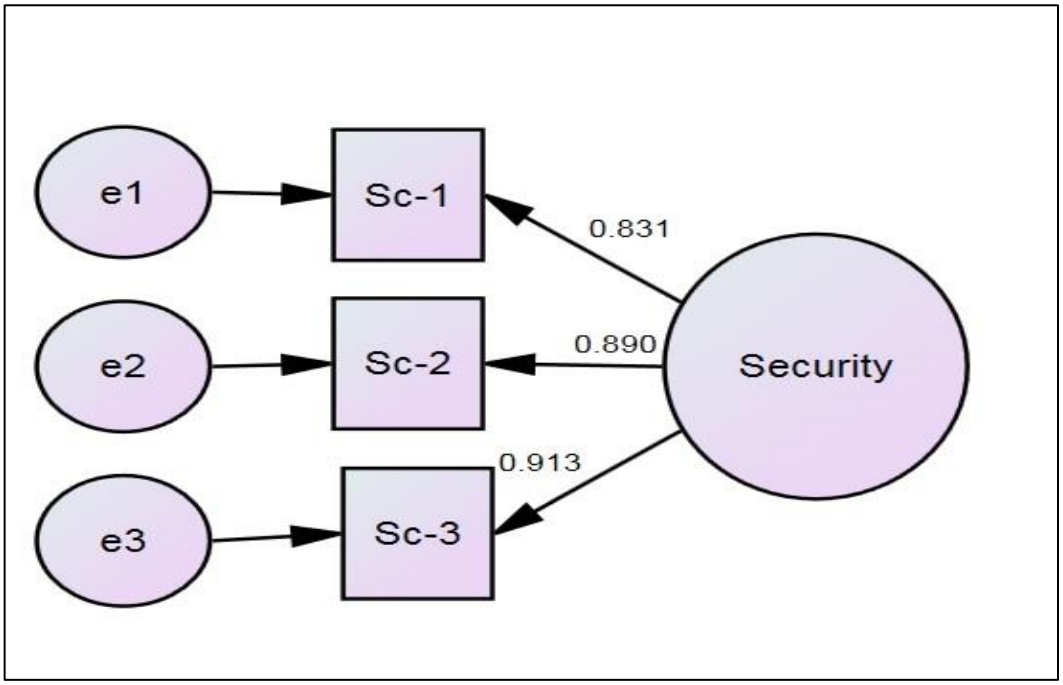


Figure 4-18: CFA for the Security construct (Fulltime workers Group)

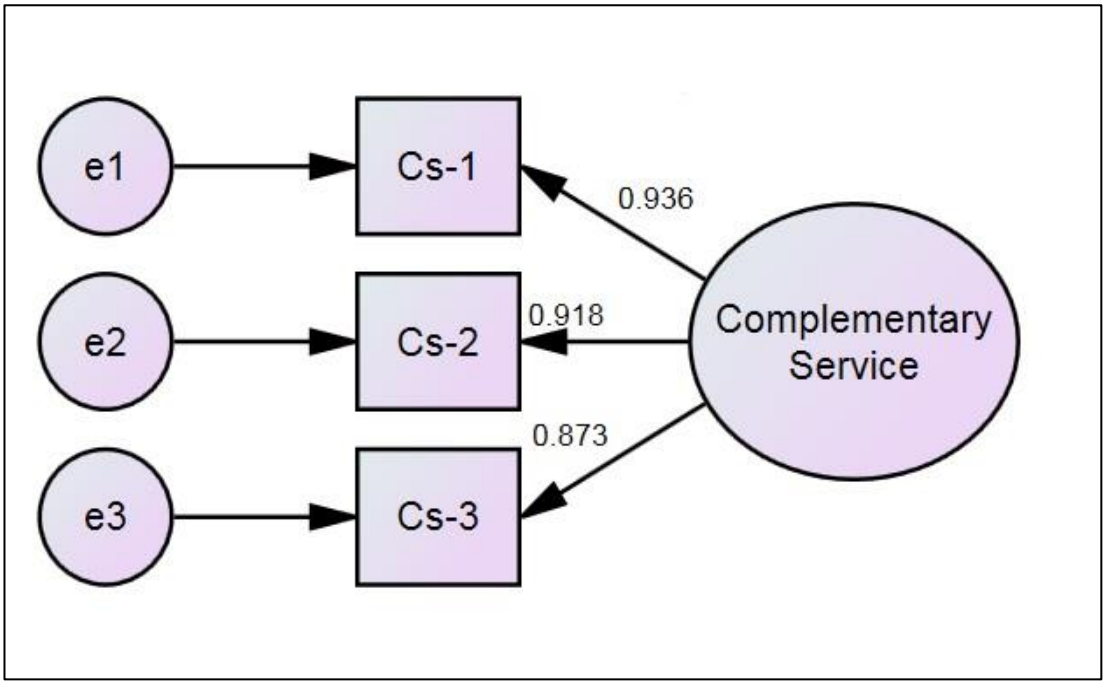


Figure 4-19: CFA for the Complementary Service construct (Non-fulltime workers Group)

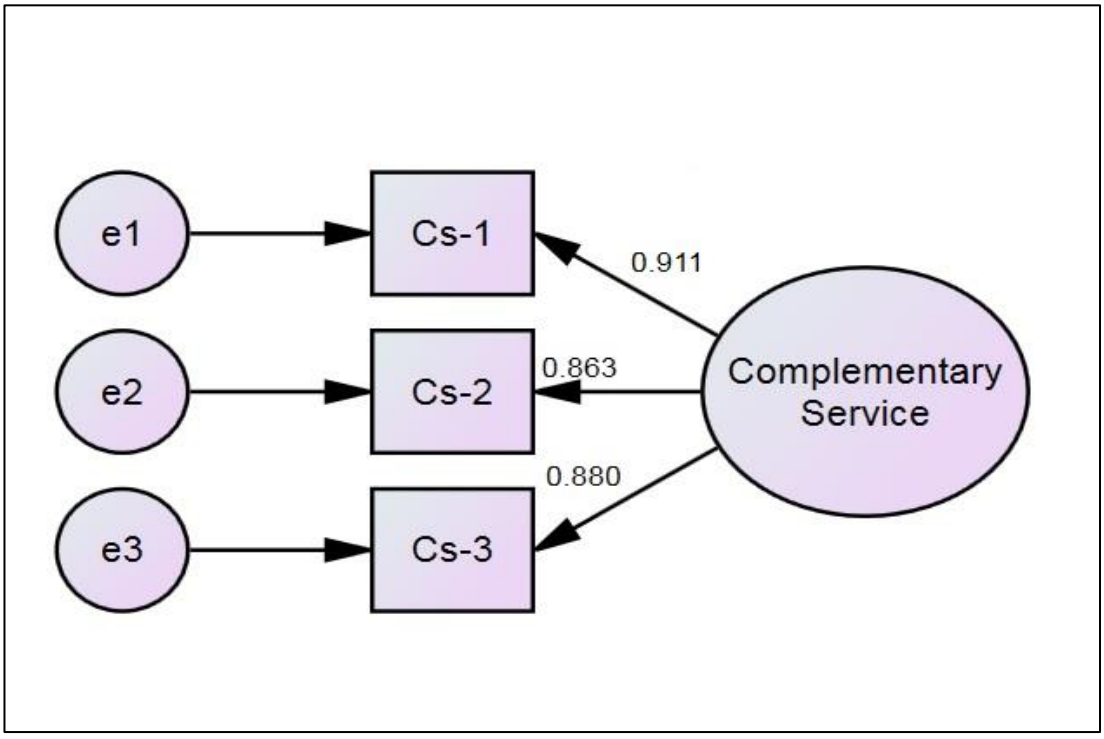


Figure 4-20: CFA for the Complementary Service construct (Fulltime workers Group)

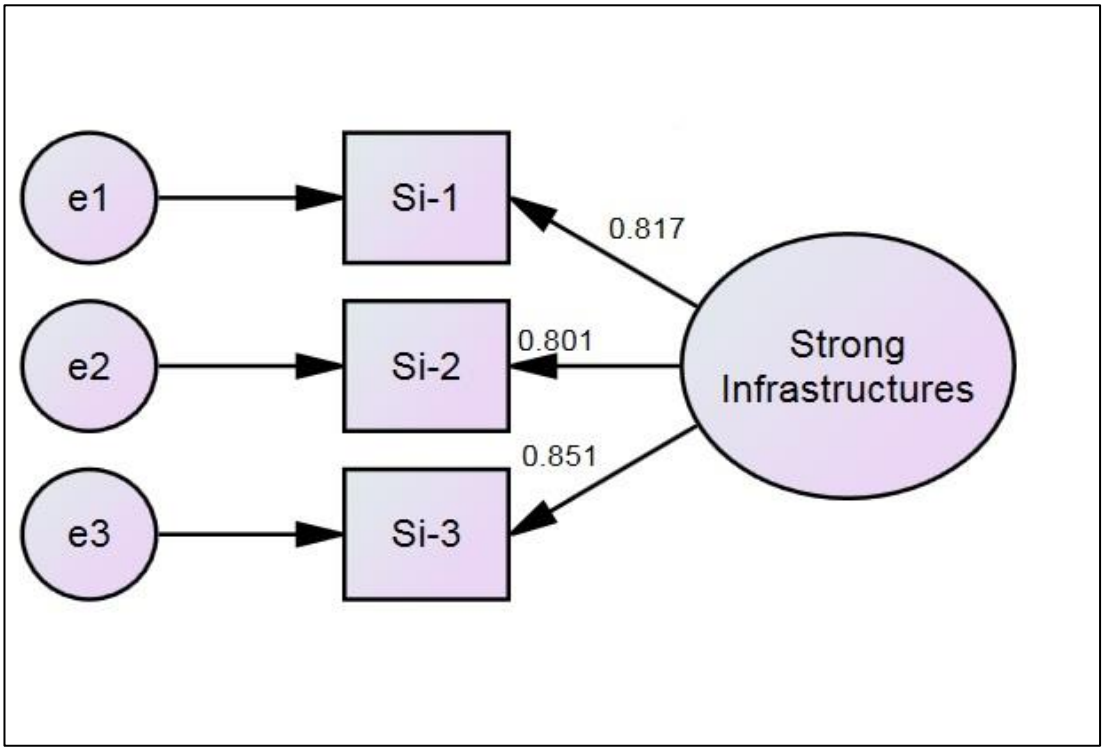


Figure 4-21: CFA for the Strong Infrastructure construct (Non-fulltime workers Group)

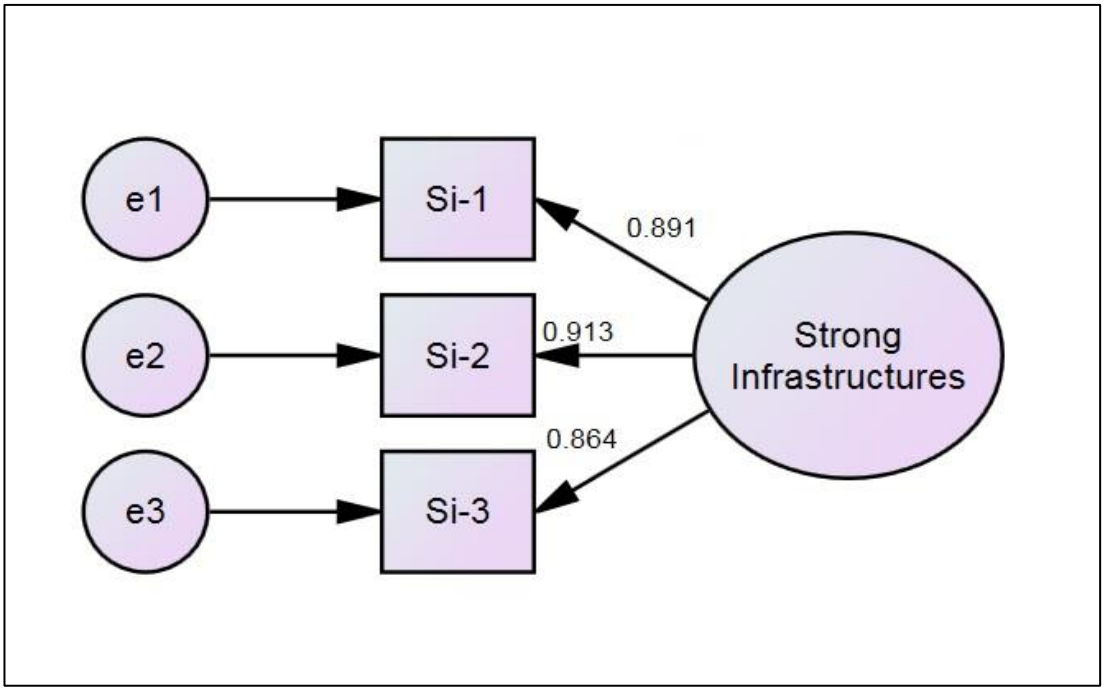


Figure 4-22: CFA for the Strong Infrastructure construct (Fulltime workers Group)

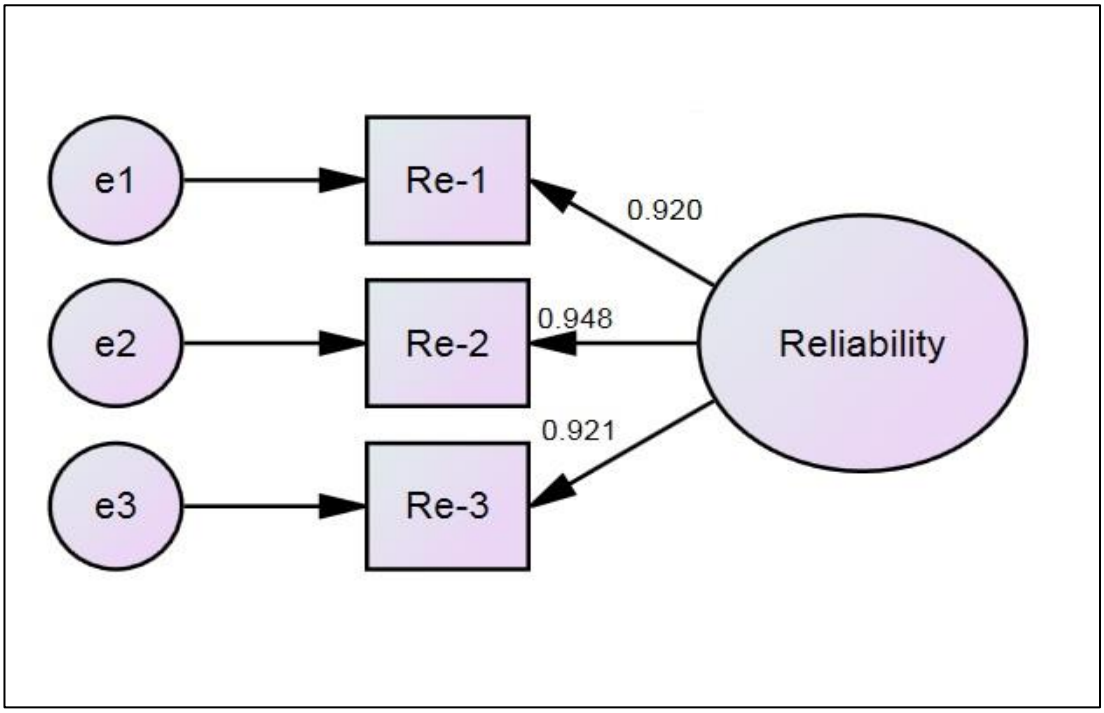


Figure 4-23: CFA for the Reliability construct (Non-fulltime workers Group)

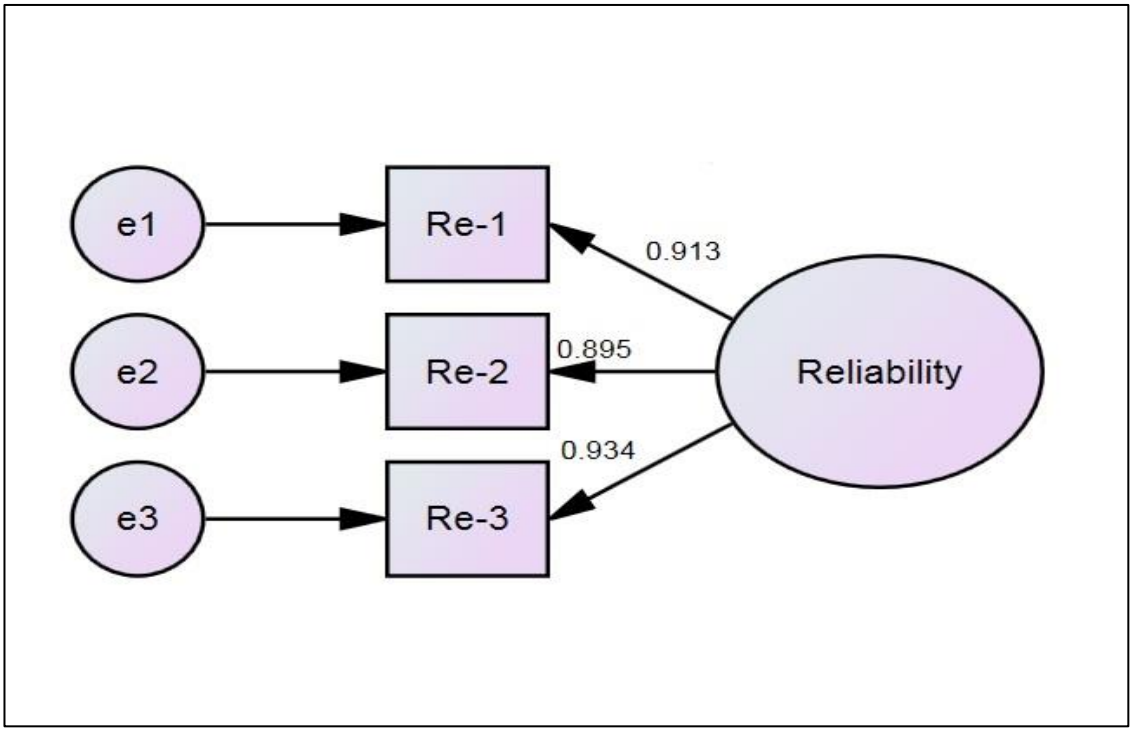


Figure 4-24: CFA for the Reliability construct (Fulltime workers Group)

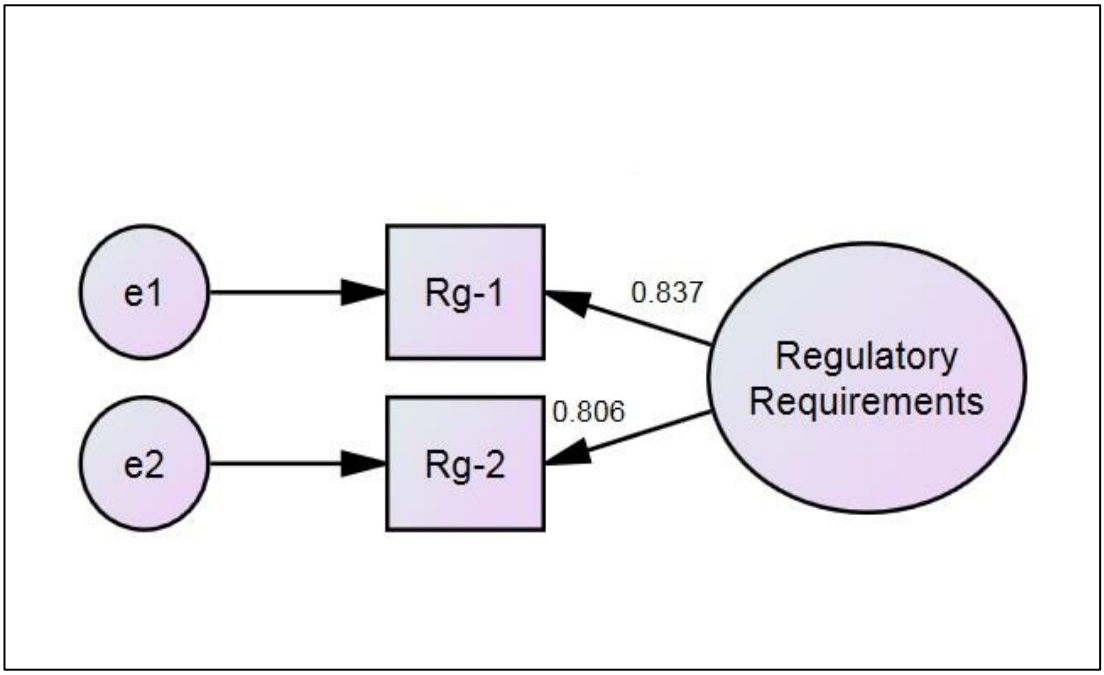


Figure 4-25: CFA for the Regulatory Requirements construct (Non-fulltime workers Group)

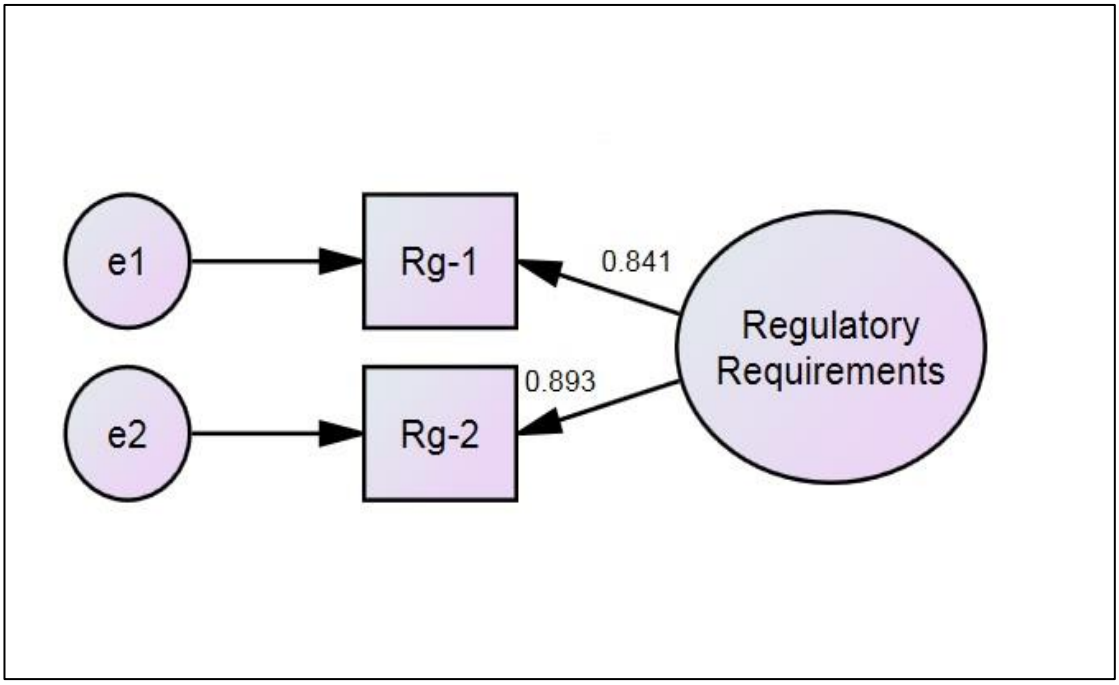


Figure 4-26: CFA for the Regulatory Requirements construct (Fulltime workers Group)

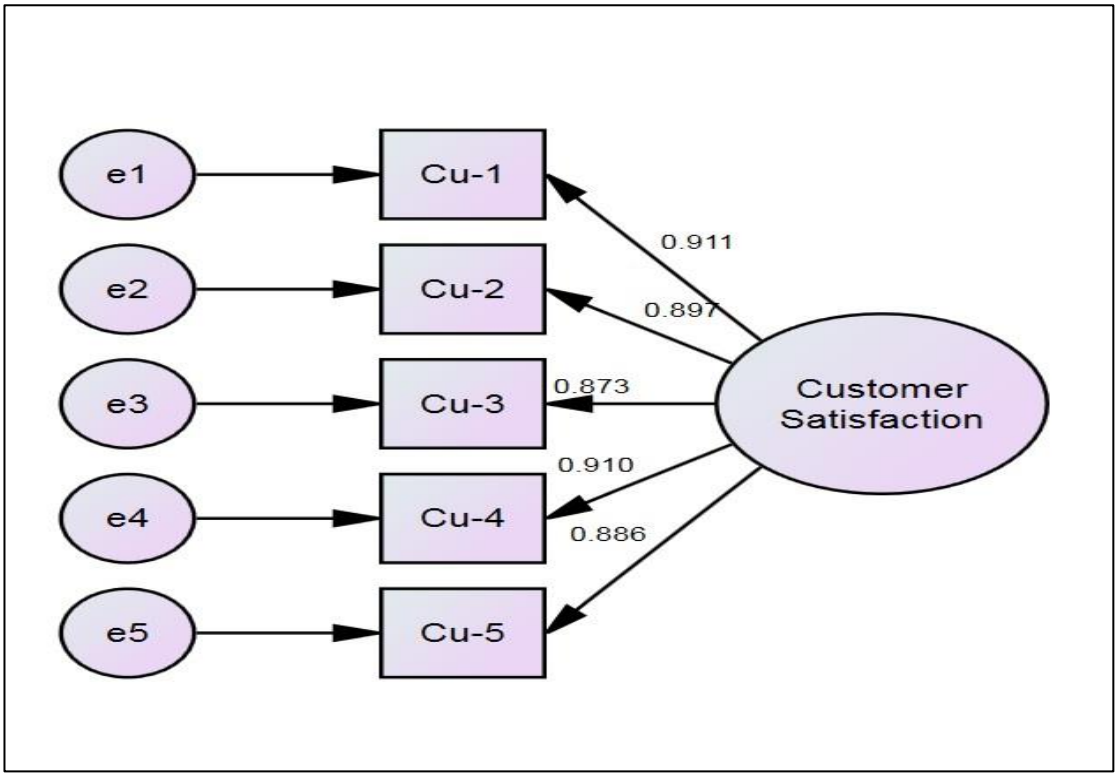


Figure 4-27: CFA for the Customer Satisfaction construct (Non-fulltime workers Group)

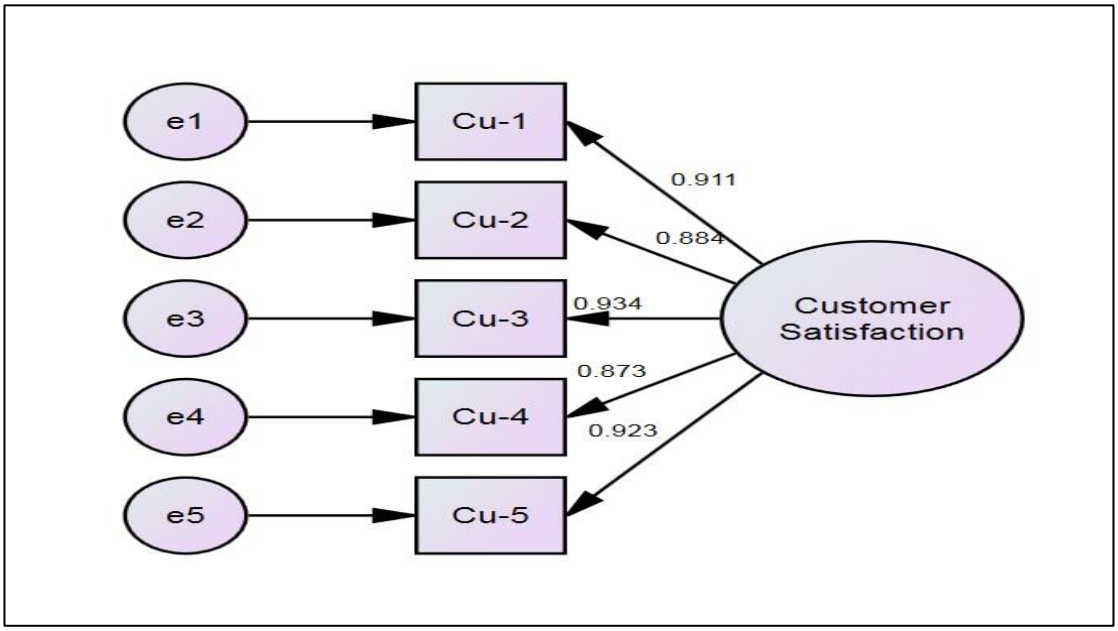


Figure 4-28: CFA for the Customer Satisfaction construct (Fulltime workers Group)

