

An Investigation of the Factors Affecting Consumers' Adoption of E-commerce: An Empirical Study of Saudi Arabia

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To my parents, my wife, my children Raghad, Leena and Eyad for their love, support and encouragement during this time of challenge.

Declaration

I declare that the work described in this thesis was originally carried out by myself during the period of registration for the degree of Doctor of Philosophy at De Montfort University, UK. It is submitted for the degree of Doctor of Philosophy at De Montfort University and has not previously been published or submitted in support of any other academic degree or award.

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Abstract

This study identified a gap in the adoption of electronic (e)-commerce in Saudi Arabia in particular and developing countries in general and hopefully, provides some useful insight regarding e-commerce in Saudi Arabia. This study is limited to a small nation or group which makes generalization not essential (Bryman 2008,p.391). But at the same time, it provides a good base for further work that can be based on the findings of this study.

Businesses across the world are launching e-commerce to increase sales by reducing costs, and extending their activities to serve their clients anywhere in the world. The literature, however, shows that in many developing countries e-commerce projects have failed due to a lack of consumers' readiness to adopt it whereas consumers in the developed countries have already incorporated e-commerce into their daily lives. In order for e-commerce to be successful in developing countries, consumers need to accept and adopt this service. This gap is addressed by this study so that developing countries come to benefit from e-commerce and avoid possible failures.

The study presents the key factors (enablers and barriers) that affect consumers' adoption of e-commerce. It aims to understand consumers' perspectives, move theoretically to obtain suppliers' comments on consumers' viewpoints, gather any new aspects mentioned by them and finally to combine the two perspectives together to arrive at the final findings. The researcher investigated a number of research methodologies to find the one appropriate for this study. As a result, a qualitative research approach was adopted, which was used to understand and explain the phenomenon under investigation. Grounded theory methodology (GT) was used since it uses theoretical sampling that helped to achieve the study's goals by moving theoretically from the first empirical study to the second. The study used various techniques to collect evidence such as semi-structure interviews, observations and official documents.

The two empirical studies of this research offered a good understanding and further insights into e-commerce adoption among consumers. It reveals a roadmap for suppliers and governments that enable them to adopt e-commerce among consumers in developing countries. The findings of this study are divided into the following dimensions: *cultural, telecommunication infrastructure, technical, suppliers' responsibilities, financial, awareness, legal, delivery, tangible and intangible end-user characteristics, security, geographical and government's responsibilities dimensions*. Government's responsibilities have been found to be the core category that affects most of the factors that are germane to this study. These factors can help decision makers understand the issues that are involved and effectively address them. The final paradigm model presented in chapter 8 illustrates the phenomenon, its causes, conditions, specifications and the required strategies that help to increase e-commerce adoption among consumers.

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List of Acronyms

<i>ATM</i>	<i>Automated Teller Machines</i>
<i>B2B</i>	<i>Business to Business</i>
<i>B2B2C</i>	<i>Business to Business to Customer</i>
<i>B2C</i>	<i>Business to Customer</i>
<i>B2E</i>	<i>Business to Employee</i>
<i>BIP</i>	<i>Bureau of Investigation and Prosecution</i>
<i>CAB</i>	<i>Citizen Advice Bureau</i>
<i>C-commerce</i>	<i>Collaborative commerce</i>
<i>CCSR</i>	<i>Centre for Computing and Social Responsibility</i>
<i>C2C</i>	<i>Consumer to Consumer</i>
<i>CERT-SA</i>	<i>National Centre for Information Security</i>
<i>CITC</i>	<i>Communications and Information Technology Commission</i>
<i>CRM</i>	<i>Customer Relationship Management</i>
<i>CSF</i>	<i>Critical Success Factors</i>
<i>E-commerce</i>	<i>Electronic Commerce</i>
<i>ESCWA</i>	<i>Economic and Social Commission for Western Asia</i>
<i>Ex2Ex</i>	<i>Exchange to Exchange</i>
<i>G-20</i>	<i>Group of twenty major economies countries</i>
<i>G2B</i>	<i>Government to Business</i>
<i>G2C</i>	<i>Government to Customer</i>
<i>G2G</i>	<i>Government to Government</i>
<i>GCC</i>	<i>Gulf Cooperation Council</i>
<i>GT</i>	<i>Grounded Theory</i>

List of Acronyms

<i>ICT</i>	<i>Information and Communication Technology</i>
<i>IIC</i>	<i>International Internet connectivity</i>
<i>IMF</i>	<i>International Monetary Fund</i>
<i>IS</i>	<i>Information Systems</i>
<i>ISDP</i>	<i>Information Society Doctoral Programme</i>
<i>ISP</i>	<i>Internet Service Provider</i>
<i>KACST</i>	<i>King Abdulaziz City for Science and Technology</i>
<i>KFUPM</i>	<i>King Fahad University of Petroleum and Minerals</i>
<i>LAN</i>	<i>Local Area Network</i>
<i>LLU</i>	<i>Local Loop Unbundling</i>
<i>MCI</i>	<i>Ministry of Culture and Information</i>
<i>MCIT</i>	<i>Ministry of Communications and Information Technology</i>
<i>MOCI</i>	<i>Ministry of Commerce and Industry</i>
<i>MOF</i>	<i>Ministry of Finance</i>
<i>OFT</i>	<i>Office for Fair Trading</i>
<i>OIC</i>	<i>Organization of Islamic Cooperation</i>
<i>P2P</i>	<i>Peer to Peer</i>
<i>PKI</i>	<i>Public Key Infrastructure</i>
<i>POS</i>	<i>Point Of Sale</i>
<i>QDA</i>	<i>Qualitative Data Analysis</i>
<i>QoS</i>	<i>Quality of Service</i>
<i>RFID</i>	<i>Radio-Frequency Identification</i>
<i>SAGIA</i>	<i>Saudi Arabian General Investment Authority</i>
<i>SAMA</i>	<i>Saudi Arabian Monetary Agency</i>
<i>SaudiNIC</i>	<i>Saudi Network Information Centre</i>
<i>SCM</i>	<i>Supply chain management</i>
<i>SME</i>	<i>Small and Medium Enterprise</i>

List of Acronyms

<i>SPAN</i>	<i>Saudi Payments Network</i>
<i>SR</i>	<i>Saudi Riyals</i>
<i>UN</i>	<i>United Nations</i>
<i>VoIP</i>	<i>Voice over Internet Protocol</i>
<i>WAN</i>	<i>Wide Area Network</i>
<i>WTO</i>	<i>World Trade Organization</i>

Chapter 1

Introduction and background to the study

1.1 Motivation

The use of Information and Communication Technologies (ICT) by organizations, such as governments and private businesses has raised their awareness of digital trends and reshaped organizations' ways of thinking about strategies, process redesign and gathering information (Lee et al., 2011, p.735, Akhavan et al., 2006, Margherita and Petti, 2010, p.488). Many businesses across the world are adopting and introducing e-commerce to reduce costs, serve customers and extend into new areas, as illustrated in sections 2.7 and 2.8.1. Consequently, many "brick and mortar" businesses (physical stores) have changed to "click and mortar" businesses (they have both an online and a physical store), such as, Wal-Mart and Tesco. Many other organisations conduct their businesses purely via cyberspace and only have a dot com location, e.g. Amazon. These latter types of e-commerce businesses cannot succeed unless consumers adopt and accept them.

E-commerce is experiencing enormous growth in Europe and the United States and continues despite the general economic slowdown (Westenberg and Bethlahmy, 2009, Dunne et al., 2008). E-commerce, therefore, has become a key element that affects core business models (Westenberg and Bethlahmy, 2009). Many reports show that e-commerce has performed better than traditional trade (Devitt et al., 2009) but in developing countries electronic trade lags behind. According to research, this is because businesses in developing countries face more risks than those operating in the developed parts of the world (Molla and Licker, 2005a, Molla and Licker, 2005b).

Research shows that consumers' attitudes are a factor that prevents the growth of e-commerce (Molla and Licker, 2005a, Sait et al., 2004). This research, therefore, explores the key factors that affect consumers' attitudes toward e-commerce adoption in developing countries.

Saudi Arabia is considered a developing country within the Arabic region. There seems to be a paucity of research into the key factors that affect consumers' adoption of e-commerce in Saudi Arabia. Section 3.3.1 justifies applying the Saudi context into this research. In order to investigate these factors and develop what is intended to be a unique inquiry, this research conducts two empirical studies that depend on each other. The first study investigates those factors that affect consumers' adoption of e-commerce from their point of view as described in chapter six. The second study - theoretically finds the appropriate suppliers and government agencies to discuss consumers' perspectives, i.e. the barriers and enablers derived from the first study. This study, therefore, closes the gap on the lack of research of e-commerce in Saudi Arabia and for consumer acceptance of e-commerce in developing countries. This thesis brings integration, interdependence and interconnection between two empirical studies, which is described in more detail in chapter 5.

1.2 The Research Aims and Questions

This study explores the key factors that affect consumers' acceptance of e-commerce in developing countries in order to develop a model that will help policy makers understand and identify the enablers and barriers of the adoption process. To accomplish this study, the following aims need to be achieved:

- Identify consumers' perspectives of the barriers and enablers that contribute to their initial uptake and subsequent use of e-commerce.
- Identify suppliers' perspectives of how to alleviate consumer barriers whilst accentuating consumer enablers of e-commerce.
- Develop a model for businesses and government agencies to promote consumers'

acceptance of e-commerce

The main question of this study upon which this inquiry focuses is:

“What are the key factors (enablers and barriers) that influence consumers’ adoption of e-commerce in the Kingdom of Saudi Arabia?”

Consequently some other supplementary questions are raised as follows:

- What are the enablers and barriers that influence consumers in order to adopt e-commerce in Saudi Arabia from their own perspectives?
- What are the enablers and challenges that face private sector organizations in order to adopt e-commerce in their businesses with respect to consumers?
- What are the suppliers’ comments on consumers’ perspectives?
- What is the combined framework that integrates consumers’ perspectives and suppliers’ perspectives together?

1.3 Thesis Outline

This study contains ten chapters as illustrated in figure 1.1. The literature reviews in chapters two and three seek to gain a good understanding of the phenomenon under study. The next two chapters present a general overview of research methodologies and the one adopted for this inquiry. Chapters six, seven and eight describe and discuss the findings of the first and second empirical studies and the combined model. Chapter nine discusses the thesis’s findings from different theoretical positions. Chapter ten discusses the inquiry’s conclusions, limitations of the research and suggestions for further work.

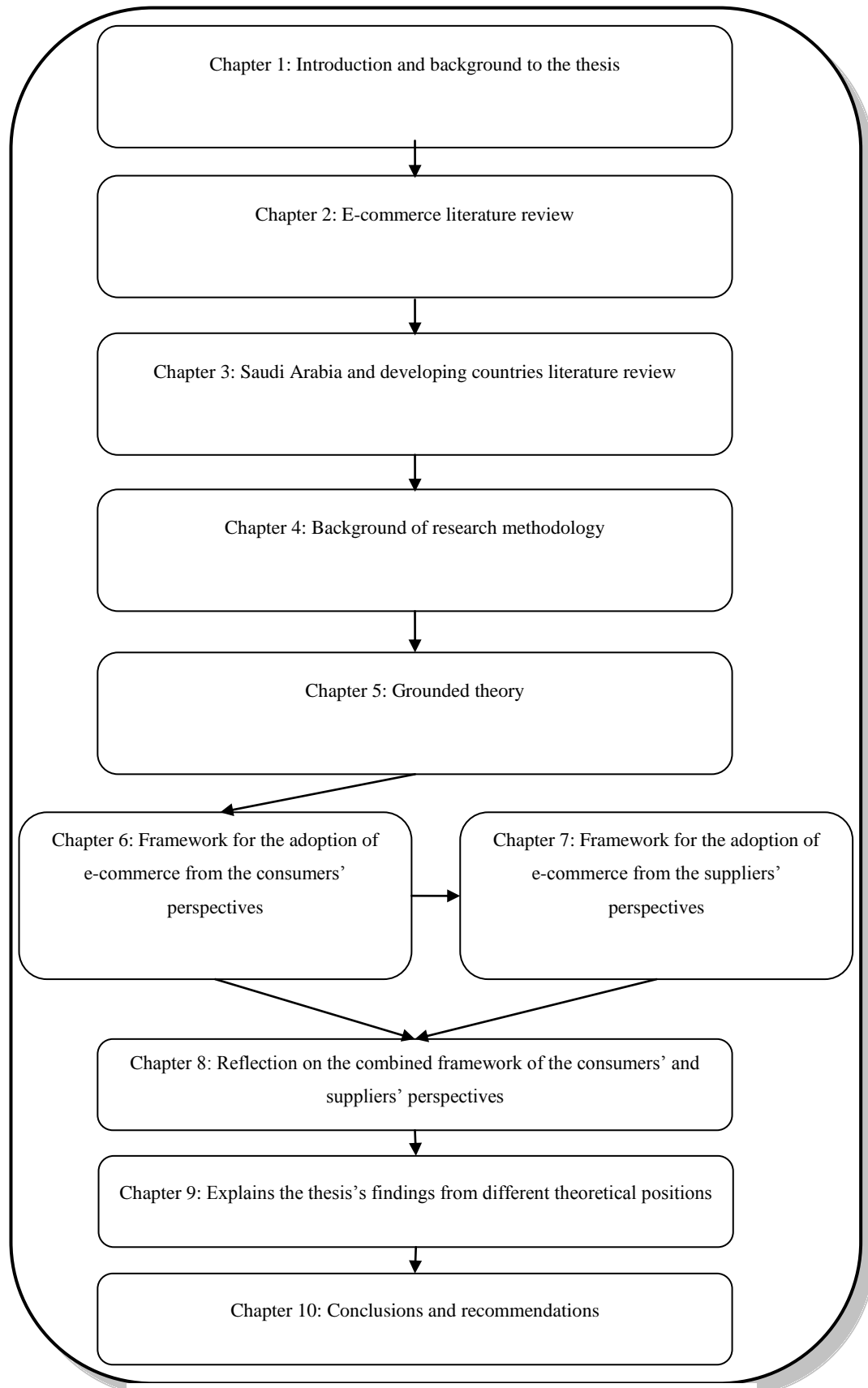


Figure 1.1 Thesis outline

The following is a brief description about each chapter of this study:

Chapter one introduces the research, the importance of the study, the research's aims, questions and outlines.

Chapter two begins the literature review. It covers previous studies in e-commerce, histories, definitions and differences between e-commerce and e-business, e-commerce characteristics, categories of e-commerce, the phases of e-commerce, advantages and limitations of e-commerce, literature background of the e-commerce adoption and e-commerce success factors.

Chapter three describes previous studies about Saudi Arabia and developing countries. This includes previous literature about information and communication technology (ICT) in developing countries and Saudi Arabia in particular, a brief about Saudi Arabia and a justification for the use of Saudi Arabia for the empirical study.

Chapter four covers research characteristics, presents research philosophies and methodologies, and a justification for the use of the qualitative research approach. Finally, the chapter presents different types of research methods that lie within the qualitative research domain.

Chapter five describes grounded theory and justifies the use of this method for this study. This is followed by a discussion on the limitations and strengths of GT.

Chapter six outlines the first empirical study and its findings.

Chapter seven discusses the second empirical study and its findings.

Chapter eight presents the combined model of the consumers and suppliers' perspectives.

Chapter nine explains the thesis's findings from different theoretical positions.

Chapter ten discusses the conclusions, recommendations and implications of the study and suggests the direction for further work.

Appendix A contains the ethical approval.

Appendix B contains the information letter to participants (Research Consent Letter).

Appendix C contains an example of a translated interview with consumers.

Appendix D contains an example of a translated interview with suppliers.

Appendix E contains an example of a translated interview with government's agencies.

Appendix F contains an example of GT data analysis.

Appendix G contains an example of emails sent to suppliers and government agencies in order to arrange the interviews.

Appendix H contains the author's publications.

To sum up, figure 1.2 is a roadmap that outlines the way the research was undertaken and where the key decision points lie.

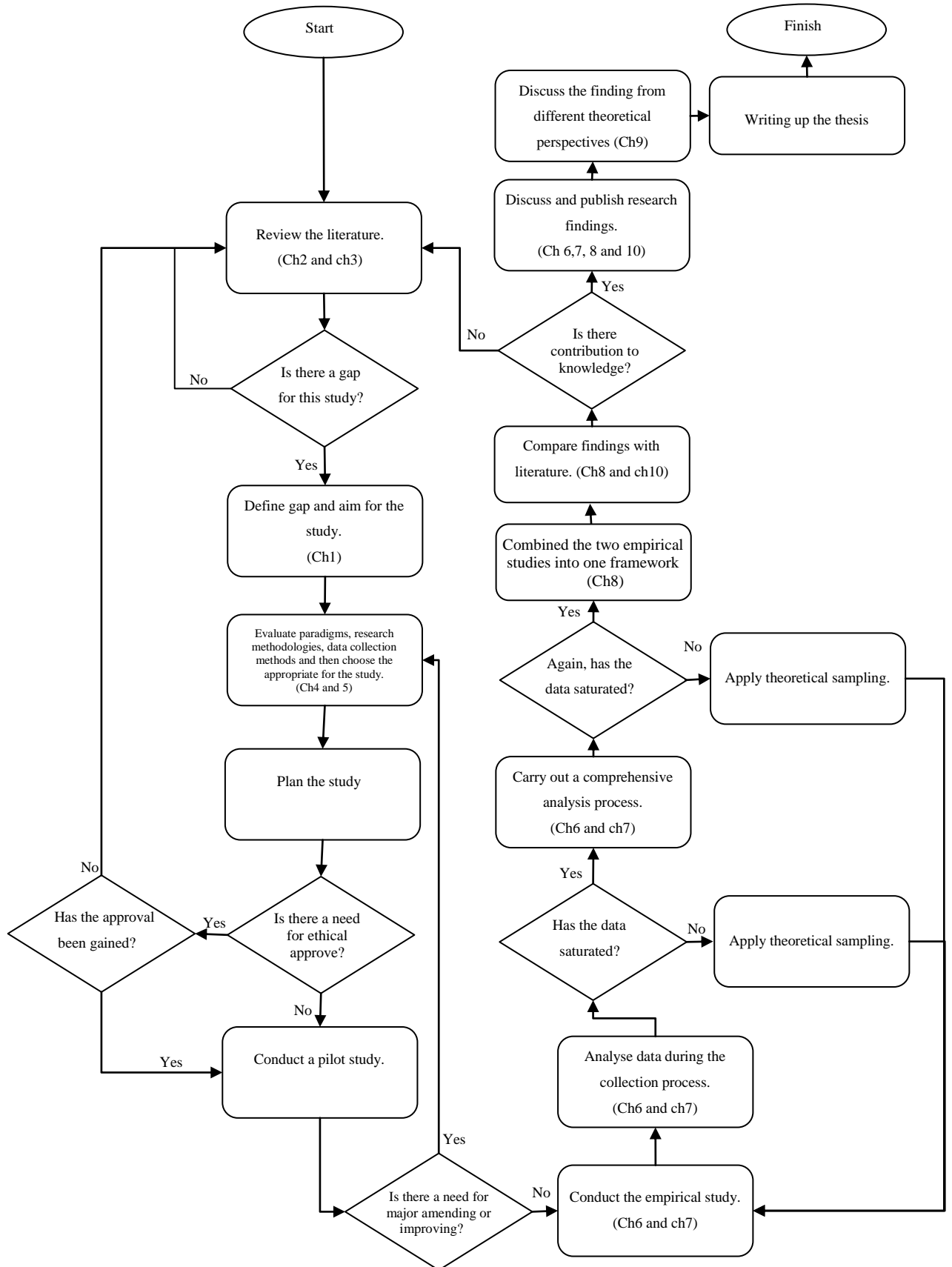


Figure 1.2 An adjustment flowchart showing the steps taken during the PhD study

Chapter 2

E-commerce literature Review

2.1 Introduction

This chapter reviews the relevant literature about e-commerce. It presents the history of the Internet and e-commerce, some definitions about e-commerce and e-business. The chapter highlights, from the literature, e-commerce characteristics, classifications, phases, advantages and disadvantages and the background for e-commerce adoption. It represents suppliers' motivations, consumers' success factors and challenges to e-commerce adoption and ends with a chapter summary.

2.2 Internet and E-commerce history

The Internet started as a project funded by the U.S. government in the year 1969 to create a network called ARPANET (Advanced Research Projects Agency NETWORK). It connected the University of California (Los Angeles) with the Stanford Research Institute. The system was extended by adding the Universities of Utah and California (Santa Barbara). This allowed access to each other's mainframes. ARPANET grew up dramatically and become the core of the current Internet (Abbate, 2001, p.147, Leiner et al., 1997, p.103, Choi et al., 1997, p.8).

Since the 1970s, applications such as the Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT) were used to facilitate commercial transactions via an electronic method, which was later called e-commerce. EDI is defined as,

“The process of using computers and computer networking to exchange data between two organizations conducting a business transaction.” (Pham, 2003, p.136)

EFT is defined as the electronic transfer of money between different organizations (Turban, 2006, p.10).

By the end of 1980s, EDI was supporting e-commerce in the form of business-to-business (B2B) and e-commerce (Brousseau, 2003, p.45). In addition, because of the high cost involved in implementing EDI, some companies rented what was called a Value-Added-Network (VAN) to facilitate EDI. VAN provided the required connection to transmit data with a monthly fixed plus a per-transaction charge (Schneider, 2007, p.5).

In 1989, the European Organization for Nuclear Research (CERN) developed a software project called ENQUIRE, from which the World Wide Web is considered to have evolved. The first on-line website became available in 1991. In 1993, CERN announced that the World Wide Web would be available to the public and this promise came to fruition in 1994. In 1995, many e-commerce businesses were launched. A good example is Amazon.com founded by Jeff Bezos.

2.3 E-commerce and E-business

E-commerce and e-business are related to each other. This section, therefore, defines the terms e-commerce and e-business and highlights the differences between them.

2.3.1 The definition of e-commerce

Before considering the different definitions of e-commerce, Choi et al.(1997, p.17) identified the three components of e-commerce, which are product, process and player (i.e. seller and buyer). Figure 2.1 illustrates these three components represented in the form of a cube (a three dimensional square).

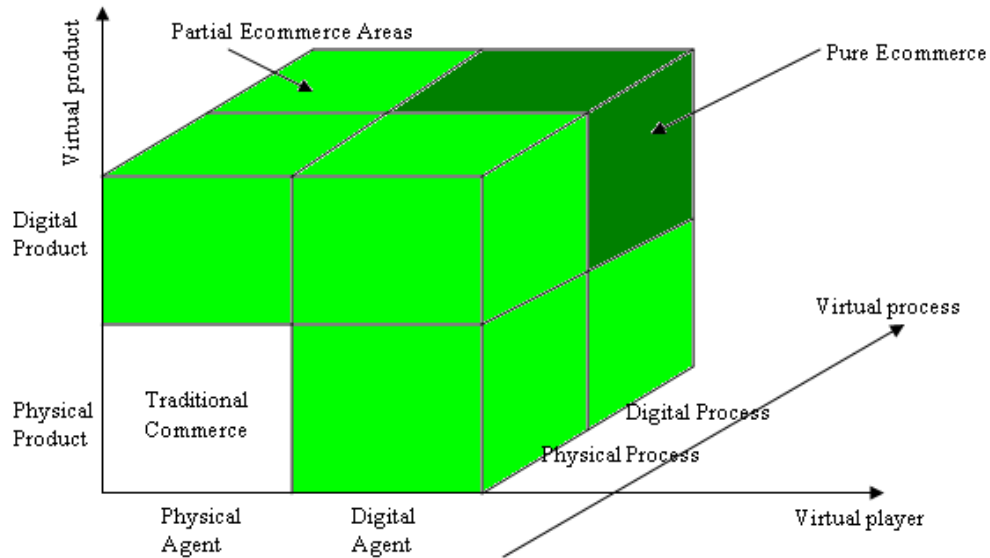


Figure 2.1 Dimensions of e-commerce
(Choi et al., 1997, p.18)

The vertical axis represents the product's type, which can be, for example, a book, a machine to deliver or a digital song. The horizontal axis shows the different types of suppliers. For example, suppliers can be physical such as shops in a mall or a digital (a pure online shop) such as Amazon.com. The third axis, called the process axis, explains the different types of processes that are involved when an individual engages with either a physical or a digital supplier. For example, visiting a store is a physical process whereas searching the web is a digital one.

Therefore, pure e-commerce is where the three components are digital (online), whereas traditional commerce is where the three components are physical (offline). The remaining combinations are partial e-commerce. Consequently, "brick and mortar" is a concept that refers to physical stores, whereas "click and mortar" is a concept that refers to a player that has stores both online and physical. Pure player concept refers to businesses that only have a dot com location such as Amazon (it only operates online). Many e-commerce websites in Saudi Arabia are physical suppliers that sell digital products. This research is concerned with the factors that affect consumer adoption of various types of e-commerce and not with traditional ways of trading.

According to the literature, there are many different definitions of e-commerce, which are summarized in table 2.1. Some researchers define e-commerce in a very

general way and state that all business activities that are transacted electronically count as e-commerce. For example, Swatman (1996, p.1) pointed out that e-commerce is,

“Any electronically-enabled business activity or process.”

This type of definition is simplistic, as it does not address any of the other issues that are raised later in this section.

Other definitions limit and then link the e-commerce activities with the Internet. For example, Schneider (2007, p.5) defined e-commerce as

“All businesses activities that use Internet technologies.”

This definition failed to notice that e-commerce was launched before the Internet in the 1970s as stated in section 2.2. The Internet was not available to businesses until the 1990s. Another example is when Laudon and Traver (2009, p.9) limited e-commerce to the use of the Internet stating,

“E-commerce is the use of the Internet and the Web to transact business. More formally, digitally enabled commercial transactions between and among organizations and individuals.”

Other researchers, however, have overcome this point and pointed out that e-commerce could be via networks including the Internet. For example, Turban et al.(2006, p.4) defined e-commerce as,

“The process of buying, selling, transferring or exchanging products, services and/or information via computer networks, including the Internet.”

Mesenbourg’s (2001, p.4) definition is another example as the researcher asserts,

“E-commerce is the value of goods and services sold over computer-mediated networks.”

Westland and Clerk (1999, p.1) also did not link e-commerce with the Internet, as

they said,

“E-commerce is the automation of commercial transactions using computer and communications technologies.”

Wyckoff and Colechhai (1999, p.28) declared that the Internet is just one example of a network.

“E-commerce is concerned specifically with business occurring over networks, which use non-proprietary protocols that are established through an open standard setting process such as the Internet.”

Some other researchers such as Chan and Swatman (1996, p.2) included government activities in e-commerce. They said it is,

“The undertaking of normal commercial, government and personal activities by means of computers and telecommunications networks and includes a wide variety of activities involving the exchange of information, data or value-based exchanges between two or more parties.”

Whereas, Zwass (1998) includes the sharing of information as part of e-commerce, which is defined as,

“The sharing of business information, maintaining business relationships and conducting business transactions by means of telecommunication networks.”

The table below summarizes the different definitions of e-commerce.

Table 2.1 Different definitions of e-commerce (direct citation).