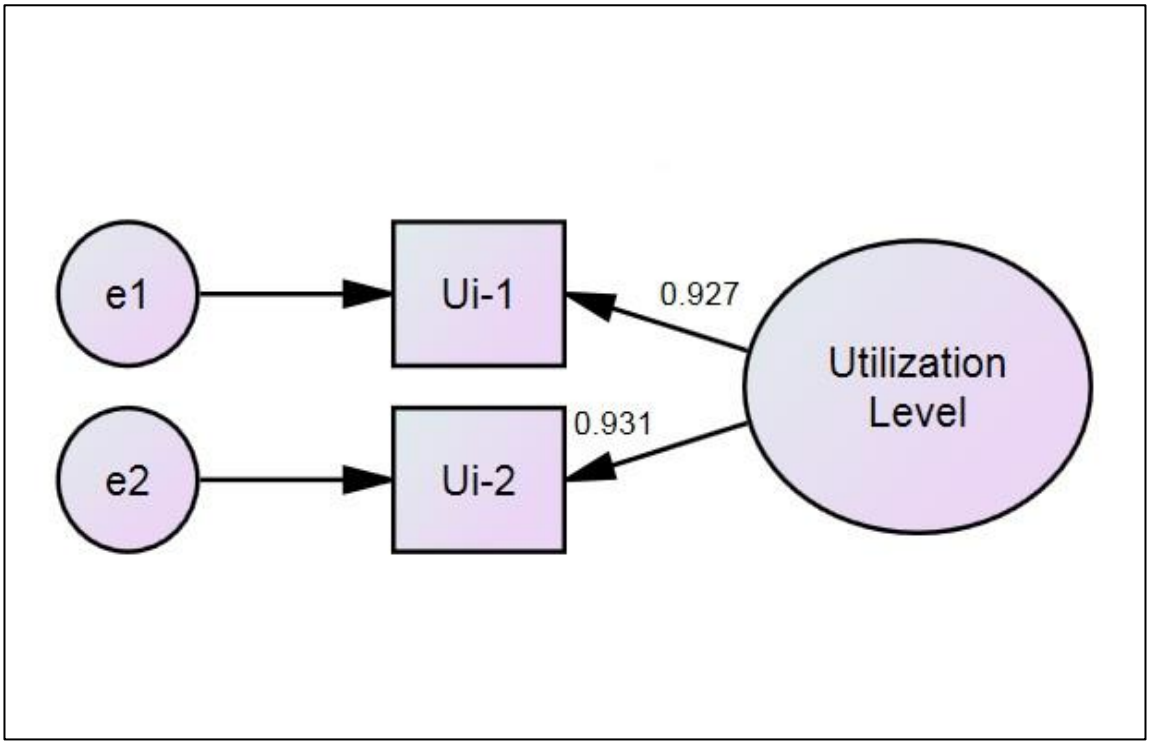


Figure 4-29: CFA for the Utilization Level construct (Non-fulltime workers Group)

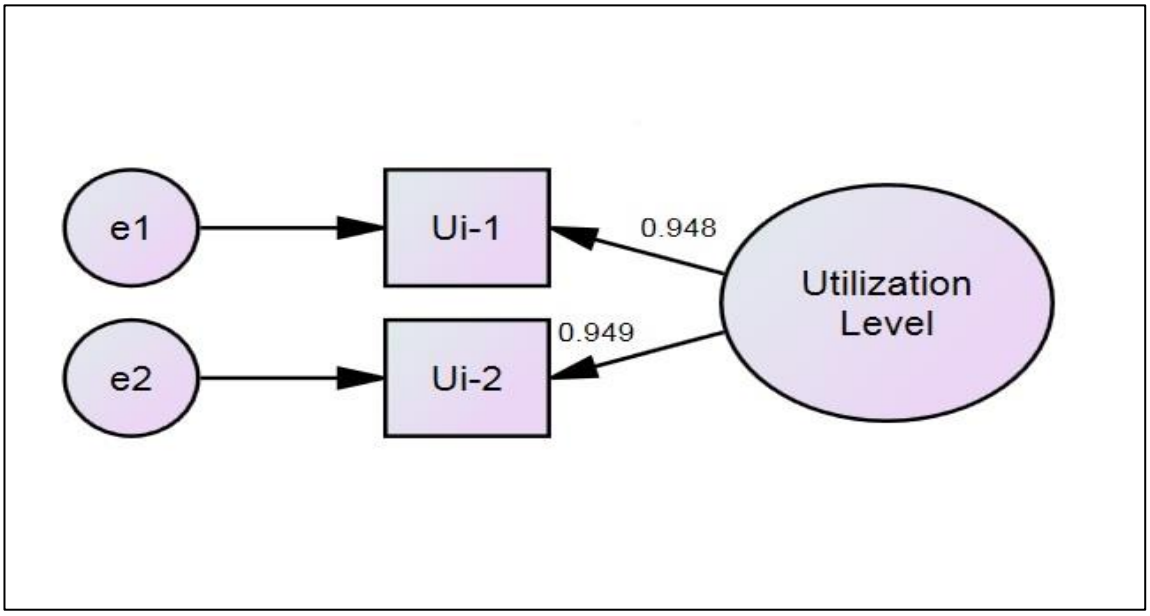


Figure 4-30: CFA for the Customer Satisfaction construct (Fulltime workers Group)

The factor loading for each construct demonstrates an acceptable value for the reflective relationships between each latent variable and the relevant indicators (Hair,

Black, Babin, & Anderson, 2006). The following two Figures 4-31 and Figure 4-32 illustrate the full CFA for both groups.

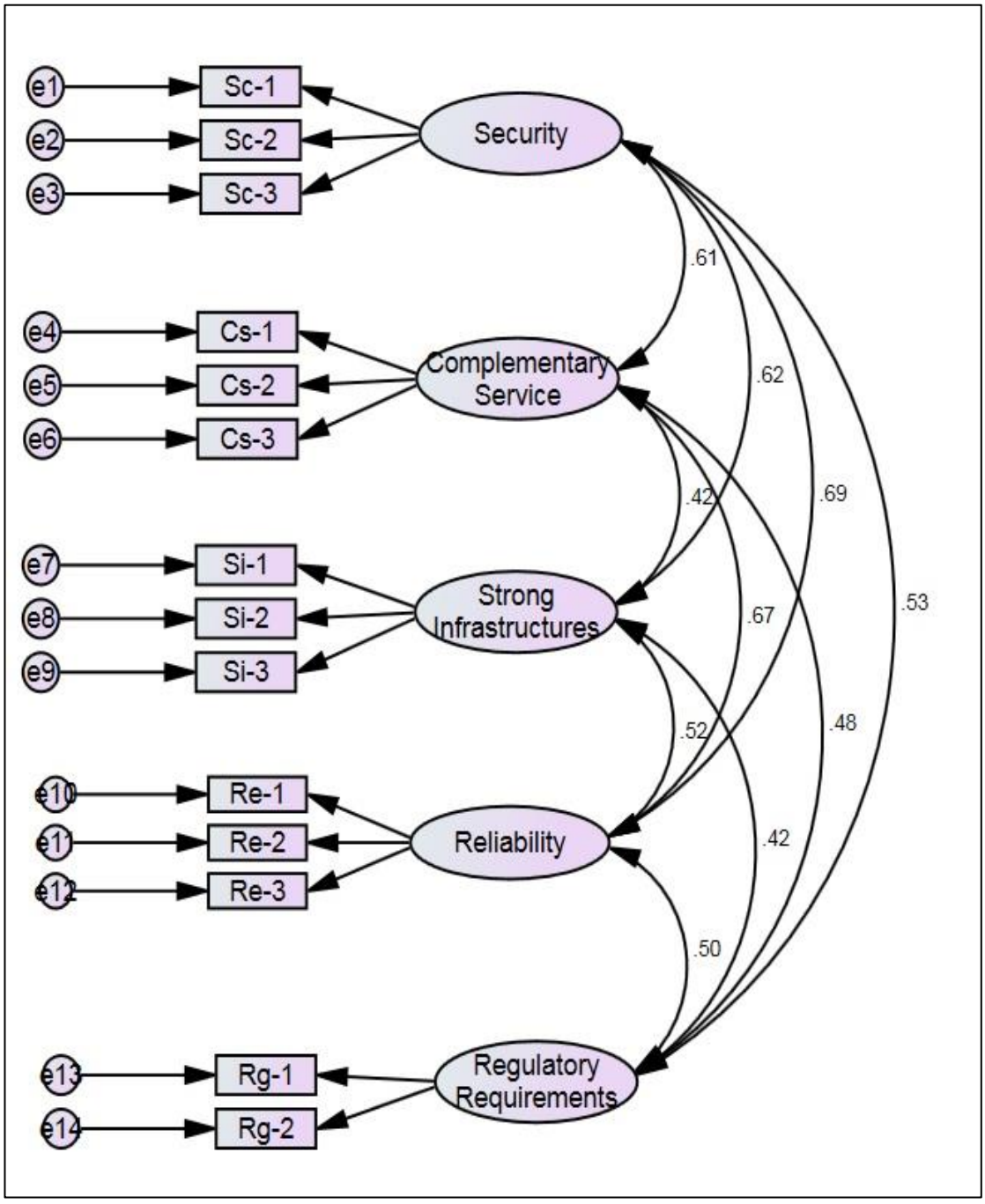


Figure 4-31: CFA for all constructs (Non-fulltime workers Group)

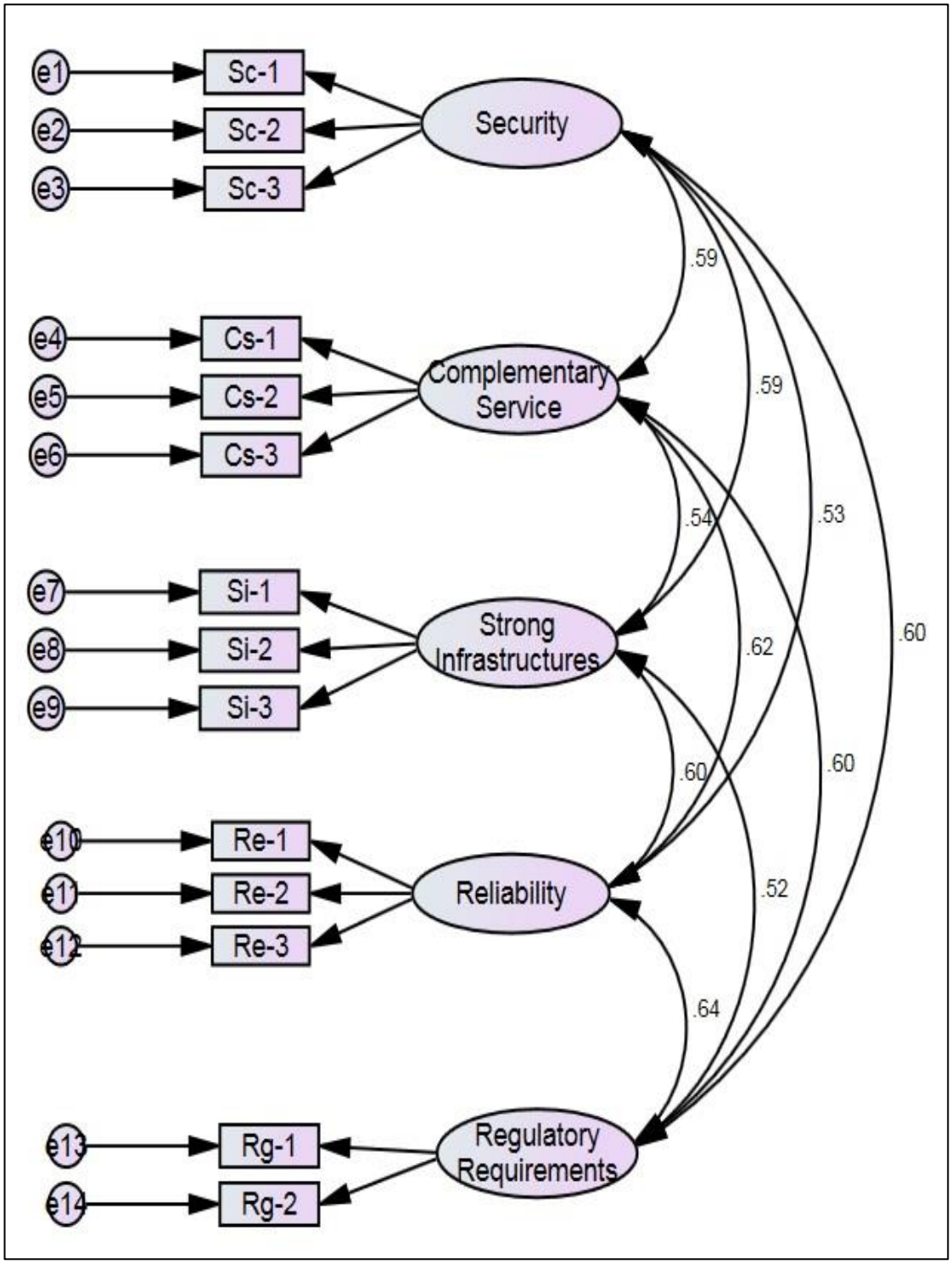


Figure 4-32: CFA for all constructs (Fulltime workers Group)

This further proved that each item loads higher on its relevant construct, whereas the outer correlation among constructs scores a lower loading. The structural model is explained in the following section.

4.11. The structural model

The structural model provides information on the path coefficients (β) and the squared R (R^2). The path coefficients (β) signify the strength of the relationship between the constructs of the model. The R^2 demonstrates the amount of variation established by the independent variables in the model to provide an indication of its predictive influence (Lowry & Gaskin, 2014). The SmartPLS 2.0 outcomes for the βs and R^2 are displayed in Figure 4-33.

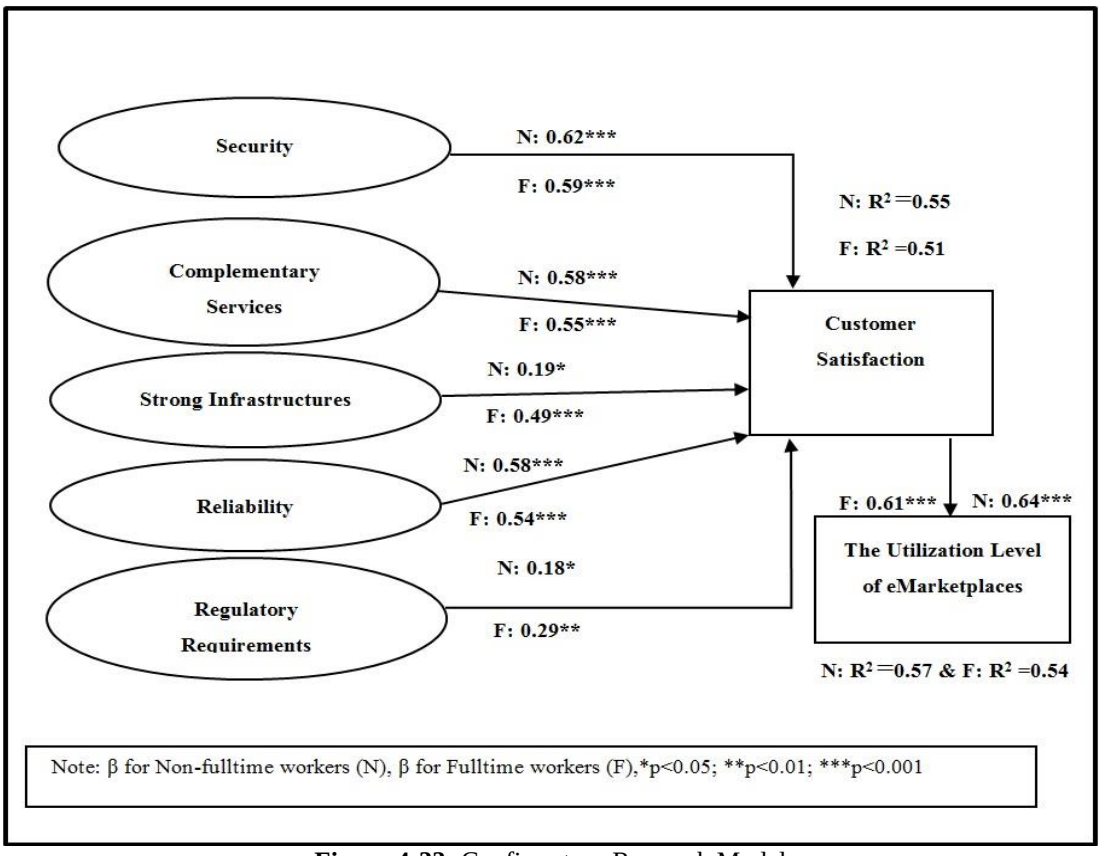


Figure 4-33: Confirmatory Research Model

As seen from Figure 4-33, the results of the structural model for both non-

fulltime workers and fulltime workers were validated by both β and R^2 values. The security factor for the non-fulltime workers with (β=0.62; p<0.001) has a higher significant impact than the fulltime workers with (β=0.59; p<0.001) on the dependant variable customer satisfaction. In addition, the factor complementary service for the non-fulltime workers with (β=0.58; p<0.001) has a similar significant impact to the fulltime workers with (β=0.55; p<0.001) on the customer satisfaction of eMarketplaces in SA. The reliability factor for the non-fulltime workers with (β=0.58; p<0.001) also has a higher significant impact than the fulltime workers group with (β=0.54; p<0.001) on customer satisfaction. However, the strong infrastructures factor for the fulltime workers group with (β=0.49; p<0.001) has higher significant impact than the non-fulltime workers group with (β=0.19; p<0.05) on customer satisfaction. Correspondingly, the regulatory requirements factor for the fulltime workers with (β=0.29; p<0.01) has a higher significant impact than the non-fulltime workers with (β=0.18; p<0.05) on customer satisfaction explaining its 55% variance for the non-fulltime workers group and 51% variance for the fulltime workers group for the previous five factors. Finally, customer satisfaction with (β=0.64; p<0.001) for non-fulltime workers and (β=0.61; p<0.001) for the fulltime workers was found to have the most significant impact on the utilization level of eMarketplaces in SA, explaining its 57% variance for the non-fulltime workers and 54% variance for the fulltime workers. Accordingly, the results of the hypotheses testing are shown in Table 4-14 below.

Table 4-14: Results of hypotheses testing with PLS path analysis

Hypotheses	Path			Regression Weights β		*P* Value		Hypotheses Findings	
				N	F	N	F	N	F
H1	**Sc**	→	**Cu**	0.62	0.59	***	***	Supported	Supported
H2	**Cs**	→	**Cu**	0.58	0.55	***	***	Supported	Supported
H3	**Si**	→	**Cu**	0.19	0.49	*	***	Weak support	Supported
H4	**Re**	→	**Cu**	0.58	0.54	***	***	Supported	Supported
H5	**Rg**	→	**Cu**	0.18	0.29	*	**	Weak support	Supported
H6	**Cu**	→	**Ul**	0.64	0.61	***	***	Supported	Supported

4.12. Summary

Customer satisfaction is one of the key measures of service quality outcomes attributed by the utilization of eMarketplaces. A review of the related literature suggests five key factors: security, complementary services, strong infrastructure, reliability and regulatory requirements of eMarketplaces. Six hypotheses were postulated and then tested on the 337 survey respondents' data. The survey participants were divided into two groups based on age, experience and their involvement in technology. The first group comprised non-fulltime workers (n=156) and the second group comprised fulltime workers (n=181). In this chapter, the relationships between the dependent and independent variables were tested by employing confirmatory factor analysis run in SmartPLS 2.0 to test the validity of the model for each group. The results confirmed that five critical success factors, namely security, complementary services, strong infrastructure, reliability and

regulatory requirements are significant in relation to eMarketplace utilization in the Saudi context with differences in regard to strong infrastructure and regulatory requirements between the two studied groups.

The chapter showed how customer satisfaction was positively correlated with the five identified factors. For instance, the standardized regression weights (β values), for the non-fulltime workers group showed a statistically significant relationship between the constructs customer satisfaction and the utilization level of eMarketplaces in SA with the highest scores of 0.64. This is followed by the relationship of the security and customer satisfaction constructs scoring β value of 0.62. The lowest scores were 0.18 and 0.19 representing the strength of the correlation between regulatory requirements and strong infrastructures with the dependent customer satisfaction construct respectively.

The inferential statistical test results using SmartPLS 2.0 software supported all six hypotheses (See Table 4-14) with differences between the two groups regarding the strong infrastructure and regulatory requirements factors. This guided the researcher to further examine the research model by conducting detailed interviews with officials and decision makers from the Ministry of Commerce and Industry in SA to validate the model and shed light on the current plans for ICT infrastructure and regulatory requirements (see the next chapter). Both findings add knowledge to the understanding of how to enhance the utilization of eMarketplaces in Saudi Arabia.

Overall, the four main steps in testing the proposed research model were the descriptive data analysis, exploratory factor analysis, confirmatory factor analysis and structural equation modelling. In addition, the goodness-of-fit model was conducted for each group followed by testing the proposed hypotheses. Overall, the six hypotheses were supported at various levels. For instance, hypothesis 3 which indicates a positive correlation between strong infrastructure and customer satisfaction was supported by the fulltime worker group, whereas the results revealed weak support for the non-fulltime worker group. These differences show that most

survey participants are not aware of the importance of eMarketplace infrastructure and regulatory requirements in SA.

Hence, in order to draw stronger conclusions, further research is required with eMarketplace regulators to address this gap. This guided the eMarketplaces researcher to validate the model qualitatively with the eMarketplace regulators in SA and gain in-depth explanations about the importance of strong infrastructure and regulatory requirements for eMarketplaces, together with the current and future Government's plans (see Chapter 5). In the next chapter, the detailed interviews with the eMarketplace regulators from the Ministry of Commerce and Industry in SA are presented together with related discussions regarding some important eMarketplace issues in the country. The contributions of this study to the existing body of research on eMarketplaces include extending the relationship between the critical success factors, customer satisfaction and the utilization level of eMarketplaces.

Chapter 5

Interview Data Analysis

5.1. Introduction

The focus of this research is on the critical success factors affecting the utilization and customer satisfaction of eMarketplaces. Initially, the research model was developed based on extensive literature and a theoretical basis (see Chapter 2). The research model was then validated quantitatively by eMarketplace users in SA (see Chapter 4). The quantitative findings supported the identified critical success factors. However, the results also showed common uncertainties among the survey participants towards the importance of eMarketplace infrastructure and regulatory requirement factors in SA. These findings, together with the advantages of the mixed methods approach explained in Chapter 3 which help to provide in-depth explanations of the issues studied, have directed the researcher to further validate the research model qualitatively with eMarketplace regulators in SA in order to enhance the validity of the survey and its findings. This chapter summarizes the interview findings with the eMarketplace regulators (experts) from the Ministry of Commerce and Industry in SA. Based on the critical remarks obtained regarding the validated research model, the research model was then revised further as will be explained in later sections.

The chapter begins with a discussion of the importance of ICT integration into Saudi Arabian businesses, followed by experts' views on the key stages of the eMarketplace life cycle. Then, the critical success factors that relate to eMarketplace utilization and customer satisfaction were discussed in detail in the semi-structured interviews based on the initial quantitative findings (see Chapter 4), with in-depth explanations of the critical success factors affecting the utilization of eMarketplaces and customer satisfaction. Lastly, issues related to the development and maintenance of eMarketplaces are presented in order to ensure improved and safer eMarketplace practices in SA. Overall, the suggestions obtained assisted in improving and revising the research model.

5.2. Qualitative Analysis Themes

For the purpose of analysing the interview findings, the interview was divided into four sections. Dividing the interview into different sections based on specific themes can help the eMarketplace researcher to better guide the interview and provide both control and flexibility while obtaining responses from interviewees (May, 2011; Williamson, & Bow, 2002). In addition, Silverman (2011) stressed the importance of standardising and dividing the interview into themes in cases where there is a need to translate the data into a different language, as is required in this research. The first section details the profiles of the eMarketplace regulators including age, gender, academic background, experience, key roles and job title to better understand their expertise and relevance to the research topic. The second section includes issues related to the importance of ICT integration into businesses and the benefits of eMarketplace implementation. The purpose of this section is to obtain rich and detailed answers from the experts, as suggested by Creswell (2009), which then help in obtaining cohesive detailed information on all aspects of the collected data. The third section covers the critical success factors relating to the utilization of eMarketplaces in SA and its relation to customer satisfaction. This section was given

the major portion of the interview time as a result of the initial quantitative model validation outcomes. As discussed in Chapter 4, there were obvious uncertainties among the surveyed participants towards two of the critical success factors, namely strong infrastructure and regulatory requirements. The eMarketplace researcher intended to collect detailed and in-depth explanations for all the studied factors with a stronger focus on the previously mentioned two factors to inform the overall research findings and contributions. The last section discusses issues related to maintaining and developing eMarketplaces and the programs that were implemented by the Ministry to support the growth of eMarketplaces together with the future plans for further development. This section allows a wider range of questions to be directed to the eMarketplace regulators to address the research aims (see Chapter 1). Table 5-1 summarizes the main sections and sub-sections of the qualitative analysis.

Table 5-1: Interviews' Protocol Main Sections

Topic	**Sections**	**Sub-sections**
5.1 Participants' profile	5.1.1 Demographic	Gender Education level Job title Key roles Experience
5.2 Importance of ICT integration into businesses in SA	5.2.1 Significance of eMarketplaces	Motivations Advantages Future potentials
	5.2.2 Key stages of the eMarketplace lifecycle	Initiation Adoption Implementation Diffusion Utilization Evaluation Improvement
5.3 Critical success factors	5.3.1 Security	Threat Prevention User Vulnerability Availability

	5.3.2 Complementary services	Additional services Customer support Effective technology
	5.3.3 Strong infrastructure	Business/ICT strategy Business/ICT structure Business/ICT culture
	5.3.4 Reliability	Services deployment Error-free services User-friendly services
	5.3.5 Regulatory requirements	eMarketplace policies Rules and regulation
5.4 Developing and maintaining eMarketplaces	5.4.1Maintaining eMarketplaces	Requirements Barriers
	5.4.2 Ministry's efforts	Growth support Programs for improvement Future development plans

5.2.1. Demographic Background

Table 5-2: Interviewees' Profiles

Participant	**Q1 (Position & Key roles)**	**Q2 (Years of Employment)**	**Q3 (Academic Background)**
Interviewee 1	• Chief network officer • Responsible for the interconnectivity between head offices and branches • External interconnectivity between the Ministry and other Ministries	9 years	Bachelor of Computer Sciences, Certified Microsoft System Engineer, Novel Certified Engineer, Cisco Certified Network Professional and other certifications like HP servers etc.
Interviewee 2	• IT assistant manager • In charge of backing up servers and maintaining	12 years	Bachelor of IT (Networking) and MBA

	connectivity		
Interviewee 3	• IT & Information Sector Manager • Managing the IT sector and reviewing policies. Also responsible for monthly meetings with other government bodies such as the Ministry of Information and Telecommunications	7 years	Master of Information Systems
Interviewee 4	• Chief security officer • Maintaining security with both sides internally and externally • The internal security wall covers all activities that are processed inside the Ministry • The external security wall covers all activities between the Ministry of Commerce and other interconnected Government bodies	4 years	Bachelor of Computer Sciences
Interviewee 5	• Data Base Administrator • Maintaining the data base and backing up data • Data base planning, analysis and risk management • Updating the dynamic data required for the webpage	7 years	Master of IT (Data-Bases). Oracle Certified Professional
Interviewee 6	• Software Engineer Developer • Training new employees • Writing programs, debugging testing all applications. • Completing forms, procedures and documentation necessary for installation and maintenance of any required software.	3 years	Bachelor of Software Engineering

Interviewee 7	• Technical Director • In charge of managing technical risks and opportunities • Defining technological strategies and making key decisions with the development team • Testing the implemented systems and finding weakness for future updates and improvements	11 years	Holds dual Master degrees in Business and Software Engineering

Table 5-1 summarises the demographic background of the seven eMarketplace regulators including their position, key roles, years of employment at the Ministry of Commerce and their academic background.

5.3. Importance of ICT Integration into Businesses in SA

All experts expressed positive views regarding the process of ICT integration into businesses in SA. Many benefits were raised during the interviews. Expert 1 stated:

> "As the world is going into the globalization stage, all the concepts of electronic transactions have facilitated services such as buying, selling, exchanging and other business transactions. Technology has been the key to success in the past 5 to 6 years especially when it has been integrated properly into businesses. A wide range of transactions, from those relating to a citizen's needs (e.g. buying bills, renewing passports and applying for visas) to developing international relations with countries which are conducting business with SA have been made easier. Most international traders and companies have benefited from integrating ICT in businesses in SA."

Similarly, expert 2 noted the important role that ICT can play in economic growth for both local and international businesses. This expert confirmed that

successful ICT integration into businesses could help both industrialised and developing countries:

> "ICT is a key factor contributing to economic growth in both developed and developing economies. In the digital economy, goods and services can be traded easily at a national and international level, together with investment and exchange of information. So, ensuring the successful integration of ICT into businesses is one of the prime goals of the Ministry of Commerce in SA at this stage."

Expert 3 suggested some features that ICT can add to traditional businesses:

> "I believe that ICT makes business easier, faster and more efficient. Also, ICT can supply tools for decision analysis, market intelligence, sales and service support together with operational excellence that lead to great savings in operational spending."

Expert 5 also discussed the significance of ICT integration into businesses by affirming the crucial cost reduction that can be obtained:

> "ICT equipment has the capacity to improve information and knowledge management inside businesses and can reduce transaction costs and increase the speed and reliability of transactions for both B2B and B2C transactions. In addition, they are effective tools for improving external communications and quality of services with other businesses and customers."

In addition, expert 7 stated the ICT can support businesses to compete for and retain customers. The expert also noted that ICT could facilitate communications

between employees and consumers which can directly lead to better and more effective performance:

> "Integrating ICT can significantly increase the ability to deliver information in business which will improve the quality and competitiveness of services. In fact, several benefits can be obtained when aligning businesses with information technology such as an effective communication among organisational staff and consumers, prompt updates of product information, updates to catalogues that can result in improved organisational performance."

5.3.1. Significance of eMarketplaces

After discussing the importance of ICT integration into businesses in SA, the experts were asked their views on the significance of eMarketplaces as intermediaries between businesses and technology. All experts expressed similar and positive views regarding the potential of eMarketplaces in the country. Expert 1 emphasized some benefits of introducing eMarketplaces into SA:

> "With the introduction of eMarketplaces in Saudi, the physical movement of employees has been reduced and they do more work in a certain place. As a result, eMarketplaces are resulting in more productivity to both businesses and employees. In addition, eMarketplaces can help businesses gain more profits. For example, traditional businesses require rent, assets, maintenance and facility management which costs a huge amount of money, whereas eMarketplaces require a warehouse and an effective website that can show and advertise products properly."

Expert 2 stated that eMarketplaces have become crucial as they provide maximum exposure to the market. Expert 2 explained how eMarketplaces can help in

gaining more customers and maximizing the desired profits, even though the cost of establishing an eMarketplace may be significantly high, depending on the organisation size and product line:

> "Nowadays, eMarketplaces have greatly improved and are commonly used in today's world. Most businesses and enterprises have moved from conventional to online trading for maximum exposure to a possible market. Consumers of eMarketplaces can increase in number faster than traditional markets as they have many online tools that facilitate advertising and recommendations. Therefore, it is quite vital to introduce eMarketing supportive tools to secure a successful profile for any company."

Expert 3 viewed the eMarketplace as a crucial tool for traditional businesses to compete in the current digital era. Expert 3 referred to the effective and efficient mechanisms employed by eMarketplaces to deliver goods and services and exchange information:

> "In fact, an eMarketplace application is considered to be an enabling mechanism that enhances market competencies, allowing organizations to deliver traditional and new services more effectively and efficiently. Establishing an eMarketplace does not require a large investment. There are many low cost tools available today, which can assist in creating eMarketplaces. For eMarketplace starters, templates are now available to build a comprehensive corporate eMarketplace with all the necessary features."

Expert 4 stated that eMarketplaces offer benefits for a wide range of business processes. Expert 4 further discussed the importance of eMarketplaces at the business level:

> "At the business level, eMarketplaces can make communication within the company faster and make the management of the company's resources more efficient. The seamless transfer of information through shared electronic files and networked computers increases the effectiveness of business processes such as documentation, data processing and other business transactions (e.g. dealing with incoming orders and preparing invoices). E-marketplaces can allow businesses to store, share and utilize all available information needed to know how to motivate customers."

Expert 5 expressed similar views to experts 1, 2, 3 and 4. This expert added "eMarketplaces can help save time for customers and reduce the cost of employees at the same time. Also, eMarketplaces can reach more customers than traditional marketplaces and also reduce the cost of doing business which will be reflected in increased profits which will eventually lead to gaining a higher GDP".

All the experts agreed on the efficiency of eMarketplaces when implemented properly. Their expectations of a better future for businesses which adopt eMarketplaces were high. The main benefits of eMarketplaces noted were: cost reduction, faster, reliable real-time trading, efficient communication, effective advertising and economic benefits.

5.3.2. Key stages of the eMarketplace lifecycle

After giving their views on the importance of eMarketplaces, the experts were asked about the key stages of the eMarketplace lifecycle. These stages are: initiation, adoption, implementation, diffusion, utilization, evaluation and improvement. The questions aimed to uncover the importance of each key stage.

The initiation of eMarketplaces: The initiation stage is concerned with gathering information on the requirements of eMarketplaces. Expert 1 stated "I believe that the initiation process is the most basic and fundamental for establishing eMarketplaces.

If the initial stage is not planned accurately or does not have a proper vision of the strengths and boundaries, then it is more likely that in the near future, eMarketplaces will be at a higher risk of failure".

Expert 2 added "Initiation is a basic stage of the eMarketplace lifecycle or any other eBusiness application. Initiation is important as it is the initial step in starting any project. For eMarketplaces to be successful, I believe it requires a proper initiation process and planning". In addition, expert 3 agreed to the vital role that the initiation stage can play for a better and successful eMarketplace future:

> The initiation process is considered a core stage in any project, including the eMarketplace platform. It can clearly help in evaluating the overall performance of the eMarketplace systems in the post-implementation stage.

Expert 4 indicated that the importance of the initiation stage usually related to proper planning. It involves the aims and objectives of the eMarketplace project:

> The eMarketplace initiation stage is the most crucial step in developing an online platform store, as it is the step in which you define your aims and objectives with other important requirements. By following the steps described in the initiation stage, it can be quicker and easier to achieve all the aims and objectives required to operate an eMarketplace. Hence, my advice to any eMarketplace operator is to consider initiation as the essential process towards success.

Similarly, Experts 6 and 7 agreed to the fact that the initiation stage of eMarketplaces is vital and cannot be ignored in order to avoid any future failure of these applications.

The adoption of eMarketplaces: The adoption stage is the process of authorizing and adopting the eMarketplace to be utilized. It specifically shows how innovation extends through the market from the initiation stage. The experts were asked their

opinions on the importance of adoption as a key stage in the eMarketplace lifecycle. The majority of experts expressed positive views and emphasized the importance of linking these key stages.

Experts 1, 2 and 4 stated that the adoption stage can help consumers and business owners to adopt these emerging online applications. Once consumers and business owners have the ability to handle online transactions, it will become easier for eMarketplaces to flourish.

Expert 5 added "…the adoption stage should consider raising public awareness of the crucial advantages of eMarketplaces. For example, once a business engages with an eMarketplace, less resources will be consumed such as papers, printers and plastic materials, which is indeed more environmentally friendly than traditional businesses".

Expert 3 suggested that the adoption stage could be somehow merged with the previous initiation stage "I believe that considering the adoption process as a differentiating key stage is not likely be effective as it could be included in the initiation stage planning. However, Experts 6 and 7 agreed with the statement that the adoption stage is a vital step for eMarketplace applications.

The implementation of eMarketplaces: The implementation stage involves the execution and creation of eMarketplaces. The experts were asked for their views on the implementation process as a key stage in the eMarketplace lifecycle. All the experts agreed with the statement. Expert 4 stated that the successful implementation of the eMarketplace is always reliant on strategic eMarketplace planning in its early stages. Specific requirements raised by the experts can be summarized as follows: first, the need to build a strong ICT infrastructure in the country. Based on the availability of a robust and efficient ICT infrastructure, the experts affirmed that the implementation of eMarketplaces could be effectively facilitated. Second, at the business level, the experts suggested that businesses should train staff in the required skills to implement ICT applications. In addition, businesses need adequate ICT resources to support the implementation of eMarketplaces. Third, at the individual

level, consumers must have the minimum skills required to interact with computers and increase their IT knowledge. Overall, the experts expected the Saudi citizens to have more ICT skills in the near future as a result of the recent programs and initiatives introduced to raise the awareness of the advantages and disadvantages of ICT. Thus, the implementation process is believed to be a key stage in the eMarketplace lifecycle and should be given enough attention to ensure the improved functionality of such online platforms.

The diffusion of eMarketplaces: The diffusion stage involves an extraordinary effort to incorporate different sources of knowledge to drive improvement and profitability for an eMarketplace. All the experts agreed with the fact that the diffusion process can play a significant role in the eMarketplace lifecycle and it should be considered as a key stage. Expert 2 emphasized the importance of having a strategy to promote the benefits of eMarketplaces to the country at this stage. Expert 2 concluded that a supportive collaboration between different Ministries in SA such as the Ministry of Education, the Ministry of Commerce and the Ministry of Communications and Information Technology would provide a comprehensive guidelines for eMarketplace users, introduce informative programs to raise awareness, build and maintain stronger ICT infrastructure for the current and forthcoming generations, introduce specialized government initiatives for regulatory purposes and support the local post services.

*The utilization of eMarketplaces***:** To thrive in the current competitive environment of the digital economy, businesses are required to have an eMarketplace that can be easily consumed (AlGhamdi, Nguyen, & Drew, 2012). The utilization stage involves the consumption of eMarketplaces. The experts were asked about the importance of the utilization process in the eMarketplace lifecycle and whether or not it should be considered as a key stage.

Interestingly, expert 5 agreed that the utilization stage is the most important stage of the eMarketplace lifecycle as it reflects the validity of the success of the implemented online platforms. Expert 1 indicated:

> "The utilization stage is the most vital phase of the eMarketplace lifecycle. Consumers at this stage are exposed range of products, information and services. It only requires one mouse click to purchase a product from almost everywhere in the world. The utilization of eMarketplaces includes appealing services such as finding and comparing product information, communication between buyers and sellers, advertising of products, online collaboration between users or companies and leaving feedback or recommendations. So, utilization is a very crucial stage and can help consumers to obtain better services, communicate easier and access a wider range of products."

Expert 6 added some important suggestions and guidelines for online Saudi eMarketplace users regarding the utilization stage:

> "When it comes to utilization, I believe that eMarketplace consumers in this country should be aware of some important guidelines. For example, finding a trustworthy online store based on certain facts like the number of users, reputation, terms of use, consumer rights, enabled security features, payment methods and professional customer help and support is always a hart job. These can help Saudi consumers to maintain the best outcomes from eMarketplace utilization."

Despite the common agreement among the experts regarding the importance and advantages of the utilization stage, expert 7 raised some possible negative impacts: "Excessive utilization of eMarketplaces can result in a dramatic increase in a sedentary lifestyle. This means that consumers will be at risk of having less

physical activity and less real social interaction or engagement in healthier activities. Consequently, many health impacts can occur such as obesity, depression, anxiety and many others. These negative impacts must be carefully considered in order to avoid any undesirable disadvantages caused by the excessive utilization of eMarketplaces."

The evaluation of eMarketplaces: The evaluation stage involves measures that evaluate the performance of eMarketplace' systems. All experts agreed on the crucial role that the evaluation process can play in improving eMarketplaces. Expert 7 offered some important considerations and measures that can help in effectively evaluating eMarketplaces: "In order to effectively evaluate the efficiency of eMarketplaces, certain considerations must be outlined clearly in the initial plan. These measures may include, first, ensuring that the initial defined objectives of the system are met. Second, the system security for the electronic exchange of data essentially which involves the protection of the customers' privacy. Third, system reliability which includes the ability to continuously run the system free of errors or obstacles, for example, having good Internet connectivity, decent storage capacity and reliable backup servers are all important. Fourth, a local search engine to ensure access to an easy and more effective tool is available for the customers' satisfaction. Fifth, a quality assurance provision to ensure common standards are in place, for example content presentation, customer support, multilanguage support and an error reporting mechanism."

The improvement of eMarketplaces: The improvement stage involves actions taken by stakeholders regarding eMarketplace improvement. It can play a significant role in increasing eMarketplace efficiency and retaining customers (see Chapter 1). The experts were asked whether or not they supported the statement that improvement was a key stage in the eMarketplace lifecycle. The majority of experts (6) agreed to this with detailed explanation. Expert 1 stated:

> "Considering the dynamic nature of the eMarketplace platforms where product information and services need to be updated constantly, it is imperative to ensure that improvements are offered to maintain the required system value creation. We understand that delivering value is a prime goal of eMarketplaces and this can be achieved via a proper system performance management plan in the strategic planning of the initiation stage."

Expert 3 mentioned the main areas that should be targeted at the improvement stage:

> "Improvements must target system performance, product quality and customer services. For example, when targeting system performance, eMarketplaces need to be assessed against the initial strategic plans and specifications. On the other hand, improving customer service can involve but is not limited to, facilitating services offered such as ordering or bedding, sufficient provision of product information, faster handling of required tasks, professional communication and support for the special needs of certain consumers."

Expert 7 emphasized that the improvement stage had become vital due to the competitive nature of the eMarketplace system:

> "In the contemporary digital economy, improvements are required especially so that eMarketplaces' users can easily find alternatives when a certain eMarketplace fails to improve its services. Thus, I recommend that eMarketplace owners in SA give sufficient attention to this key stage."

However, expert 5 opposed this statement, claiming that improvements can be included whether in the initiation or the evaluation stages:

> "I think improvements cannot stand alone in the eMarketplace lifecycle, rather they can be an outcome of the evaluation stage or they can be planned prior to or after utilization in the initiation stage."

To sum up, this section summarizes responses of the experts regarding the key stages of the eMarketplace life cycle as identified from the literature (see Chapter 1). The stages that were discussed were: initiation, adoption, implementation, diffusion, utilization, evaluation and improvement. Overall, the experts' detailed explanations were noted for each key stage, which in turn, helps in the better understanding of the suggested eMarketplace life cycle. In addition, suggestions to enhance the proposed eMarketplace lifecycle were noted for further research and improvement.

5.4. Critical success factors

Following the section on the eMarketplace life cycle, the experts were asked to explain their views on the critical success factors identified in this research.

5.4.1. Security

Ensuring the security of eMarketplaces was found to be vital for every eMarketplace system, consumers and owners (see Chapter 2). Experts offered valuable comments on the importance of security together with the negative impact caused by online threats and user vulnerability.

Expert 4 highlighted the importance of security for eMarketplaces with seven important considerations:

> "In conducting business online, eMarketplace systems should be able to: first, confidently identify and confirm the identity of the parties involved in any transaction; second, determine that the activities being engaged in by an consumer or machine is commensurate with the level of authorization assigned; third, confirm the validity of third parties involved in any

> transaction with consumers or eMarketplace owners; fourth, protect information from being altered either in storage or in transit; fifth, be certain that only authorized entities have access to stored information; sixth, ensure that every component of the eMarketplace infrastructure is available when needed; seventh, be capable of encrypting transmitted data for more efficient transaction verification purposes."

Following the discussion on the importance of eMarketplaces, the experts were asked their opinions on the importance of the availability of advanced eMarketplace security systems that can ensure the confidentiality of users and the integrity of the information. There was common agreement among the experts on the importance of security as a critical success factor for eMarketplace users. Expert 1 stated:

> "Having advanced security systems and measures in place would offer consumers the confidence to frequently use the online services of eMarketplaces. For example, cooperating with internationally recognized secure payment systems can attract more consumers as they would have safer transactions."

In addition, expert 2 asserted that the availability of advanced security systems is not only important for consumers but also for business owners and every transaction conducted via eMarketplaces must be completed secure to ensure the desired level of satisfaction. Similarly, expert 5 mentioned:

> "Yes, the availability of advanced security systems is better for eMarketplaces as it can protect consumers from online hazards while shopping online. If eMarketplaces lack security, then consumers will be more likely to not have trust and that can cause a lack of utilization and the slow growth of eMarketplaces."

Expert 5 concluded that advanced security systems will assist in reducing the Internet hazards, scams and frauds which will, in turn, create a safer environment for customers. Furthermore, expert 6 added:

> "As the Internet can expose eMarketplaces and online consumers to numerous online threats, it is critical to ensure that adequate consideration is made in relation to the implementation of advanced security systems for any online applications, including eMarketplaces. This can increase the possibility of protecting online businesses, their reputation, their ability to produce a better income, as well as ensuring customer confidentiality and guaranteeing that relationships between them are safe. Therefore, security is the most important factor that can help eMarketplaces to gain consumer loyalty and progress towards a better future."

Moreover, expert 7 confirmed that the availability of advanced security systems can ensure a safe interactive online platform for both buyers and sellers. He added that employing a secure system can result in the smooth running of eMarketplaces with fewer hazards:

> "…Without advanced security systems, consumers of eMarketplaces may encounter unwanted online breaches that may discourage them from experiencing this technology again in the future."

However, expert 3 stated that: "Yes, advanced security systems are important as long as the system does not get too complicated which may result in a dramatic reduction of consumer interest". He clarified that some advanced security systems may require longer procedures to complete transactions which consume both time and effort.

5.4.2. Complementary services

The improvement of service offers in eBusiness organizations has been given different terminology, for example *additional services*, *complementary services*, *product services*, and *combined services*. The term *complementary* is a service that is offered in addition to an eBusiness organization's essential service that supports the client to use the service.

Complementary services in the context of the eMarketplace have many applications and can be found in numerous areas. This is why it is found to be very important for all eMarketplace systems, customers and owners. Experts offered valuable comments on the importance of the complementary services offered by eMarketplaces. In relation to this eMarketplace success factor, all experts agreed that complementary services required attention from eMarketplace experts as well from eMarketplace application developers. The experts' comments on this success factor are as follows:

Expert 1 highlighted the importance of complementary services in eMarketplaces as follows:

"Certainly in very different ways, it is important but when it comes to a company who wants to provide eMarketplace services, it is more likely that it might not be able to fulfil the regulations imposed by its relevant Ministry. Companies who are into eMarketplaces should have an edge over the others to penetrate the market and make the country use the service in such a way that will benefit both the eMarketplace owners and consumers."

Expert 2 highlighted the importance of complementary services in the context of customer privacy and security when they shop online. "For the success of any system, rules that regulate its use are very important to protect experts. I would therefore say that regulatory requirements are very important to ensure the safety of

both consumers and owners of eMarketplaces." Expert 3 highlighted the importance of complementary services in eMarketplaces as follows: "Having proper regulations for eMarketplaces can help both consumers and stakeholders. It basically reserves the rights of all parties involved in such a practice." This expert also mentioned that in order to attract international consumers from outside SA, it important that regulatory requirements should be implemented in the country.

Expert 4 again highlighted the importance of customer privacy and security when shopping online, stating, It is true that regulatory requirements are vital for eMarketplace utilization. Also, in SA, the consumers found that they were unprotected, which is why consumers in this country will not take any risk by purchasing from an eMarketplace which does not guarantee security. The country should protect their consumers by using, for example, the PayPal payment method which is one of the most trusted payment methods and consumers feel very comfortable with any eMarketplace which includes this as one of the payment methods."

Experts 5, 6 and 7 highlighted the importance of complementary services in the context of government policies in the country. According to these experts, regulatory requirements generally aim at regulating, ordering and controlling a specific activity that runs nationally and internationally. Therefore, the government should impose regulations that help protect the rights of consumers, companies and the government to ensure fair participation in this new business environment.

5.4.3. Strong Infrastructure

The infrastructure of eMarketplaces was found to be very important for all eMarketplace systems, customers and owners. The experts offered valuable comments on the importance of eMarketplace infrastructure. In relation to this eMarketplace success factor, all the experts agreed that strong infrastructure requires a huge initial investment, as it is critical to make correct and precise decisions to ensure the organization receives a satisfactory return on this investment. For

example, buying a new production facility requires a huge initial investment, but it could increase the eMarketplaces' overall efficiency. Therefore, it needs to ensure that the investment will be covered by the increased performance in productivity before committing to invest in Saudi Arabia's organizational infrastructure. The remaining expert's comments are summarized below:

Expert 1 highlighted the importance of strong infrastructure for eMarketplaces as follows:

" ICT infrastructure is very important for all the reasons that have been mentioned previously. Also, if we examine the customs of SA, they plays a very important role in eMarketplaces as it can facilitate the import of ICT equipment".

Experts 2, 4 and 6 suggested that a strong infrastructure for eMarketplaces would enhance the safety of online customers. For example, they said:

"Most definitely, a strong ICT infrastructure would be a great advantage to increase the use of eMarketplaces, as consumers would feel it is safe to use online services"; "The challenge today is to offer assurance to consumers that online services are as safe and even safer than walking around with your money in your wallet"; "eMarketplace infrastructure should protect all users, whether they are at home or in the office".

Expert 3 suggested additional remarks on the infrastructure of eMarketplaces. For example, this expert mentioned:

"ICT infrastructure is fundamental and essential for productivity and success in the field of eMarketplaces as a part of eBusiness applications. This includes high speed, consistent, flexible and open ICT networks and systems."

Experts 5 and 7 suggested that strong infrastructure is essential for the success of eMarketplace applications. For example, these experts mentioned:

"Strong infrastructure is the most fundamental and important issue that can support the increased use of eMarketplace applications"; "I believe that having proper ICT infrastructure can help both the government and citizens by improving their workplace."

5.4.4. Reliability

Increasing the reliability of eMarketplaces refers to the ability to retain the required functionality under specified conditions for a quantified period of time.

The experts offered valuable comments on the importance of the reliability of eMarketplace services, all agreeing that eMarketplace services should be reliable.

Expert 1 highlighted the importance of reliability in eMarketplaces as follows: " If all the features of eMarketplaces are reliable, then the customer will definitely rely on the eMarketplaces (with 100% peace of mind) and then this service will be used more often."

Experts 2, 3, and 4 highlighted the importance of implementing reliable eMarketplace services in the country, as according to them, "implementing a reliable eMarketplace can easily gain consumers trust in shopping online. Without reliability, the system is more likely to be unsuccessful and not trusted by consumers of eMarketplaces. Thus, reliability is a critical success factor that must be considered when deciding to introduce an eMarketplace."

Expert 6 also highlighted the importance of reliability in the context of the trustworthiness of eMarketplace services. "Reliability which is the probability of failure-free software operation for a specified period of time in the eMarketplace is very important; it can enhance consumers' trust in eMarketplaces and can reassure the business owners that their eMarketplaces are running competently."

Expert 7 stated that reliability is the degree to which eMarketplaces function free of errors and if the reliability of eMarketplaces could be improved, this would be better for the efficient and competent running of the online services Making eMarketplaces dependable means that consumers can depend on it at all times. This can generate great success for eMarketplaces. Therefore, reliability is considered one of the most success measures of eMarketplace achievement in a country like SA.

5.4.5. Regulatory requirements

New eMarketplace technologies have considerably grown the capability of online wholesalers to collect, target, monitor, profile, and even sell individual information about clients to third parties. In response to wide social concerns about privacy and others legal issues, the Organization for Economic Co-operation and Development instigated widespread discussions in the 1970s on the development of a regulatory outline for privacy and other legal issues (Alwabel & Zairi, 2005). Experts offered valuable comments on the importance of regulatory requirements in eMarketplace services, all agreeing that the regulatory requirements for eMarketplace should be reviewed regularly.

Expert 1 highlighted the importance of regulatory requirements in the eMarketplace as follows: "There are currently an increasing number of Internet consumers in SA. The exponential development of Internet access and online activity has led to an increase in the number of new regulatory requirements that have been necessary to implement in the country and other legal questions related to copyright and digital content, national laws for cyberspace, privacy and data protection, security of electronic commerce and cyber trade have arisen."

Experts 3, 6, and 7 highlighted the importance of regulatory requirements in the context of the implementation of eMarketplace applications in the country. They noted that SA is a Muslim country and is obligated to implement Sharia law in all aspects of people lives, which has an influence on the eMarketplace in SA, because

Sharia law has laid down procedures and regulations for businesses. It has unique terminologies which cannot be ignored in a trading environment, for instance, the process for a contract of sale, the meeting place and absentee purchases. According to the Holy book of the Quran, trading should not be initiated between two parties in one place and then later wrapped up in a totally different place. This is why regulatory requirements are important for the success of eMarketplaces in this country.

5.4.6. Customer Satisfaction

In order to identify the strength of the relationship between the critical success factors with customer satisfaction and the utilization of eMarketplaces in SA, the experts were asked to rate each factor on a five point Likert-scale, where 1 meant *Not at all important*, 2 meant *Slightly important*, 3 meant *Important*, 4 meant *Very important*, and 5 meant *Extremely important*. After conducting the interviews with the experts, the interview data and questionnaires were studied and analyzed. To cross-validate the importance of each selected factor and to answer the previously mentioned research questions, we calculated the statistical mean to identify the average knowledge level of each factor and used this to identify the spread of the values on the utilization of eMarketplaces and customer satisfaction factors in a particular sample. Table 5-3 depicts the questionnaire response rate. The questionnaires covered the five critical success factors identified namely: security, strong infrastructure, complementary services, reliability and regulatory requirements. All these factors were further categorized into sub-factors as shown in Table 5-3. After independent factor investigation, the average of each sub-factor was calculated and assigned to the parent factor. The data analysis result indicates that importance of factors varies from expert to expert, but this variation is very minor. The mean score for the factors are as follows: security (3.94) which is between *Slightly important* and *Important;* strong infrastructure (3.90) which is between

Slightly important and *Important*; complementary services (3.81) which is between *Slightly important* and *Important*, reliability (3.88) which is between *Slightly Important* and *Important* and regulatory requirements (3.94) which is between *Important* and *Very Important*.

5.4.7. The Utilization of eMarketplaces

For the analysis of the relationship between customer satisfaction and the utilization of eMarketplaces, the mean values of all the factors were taken again and compared with the mean of the results for the utilization of eMarketplaces. As customer satisfaction has a strong relationship with eMarketplace utilization, if the result of each factor belonging to customer satisfaction is high, the utilization of eMarketplaces in SA is also high and vice versa. From with the expert's interviews, it is found that each factor in Figure 5-2 could positively influence the level of utilization of eMarketplaces in SA. Figure 5-1 presents the results which indicates that customer satisfaction is strongly linked to the utilization of eMarketplaces, for example, the importance of the factors *security*, *strong infrastructure*, *reliability* and *regulatory requirements* is between *Slightly important* and *Important* which is almost equal to the importance of the utilization of eMarketplaces. Moreover, the importance of the factor *complementary services* is between *Important* and *Very important* which also almost equal to the results of the utilization of eMarketplaces, according to the third expert in SA, as shown in Figure 5-1.

5.5. Discussion

This section presents a discussion of the results which includes the factors that are involved in enhancing customer satisfaction of eMarketplaces and its utilization in SA.