Author	Definition
Swatman (1996, p.1)	It is any electronically enabled business activity or process.
Schneider (2007, p.5)	It includes all businesses activities that use Internet technologies.
Laudon and Traver (2009, p.9)	E-commerce is the use of the Internet and the Web to transact business. It is more formally, digitally enabled commercial transactions between and among organizations and individuals.
Turban et al.(2006, p.4)	It is the process of buying, selling, transferring or exchanging products, services and/or information via computer networks, including the Internet.
Mesenbourg (2001, p.4)	E-commerce is the value of goods and services sold over computer-mediated networks.
Westland and Clerk (1999, p.1)	E-commerce is the automation of commercial transactions using computer and communications technologies.
Wyckoff and Colecchai (1999, p.28)	E-commerce is concerned specifically with business occurring over networks, which use non-proprietary protocols that are established through an open standard setting process such as the Internet.
Chan and Swatman (1996, p.2)	The undertaking of normal commercial, government and personal activities by means of computers and telecommunications networks and includes a wide variety of activities involving the exchange of information, data or value-based exchanges between two or more parties.
Whereas, Zwass (1998)	It is the sharing of business information, maintaining business relationships and conducting business transactions by means of telecommunication networks.

From the previous definitions of e-commerce, essential key elements for the e-commerce process were found. The first element is the need for an electronic transfer medium such as the Internet or any other electronic network. The second key element is the availability of physical/digital products or services online. The third element is the accessibility of business processes such as to sell, buy or share information. The fourth element is the availability of two or more parties such as sellers and buyers or a service provider and recipient. The fifth element is the payment method or money transaction by either paying online or upon delivery. In some cases, advertising can act as a type of payment. Therefore, instead of monetary payment, the customer can accept, read or see advertisements. Many mobile software and applications can be downloaded either free by accepting the advertisements on these applications or by paying the full-price, for

example, through the Android market or in Apple Stores for smart phones and tablet computers applications, or via twitter and facebook.

In conclusion, this study treats e-commerce as,

“The business process of buying, selling, sharing or exchanging physical or digital products, services, data or information via electronic communication media between two or more parties with a defined payment method.”

2.3.2 Definition of e- business

E-commerce and e-business are closely related, therefore, this thesis seeks to define e-business and its differences with e-commerce. This helps to understand the area under consideration in this thesis.

Mesenbourg (2001, p.4) affirms that any electronic process conducted inside or outside an organization over computer-networks can be called e-business and said it is,

“Any process that a business organization conducts over computer-mediated networks.”

Turban et al. (2006, p.4) defined e-business as,

“Not just buying and selling of goods and services but also servicing customers, collaborating with business partners, conducting e-learning and electronic transactions within an organization.”

Furthermore, McKay and Marshall (2004) pointed out that,

“E-Business is the use of the Internet and other information technologies to support commerce and improve business performance.”

IBM was one of the first to use this term and, therefore, their definition of e-business is particularly important. IBM defines e-business on their website as,

“The transformation of key business processes through the use of Internet

technologies” (IBM, 2002, p.4).

In 1999, the UK government brought a comprehensive definition for e-business and indicated that it is,

“The exchange of information across electronic networks, at any stage in the supply chain, whether within an organisation, between businesses, between businesses and consumers or between the public and private sectors, whether paid or unpaid” (Cabinet Office, 1999).

The next sub-section represents the differences between e-commerce and e-business.

2.3.3 Differences between e-commerce and e-business

There are three views that concern the relationship between e-commerce and e-business as illustrated in the following figure.

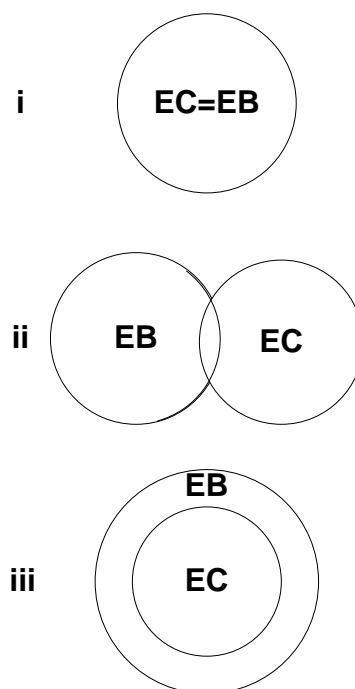


Figure 2.2 Alternative relationships between e-commerce and e-business suggested in the literature (Chaffey, 2004, p.10)

This debate is about the meaning and limitations of each one. One view suggests

that e-commerce and e-business are the same. Another view argues that e-commerce is different from e-business but they share some characteristics. This view argues that there are aspects of each that do not form part of these common characteristics. The third view believes that e-commerce is a subset of e-business.

Damanpour and Madison (2001, p.18) support the first perspective and do not differentiate between e-business and e-commerce. They said,

“E-Business/e-commerce is any net business activity that transforms internal and external relationships to create value and exploit market opportunities driven by new rules of connected economy.”

Schneider (2007, p.5) supports this view and does not differentiate between e-commerce and e-business and stated that e-commerce is more than buying and selling on the Internet. It is all the activities that companies do with other businesses and those that organisations carry out internally to support their trading.

Chaffey (2004, p.10) supported the third opinion as shown by figure 2.2-iii and said,

“E-commerce can best be conceived as a subset of e-Business”

Laudon and Traver (2009, p.10) combined the second with the third perspective and stated that e-business refers to the digital processes inside the firm and not the commercial transactions across the organization’s borders. This process does not provide profit but provides a good infrastructure from which e-commerce can make money as shown by the following figure.

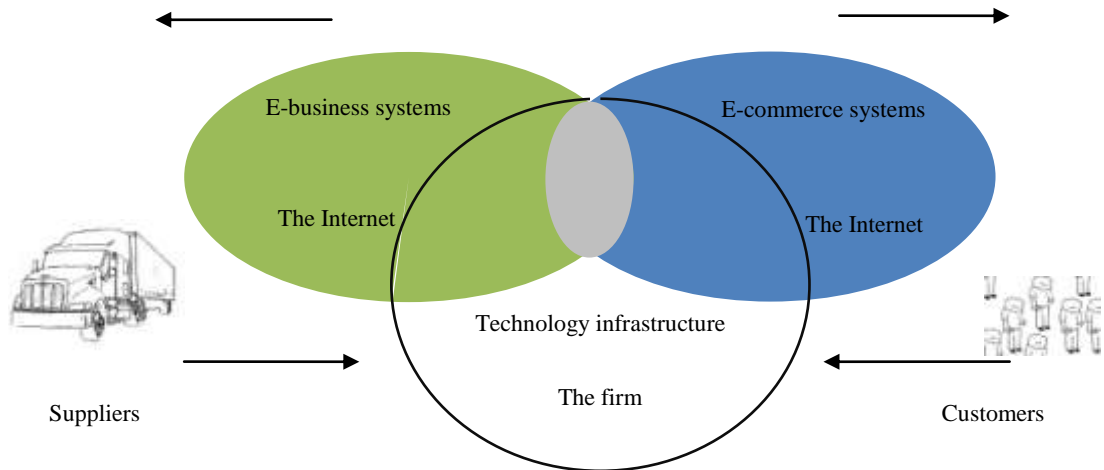


Figure 2.3 Differences between e-commerce and e-business
(Laudon and Traver, 2009, p.10)

After examining the different definitions of e-commerce and e-business, this research supports Laudon and Traver's (2009, p.10) perspective that e-commerce is the electronic activity that deals with trading interactions that are supported by an e-business infrastructure.

2.4 E-commerce characteristics

Laudon and Traver (2009, p.12) identified eight features of e-commerce:

- Ubiquity: it is available everywhere and at any time.
- Global reach: it enables the local market to reach the global one aiming to increase the number of potential consumers.
- Universal standards: the Internet and e-commerce have a standard technology that is shared around the world.
- Richness: it provides rich information about products for all consumers at the same time.
- Interactivity: it is a two way communication process between consumers and e-shops, such as categorizing the website according to his/her needs, as well as showing particular information in a certain time and in a preferable order.

- Information density: it allows, for example, consumers to have instant access to information and suppliers with real-time updates.
- Personalization: it has the ability for individuals to adjust his/her settings or favourites.
- Social technology: such as, Facebook

Burns (2002, p.5) stated that e-commerce has some characteristics with regard to payments. First, globalisation means that payments for services/goods can be remitted anywhere and, therefore, geographical factors have been minimised. Second, openness and accessibility are two other characteristics. These enable small enterprises and individuals to provide complete e-commerce websites much like those that large companies offer. The third characteristic concerns immediate results whereby payment happens immediately in real-time. By contrast, there is always a delay with a paper-based payments process. Ease of automated processing is the fourth characteristic, by which people can,

“Cheaply and easily automate the generation and processing of multiple payments with minimum effort” Burns (2002, p.5).

Moreover, functionality, reliability, usability and efficiency were reported by Stefani and Xenos (2001, p.1) as the four quality factors (quality of webpage and its services) in e-commerce systems. They presented the characteristics of e-commerce systems that are reproduced in the following table.

Table 2.2 Characteristics of e-commerce systems
(Stefani and Xenos, 2001, p.3)

Characteristics of e-commerce systems	Functionality	Reliability	Usability	Efficiency
Easy access to the web pages	*		*	*
Easy navigation	*		*	
Adaptation to user profile	*		*	*
Search engine service	*	*	*	
Easy exit – undo functions	*			
Useful help service	*		*	*
Electronic shopping cart	*		*	
Electronic shopping list	*		*	
Secure and reliable transactions	*	*		
Security protocols SET, SSL		*		
Correct and accurate information about products		*		
Direct delivery of the products			*	*
Indisputable financial transactions		*		
Recoverability of products and services	*		*	
Legitimate web site		*		

2.5 Classifications of e-commerce

Scholars have classified e-commerce into different categories.

Laudon and Traver (2009, p19) suggest that e-commerce comprises of five major types. The first type is Business-to-Consumer e-commerce (B2C),

“In which online business attempts to reach individual consumers.”

The second type is Business-to-Business e-commerce (B2B),

“In which the business focus is to sell to other business.”

They stated that Business-to-Government (B2G) is a subset of Business-to-Business e-commerce (B2B).

The third is Consumer-to-Consumer e-commerce (C2C) which,

“Provides a way for consumers to sell to each other, with the help of an online market maker such as the auction site.”

The fourth is Peer-to-Peer e-commerce (P2P) which,

“Enable Internet users to share files and computer resources directly without having to go through a central web server.”

The final type is Mobile e-commerce (m-commerce), which is the use of mobile phones to complete transactions using text messages or data via a public or private network. The Cabinet Office (2006, p.20) stated that m-commerce,

“Enables people to use a mobile phone to send and receive money and make payments at pay points in shops, restaurants, service stations and online.”

This study, however, considered m-commerce as an e-commerce tool that can be used within the previous e-commerce categories.

Schneider (2007, p.7) mentions the first three types that Laudon and Traver (2009, p.19) discussed as well as two additional types. The first additional type is business processes, such as, providing customer relationship management (CRM) solutions in which organizations,

“Use Internet technologies to support selling and purchasing activities.”

The second is Business-to-Government (B2G), which Laudon and Traver (2009, p.19) had included within B2B e-commerce. On the other hand, Turban et al. (2006, p.8) defined fourteen types of e-commerce. These include the five types that Laudon and Traver (2009, p.19) listed together with B2G e-commerce mentioned by Schneider (2007, p.5) and an additional eight types as follows: Business-to-Business-to-Consumer e-commerce (B2B2C) in which,

“Business provides some products or services to a client business. The client business maintains its own customers without adding any value to it.”

This category can also provide services or products to consumers with benefits as presented in table 2.3.

Table 2.3 B2B2C categories
(Turban et al., 2006)

B2B2C		
Type	Description	Example
Without added value	When organizations provide services or products to consumers and do not add any value.	When organizations provide Internet connections to their employees.
Without added value but gain a profit	When organizations provide services or products to consumers and receive commission from the provider.	Travel agents sell airlines tickets without adding any value to it but receive commission from the airlines.
Added value	When organizations provide services or products to consumers, add value to them and subsequently sell them.	Cars sellers buy cars from factories customise them and then sell them to consumers after adding value to them.

The ninth type is Consumer-to-Business e-commerce (C2B) such as priceline.com where, *“Individuals use the Internet to sell products or services to organizations and seek sellers.”*

The tenth type is Intra-business e-commerce which includes Business-to-Employee (B2E), *“All internal organizational activities that involve the exchange of goods, services or information about that organization.”*

The eleventh is Collaborative Commerce, *“When individuals or groups communicate or collaborate online.”*

The twelfth is non-business e-commerce that uses, *“E-commerce to reduce expenses or to improve the general operation and customer services”*. Examples would include religious and social organizations and government agencies.

The thirteenth type is e-learning, which provides education online.

The final type is exchange-to-exchange (Ex2Ex) which, *“Describes public electronic marketing with many buyers and sellers.”*

The Federal Trade Commission (2000, p.11) defined Exchange-to-Exchange (Ex2Ex)

Chapter 2. E-commerce literature Review

as part of B2B e-commerce being a, “Two-sided marketplace where buyers and suppliers negotiate prices, usually with a bid and ask system and where prices move both up and down.”

In conclusion, table 2.4 shows summary of e-commerce classifications with their definitions.

Table 2.4 Different classification of e-commerce

Type	Definition
Business-to-Consumer e-commerce (B2C)	“Online business attempts to reach individual consumers” (Laudon and Traver, 2009, p19)
Business-to-Business e-commerce (B2B)	“Business focus to sell to other business” (Laudon and Traver, 2009, p19)
Business-to-Government (B2G)	Is a subset of Business-to Business (B2B) e-commerce
Consumer-to-Consumer e-commerce (C2C)	“Provides a way for consumers to sell to each other with the help of an online market maker such as the auction site” (Laudon and Traver, 2009, p19)
Peer-to-Peer (P2P)	“Enable Internet users to share files and computer resources directly without having to go through a central web server” (Laudon and Traver, 2009, p19)
Business processes	“Internet technologies to support selling and purchasing activities” (Schneider, 2007, p.7)
Business-to-Business-to-Consumer e-commerce (B2B2C)	“Business provides some products or services to a client business. The client business maintains its own customers with out adding any value to it” (Turban et al., 2006, p.8)
Consumer-to-Business (C2B)	“Individuals who use the Internet to sell products or services to organizations and individuals and who seek sellers and priceline.com is a well-known organizer of C2B transactions” (Turban et al., 2006, p.8)
Intra-business e-commerce	“All internal organizational activities that involve the exchange of goods, services or information on that organization” (Turban et al., 2006, p.8)
Business-to-Employee (B2E)	A subset of the intra-business category (Turban et al., 2006, p.8)
Collaborative Commerce	“When individuals or groups communicate or collaborate online” (Turban et al., 2006, p.8)
Non-business e-commerce	“E-commerce reduces expenses or improves the general operation and customer services” (Turban et al., 2006, p.8). Religious organizations, social organizations and government agencies are an example of non-business e-commerce.
E-Learning	Provide education online.
Exchange-to-Exchange (Ex2Ex)	“Describes public electronic marketing with many buyers and sellers” (Turban et al., 2006, p.8) Another definition is that Ex2Ex is part of B2B e-commerce and a “Two-sided marketplace where buyers and suppliers negotiate prices, usually with a bid and ask system and where prices move both up and down.” (Federal Trade Commission, 2000, p.11)

As stated in section 2.3.1 this research treats e-commerce as,

“The business process of buying, selling, sharing or exchanging physical or digital products, services, data or information via electronic communication media between two or more parties with a defined payment method.”

A classification for e-commerce based upon the definitions above is summarised by the figure below.

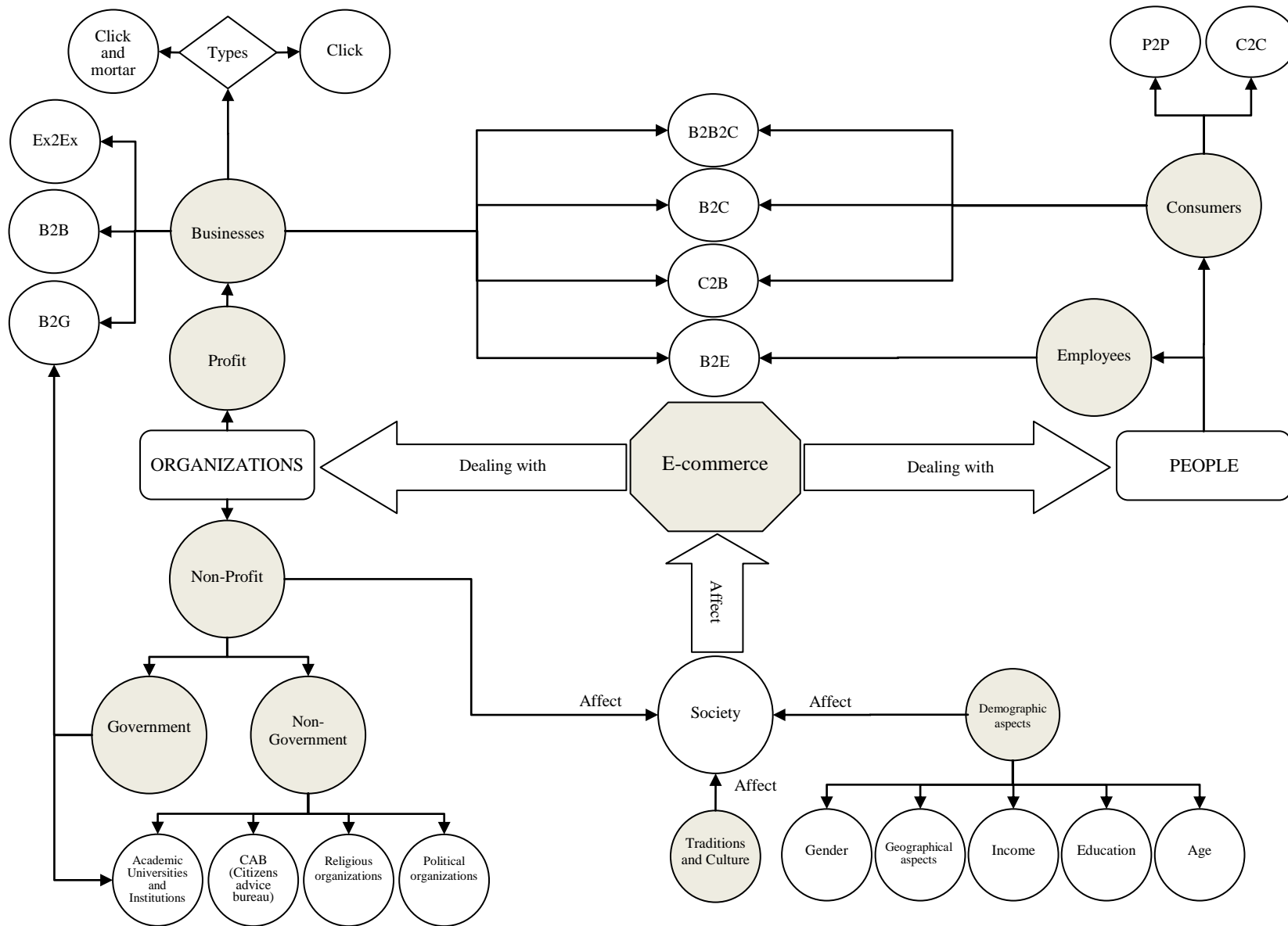


Figure 2.4 E-commerce classifications from the thesis pointview

The above figure shows that e-commerce deals with individuals (right hand side of the figure) and with organizations (left hand side of the figure). Individuals can be divided into consumers and employees and contain B2E, B2C, C2B, B2B2C, C2C, and P2P.

Organizations in the previous figure are divided into profit organizations such as private businesses (B2B, B2B2C, B2E, Ex2Ex2, B2G, B2C and C2B) and non-profit organizations such as universities and the Citizen Advice Bureau (CAB). This research is concerned with business to consumer e-commerce (B2C) and thus it investigates those factors that affect consumers' adoption of e-commerce. Moreover, this research links demographic data such as age, education, gender, income and geographical locations to the research's findings. This enriches the study in order for others to conduct further work based on this research.

2.6 E-commerce phases (stages)

There are various viewpoints regarding the stages of e-commerce. This section presents these phases from different perspectives and then concludes with the researcher's point of view.

To begin with, there are six phases for e-commerce counted by Molla and Licker (2005a, p.881). These are:

1. No e-commerce: Where firms are not connected to the Internet.
2. Connected e-commerce: Where there is an Internet connection but no website.
3. Static e-commerce: In this stage, firm displays the same information about the firm itself, its products and services to all customers with no interactivity.
4. Interactive e-commerce: Where the website can accept emails and completed forms from visitors. This phase is considered by Molla and Licker (2005a) to be the beginning of e-commerce.
5. Transitive e-commerce: Where users can purchase products online.

6. Integrated e-commerce: This is the final stage where a firm's website is fully integrated with its support systems such as those of its suppliers.

Rayport and Jaworski (2002) counted four stages of e-commerce rather than the six phases mentioned by Molla and Licker (2005a). The first is the broadcast stage where a website contains static information only such as a company's information. The second stage of growth is the interacting stage with consumers, such as, sending and receiving emails. Transact is the third stage that can use the Internet to support transactions such as an online ordering system. The fourth stage is the collaborating stage, which provides inter-organisational activities and the company itself and its partners can access it.

Rao et al.(2003, p.14) agrees with Rayport and Jaworski (2002) and proposed that e-commerce development consists of four stages. First, is the present stage where companies offer their brochures online. This can be called a one-way communication. Second, is the portal stage, which is defined as the introduction of two-way communication. This stage, however, does not provide financial transactions. Third, is the transactions integration stage, which provides financial transactions between partners. Fourth, is the enterprises integration stage where there is complete integration of business processes with high collaboration between suppliers and consumers. In addition, this stage controls both CRM and the supply chain management (SCM).

Aguila-Obra and Padilla-MelUndez (2006, p.106) listed six stages for the Internet technology adoption process. Initiation is the first phase where the usage level of Internet technology is basic (e.g. emails and simple websites). Firms at this stage of development are considered beginners in the use of the Internet. The second and third stages are adoption and adaptation where firms use some Internet technology such as owning their own servers and have external support for their Internet technologies. Acceptance and routinisation are the fourth and fifth phases. Firms at these two stages have their own server that accesses the Internet and their own intranet. Infusion is the sixth stage where firms benefit from having their own ICT departments. Therefore, they manage their Internet technologies themselves and do not have external consultants. There are, however, variations to this process of development, since many businesses currently do not strictly follow Aguila-Obra and Padilla-MelUndez's (2006, p.106)

stages. Very many small and medium Enterprises (SMEs) and even quite large businesses would have intranets and substantial web presences on outsourced servers and there is an increasing tendency in this direction (e.g. DMU is outsourcing its intranet to Google). This research disagrees with Aguila-Obra and Padilla-MelUndez (2006, p.106) when they state that businesses have servers without ICT departments. This is because; running a server without someone dedicated to keeping it secure is very risky. In addition, this research disagrees with stages four and five in Aguila-Obra and Padilla-MelUndez's (2006, p.106) study as today many businesses have started to use the clouding system that does not require them to know about their system configuration that delivers their services.

Karakaya and Charlton (2001, p.49) have classified websites into three types. These are information webs that publish information on the web; transactional webs, which support activities such as money transfers; and the third type operational webs, which integrate computers, humans and other power resources together.

In conclusion, this research considered the six-phases identified by Molla and Licker (2005a, p.881) to be the comprehensive phases of e-commerce. Most other researchers agreed with Molla and Licker (2005a, p.881) about some of the phases as shown in table below.

Table 2.5 E-commerce phases

E-commerce phase	Definition	References
No e-commerce	Firms that are not connected to the Internet	(Molla and Licker, 2005a)
Connected e-commerce	There is an Internet connection but no website	(Molla and Licker, 2005a)
Static e-commerce	It displays the same information about the firm, its products and services to all its customers with no interactivity	(Molla and Licker, 2005a, Rayport and Jaworski, 2002, Rao et al., 2003, Karakaya and Charlton, 2001)
Interactive e-commerce	The website can accept emails and filled forms from visitors (the beginning of e-commerce)	(Molla and Licker, 2005a, Rayport and Jaworski, 2002, Rao et al., 2003, Aguila-Obra and Padilla-MelUndez, 2006)
Transitive e-commerce	Users can purchase products online	(Molla and Licker, 2005a, Rayport and Jaworski, 2002, Rao et al., 2003, Karakaya and Charlton, 2001)
Integrated e-commerce	The website is integrated with all support systems such as suppliers	(Molla and Licker, 2005a, Rayport and Jaworski, 2002, Rao et al., 2003, Karakaya and Charlton, 2001)

2.7 The advantages and disadvantages of e-commerce

This section starts by discussing e-commerce benefits. Abu Abid et al. (2011) counted some of the benefits, such as, improved customer services, increased ability to compete, increased sales, better information for managers, reduced cost and improved distribution channels. Thulani et al. (2010) agreed with Abu Abid et al. (2011) and added the advantage that e-commerce was an inexpensive advertising medium. Damanpour and Madison (2001, p.21) counted six advantages of e-business. They espoused that e-business brings perfect management information, facilitates integration of suppliers and vendors, superior channel partnership, less transaction costs, better understanding of the market and expands geographical coverage. Barbonis and Laspita (2005, p.31) added some other benefits for consumers such as saving time and money as well as product availability for consumers. Browne et al.(2004, p.242) revealed other consumer advantages, such as, the ability to shop at home, obtaining hard-to-find items, home delivery, accessing branches not found locally, ease of ordering, ease of comparing products and prices, avoiding driving and traffic, a better selection and variety and easy to find information about products. Legris et al. (2003, p.191) agreed on some of the benefits above and added the increase of sales. Cloete et al.(2002, p.2) included other benefits of e-commerce such as improving customer services and the exchange of information between customers and suppliers. Research by Johar and Awalluddin (2011) claimed that the ease of learning to use e-commerce is another advantage.

On the other hand, Browne et al.(2004, p.242) identified some disadvantages of buying online, such as preferring to see the products before purchasing, worrying about the security of the transactions, difficulty in returning items, in some cases shipping and costs are high and take a long time, no salesperson (to speak to) and the wrong product can be shipped.

Comparing advantages and disadvantages of e-commerce helps firms and individuals to recognize that the advantages of e-commerce outweigh the disadvantages.

2.8 Background of the Adoption of e-commerce

This section is divided into two sub-sections. The first sub-section talks about motivation and success factors for the e-commerce adoption. The second sub-section explains the challenges that face the adoption of e-commerce (barriers). Prior to this, however, a brief paragraph describes some of the models and theories used by the quantitative approach to predict human behaviour. The paragraph is kept brief because this study adopts a qualitative approach and these models are more appropriate for research that uses a quantitative approach. However, much of the empirical work to date uses the quantitative approaches as described below.