Table 5-3: Experts Data and Analysis

Customer satisfaction factors	**The eMarketplace Regulators in SA**						
	Expert 1	**Expert 2**	**Expert 3**	**Expert 4**	**Expert 5**	**Expert 6**	**Expert 7**
	Mean	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
Security	**4.0**	**3.7**	**4.3**	**4.0**	**3.7**	**4.2**	**3.7**
-Threat	**4**	**4**	**4**	**4**	**5**	**4**	**4**
-Vulnerability	**3**	**4**	**4**	**5**	**4**	**5**	**4**
-Impact	**4**	**4**	**5**	**4**	**3**	**4**	**3**
-Trustworthiness	**5**	**3**	**2**	**3**	**3**	**4**	**4**
Strong infrastructure	**3.5**	**4.1**	**4.33**	**4.1**	**3.8**	**3.5**	**4.0**
-Business/ICT strategy	**4**	**4**	**5**	**3**	**5**	**3**	**3**
-Business/ICT structure	**3**	**4**	**4**	**4**	**4**	**4**	**5**
-Business/ICT culture	**4**	**5**	**4**	**4**	**3**	**3**	**3**
-Ease of use	**4**	**3**	**3**	**5**	**4**	**4**	**5**
-E-readiness	**3**	**4**	**5**	**4**	**4**	**4**	**5**
-Simplicity	**3**	**5**	**5**	**5**	**3**	**3**	**3**
Complementary services	**3.8**	**3.5**	**4.0**	**4.0**	**3.8**	**3.6**	**4.0**
-Additional services	**3**	**3**	**4**	**4**	**5**	**4**	**5**
-Customer support	**4**	**4**	**4**	**4**	**4**	**4**	**4**
-Effective technology	**4**	**4**	**5**	**5**	**4**	**4**	**4**
-Usability	**4**	**5**	**3**	**5**	**4**	**5**	**4**
-Staff training	**5**	**3**	**3**	**4**	**3**	**3**	**5**
-Technical support	**3**	**2**	**5**	**2**	**3**	**2**	**2**
Reliability	**4.0**	**3.8**	**3.8**	**4.0**	**4.1**	**3.7**	**3.8**
-Services deployment	**4**	**3**	**3**	**5**	**4**	**4**	**5**
-Error-free services	**3**	**5**	**5**	**3**	**5**	**3**	**5**
-User-friendly services	**4**	**3**	**3**	**5**	**3**	**4**	**3**
-Arabic content	**4**	**3**	**4**	**3**	**4**	**3**	**4**
-Connectivity	**4**	**4**	**4**	**4**	**5**	**4**	**4**
-System effectiveness	**4**	**3**	**4**	**3**	**3**	**4**	**2**
-Service quality	**5**	**4**	**4**	**5**	**5**	**4**	**4**
Regulatory requirements	**4.0**	**4.0**	**4.25**	**3.7**	**4.2**	**4.5**	**3.7**
-E-business policies	**4**	**3**	**5**	**4**	**5**	**5**	**5**
-Rules and regulation	**5**	**5**	**5**	**3**	**5**	**4**	**5**
-Internet speed	**4**	**4**	**3**	**4**	**4**	**5**	**3**
-Awareness	**3**	**4**	**4**	**4**	**3**	**4**	**2**
The Utilization of eMarketplaces	**3.80**	**3.86**	**4.52**	**3.90**	**3.92**	**3.98**	**3.88**

5.5.1. Factors Influencing Customer Satisfaction in SA

A report published the Saudi Gazette in 2013 predicted that electronic trade shares in the country would hit SR50 billion by 2015 (Alexandra, 2014). Cash on delivery is still the favoured method of payment for the majority of eMarketplace purchasers in the Kingdom of SA (Alexandra, 2014). During the interviews with eMarketplace experts in SA, the questions were initially based on the eMarketplace literature. However, during the interviews, these experts suggest several other important sub-factors related to the main factors as follows:

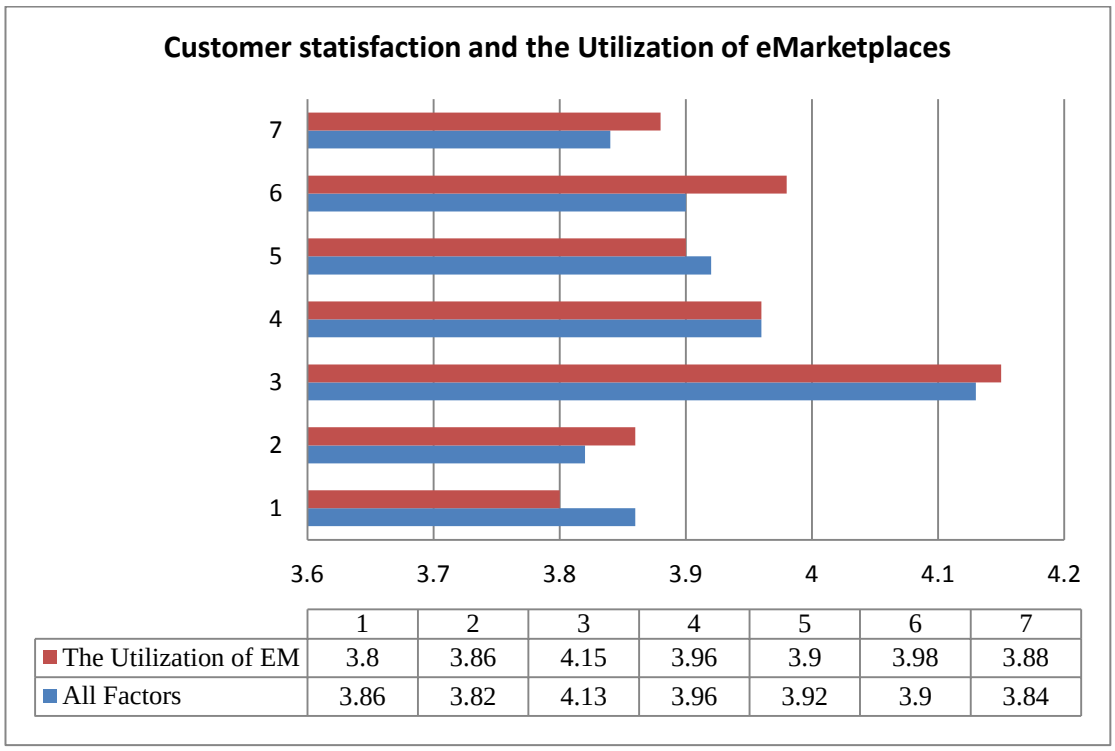
5.5.2. Trustworthiness of Organizations in the Security of eMarketplaces

Of the seven experts interviewed, six recommended this sub-factor in improving customer satisfaction and the utilization of eMarketplaces in SA. According to these experts, trustworthiness is based on very important factors of trust that have two dimensions: intention and competence. One can ask what is the intention for one to be trustworthy?, for one may be interested by self-regard and what they obtain out of being trustworthy. For example, if someone is selling a used item with mechanical problems. User wants a potential purchaser to trust system so the seller mentions that customer order is in working order. In this situation, the seller is only concerned with customer own interests and not that of the other party who is considering the purchase of the item.

5.5.3. Usability, Staff Training and Technical Support in Complementary Services

Five of the seven experts recommended usability, staff training and technical support sub-factors to support complementary services. According to them, service usability refers to the degree to which a service can be employed by specified customers to

obtain specified goals and objectives with efficiency, effectiveness and satisfaction in a quantified context of use. Therefore, staff training is important so that the eMarketplace staff not only be able to fulfil the customers' requirements, but can also provide technical support to achieve their goals and objectives effectively.



	1	2	3	4	5	6	7
The Utilization of EM	3.8	3.86	4.15	3.96	3.9	3.98	3.88
All Factors	3.86	3.82	4.13	3.96	3.92	3.9	3.84

Figure 5-1: Customer Satisfaction Factors and the Utilization of eMarketplaces.

5.5.4. Ease of use, E-readiness and Simplicity in the eMarketplace Infrastructure

All experts recommended the sub-factors ease of use, e-readiness and simplicity in establishing a strong infrastructure. According to the experts, eMarketplace development can lead to important operational changes and requirements, including the level of organizational infrastructure that a company needs to employ in the organization. This change in infrastructure may require a huge initial cost, so it is

critical to make correct and accurate decisions to guarantee that the organization receives an adequate return on its investment. This will only be possible if ICT infrastructure is easy to use, is e-ready and simple so that change can be managed.

5.5.5. Arabic Content, Connectivity, System Effectiveness and Service Quality in the Context of Reliability

All the experts recommended the sub-factors: Arabic content, connectivity, system effectiveness and service quality as being important to the factor reliability. According to the experts, some electronic businesses in SA are sluggish in accepting eMarketplace technologies to distribute their products, and this is because of an internal set of organizational factors as well as some external factors of online business organizations in SA. Therefore, in improving the performance of the eMarketplace in SA, it is important that its reliability should be consistent with the users' expectations, and that existing faults be exposed. Thus, when providing reliable online services to Saudi customers, services should also be in the Arabic language, always connected, effective and of the best quality.

5.5.6. Internet Speed, Awareness in Regularity Requirements

All the experts recommended these sub-factors as being important to the factor regulatory requirements. According to the experts, eMarketplaces can deliver opportunities to electronic business processes in the Kingdom. However, adopting a new online business tool can result in connectivity problems and risks. It is important to recognize the legal problems and possible risks to guarantee a safe, protected environment for trading with consumers of eMarketplaces. These days many online business organizations in SA are endorsing the global synchronization of legal structures, which is based on two main factors: first, privacy - In typical online interchange environments, customers are entitled to have their privacy respected. Online businesses should provide the consumers with choices about the

use of their personal information and integrate security procedures to limit the use of this by unwanted parties. Therefore, privacy strategies and procedures should be carefully explained to consumers. Although respecting customer privacy is a legal requirement, it also signifies proper eMarketplace practice. For example, if consumers believe that a website and organization is good, then they are more likely to conduct online transactions with it. In addition, copyright and trademark - Many attempts have been made to tackle the issues associated with the copyright of digital content, such as websites and other online material. Digital businesses have a strong impact on copyright and associated issues, and the issue of copyright is fundamental to how online businesses evolve. Therefore, it is vital that laws are established and applied suitably to guarantee that digital technology does not destabilize the basic principle of copyright and associated rights.

Policies and laws, at present, are mostly online confidentiality policies that are shaped by private companies. The Saudi Arabian Government is introducing legislation to sustain and strengthen the privacy safety measures of numerous e-businesses. The main issues concerning the legalization of eMarketplaces include the following: guaranteeing appropriate online contracts, record retaining obligations, original documentation, Vat and Tax requirements, improving regulations and external data safety laws. Therefore, the sub-factors Internet speed and awareness are very important in order to improve the customer satisfaction of eMarketplaces in SA.

5.5.7. Customer Satisfaction of eMarketplaces Relationship with the Utilization of eMarketplaces

In relation to identify the relationship between customer satisfaction and the utilization of eMarketplaces, the experts were asked to estimate to what degree the utilization of eMarketplaces depends on customer satisfaction. All the experts agreed that in SA, at least 20% to 30% of the utilization of eMarketplaces depends on customer satisfaction. In addition, they mentioned many other factors: 1) linking

the business strategy with the technology strategy: as the organization's formal online business strategy is hard for technology departments to understand, this may result in the electronic business strategy being unclear to the technology department. Likewise, the formal technology strategy is hard for the online business departments to understand; 2) Decentralization: online business organization departments need to be decentralized to align with the organization's units and the organization's projects; 3) Saudi culture: a well-managed organizational culture is required in SA in order to develop a working relationship between eMarketplaces and technology functions, which leads to an improved level of eMarketplace utilization; 4) Domain knowledge: some electronic business and technology departments in Saudi online business organizations do not share their domain knowledge. By sharing domain knowledge, the communication gap between the two groups is reduced and the utilization of eMarketplaces will be enhanced.

5.5.8. Barriers to the Utilization of eMarketplaces

The experts agreed on the most common barriers hindering the development and utilization of eMarketplaces. These barriers include weak infrastructure, undeveloped services, a lack of rules and regulations, privacy and security concerns and a lack of customer awareness. According to the interviewed experts, these barriers should be considered in order to obtain better utilization and development of eMarketplaces.

Hence based on above findings, the validated research model (see Chapter 4) is updated accordingly, as shown in Figure 5-2. In Figure 5-2, the sub-factors, which are in bold and italic, are explored during the interviews with the experts.

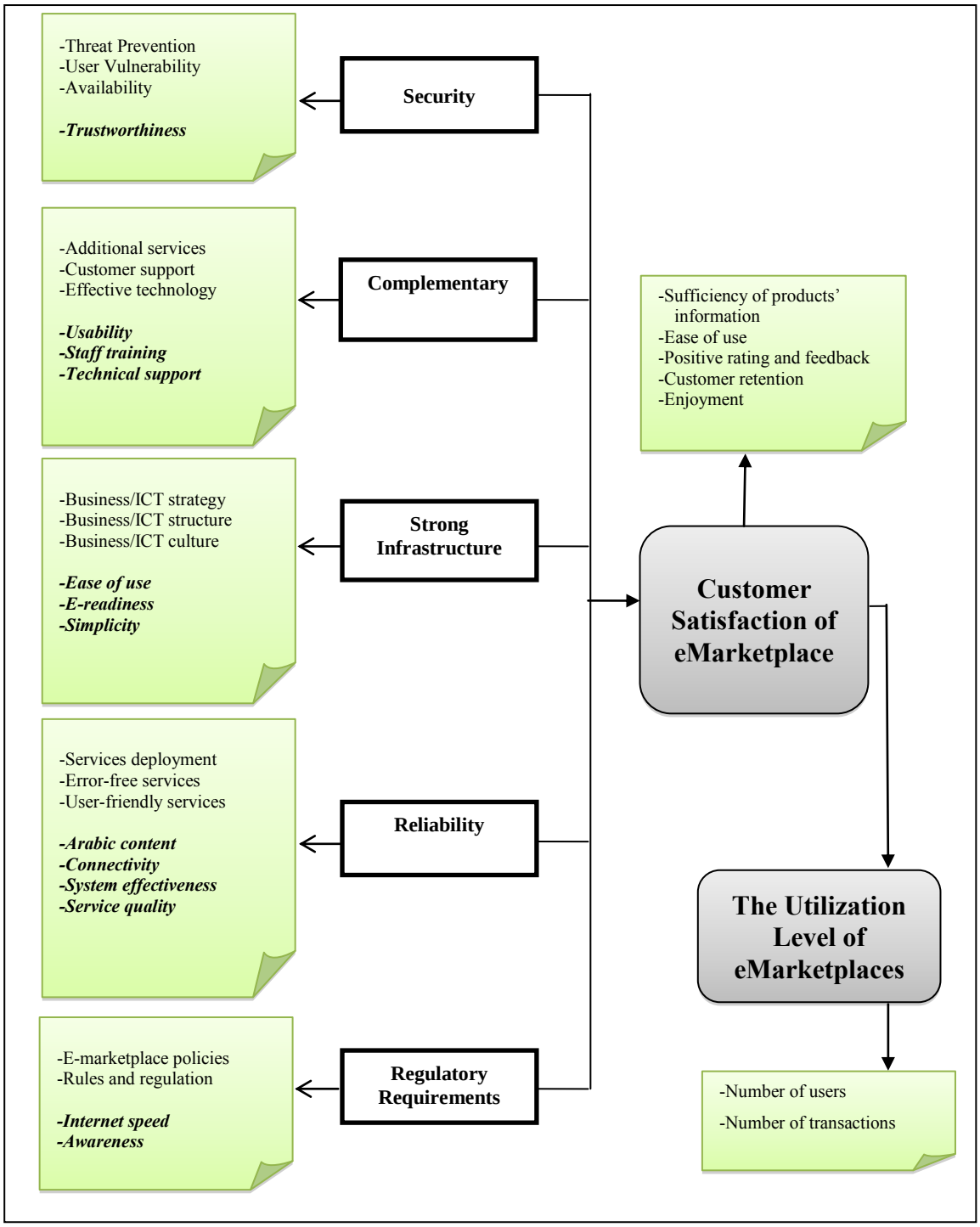


Figure 5-2: Revised Research Model

5.6. Summary

In this chapter, the qualitative views of seven eMarketplace regulators were collected in order to further validate the research model based on the initial statistical findings (see Chapter 4). In particular, the experts' clarifications shed light on the importance of the eMarketplace infrastructure and regulatory requirements factors in SA. They suggested additional sub-factors which were used to revise the research model (see Figure 5-2). As SA is a fast growing and developing country in terms of eMarketplace utilization, its economy is producing opportunities for both exporters and investors. These are additional advantages boosted by economic improvement, eBusiness market liberalization, an emergent private sector and moves to expand the economy away from dependence on oil and gas industries. However, in terms of eMarketplace utilization, SA is a country where online organizations have a very bright future for three main reasons. Firstly, it is a country where women are not allowed to drive, thus Saudi women may have difficulty going to the shopping malls. Secondly, it is a country where sometimes the weather is extremely hot, which makes it very difficult to shop and travel to conventional markets. Thirdly, it is a country where the government provides many opportunities for new online businesses with the main opportunity being that it is a tax-free country. Therefore, Saudi customers have much to gain when eMarketplaces are utilized and regulated properly and effectively.

In addition to customer satisfaction in eMarketplaces, there may be other measures that affect the utilization stage. For instance, other measures as suggested by Kaplan & Norton (2007), including product and quality of service measures, could be used to test the proposed framework. Also, the data used in this research was country-based, so future research could investigate data from other countries or regions in order to further develop the relationship between customer satisfaction and the utilization of the eMarketplace.

Chapter 6

Discussion

6.1. Introduction

This chapter summarizes the discussion in two main phases: phase 1 discusses each contribution of this thesis and phase 2 describes the general findings related to the utilization of eMarketplaces in SA.

6.2. Discussion of the critical success factors in eMarketplace utilization

This thesis proposed an eMarketplace framework which has been validated both quantitatively and qualitatively. The framework consists of five major eMarketplace factors namely: security, strong infrastructure, complementary services, reliability and regulatory requirements. In this section, a discussion of these five eMarketplace critical success factors is presented. Using the five factors derived from the literature to develop the framework (Figure 2-3 in Chapter 2), subsequent quantitative analysis and qualitative analysis validated these as eMarketplace critical success factors. Each of these factors is discussed in the following subsections.

6.2.1. Security

The literature often reports on online businesses that have fallen victim to hacking and data breaches due to inadequate security measures, leading to a loss of reputation with devastating commercial consequences. As such, the security of eMarketplaces is vital in helping businesses both to minimize threats to their site and to avoid compromising sensitive data. It also encourages sales, as customers will naturally make purchases from a protected website that they trust. In order to make their business a secure place to shop, businesses should be aware of several security services that safeguard their eMarketplace so that customer confidence is high.

From the consumers' viewpoint, many eMarketplace sites and applications use customer data for different business purposes (Fisher, 2001). Consumers' beliefs in this have been confirmed by media stories of predominantly egregious privacy failures and public relations nightmares. In one survey, 92% of respondents pointed out that even when companies gave an assurance that they would keep personal data private, the respondents did not believe they would really do so (Light, 2001).

Culnan and Armstrong (1999) suggested that consumers have two kinds of security concerns. First, they are worried about unauthorized access to individual data because of security breaches. Second, consumers are worried about the danger of secondary use – the reprocessing of their personal data for unconnected purposes without their permission. This includes allocation to third parties who were not part of the deal in which the consumer relayed their individual data. It also comprised the aggregation of the consumers' operation data and other individual data to generate a profile. Smith, Milberg, and Burke (1996) raised two additional concerns based on Delphi studies, common concerns about individual data being collected and concerns over one's inability to correct any errors.

Another way for businesses in SA to check the security of their eMarketplace site is to go through the purchasing process, selecting goods and making a payment,

as if they were the purchaser. This will give businesses the opportunity to build a 'security checklist' to guarantee all services are in order. In order to validate security in the context of eMarketplace utilization and customer satisfaction, this factor has divided security into three sub-factors namely: threat prevention, user vulnerability and availability. The outcome was certain as customers in SA are aware of these security requirements, and most of them are even aware of how to engage in online shopping, as shown in Figure 6-1. The figure presents only the statistical mean value of their responses.

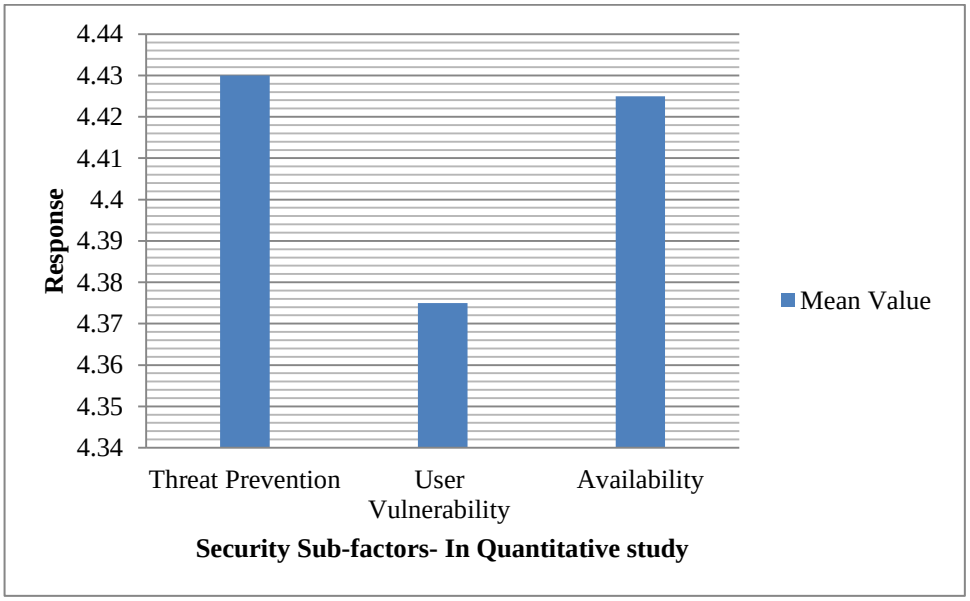


Figure 6-1: Security in the Quantitative study

However, during the qualitative study with eMarketplace regulators in Saudi Arabia, the sub-factors were given higher importance and a new sub-factor namely, trustworthiness was also suggested, as shown Figure 6-2.

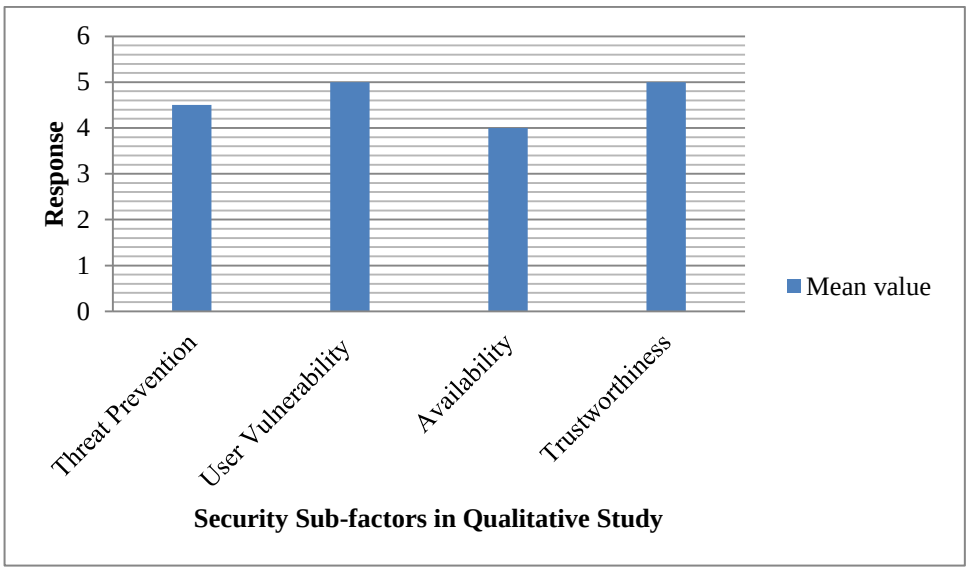


Figure 6-2: Security in the Qualitative study

6.2.2. Complementary Services

The development of services offered in the online business organizations has been given various terms such as additional services, complementary services, product services and combined services.

The term, complementary services has been studied in the literature from several points of view (Alasem, 2009; Gronroos, 2007; Gummesson, 2000; Lu, 2001; Vargo & Lusch, 2004; Zeithaml, 2002). The notion of electronic services represents one prominent application of technology and communication tools, which is also referred to as IT in different capacities. However, providing an accurate definition of electronic service is difficult as experts employ several definitions. Despite these dissimilar definitions of electronic services, it can be contended that they all support the role of IT in enabling the distribution of services over the Internet.

Complementary services in the context of electronic services have many applications and can be found in many areas, however, in this section two leading application areas of electronic services are discussed:

- eMarketplaces: complementary services characteristically provided by business organizations, non-government or private business companies;
- eGovernment: complementary services provided by the government to public and private business organizations.

In order to validate complementary services in the context of eMarketplace utilization and customer satisfaction, this factor is divided into three sub-factors, namely: additional services, customer support and effective technology. The result of this factor in this study was satisfactory as customers in SA agreed to the importance of the complementary services requirements. Figure 6-3 presents only the statistical mean value of their responses.

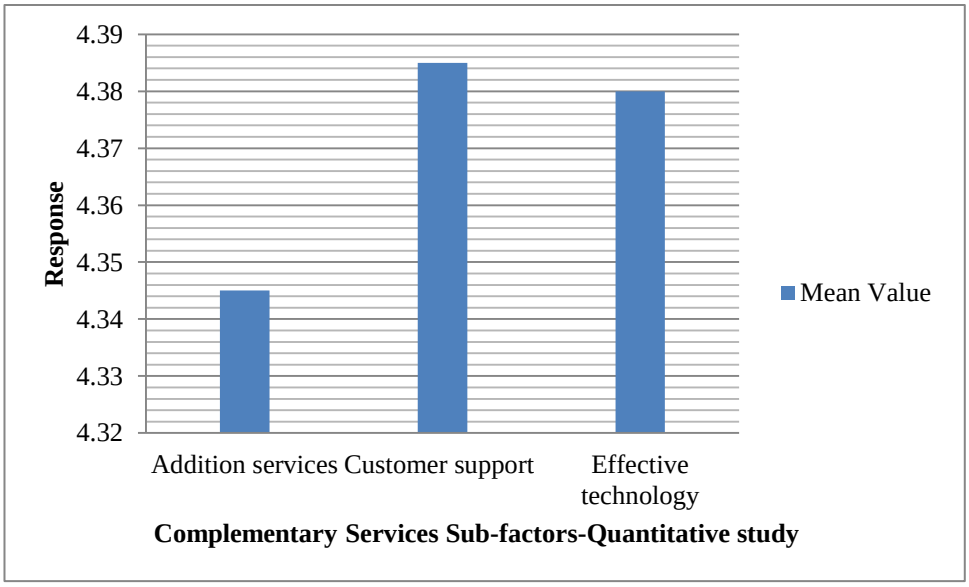


Figure 6-3: Complementary services in the Quantitative study

However, during the qualitative study with the eMarketplace regulators in SA, not only was a higher importance found for each complementary services sub-factor, they also raised new factors relating to the importance of strong infrastructure in eMarketplace utilization and customer satisfaction in SA, as shown in Figure 6-4.

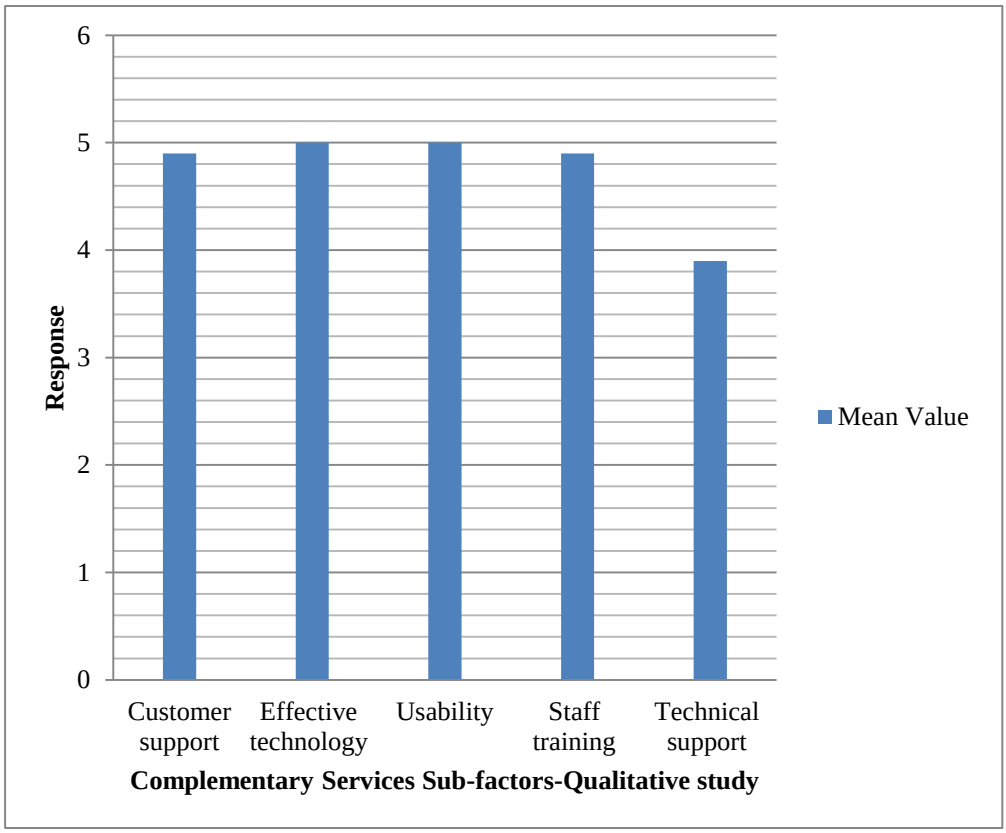


Figure 6-4: Complementary services in the Qualitative study

6.2.3. Strong Infrastructure

It is widely accepted that every business requires infrastructure to support and sustain its customers and operations. This includes facilities, equipment, and processes to support all the practical areas of any type of business. Selecting the appropriate infrastructure to match the business strategies ensures company operations will run

smoothly. Conversely, if an element of the required infrastructure is out of sync with the strategies of the business, it is likely to cause a massive delay in achieving the desired goals.

For instance, in the context of eMarketplaces, if the company's value proposition is to provide the maximum level of consumer service for premium products, then the company's infrastructure should include procedures to deliver a quick and approachable service, including self-service tools, live chat and a quick turnaround on consumers' questions and orders. On the other hand, if company's value proposition is to provide the lowest price every day, then the company's infrastructure should be motivated to be a low cost provider. While the company can attain this in various ways, it needs to guarantee that the cost of products sold and overhead expenditures, which include infrastructure costs, are as low as possible.

The literature shows that infrastructure in the context of eMarketplace utilization has been studied widely (Byrd & Turner, 2000; Henderson & Venkatraman, 1993; Mumford & Weir, 1979; Ullah & Lai, 2013). Managing infrastructure in any type of business organization is a complex issue which can be divided into two main types: business infrastructure and ICT infrastructure; with each type being divided into three major components, respectively, i.e. business strategy, business structure, business culture and technology strategy, technology structure, and technology culture. The idea of business strategy has been extensively studied in the areas of business and ICT. According to Mintzberg, Lampel, Quin, and Ghoshal (2003), strategy can be defined in five different ways. First, a strategy is a plan which includes an intended course of action. Second, a business strategy is a plan which is employed to address competition from others. Third, a business strategy is a pattern which states levels of actions in organisations. Fourth, a strategy is a position meaning 'where' and 'when'. A strategy needs to be practical to business actions, which could be both the internal and external actions of the business. Fifth, a business strategy is a viewpoint which mentions the differing viewpoints of business

managers when implementing the organization strategy (Sapienza, Smith, & Gannon, 1988).

Therefore, researchers suggested that, in order to establish a strong infrastructure in the context of eMarketplace utilization, the following organizational components need to be strongly aligned (Sapienza, Smith, & Gannon, 1988):

- aligning business strategy and ICT strategy;
- aligning business structure and ICT structure;
- aligning business culture and ICT culture.

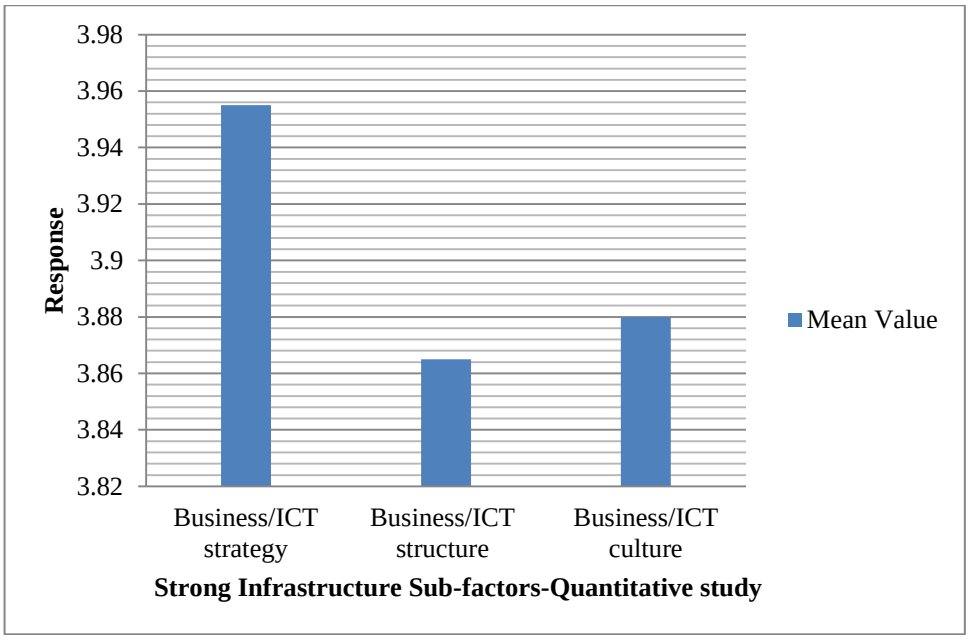


Figure 6-5: Strong Infrastructure in the Quantitative study

This alignment could bring many important benefits such as reduced repetition of effort, guaranteed devotion to standards, improved movement of information through an information system, endorsed flexibility essential for an unpredictable environment, guaranteed interoperability between organizational and exterior entities, and the management of organizational practices and policies (Ullah & Lai, 2013).

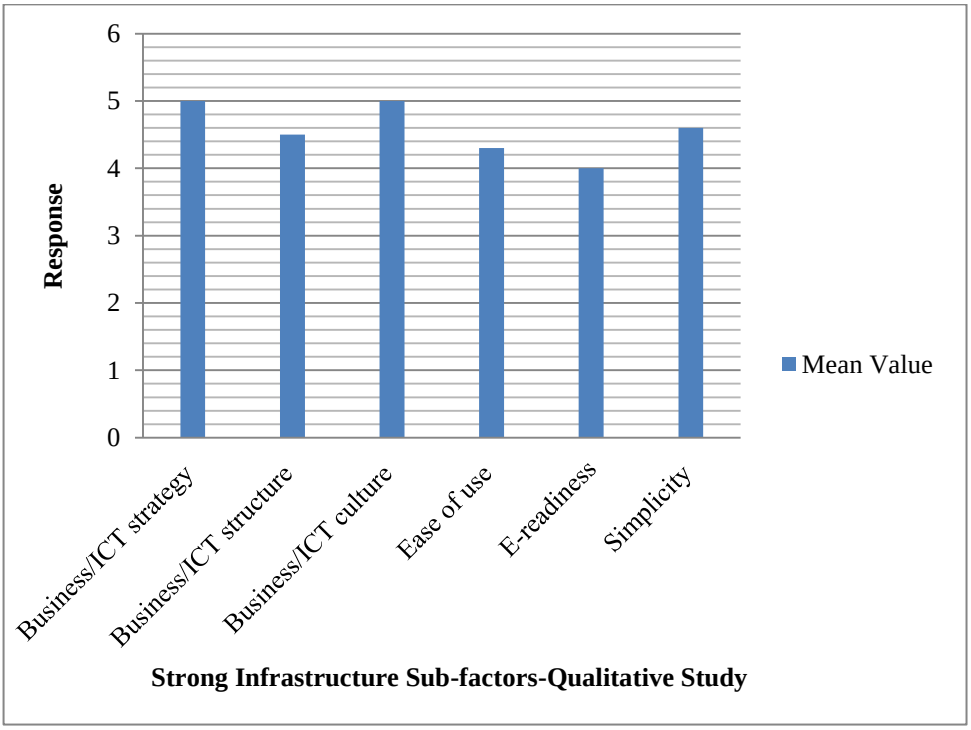


Figure 6-6: Strong Infrastructure in the Qualitative study

In order to validate strong infrastructure in the context of eMarketplace utilization and customer satisfaction quantitatively, strong infrastructure is divided into three sub-factors namely: business/ICT strategy, business/ICT structure and business/ICT culture. The result of this factor in this study was not satisfactory as some customers in Saudi Arabia are not aware of these strong infrastructure requirements. However, most of them are aware of the importance of strong

infrastructure, as shown in Figure 6-5. This figure only shows the statistical mean value of their responses.

However, during the qualitative study with the eMarketplace regulators in SA, a higher importance for each strong infrastructure sub-factors was given, as well as the emergence of new factors, as shown Figure 6-6.

6.2.4. Reliability

Reliability in the context of the eMarketplace is defined as the ability to achieve the required functionality under the quantified conditions for a quantified period of time. To study the reliability of an eMarketplace application, it is important to understand the web application structure as web applications are the main source of providing eMarketplace services. The web application is a multi-layered structure, with the customer at the top of the layer of the web application and the information foundation at the bottom of the layer. A customer collaborates with the nodes in the web application through an Internet browser, which has links to the home pages at the interfaces of the nodes in the system. The computer servers at a node offer the services for measured navigation to recover information from the information sources at that node of the network. Web components can be characterized into customer, Internet browser, and computer server classes. The objects in a web application instantiated from the classes interconnect in a significant way via messages. The behaviour of objects in a class for the web application is recognized by a ranked labelled changeover system with an inadequate number of states. A state signifies an effective high-level unit in the web application. A changeover between two states may be labelled by a message shared by objects of several classes.

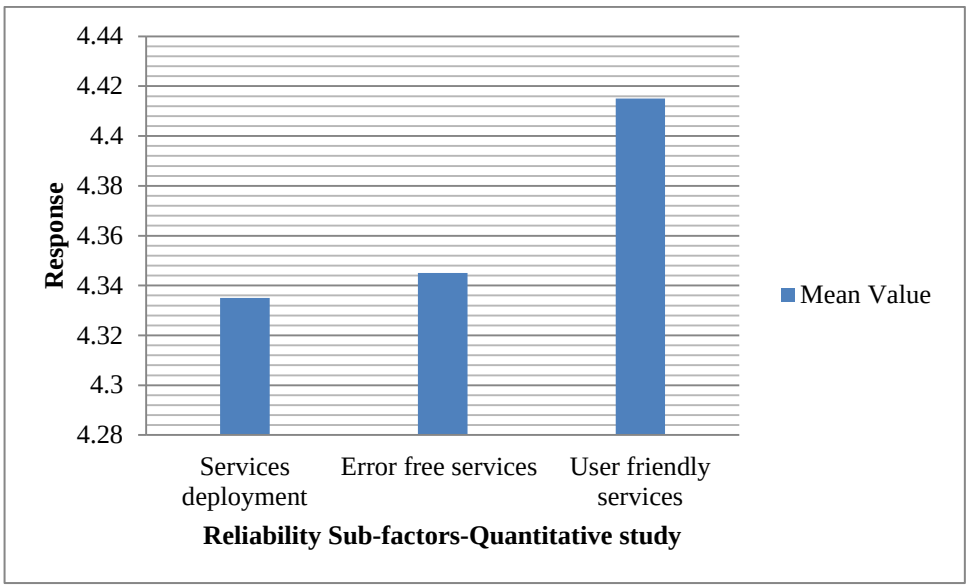


Figure 6-7: Reliability in the Quantitative Study

The literature shows the very high importance of reliability in the context of eMarketplace utilization, as customers and service providers can rely on a proper and continues functionality of the eMarketplace. Therefore, the reliability of eMarketplace applications is very important for the success of eMarketplace utilization and customer satisfaction (Gommans, Krishnan, & Scheffold, 2001).

In order to validate reliability in the context of eMarketplace utilization and customer satisfaction quantitatively, we divide the strong infrastructure factor into three sub-factors namely: services deployment, error-free services and user-friendly services. The results of this study in relation to this factor were satisfactory as customers in SA are aware of these reliability requirements, and most of them are aware of the importance of reliability, as shown in Figure 6-7. It presents only the statistical mean value of their response.

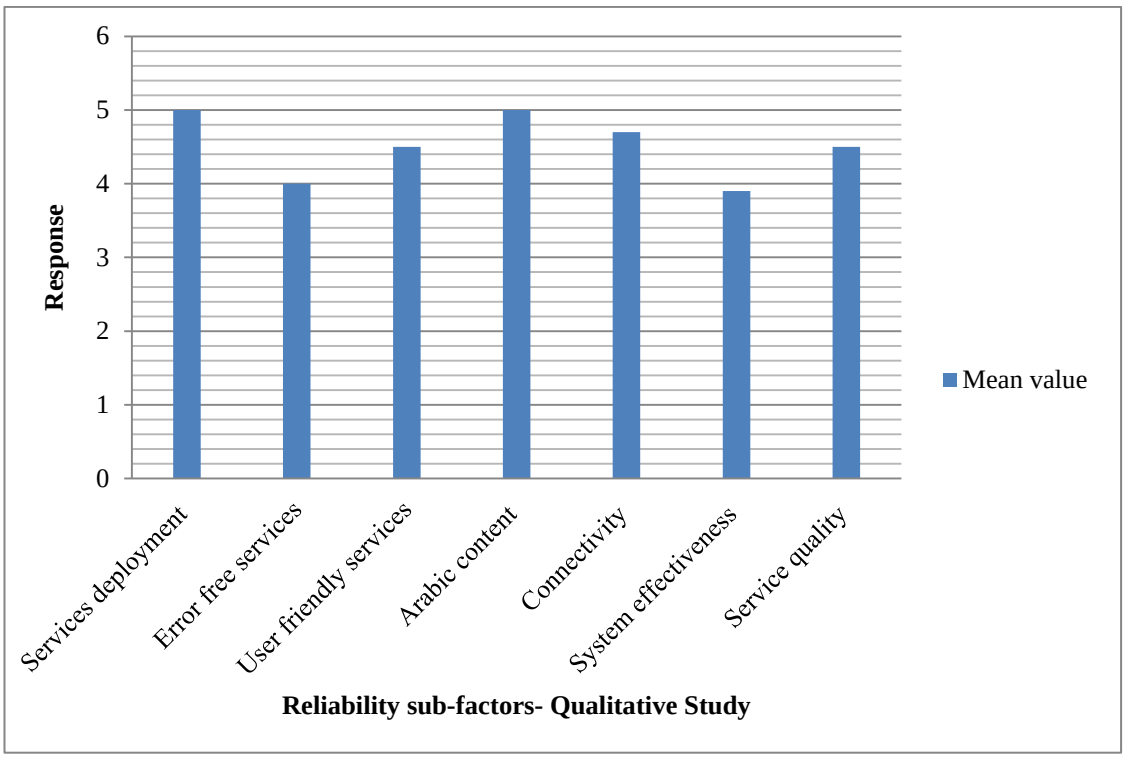


Figure 6-8: Reliability in the Qualitative Study

However, during the qualitative study with the eMarketplace regulators in SA, not only was a higher importance found on each reliability sub-factor, they also suggested additional sub-factors for the importance of reliability in eMarketplace utilization and customer satisfaction in SA, as shown in Figure 6-8.

6.2.5. Regulatory Requirements

In the present era of eMarketplace technology, many users want to complete their work rapidly and with little effort. At times, users overlook the legal and ethical principles of their actions. In the traditional eMarketplace, it is not easy to start a new electronic business. Therefore, it is important to implement strategies that comply with all the government rules and regulations. An eMarketplace makes it possible to

undertake nearly any type of business in a very simple way. The eMarketplace presents a world of opportunity for doing electronic businesses, attaining global markets and making purchases without leaving the office.

An eMarketplace can provide opportunities to develop business processes. However, implementing a new business tool can bring with it several related problems and risks, as does the eMarketplace. It is important to recognize the legal problems and possible risks to guarantee a safe, protected environment for customers and other electronic businesses.

In order to validate regulatory requirements in the context of eMarketplace utilization and customer satisfaction quantitatively, the regulatory requirements factor was divided into two sub-factors namely: eMarketplace policies and rules and regulations. The result of this study in relation to this factor was not really satisfactory as some customers in SA are not aware of these regulatory requirements, however, most of them are aware of the importance of regulatory requirements, as shown in Figure 6-9 which presents only the statistical mean value of the responses.

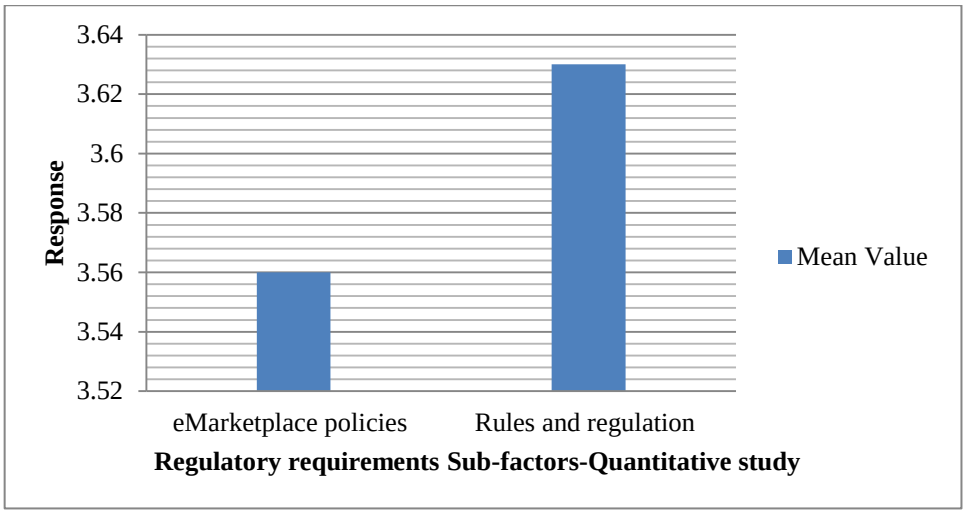


Figure 6-9: Regulatory Requirements in the Quantitative Study

However, during the qualitative study with the eMarketplace regulators in SA, not only was higher importance found on each regulatory requirements sub-factors, they also highlighted new factors in relation to the importance of regulatory requirements in eMarketplace utilization and customer satisfaction in Saudi Arabia, as shown Figure 6-10.

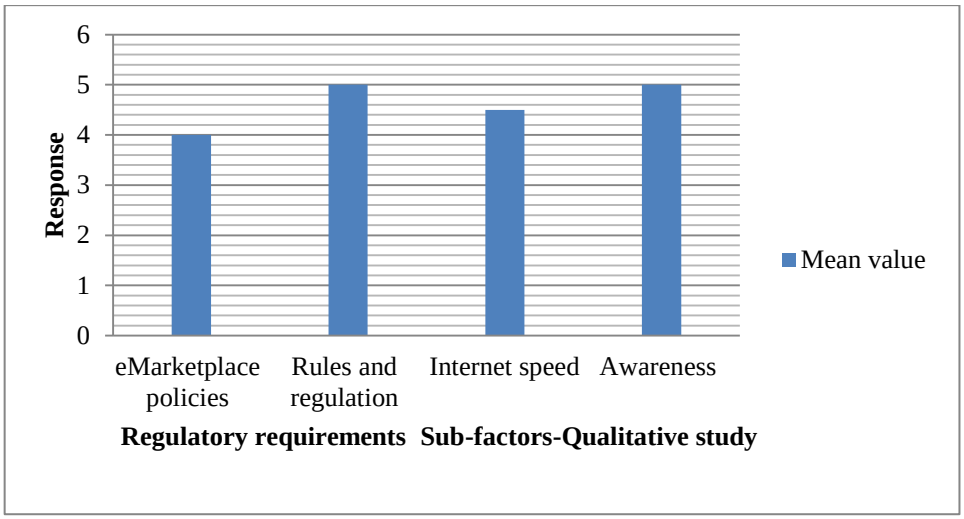


Figure 6-10: Regulatory Requirements in the Qualitative Study

6.3. Thesis contributions with industry experts

The results described in the previous chapters were validated using quantitative and qualitative research methods. Therefore, it is important to discuss the contributions of the eMarketplace experts in this thesis and to strengthen the proposed research model, so further investigation is needed to validate and evaluate every studied factor between eMarketplaces experts in the industry. This section aims to examine empirically the factors among eMarketplaces experts in industry. In this section, the goal is to answer the following questions:

Table.6-1: The proposed eMarketplace factors

eMarketplace factors		**Abbreviation**
Security		**Sc**
SC	Threat Prevention	SC 1
	User Vulnerability	SC 2
	Availability	SC 3
	Trustworthiness	SC 4
SI	**Strong Infrastructure**	**SI**
	Business/ICT strategy	SI 1
	Business/ICT structure	SI 2
	Business/ICT culture	SI 3
	Ease of use	SI 4
	E-readiness	SI 5
	Simplicity	SI 6
CS	**Complementary Services**	**CS**
	Additional services	CS 1
	Customer support	CS 2
	Effective technology	CS 3
	Usability	CS 4
	Staff training	CS 5
	Technical support	CS 6
RE	**Reliability**	**RE**
	Services deployment	RE 1
	Error-free services	RE 2
	User-friendly services	RE 3
	Arabic content	RE 4
	Connectivity	RE 5
	System effectiveness	RE 6
	Service quality	RE 7
RG	**Regulatory Requirements**	**RG**
	E-marketplace policies	RG 1
	Rules and regulation	RG 2
	Internet speed	RG 3
	Awareness	RG 4

- Do the eMarketplace factors examined in this thesis influence the eMarketplace customer satisfaction in SA?
- Are the eMarketplace factors examined in this study of equal importance to eMarketplace success and its utilization?

To answer these questions, a questionnaire was designed on the basis of each selected eMarketplace factor and was sent to ten industry experts from the Ministry of Commerce and Industry in SA. All the participants were first informed of the research and were asked to participate. In the questionnaire, each factor was rated by the participants using a five-point Likert scale, in which 1 refers to 'not understood', 2 refers to 'slightly understood', 3 refers to 'understood', 4 refers to 'well understood', and 5 refers to 'completely understood'. The eMarketplace main factors were divided into sub-factors, as shown in Table 6-1.

A total of ten industry experts responded to the questionnaire and their responses were analysed. Table 6-2 details the responses given by the industry experts from the Ministry of Commerce and Industry. To cross-validate the significance of each factor in this thesis according to the industry experts, statistical mean, standard deviation and arithmetical covariance were used. Statistical mean was used to find the experts' average knowledge level of each factor in the thesis; standard deviation was used to classify the spread of the values in a specific sample. As suggested by the experts, industry cannot be ignored in the field of eMarketplace utilization and customer satisfaction. The following sections summarize the viewpoints of the industry experts on each of the five factors of the proposed research model.

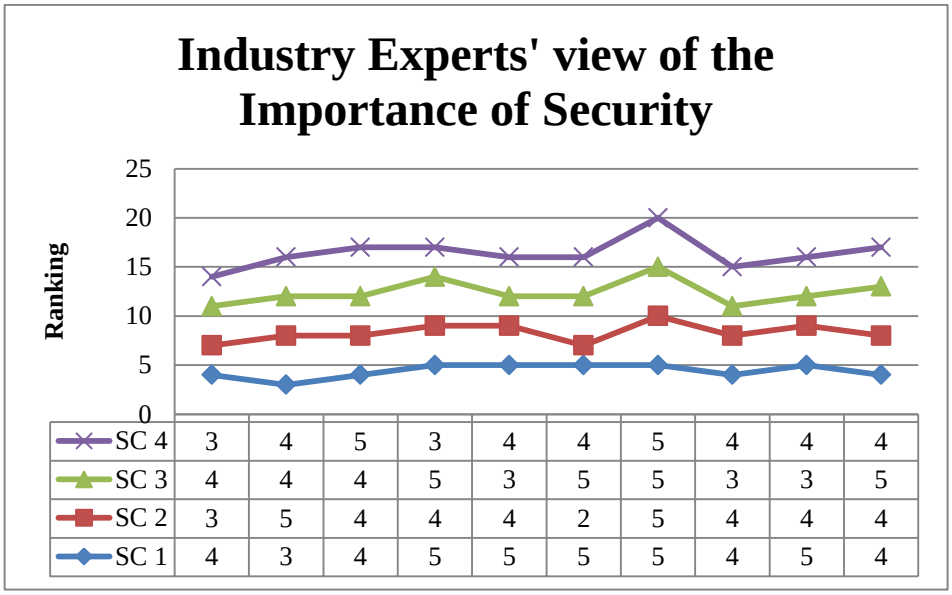


Figure 6-11: Industry Experts' view of the importance of Security

6.3.1. SC

The eMarketplace security factor was divide into four sub-factors: 1) threat prevention, 2) user vulnerability, 3) availability and 4) trustworthiness as shown in Table 6-1. The data analysis results of this factor, shown in Figure 6-12, indicate that every expert understood the importance of each factor in relation to security in eMarketplaces, which is why, in most cases, the experts ranked each factor as either *well understood or completely understood.*

Table 6-2: Demographic characteristics of the industry participants

Factor of eMarketplaces	**Participants' answers**									
SC										
SC 1	4	3	4	5	5	5	5	4	5	4
SC 2	3	5	4	4	4	2	5	4	4	4
SC 3	4	4	4	5	3	5	5	3	3	5
SC 4	3	4	5	3	4	4	5	4	4	4
SI										
SI 1	4	4	4	5	4	5	5	4	5	4
SI 2	5	4	5	5	4	5	4	5	4	5
SI 3	5	4	4	4	5	4	4	5	5	5
SI 4	4	5	5	4	4	3	4	4	3	5
SI 5	5	4	5	3	5	4	5	5	5	4
SI 6	5	4	5	4	5	3	4	5	5	5
CS										
CS 1	5	3	4	5	4	3	5	4	4	5
CS 2	4	3	5	5	4	2	4	4	3	4
CS 3	5	4	4	4	5	4	5	4	3	5
CS 4	3	4	4	5	4	3	4	5	4	4
CS 5	3	5	4	5	5	3	4	4	3	3
CS 6	4	4	5	4	5	4	4	4	4	5
RE										
RE 1	5	5	4	5	5	4	4	3	4	4
RE 2	4	3	5	4	4	3	5	4	5	5
RE 3	4	5	4	3	5	4	5	4	4	3
RE 4	5	3	5	4	4	4	4	5	3	4
RE 5	4	4	5	5	5	5	4	4	5	4
RE 6	4	4	5	4	4	5	5	3	4	3
RE 7	4	3	4	5	5	4	5	4	5	4
RG										
RG 1	5	3	4	5	5	3	5	5	3	4
RG 2	4	4	5	3	4	3	3	3	3	4
RG 3	5	4	4	5	5	4	4	5	4	4
RG 4	5	5	4	5	4	4	4	3	5	4

Judging by the viewpoints of the industry experts in SA, this factor is important to the Saudi eMarketplace industry for the following reasons: first, it ensures customer privacy and improves their trust in the industry. Second, it allows industry resources to be available for the customer at any time and at any place, which could improve industry growth.

The variance results of indicate that there is not much statistically significant difference between each industry expert regarding the importance of every factor of security: vulnerability *(variance=0.02)* and trustworthiness *(variance=0.02)*; while two of the factors threat prevention *(variance=0.08)* and availability *(variance=0.08)* showed a larger variance which indicates that the eMarketplace experts agree on the importance of these sub-factors for the success of eMarketplaces in SA. However, this importance varies between participants, as some experts ranked the importance of some security factors between *well understood and completely understood* and some ranked them between *understood* and *well understood* as shown in Table 6-3.

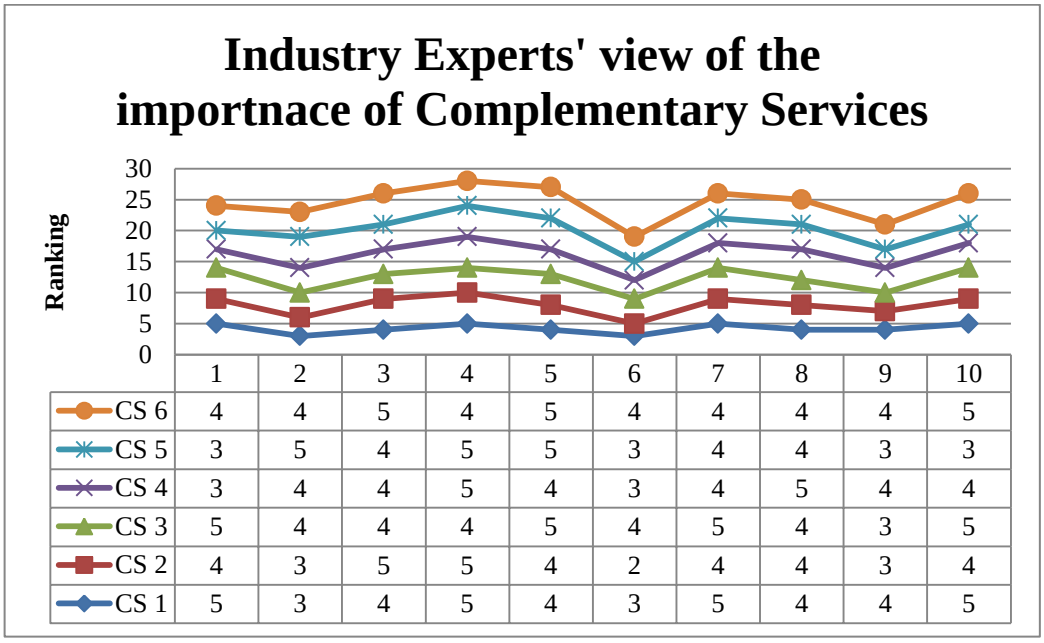
Table 6-3: SC

SC	Industry Experts			
	SC1	**SC2**	**SC3**	**SC4**
SC 1	0.04			
SC 2		0.02		
SC 3			0.08	
SC 4				0.08

6.3.2. CS

To cross-validate this factor of between industry experts in the context of eMarketplace utilization and customer satisfaction, we divide this factor into six sub-factors: 1) addition services, 2) customer support, 3) effective technology, 4) usability, 5) staff training and 6) technical support, as shown in Table 6-1. The data analysis results of this factor, shown in Figure 6-12, indicate that every expert

understood the importance of each factor of complementary services in eMarketplaces, which is why, in most cases, the experts ranked each factor as either *well understood* or *completely understood*.