Many e-commerce projects are part of Information Systems (IS) projects. Some of these projects have low success rates. Therefore, researches have been undertaken to identify the factors that facilitate the use of IS. These factors have been grouped into the following four models that help analyse IS usage (Legris et al., 2003, p.191):

1. Theory of Reasoned Action (TRA), which was developed by Fishbein and Ajzen (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980) that can predict and explain human behaviour. It is *"Designed to explain virtually any human behaviour"* (Ajzen and Fishbein, 1980, p.4). Ajzen and Fishbein (1980) described behavioural intention as the *"Strength of one's intention to perform a specified behaviour"* and identified that subjective norm is the *"Person's perception that most people who are important to him think he should or should not perform the behaviour."*
2. Technology Acceptance Model (TAM) developed by Fred Davis in 1985 was adapted from TRA. This model helps one to understand and provide evidence on how end-users can use or accept a technology. This model examines the perceived ease of use and usefulness and the probability of system use. TAM aims to predict and explain user behaviour toward ICT. Furthermore, TAM provides, *"A basis for tracing the impact of external factors on internal beliefs, attitudes and intentions."* (Davis et al., 1989, p.985)

3. The Theory of Planned Behaviour (TPB) is the expanded version of TRA, which includes measures of control belief and perceived behavioural control. The theory was developed by Icek Ajzen (1985).

4. The Diffusion of Innovation Theory (DOI) by Rogers (1995) was originally published in (1962). This theory explains the spread of new ideas and technologies over culture. DOI has four elements that influence the spread of new ideas or technologies. These are innovation, time, communication channels and a social system. People move from one stage to another in the following order: knowledge, persuasion, decision, implementation and confirmation.

The following section reviews previous studies on factors affecting consumers' adoptions of e-commerce.

2.8.1 Suppliers' motivations and consumers' successful factors in e-commerce adoption

This section focuses on motivations that encourage suppliers to apply e-commerce to their businesses as well as concerns about the successful factors that encourage consumers to adopt it.

The improvement in world communications has led companies around the world to move to e-commerce (Barbonis and Laspita, 2005, p.31). Chong, Lin et al. (2009) identified some factors that affected collaborative commerce (c-commerce) adoption by Malaysian organizations. These factors included competitive pressure and top management support. Jianhong and Hua (2011) pointed out that consumer belief is a significant factor that affects e-commerce adoption. Consumer belief is affected by many factors, such as, privacy, trust, economic conditions, social culture and suppliers' reputations. Chan et al. (2001, p.5) identified a number of key drivers that encourage suppliers to apply e-commerce. First, the Internet makes distribution systems easy for firms. Second, the increasing competition in business forces companies to search for new opportunities such as applying e-commerce in their businesses. Third, globalization leads companies to move into international markets to be able to expand their networks. The fourth key driver is related to the information age by which businesses increase

their trade through benefiting from collecting information for marketing purposes. Fifth, the use of technologies for automation to avoid the increasing cost of labour. Finally, to satisfy companies and customers requirements there should be low cost and high quality products and services.

Another research stated that suppliers are motivated by four factors that influence the evolution of e-commerce education in China, which are economic globalization, domestic economic growth, ICT advancement and government's promotional interventions (Zhang et al., 2004, p.4).

Return policies are considered to be one of the successful factors for consumers and suppliers in the e-commerce adoption process. As discussed in Chapters six to ten, not applying a return and refund policies is one of the barriers preventing consumers adopting e-commerce in Saudi Arabia. The positive side is that some studies have confirmed that applying a return policy increases sales (Whyatt and Koschek, 2010, p586, Business Fraud Awareness, 2010).

Halaweh and Fidler (2008) divided security factors into tangible (security certificates, https, and lock icon) and intangible features (previous experiences and word of mouth). The research showed that consumers gave more priority to intangible features rather than tangible ones.

Xu (2008, p.334) declared that there is an impact of the environmental factors (information, infrastructure, and demographic factors) in the B2C e-commerce adoption process in his study. Al-Maghrabi et al. (2011, p.101) conducted a study in Saudi Arabia and argued that website quality and content bring usefulness and enjoyment to consumers. In addition, they stated that family and friends could pass trust in a particular website by "*positive word of mouth.*" Kim and Fesenmaier (2008) suggest that first impressions cause quick decisions and judgments to be made about the quality of a website.

Sung (2006, p.1167) listed sixteen factors required by firms to be successful when applying e-commerce. These success factors include:

- Customer relationship i.e. the webpage should be customized for each customer.
- Privacy of consumer information.
- A low-cost operation.
- Ease of use.
- The need for an e-commerce strategy.
- The need for e-commerce technical expertise.
- The stability of the system.
- The security of system.
- A fast retrieval time.
- Processing payments safely.
- Plenty of information about the goods.
- The variety of goods.
- The low prices of the goods.
- Delivery services.
- Other services such as hot lines.
- The ability to evaluate e-commerce operations.

Many factors found in the literature are variously categorized, but they serve the same purpose. For example, Jennex et al. (2004, p.280) counted five infrastructure success factors for e-commerce, which include people factors (i.e. employees who can meet the demand of the company's clients and understand their culture and language), a technical infrastructure to create applications for the organization, a client interface, a business infrastructure and a regulatory interface. Turban (2000) identified some critical success factors (CSF) that have the same significance such as top management support and a user-friendly webpage. With regard to e-services, Featherman et al. (2010) stated that security and reliability concerns influenced privacy risk and this type of risk is higher for the online purchase of e-services than for goods and for traditional services.

Furthermore, the influence of perceived risk among people increased during the online purchase decision stage (Martín et al., 2010, Jones and Leonard, 2008).

Limayem et al (2000, p.427) proposed that there are six factors, which influence online shopping. These are:

- Intentions “*as behaviour is preceded by intentions.*”
- Attitude.
- Personal innovativeness (people are not like each other in the degree and speed of adoption of innovation).
- Behavioural control (i.e. site accessibility, loading speed, ability to navigate, product description, transaction efficiency and navigation efficiency).
- Subjective norms (i.e. family influence, media influence and friends’ influence).
- Perceived consequences (i.e. cheaper prices, risk of security breach, comparative and convenient shopping, privacy, improved customer services and saving time).

Many researchers have identified the same CSF for e-banking such as Shah et al.(2007, p.513) who listed proficient customer service, legislation, re-engineering the business process, real-time integration of distributed resources, real-time Internet (such as the Internet integrated with ATM offering a real-time balance), the richness of the content of web pages and company brands as CSF. Laosethakul and Boulton (2007, p.10) also explored the following CSF for e-commerce. These factors are a convenient website (i.e. ease to navigate, a variety of products and clear instructions), the quality of the Internet connection, online security and privacy, strong information technology capability (i.e. qualified ICT people), brand name recognition, product availability, delivery, and customer service and customer relationship. Chong et al. (2010, p.279) added government support as significant factors in predicting the intention to use online banking in Vietnam.

The table below summarizes suppliers and consumers’ motivations and concludes the need for businesses to consider these CSF to ensure success in the e-commerce adoption process.

Chapter 2. E-commerce literature Review

Table 2.6 Motivations and CSF for suppliers and consumers in order to adopt e-commerce

Factors	Suppliers	Consumers
Internet makes distribution systems easy for firms.	✓	
The increasing competition in business forces companies to search for new opportunities	✓	
Globalization leads companies to move into international markets to be able to expand their networks.	✓	
The information age means businesses benefiting from collecting information for marketing purposes.	✓	
The use of technologies for automation to avoid the increasing cost of labour.	✓	
Low-cost operation and high quality products and services.	✓	✓
Domestic economic growth	✓	
ICT advancement	✓	
Government's promotional interventions and support	✓	
Return policies	✓	✓
Quality and richness of the content on website		✓
Family and friends can pass trust to a particular website		✓
Customizing a webpage for each customer		✓
Stability of the system		✓
The good security and privacy of consumer information		✓
Fast retrieval time and real-time integration of distributed resources (such as Internet integrated with ATM offering a real-time balance)	✓	✓
Quality of Internet connection	✓	✓
Product availability		✓
Legislation	✓	✓
Proficient customers services and customers relationship		✓
People factors (i.e. employees who can meet the demand of the company's clients and understand their culture and language) and Personal innovativeness (people are not like each other in the degree and speed of adoption of innovation)		✓
Increase sales and increase distribution channels	✓	
Client interface		✓
Top management support	✓	
Improve customer services	✓	
Intentions " <i>as behaviour is preceded by intentions</i> "		✓
Attitude		✓
Provide better information for managers	✓	
Subjective norms (i.e. family influence, media influence and friends' influence)		✓
Perceived consequences (i.e. cheaper prices, risk of security breach, comparative shopping, convenient shopping, privacy, improved customer services and saving time)		✓
Trust		✓
Company's' brands		✓
Convenient website (i.e. ease to use and navigate, variety of products, clear instructions)		✓
Strong information technology capability (i.e. qualified ICT people)	✓	✓
Delivery	✓	✓
The low-cost advertising medium	✓	

The next section describes and lists the obstacles that may prevent the adoption process of e-commerce.

2.8.2 Challenges to e-commerce adoption (Barriers)

This section reviews previous research into barriers that prevent the adoption of e-commerce in developing countries. Abdulghader et al. (2011) ranked most of the barriers that affect e-commerce adoption in Libya. These barriers included the fear of Internet fraud, a lack of the required infrastructure, a lack of government support, the initial expense, a lack of knowledge about e-commerce, the lack of a secure e-payment system, organizational barriers, the lack of a telecommunications infrastructure and poor coordination.

Mohanna et al. (2011) identified many factors that influence e-commerce adoption. These factors were divided into technical infrastructure (Internet speed and connectivity, logistics and ICT experts), managerial organizations (government investment in IT, the availability of e-commerce department inside organizations, and legal issues) and social-cultural background (ICT literacy, trust in e-commerce, e-commerce awareness and training).

Another research by Kapurubandara and Lawson (2006) divided e-commerce barriers into internal and external ones. Internal barriers are, for example, employees' lack of skills and security concerns. External barriers are cultural (lack of popularity for online sales), political (the instability of one's country's economy), social (lack of information about e-commerce and of ICT knowledge among senior management), legal and regulatory (an insufficient legal framework for e-commerce, lack of standards in software and little government support).

Another piece of research showed that the lack of a postal system discouraged e-commerce in developing countries (Hunaiti et al., 2009). Abu Abid, Rahim et al. (2011) identified some of the barriers mentioned above and added some others, such as, lack of interest by business partners to participate in e-business initiatives, inadequate competition from industry, lack of time to implement e-business, the high level of

complexity associated with its implementation and the lack of compatibility between current and future e-business infrastructure. Thulani et al. (2010) agreed on most of the above factors and added the lack of suitability of e-commerce for some products offered by SMEs. Olatokun and Kebonye (2010) found that security issues are a major challenge for SMEs. Lawrence and Tar (2010) counted four e-commerce barriers in developing countries. The first was infrastructure barriers which include technology, telecommunication, high cost of the Internet and access to equipment. The second is the lack of government policy and support. The third is socio-cultural barriers, which include language, trust and lack of personal contact. The fourth is socio-economic barriers, such as, economic conditions, the payment and educational system and logistics.

CommerceNet conducted a study in the year 2000 to determine the top ten barriers to e-commerce in the United States (Turban et al., 2006, p.27). The most important factors were security, trust and risk, lack of qualified personnel, lack of business models, culture, user authentication, lack of public key infrastructure, organization, fraud, slow navigation on the Internet, and legal issues. Barbonis and Laspita (2005, p.31) and Jones and Leonard (2008) also agreed with CommerceNet that lack of trust is one of the barriers to e-commerce adoption. Karakaya and Charlton (2001, p.49) also agreed with the above barriers as they listed bandwidth (high-speed Internet), privacy and security of transactions to be some of the barriers preventing consumers adopting e-commerce. Moreover, they mentioned that product delivery and return are major concerns for consumers as delivery in some cases is late or not in sequence, especially, during holiday seasons.

Papazafeiropoulou (2004) examined the adoption of new technologies such as the Internet and e-commerce in eight countries in South-Eastern Europe and found the weaknesses and threats that may influence the adoption of new technologies (e-commerce). These include:

- Limited Internet access.
- Lack of skilled personal.

- Lack of computer equipment.
- Lack of telecommunications infrastructure.
- Lack of flexible payment systems.
- Absence of e-commerce awareness among residents.
- Limited knowledge of English.
- Lack of cooperation between public and private sectors.
- Lack of cooperation between universities and private businesses.
- Absence of e-commerce regulations.
- The high cost of network facilities.
- Security concerns among people.
- High cost of the Internet.
- Delay in developing rural areas.
- Low income for ICT specialists.
- Low population income, which prevents investment opportunities.

Ahmed et al. (2006) conducted a survey in Saudi Arabia and identified some challenges that may face organisations when they want to adopt e-commerce in their business. Some of these factors related either to the organizations themselves or to their consumers such as relying on face-to-face contact, lack of technical support and elderly people unwilling to use information technology. Another study in Saudi Arabia conducted by Al-Hudhaif and Alkubeyyer (2011) addresses that awareness, human and technological resources, market e-readiness are some of the factors that affect private sector organizations in Saudi Arabia. AlGhamdi et al. (2011) and AlGhamdi et al. (2011b) identified many factors that affected e-commerce adoption in Saudi Arabia. These included selling and buying habits, delivery issues, online payment, lack of a strong ICT infrastructure, no clear regulations, lack of trust, lack of government support, people's culture, suppliers' beliefs in the inability to offer online advantages to consumers, that some products are not suitable for e-commerce (delivering food), lack

of e-commerce experience among suppliers, resistance to change and the high setup cost for e-commerce system.

Negative feedback has much more influence than positive feedback on customers' decisions (Zhou et al., 2009). In addition, a seller's reputation has an impact on sales (Ye et al., 2009). Farhoomand et al. (2000, p.27) identified six barriers to global e-commerce. Some of these barriers have been discussed above while others are worthy of being included in the literature.

1. Legal barrier: It includes user privacy, advertising, copyright laws, legitimacy of electronic signatures, ISPs' responsibilities and cryptography and public key encryption.
2. Technical barrier: This includes security, infrastructure and integration of old systems, the availability of applications that can support local languages and the performance of the Internet.
3. Economic barrier: It includes income, literacy level, social infrastructure, currency, inflation, taxation system, interest rate and the cost of buying technologies.
4. Cultural barrier: It includes ethnicity, religion and language.
5. Organizational barrier: It includes negative attitudes, lack of knowledge, resistance to change and lack of top management commitment.
6. Political issues barrier: Such as government attitude and interagency coordination.

Nine barriers to Internet banking were listed by Rotchanakitumnuai and Speece (2003, p.316), which were grouped into trust issues including security, trust in the service provider and reliability of transactions. Legal support issues are the second group, which include privacy protection, fair liability for bank customers for any financial mistakes and the ability of the court to resolve Internet banking disputes efficiently. The final group are the organizational barriers, which include negative attitude, lack of ICT resources and lack of knowledge on how to use Internet banking efficiently.

Vatanasakdakul et al.(2004, p.5-10) agreed with previous literature and grouped

these barriers into social and cultural issues that prevented B2B e-commerce adoption in developing countries. These issues are trust and control, motivation, lack of initiative, importance of personal contact, cost and language. They pointed out that language is a very serious problem. In addition, they declared that e-commerce in some of the developing countries increases costs because they do not trust the Internet (i.e. emails) so they send emails then confirm it by a call or fax. Moreover, they found many managers prefer to use a 'wait and see' strategy and they are forced to engage in e-commerce business through foreign partners or by company image. Their last barrier is with regard to the fact that most of the top managers are old and there is a gap between the boss and his/her subordinates. Others like Aguila-Obra and Padilla-MelUndez (2006, p.108) focused on organisations as a main e-commerce barrier that affects Internet technology adoption. There are two factors involved: technological resources and managerial capabilities. Chircu and Kauffman(2000, p.66) identified other barriers, such as, conversion (converting from the old to the new system), resources, knowledge and usage. Barbonis and Laspita (2005, p.31) listed most of the issues already identified in the literature, such as, security, privacy, the state of anonymity of the Internet, restricted ways of payment and lack of personal communication as barriers to the adoption of e-commerce.

Siala et al. (2004, p.7) agreed with the literature that,

“Religion influences consumer purchase decisions.”

Chau et al.(2002, p.139) had the same opinion on culture and stated that cultural influences consumers' attitudes towards e-commerce. Moreover, Barbonis and Laspita (2005, p.33) stated that cultural factors, personal characteristics (attitudes to trust and risk) and demographic factors are some of the factors that influence adoption in Greece.

Chapter 2. E-commerce literature Review

Table 2.7 Challenges for suppliers and consumers in order to adopt e-commerce

Challenges (Barriers)	Suppliers	Consumers
Risk, security, online fraud, privacy, trust and User authentication and lack of public key infrastructure	✓	✓
Lack of business models	✓	
Cultural barrier, which include ethnicity, religion and language		✓
Absence of e-commerce section in trading department	✓	
Slow navigation on the Internet		✓
Legal issues	✓	✓
Lack of qualified personnel	✓	
Product delivery and return delivery in some cases is late or not in sequence	✓	✓
Lack of time to implement e-business system	✓	
Relying on face-to-face contact		✓
Demographic factors		✓
Old people are unwilling to apply information technology in their life		✓
The old mentality of most of the top managers in developing countries	✓	
Market e-readiness		
Negative feedback has much more influence than positive feedback on customers' decisions		✓
Bad sellers' reputations		✓
Technical barrier, such as security, infrastructure, integration of old systems, availability of applications, especially those that can support local languages and the performance of the Internet	✓	
Economic barrier, which includes income, literacy level, social infrastructure, currency, inflation, taxation system, interest rate and the cost of buying technologies		✓
Organizational barrier, which include negative attitude, lack of knowledge, resistance to change (managers prefer to use a 'wait and see' strategy) and lack of top management commitment	✓	✓
Political issues such as government attitude and interagency coordination	✓	✓
Lack of government support		
Lack of initiative	✓	✓
Importance of contacts		✓
Language is a very serious problem		✓
Lack of compatibility between old and new systems	✓	
Resource barriers	✓	
Knowledge barriers	✓	✓
Usage barriers		✓
The state of anonymity of the Internet		
Restricted ways of payment and reliability of transactions	✓	✓
Lack of personal communication		
Poor coordination		
Personal characteristics (attitudes to trust and risk)		✓
Forced to do e-commerce business through foreign partners or by company image	✓	
High cost of the Internet		✓

2.9 Summary

This chapter presents a literature review about e-commerce, its background, the differences between it and e-business, its advantages and disadvantages, adoption background, motivations and barriers for e-commerce adoption. However, grounded theory methodology requires the researcher to be open-minded and not empty headed. Therefore, and in order to follow Strauss and Corbin's (1990) approach, the researcher reviewed some of the literature, which helped to design the pilot and then the first and second empirical studies. After the results of these studies were obtained, the researcher conducted a comprehensive literature review to be able to compare and evaluate the thesis's findings.

The next chapter is a logical successor of the present one. It reviews literature on Saudi Arabia and developing countries.

Chapter 3

Overview on Saudi Arabia and developing countries

3.1 Introduction

This chapter is complementary to chapter two and reviews the relevant literature on developing countries in general and Saudi Arabia in particular. The review revealed the real status of ICT in area under study. The status of ICT is a key factor in e-commerce rollout. Therefore, and in order to describe the Saudi context, this chapter begins with an appraisal of the status of ICT in developing countries, which is followed by a brief description of Saudi Arabia including its official language, religion, population and location. Next, the reasons for selecting Saudi Arabia for this research are justified. From there the chapter proceeds to describe the status of ICT in Saudi Arabia. The chapter then ends with a summary.

This research considered Saudi Arabia to be a developing country. Therefore, the next section presents and explains the definition, criteria, and relevance of the term “developing countries” to this study.

3.2 Developing countries

Before going deep into the literature, this section explains and clarifies the meaning of “*developing countries*” in this research, its definition and criteria.

To begin with, Kofi Annan, the former Secretary General of the United Nations stated that

“A developed country is one that allows all its citizens to enjoy a free and healthy life in a safe environment. And a genuinely developing country is one in which civil society is able to insist, not only on material wellbeing, but on improving standards of human rights and environmental protection as well.” (ANNAN, K., 2000)

The World Bank (2013) classified countries over the world into four income groups which are:

- Low income countries which has a gross national income (GNI) per capita of US\$1,005 or less.
- Lower middle income countries which has a GNI per capita between US\$1,006 and US\$3,975.
- Upper middle income countries which has a GNI per capita between US\$3,976 and US\$12,275.
- High income countries which has a GNI above US\$12,276.

On the other hand, WTO (World Trade Organization) presents five different groups of developing countries (KASTENG et al., 2004) which are:

- Least Developed Countries (LDCs) (50),
- Food insecure countries, with the exception of the LDCs (34)
- Developing countries with special need for rural development (44)
- Significant net agricultural-exporting developing countries (4)
- Advanced developing countries (14)

WTO classified Saudi Arabia as a developing country (middle-income country) with special needs for rural development.

But at the end, most of the classifications agreed about the classification to be either developing countries or developed ones (Nielsen, 2011). For example, developed

countries are named in the IMF as “Advanced countries”. They are also named under the World Bank as “High-income countries”.

Regarding the criteria that differentiate between developing countries and developed ones, the UN (1993) identified the following criteria for least developed countries:

- Income per capita; countries with high gross domestic product (GDP) per capita would thus be described as developed countries.
- Another economic criterion is industrialization; countries in which the tertiary and quaternary sectors of industry dominate would thus be described as developed.
- More recently another measure, the Human Development Index (HDI), which combines an economic measure, national income, with other measures, indices for life expectancy and education, has become prominent. This criterion would define developed countries as those with a very high (HDI) rating. Unlike GDP, HDI takes into account how income is turned "into education and health opportunities and therefore into higher levels of human development."

This research adopted the United Nations’ (UN) classification (UN, 2007, p127) that groups countries for analytical purposes and reports into developed economics (e.g. Europe, Japan, USA, Canada, etc. but excluding the European transition economics,), major developed economies (e.g. the group of seven, which includes the UK, USA, Canada and others), economies in transition (e.g. Eastern Europe) and finally the developing countries (e.g. Africa, Western Asia, which includes Saudi Arabia). The UN classifies developing countries into oil-exporting ones, which includes Saudi Arabia and oil-importing ones, which include all other developing countries that are not in the first group.

Moreover, the UN views Saudi Arabia, Bahrain, Kuwait, Oman, Qatar and the United Arab Emirates similarly. They are all members of the Gulf Co-operation Council (GCC). These six countries exhibit many similarities. They all are classified as

developing and oil-exporting countries. All the GCC countries are ruled by monarchies (Chalcraft, 2010).

Hofstede (2009) conducted an extensive cross-culture study of how values are influenced by culture. As a result, Hofstede defined five cultural dimensions, which are:

1. Power Distance Index (PDI): *“the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally”* (Hofstede, 2009).
2. Individualism (IDV): *“the degree to which individuals are integrated into groups”* (Hofstede, 2009).
3. Masculinity (MAS): *“the distribution of roles between the genders which is another fundamental issue for any society to which a range of solutions are found”* (Hofstede, 2009).
4. Uncertainty Avoidance Index (UAI): *“deals with a society's tolerance for uncertainty and ambiguity; it ultimately refers to man's search for truth. It indicates to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations”* and *“Uncertainty avoiding cultures try to minimize the possibility of such situations by strict laws and rules, safety and security measures, and on the philosophical and religious level by a belief in absolute Truth; 'there can only be one Truth and we have it'.”* (Hofstede, 2009)
5. Long-Term Orientation (LTO): *“values associated with Short Term Orientation are respect for tradition, fulfilling social obligations, and protecting one's 'face'”* (Hofstede, 2009).

His study included many countries such as Saudi Arabia, UK, USA, China and Japan. He grouped countries that have common value scores into one group or region. For example, he collected all the Arabic countries of his study (Egypt, Saudi Arabia, United Arab Emirates (UAE), Kuwait, Libya, Iraq and Lebanon) into a single group called the Arab World. He suggested that these Arabic countries have similar cultural values.

Therefore, and in order to confirm, refute and generalize the current thesis's results, the

researcher declares that findings in this study came from Saudi Arabia in particular which cannot be representative of others but can be captured as a base for further works in other developing countries (Bryman 2008,p.391).

3.3 Information and Communication Technology (ICT) in developing countries

The Internet is diffusing rapidly into Asia, Africa and the Middle East. The population of these countries represents approximately two-thirds of the world's total whereas the percentage of its Internet users did not exceed forty two percent of the total worldwide users in 2007 as illustrated in figure 3.1 (InternetWorldStats, 2007).

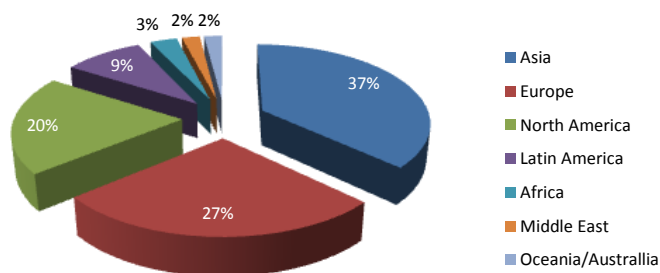


Figure 3.1 Internet users in the world distribution by world regions in 2007 (InternetWorldStats, 2007)

This percentage rose in 2010 to reach fifty-one percent of the total Internet users in the world. By contrast, in 2010 the combined populations of Europe and North America represented seventeen percent of world's total yet thirty eight percent of the Internet users in world were from these two regions as illustrated in figure 3.2 (InternetWorldStats, 2011).

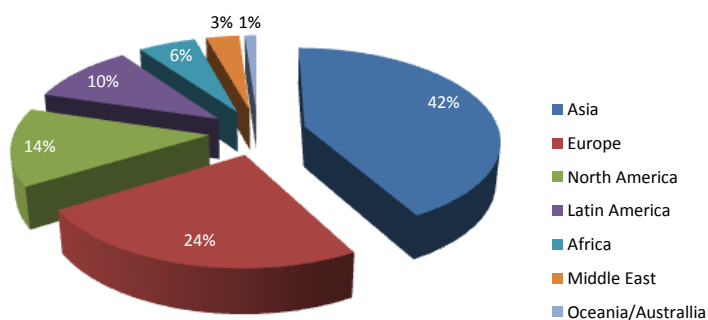


Figure 3.2 Internet users in the world distribution by world regions in 2010 (InternetWorldStats, 2011)

The following table shows that seventy seven percent of North America’s population use the Internet whereas Africa, Asia and the Middle East appear at the bottom of the table with approximately eleven percent, twenty-one percent and twenty-nine percent of their population using the Internet.

Table 3.1 World Internet usage and population statistics (InternetWorldStats, 2011)

World Regions	Population	Internet Users	Internet Users	Penetration	Growth	Users %
Africa	1,013,779,050	4,514,400	110,931,700	10.9 %	2,357.3 %	5.6 %
Asia	3,834,792,852	114,304,000	825,094,396	21.5 %	621.8 %	42.0 %
Europe	813,319,511	105,096,093	475,069,448	58.4 %	352.0 %	24.2 %
Middle East	212,336,924	3,284,800	63,240,946	29.8 %	1,825.3 %	3.2 %
North America	344,124,450	108,096,800	266,224,500	77.4 %	146.3 %	13.5 %
Latin America/Caribbean	592,556,972	18,068,919	204,689,836	34.5 %	1,032.8 %	10.4 %
Oceania / Australia	34,700,201	7,620,480	21,263,990	61.3 %	179.0 %	1.1 %
World total	6,845,609,960	360,985,492	1,966,514,816	28.7 %	444.8 %	100.0 %

In the Arab world (Middle East), approximately 30% of the population are connected to the Internet and the region exhibits one of the highest rates of growth for Internet usage but its individuals remain reluctant to use e-commerce, which is the gap

for this research. In 1992, Egypt established the area's first Internet connection via France (Privacy International, 2003b). In 1995, Bahrain and Kuwait started to access the Internet. Saudi Arabia citizens started accessing the Internet in 1999 (Tucker et al., 2002, p.2, CITC, 2007a). Most Arab countries apply national proxy filtering systems to block some unwanted materials such as some political and obscene websites (Tucker et al., 2002, p.2).

The United Nations Economic and Social Commission for Western Asia (UN-ESCWA) has 14 group members, which are GCC (Saudi Arabia, Bahrain, Kuwait, Oman, Qatar and United Arab Emirates), Egypt, Iraq, Jordan, Lebanon, Palestine, Sudan, Syria and Yemen. These Arabic countries are also classified as developing ones. UN-ESCWA (2009) categorized four maturity levels with respect to ICT confidence and security and classified the above Arab countries among these levels as shown in the table below.

Table 3.2 UN-ESCWA's maturity level in structuring ICT's confidence and security (un-escwa, 2009)

Country or territory	Maturity level 1		Maturity level 2		Maturity level 3		Maturity level 4	
	2007	2009	2007	2009	2007	2009	2007	2009
Saudi Arabia			✓	✓				
Egypt			✓	✓				
Qatar			✓	✓				
United Arab Emirates			✓	✓				
Iraq		✓	✓					
Kuwait		✓	✓					
Bahrain	✓	✓						
Jordan	✓	✓						
Lebanon	✓	✓						
Oman	✓	✓						
Palestine	✓	✓						
Syria	✓	✓						
Yemen	✓	✓						
Sudan		✓						

The highest level is maturity level 4. At this level, a country is mature in structuring

ICT confidence and security and none of the Arabic countries has reached this level yet. Countries at maturity level one lack standards and regulations in law, security and privacy related to ICT, such as Syria and Yemen. Countries at maturity level two, such as Saudi Arabia and Egypt, already have the basic laws that counter the misuse of ICT and have built a secure e-transaction environment but there is a lack of sufficient measures able to secure information. None of the Arabic countries has reached level three. This level requires stronger security policies and well-suited cyber-security awareness plans. The 14 members of ESCWA still lack the right regulations to protect people's information and their online privacy (un-escwa, 2009).

Most of the Arabic countries do not have a legal framework for electronic transactions. Saudi Arabia, Egypt, Bahrain, Jordan, Oman, Sudan and UAE are the only governments that have published e-transaction laws in their countries as shown in table 3.3 (un-escwa, 2009). For instance, CITC in Saudi Arabia issued the e-crimes and e-transaction acts on 27th of March 2007 (Saudi Network Information Center, 2010b).

Table 3.3 Availability of e-transaction law, e-signature law and infrastructure for the management of PKI in the escwa region, 2009 (un-escwa, 2009)

Country or territory	e-transaction law	e-signature law	Management of Public Key Infrastructure (PKI)
Saudi Arabia	✓	✓	✓
Egypt	✓	✓	✓
Bahrain	✓	✓	x
Jordan	✓	✓	x
Oman	✓	✓	x
Sudan	✓	✓	x
United Arab Emirates	✓	✓	x
Syria	x	✓	x
Kuwait	x	x	x
Lebanon	x	x	x
Palestine	x	x	x
Qatar	x	x	x
Iraq	x	x	x
Yemen	x	x	x

The Economist Intelligence Unit (2010) ranked e-readiness for the digital

Chapter 3. Overview on Saudi Arabia and developing countries

environment of over 70 countries in order to give an indication of the quality of the ICT infrastructure in each country. A selection of some of these countries is illustrated by the following table.

Table 3.4 Economist Intelligence Unit digital economy rankings, 2010
(Economist Intelligence Unit, 2010)

2010 rank (of 70)	2009 rank	Country	2010 score (of 10)	Connectivity (20%)	Business Environment (15%)	Social and Cultural environment (15%)	Legal Environment (10%)	Government policy and vision (15%)	Consumer and business adoption (25%)
1	2	Sweden	8.49	8.20	8.13	8.53	8.25	8.90	8.75
3	5	United States	8.41	7.35	7.85	9.00	8.70	9.25	8.60
7	8	Hong Kong	8.22	7.65	8.40	7.27	9.00	9.18	8.28
14	13	United Kingdom	7.89	7.65	7.40	7.73	8.10	8.55	8.00
16	22	Japan	7.85	7.70	7.16	7.80	7.43	8.75	8.04
32	34	United Arab Emirates	6.25	6.80	7.27	5.47	5.10	6.20	6.18
36	38	Malaysia	5.93	4.35	7.36	5.47	6.88	6.65	5.80
40	41	South Africa	5.61	3.65	6.03	5.57	7.58	5.80	6.05
43	43	Turkey	5.24	4.20	6.11	5.80	5.45	5.50	4.98
52	51	Saudi Arabia	4.75	4.25	6.34	5.13	4.75	4.85	3.90
57	57	Egypt	4.21	2.55	6.20	5.00	5.20	4.90	3.05
65	65	Indonesia	3.60	2.60	6.04	3.60	4.20	3.88	2.55
68	67	Algeria	3.31	2.90	4.74	3.87	3.30	2.65	2.83

This table contains four Arabic countries. UAE is the leader among the Arabic countries. Its ranking has improved from 34 in 2009 to 32 in 2010. Saudi Arabia holds second place in terms of Arabic countries with a ranking of 52 out of 70 but lags far behind the UAE. Saudi Arabia has also recorded a lower score in the consumer and business adoption section with a score of 3.90 out of 10. Egypt is ranked 57 out of 70. Algeria is ranked last with 68 out of 70. The remaining Arab countries are not included in this ranking due to either a lack of information or their low scores.

3.4 Kingdom of Saudi Arabia in brief

The field study of this research is Saudi Arabia; therefore, this section describes the country in brief. Saudi Arabia is an Arabic and Islamic country as most of its citizens are Muslim Arabs (Abir, 1993, Ministry of Foreign Affairs, 2006). Their first language, therefore, is Arabic. The political system is a monarchy. The Riyal is the main currency, which is currently equal to approximately £0.16 or \$0.26. English is widely spoken as a second language, especially in the business sector (Ministry of Foreign Affairs, 2011).



Figure 3.3 Map of Saudi Arabia
(Google Maps, 2011)

As seen in the above figure, Saudi Arabia is located in south western Asia. The country occupies an area of 2,150,000 square kilometres. It is the second largest Arabic country after Algeria and counted as the 13th largest country in the world. Half the total area of Saudi Arabia is desert (Ministry of Foreign Affairs, 2006). Saudi Arabia has the largest reserve of crude oil and is the world's second biggest oil producer (OPEC, 2011).

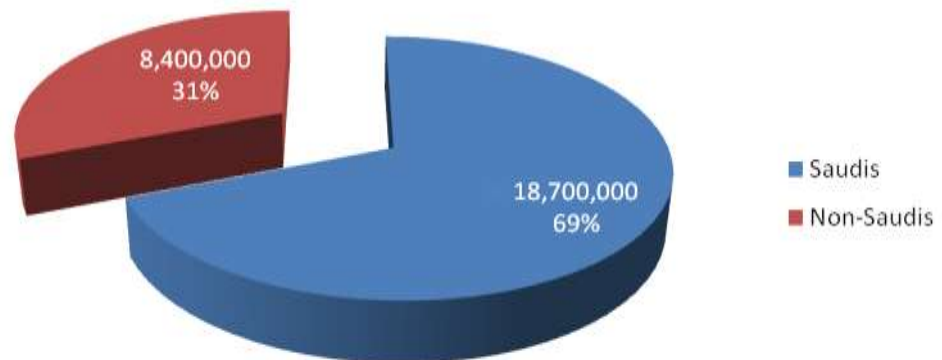


Figure 3.4 Saudi population

The above figure shows approximately twenty seven million people live in Saudi Arabia in 2010 (Central Department of Statistics and Information, 2010a). Non-Saudis represent slightly less than one third of the total population and number approximately 8.4 million. Saudi citizens, therefore, number around 18.7 million. Half of the Saudi population are males and half females. Seventy percent of the non-Saudis are males because more jobs are available to men and due to certain Saudi's regulations and visa restrictions that prevent issuing family visas for low-income overseas workers who wish to work in Saudi Arabia.

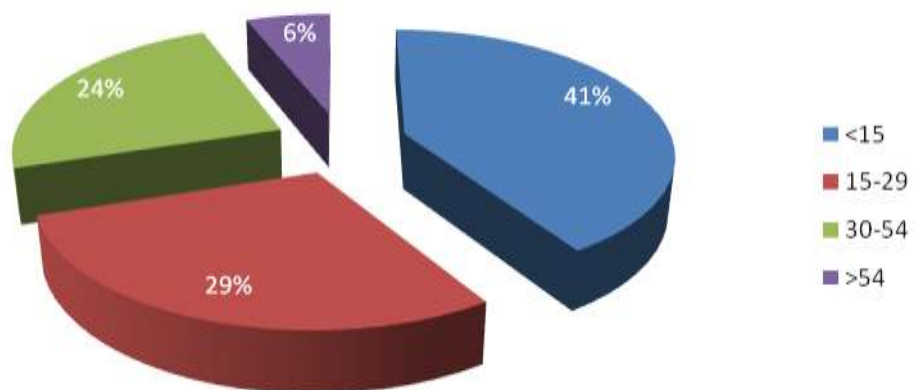


Figure 3.5 Age classification for the Saudi population

As seen in the above figure, slightly more than forty percent of Saudis are less than fifteen years old. Five and a half million of the total Saudi population are classified as young people between the ages of fifteen and twenty-nine and represent around one third of the Saudi population. As a result, the above statistical data shows that two-thirds of the Saudi population are under the age of thirty. A further four and a half million citizens are aged between thirty and fifty-four and they represent a further quarter of the Saudi population. The elderly Saudi people who are above fifty four years number slightly more than one million and represent six percent of the total population (Ministry of Economy & Planning, 2004, Central Department of Statistics and Information, 2010a).

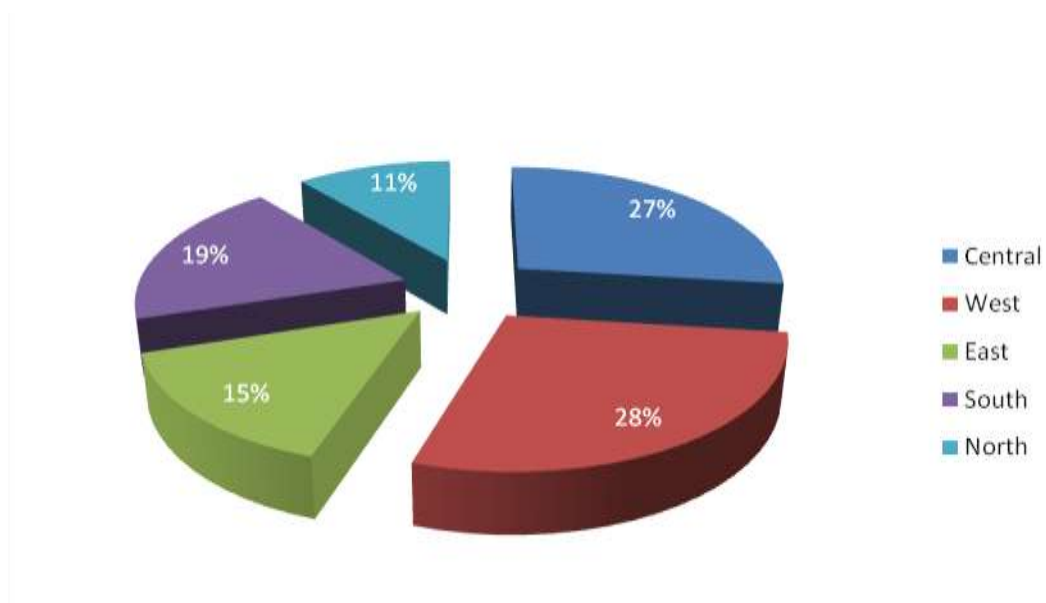


Figure 3.6 The five Saudi's regions and its populations

Saudi Arabia has five regions, illustrated in figure 3.6 (Central Department of Statistics and Information, 2010b, Ministry of Economy and Planning, 2004, Abir, 1993). The central region has a population of more than seven million and represents twenty-seven percent of the total population. This region has the Saudi Arabian capital city, Riyadh, as its only large city. In this region, more than eighty percent of the total population in this region live in Riyadh and it has reached five and half million people. The rest of the population is distributed in medium and small cities, towns and villages. This population distribution encourages firms in the central region to focus on Riyadh. The second region is the western one with more than seven and half million people and represents twenty-eight percent of the total population. This region has three large cities,

which are Jeddah, Makkah and Madinah. The third region is the eastern one with a population of about four million people and represents fifteen percent of the total population. More than eighty-five percent of the population of this region live in the four main cities, which are Dammam, Khobar, Hassa and Hofuf. The remaining fifteen percent, equalling half a million, is distributed in other towns and villages. The fourth region is the southern one with five million people and represents slightly less than twenty percent of the total population. Most of its population live in Abha, Khamis Mushait, Najran, AlBaha and Jizan. Finally, the northern region has a population of more than two and a half million most of them distributed in four medium sized cities, which are Tabouk, Hail, Arar and Aljouf.

3.4.1 Why Saudi Arabia

Saudi Arabia has been selected for the field study of this research for the following reasons:

1. Saudi Arabia is considered to be a developing country (United Nations, 2010) that lacks e-commerce facilities.
2. The Saudi Arabian General Investment Authority (SAGIA) established the National Competitiveness Centre (NCC) in 2006 to monitor, maintain and improve the competitiveness of businesses in Saudi Arabia (NCC, 2011). “*Doing Business*” (2011), which provides measures of business regulations across different economics has ranked Saudi Arabia the eleventh most competitive economy in the world. Although 43.6% of the Saudi population use the Internet (Internet World Stats, 2011) e-commerce still lags behind (Aleid et al., 2009). Therefore, Saudi Arabia is a good case study for this research to investigate the key factors that affect consumers’ adoption of e-commerce.
3. Saudi Arabia is considered the leader of the Arabic and Islamic countries. This is because it is the land of the two holy mosques. It hosts the Organisation of Islamic Cooperation (OIC), which consists of 57 countries and plays an important role in the International Monetary Fund (IMF) and the World Bank. Hence, Saudi Arabia is the only Middle Eastern country among the top 20 members of the IMF (number 8)

in terms of voting power (70,595 votes). In addition, it is the only Middle Eastern country that is a member of the Group of Twenty (G-20).

4. Consumers' adoption of e-commerce differs from country to country according to many issues such as culture, human behaviour, and country infrastructure (Barbonis and Laspita, 2005). The literature review revealed that little research into e-commerce adoption had been conducted in Saudi Arabia, which enhanced the researcher's interest to conduct this study and make a new contribution to knowledge.
5. The fifth reason is related to a previous one as countries that have geographical and environmental diversity are few and Saudi Arabia is one of these countries due to its large size (Saudi Ministry of Foreign Affairs, 2006). For example, on the eastern side of the country there is a low-lying region, whereas people on the western side live between large mountains and the Red Sea. The southwest region has mountains, valleys and forests combined with very nice weather. This region supports farming and national parks. By contrast, desert covers most of the central region of Saudi Arabia with high temperatures in summer and low temperatures in winter (Saudi Ministry of Foreign Affairs, 2006). Therefore, Saudi Arabia furnishes this research with different geographical conditions and it may reveal valuable findings that depend upon these differences.
6. Local authorities in Saudi Arabia supported this research and facilitated access to both empirical studies.
7. Finally, and in the context of Saudi Arabia, this research is unique with respect to its methodological approach and the use of theoretical sampling that ties the first empirical study with the second. Therefore, by applying GT's method in Saudi Arabia the study may bring new factors that affect e-commerce adoption among individuals.

3.4.2 ICT in Saudi Arabia

In 1994, Saudi Arabia allowed some institutions and other academic organisations to use the Internet as an initial experiment. By 1999, there was access to the Internet for the general public (CITC, 2007a). Saudi Arabia applied Internet filtering and assigned this matter to the King Abdulaziz City for Science and Technology (KACST) to maintain the firewall gate and filter its content (Open Net Initiative, 2004). In 2003, the Saudi government created the Communication and Information Technology Commission (CITC) to control and regulate ICT in Saudi Arabia. Then, in 2004, and as part of the CITC's regulations, KACST signed an agreement with the CITC that officially indicated the completion of the Saudi Network Information Centre (SaudiNIC), which was transferred from KACST, to the CITC. It moved practically in 2007 (ICANN, 2010). Table 3.5 outlines the major events in the Saudi's Internet field.

Table 3.5 The major events in the Saudi's Internet field
(CITC, 2011b)

Year	Event
1993	King Fahd University of Petroleum and Minerals (KFUPM) in Dhahran becomes the first Saudi institution to connect to the Internet.
1994	King Abdulaziz City for Science and Technology (KACST) becomes the '.sa' domain manager to co-ordinate Internet services within the Kingdom.
1999	Internet access begins the move from government and academia into the mainstream.
2004	Liberalization of the ICT market by introducing new licenses for telecom services
2004	SADAD enters production
2005	The Ministry of Communications and Information Technology (MCIT) establishes an e-Government Programme
2006	The transfer of Internet related responsibilities from KACST to CITC
2007	The Saudi Electronic Transactions Act promulgated, which establishes rules for electronic transactions and digital signatures
2010	Household broadband penetration reaches 41.6 % in Saudi Arabia
2010	Registration opened for Arabic domain names under (السعودية)

In 2003, the Saudi government assigned MCIT to start planning to provide e-government services across the country. For that reason, CITC launched a general department called e-government as illustrated by the figure below.

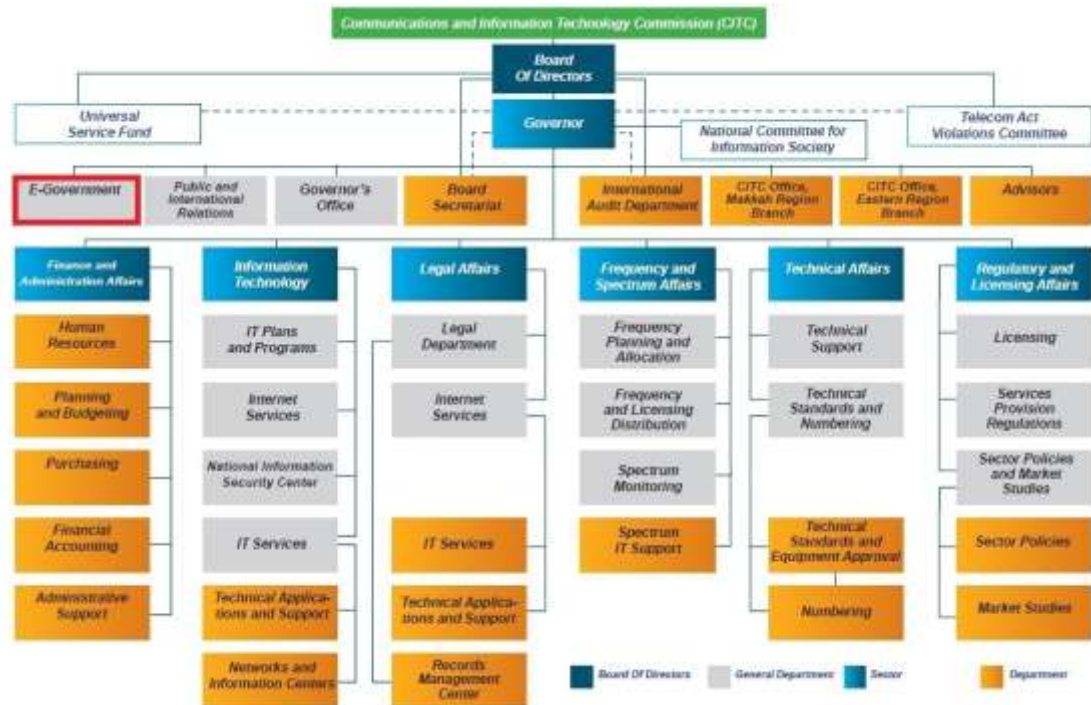


Figure 3.7 CITC's organizational structure (CITC, 2011a)

In 2005, the e-government programme called 'Yasser' was launched (Yesser, 2011). In contrast and as shown in figure 3.7, no single department controls and regulates e-commerce.

CITC is the responsible organization for the ".SA" domain. In 2006, the CITC established the National Centre for Information Security (CERT-SA), which aimed to increase awareness about the risks that affect the security of information at national level. In 2010, Saudi Arabia applied the Arabic domain "السعوديه" and assigned the CITC to be the sponsoring organisation for this domain (CITC, 2009).

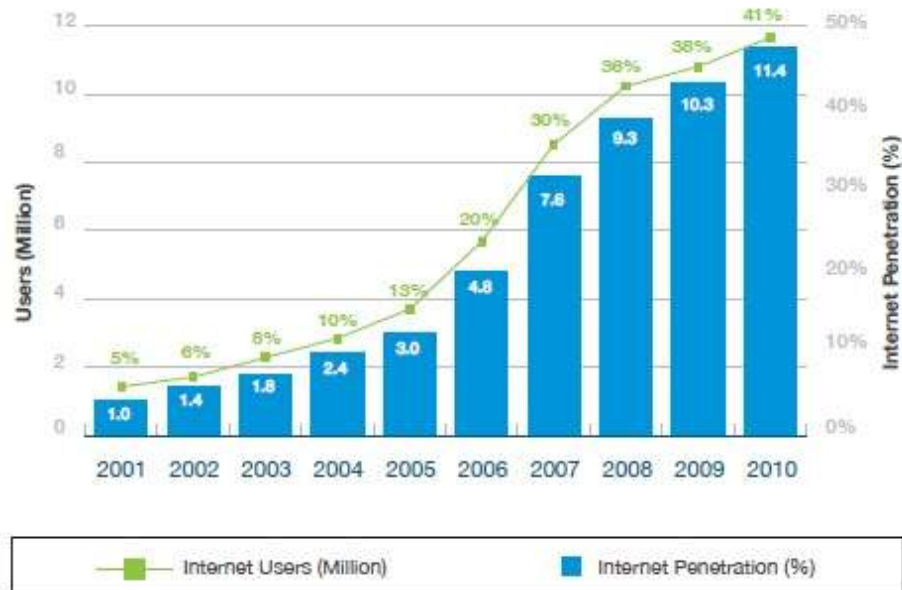


Figure 3.8 Internet Market Evolution from 2001 to 2010 (CITC, 2011a)

According to the CITC, the number of Internet users has increased dramatically in Saudi Arabia from one million in 2001 to more than eleven million in 2010. This means that approximately 41% of the population were using the Internet in 2010 as shown by the previous figure.

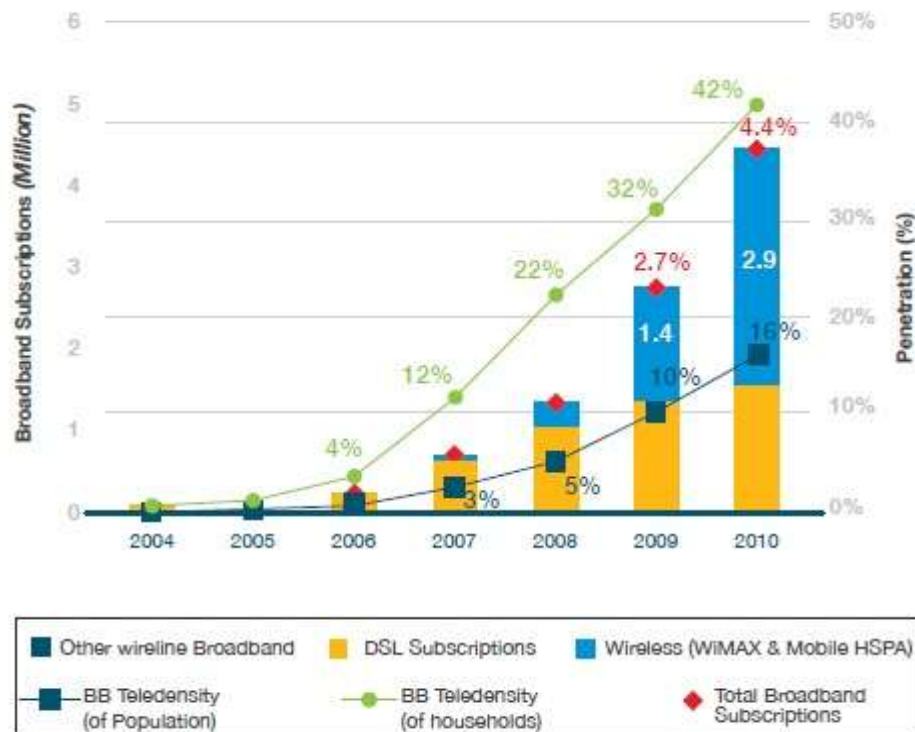


Figure 3.9 Broadband Market Evolution 2001-2010 (CITC, 2011a)

During 2010, and as seen in figure 3.9, there was enormous growth in broadband subscription, which increased from 2.7 million in 2009 to 4.4 million in 2010. This was due to the availability of mobile and wireless connections such as WIMAX. Unfortunately, WIMAX services are only available in large cities; therefore, people living in rural areas (towns and villages) do not have access to this service. Moreover, as reported by CITC (2011a), Internet penetration in Saudi Arabia has reached 42%, which is higher than the average for Internet penetration in developing countries (21%). A study by Abousaber and Papazafeiropoulou (2011) conducted over 63 SMEs in Saudi Arabia indicated that 75 percent have an Internet connection and the majority of them have a DSL connection.

Furthermore, the number of registrations for Saudi domains increased from 2,820 in 2000 to 14,552 in 2008 as illustrated in figure 3.10 (CITC, 2007b, CITC, 2009, CENTR, 2008).

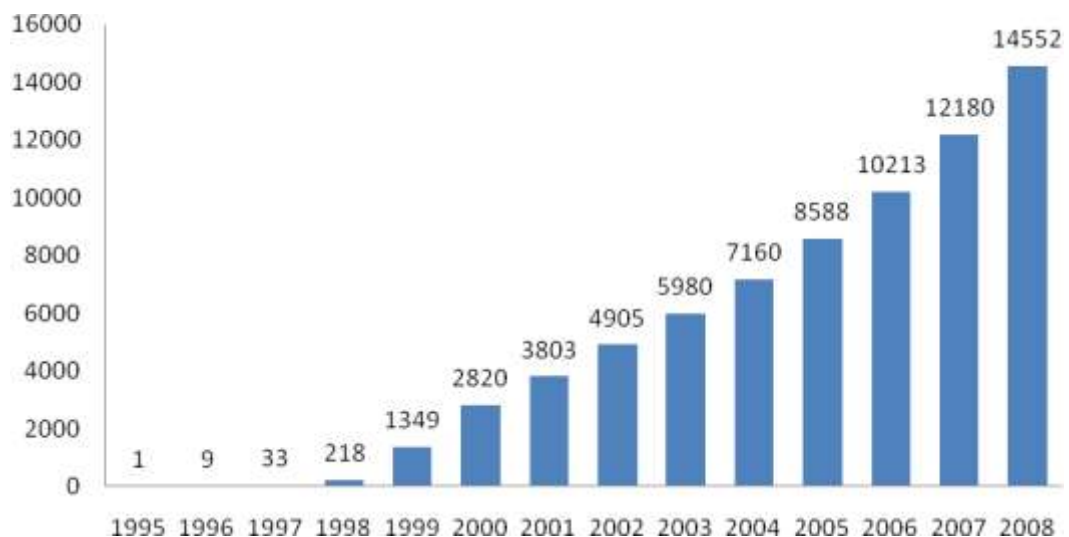


Figure 3.10 Number of registered domains under the domain .SA (CENTR, 2008)

However, the growth of new registration domains in Saudi Arabia is weak compared to other countries like the UK. For instance, in 2008, the total number of registered Saudi domains under the domain ‘.SA’ did not exceed 15,000 domains whereas it exceeded 7 million in the UK at the same year. However, the weekly new registration for the British domains at around 40,000 is much more than the total of

registered Saudi domains in 2008 (Nominet, 2010).