	1	2	3	4	5	6	7	8	9	10
CS 6	4	4	5	4	5	4	4	4	4	5
CS 5	3	5	4	5	5	3	4	4	3	3
CS 4	3	4	4	5	4	3	4	5	4	4
CS 3	5	4	4	4	5	4	5	4	3	5
CS 2	4	3	5	5	4	2	4	4	3	4
CS 1	5	3	4	5	4	3	5	4	4	5

Figure 6-12: Industry Experts' view of the importance of Complementary Services

The variance results indicate that there is not much statistically significant difference between each industry expert regarding the importance of every sub-factor of the complementary services: additional services (0.08), customer support (0.02), effective technology (0.08), usability (0.04), staff training (0.07) and technical support (0.04) showed a larger variance which indicates that the eMarketplace experts agreed on the importance of these factors for the success of eMarketplaces in SA. However, this importance varies between participants, as some experts ranked the importance of some complementary services factors between *well understood* and *completely understood* and some ranked them between *understood* and *well understood*.

Table 6-4: CS

CS	Industry Experts					
	CS1	**CS2**	**CS3**	**CS4**	**CS5**	**CS6**
CS1	0.08					
CS 2		0.02				
CS 3			0.08			
CS 4				0.04		
CS 5					0.07	
CS 6						0.04

6.3.3. SI

To cross-validate this factor strong infrastructure among industry experts in the context of eMarketplace utilization and customer satisfaction, this factor was divided into six sub-factors: 1) business/ICT strategy, 2) business/ICT structure, 3) business/ICT culture, 4) ease of use, 5) e-readiness and 6) simplicity, as shown in Table 6-1. The data analysis results for this factor, shown in Figure 6-13, indicate that every expert understood the importance of each sub-factor of strong infrastructure in eMarketplaces, which is why, in most cases, the experts ranked each factor as either *well understood or completely understood.*

The variance results indicate that there is not much statistically significant difference between each industry expert regarding the importance of every factor of strong infrastructure: business/ICT strategy (0.06), business/ICT structure (0.05), business/ICT culture (0.08), ease of use (0.08), e-readiness (0.04) and simplicity (0.04) showed a larger variance which indicates that the eMarketplace experts agreed on the importance of these factors for the success of eMarketplaces in SA. However, this importance varied between participants, as some experts ranked the importance of some strong infrastructure factors between *well understood* and *completely understood* and some ranked them between *understood* and *well understood*, as shown in Table 6-4.

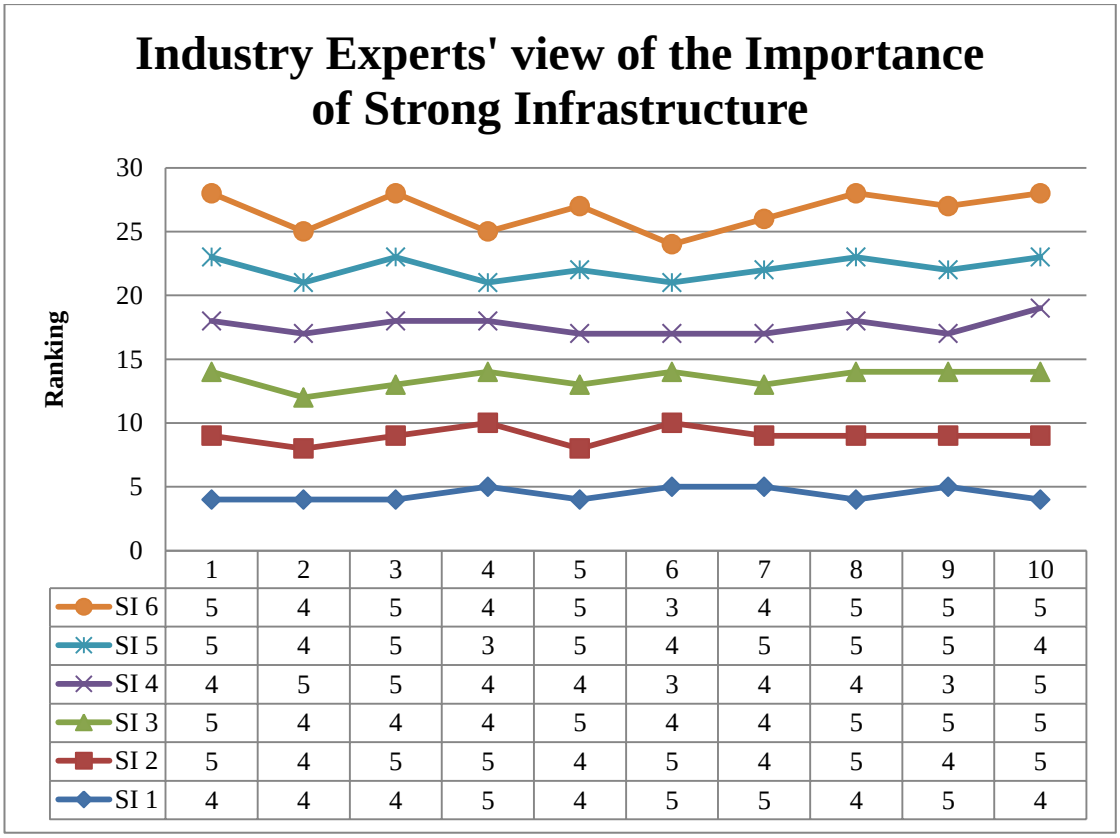


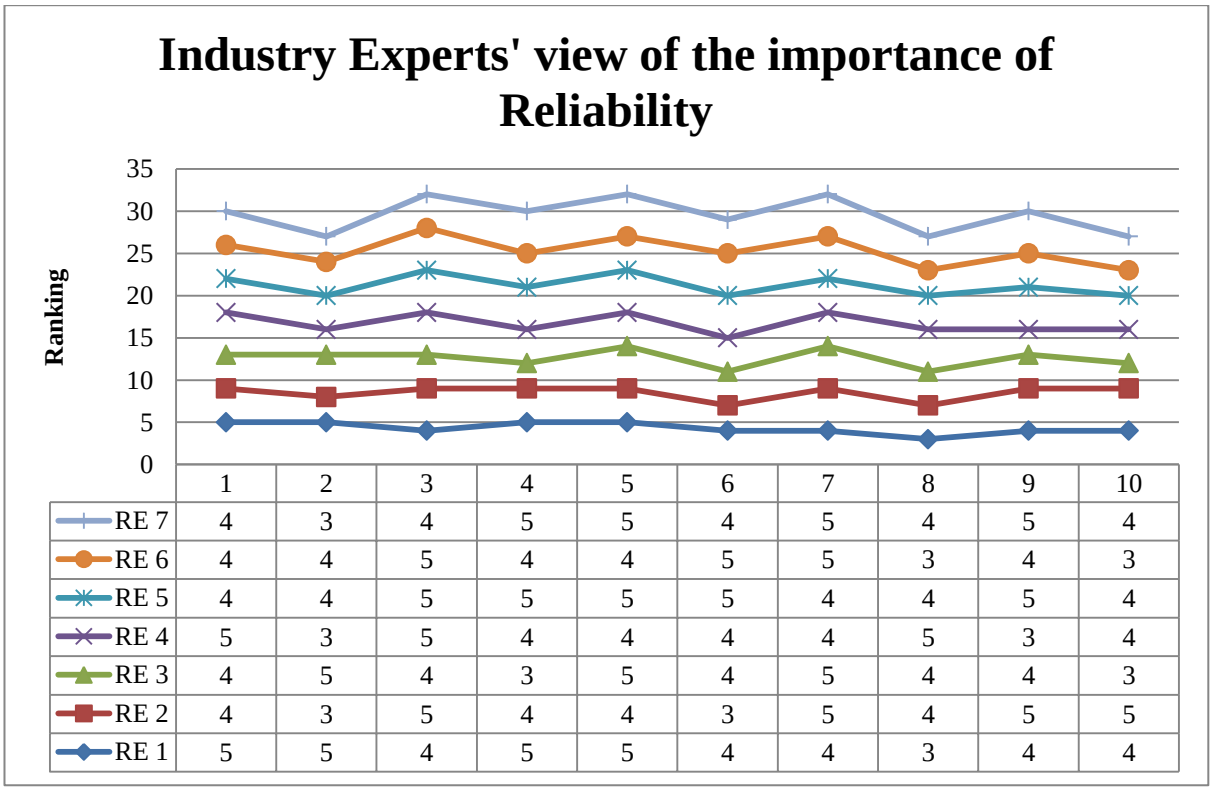
Figure 6-13: Industry Experts' view of the importance of Strong Infrastructure

Table 6-5: SI

SI	Industry Experts					
	SI1	**SI2**	**SI3**	**SI4**	**SI5**	**SI6**
SI 1	0.06					
SI 2		0.05				
SI 3			0.08			
SI 4				0.08		
SI 5					0.04	
SI 6						0.04

6.3.4. RE

To cross-validate this factor among industry experts in the context of eMarketplace utilization and customer satisfaction, we divide this factor into seven sub-factors: 1) services deployment, 2) error-free services, 3) user-friendly services, 4) Arabic content, 5) connectivity, 6) system effectiveness and 7) service quality as shown in Table 6-1. The data analysis results for this factor, shown in Figure 6-14, indicate that every expert understood the importance of each sub-factors of reliability in eMarketplaces, which is why, in most cases, the experts ranked each factor as either *well understood* or *completely understood*.



	1	2	3	4	5	6	7	8	9	10
RE 7	4	3	4	5	5	4	5	4	5	4
RE 6	4	4	5	4	4	5	5	3	4	3
RE 5	4	4	5	5	5	5	4	4	5	4
RE 4	5	3	5	4	4	4	4	5	3	4
RE 3	4	5	4	3	5	4	5	4	4	3
RE 2	4	3	5	4	4	3	5	4	5	5
RE 1	5	5	4	5	5	4	4	3	4	4

Figure 6-14: Industry Experts' view of the importance of Reliability

The variance results indicate that there is not much statistically significant difference between each industry expert regarding the importance of every sub-factors of reliability: services deployment (0.02), error-free services (0.04), user-friendly services (0.07), Arabic content (0.04), connectivity (0.08), system effectiveness (0.04) and service quality (0.08) showed a larger variance which indicates that the industry experts agreed on the importance of these factors for the success of eMarketplaces in SA, as shown in Table 6-6. However, this importance varies between participants, as some experts ranked the importance of some reliability factors between *well understood* and *completely understood* and some ranked them between *understood* and *well understood*.

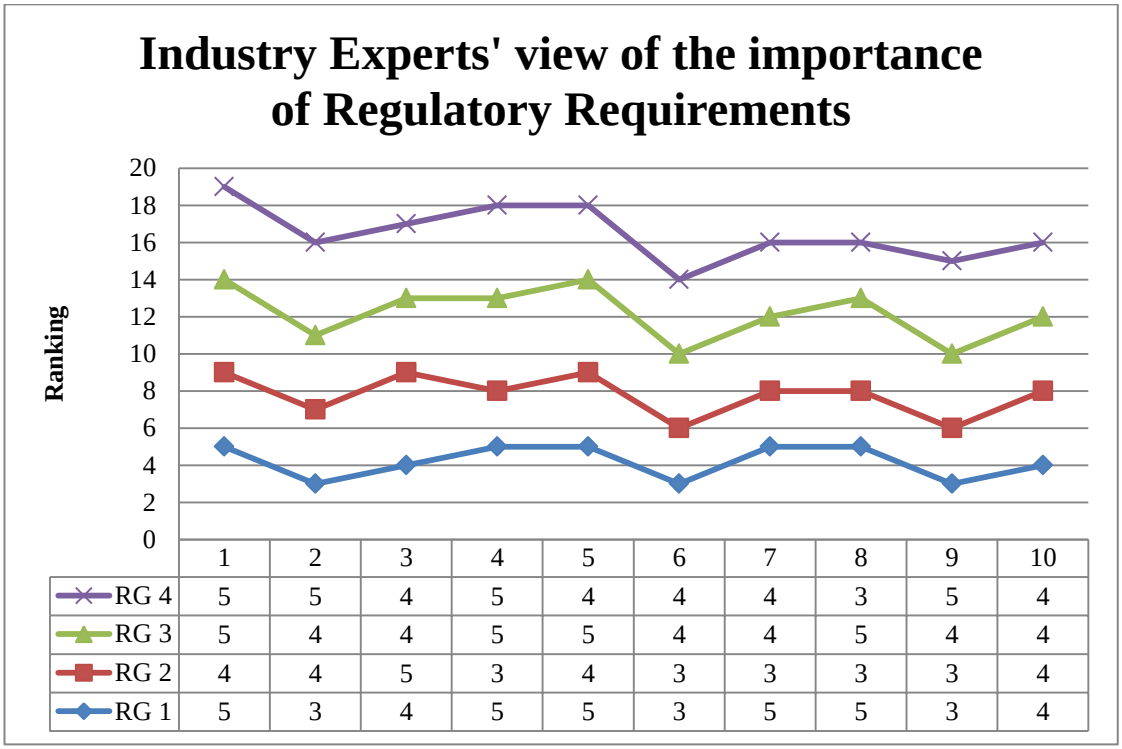
Table 6-6: RE

RE	Industry Experts						
	RE1	**RE2**	**RE3**	**RE4**	**RE5**	**RE6**	**RE7**
RE 1	0.02						
RE 2		0.04					
RE 3			0.07				
RE 4				0.04			
RE 5					0.08		
RE 6						0.04	
RE 7							0.08

6.3.5. RG

To cross-validate this factor of eMarketplace among industry experts in the context of eMarketplace utilization and customer satisfaction, we divide this factor into four sub-factors: 1) eMarketplace policies, 2) rules and regulation, 3) Internet speed, and 4) awareness, as shown in Table 6-1. The data analysis results for this factor, shown in Figure 6-15, indicate that every expert understood the importance of each factor of

the regulatory requirements in eMarketplaces, which is why, in most cases, the experts ranked each factor as either *well understood* or *completely understood*.



	1	2	3	4	5	6	7	8	9	10
RG 4	5	5	4	5	4	4	4	3	5	4
RG 3	5	4	4	5	5	4	4	5	4	4
RG 2	4	4	5	3	4	3	3	3	3	4
RG 1	5	3	4	5	5	3	5	5	3	4

Figure 6-15: Industry Experts' view of the importance of regulatory requirements

The variance results indicate that there is not much statistically significant difference between each industry expert regarding the importance of every sub-factors of regulatory requirements: eMarketplace policies (0.04), rules and regulations (0.08), Internet speed (0.04) and awareness (0.08) showed a larger variance which indicates that the eMarketplace experts agreed on the importance of these factors for the success of eMarketplaces in SA, as shown in Table 6-7. However, this importance varies between participants, as some experts ranked the importance of some regulatory requirements factors between *well understood and completely understood* and some ranked them between *understood* and *well understood.*

Table 6-7: RG

RG	Industry Experts			
	RG1	**RG2**	**RG3**	**RG4**
RG 1	0.02			
RG 2		0.08		
RG 3			0.04	
RG 4				0.08

6.4. General findings

This section summarises the discussion on the general findings:

6.4.1. The main pillars of eMarketplaces

One of the findings of this thesis is the identification of the three main pillars of eMarketplaces based on both experts' opinion and the literature review. From the literature, it was found that eMarketplaces involve two main pillars/players, namely the customer/buyer and the seller/company (see Chapter 2). However, there may be other pillars/players that are crucial for the utilization of eMarketplaces. For instance, despite the fact that many previous scholars considered regulatory requirements as a key factor for successful utilization of eMarketplaces (Ahmad & Agrawal, 2012; S. Al-Somali, R. Gholami, & B. Clegg, 2010; Al-Somali, Gholami, & Clegg, 2009; Aleid, Rogerson, & Fairweather, 2009; Algarni, Cheung, & Lee, 2011; AlGhamdi, Drew, & Alfaraj, 2011; AlGhamdi, Drew, & Alshehri, 2011; Sadi & Al-Khalifah, 2012), no previous study has addressed eMarketplace regulators explicitly as an important player. Table 6-8 presents a summary of eMarketplace research trends over the past decade or so, in terms of these eMarketplace pillars/players together

with a variety of related topics ranging from its operational aspects, structures and standards through to strategy, models, utilization and customer satisfaction.

Table 6-8: Research Trends on eMarketplaces

Authors	**Studied factors**	**eMarketplaces Pillars**	
Research Focus	Online Business and eMarketplaces		
Malone, Yates and Benjamin (1987), Williamsson (1975), Kian Chong et al. (2010), Chang et al. (2010), Irissappane et al. (2013)	• Transaction cost • Price • Proficient markets fundamentals • Relational theory of eMarketplace • Faith or trust	Customers	√
		eMarketplace Regulators	×
		Company	√
Kim & Xu (2007), Lee, Westland, & Hong (1999), Chang & Wong (2010), Truong & Jitpaiboon, (2008), Burdick et al. (2014), Renna (2010), Laudon et al. (2012)	• Low price business strategies • Switching costs • Trading experience	Customers	√
		eMarketplace Regulators	×
		Company	√
Research Focus	The Competency of eMarketplaces		
Cordella (2006), Lee & Clark (1996), Varadarajan & Yadav, (2009)	• Business environmental uncertainty • Information asymmetry • Benefits of eMarketplaces	Customers	√
		eMarketplace Regulators	×
		Company	√
Research Focus	The Operational Presentation of eMarketplaces		
Lee & Whang (2002), Muylle & Basu (2008), Singh et al. (2005), Chien et al. (2012)	• Operational eMarketplace • Presentation of eMarketplaces within the supply chain • Knowledge and intelligence in the supply chain	Customers	√
		eMarketplace Regulators	×
		Company	√
Research Focus	The Structure of eMarketplaces		
Bhargava & Choudhary (2004), Grover & Ramanlal (1999), West Jr (1997), Standing et al. (2006), Chang & Wong (2010), Rosenzweig et al. (2011)	• Knowledge transparency, • Artifact design strategies • How eMarketplace ideas can change the structure of administration services	Customers	√
		eMarketplace Regulators	×
		Company	√
Research Focus	The Adoption of eMarketplaces		
Damsgaard (1999), Driedonks et	• Techniques in eMarketplaces	Customers	√

al. (2005), Wareham et al. (2005), Brown & Lockett (2004), Gengatharen & Standing (2005), Pozzebon & Van Heck (2006), Howard et al. (2006), Kaefer & Bendoly (2004), Christiaanse & Markus (200), Jayaraman & Baker (2003), Kalvenes & Basu (2006)	• Barriers of eMarketplace • E-business supply chain • Privacy in eMarketplaces • Implementation of eMarketplace	eMarketplace Regulators	×
		Company	√
Research Focus	IS and eMarketplaces Standards		
McKeown (2002), Albrecht et al. (2005), Choudhury et al. (1998), Rao et al. (2007), Guo et al. (2012)	• IS standards • eMarketplace standards	Customers	√
		eMarketplace Regulators	×
		Company	√
Research Focus	Business Organization Models		
Turban et al. (2002), Cousins & Robey (2005), Dai & Kauffman (2002), Cheng et al. (2006), Gosain (2003), Sila (2013)	• Buyer and seller mechanisms • Knowledge administration of IS	Customers	√
		eMarketplace Regulators	×
		Company	√
Research Focus	Other Common Issues		
Standing et al. (2006), Phan (2003), Pavlou (2002), Ratnasingam (2005), Ratnasingam (2007), Verhagen et al. (2006), Kaplan & Norton (2007), Shoniregun (2003), Gilliam & Feather (2004), Lu (2001), Ullah & Lai (2011), Aladalah et al.(2014) Vargo & Lusch (2011), Barrett et al. (2015)	• eBusiness strategy • Value creation • Sustainability • Knowledge sharing • Utilization of eMarketplaces • Customer satisfaction • Rules and regulations • Robust and efficient infrastructure • Service science • Quality services	Customers	√
		eMarketplace Regulators	×
		Company	√
Ullah & Lai (2013), Konana et al. (2000), Mircea et al (2011), Hussein & Sulaiman (2013)	• New technologies (Cloud Computing) • eMarketplace theories • Rapid growth and expansion • eMarketplace theory that acts as agent	Customers	√
		eMarketplace Regulators	×
		Company	√

As seen from Table 6-8, from the primary analysis of the literature, it can be seen that there are two main parties (pillars/players) in eMarketplaces, suppliers (companies or sellers) and customers (buyers) with a variety of eMarketplace related topics. However, it can be seen that eMarketplace regulators have been neglected in

the literature. Therefore, in this research, eMarketplace regulators are considered a main pillar/player that is vital for the successful utilization of eMarketplaces as the regulatory requirements of eMarketplaces were regarded as a successful factor (Ahmad & Agrawal, 2012; S. Al-Somali, R. Gholami, & B. Clegg, 2010; Al-Somali, Gholami, & Clegg, 2009; Aleid, Rogerson, & Fairweather, 2009; Algarni, Cheung, & Lee, 2011; R. AlGhamdi, Drew, & Alfaraj, 2011; AlGhamdi, Drew, & Alshehri, 2011; Sadi & Al-Khalifah, 2012). Thus, Figure 6-16 illustrates the proposed three main pillars of the utilization and customer satisfaction of eMarketplaces in the context of this research.

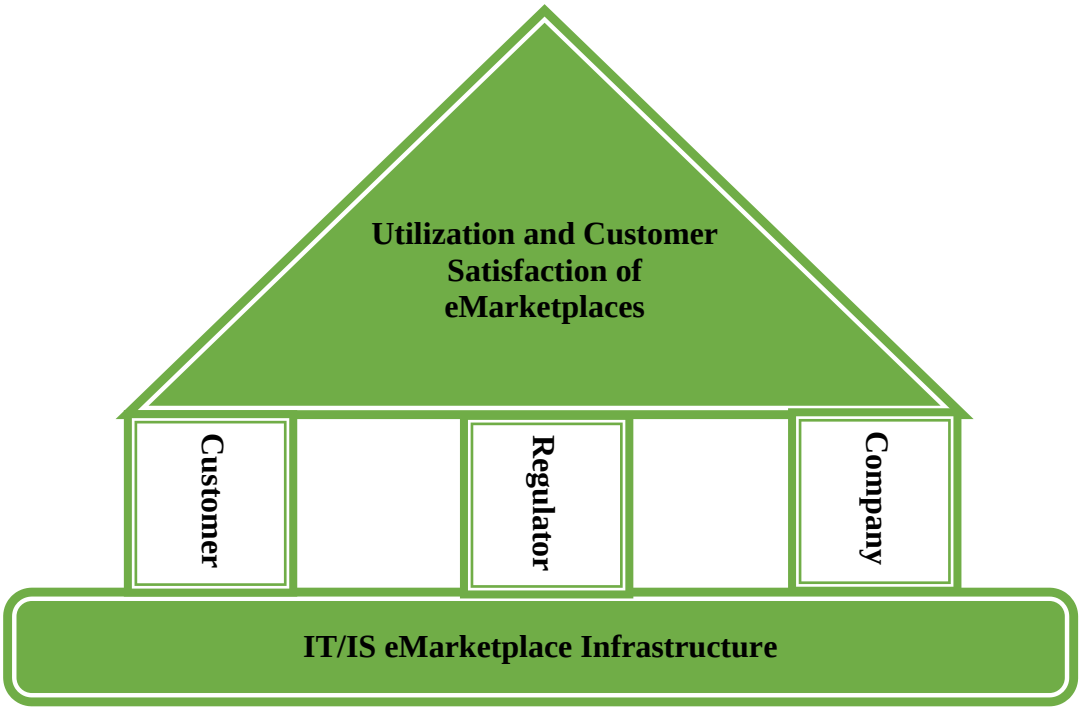


Figure 6-16: Three Main Pillars of an eMarketplace

Figure 6-16 shows the three main pillars of eMarketplaces, i.e. customer, eMarketplace regulator and company. The inclusion of eMarketplace regulators as a

main pillar/player is due to the fact that they can play an important role in successful eMarketplace utilization (Kudělka, Snášel, Horák, Hassanien, & Abraham, 2010; Joo & Kim 2004; Azizi, Salar, & Langroudi, 2012; Jiang, Dong, & Tang, 2013; Du, Li, & Wei, 2005; Monsuwé, Dellaert, & De Ruyter, 2004; Grieger 2003; Hartley, Lane, & Hong, 2004; Soh, Markus, & Goh, 2006; Chua, Straub, Khoo, & Kadiyala, 2005). Underlying the pillars are the IT/IS eMarketplace infrastructure that supports the utilization of eMarketplaces. Like many organizations today, an eMarketplace process can cut across the boundaries of the pillars, hence a business process-oriented approach is highly recommended in the eMarketplace.

6.4.2. Saudi Arabian cultural influence on eMarketplaces

The literature shows that there is a need to pay more attention to the development of eMarketplace applications, particularly in the context of developing countries as undertaken by this thesis with a focus on Saudi Arabia, since strategies and experiences from developed countries may not be suitable and relevant to developing countries (Chen, Chen, Ching, & Huang, 2007; Vörös & Choudrie, 2011).

As indicated in the survey and interviews, the participants felt that Saudi customers would not be comfortable with eMarketplace applications, as the systems lacked human interaction and required rapid improvement. Low levels of buyer trust, demand and awareness particularly for a comparatively new service like an eMarketplace can indirectly discourage organisations to adopt eMarketplace applications. The participants clarified that only few business organisations in the country used global payment methods, such as credit card, which is vital to conducting business online. For example, payment methods like credit cards are not being used because these methods charge interest, which is prohibited under Islamic Laws. This could also be an issue in developing an eMarketplace environment in SA. Businesses in the country normally use a traditional shopfront business method,

which is ideal for local customers and only organizations with foreign customers struggle to invest in eMarketplaces application. However, this does not mean that there is no avenue for the future growth of eMarketplaces in SA. As some of the participants in this research specified, the level of awareness of eMarketplaces is growing, particularly amongst the younger population in the country. In fact, a respondent in this research, who had been operating a business without a physical shop for some time, claimed that the perception of customer apathy to eMarketplaces was not significantly exaggerated. This is because customers' demands, trust and awareness place more pressure on the business organisation's commitment to respond with more creativity towards eMarketplace adoption.

Analysis of the results also suggested that there was a direct association among customers and business executives in eMarketplaces as well as the organisations' business readiness. The analysis of the survey and interview data showed that all were statistically important, suggesting that customer satisfaction could play a significant role in influencing the final decision to adopt and utilize eMarketplaces.

6.4.3. Business readiness

Business readiness is a promising notion embedded in the overall readiness of an enterprise to adopt eMarketplaces, but it was established as an independent factor in the literature on eMarketplaces and was separated from organisational E-readiness. Researchers of the eMarketplace made this separation after conducting an investigation in this area (AlGhamdi, Nguyen, & Drew, 2012). Business readiness is defined in the literature as the degree to which a business organisation is skilful and ready to accept change with the willingness of its upper management. Two main concepts support the factor of business readiness: organisational promise and organisational awareness. The association between these two sub-factors can be observed to change respectively, in other words, the greater the organisational

awareness, the more the organisational promise (Aleid, Rogerson, & Fairweather, 2010; AlGhamdi, Nguyen, & Drew, 2012).

In the quantitative and qualitative sections of this thesis, it is found that organisational awareness can play a key role in the decision to adopt and utilize eMarketplaces. Some of the participants in SA ranked eMarketplace usage and operation highly and these participants are more likely to overcome any further obstacles in eMarketplace adoption. The majority of eMarketplace experts in this research answered with some degree of enthusiasm towards the change from shopfront or individual services type sales to mass online provision using online shopping platforms.

Both the quantitative and qualitative studies support and confirm the importance of business readiness in eMarketplaces as it is a factor that affects the decision to adopt and utilize eMarketplaces. Molla and Licker (2005) argued, 'organizations in developing countries that are most likely to move to eMarketplaces are the ones that take stock of the changes happening in their environment as a result of eMarketplaces, comprehend the meaning of these changes for businesses in their country and project how these changes are going to affect their businesses in short to long term'. The relationship between the two fundamental concepts of business readiness is also obvious in other studies (Aleid, Rogerson, & Fairweather, 2010; Lee, Wang, Lim, & Peng, 2009; Molla & Licker, 2005; Selim, 2008; Zhu & Kraemer, 2005). A lack of organisational commitment and organisational awareness contribute considerably to the comparative absence of eMarketplaces in Saudi Arabian businesses. AlGhamdi, Nguyen, & Drew, (2012) proposes that organisations that can resolve these matters and have a promise to grow their business should be able to take the lead in the Saudi eMarketplace industry.