In 2010, the CITC handled more than 16,000 complaints about billing, annoying calls, service interruptions, quality of service and mobile numbers. None of these related to e-commerce such as e-payment and Internet fraud (CITC, 2011a).

With regard to the status of e-commerce in Saudi Arabia, the CITC (2008, p.58) conducted a quantitative research involving 8943 interviews from people across Saudi Arabia. The study was conducted in 2007 and 2008 and revealed that more than three-quarters of the participants had not visited an e-commerce website and only 5% had ever bought/sold online. Another study conducted in 2010, illustrated in figure 3.11, declared that e-commerce in Saudi Arabia is still in its early stages as the percentage of residents in Saudi Arabia who have made an online purchase does not exceed 6% compared to 58% in the USA (CITC, 2011a). The study also revealed that only a small number of participants, not exceeding 16%, intend to buy online in the future. As a result, the two studies conducted by the CITC (2011a) and the Economist Intelligence Unit (2010) exposed the lack of e-commerce adoption among residents in Saudi Arabia.

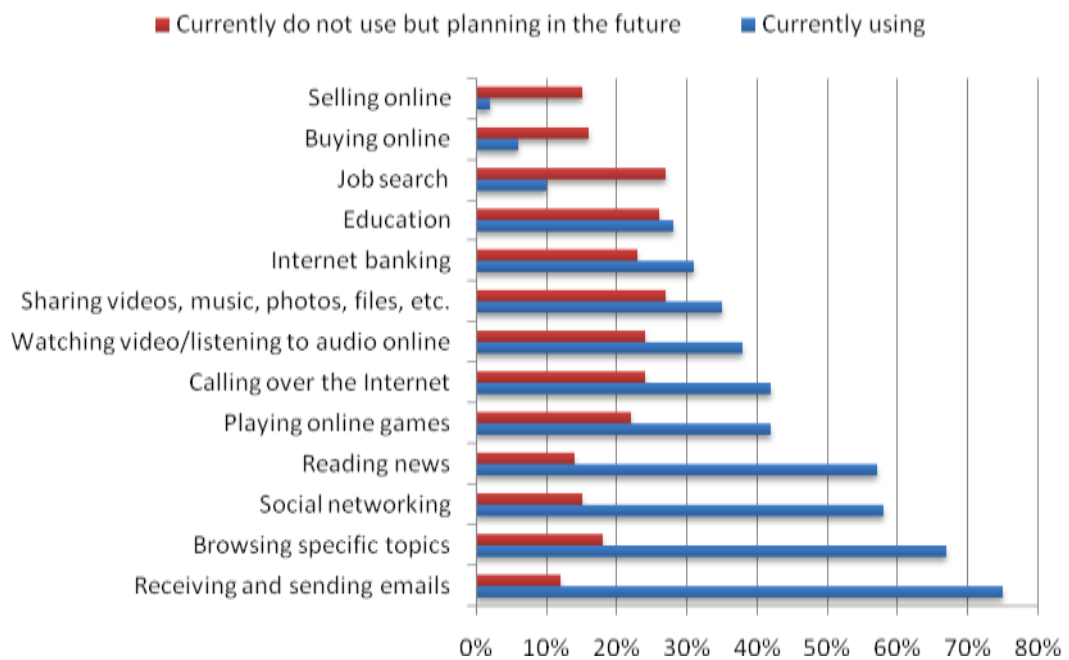


Figure 3.11 Internet usage in Saudi Arabia (CITC, 2011a)

There are currently five payment methods in Saudi Arabia (CITC, 2011a) as follows:

1. SADAD is the first type of payment method operated by SAMA (Saudi Arabian Monetary Agency) that allows residents to pay online. Unfortunately, a maximum of 100 companies (billers) can subscribe to SADAD. This can limit suppliers selling online.
2. Credit Cards but these “*suffer from a low adoption rate in Saudi Arabia*” (CITC, 2011a). This issue studied in more detail during this research.
3. Short code SMS payments allow residents to pay by sending SMS’s to the suppliers’ short code. This method, however, faces some barriers that prevent its spread. For example, the maximum payment limit is 20SR to 25SR (£3 to £5) and a high transaction fee goes to the SMS’s operator (around 60% of the total cost of SMS) and the system takes a long time to pass payment to the supplier.
4. PayPal is only available to send money and not to receive it; therefore, suppliers cannot integrate it into their e-commerce system.
5. Some of the Saudi banks issue pre-paid cards, however, the CITC (2011a) stated that pre-paid cards have no rules and regulations in Saudi Arabia.

Early development infrastructure plans focused mainly on Saudi Arabian large cities. This resulted in a lack of infrastructure in other areas, prompting residents to migrate to these cities. For example, as seen in section 3.3, eighty percent of the population in the central region live in Riyadh. The private sectors, including telecommunication providers, are driven by profit and are likely to ignore residential areas with a small population.

Many private businesses in Saudi Arabia who have already adopted e-commerce in their businesses offer only online services and not physical products. This includes banks, airlines and telecommunications companies, however; SME’s remain reluctant to become involved in online businesses.

SaudiNic expects a big change over the next few years with a dramatic increase in

the number of Internet users (Saudi Network Information Center, 2010c). The evidence is that the number of Internet users in Saudi Arabia increased from 4.7 million in 2007 to 7.7 million in 2009. This growth is equivalent to sixty percent of the Internet users in 2007 (Internet World Stats, 2010).

In 1990, SAMA established the Saudi Payments Network (SPAN) in Saudi Arabia to link Automated Teller Machines (ATMs) and Point Of Sale (POS) with banks and with SAMA (SAMA, 2007) while figures 3.12 and 3.13 shows the growth of SPAN and their transactions in billions over recent years in Saudi Arabia.

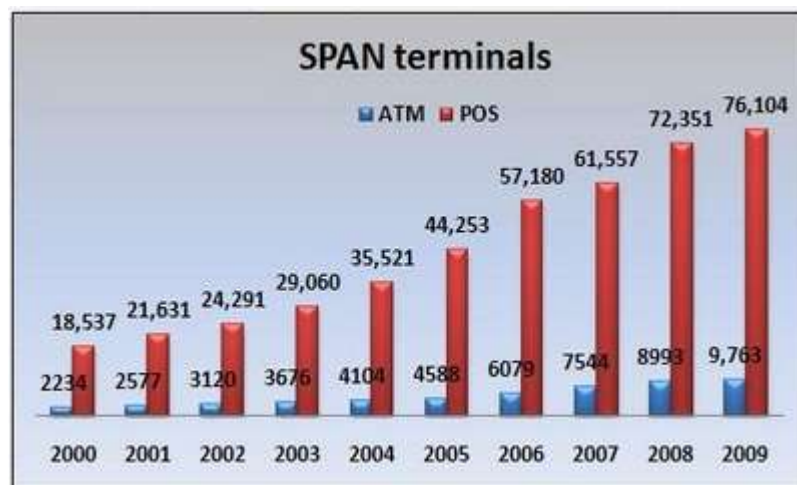


Figure 3.12 SPAN Terminals 2000-2009 (SAMA, 2007)

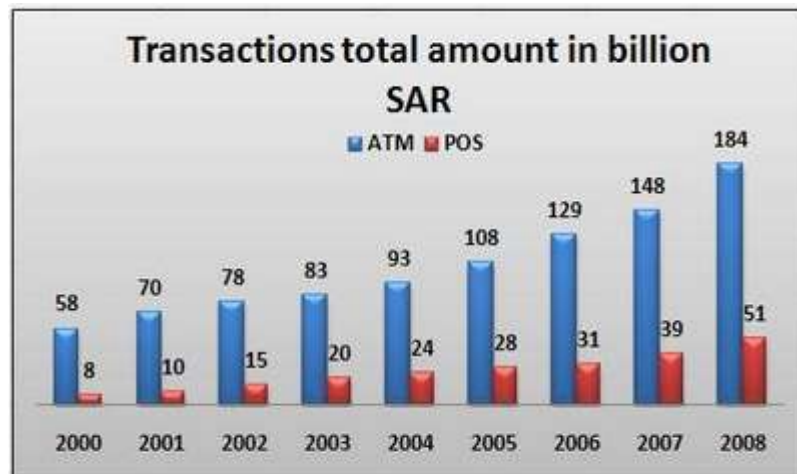


Figure 3.13 Total SPAN transactions in billions 2000-2008 (SAMA, 2007)

Many studies have stated that credit cards are used on a small scale in Saudi Arabia as the Islamic religion prohibits the payment of interest “riba” (Siala et al., 2004,

p.7, Zainul et al., 2004, p.286, Alfuraih, 2008); (CITC, 2011a).

Regarding delivery services, Saudi Arabia did not have a system for home addresses until 2005 as Saudi citizens normally pick up their mail-letters from post offices. The Saudi government, therefore, introduced a new plan called The Radio-Frequency Identification (RFID) based Mailbox Project. The Saudi Post launched the home mailbox project in Riyadh in 2005 (Wessel, 2009). Saudi Post underwent a huge transformation. It moved from a manual traditional postal system to a fully automated service called Wasel Address, which depends on satellites and a GEO-data postal code system. In order for the new service to be successful in Saudi Arabia its needed to overcome the following barriers (Miletzki and Al Darwish, 2008). Firstly, there are no names and numbers for home and street addresses in Saudi Arabia. The new system, therefore established a new addressing scheme that named streets and numbered the houses based on ZIP+4+4 (for example, Riyadh 1111-2222 or Jeddah 1111-2222). Second, the new postal system needed to be able to read Arabic and English addresses at the same time. Third, an integrated system is required that can work with the old system (5 digit postal code with PO Box number) and the new one (ZIP+4+4). Many homes and businesses in cities will now have mailboxes, however, towns and villages still do not have access to the new postal system. The acceptance of the new postal system among Saudi citizens is discussed in chapters six, seven and eight.

There are few studies on the volume and the monetary value of the turnover of e-commerce in Saudi Arabia and in the GCC. One report stated that e-commerce in GCC may reach \$100 billion in 2010 (Cabral, 2010). However, the report did not specify whither this is for B2B or B2C or if it is for any other e-commerce classifications. The responsible authorities in Saudi Arabia, however, do not have accurate figures or enacted studies regarding this issue.

3.5 Chapter summary

This chapter complements chapter two by describing the Saudi Arabian context. It explored the current states of e-commerce and ICT in Saudi Arabia. The chapter also mentioned five electronic transaction methods (SADAD, Credit Cards, Short code SMS payments, PayPal and Pre-paid cards), which need to be considered by this study.

After understanding the Saudi context, the next chapter describes the research methodology adopted by this inquiry in more detail. While this study applied grounded theory as the chosen research methodology, some literature was reviewed at an early stage of the study to identify the gap in the knowledge base that needed to be studied. Additional literature was reviewed once findings of the study became known. This enabled the researcher to compare the study's findings with the relevant literature and to participate in the world of research.

Chapter 4

Research Methodology

4.1 Overview

The purpose of this chapter is to describe different research philosophies and methodological strategies to be able to choose the most suitable one and adopt it for this study. Therefore, this chapter introduces the three common research philosophies, namely, positivist, interpretivist and critical paradigms. The choice of the particular paradigm that is adopted by this study is subsequently justified.

This chapter describes both quantitative and qualitative research approaches and justifies the adoption of the qualitative approach. It illustrates the different research methods found within the qualitative approach and the particular choice of the technique that is used during this study.

Before proceeding to the discussion contained in this chapter, a proper definition for research is required. Leedy and Ormrod (2001, p5) defined research as,

“The systematic process of collecting and analyzing information (data) in order to increase our understanding of the phenomenon about which we are concerned or interested.”

Cooper and Emory (1995, p.21) defines research as, *“Systematic inquiry aimed at providing information to solve problems.”*

Burns (2000, p3) said, *“Research is a systematic investigation to find answers to a problem.”* See figure 4.1.

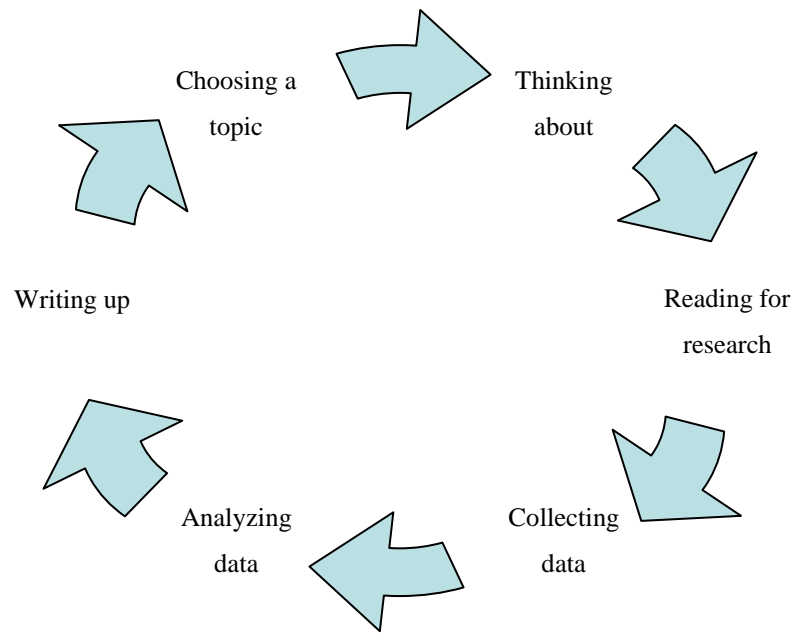


Figure 4.1 The research spiral
(Blaxter et al., 2002, p.10)

Therefore, research in general includes the following: clear goals with a research question (section 1.2), collecting data (chapter 6 and 7) and a specific plan of procedure which is presented in section 1.4 and chapter 5 (Leedy and Ormrod, 2001, p.4).

4.2 Research Philosophy/Paradigms

This section describes the different research paradigms that help researchers to view the world from the paradigm's perspective. Before going deeply into this approach, a definition for the term 'paradigm' is required. Chalmers (1982, p.90) defines paradigm as,

“Made up of general theoretical assumptions and laws and techniques for their application that the members of a particular scientific community adopt.”

Oates (2009, p.282) defined paradigm as,

“A set of shared assumptions or ways of thinking about some aspect of the world.”

There are three common schools/ paradigms on research philosophy existing in the area

of IS. They are positivist, interpretivist and critical as illustrated in the table below (Myers, 1997, Merriam, 2009, p.11, Walsham, 1995, Oates, 2009, Guba, 1990, Smith, 1989, Willis, 2007, p.8).

Table 4.1 Summary characteristic of research paradigms adopted from (Merriam, 2009, p.11)

	Positivist	Interpretative	Critical
Purpose	Predict, control and generalize	Describe, understand and interpret	Change, emancipate and empower
Types <small>(the lists are not intended to be comprehensive, but examples)</small>	Experimental, survey, quasi-experimental	Phenomenology, ethnography, hermeneutic and grounded theory	Neo-Marxist, feminist, participatory action research (PAR), critical race theory, critical ethnography
Reality	Objective, external, out there	Multiple realities, context-bound	Multiple realities, situated in political, social, cultural contexts (one reality is privileged)

The following sub-sections discuss and describe the different research paradigms in more detail.

4.2.1 Positivist Paradigm

Auguste Comte is the father and founder of this paradigm (Hartas, 2010, p.35, Willis, 2007, p.12, Thomas, 2009, p.74) which assumes that reality exists, independent of the observer and is measurable (Merriam, 2009, p.8, Stahl, 2005, Weber, 2004). For example, Myers (1997, p.3) pointed out that,

“Positivists generally assume that reality is objectively given and can be described by measurable properties, which are independent of the observer (researcher) and his or her instruments.”

Positivism is considered to be the oldest paradigm and has two assumptions (Oates, 2009, p.283). The first assumption is that the world is ordered, well organized and not random. The second is that our world can be objectively investigated. The aim of positivism is to find regularities as the hypotheses that are proven may become laws otherwise, they will be refuted (Myers, 1997, Oates, 2009, p.284). Some techniques are

used with positivism. The first technique is reductionism, which is the breaking of complex things to small parts; however, this technique cannot always be used because it can cause one to lose the big picture. Repeatability is the second technique, which is repeating an experiment many times to avoid faulty measurements. It is also not always possible because some phenomena can only be studied once. Refutation is the third technique where hypothesis may be refuted if a researcher is exploring whether A causes B is not true in some circumstances (Oates, 2009, p.285). Objectivity, reliability, internal and external validity are the criteria to judge the quality of positivist research (Oates, 2009, p.287).

4.2.2 Interpretivist paradigm

This paradigm aims to discover,

“The subjective meanings of social action and how these social meanings are made.” (Miller et al., 2010, p.60)

It considers that reality and the researcher cannot be separated from each other (Weber, 2004). It is,

“Where qualitative research is most often located, assumes that reality is socially constructed, that is, there is no single, observable reality. Rather, there are multiple realities, or the interpretations, of a single event.” (Merriam, 2009, p.8)

It is the understanding of social context as defined by Oates (2009, p.292) to be,

“The social process by which it is developed and construed by people and through which it influences and is influenced by its social setting.”

Interpretative research aims to understand, explain, identify and explore phenomenon in a social setting (Oates, 2009, p.292). Myers (1997, p.3) pointed out that

“Interpretative researchers start out with the assumption that access to reality is only through social constructions such as language.”

Therefore, there are some points that need to be considered in the interpretivist paradigm. First, there is no particular version of the truth. This means that different cultures or groups see the world in different ways. Second, reality can be accessed or obtained through social constructions such as language and understanding. Third, the researcher from an interpretivist viewpoint has his/her own beliefs and values, which may affect the research situation. Researchers, therefore, should be reflective and acknowledge how they influence their research as admitted in section 10.7 (Oates, 2009, p.292). Four criteria are used to evaluate interpretative research. They are: Credibility, transferability, dependability, and confirmability (Lincoln and Guba, 1985, Liamputtong, 2009) which is described in more detail in section 5.6.

4.2.3 Critical paradigm

It is often described to be the third research paradigm in social sciences and the alternative to interpretivist and positivist research (Orlikowski and Baroudi, 1991, Stahl, 2005, Stahl, 2008c). This, however, does not mean that these three paradigms are all the possibilities that exist (McLean and Stahl, 2007).

Critical research is defined as,

“Identifying power relations, conflicts and contradiction, and empowering people to eliminate them as sources of alienation and domination.” (Oates, 2009, p.296)

Stahl (2004) stated that critical research is,

“Concerned with power and emancipation and intends to change the state of affairs” and “aims to make a practical difference.”

It characterized by

“An intention to change the status quo, overcome injustice and alienation and promote emancipation.” (Stahl, 2008b, Stahl, 2008a)

Furthermore, critical perspective is,

“Concerned with critiquing existing social systems and revealing any contradictions and conflicts that may inhere within their structures” (Orlikowski and Baroudi, 1991, p.21)

Critical research seeks to expose the exits of power relations and deformations in the area under study (Stahl, 2005). Therefore, our world is not only formed of experiences, discourses and events but also consists of structures and power relationships (Hartas, 2010, p.40).

In critical research, people can change their circumstances (Orlikowski and Baroudi, 1991, p.19). Therefore, and from a critical viewpoint, understanding and explaining is not enough. The aim of critical research is to focus upon relationships, conflicts and contradictions in order to eliminate them (Myers, 1997, p.3). Howcroft and Trauth (2005, p.196) counted five themes used in critical IS researches which are:

- Emancipation: The researcher in this theme aims in *“Freeing individuals from power relations around, which social and organizational life are woven.”* (Fournier and Grey, 2000)
- A critique of tradition: This theme aims to *“Upset existing patterns of power and authority.”* (Howcroft and Trauth, 2005, p.197)
- Non-performative intent: it is the *“Rejection of the idea that decisions and actions within organizations and/or at societal levels should be based on solely economic efficiency and neglect the social aspects involved.”* (Eneman, 2010)
- A critique of technological determinism: This theme critiques technological determinism (Eneman, 2010, Howcroft and Trauth, 2005). Therefore, it *“Challenges the notion that assumes that technology is neutral and that technological development is autonomous and that societal development is determined by the technology.”* (Eneman, 2010)
- Reflexivity: Stahl (2008b, p.11) stated that *“Critical scholars need to reflect on and be open about their own background and aims. Doing so requires them to admit that they cannot be neutral.”* Eneman (2010) gave an example that *“Critical researchers*

need to consider how the research topics are selected, how the research is conducted and the consequences of how the research was conducted since this is not a neutral process..”

To sum up with, this paradigm is characterized by the intention to change and emancipate alienated individuals (Niehaves and Stahl, 2006).

4.2.4 Justifying the chosen research philosophy

This section justifies the adopted paradigm that is most appropriate for this study. This is because each paradigm has its own strengths and limitations. This research explores the factors affecting consumers’ adoption of e-commerce in a particular social setting from their and their suppliers’ perspectives. It aims to understand a phenomenon and not to quantify it. In order to achieve this aim, the researcher needs to understand the phenomenon by accessing the participants’ meanings within a social world (Khazanchi and Munkvold, 2003). In addition, it requires the researcher to accept subjectivity and not take an objectivist approach (Neergaard and Ulhøi, 2008, p. 383). It requires the researcher not to ignore social conditions and their influence on human behaviour (Orlikowski and Baroudi, 1991). As a result, positivism is not suitable for this research for the reasons mentioned above.

Furthermore, critical research is a good alternative paradigm because it tries to understand and change the status of relevant factors that affect consumers’ adoption of e-commerce but this research aims to understand phenomenon and not to change them. On the other hand, in order for a researcher to understand and then change phenomenon under study, he/she needs more time in the field and the authority and power to enact change. The researcher in this study lacks these two factors because, his study (PhD) is constrained by time, the researcher does not have the authorization to effect change and finally, government agencies, suppliers and consumers need awareness plans in order to accept and recognise the need for changes. For example, television chef Jamie Oliver has faced resistance to adapt the American community to healthy eating in his series ‘Jamie Oliver's Food Revolution’ (Daily Mail, 2010, McLean and Stahl, 2007).

All the aspects mentioned above supported the statement that interpretative research is the best choice for this study, as this research needs to understand a phenomenon in depth and understand deeply people's feelings and beliefs, since people view the world in different ways. The next section describes the two common research approaches: quantitative and qualitative.

4.3 Quantitative and Qualitative Approaches

Oxford Dictionaries Online (2011) defines methodology as a,

“System of methods used in a particular area of study or activity.”

Dictionary.com (2011) also defines methodology as,

“A set or system of methods, principles and rules for regulating a given discipline.”

Research approaches are classified into quantitative and qualitative approaches as illustrated in figure 4.2. The qualitative approach adopted for this study is also shown (red rectangle).

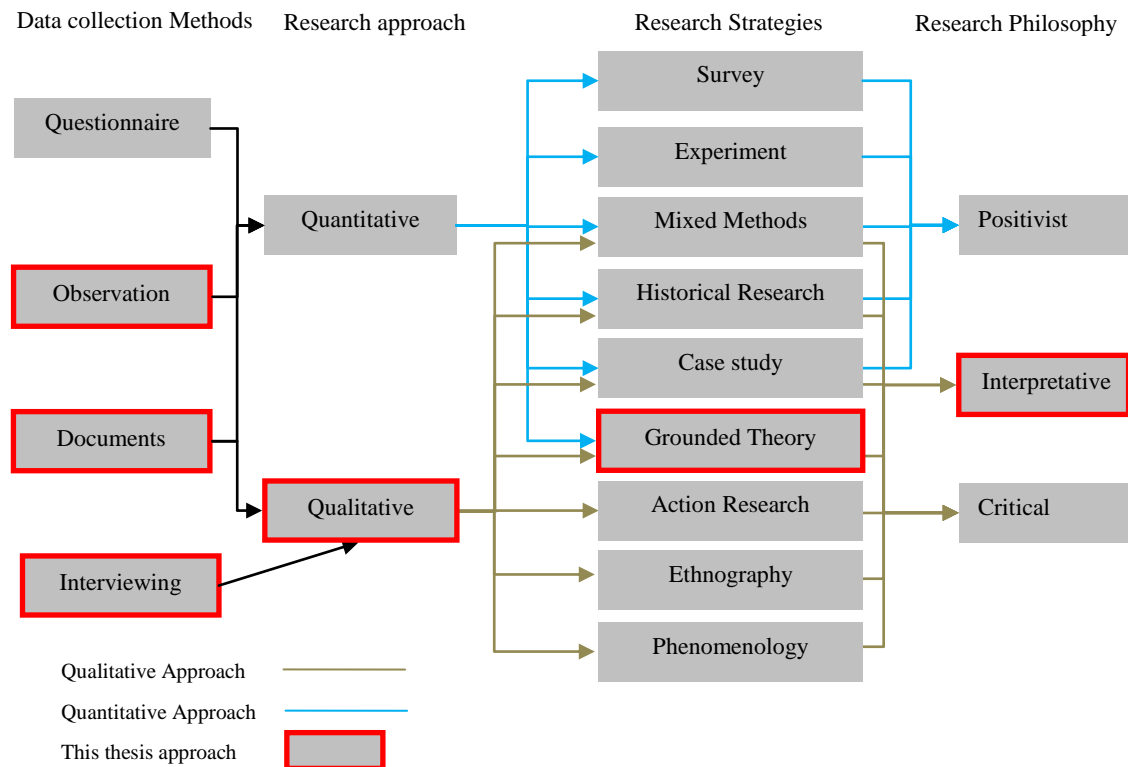


Figure 4.2 An overview of research methodologies and the approach adopted for this study

This section explains these two methodologies, their strengths, weaknesses and limitations and then justifies the reasons for choosing a particular approach.

Quantitative research is objective and has the form of numbers. Surveys, case studies, experiments, grounded theory (Grounded Theory Institute, 2011), some mixed methods and historical research are examples of its research strategy. Questionnaires, documents and observations are examples of its data collection methods. Quantitative research is used to test hypothesis but does not in itself generate or discover theories. Therefore, quantitative research fits the positivist paradigm. In the field of social research, quantitative is good for discovering 'how many?' but not 'why?'. The aim of this study is to know why people do not adopt e-commerce in Saudi Arabia (Denscombe, 2007, p.283). For the reasons above, a quantitative approach is not appropriate for this study.

On the other hand, qualitative research focuses on meaning, understanding and interpreting phenomenon (Denzin and Lincoln, 2007). Strauss and Corbin (1990, p17)

defined qualitative research as,

“Any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification.”