6.4.4. Social Influence

The social influence on eMarketplaces is defined as the degree to which an individual observes in eMarketplace application. Social influence as a direct cause of behavioural purpose consists of three factors: subjective norm, image and social factors. The literature shows that the effect of social influence was stronger among women, and even more so with older women (Venkatesh, Morris, Davis, & Davis, 2003). The social influence of eMarketplaces was even more substantial in the early stages of individual experience with information technology. The results from the literature and some parts of this research show that this construct also has significant influence on behavioural intention. However, these studies do not support the role of age, gender, education and experience as moderators. Only age directly influences eMarketplaces. These factors do not explain the purpose of eMarketplaces utilization.

6.4.5. Employee Commitment

The eMarketplace literature shows that most individuals choose to work for a traditional public or physical market because of wages, job security and "other favourable working conditions related with public employment" (Scoppa, 2009). As specified by two of the participants, a large number of employees within the domain of the Ministry of Commerce and Industry, the ministry that is responsible for defining rules and regulations for public sector employees, do not have adequate qualifications to deal with information technology, particularly eMarketplace applications, while their counterparts in the private sector do. Hence, a few public sector business organisations were reluctant to implement eMarketplaces due to human resource issues.

6.5. Summary

This chapter summarized the discussion into two main phases: phase 1 described the discussion of each contribution of this thesis, including a comparison between the quantitative finding (see Chapter 4) and the qualitative findings (see Chapter 5) and phase 2 described the general findings on related eMarketplace issues in SA. Then, a discussion on the contributions of the industry experts in SA is presented with a particular focus on eMarketplace utilization and customer satisfaction in order to address the main research question (see Chapter 1).

Chapter 7

Conclusion and Future Research Directions

7.1. Conclusion

This thesis explored the factors influencing customer satisfaction and the utilization of eMarketplaces. It provided explanations and insights into the understanding of the utilization of eMarketplaces, based on the literature and perceptions of its users. Through investigating the phenomenon of eMarketplaces within the context of successful utilization, this thesis increases the knowledge base to recognize how to enhance eMarketplace utilization according to the specific context of the study. After developing the conceptual research model from an literature review, the model was validated among eMarketplace users in SA. For the security factor, the results indicate strong agreement among participants towards the importance of security and its relevant sub-factors, namely, threat prevention, user vulnerability and availability. In the context of complementary services, the fulltime workers show slightly

lower interest compared to the non-fulltime workers.

However, these results still represent strong agreement among the fulltime workers towards the importance of complementary services as a factor and its related sub-factors, namely, additional services, customer support and effective technology. The results for strong infrastructure show overall weak support among the non-fulltime group and slightly better support among the fulltime group for this factor and its related sub-factors, namely, business/ICT strategy, structure and culture. In addition, the reliability factor results show that most participants see this as a critical success factor for the utilization of eMarketplaces and its related sub-factors, namely, service deployment, error-free services and user-friendly services. Furthermore, the results of the regulatory requirements indicate that most of the non-fulltime workers are not aware of the importance of eMarketplace rules, regulations and policies, whereas participants of the fulltime group showed common agreement towards the importance of this factor.

Based on the initial findings of the quantitative study, detailed interviews with eMarketplace regulators were conducted. The clarifications offered by the eMarketplace regulators in this study were mainly to shed lights on the importance of eMarketplace infrastructure and regulatory requirements. During this study, the regulators recommended additional sub-factors (trustworthiness in security, usability, staff training and technical support in complementary services; ease of use, e-readiness and simplicity in strong infrastructure; Arabic content, connectivity, system effectiveness and service quality in reliability; and Internet speed and awareness in regulatory requirements), which was then used to revise the research model. As every regulator was from SA, they mentioned that the country is a fast growing and developing country in terms of eMarketplace utilization; its economy is producing opportunities for both exporters and investors. However, in terms of eMarketplace utilization, the regulators mentioned that SA is a country where eMarketplace applications could have potential in the future for three main reasons. First, it is a country where women are not allowed to drive; thus Saudi women may

have problems going to shopping malls. Second, it is a country where sometimes the weather conditions become very hot, which makes it very hard to shop and travel to conventional markets. Third, it is a country where the government provides many opportunities for new online businesses with the main opportunity being that it is a tax-free country. Therefore, Saudi consumers have much to gain when eMarketplaces are utilized and regulated appropriately and efficiently. The remarks from the experts also highlighted the most common barriers affecting the development and utilization of eMarketplaces. These barriers include weak infrastructure, undeveloped services, a lack of rules and regulations, privacy and security concerns and a lack of customer awareness.

From the research, a three pillar eMarketplace framework is suggested for its utilization. An eMarketplace regulator plays a major role in the eMarketplace industry as they set the rules and regulations in order to control the eMarketplace applications. In some countries such as SA where there are many regulations relating to culture and religion, eMarketplace regulators have a huge effect on the sustainability of eMarketplaces. This may be true for other similar countries but the framework will need to be further investigated for other countries.

The following sections summarise the theoretical and practical contributions, discuss the limitations of the study, outline the remaining challenges in the discipline and provide directions for future investigation.

7.2. Research Contributions

The findings of this research have led to several achievements and contributions. The literature review of this research has resulted in identifying the success factors and building an empirical foundation that assists in a better understanding of customer satisfaction and the utilization of eMarketplaces. Subsequently, the conceptual research model was developed representing a major contribution to the body of knowledge for the eMarketplace discipline, as no prior research has

covered this in the context of customer satisfaction and utilization (Algarni, Cheung, & Lee, 2011). The study has also demonstrated how the influence of factors affecting customer satisfaction of the utilization stage of eMarketplaces varies based on the geographical boundaries of the study.

From a methodology perspective, this research has effectively verified the use of the multiphase mixed method design in which participating eMarketplace users and regulators were selected carefully to give their views and recommendations. These findings and recommendations show the importance of considering different players involved in eMarketplace activities in order to encourage faster growth and more effective utilization.

Another major contribution of this research was the validation of the research model quantitatively with empirical data from the customers of eMarketplaces. It demonstrated how important the identified success factors were for the study context of Saudi Arabia. The results showed that eMarketplace users perceived the importance of each factor differently, based on their age, educational background and experiences. These findings not only add to the research on eMarketplace utilization in Saudi Arabia, but they are also significant for related studies which address countries with a similar background to better understand eMarketplace users' views (Algarni, Cheung, & Lee, 2012, 2013a).

Based on the findings of the initial research model validation, a second validation phase with eMarketplace regulators was required to clarify issues related to eMarketplace infrastructure and regulatory requirements. The model was quantitatively validated with empirical data collected from eMarketplace regulators in Saudi Arabia. The findings further proved that the initially found factors are crucial for eMarketplaces with some suggestions for additional sub-factors related to the context of this study. The experts asserted that companies that employed eMarketplaces which had stronger customer satisfaction are more likely to have an increased level of utilization. In addition, important clarifications regarding eMarketplace infrastructure and regulatory requirements were obtained to address

the observed differences in the users' opinions. These results contribute to expanding the body of knowledge in the field of eMarketplace utilization in developing countries and suggest solutions and guidelines for the challenges that may face eMarketplace users and owners in identifying proper strategies to improve and promote the successful utilization of eMarketplaces (Algarni, Cheung, & Lee, 2015).

7.3. Limitations and Future work

7.3.1. Research limitations

The study has two main limitations. As it is implemented and evaluated only on Saudi Arabian users of eMarketplaces, further investigations in similar cultural communities are required to strengthen the results of this study. Since this study investigates the success factors of eMarketplaces in the context of its utilization and customer satisfaction, further detailed investigation focusing on other factors such as cultural and social-related issues (e.g. different cultures may involve different knowledge, beliefs, values, attitudes, goals, behaviours, and practices that characterize a tribe or society of people and determines people's way of life (Morsi, 1995) could be very useful. Also, in this regard, it might be useful for future studies to consider larger samples in order to obtain more information to help predict the behaviours of consumers from different cultures.

7.3.2. Future work

Despite all the possible advantages of IS in the context of online businesses today, the research on eMarketplaces has narrowly focused on cost-related aspects. For instance, a lack of customer satisfaction and unmet customer expectations are important inhibitors for online business growth. Trust is also another important aspect of eMarketplace utilization. Possible risks related to the opportunistic

behaviour of traders are a traditional reason for higher transaction costs in the eMarketplace environment, and demonstrates the need for eMarketplace techniques that build trust. In this section, the remaining challenges in the discipline were outlined together with the possible dimensions of this work that have opened up for future investigation.

7.3.2.1. eMarketplace categories

The research divided eMarketplaces into five categories namely, independent eMarketplace, buyer-oriented eMarketplace, supplier-oriented eMarketplace, vertical eMarketplace, horizontal eMarketplace and the hybrid eMarketplace. Depending on the specific needs of companies, they can employ any type of these eMarketplaces. For example, large organizations that have sufficient resources would implement a vertical eMarketplace with a multi-tiered system comprising many suppliers. On the other hand, a group of buyers may choose a buyer-oriented eMarketplace as a platform for finding the best procurement options. However, shorter product life cycles and the demand for a larger number of derivatives have driven companies to be adaptive as well as responsive to the volatile business environment. This suggests that they may need to consider a hybrid type of eMarketplace, which provides the benefits of both the vertical and horizontal eMarketplaces.

The research on eMarketplace categories also ignores the important aspects of customer needs and activities that may neutralize many of the hypothesized competitive benefits of the business firms. For instance, consumers who need instantaneous satisfaction may be unenthusiastic to rely on eMarketplace vendors who ship products by courier. Therefore, in this context, the hybrid eMarketplace category involving the use of both a virtual and physical presence to attain the needs of purchasers may be a better option.

7.3.2.2. Pillars of eMarketplace

Without any of the three pillars of the eMarketplace, as mentioned earlier, it is unlikely that the eMarketplace will be sustainable. The eMarketplace regulators play a major role in the eMarketplace industry as they set the rules and regulations in order to control the eMarketplace applications. In some countries such as Saudi Arabia where there are many regulations relating to culture and religion, eMarketplace regulators have a huge effect on the sustainability of eMarketplaces. Hence, eMarketplace owners (or operators) need to consider the influence of this pillar. Obviously, the customer as a second pillar of eMarketplaces also plays a very important role in its sustainability, as without these pillars, the eMarketplace will not function. Earlier customer-focused eMarketplace research was mainly on the operational, implementation and adoption aspects of eMarketplaces. However, with the introduction of Service Science Management and Engineering (SSME) by IBM (Fodell, Murphy, & Wright, 2009), there is a now a focus on value (customer perspective) and value co-creation between stakeholders. Similarly, the regulator as the third pillar is also equally important. Together, these three pillars should work together to co-create value for the stakeholders.

7.3.2.3. eMarketplace influence on small businesses

Small businesses are able to compete with large organizations with the help of eMarketplaces (AbuAbi, Rahim, & Burgess 2013). Their online presence allows them to have permanent contact with consumers who can obtain information and place orders anytime and anywhere, with little or no overheads where staff are concerned. In addition, it can provide the small businesses with opportunities to collaborate in order to gain a better future with the employment of eMarketplaces (Cheung, Scheepers, Swift, Lee, & Bal, 2010).

7.3.2.4. Applying Service Science concepts in eMarketplaces research

Unlike traditional organizations, international eMarketplaces are not restricted by physical borders. Communicating with a purchaser located at the opposite side of the world is as simple as communicating with someone in the next room. Without the need for large financial investment/commitment, any manufacturer can now trade in any country via eMarketplaces without any prior physical contacts with the eMarketplaces concerned. There is now an emerging research interest in applying Service Science concepts to eMarketplace research. Due to the growth of eMarketplaces, no single theory in this area can tackle the complexity of the phenomena of eMarketplace sustainability (Aladalah, Cheung, & Lee, 2014). Researchers have explored this matter from diverse theoretical viewpoints, where they have enhanced knowledge about eMarketplaces. For instance, Aladalah, Cheung, and Lee (2014) showed that value creation and service systems factors have a strong positive influence on eMarketplace sustainability. Such findings enhance an understanding of eMarketplace utilization, particularly in terms of the factors that ensure sustainability, which is considered a core element in Service Science theory.

7.3.2.5. Cloud computing in the implementation of eMarketplace applications

Another evolving research topic is the integration of cloud computing into eMarketplaces (Hussein & Sulaiman, 2013). Cloud computing offers many services that can assist in the faster growth and expansion of eMarketplaces. For example, Hussein and Sulaiman (2013) found that cloud computing can increase online businesses' productivity due to increased efficiency and flexibility resulting from proper cloud computing integration. Thus, cloud computing can offer eMarketplace users with higher accessibility and more convenient ways of exchanging their data when required (Mircea, Ghilic-Micu, & Stoica, 2011).

7.3.2.6. Influence of success factors on eMarketplace success

Supplementary research is needed to identify the success factors influencing the success of eMarketplace utilization across the world, based on specific requirements. These factors should include both theoretical and practical aspects of eMarketplaces. In this proposed research, we identify five factors that influence eMarketplace success; however, further investigation is required among eMarketplace users from different countries of the world. This research has only been validated among eMarketplace users in Saudi Arabia.

7.3.2.7. Implementation of eMarketplaces

Finally, the implementation of eMarketplaces applications on different devices such as smart mobile phones, tablets and laptops need different settings in different country. For instance, as Saudi Arabia is a new participant in eMarketplace implementations, specific requirements may differ from other countries, based on cultural values. In this context, the question to be examined is whether these platforms have common success factors, or require independent studies and research.

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Monash University Human Research Ethics Committee (MUHREC)
Research Office

Human Ethics Certificate of Approval

Date:	**23 January 2012**
Project Number:	**CF11/3680 – 2011001946**
Project Title:	**Investigating into eMarketplaces Lifecycle Issues: Evidence from Saudi Arabia**
Chief Investigator:	**Dr Yen Cheung**
Approved:	**From: 23 January 2012 To: 23 January 2017**

Terms of approval

1. The Chief investigator is responsible for ensuring that permission letters are obtained, if relevant, and a copy forwarded to MUHREC before any data collection can occur at the specified organisation. **Failure to provide permission letters to MUHREC before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research**.
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by MUHREC.
4. You should notify MUHREC immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project (including changes in personnel):** Requires the submission of a Request for Amendment form to MUHREC and must not begin without written approval from MUHREC. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any further correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. MUHREC should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by MUHREC at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

Professor Ben Canny
Chair, MUHREC

cc: Assoc Prof Vincent Lee, Mr Fahad Ali S Algarni

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Investigating into eMarketplaces Lifecycle Issues: Evidence from Saudi Arabia

Background Information

1. What is your gender

☐ Male ☐ Female

2. How old are you?

☐ Below 18 years ☐ 34 to 41 years
☐ 18 to 25 years ☐ 42 to 49 years
☐ 26 to 33 years ☐ 50 years and over

3. Do you have an access to the internet?

☐ Yes ☐ No

4. Have you ever purchased any products over the internet?

☐ Yes ☐ No

5. If Yes, how frequent do you use the eMarketplaces?

☐ Daily ☐ Weekly
☐ Monthly ☐ More than a month

6. What is your occupation?

☐ Student ☐ Employer
☐ Unemployed ☐ Other

7. What is your highest level of education?

☐ High school ☐ Diploma
☐ Bachelor ☐ Master
☐ Doctoral ☐ Other

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Please indicate your level of agreement regarding key stages of eMarketplaces

Please check the appropriate column. The numbers 1 to 5 represents the following:

1= Strongly Disagree, 2= Disagree, 3= Not sure, 4= Agree, 5=Strongly Agree

	Lifecycle of eMarketplaces	1	2	3	4	5
1	Considering the initiation process of eMarketplaces is important					
2	Implementing and adapting of eMarketplaces are essential stages on its lifecycle					
3	Diffusion of eMarketplaces should be considered as a key stage					
4	Utilization of eMarketplaces is important stage on its lifecycle					
5	Evaluation of eMarketplaces can be a key stage on its lifecycle					
6	Improvement of eMarketplaces is crucial stage after the evaluation process					
Additional Comments:						

Please indicate your level of agreement in regards to security of eMarketplaces

	Security	1	2	3	4	5
1	I prefer shopping online if online threats are prevented					
2	Security can help eMarketplace customers overcome vulnerability					
3	I prefer shopping online if eMarketplaces have available advanced security systems					
Additional Comments:						

Please indicate your opinion in regards to the need complementary services for eMarketplaces

	Complementary Services	1	2	3	4	5
1	I prefer to use an eMarketplace that provides additional services					
2	I prefer to use an eMarketplace that offers customer support services anytime					
3	It is important for eMarketplace systems to be effective					
Additional Comments:						

Please indicate your opinion in about the importance of eMarketplaces infrastructures

	Strong Infrastructure	1	2	3	4	5
1	For better infrastructure, it is important for eMarketplaces to be aligned with business/ICTstrategy					
2	It is important for eMarketplaces to be aligned with business/ICT structure, in the context of its infrastructure					
3	It is important for eMarketplaces to be aligned with business/ICT culture to obtain stronger infrastructure					
Additional Comments:						

Please indicate your level of agreement regarding the reliability of eMarketplaces

	Reliability	1	2	3	4	5
1	The consistency of eMarketplace service deployment (which means achieving similar, capable and adaptive performance continuously) makes it reliable					
2	It is crucial that eMarketplaces provide error-free services					
3	I prefer eMarketplaces that afford user-friendly service					
Additional Comments:						

Please indicate your level of agreement regarding the regulatory requirements of eMarketplaces

	Regulatory Requirements	1	2	3	4	5
1	It is better if governments provide updated eMarketplace policies					
2	Government rules and regulations for eMarketplaces can protect customers and businesses from online hazards					
Additional Comments:						

Please indicate your level of agreement regarding the customer satisfaction of eMarketplaces

	Customer Satisfaction of eMarketplaces	1	2	3	4	5
1	I am satisfied if eMarketplaces provide sufficient product information					
2	I prefer eMarketplaces that are easier to use while shopping online					
3	Positive rating feedback from previous eMarketplace customers makes me more confident to use it					
4	I usually prefer to revisit an eMarketplace which satisfied me in a previous transaction					
5	I prefer eMarketplaces that provide enjoyment and a pleasant experience					
Additional Comments:						

Please indicate your level of agreement regarding the utilization of eMarketplaces

	The Utilization Level of eMarketplaces	1	2	3	4	5
1	The higher the number of completed transactions the better utilization level of eMarketplaces					
2	I prefer to use eMarketplaces that have a high number of satisfied customers					
Additional Comments:						

(The End)

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Investigating into eMarketplaces Lifecycle Issues: Evidence from Saudi Arabia

Interview Protocol for Members in the Ministry of Commerce and Industry - Saudi Arabia

Section A: Interviewee Profile

1. Please indicate your name, job title and explain your key roles.
2. How many years have you been associated with the ministry?
3. Please describe your academic background.

Section B: The Significant of eMarketplaces and its Lifecycle Stages

1. What is the significance of integrating information and communications technology (herein referred as ICT) in businesses?
2. What is the importance of introducing eMarketplaces in the process of trading for both customers and stakeholders?
3. Do you agree that doing businesses over the internet can lower the costs of conducting businesses?
4. In your opinion, do you think the use of eMarketplaces would increase the overall profit for both government and companies? Please explain.
5. Do you think that considering the initiation and adoption processes are important for eMarketplaces systems?
6. Do you agree that a proper implementation of eMarketplaces would result in higher consumption of the technology? Please explain.
7. Do you agree that diffusion of eMarketplaces can be a key stage of their lifecycle?
8. Do you agree that utilization of eMarketplaces can be a key stage of their lifecycle?
9. Would you agree that evaluating eMarketplaces is a crucial stage of their lifecycle? Please explain.
10. Do you agree that improvement of eMarketplaces is an important process of their lifecycle?
11. Are there any other important stages that should be considered for improving the consumption of eMarketplaces? If yes, please explain.

Section C: Success Factors Affecting eMarketplaces Introduction in Saudi Arabia.

1. Would you agree that availability of advanced security systems is better for eMarketplaces customers? Please explain.

2. Do you think that availability of skilled information technology (herein referred as IT) employers is important to support eMarketplaces systems?

3. Would you agree that the availability of complementary services would support the utilization of eMarketplaces? Please explain.

4. Do you think that the availability of strong ICT infrastructure would support the spread of eMarketplaces?

5. What are the efforts of Ministry of Commerce and Industry to initiate and support ICT infrastructures?

6. Do you think that the government is investing sufficient fund to support ICT infrastructures? Please explain.

7. Do you think that reliability of eMarketplaces systems including consistency, connectivity, accuracy and dependability is required to motivate online customers? Please explain.

8. Do you think that regulatory requirements are significant for initiating and implementing of eMarketplaces systems? Please explain.

9. Are there any programs or projects to regulate eMarketplace practices? If "Yes", please explain.

10. Do you think eBusinesses applications including eMarketplaces are fully regulated or need more regulations?

11. Would you agree that the support from the senior management is a factor that has affected your company's decision to consider initiating e-business systems? Please explain.

12. What are the Ministry plans to regulate eMarketplaces practices?

13. In your opinion, what are other success factors that you believe have influenced the Ministry's decision to consider initiating eMarketplaces systems? Please explain why these factors affecting such decision.

Section D: Developing and Maintaining of eMarketplaces

1. What are the general requirements for maintaining eMarketplaces applications in the country?
2. What are the programs that were implemented by the Ministry to support the growth of eMarketplaces?
3. What are the strategies to improve the use of eMarketplaces? Please explain.
4. Would the Ministry provide instructions for eMarketplaces customers to raise their awareness regarding its benefits/risks?
5. What are the possible barriers to maintain eMarketplaces?
6. Do you have any suggestions that may help in developing the use of eMarketplaces for both customers and vendors?

(The End)

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تحقيقات في قضايا دورة حياة الاسواق الالكترونية: شواهد من المملكة العربية السعودية.

معلومات عامة

1. ماهو جنسك

انثى ☐ ذكر ☐

2. كم سنك .

من 34 الى 41 سنه ☐ اقل من 18 سنه ☐
من 42 الى 49 سنه ☐ من 18 الى 25 سنه ☐
اكبر من 50 سنه ☐ من 26 الى 33 سنه ☐

3. هل يوجد لديك خدمة إنترنت

لا ☐ نعم ☐

4. هل قمت بعملية بيع او شراء عبر الانترنت من قبل

لا ☐ نعم ☐

5. اذا كانت الإجابة بنعم فالمرجو توضيح معدل تلك العمليات

اسبوعي ☐ يومي ☐
اكثر من شهر ☐ شهري ☐

6. ماهي وظيفتك

موظف ☐ طالب ☐
غير ذلك المرجو التوضيح ☐ غير موظف ☐

_____

7. ماهي اعلى مؤهلاتك التعليمية

دبلوم ☐ ثانوية عامة ☐
ماجستير ☐ بكالوريوس ☐
غير ذلك ☐ دكتوراه ☐

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المرجو منك أن تبين مدى رضائك عن المراحل الرئيسية في حياة السوق الإلكترونية

أرجو وضع علامة صح في المربع المناسب. حيث أن الارقام من 1 إلى 5 تعبر عن ما يلي:

موافق بشدة=5 , موافق =4 ,لا ادري =3 , غير موافق =2 , غير موافق بشدة =1

	دورة حياة الأسواق الالكترونية	1	2	3	4	5
1	تعتبر مرحلة تأسيس الاسواق الالكترونية وادخالها للمجتمع مرحلة هامه					
2	تنفيذ وتعليم الاسواق الالكترونية يعتبران مرحلتان مهمتان في دورة حياة السوق الإلكترونية					
3	إنتشار ظاهرة الاسواق الالكترونية في المجتمع تعتبر خطوة هامه في دورة حياة السوق الإلكترونية					
4	معدل إستخدام السوق الإلكترونية يتعتبر مشر مهم على نجاح السوق الإلكترونية					
5	تقييم السوق الالكترونية والذي يهتم بمعرفة كفاءة نظام السوق الالكتروني يعتبر مرحلة مهمة في دورة حياة السوق الالكترونية					
6	تعتبر مرحلة تطوير الاسواق الالكترونية بعد تقييمها مرحلة هامه والتي تحتوي على تطوير خصائص الموقع وتطوير كل إمكانياته العملية.					

تعليقات إضافية

الرجاء تحديد مدى موافقتك على الحاجه إلى الأمان في الاسواق الالكترونية

	أمان السوق الالكترونية	1	2	3	4	5
1	أفضل التسوق إلكترونيا اذا تم القضاء على التهديدات اللتي تستهدف المستهلك					
2	أمان مواقع التجارة الإلكترونية يساعد مستهلكيها على التخلص من الوقوع ضحية الجهل بمخاطرها					
3	أفضل استخدام الاسواق الالكترونية اللتي تستخدم أنظمة امان متقدمه جداً					

تعليقات إضافية

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Information Technology

الرجاء تحديد مدى موافقتك على وجود حاجة لتقديم خدمات تكميلية للأسواق الالكترونية

	الخدمات التكميلية	1	2	3	4	5
1	أنا افضل السوق الالكتروني الذي يقدم خدمات مخصصة إضافية					
2	أنا افضل السوق الالكتروني الذي يقدم خدمات خاصة بخدمة العملاء على مدار الساعة					
3	من المهم جدا ان تكون انظمة مواقع التجارة الإلكترونية فعالة ونشطة					

تعليقات إضافية

الرجاء تحديد مدى موافقتك على اهمية البنية التحتية للأسواق الالكترونية

	بنى تحتية قوية للسوق الالكترونية	1	2	3	4	5
1	للتحصل على بنية تحتية اقوى ينبغي على مواقع التجارة الإلكترونية الموائمة بين إستراتيجيات العمل التقليدي وتقنية المعلومات					
2	من المهم جدا لمواقع التجارة الإلكترونية الموائمة بين بنية وخطط الأعمال وتقنية المعلومات للحصول على بنية تحتية اقوى					
3	من المهم جدا لمواقع التجارة الإلكترونية الموائمة بين ثقافة الأعمال وتقنية المعلومات للحصول على بنية تحتية اقوى					

تعليقات إضافية

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الرجاء تحديد مدى موافقتك على اهمية الاعتمادية على الاسواق الالكترونية

	الاعتمادية على سبيل المثال مدى الاعتماد على السوق الالكترونية و وفترات عملها	1	2	3	4	5
1	اتساق نشر خدمة مواقع التجارة الإلكترونية (وهو ما يعني تحقيق أداء مماثل ، قادرة على التكيف و بشكل مستمر) يؤدي إلى اعتمادية بشكل افضل عليها					
2	من المهم للاسواق الالكترونية تقديم خدمات خالية من الاخطاء بشكل مستمر					
3	أنا أفضل الأسواق الإلكترونية اللتي تقدم خدمات سهلة ومحببة للمستهلك					

تعليقات إضافية

الرجاء تحديد مستوى موافقتك على أهمية المتطلبات التنظيمية للأسواق الالكترونية

	المتطلبات التنظيمية	1	2	3	4	5
1	إنه من الأفضل إذا قامت الحكومات بتشريع أنظمة للاسواق الالكترونية					
2	إذا قامت الحكومة بشرع لوائح وانظمة الاسواق الالكترونية فسوف تتمكن من حماية العملاء والشركات من مخاطر الانترنت					

تعليقات إضافية

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الرجاء تحديد مستوى موافقتك على أهمية رضاء المستهلك قي الاسواق الالكترونية

	مدى الرضا عن الاسواق الالكترونية	1	2	3	4	5
1	كمستهلك يرضيني توفير معلومات كاملة ودقيقة عن المنتجات المعروضة في مواقع التجارة الإلكترونية					
2	أنا افضل مواقع التجارة الإلكترونية اللتي تكون أسهل في استخدامها					
3	التقييمات والتغذية الراجعة الإيجابية من المستخدمين السابقين لمواقع التجارة الإلكترونية يجعلني اكثر ثقة للتسوق منها					
4	أنا عادة أفضل التسوق في مواقع التجارة الإلكترونية اللتي نالت على رضائي في خبرات تسويقية سابقة					
5	أنا افضل مواقع التجارة الإلكترونية اللتي تقدم متعة تسويقية وتجارب مرضية					

تعليقات إضافية

الرجاء تحديد مستوى موافقتك على أهمية مستوى استهلاك الأسواق الالكترونية

	مستوى إستهلاك مواقع التجارة الإلكترونية	1	2	3	4	5
1	كلما زاد عدد عمليات البيع الإلكترونية كلما ارتفع مستوى استهلاك مواقع التجارة الإلكترونية					
2	اذا كان عدد مستخدمي سوق الكتروني عالي فهذا يعني أنه أفضل					

تعليقات إضافية

(النهاية)

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تحقيقات في قضايا دورة حياة الاسواق الالكترونية: شواهد من المملكة العربية السعودية.