Myers (1997, p.2) claimed that qualitative research techniques,

“Were developed in the social sciences to enable researchers to study social and cultural phenomena.”

Qualitative research in the interpretive paradigm is to understand and to interpret phenomenon according to what meaning people bring to them (Denzin and Lincoln, 2007, p.3). In addition, qualitative research transforms the world into interviews, memos, field-notes, recordings, conversations and photographs (Denzin and Lincoln, 2007). It is appropriate for in-depth understanding of phenomena (Liamputtong, 2009). Grounded theory, phenomenology, ethnography, action research, case study, historical research and mixed methods are examples of its research strategy. Interviews, observations and documents are used as research collection methods (Denscombe, 2007, p.286). Qualitative research does not require any generalisation of the research findings (Hesse-Biber and Leavy, 2005).

In addition, qualitative research allows the use of a small sample population. This number can be decided during data collection. A researcher can carry out purposive sampling, also called a theoretical sampling, which is described in section 5.2.2 (Liamputtong, 2009, Strauss and Corbin, 1990). Theoretical sampling is used to provide information, which other samples may not elicit. The main issue on deciding the sample size is that there is no need to continue sampling once the research has arrived at a sample size where additional samples do not provide any new data that can be useful for the researcher. This situation is called “data saturation” (Mason, 2002, Strauss and Corbin, 1990).

Researchers adopt a qualitative research approach for many reasons (Liamputtong, 1996):

- To explore, investigate and explain the problem in deep detail and, therefore, to develop a theory and to hear silenced voices.
- When there is a need to understand the context and the participants' environment.
- To understand the uniqueness of individuals.
- To understand culture, economic and social factors.

There are five stages in order to analyse qualitative data as follow (Denscombe, 2007, p.288):

- Data preparation: notes and interviews are formats of qualitative data and need to be prepared and organised before analysis. Making back-up copies and collecting data in a way that lets the researcher add data at any time are ways to help data preparation.
- To be familiar with the data: the researcher should read and read again to make sure that he/she understands the details of what has been written.
- Data interpretation: this stage contains coding, categorizing and identifying relationships then developing the theory.
- The researcher needs to evaluate his/her research as described in section 5.6 as well as not ignoring data that does not fit in with the analysis.
- Finally, the researcher should represent the qualitative data and findings (chapter 6, 7 and 8).

To sum up, before justifying the reasons for choosing qualitative research as the research methodology for this study, the researcher comments on the main differences between quantitative and qualitative research in the table below.

Table 4.2 Characteristics of qualitative and quantitative research adopted from Merriam (2009, p.18)

Point of comparison	Qualitative research	Quantitative research
Focus on research	Quality (nature, essence)	Quantity (how much, how many)
Associated phrases	Fieldwork, ethnographic, grounded, constructivist	Experimental, empirical, statistical
Goal of investigation	Understanding, description, discovery, meaning, hypothesis generating	Prediction, control, description, confirmation, hypothesis testing
Design characteristics	Flexible, evolving, emergent	Predetermined, structured
Sample	Small, purposeful, theoretical	Large, random, representative
Data collection	Researcher as a primary instrument, interviews, observations, documents	Inanimate instruments (scales, tests, surveys, questionnaires)
Primary mode of analysis	Inductive, constant comparative method	Deductive, statistical
Findings	Comprehensive, holistic, expansive, richly descriptive	Precise, numerical

4.3.1 Justifying the use of Qualitative research methodology

In qualitative research,

“The researcher uses interpretive and theoretical frame-works to further shape the study” (Creswell, 2007, p.15).

This study applied a qualitative approach because:

1. Qualitative research is appropriate in a natural setting because the researcher tends to collect data in the field. Data is gathering by talking face-to-face, by using VoIP (Voice over Internet Protocol) or via telephone conversations with people and by observing their behaviour. It is different from quantitative research as the researcher does not send questionnaires to people and collect them at a later time (Creswell, 2007, p.37).
2. Qualitative research produces rich descriptions as well as participants’ quotes that

support the research findings (Merriam, 2009, p.16).

3. Qualitative research is an inductive process that helps the researcher to build theories rather than testing hypotheses. This can help especially if there is a lack of existing theories (Merriam, 2009, p.15).
4. The researcher is the main and primary instrument. He/she is the key to collecting data as researchers interview participants, observe their behaviour and examine documents themselves (Creswell, 2007, p.37, Merriam, 2009, p.15).
5. Qualitative research focuses on the meaning and understanding of phenomenon. It does not adopt meanings brought from other researchers. Therefore, qualitative research helps the researcher to explore phenomenon by studying participants and “*hear silenced voices*” (Creswell, 2007, p.37, Merriam, 2009, p.14).
6. Qualitative research is an emergent design as a researcher’s procedure can be modified once he/she has entered the field. Consequently, questions and participants may be changed or modified (Creswell, 2007, p.37, Merriam, 2009, p.16).

4.4 Research Methods

As stated by Weber (2004), the main aim of research is to improve knowledge about particular phenomenon. Moreover, there are different research methods each with their own strengths and weaknesses. Therefore, the researcher seeks different methods and knows their advantages and disadvantages so as to be able to choose the appropriate one.

Blaxter et al (2001) classified research methods into action research, case study, experiments and surveys. Denscombe (2007, p.3) agreed with Blaxter et al (2001) on four methods and added a further four, which are ethnography, phenomenology, grounded theory and mixed methods. Burns (2000, p481) also added historical research as a methodology. Leedy and Ormrod (2001, p149) divided research methods into two groups. The first group is the qualitative research design, which includes five methods

that are case study, ethnography, phenomenological study, grounded theory and content analysis. The second group is quantitative research that includes either experimental or descriptive research (i.e. survey research and observation studies). Myers (1997, p.4) added action research as a qualitative research method.

As mentioned previously, many research methods can be used. Therefore, some types of research, however, can fit into more than one approach, as there may be more than one method to solve a problem. The procedure for selecting the appropriate methodology is to search for a way that gives the best fit and leads to proper solutions.

Since this study involves qualitative research, **experiment** and **survey research** are not used. Another reason, **surveys** do not provide in depth details about the research area and the researcher cannot be sure about the accuracy and honesty of responses (Oates, 2009, p.104, Denscombe, 2007, p.31). **Experimental** research is mostly done in the laboratory, which is unlike the real world. This study conducts in the field with consumers in Saudi Arabia; therefore, experiments are not suitable for this study (Oates, 2009, p.137, Denscombe, 2007, p.58, Collis and Hussey, 2009).

Ethnography aims to study people's behaviour and their culture as stated,

"Description of people or cultures." (Oates, 2009, p.173)

Ethnography has been criticised because one of its disadvantages is that the researcher needs to spend more time in the field in order to understand the people's culture (Merriam, 2009, p.28, Oates, 2009, p.182). It offers, however, a good alternative approach for this study.

Phenomenology is a qualitative research method founded by Husserl (1970) that studies people's experiences (Merriam, 2009, p.25). It fits best small-scale research and gives descriptions reflecting the complexity of the social world (Denscombe, 2007, p.83). It *"Focus on the experience itself"* and is concerned about the experiences of our lives (Merriam, 2009, p.24). But, participants in this study may lack the required experience which may prevent the researcher from gathering the required data.

Action research: the researcher in this approach is concerned with performing actions, not only describing or observing. Therefore, it is “*research into action*” by planning for change, performing the change, reflecting on what happened then starting another cycle (Oates, 2009, p.155). It aims to investigate and bring change to phenomenon (Punch, 2005, p.160). This approach requires the researcher to work in the field of study and involves a continuous cycle of improvement. The approach, therefore, allows continuous improvement of the research process. It does not, however, apply in this study because the compulsory participation of the practitioner make extra work for the practitioner in the early stages and the ownership of the research process depends on the structure of the relationship between practitioner and researcher (Oates, 2009, p.168, Denscombe, 2007, p.131). Another reason is that this study aims to understand phenomenon and not bring about change. The third reason is that this study involved many organisations and the researcher does not have enough time or the required permissions and authorizations in order to effect change.

Since e-commerce is a new technology in Saudi Arabia, **historical research** is not suitable for this study.

Case study is a good research method that aims to investigate phenomenon in depth (Yin, 2009). However, it is not applied in this research due to the difficulties in defining the boundaries of the case study (Denscombe, 2007, p.45).

In undertaking fieldwork with consumers in Saudi Arabia, **grounded theory** is the appropriate method according to the following reasons. It is an accepted method for qualitative research and can be used with many qualitative data collection methods such as interviews, documents and observations. It aims to generate theory. Moreover, it is a good tool for analyzing qualitative data and it has a reality and grounded explanations. It is characterised by collecting and analysing data at the same time, which results in directing the researcher to new and unthought-of issues. Finally, this study was conducted over two empirical field studies. The researcher sought a research method that was able to link these two studies together and grounded theory has the ability to do so through theoretical sampling. As a result, fieldwork with consumers in the first empirical study was linked to the second one, which was conducted with government

agencies and suppliers via theoretical sampling.

This was accomplished in two main phases by applying a theoretical sampling technique that is described in chapters 6 and 7.

4.5 Summary

This chapter described the three common research paradigms. A justification for the selected paradigm, namely, the ‘interpretivist research paradigm’ was given. Sections 4.3 and 4.4 described the two main types of research methodologies (quantitative and qualitative research approaches) with a brief account of their research methods. This leads to the point where this research has the appropriate method to conduct a ‘Grounded theory method’.

In order to obtain the relevant results for this research, the researcher focused on the meaning and understanding of the phenomenon under study (Creswell, 2007, p.37, Merriam, 2009, p.14). Therefore, qualitative research was the approach that was chosen for this research.

The next chapter is the logical successor of the present one. It presents a detailed description of the grounded theory method and discusses the way to utilise it for this study.

Chapter 5

The adoption of Grounded Theory in this research

“Grounded theory research provides researchers with procedures that allow for imaginative engagement with data. This may lead to the emergence of some unexpected events and experiences. And this allows researchers to construct a theoretical framework that may help to explain many social realities in the health and social sciences about which we know little. This is the beauty of grounded theory research.”
(Liamputtong, 2009, p.223)

5.1 Introduction

This chapter presents an overview of grounded theory that was adopted by this study. Theoretical sensitivity, theoretical sampling, data saturation and memos are some of the techniques used in GT as presented in sections 5.2.1, 5.2.2, 5.2.3 and 5.2.4. As well as data collection, the methods and the process of data analysis are illustrated in sections 5.3 and 5.4. Finally, sections 5.5 and 5.6 demonstrate limitation and strengths of this methodology and research evaluation to end with chapter summary.

5.2 Overview of grounded theory

Grounded theory was developed by Barney Glaser and Anselm Strauss. Both were seeking a methodological framework to develop categories directly from the research

data. Their first application of grounded theory is “*Awareness of Dying*” which was published in 1965. They declared that there is a wide gap between theory-generating and empirical study which needed to be bridged (Neergaard and Uilhøi, 2008, p.125). But since their publication on grounded theory, “*The Discovery of Grounded Theory*” in 1967, Glaser and Strauss have disagreed on 'how to do' grounded theory, resulting in a split in the theory between Glaserian (Glaser approach) and Straussian (Strauss and Corbin approach) approaches.

Strauss and Corbin (1990, p.24) defined grounded theory as,

“A qualitative research method that uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon.”

This research, however, criticizes the above definition which declares that GT is a qualitative research method whereas it can be applied to both qualitative and quantitative methods (Grounded Theory Institute, 2011). Another definition of grounded theory is,

“Research method that seeks to develop theory that is grounded in data systematically gathered and analyzed.” (Myers, 1997, p.1)

Creswell (2007, p.63) confirmed that theory is generated in data from participants in the field of study and with forward planning. However, table 5.1 shows the main differences between Glaserian and Straussian approaches.

Chapter 5. The adoption of Grounded Theory in this research

Table 5.1 Key differences between the main two GT approaches
Adopted from (Onions, 2006)

Glaserian	Straussian
Beginning with general wonderment (an empty mind)	Having a general idea of where to begin
Theoretical sensitivity (the ability to perceive variables and relationships) comes from immersion in the data	Theoretical sensitivity comes from methods and tools
The credibility of the theory or its verification is derived from its grounding in the data	The credibility of the theory comes from the rigour of the method.
A basic social process should be identified	Basic social processes need not be identified
The researcher is passive, exhibiting disciplined restraint	The researcher is active
Data reveals the theory	Data is structured to reveal the theory
Coding is less rigorous, a constant comparison of incident to incident with neutral questions and categories and properties evolving. Take care not to 'over-conceptualize', identify key points	Coding is more rigorous and defined by technique. The nature of making comparisons varies with the coding technique. Labels are carefully crafted at the time. Codes are derived from 'micro-analysis, which consists of analysis data word-by-word'
Two coding phases or types, simple (fracture the data then conceptually group it) and substantive (open or selective to produce categories and properties)	Three types of coding, open (identifying, naming, categorizing and describing phenomena), axial (process of relating codes to each other) and selective (choosing a core category and relating other categories to it)

This research used grounded theory because of the following reasons:

1. Grounded theory is an appropriate method for this research as there is no theory available that describes the phenomenon under study (Creswell, 2007, p.66).
2. Most the models in the literature have been developed and tested under different samples, populations and cultures.
3. This study conducts theoretical sampling, which finalises the theory caused by any differences in participant perspectives during the study. This process results in two main stages and at each one there are checkpoints that convince the researcher to follow the participants' viewpoints during the data collection and analysis stage.
4. According to Strauss and Corbin (1990) collection and data analysis occurs all together at the same time. Therefore, the researcher collects data, transcripts and

then analyses them. The researcher then updates his/her agenda and the questions of the interviews and returns back to the field to collect more data.

This research follows Strauss and Corbin's (1990) approach for the following reasons:

1. The systematic procedures of Strauss and Corbin's approach encouraged the researcher to learn more about applying a grounded theory method (Creswell, 2007, p.64, p.66).
2. Strauss and Corbin's (1990) approach stated that the use of literature is a good background but it is essential not to immerse too much in the literature since the GT method seeks discovery. The main literary benefit for the researcher is to guide his research and keep his mind open about data and categories (Liamputtong, 2009,p.212). Strauss and Corbin (1990, p.24) explained the use of literature in grounded theory and pointed out that a literature review forms a good background that can be used in the research. They mentioned, however, that the researcher does not need to review all the literature germane to his study. After this stage, there is a need to review the literature to compare variables and to read what others have written about the phenomenon.
3. The developed theory is grounded in the data from the participants in the study (Strauss and Corbin, 1990). The researcher, therefore, is going to collect rich data to be able to fully develop the categories and then the theory (Liamputtong, 2009, p.213).

Strauss and Corbin (1990, p.61) pointed out the sequence of steps involved in analysing data in a grounded theory. They are coding and categorizing data, comparing the codes and categories, checking the codes and categories with the collected data then generating a concept and a theory. In order for the researcher to benefit fully from grounded theory, he/she should apply theoretical sensitivity, theoretical sampling, theoretical saturation and memos as explained below.

5.2.1 Theoretical sensitivity

Theoretical sensitivity is the,

“Ability to recognize what is important in data and to give it meaning” (Strauss and Corbin, 1990, p.46).

These attributes reside in the researcher’s personal qualities and originate from the resources that are described below (Strauss and Corbin, 1990, p.42):

1. Literature: This includes reading researches, documents or theories to gain a rich background that make the researcher sensitive to the phenomenon under study.
2. Professional experience: It helps to understand the event or setting more quickly. Therefore, the more professional the experience the more is the knowledge about the research area. On the other hand, this experience may block the researcher from routines issues.
3. Personal experience: As each person witnesses his/her own experiences, such as, divorce. Therefore, the researcher should not expect everyone in the field to have had his/her experiences.
4. Analytic process: As the researcher comes to understand the phenomenon by collecting, analysing and making comparisons of the data, asking questions and developing frameworks his/her sensitivity will increase.

The next sub-section illustrates the use of theoretical sampling.

5.2.2 Theoretical sampling

Strauss and Corbin (1990, p.176) defined theoretical sampling as,

“Sampling on the basis of concepts that have proven theoretical relevance to the evolving theory.”

The main purpose is to,

“Maximize opportunities to develop concepts.”(Corbin and Strauss, 2008, p.143)

Another definition of theoretical sampling is when,

“Participants are theoretically selected to help the researcher construct the theory.”

(Liamputtong, 2009, p.214)

Theoretical sampling is considered to be a strong point of grounded theory, which makes it special (Charmaz, 2006, p.101). It assists the researcher to focus on categories and their properties that remain under developed and partially understood (Charmaz, 2006, p.96). In order to fully develop a certain category, the researcher should conduct theoretical sampling to fill the gaps until the saturation point has been reached (section 5.2.3). This can be achieved by finding new participants or by returning to previous ones to ask further questions.

Theoretical sampling has the following features:

- It is cumulative because it allows the researcher to focus more deeply during the open, axial and selective coding.
- It has the flexibility to investigate unplanned areas.
- It increases data density.

Theoretical sampling is involved during the three coding procedures as follows:

- Sampling in Open Coding: Because open coding aims to discover the naming and categorizing of phenomenon, sampling during this phase is “open” to gather as much relevant data about the phenomenon as possible. Therefore, it is good not to structure the interviews or observations and be open to all possibilities to give space for relevant concepts to emerge.
- Sampling in Axial Coding: Because Axial coding aims to make connections and find relationships between categories, sampling in this stage focuses on discovering and validating these relationships. This can be done by asking questions and making comparisons to determine whether these relationships resist (hold up).
- Sampling in Selective Coding: Because selective coding aims to select the core

category, relate it to the other categories and then validate the relationships, sampling in this phase should be directed and planned with good selection of samples to obtain the required data. For example, this can be done by returning to an old document, person, place, or to new ones to gather the necessary data.

Sampling continues until reaching theoretical saturation for each category as described in the next sub-section.

5.2.3 Theoretical saturation

Theoretical saturation is a term that is used if no new data has emerged (Strauss and Corbin, 1990, p.188, Corbin and Strauss, 2008, p.145). This means, the researcher reaches a point where he/she cannot develop any more categories and cannot establish any new relationships between concepts. Strauss (1987, p.21) also defined theoretical saturation as,

“When analysis no longer contributes to discovering anything new about a category.”

Therefore, researchers using grounded theory should continue conducting theoretical sampling until reaching the point of theoretical saturation (Denscombe, 2007,p.100).

An important issue arises in this section that many researchers discard, which is due to the lack of differentiate between theoretical and data saturation. Data saturation can be achieved when a researcher continues collecting data until he/she reaches a point where no more data emerges. This is called “data saturation.” Theoretical saturation occurs when no new ideas, “theoretical ideas” appear during analysis. Therefore, theoretical saturation is when no new developed categories can appear on the surface derived from analyses of the study (Charmaz, 2006, p.102). Researchers need to apply the two terms together in order to stop data collection and analysis. This point is indicated when no new ideas are discovered and new data is not able to emerge (Charmaz, 2006, p.113, Liamputtong, 2009, p.215).

5.2.4 Research memos

Memos are the written documents of the researcher's abstract thinking about data to formulate the theory in later stages (Strauss and Corbin, 1990, p.198). It helps a researcher to move from data thinking to abstract thinking and then return to the data to ground the abstract thinking in reality. Therefore, an important tool in grounded theory is to keep track of ideas, especially during the stage of analysing the data (Charmaz, 2006, p.72). Researchers use memos to develop ideas about concepts and develop links between them. This is essential especially if there is more than one researcher conducting the field of study (Corbin and Strauss, 2008, p. 119). Memos should be used at every stage of the grounded theory process to help the researcher develop ideas and as the researcher writes more memos his/her categories become clearer (Liamputtong, 2009, p.218). At the early stages of research memos look simple but accumulate and provide a good store of ideas brought from the analysis of the data (Glaser, 1978, p.83, Strauss and Corbin, 1990, p.197). Moreover, each memo contains some information such as title, references to concepts or category, date, references and short quotes which can be used later for illustration during the writing-up (Strauss and Corbin, 1990, p.202).

Memos start at the beginning of the research and continue until its end. Therefore, memos look different for each type of coding as follows:

1. Memos in Open Coding: Because the researcher at this stage is open and does not have enough information about the phenomenon, he/she writes down his/her first impressions and thoughts without any concern whether or not they are correct.
2. Memos in Axial Coding: In this stage, memos reflect the researcher's attempts to relate categories together. The researcher during this stage writes both the successful and unsuccessful attempts. Moreover, he/she ask questions, such as, what are the conditions for this phenomenon? What are the strategies? What are the consequences? What happens when conditions change? The memos, therefore, will improve with time.
3. Memos in selective coding: During this stage memos have less code but more

theoretical notes. Therefore, it is the first descriptive version of the research to identify the core category and to relate it to other categories. Operational notes are another kind of memo that is composed during selective coding. This type of note aims to be specific in order to validate the research findings. For example, the researcher can ask questions, such as, check this? Do that? Or Go there.

5.3 Data Collection Methods/Techniques

Generally, there are four methods for collecting data, which are documents, observations, questionnaires and interviews as shown in the figure below (Blaxter et al., 2002, p.63, Denscombe, 2007, p.133, Kumar, 2005, p.8). This section discusses these methods in the context of GT.

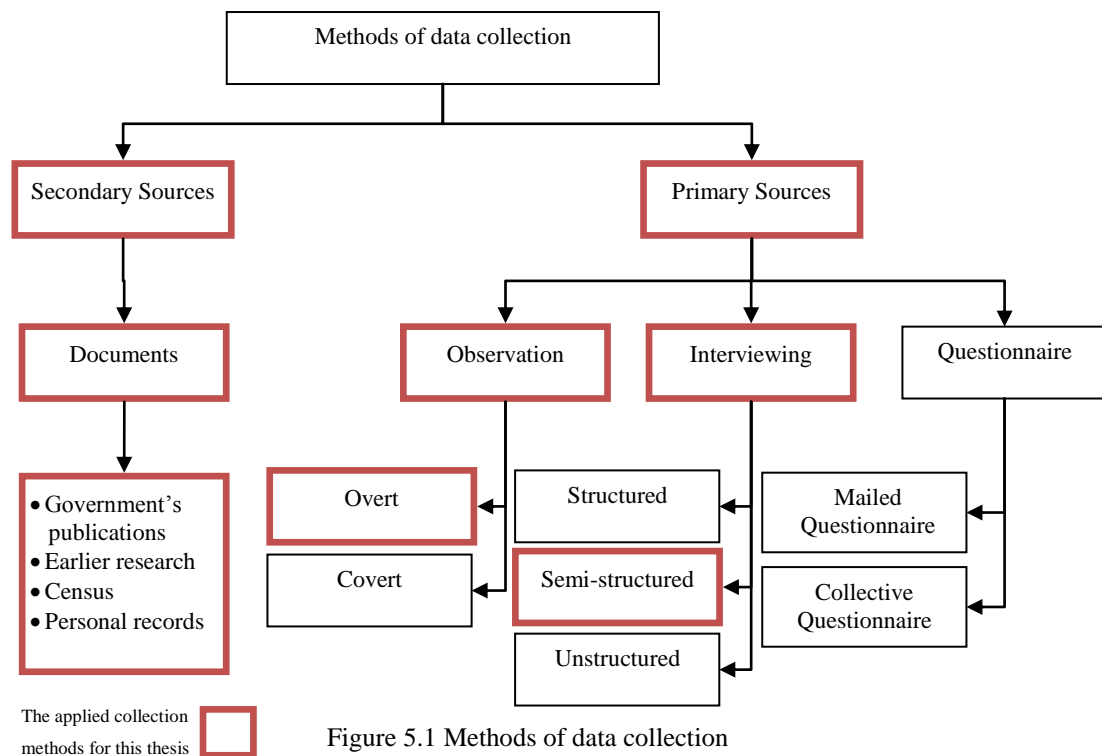


Figure 5.1 Methods of data collection adopted from Kumar (2005, p.118)

The use of different data collection methods facilitated and helped this research to look from different perspectives. This can be called triangulation, which is,

“The use of two or more methods of data collection in the study of some aspects of human behaviour.” (Burns, 2000, p.419)

Triangulation has some advantages, which include more accuracy and giving a fuller picture of the study. It also has some disadvantages, which include the need for more money and time and the requirement for more skills (Denscombe, 2007, p.137).

Since the researcher views the world from the interpretivist perspective, follows a qualitative approach, and intends to use grounded theory, questionnaires are not used. Questionnaires can be problematic. For example, it is easy for the respondent to consult other people; it is not suitable for very young, old and illiterate people. In addition they have a low response rate, do not allow the researcher to clarify anything with the respondents, it is difficult to check the truthfulness of the answers and the pre-coded questions and answers may deter participants from answering (Denscombe, 2007, p.170, Kumar, 2005, p.130).

Observation is used in this research to record and observe what people do. In addition, documents are used in this study to produce pre-coded data and to gain an insight knowledge in the field under study (Denscombe, 2007, p.214).

Interviews are difficult to analyse, since the data is not pre-coded. It is, however, used in this research because it creates depth, has a high response rate and the researcher can check the accuracy of the collected data (Denscombe, 2007, p.202).

The following sub-sections explain in more detail the three collection methods mentioned above.

5.3.1 Interviews

This research applied interviews as the main source of data because it is a good technique to gather data that cannot be collected by other means, such as, observations and questionnaires. In addition, interviews can take place at home, on the street, at work, by phone or over the Internet (VoIP) such as by Skype (Blaxter et al., 2002, p.172). It is a useful tool that is used when the researcher wants to penetrate further in things such as people's emotions, feelings and opinions (Denscombe, 2007, p.174).

There are three types of research interview (Denscombe, 2007, p.175, Burns, 2000,

p.423):

- Structured interviews: The researcher has control over the questions and answers. This leads to easier analysis. It is used when the researcher wants to collect a large amount of data from many interviewees.
- Semi-structured interviews: The researcher gives the interviewee more flexibility in developing ideas. This type of interview is used in this research.
- Unstructured interviews: the researcher introduces the topic then allows the interviewee to develop his ideas and use his own words.

It is essential to prepare for the interviews, get approval from the relevant authorities, such as, the ethics approval presented in appendix A and to arrange the venue (Denscombe, 2007, p.189).

During interviews, the researcher met a number of requirements. The researcher began with an introduction that included the aim of research, the interview's length (time), interviewee's right, benefits and potential risks if any (appendix B). Permission was sought from the informants to record the interviews. The researcher gave the interviewee an easy general question to start. The researcher monitored the progress of the interview by trying to cover most of the issues in the time allowed. In addition, the researcher should finish the interview by ensuring that all the issues have been covered, inviting the interviewee to raise any points that have not been covered and thank the interviewee for giving his or her time as shown in appendix C (Denscombe, 2007, p.192).

Moreover, the questions in a qualitative interview should meet the following criteria (King and Horrocks, 2010, p.49). First, questions must not lead the interviewee or place him/her under pressure to confirm what the interviewer stated. Second, questions should be direct, simple and not complex. There should be no multiple questions at the same time. Third, the interviewer should listen carefully to the interviewee to avoid missing important issues stated by the latter and then to next ask the correct question. Finally, non-verbal communication plays an important role during the interview such as being calm and not nervous helps to let the interviewee feel at ease

and avoid distracting him/her (King and Horrocks, 2010, p.49).