بروتوكول المقابلة مع أعضاء في وزارة التجارة والصناعة بالمملكة العربية السعودية

الجزء أ: معلومات عامه عن الضيف

1. الرجاء تقديم الاسم والمسمى الوظيفي وتوضيح الأدوار الرئيسية الخاصة بك.
2. كم عدد سنوات الخدمة التي قضيتها مع الوزارة؟
3. يرجى توضيح مؤهلاتك الأكاديمية.

الجزء ب: أهمية مواقع التجارة الإلكترونية ومراحل حياتها

1. ما هي أهمية دمج تكنولوجيا المعلومات والاتصالات في الأعمال التجارية؟
2. ما هي أهمية تقديم خدمة التجارة الالكترونية عند التداول مع الجهات المعنية في المملكة العربية السعودية؟
3. هل توافق على أن المتاجرة عبر الإنترنت يمكن أن يقلل من التكاليف الإجمالية لإجراء الأعمال التجارية؟
4. هل توافق على أن عملية إنشاء انظمة التجارة الالكترونية مهم، يرجى توضيح؟
5. ما هي الاستراتيجيات والخطط التي وضعتها وزارة التجارة بخصوص اعتماد مواقع التجارة الالكترونية في المملكة العربية السعودية؟
6. هل توافق على أن التطبيق السليم لمواقع التجارة الالكترونية من شأنه أن يؤدي إلى ارتفاع استخدام وإشراك الناس في هذه التكنولوجيا؟ يرجى توضيح ذلك.
7. هل توافق على أن تقييم أداء مواقع التجارة الالكتروني بعد استخدامها مهم لمواصلة تطويرها؟ يرجى توضيح ذلك.
8. هل هناك أي مراحل أخرى مهمة ينبغي النظر فيها لتحسين وتطوير بيئة عمل مواقع التجارة الالكترونية؟ إذا كانت الإجابة بنعم، فيرجى توضيح ذلك.

الجزء ت: عوامل النجاح المؤثرة على دخول تقنية مواقع التجارة الالكترونية في المملكة العربية السعودية

1. هل توافق على أن وجود أنظمة أمنية متطورة أفضل لعملاء الأسواق الإلكترونية؟ يرجى توضيح ذلك.
2. هل تعتقد أن توافر موظفين متخصصين في تكنولوجيا المعلومات يساهم في دعم الأسواق الإلكترونية؟
3. هل توافق على أن توفر الخدمات التكميلية من شأنه أن يدعم مستوى الاستهلاك في الأسواق الإلكترونية؟ يرجى توضيح ذلك.
4. هل تعتقد أن توافر البنية التحتية القوية لتكنولوجيا المعلومات والاتصالات من شأنه أن يدعم انتشار الأسواق الإلكترونية؟
5. ما هي الخطوات أو الإجراءات التي تم تنفيذها من قبل وزارة التجارة والصناعة لبدء ودعم البنى التحتية لتكنولوجيا المعلومات والاتصالات؟
6. هل تعتقد أن الحكومة تستثمر الأموال الكافية لدعم البنى التحتية للتكنولوجيا المعلومات والاتصالات؟ يرجى توضيح ذلك.
7. هل تعتقد أن هناك حاجة إلى الاعتمادية على مواقع التجارة الإلكترونية بما في ذلك إستمرارية الاداء الفاعل، والاتساق والدقة في الاداء والاتصال الدائم لتحفيز العملاء على الانترنت؟ يرجى توضيح ذلك.
8. هل تعتقد أن المتطلبات التنظيمية هامة لبدء وتنفيذ الأسواق الإلكترونية؟ يرجى توضيح ذلك.
9. هل هناك أي برامج أو مشاريع لتنظيم ممارسات الأسواق الإلكترونية قانونياً؟ إذا "نعم"، فيرجى توضيح ذلك.
10. هل تعتقد أن التجارة الالكترونية حاليا منظمة قانونياً أو أنها بحاجة إلى المزيد من اللوائح والتنظيم؟
11. هل توافق على أن الدعم الحكومي للبنى التحتية لتكنولوجيا المعلومات والاتصالات هو أحد العوامل التي يمكن أن تعزز وتدعم تقنية الأسواق الإلكترونية؟ يرجى توضيح ذلك.
12. ما هي خطط الوزارة المستقبلية لتنظيم ممارسات الأسواق الإلكترونية قانونياً؟
13. في رأيك، ما هي العوامل الأخرى التي أثرت على قرار الوزارة لإعتماد الاسواق الالكترونية في البلاد؟ يرجى توضيح لماذا هذه العوامل تؤثر على قرار من هذا القبيل.

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الجزء ث: تطوير وصيانة مواقع التجارة الإلكترونية

1. ما هي المتطلبات العامة للحفاظ على فعالية اداء الأسواق الإلكترونية في البلد؟
2. ما هي البرامج التي تم تنفيذها من قبل الوزارة لدعم نمو الأسواق الإلكترونية؟
3. ما هي الاستراتيجيات لتحسين استخدام الأسواق الإلكترونية؟ يرجى توضيح ذلك.
4. هل ستقوم الوزارة بتوفير تعليمات لعملاء الأسواق الإلكترونية لزيادة وعيهم بشأن فوائدها، والمخاطر منها؟
5. ما هي العوائق المحتملة التي تهدد المحافظة على الأسواق الإلكترونية؟
6. هل لديكم أي اقتراحات يمكن أن تساعد في تطوير استخدام الأسواق الإلكترونية للعملاء والشركات على حد سواء؟

(نهاية المقابلة)

MONASH University

<15/12/2011>

Explanatory Statement – Saudi Sponsored Employees and Students

Title: Investigating into eMarketplaces Lifecycle Issues: Evidence from Saudi Arabia.

My name is Fahad Ali Algarni and I am conducting a research project with Dr. Yen Cheung and Associate Professor Vincent Lee in the Faculty of Information Technology towards a PhD in Information Technology at Monash University, Australia. This means that I shall be writing a thesis at the end of my doctoral research project. The study aims to provide a lifecycle for eMarketplaces. To complete this study, I need to investigate specific areas of the implementation of eMarketplaces in Saudi Arabia. I will be gathering data through a combination of questionnaires and interviews.

I would like to invite you to be part of this important study. Through the questionnaire, I aim to explore ideas, beliefs, and the experiences of online customers who use the Internet. During the survey questions I will seek to discover information from you about the requirements of eMarketplaces, the key stages of eMarketplaces lifecycle and the critical success factors that related to each key stage to enhance eMarketplaces customer satisfaction.

This research considers eMarketplace as an emerging phenomenon in the sphere of eCommerce. The definition of eMarketplace can be conceptualized as a "virtual space" used by consumers and sellers to exchange goods and services and carry out other business transactions. Since the emergence of eBusiness, there have been much research and practice on the adoption of eBusiness systems such as eMarketplaces. However, there is little research on investigations of the utilization and customer satisfaction of eMarketplaces. Therefore, this research aims to identify factors influencing the successful utilization of eMarketplace systems resulting in enhancing customer satisfaction towards eMarketplaces.

This research project is expected to make important contributions. Existing literature primarily identifies factors affecting online businesses introduction in the Saudi context and is less vocal on eMarketplaces consumption. Thus, identifying success factors implies an influential contribution to the improvements of eMarketplace systems. As a result, an explanatory model of eMarketplaces' consumption will be developed addressing the enhancement of eMarketplaces' customer satisfaction.

This research project involves multiple case study approach. Your name has been selected from a directory which is publicly available on the websites of the Ministry of Higher Education in Saudi Arabia (http://www.mohe.gov.sa). I would like you participate by completing this online survey and the expected time to complete it is about 25 minutes. I wish to ask you about success factors affecting the consumption of eMarketplaces.

As mentioned earlier, this research involves multiple case study approach. The researcher would contact employees and students directly via email and would request their voluntarily participation in this research project. A copy of the explanatory statement will be attached with the email. Should a student wish to participate; there will be a direct link to the online survey. All submitted surveys will be stored online anonymously.

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ABN 12 377 614 012 CRICOS provider number 00008C

The project does not involve any risks. Being in this study is voluntary and you are under no obligation to consent to participation. However, if you do consent to participate, you may only withdraw prior to the questionnaire being submitted.

The information collected will be treated as confidential and used for research purpose only. Confidentiality of the information provided will be protected subject to any Australian legal limitations. Access to the information will be restricted to the investigators only. As required by the University, results will be kept on the Clayton School of Information Technology premises in a locked cupboard/filing cabinet for 5 years. Furthermore, no individual person or organization will be identifiable in the reports and research papers published in IT/e-business journals and conference proceedings, written up based on the results, thus protecting privacy of individuals.

If you would like to be informed of the aggregate research finding, please contact myself [redacted] The findings are accessible for any time.

If you would like to contact the **researchers** about any aspect of this study, please contact the Chief Investigator:	If you have a **complaint** concerning the manner in which this research is being conducted, please contact:
Dr. Yen Cheung Faculty of Information Technology PO Box 123, Clayton, VIC 3800, Australia Building 63, Clayton Campus, Wellington Road, Clayton [redacted]	A/P. Abdel-Maksoud Abdel-Kader Soliman Dean of Faculty of Computer Sciences at King Khalid University P.O. Box 344, Bisha 61922 Saudi Arabia [redacted]

Thank you.

Fahad Algarni

MONASH University

<12/08/2012>

Explanatory Statement – Members from the Ministry of Commerce

Title: Investigating into eMarketplaces Lifecycle Issues: Evidence from Saudi Arabia.

My name is Fahad Ali Algarni and I am conducting a research project with Dr. Yen Cheung and Associate Professor Vincent Lee in the Faculty of Information Technology towards a PhD in Information Technology at Monash University, Australia. This means that I shall be writing a thesis at the end of my doctoral research project. The study aims to provide a lifecycle for eMarketplaces. To complete this study, I need to investigate specific areas of the implementation of eMarketplaces in Saudi Arabia. I will be gathering data through a combination of questionnaires and interviews.

I would like to invite you to be part of this important study. Through the interview, I aim to explore ideas, beliefs, and the experiences of online shopping in Saudi Arabia. During the interview questions, I will seek to discover information from you about the requirements of eMarketplaces, the key stages of eMarketplaces lifecycle and the critical success factors that related to each key stage to enhance eMarketplaces customer satisfaction.

This research considers eMarketplace as an emerging phenomenon in the sphere of eCommerce. The definition of eMarketplace can be conceptualized as a "virtual space" used by consumers and sellers to exchange goods and services and carry out other business transactions. Since the emergence of eBusiness, there have been much research and practice on the adoption of eBusiness systems such as eMarketplaces. However, there is little research on investigations of the utilization and customer satisfaction of eMarketplaces. Therefore, this research aims to identify factors influencing the successful utilization of eMarketplace systems resulting in enhancing customer satisfaction towards eMarketplaces.

This research project is expected to make important contributions. Existing literature primarily identifies factors affecting online businesses introduction in the Saudi context and is less vocal on eMarketplaces consumption. Thus, identifying success factors implies an influential contribution to the improvements of eMarketplace systems. As a result, an explanatory model of eMarketplaces' consumption will be developed addressing the enhancement of eMarketplaces' customer satisfaction.

This research project involves multiple case study approach. Your name has been selected based on your major from a directory which is publicly available on the websites of the Ministry of Commerce and Industry in Saudi Arabia- Jeddah Chamber of Commerce and Industry (http://www.mci.gov.sa). I would like you participate by answering my interview questions and the expected time to complete it is about 50 minutes. I wish to ask you about success factors affecting the consumption of eMarketplaces in Saudi Arabia.

This research project involves multiple case study approach. A total of 10 members shall be contacted based on their majors. The researcher would contact officials directly via email and would request their voluntarily participation in this research project. A copy of the explanatory statement and consent form will be attached with the email. Should a reply is received from the contacted officials; an appointment will be made for face-to-face semi-structured interviews with them. These interviews will take place in the interviewees' office and are expected to last for about 50 minutes. All interviews will be audio taped

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for data analysis at a later stage. Once the data are transcribed by the researcher from audio tapes, transcripts of the interviews will be forwarded to the interviewees for verification.

The project does not involve any risks. The only anticipated inconvenience for participants would be the time taken by the interviews. Furthermore, participation in this research project is voluntary, and interviewees may withdraw their consent to participate and discontinue participation from the project. However, participation in this research cannot be withdrawn after you have carefully reviewed the interview transcripts and have allowed us to use those transcripts for data analysis. Participants may withdraw any data previously provided. Furthermore, we assure that you and your organization will not be penalized in any way if you do not wish to supply some or all of the information requested in the interview.

The information collected will be treated as confidential and used for research purpose only. Confidentiality of the information provided will be protected subject to any Australian legal limitations. Access to the information will be restricted to the investigators only. As required by the University, audio tapes and interview transcripts will be held in locked cabinets in the Clayton School of Information Technology for a period of five years after which they will be destroyed. Furthermore, no individual person or organization will be identifiable in the reports and research papers published in IT/e-business journals and conference proceedings, written up based on the interview records, thus protecting privacy of individuals.

If you would like to be informed of the aggregate research finding, please contact myself [redacted] The findings are accessible for any time.

If you would like to contact the **researchers** about any aspect of this study, please contact the Chief Investigator:	If you have a **complaint** concerning the manner in which this research is being conducted, please contact:
Dr. Yen Cheung Faculty of Information Technology PO Box 123, Clayton, VIC 3800, Australia Building 63, Clayton Campus, Wellington Road, Clayton [redacted]	A/P. Abdel-Maksoud Abdel-Kader Soliman Dean of Faculty of Computer Sciences at King Khalid University P.O. Box 344, Bisha 61922 Saudi Arabia [redacted]

Thank you.

Fahad Algarni

MONASH University

<15/12/2011>

بيان توضيحي : الموظفون و الطلاب السعوديين المبتعثين للدراسة بالخارج

العنوان : التحقيق في قضايا دورة حياة الأسواق الالكترونية شواهد من المملكة العربية السعودية.

اسمي فهد علي القرني وأنا حاليا أجري مشروع بحثي مع الدكتور ين تشيونغ وأستاذ مشارك لي فنسنت في كلية تقنية المعلومات للحصول على شهادة الدكتوراه في مجال تكنولوجيا المعلومات في جامعة موناش، أستراليا. هذا يعني أنني يجب أن اكتب بحثا كاملاً في نهاية مشروع بحثي الدكتوراه. وتهدف الدراسة إلى التحقيق في مراحل دورة حياة الاسواق الالكترونية من مرحلة التأسيس وصولاً إلى مرحلة الاستهلاك. لاستكمال هذه الدراسة، أنا بحاجة للبحث في مجالات مختلفة حول الاسواق الالكترونية في المملكة العربية السعودية. في البداية، سوف يكون جمع البيانات من خلال استبيان عبر الإنترنت.

وأود أن أدعوكم إلى أن تكون جزءا من هذه الدراسة الهامة. وقد تم اختيار اسمك من الدليل الذي يتوفر للجمهور على المواقع التابعة لوزارة التعليم العالي في المملكة العربية السعودية (http://www.mohe.gov.sa) بناءاً على تخصصك. من خلال الاستبيان ، أسعى لاستكشاف الأفكار والمعتقدات والخبرات لمستخدمي الإنترنت. خلال أسئلة الاستطلاع سوف أسعى لاكتشاف معلومات منك عن متطلبات الأسواق الالكترونية، والمراحل الرئيسية في دورة حياة الأسواق الالكترونية وعوامل النجاح الحاسمة المتصلة بكل مرحلة رئيسية لتعزيز رضا عملاء الأسواق الالكترونية.

هذا البحث يعتبر الأسواق الإلكترونية كظاهرة ناشئة في مجال التجارة الإلكترونية. ويمكن تصور تعريف الأسواق الإلكترونية ك "الفضاء الافتراضي" المستخدمة من قبل المستهلكين والبائعين لتبادل السلع والخدمات وتنفيذ المعاملات التجارية الأخرى. منذ ظهور التجارة الالكترونية، كان هناك الكثير من البحوث على تنفيذ نظم الأعمال الإلكترونية مثل الأسواق الالكترونية. ومع ذلك ، لا يوجد هناك بحوث تهتم بشأن التحقيقات في دورة حياة الأسواق الإلكترونية منذ تأسيسها وحتى مرحلة تقييمها. ولذلك، هذا البحث يهدف إلى تحديدالمراحل الأساسية في دورة حياة السوق الإلكترونية لتعزيز رضا العملاء تجاه الأسواق الالكترونية في المملكة العربية السعودية.

ومن المتوقع أن هذا المشروع البحثي يقدم مساهمات هامة. البحوث الحالية تحدد العوامل التي تؤثر في المقام الأول على الأعمال الالكترونية في السياق السعودي، ولكن القليل منها ركز على مرحلة استهلاك السوق الإلكترونية. لذلك، ظهرت أهمية تحديد المراحل الرئيسية وعوامل النجاح ذات الصلة بها لإدخال تحسينات على نظم السوق الإلكترونية. نتيجة لذلك ، سيتم تطوير نموذج تفسيري يوضح تعزيز الأسواق الالكترونية لكي تتمكن من إرضا العملاء في المملكة العربية السعودية.

يشتمل هذا المشروع البحثي على نهج دراسة الحالة. أولا أود الاتصال عبر البريد الإلكتروني بالطلبة المتعثين طالبا منهم التطوع بالمشاركة في هذا المشروع البحثي. وسوف يرفق نسخة من بيان توضيحي مع البريد الإلكتروني. إذا رغب طالب في المشاركة، سوف تكون هناك وصلة مباشرة للاستطلاع على الانترنت. وسيتم تخزين جميع النتائج بشكل سري في قاعدة بيانات خاصة

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بالباحثين فقط. وقد يستغرق اتمام هذا الإستبيان فترة تصل الى 10 دقائق. وأود أن أسألك عن المراحل الرئيسية والعوامل التي تؤثر في نجاح دورة حياة الأسواق الالكترونية في المملكة العربية السعودية.

المشروع لا يحتوي على أي مخاطر. المشاركة في هذه الدراسة عمل تطوعي ولا يوجد أي التزام للموافقة على المشاركة. ومع ذلك، إذا لم توافق على المشاركة، يمكن الإنسحاب فقط قبل تسليم الإستبيان.

سيتم التعامل مع المعلومات التي تم جمعها على أنها سرية واستخدامها لأغراض البحث فقط. ستتم حماية سرية المعلومات المقدمة وفقاً لقيود قانونية الاسترالية. وسوف يقتصر الوصول إلى المعلومات للباحثين فقط على النحو المطلوب من قبل الجامعة، سيتم الاحتفاظ النتائج في كلية كلايتون لتكنولوجيا المعلومات في قاعدة بيانات مؤمنة لمدة 5 سنوات. وعلاوة على ذلك، فإن أي شخص فرد أو منظمة لا يمكن تحديدها في التقارير والأبحاث المنشورة في مجلات تكنولوجيا المعلومات والأعمال التجارية الإلكترونية / و المؤتمرات وذلك حمايةً لخصوصية الأفراد المشاركين في هذا البحث.

إذا كنت ترغب في الاطلاع على نتائج البحث يرجى الاتصال بي على الرقم 0061416723368 أو 00966555233284 أو على البريد الإلكتروني [redacted] علماً بأن النتائج ستكون متاحه لكم في اي وقت.
:

إذا وجد لديك أي اعتراض على الطريقة التي تم بناءاً عليها هذا البحث يرجى الإتصال على :	**إذا وجد لديك أي اعتراض على الطريقة التي تم بناءاً عليها هذا البحث يرجى الإتصال بمسؤول البحث :**
الأستاذ مشارك: عبدالمقصود عبدالقادر سليمان. عميد كلية الحاسب الآلي جامعة الملك خالد 61922 بيشه ,344 ص.ب المملكة العربية السعودية [redacted]	د: ين شيونغ. كلية تقنية المعلومات أستراليا ,3800 فيكتوريا ,كلايتون ,123 ص.ب كلايتون ,طريق ويلينقتون ,فرع كلايتون ,63 مبنى [redacted]

وشكراً.

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MONASH University

<12/08/2012>

بيان توضيحي : أعضاء من الغرفة التجارة التابعة لوزارة التجارة والصناعه في المملكة العربية السعودية

العنوان : التحقيق في قضايا دورة حياة الأسواق الالكترونية شواهد من المملكة العربية السعودية.

اسمي فهد علي القرني وأنا حاليا أجري مشروع بحثي مع الدكتور ين تشيونغ وأستاذ مشارك لي فنسنت في كلية تقنية المعلومات للحصول على شهادة الدكتوراه في مجال تكنولوجيا المعلومات في جامعة موناش، أستراليا. هذا يعني أنني يجب أن اكتب بحثا كاملاً في نهاية مشروع بحثي الدكتوراه. وتهدف الدراسة إلى التحقيق في مراحل دورة حياة الاسواق الالكترونية من مرحلة التأسيس وصولاً إلى مرحلة الاستهلاك. لاستكمال هذه الدراسة، أنا بحاجة للبحث في مجالات مختلفة حول الاسواق الالكترونية في المملكة العربية السعودية. في البداية، سوف يكون جمع البيانات من خلال استبيانات عبر الإنترنت ومقابلات شخصية مع صناع القرار في وزارة الصناعة والتجارة في المملكة العربية السعودية.

وأود أن أدعوكم إلى أن تكون جزءا من هذه الدراسة الهامة. وقد تم اختيار اسمك من الدليل الذي يتوفر للجمهور على المواقع التابعة لوزارة التجارة في المملكة العربية السعودية (http://www.mci.gov.sa) بناءاً على وظيفتك. من خلال هذه المقابلة ، أسعى لاستكشاف الأفكار والمعتقدات والخبرات لمستخدمي الإنترنت. خلال أسئلة المقابلة سوف أسعى لاكتشاف معلومات منك عن متطلبات الأسواق الالكترونية، والمراحل الرئيسية في دورة حياة الأسواق الالكترونية وعوامل النجاح الحاسمة المتصلة بكل مرحلة رئيسية لتعزيز رضا عملاء الأسواق الالكترونية.

هذا البحث يعتبر الأسواق الإلكترونية كظاهرة ناشئة في مجال التجارة الإلكترونية. ويمكن تصور تعريف الأسواق الإلكترونية ك "الفضاء الافتراضي" المستخدمة من قبل المستهلكين والبائعين لتبادل السلع والخدمات وتنفيذ المعاملات التجارية الأخرى. منذ ظهور التجارة الالكترونية، كان هناك الكثير من البحوث على تنفيذ نظم الأعمال الإلكترونية مثل الأسواق الالكترونية. ومع ذلك ، لا يوجد هناك بحوث تهتم بشأن التحقيقات في دورة حياة الأسواق الإلكترونية منذ تأسيسها وحتى مرحلة تقييمها. ولذلك، هذا البحث يهدف إلى تحديدالمراحل الأساسية في دورة حياة السوق الإلكترونية لتعزيز رضا العملاء تجاه الأسواق الالكترونية في المملكة العربية السعودية.

يشتمل هذا المشروع البحثي على نهج دراسة الحالة ومن المتوقع أن هذا المشروع البحثي يقدم مساهمات هامة. البحوث الحالية تحدد العوامل التي تؤثر في المقام الأول على الأعمال الالكترونية في السياق السعودي، ولكن القليل منها ركز على مرحلة استهلاك السوق الإلكترونية. لذلك، ظهرت أهمية تحديد المراحل الرئيسية وعوامل النجاح ذات الصلة بها لإدخال تحسينات على نظم السوق الإلكترونية. نتيجة لذلك ، سيتم تطوير نموذج تفسيري يوضح تعزيز الأسواق الالكترونية لكي تتمكن من إرضا العملاء في المملكة العربية السعودية.

المشروع لا يحتوي على أي مخاطر. المشاركة هنا تعتبر عمل تطوعي في هذا المشروع البحثي. إذا كنت ترغب في المشاركة، سوف أقوم بعمل موعد لمقابلتك في مكتبك ومن ثم أقوم بطرح الاسئلة عليك وتدوين الإجابات. وسيتم تخزين جميع النتائج بشكل سري في قاعدة بيانات خاصة بالباحثين فقط. وقد يستغرق اتمام هذه المقابلة فترة قد تصل الى 50 دقائق. وأود أن أسألك عن المراحل الرئيسية والعوامل التي تؤثر في نجاح دورة حياة الأسواق الالكترونية في المملكة العربية السعودية.

هذا المسح مجهول. لا أحد، بما في ذلك الباحث ، يكون قادر على التعرف على هويتك. مشاركتكم طوعية ولست تحت أي التزام للموافقة على المشاركة. يمكنك اختيار عدم المشاركة في المقابلة، وأن تتوقف عن الاستجابة في أي وقت ، أو تتخطي أي الأسئلة التي كنت لا ترغب في الإجابة

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عليها. ومع ذلك، إذا لم توافق على المشاركة، قد تنسحب فقط من المقابلة قبل تسجيلها. بعد القيام بتسجيل جميع الاجابات سيتم تفريغها إستحدامها في أهداف تحليلية للبحث المشار إليه سابقاً.

سيتم التعامل مع المعلومات التي تم جمعها على أنها سرية واستخدامها لأغراض البحث فقط. ستتم حماية سرية المعلومات المقدمة وفقاً لقيود قانونية الاسترالية. وسوف يقتصر الوصول إلى المعلومات للباحثين فقط على النحو المطلوب من قبل الجامعة، سيتم الاحتفاظ النتائج في كلية كلايتون لتكنولوجيا المعلومات في قاعدة بيانات مؤمنة لمدة 5 سنوات. وعلاوة على ذلك، فإن أي شخص فرد أو منظمة لا يمكن تحديدها في التقارير والأبحاث المنشورة في مجلات تكنولوجيا المعلومات والأعمال التجارية الإلكترونية / و المؤتمرات وذلك حمايةً لخصوصية الأفراد المشاركين في هذا البحث.

إذا كنت ترغب في الاطلاع على نتائج البحث يرجى الاتصال بي على الرقم 0061416723368 أو 00966555233284 أو على

البريد الإلكتروني : [redacted] **علماً بأن النتائج ستكون متاحه لكم في اي وقت.**

إذا وجد لديك أي اعتراض على الطريقة التي تم بناءاً عليها هذا البحث يرجى الإتصال على :	**إذا وجد لديك أي اعتراض على الطريقة التي تم بناءاً عليها هذا البحث يرجى الإتصال بمسؤول البحث :**
الأستاذ مشارك: عبدالمقصود عبدالقادر سليمان. عميد كلية الحاسب الآلي جامعة الملك خالد 61922 بيشه ,344 ص.ب المملكة العربية السعودية [redacted]	د: ين شيونغ. جامعة موناش - كلية تقنية المعلومات أستراليا ,3800 فيكتوريا ,كلايتون ,123 ص.ب كلايتون ,طريق ويلينغتون ,فرع كلايتون ,63 مبنى تليفون: [redacted]

وشكراً.

فهد القرني

MONASH University

Consent Form – Members in the Ministry of Commerce and Industry – Saudi Arabia

Title: Investigating into eMarketplaces Lifecycle Issues: Evidence from Saudi Arabia

NOTE: This consent form will remain with the Monash University researcher for their records

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

1. I agree to be interviewed by the researcher ☐ Yes ☐ No
2. I agree to allow the interview to be audio-taped ☐ Yes ☐ No
3. I agree to make myself available for a further interview, if required ☐ Yes ☐ No

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way.

I understand that any data that the researcher extracts from the interview for use in reports or published findings will not, under any circumstances, contain names or characteristics that can identify me and/or my organization.

I understand that interview transcript will be available under my request.

Participant's name

Signature

Date

الغرفة التجارية الصناعية بجدة
JEDDAH CHAMBER OF COMMERCE & INDUSTRY

الرقم : ٤٤٠٠/
التاريخ : ١٤٣٣/١١/٢٢هـ
الموافق: ٢٠١٢/١٠/٠٨م

الاستاذ / فهد علي صالح القرني المحترم

السلام عليكم ورحمة الله وبركاته، ،
إشارة إلى خطابكم والمتضمن طلب موافقة الغرفة على إجراء دراسة بعنوان مناقشه في قضايا استهلاك الشبكات الالكترونية وتأثيرها على تعاملات السوق الالكترونية في المملكة العربية السعودية .

علية نفيدكم بالموافقة على ذلك على أن لايلحق الغرفة أي تبعات مالية أو أي تبعات أخرى مع تزويد الغرفة بنسخه من الدراسة بعد اعتمادها والموافقة عليها من قبل الجامعة.

وتقبلوا خالص تحياتنا، ، ،

[redacted]

م. محي الدين بن يحيى حكمي
مساعد الأمين العام