It is very important for researchers not to rely solely on human memory. There are a number of ways to record an interview. The researcher can write notes during or immediately after the interview. This can happen when the interviewee refuses to have the interview recorded. The second way of recording the interview is by audio or even by video. Most researchers, however, feel that audio recording provides enough data for the research. Thus, the interviewer should check his/her equipment before starting the interview because it is difficult for the interviewee to re-commence the interview.

For every one hour of audio recording, it takes approximately three to four hours to transcribe. Researchers should append comments and notes together with the interviewee's words. These notes can be raised from the interviewer's memory of the interview (Denscombe, 2007, p.196).

In conclusion, interviews are used during both stages of the research with consumers and suppliers to investigate factors (barriers and enablers) affecting consumers' adoption of e-commerce in Saudi Arabia. The researcher, by interviewing suppliers and government agencies, seeks to confirm or refute the findings gathered from the consumers, obtain new evidence and collect information from suppliers on how to eliminate consumers' barriers.

5.3.2 Documents

Documents are used as a secondary source to gather information about developing countries including Saudi Arabia (i.e about the Saudi government and the private sector), and to benchmark e-commerce. Documents bring useful information to investigate in more detail some aspects related to the area under consideration. It is easy to obtain, low-cost compared to other data collection methods, convenient (no need for appointments or permissions), saves time and effort and may have less ethical problems (Denscombe, 2007, p.241). For example, some documents such as government reports/documents, newspaper articles, brochures, booklets are employed in this research as illustrated in table 5.2. This research, however, is aware of some of the

documents that may contain “*built-in biases that a researcher may not be aware*” (Merriam, 2009, p.154).

Table 5.2 Some types of documents conducted during this research

Type of document	Example
Reports, statistical information and government's documents	<ul style="list-style-type: none"> • Detailed Results Population and Housing Census. • The kingdom : site and geographical Position. • E-crimes and e-transaction acts. • Commercial possibilities on the Internet. • Regional Profile 2009: Building Confidence and Security. • Trade and development report, 2010. • A performance and Innovation Unit Report. • Mobile telephony and the development of public services. • The universal access and universal service policy. • Internet in Saudi Arabia. • Number of Registered Domain Names under the Saudi Domain (.sa). • Internet Usage in the Kingdom of Saudi Arabia. • Annual report 2009. • Commercial possibilities on the Internet. • Users & Demography for the Saudi Arabia. • Entering the 21st century : competition policy in the world of B2B electronic marketplaces: a report. • One & Two-Character Domains in Dot-INFO.
Newspapers' articles	<ul style="list-style-type: none"> • Alriyadh, Aljazeera and Okaz newspaper. • TradeArabia Business News.
Government and suppliers websites	<ul style="list-style-type: none"> • Saudi Arabian Monetary Agency (www.sama.gov.sa) • Saudi Payment Network (www.span.com.sa) • Ministry of Finance (www.mof.gov.sa) • Communications and Information Technology Commission (www.citc.gov.sa) • Bureau of investigation and prosecution (www.bip.gov.sa) • Ministry of Commerce and Industry (www.commerce.gov.sa) • Central Department of Statistics and Information (www.cdsi.gov.sa) • Saudi Network Information Center (www.nic.net.sa) • Al Rajhi bank (www.alrajhibank.com.sa) • Saudi telecom (www.stc.com.sa) • Mobily (www.mobily.com.sa) • Saudi Post (www.sp.com.sa) • Yesser programme (www.yesser.gov.sa)

5.3.3 Observation

Observation means,

“To watch and to pay attention to” and is used to *“find out what people actually do, rather than what they report they do when questioned”* (Oates, 2009, p.202).

Observation is considered a difficult activity for researchers; however, it can help in knowing what people are doing and draw the observer into the action to see what is occurring. It is recommended to combine interviews with observation to enable the researcher to interpret correctly what has been said (in the interview) and what he/she saw as an observer (Corbin and Strauss, 2008, p.29).

Observation can be overt or covert. In overt observation, everyone knows that the researcher is observing, which is the case in this research. This helps to make the research ethically correct. In contrast, no one knows about the observer in covert observation. Therefore, researcher should not ask many questions during this type of observation. Another reason for applying the overt observation in this study is to be able to ask as many questions as needed and for the research to comply with the required ethical standards (Oates, 2009, p.203).

During the first and second empirical field study, the researcher visited many places and wrote field notes as part of the observation plan. With respect to ethical issues, the researcher accepted the agreement of responsible people and the participants. Therefore, interviews with observation provided a good understanding of the phenomenon under study.

5.4 Data Analysis in GT

As mentioned earlier this research follows Strauss and Corbin’s (1990) approach of grounded theory. The GT’s analytic procedures are designed to build theory and increase its density. There are, therefore, three coding procedures in the analysis stage, which are open coding, axial coding and selective coding. Prior to that, the researcher

prepared the questions to explore the issues that are related to the phenomenon and on understanding how participants experience the process. Collecting and analysing data in grounded theory happens at the same time, which counted as one of the advantages of grounded theory. As a result, the researcher conducted interviews and then analysed the responses to be able to amend the questions and to add new ones that arose during the previous interview. In a later stage, the researcher theoretically chose some of the participants by applying theoretical sampling to close the gaps that appeared during analysis (section 5.2.2). The following sub-sections describe the three coding process that applied to this study.

5.4.1 Open Coding

Open coding is the first coding data. It is called an initial coding as the researcher breaks the data in order to extract all possible meanings. This process results in grouping codes and then naming categories. This process gives a name for every event, idea and incident to represent a phenomenon (Strauss and Corbin, 1990, p.63). In open coding, researchers make comparison between events, actions and interactions (Corbin and Strauss, 2008). As a result, many categories are identified during open coding as the researcher examines and finds the similarities and differences between events, actions and interactions (Strauss and Corbin, 1990, p.98). The examination of the data can be word by word, sentence by sentence, line by line, paragraph by paragraph or incident by incident. In open coding, the researcher is concerned about ‘what’ questions such as ‘what is happening in the data?’

5.4.2 Axial Coding

Because of the open coding process, data is already broken down. The researcher, therefore, moves to the next stage, which is axial coding in which the researcher examines the codes at a more conceptual level than in open coding and relates these codes to each other by making connections between categories (Strauss and Corbin, 1990, p.97). This phase, therefore, finds the relationship between categories and ensures that each code is clear and fully explained (Strauss and Corbin, 1990, p.97, p.125). In axial coding, the researcher asks questions such as when, why, how and where?

5.4.3 Selective Coding

This stage aims to confirm links between categories and bring them together around a core category (Strauss and Corbin, 1990, p.116). The core category is,

“The central phenomenon around which all the other categories are integrated.”
(Strauss and Corbin, 1990)

This stage is considered to be a story line that is written by the researcher. At this stage, the researcher compares categories and then identifies the core category. This results in the formation of a theory (Creswell, 2007, p.67).

The researcher selected the core category from all the developed categories as illustrated in chapter 6 and 7 (Corbin and Strauss, 2008, p.104). The selected core category should be able to link categories together and have the greatest description and explanatory relevance. The result of this procedure is considered to be a theory that is written by the researcher to describe the specific problem (Creswell, 2007, p.67).

Conditional matrix is an analytic diagram used to connect conditions and consequences that influence the phenomenon (Strauss and Corbin, 1990, p.158). It is not applied, however, in this research for the following reasons.

1. A conditional matrix is an optional step (Creswell, 2007, p.67).
2. The conditional matrix may force the data (theoretical code) to become conceptual and confuse the analyst if he/she wants to outline the emerging categories (Glaser, 1992, p.96).
3. Grounded theorists rarely have the time, resources and data to develop a conditional matrix (Strauss and Corbin, 1998).
4. According to Creswell (2007, p.65) and Creswell and Brown (1992),

“In my experience, this matrix is seldom used in grounded theory research and researchers typically end their studies with a theory developed in selective coding.”

5.4.4 Paradigm Model

Paradigm model is used in grounded theory method to intensify analysis. The model has a set of relationships as the follows (Strauss and Corbin, 1990, p.99):

1. Causal conditions: They are a set of incidents and events that influence phenomenon.
2. Phenomenon: It is *“The central idea, event, happening, the incident about which a set of actions or interactions are directed at managing, handling or to which the set of actions is related.”* (Strauss and Corbin, 1990, p.96)
3. Context: It is the phenomenon’s proprieties and stand for a set of conditions within which strategies/actions are taken.
4. Intervening conditions: They are the set of conditions that facilitate or restrict the taken strategies within a certain context.
5. Strategies/actions: They are a set of strategies that solve and manage a phenomenon under certain perceived and predictable conditions.
6. Consequences: They are the outcomes of the applied strategies to manage phenomenon.

As a result, the paradigm model is represented by the following figure.

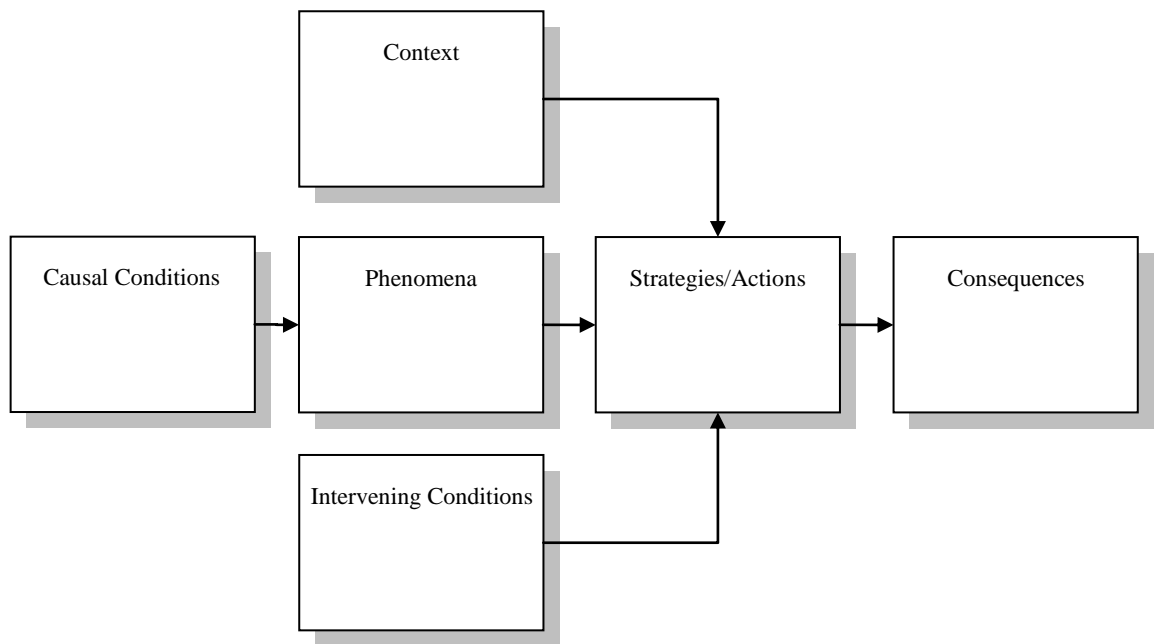


Figure 5.2 The paradigm Model

Adopted from Strauss and Corbin (1990, p.99) and Creswell (2007, p.293)

This model is applied to this study and presented in chapter 6, 7 and 8. The next section describes the strengths and limitations of grounded theory.

5.5 Strengths and Limitations in GT:

Grounded theory like every other premise has its own advantages and disadvantages as follows:

Strengths:

- It provides a systematic approach for qualitative research.
- It has good techniques that aim to enrich findings during the analysis stage such as, theoretical sensitivity, theoretical sampling and theoretical saturation.
- It is the appropriate research methodology when there is no theory to explain a phenomenon under study or when there is no concern that has been sufficiently explained (Skeat and Perry, 2008).

Challenges/Limitations:

- The researcher should “*set aside as much as possible*” and must know that Strauss and Corbin’s (1990) method is a systematic approach with specific data analysis steps (Creswell, 2007, p.68).
- Some researchers may declare that their research has been conducted by applying the grounded theory method whereas they did not apply theoretical sampling and saturation techniques in their research.
- Some researchers claim difficulties in deciding when to stop applying theoretical saturation and when categories are saturated (Creswell, 2007, p.68).

5.6 Research evaluation

“A trust worthy study is one that is carried out fairly and ethically and whose findings represent as closely as possible the experiences of the respondents.” (Padgett, 2008, p.184)

There are differences between quantitative and qualitative research with respect to their evaluation as piece of research (Lincoln and Guba, 1985). Quantitative research is evaluated according to reliability and validity (Lietz and Zayas, 2010, p.190). Reliability refers to the stability, truthfulness and trustworthiness of the research findings whereas validity measures the rules, criteria and standards of the applied methodology. Since, qualitative research is more subjective validity and reliability are incompatible with it. Therefore, reliability and validity are not the appropriate measurements in qualitative research. This is because these measurements change position to the positivist approach instead of the interpreted approach (Liamputtong, 2009, p.21, Angen, 2000, p.379).

In order to evaluate qualitative research, Lincoln and Guba (1985, 1989) have developed four criteria that researchers can use in order to prove and assure the method’s rigour. These criteria are credibility, transferability, dependability and confirmability, which can be used as guiding principles to evaluate qualitative research

and should not be considered as rules for using validity and reliability in positivist research (Carpenter and Suto, 2008, p.150, Lietz and Zayas, 2010). This chapter explains these four criteria and applies them in chapter ten to judge the rigour of this research.

Liamputtong (2009, p.20) defined rigour as,

“The quality of qualitative enquiry and is used as a way of evaluating qualitative research.”

These criteria are listed in the table below.

Table 5.3 Criteria and strategies for ensuring rigour in qualitative research
(Liamputtong, 2009)

Rigour criteria	Criteria for rigour	Research strategy	Techniques to ensure rigour
Credibility	Truth value	Field notes/ Memo	Purposeful/theoretical sampling
		Tape recorder	Negative/deviant case
		Thematic log	Constant comparison
		Auditing transcript	Member checking
			Triangulation
		Audit trail	
Transferability	Applicability	Data display	Purposeful/theoretical sampling
		Simultaneous literature review	Thick description
Dependability	Consistency	Field notes/ Memo	Negative/deviant case
		Tape recorder	Member checking
		Thematic log	Triangulation
		Auditing transcript	Audit trail
		Researcher's story	
		Reflexivity	
Confirmability	Neutrality	Field notes/ Memo	Audit trail

The following sub-sections describe the four criteria that evaluate qualitative research:

5.6.1 Credibility

Drisko (1997) declared,

“Interpretations must be authentic and accurate to the descriptions of the primary participants.”

Therefore, credibility is used to judge the reliability and authority of the research (Liamputtong, 2009, p.21). The key point here is to see if explanation fits description (Tobin and Begley, 2004, p.391). According to Padgett (2008) credibility should fit between what participants said and the way researcher represents their viewpoint. As a result, the researcher should control the risk of bias and reactivity (Padgett, 2008). Lietz and Zayas (2010, p.191) defined reactivity as,

“The potential for the researcher to exert an impact on the participants thereby changing the findings of the study.”

The way the researcher asks questions or behaves during interviews (such as non-verbal communication) can increase reactivity. Reactivity can also increase during observation by the degree that researcher participates (Lietz and Zayas, 2010, p.191). On the other hand, predetermined ideas and the researcher’s social status may shape the design of the study and, therefore, it may increase bias and lead to a misrepresentation of the data (Lietz et al., 2006).

Two main strategies lead to achieve the credibility of the research:

1. Applying theoretical sampling and the selection of participants according to their knowledge and characteristics gives credibility to the research (Carpenter and Suto, 2008).
2. When participants recognise the description and interpretation of the researcher (Waterfield, 2004). Therefore, it can be achieved,

“When the multiple realities held by participants are represented as accurately and adequately as possible.” (Liamputtong, 2009, p.21)

5.6.2 Transferability

Transferability is the ability to apply the research findings to other contexts, settings, situations, events, individual or groups (Padgett, 2008). In other words, it is the degree to which findings can be applicable to other situations, contexts or settings (Carpenter and Suto, 2008, p.149). This can be done by in-depth description about a phenomenon that makes other researchers able to understand if the findings are applicable to fit into other settings (Devers, 1999, Lietz and Zayas, 2010). This can help other researchers to judge if the current findings can be transferred or generalised to other contexts.

5.6.3 Dependability

Dependability (Auditability) is the degree to which the study is documented to allow researchers from outside to follow and trace the research's process (Padgett, 2008). Dependability is assured when the research process is traceable and well documented (Tobin and Begley, 2004, p.392). Therefore, it can be compared to reliability (Liamputtong, 2009, p.22). According to Carpenter and Suto (2008, p.150) dependability is to make sure that findings fit the derived data.

The idea behind dependability is based on repeatability. Therefore, it is concerned with whether the researcher is able to obtain the same result if he/she observes the same phenomenon twice, but a researcher cannot obtain the same result because he/she is measuring two different things. Therefore, the researcher should describe and give details about the changes that take place in the setting and how this change influences the way the research is approached. For example, Lietz and Zayas (2010, p.196) stated, *“One way of addressing the need to make decisions and changes along the way is to provide detailed documentation throughout the research project.”* Therefore, *“Keeping an audit trail and engaging in peer debriefing.”* are two strategies that increase dependability (Lietz and Zayas, 2010, p.196). The audit trail is a written report of the research process that reports what happened during the research. In addition, peer debriefing is used to consult other experts (colleagues) in qualitative research and discuss procedures and decisions to obtain feedback that can enrich the quality of the research (Padgett, 2008).

5.6.4 Confirmability

Confirmability is the ability of other researchers to confirm the research findings (Lincoln and Guba, 1985). It aims to confirm that findings are clearly linked to the data (Padgett, 2008). It can also be defined as the degree to which findings are determined by respondents and not by the researcher's perspective (Lincoln and Guba, 1985, p.290). Therefore, confirmability can be achieved by exhibiting the data that is collected and the analysis steps leading to the findings.

The previous four sub-sections have described the four criteria that help to judge research rigour. The following is a discussion about some strategies to ensure the rigour of a piece of research.

First, the selected methodology strengthens rigour. This is because, the selected method links to the aim of the research, which helps to justify the choice of research methodology (Carpenter and Suto, 2008).

Secondly, the more researchers engage in fieldwork the less bias in the research. In other words, the longer the time spent in fieldwork the more accurate the data collection (Liamputtong, 2009). Therefore, if a researcher is collecting data through in-depth interviews then the more interviews the researcher conducts the more accurate the data collection.

Thirdly, the rich research details about participants, settings and methodology the greater the reliability, transferability and generalisation of the data and of the research findings (Johnson and Waterfield, 2004, p.128).

Fourthly, the researcher should bring evidence in order to present his/her findings. This can be done by bringing the exact quotation of the participants (Liamputtong, 2009, Carpenter and Suto, 2008, p.156).

Reflexivity is a fifth strategy that ensures rigour. This is because the researcher considered being part of his/her study. According to Angen (2000) researchers engage in shaping and analysing their data. Therefore, reflexivity should be acknowledged in

order to give credibility to the findings. As a result, reflexivity should be discussed in the research limitation section (Malterud, 2001).

Triangulation is the sixth strategy for strengthening qualitative research credibility. It combines multiple sources to confirm data (Carpenter and Suto, 2008, p.152). Denzin (1989) counted the four kinds of triangulation. The first type of triangulation is the use of multiple methods such as applying in-depth interviews together with observation in the study (Padgett, 2008). This gives validity to the research, as the same findings are confirmed through different methods.

The second kind of triangulation is called researcher triangulation, which means that more than one researcher conducts the study either by analysing, collecting data or observing (Sands and Roer-Strier, 2006). In this scenario, the researchers work together as a team to examine the same phenomenon.

Data triangulation or source triangulation is considered the third kind of triangulation and it can be conducted by using multiple quotations, involving multiple participants and collecting data from different locations at different times (Sands and Roer-Strier, 2006, p.238, Carpenter and Suto, 2008, p.153).

The fourth kind of triangulation is labelled theoretical triangulation. This kind of triangulation can be conducted by the use of different theoretical frameworks within the same study in order to interpret its findings (Padgett, 2008).

In this research, the researcher conducts some of these kinds of triangulation, such as, multiple collection methods and data triangulation. This is due to the constraint of time and the high cost that may be incurred by applying all kinds of triangulation (Johnson and Waterfield, 2004, p.126).

The above strategies are related to the design of the research. Peer review, which is described in this paragraph, is a strategy related to participants and researchers in order to reduce bias (Sandelowski, 1998, Morse, 1994). A peer is a colleague who has a general understanding of the qualitative research approach and the area of the research through, for example, by peer reviews, access to transcripts and field notes. The purpose

of a peer interviews is not to approve the research that is under consideration, nor give opinions, but to offer expert criticism that can help the researcher to avoid bias (Sandelowski, 1998, p.470). According to Padgett (2008, p.194) each research methodology fits one or more rigour strategies. In this study, Padgett (2008, p.194) stated that grounded theory fits better with data triangulation.

The researcher should maintain the privacy of the participants; inform them about the research's aims, purpose, procedure, benefits and any possible risks that may occur. This helps participants to make the decision either to accept or reject participation in this research (Emanuel et al., 2000). In order to obtain the right content from the participants, the researcher should give full details of the nature of his research (Dickson-Swift et al., 2008). Confidentiality and hiding candidate's details is considered a significant concern (Christians, 2008). Participants have the right to keep their details secure such as their names and other privacy issues. Therefore, researchers should secure all the data in a safe store that can only be accessed by the research team (Carpenter and Suto, 2008). Furthermore, researchers must make sure that participants are not affected in any negative way as a result of participating in the research (Dickson-Swift et al., 2008).

In conclusion, this section presented the four criteria that evaluate qualitative research as well as describing the strategies that help to ensure its rigour. This chapter ends with the following summary.

5.7 Summary

This chapter described grounded theory method. It highlighted the key differences between the two main GT approaches (Glaserian and Straussian). The chapter described the techniques applied in grounded theory such as theoretical sampling, theoretical sensitivity, theoretical saturation and memos. It then described the different data collection methods used in this thesis such as interviews and documents. Section 5.4 discussed the process of data analysis in grounded theory, which is open, axial and selective coding. Finally, the researcher described the four criteria that are used to

evaluate this research, which are credibility, transferability, dependability and confirmability. These criteria are examined in the conclusion to chapter ten in order to prove the quality of the thesis.

An awareness of the strengths and weaknesses of GT and of the four criteria that are used to evaluate qualitative research strengthens the use of this methodology for this inquiry. The next chapter presents the first empirical study's findings.

Chapter 6

The framework of the adoption of e-commerce from the consumers' perspectives

6.1 Introduction

This chapter outlines the first empirical study and its findings. As presented in chapter one, and, after reviewing the literature in chapter two and three, a research gap was found. This gap is related to factors (motivations and obstacles) affecting the consumers' adoption of e-commerce in developing countries, such as, Saudi Arabia. As illustrated in section 3.3.1, Saudi Arabia is a good case study. As a result, this study was conducted taking note of the geographical aspects in Saudi Arabia and then the demographic aspects of each region of that country. Therefore, education, age, gender, income and employment status are considered in this study to help understand the environmental setting of this research.

As described in chapter five, this research applies grounded theory method to carry out a qualitative research following Strauss and Corbin's (1990) approach. A pilot study was conducted to refine the interview questions for the first and second empirical studies. The pilot study aimed to evaluate the process of data collection, the appropriate procedure for conducting interviews and the correct way to analyse the data. Furthermore, it aimed to redesign the research, saved time and enabled the researcher to go into the field to execute the main empirical work. It ensured that the researcher had sufficient skills to understand the research methodology to be able to conduct the study in the field (van Teijlingen and Hundley, 2001).

Figure 6.1 illustrates and explains the integration of the two studies and the synthesis that arises. The empirical study of this research was divided into two main stages. The first stage is referred to as the first empirical study and is presented in this chapter. It is based on a street sample in Saudi Arabia with consumers as illustrated in table 6.1. The second empirical study is presented in chapter seven. It focused on suppliers' perspectives of what consumers stated during the first empirical study. GT's theoretical sampling was applied to link the first empirical study with the second one. Furthermore, it was applied during the first empirical study, as shown in figure 6.1, to cover issues that need more investigation in order to achieve theoretical saturation.

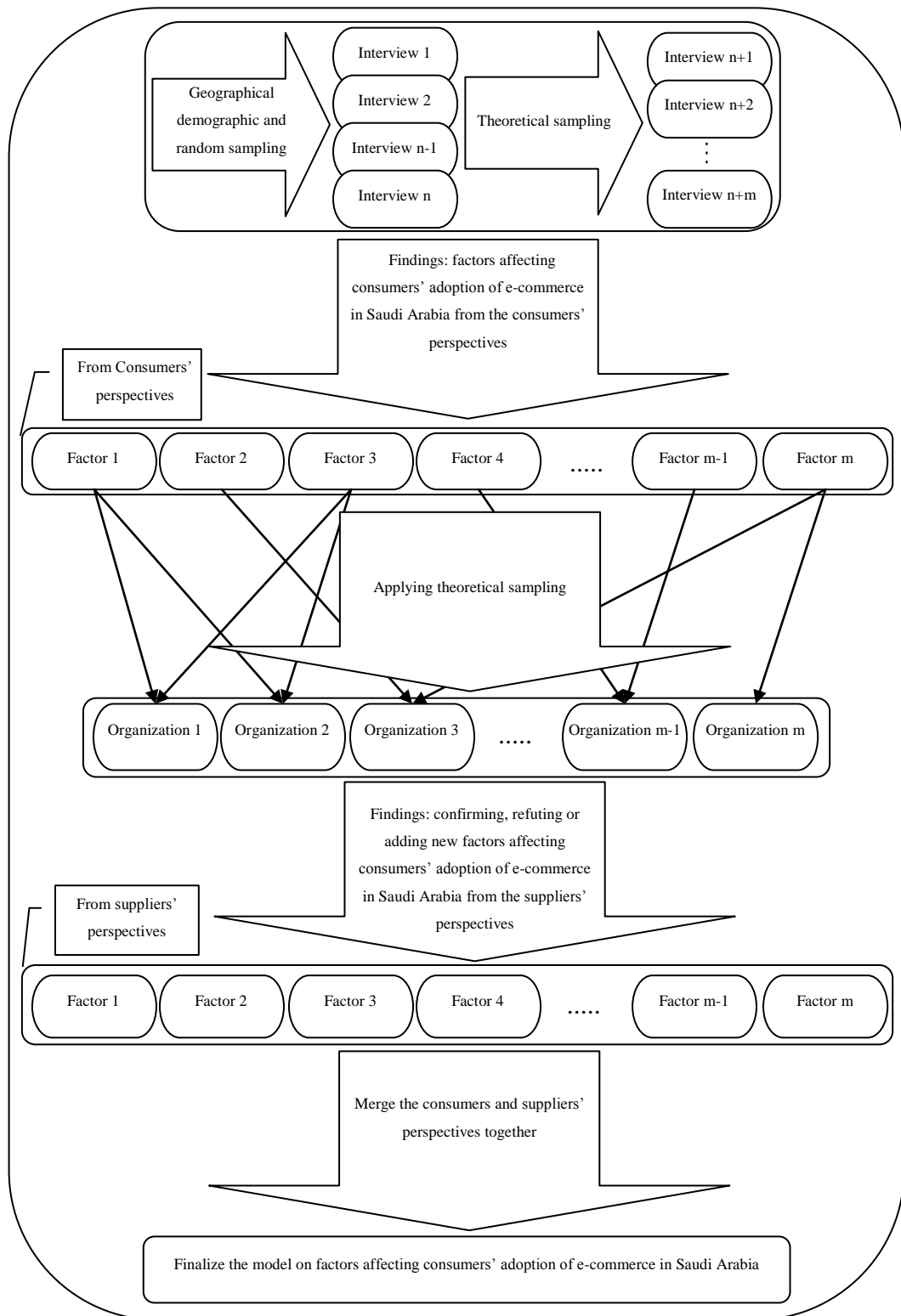


Figure 6.1 The applying of grounded theory methodology for this study

Table 6.1 Geographical demographic spread of interviewees

Demographic spread		Saudi regions															Total															
		North (N)				South (S)				Centre (C)						East (E)				West (W)												
		1	2	3	4	1	2	3	4	1	2	3	4	5	6	1		2	3	4	1	2	3	4	5							
		Total	4			T	4			T	6					T		4			T	5										
Gender	Male	2	*	*			2	*	*				4	*	*	*	*			2	*		*			3	*		*	*	*	13
	Female	2			*	*		2			*	*		2			*	*	*	2		*	*	*		2		*	*	*		10
Age	15-24	1				*								1		*										1		*				3
	25-34	2		*	*			2		*	*			3		*	*	*	*	3		*	*	*	*	2	*		*			12
	35-54	1	*					1			*			2	*			*		1	*					1			*			6
	>=55							1	*																	1				*		2
Education	Low							1		*																1			*			2
	Medium	1			*			1	*					2	*		*			1			*			2	*		*	*		7
	High	3	*	*		*		2		*		*		4	*		*	*	*	3	*	*	*	*		2	*	*	*			14
Income	<4000	2			*	*		1		*				1		*				1		*				1		*		*		6
	4000-7999	2	*	*				1			*		*	2			*	*	*	1			*			2	*		*	*		8
	8000-12000							1	*					2		*		*		2	*		*			1	*		*			6
	>12000							1	*					1	*											1		*				3
Living in	Village	1			*			1		*				1		*				1		*				1		*		*		5
	Town	1				*		1			*			1	*											1		*				4
	City	2	*	*				2	*	*				4		*	*	*	*	3	*	*	*	*		3	*	*	*	*		14
Employment status	Unemployed																			1		*										1
	Gov. employee	1		*				2	*	*	*			3	*		*	*	*	1		*				1	*		*	*		8
	Priv. employee	1			*			1			*		*	2		*	*	*	*	1	*					1		*		*		6
	Retired							1	*																	1			*			2
	Self employed	1	*																							1		*		*		2
	Student	1			*									1	*					1		*				1		*		*		4

The first empirical study was conducted with 23 participants from the five regions in Saudi Arabia as shown previously in table 6.1. The research, in each region, was conducted in public areas such as shopping malls, coffee shops and in the street with no appointments. At the beginning of the study, participants were chosen at random from these regions while taking into account the application of theoretical sampling to answer questions not answered by the randomly selected participants. The researcher obtained informed consent from all participants.

Official papers were carried from De Montfort University showing the importance and purpose of the study and from the sponsor of this study, the Saudi SACB in London, asking the authorities and people in Saudi Arabia to help. These two papers helped to save time and avoided the potential risk of not having the authority to conduct this study.

Participants in this empirical study welcomed the researcher; most of them accepted the recording process and provided the researcher with contact information in case further information was required.

After each interview, as illustrated in section 5.4, the audio-recorded responses were transcribed to provide an initial analysis for grounded theory process purposes. Unlike many research methods, this process helped the researcher to be more dynamic in understanding the field more quickly, resulting in amendments to the interview questions during the data collection phase. As stated in section 5.4, at the beginning of the interview, participants were asked in general about the Internet and e-commerce to assess their knowledge about these subjects. The interviews were semi-structured, which gave a good chance for interviewees to focus on issues not mentioned previously and in some cases answer some of the later questions. The participants were then asked about issues that had not been addressed. The questions were direct and simple and the researcher avoided placing a participant under pressure in order to confirm an answer or situation. After each interview, the researcher gave an opportunity to each interviewee to end their interview with their own comments. Finally, the researcher confirmed his understanding of the interviewee's answers. This technique increased the credibility of the research as pointed out in section 5.6.1.

Following GT analysis, the transcripts were read repeatedly (Regmi et al., 2010) and GT coding procedures (which are open, axial and selective coding) were applied. During this empirical study, all twenty-three interviews were transcribed in the Arabic language and then translated into English by the researcher. The translation was submitted to a focus group (PhD researchers who are fluent in English and Arabic) to make sure that the translations were correct. Twenty-five percent of the total interviews (five interviews) randomly selected were reverse translated using different translators. This proved that the original translation had sufficient reliability with no discrepancies in meaning (Regmi et al., 2010, p.20). During analysis, some participants were re-contacted and they were asked to clarify certain parts of their responses. After each interview, the participant was allowed to lead the researcher to issues or ideas that were not taken into account during the interview. Questions were amended, if necessary, to obtain answers to related issues. This procedure forced the researcher to spend more time than expected in the field. The sequence of interviews continued until the stage when interviewees were unable to provide any further useful information. There were, however, some issues left unanswered by random participants. Therefore, theoretical sampling (explained in section 5.2.2), was conducted in order to find answers to some of these questions or to confirm some critical issues such as finding new participants according to some criteria or returning to previous participants (who authorized the researcher to contact them again) to ask for further questions. The research then reached data saturation point (illustrated in section 5.2.3), where no new ideas or data could be gathered that could help this study. Therefore, the first empirical study had reached completion.

Despite the researcher having good background knowledge, he was not steeped in the literature that pertains to this particular area of research. This was because a GT method seeks discovery (Strauss and Corbin, 1990). The researcher, however, came to the research with some background in the technical literature such as academic papers and non-technical literature such as diaries and other reports to commence the study and derive the list of questions. Some questions and topics were added after the first interview by conducting a GT data analysis. This facilitated in identifying new topics to include any that had surfaced during the interview. After the two empirical studies were

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completed, the researcher engaged in a detailed review of the relevant literature to compare it with the research's findings.

The next section describes the findings of the first empirical study.

6.2 Overview of the first empirical study and its findings

This section represents the key findings that originated from the interviews using the GT method in the first empirical study as shown in Figure 6.1. This research (as seen in table 6.1) uses a simple coding letter that relates to each region and a number that relates to each interviewee. For example, C1 is the interviewee number one from the central region. A sample of the interviews conducted with consumers is shown in appendix C.

Before recounting the findings, a brief description of the analysis stage is provided. This stage is described in more detail in section 5.4. Open coding as illustrated in section 5.4.1 is the first coding data. In this stage, a name has been assigned for every event, idea and incident. This name was used to represent a phenomenon. Then, a comparison was made between these events, actions and interactions in order to group them together. As a result, initial categories were discovered. During this process, the data was broken down and reconceptualised.

After the open coding process, the researcher progressed to the next step, which was axial coding as demonstrated in section 5.4.2, which examined the codes at conceptual level compared to open coding. This stage found the relationship between these categories and ensured that each code was clearly defined and fully explained.

The third analytic process was the selective coding stage. This stage builds links between categories at a more conceptual level and draws them together around the core category. This stage is considered a story line, written by the researcher as described in section 5.4.3. The researcher at this stage compared the developed categories and identified the core one. This enabled the researcher to link most categories together with the greatest descriptive and explanatory relevance. Figure 6.2 shows the categories and

Chapter 6. The framework of the adoption of e-commerce from the consumers' perspectives their relationships to each other in relation to the first empirical study.

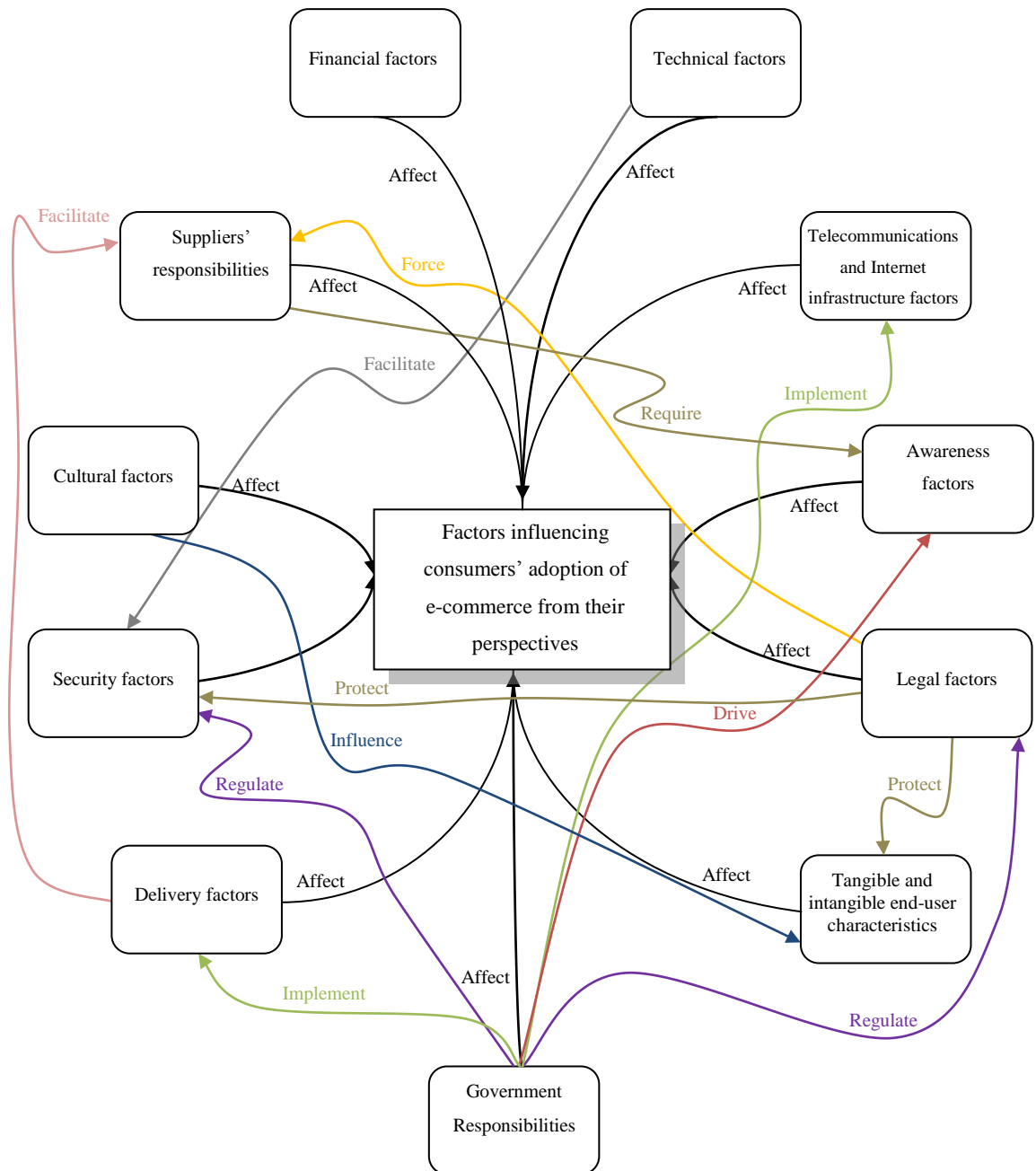


Figure 6.2 The relationships between categories in the first empirical study

The following sections describe each category with their key findings. In order to distinguish between barriers and enablers in the following figures, the grey boxes are enablers for e-commerce adoption and the white boxes are the barriers.

6.2.1 Cultural factors

This empirical study revealed cultural issues, which need to be considered when adopting e-commerce in Saudi Arabia as shown by the figure below.

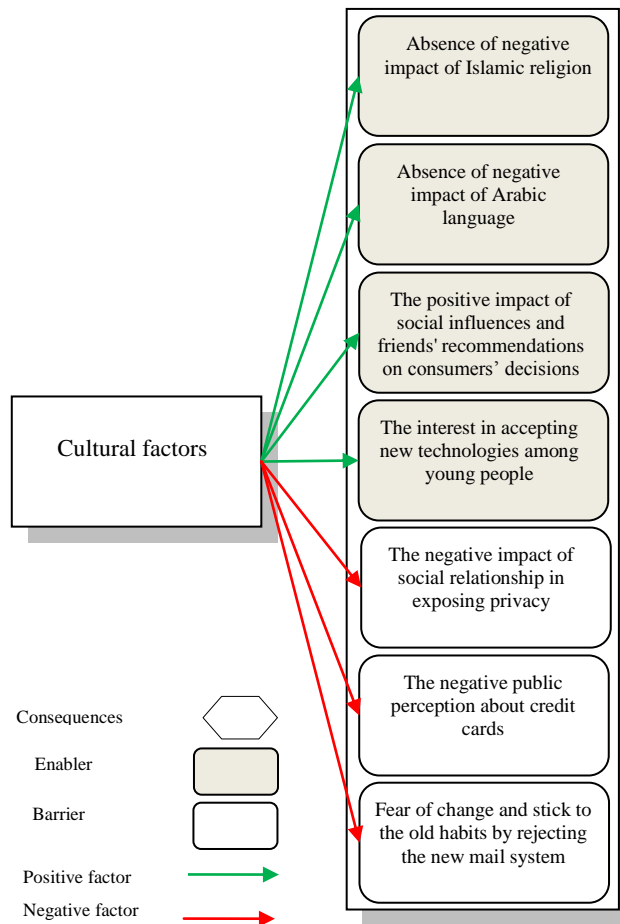


Figure 6.3 The cultural factors

This section refuted two very important points related to the influence of the Islamic religion and the Arabic language on the e-commerce adoption among consumers. Therefore, this study turned some of the agreed negative factors found in the literature into neutral ones. The previous literature considered both language and the Islamic religion an obstacle to consumers' adoption of e-commerce. For example, Siala et al. (2004, p.7), Zainul et al (2004, p.286) and Alfuraih (2008) considered Islam to be an obstacle to e-commerce adoption due to applying interest (called 'riba' in Islam) to credit cards instalments. Thomas (2006, p.10, p.26) stated that riba in the Arabic language means "*increased and grew*" and has been defined in Islamic religion

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'Shariah' as the interest over debt to "*delay in settlement of a due debt, regardless whether the debt be that of a goods sold or a loan.*" The interest 'riba' is prohibited in Islam for many reasons as stated in Choudhury and Al-Sakran (2001, p.27). There is a consensus, however, among most participants in this study that the Islamic religion is not considered anymore as a barrier that influences consumers' adoption of e-commerce. For example, a participant from the central region (C1) said,

"In the past, there was an Islamic barrier in dealing with e-commerce but now we easily can issue Islamic credit cards and do our transaction in a fully Islamic way."

As seen in chapter seven, this is due to improvements in Islamic banking and finance and the new commercial transactions that are compliant with the principles of Islamic law (Shariah). The best example, as seen in section 7.2.1, is the availability of Islamic credit cards, which avoid dealing with interest 'riba'. Consequently, the Islamic religion should no longer be an obstacle to the e-commerce adoption in the Islamic world.

The literature has stated that language is also one of the barriers that prevent people from buying and selling online (Duan et al., 2010, p.361, Vatanasakdakul et al., 2004, p.10, Thanasankit, 2003, p. 263). This research can confirm that the Arabic language is no longer counted as an obstacle in the adoption process from the consumers' perspectives due to the availability of Arabic versions of websites as pointed out (S4),

"All the websites I know has the Arabic version and some of them have the English version as an extra service."

This issue was raised during the second empirical study with suppliers and its results confirm that language is no longer a barrier to e-commerce adoption. This matter is discussed in more detail in section 7.2.1.

Interviewees exposed some enabling factors. Participants revealed that recommendations from friends' and other members of society help to facilitate e-commerce adoption. For example, N2 said,

“I like to buy online from websites recommended by friends.”

This study revealed that the young people are interested in accepting new technologies. Individuals under the age of thirty represent approximately two-thirds of the Saudi population (approximately 13 million) as illustrated in section 3.3 (figure 3.5). Approximately 60 percent of young people are under 15 and the rest, 40 percent, are aged 15-29 (around 5.4 million). Participants under 34 years old were very interested to know more about new technology, especially technologies related to the Internet as stated (C2),

“We like new technology, especially if it is related to the Internet, gaming and mobile phones.”

Facebook’s statistics support this finding. There are approximately, 4.5 million Facebook accounts in Saudi Arabia as shown in the figure below.

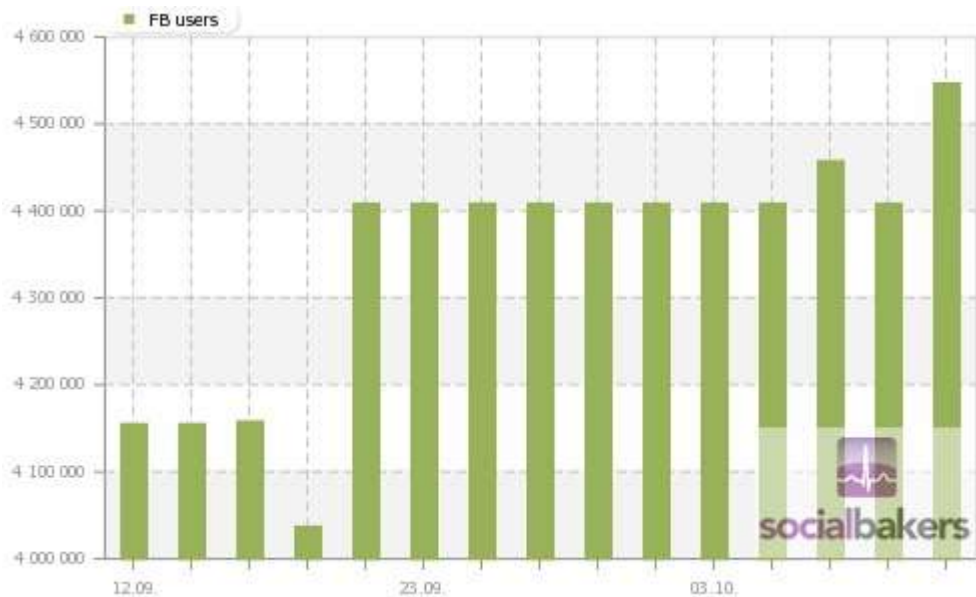


Figure 6.4 Users and demography for Saudi Arabia (Facebook, 2011)

More than 82 percent (around 3.7 million out of 4.5 million) of the Saudi accounts belong to young people between the ages 13-34 years as seen in figure 6.5. This supports the idea that young-people in Saudi Arabia are thirsting for new technologies and a further study may be needed to confirm this.

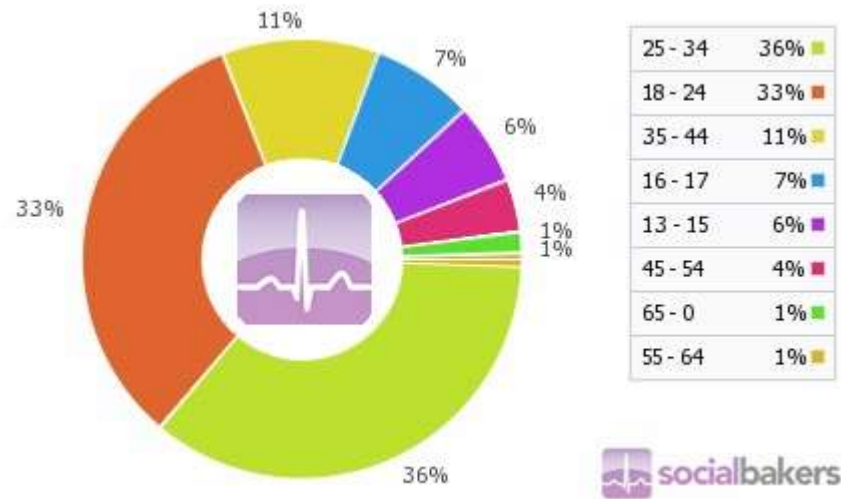


Figure 6.5 User's age distributions on Facebook in Saudi Arabia (Facebook, 2011)

On the other hand, there are barriers to the adoption of e-commerce. Saudi Arabia has strong social ties and people like to help each other, not giving the concept of individual privacy enough attention. Staff working in both private and public sectors can expose consumers' privacy, in good faith, by passing information to those with whom they have social relationships. Therefore, participants in this study are afraid of having their private information easily seen by the public. One of the participants in the west region (W4) said

“My major concern is that consumers' privacy is easily hacked especially when dealing with private business. Anyone in the kingdom can know about my private information and activities by calling one of his friends who is working in that company and get all my private information by good faith.”

Another (E2) said, *“Many people are able to find an employee of a private or a public organization who has access to database and get the other people private information.”*

Therefore, strong social ties have a negative impact on consumers' privacy, which prevents them from adopting e-commerce.

Another barrier to e-commerce adoption is that although there are credit cards compliant with the principles of Islamic law (Shariah), there remains a belief among the

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community that these cards should not be used because it causes an accumulation of debt. An interviewee in the central region (C6) said,

“The bank sent me a new credit card as part of their marketing but I returned it back and asked to cancel it.”

Another one (S4) stated,

“I do not like credit cards because it bring bankruptcy and allows you to spend money you do not own.”

Therefore, this finding confirms the CITC (2011a) report mentioned in section 3.3.2 in which credit cards suffer from low adoption in the Kingdom and, therefore, have a negative impact on e-commerce adoption.

Consumers' resistance to change and retaining old habits is another barrier to e-commerce adoption. This study shows that old people do not like to change their life style. For example, they prefer to stick on the old mail system preferring to pick up their mail themselves from main post offices in city centres. They stated that this is an old habit and enables them to meet old friends.

6.2.2 Telecommunications and Internet infrastructure factors

This section has three barriers with no enablers in the e-commerce adoption among consumers as illustrated in figure 6.6.

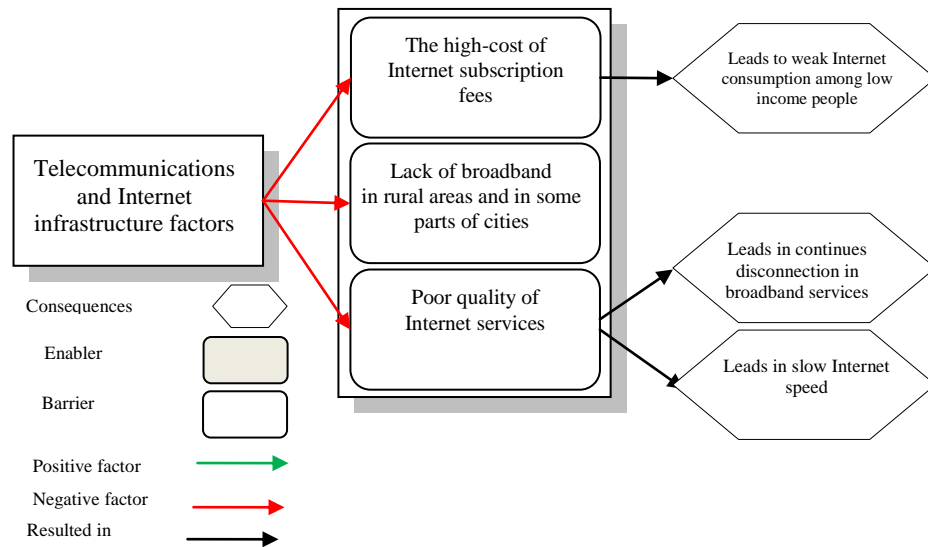


Figure 6.6 Telecommunications and Internet infrastructure factors

The study found that major Internet providers in Saudi Arabia are charging high fees for broadband usage, including setup fees and rental (Aleid et al., 2009). For example, table 6.2 shows a comparison of Internet prices between Saudi Arabia and other gulf, Arabic and developed countries in 2009 (Aleid et al., 2009).

Table 6.2 The Internet prices in January 2009
(Aleid et al., 2009)

Country	Internet Speed							Gross Domestic Product Per Capita (£1=5.3SR)
	128KB	256KB	512KB	1 MB	2 MB	8 MB	16 MB	
Saudi Arabia	£19	£27	£36	£54	£83	£152	£174	£9,900
UAE	N/A	£27	£34	£45	£63	£109	N/A	£26,000
Jordan	£16	N/A	£20	£28	£37	£56	N/A	£1,700
Egypt	N/A	£11	£18	£31	£50	£105	£186	£1,000
UK	N/A	N/A	N/A	N/A	£4.5 or free	£4.5	£10	£21,000

The above table shows that Saudi Arabia almost has the highest Internet prices of the entire Gulf, Arabic and developed countries, such as, the UK. In 2009, the fee for 128KB in Saudi Arabia is much greater than the fee for 16MB in the UK. In recent years (for example in 2011), there has been a drop in broadband prices but it remains expensive. Table 6.3 shows that after two years, in 2011, the cost for 256 kbps in Saudi

Arabia remains greater than for 20MB in the UK.

Table 6.3 Comparing the monthly Internet fees in 2011 between Saudi Arabia and the UK
 (£1= 6.0SR)
 (Mobily, 2011, STC, 2011, Sky, 2011, BT, 2011)

Country	256KB	512KB	1MB	2MB	4 MB	10-20 MB
Saudi Arabia	£20	£24	£27	£30-35	£34	£40
UK	N/A	N/A	N/A	N/A	N/A	£5 - £13

The high fees for broadband have slowed down its adoption in rural areas especially among people with low incomes. An interviewee from the northern region (N4) said,

“The Internet price is still expensive. I do not think that my parents are able to pay the broadband monthly fees.”

Citizen lives in a city (E1) said,

“The Internet cost is cheaper than before” but “however, compared to other countries, it is really expensive.”

Therefore, broadband price is a barrier in the e-commerce adoption.

Moreover, broadband availability is another obstacle in Saudi Arabia. Most towns and villages lack broadband services. Therefore, they still use dial-up services. An interviewee from a town in the central region (C1) said,

“There is no broadband service in our town. We are still surfing the Internet using dial up.”

Another quote from the northern region of Saudi Arabia (N1) said,

“Most villages in the northern region don't have the Internet infrastructure. They do not have broadband. They are still using dial up.”

Part of this problem exists in major cities due to the inability to meet the demand for broadband services, especially in new residential areas. An interviewee living in a large

city (W2) said,

“You have to wait for a long time to get the broadband services.”

The last barrier in this section is poor broadband quality. Many participants stated that there is a lack of confidence in broadband services. This is because it is disconnected from time to time. According to an interviewee who has broadband and lives in a city (C3) said,

“Sometimes, the Internet is disconnected for hours or even for the whole day.”

A second reason associated with broadband quality is the gap between announced and actual download speeds. According to an interviewee who lives in a city in the eastern region (E4),

“The Internet speed is slow even if you order a high speed connection. We feel that there is a high load on the Internet.”

The slow speed of Internet makes surfing boring and this may make consumers reluctant to purchase online. As said by an interviewee from the eastern region (E1),

“Sometimes, I cannot surf the Internet and I turn off my computer because the Internet is slow and I feel bored to death.”

To sum up, the above barriers need to be demolished in order to adopt e-commerce among consumers. The researcher applied theoretical sampling to be able to carry these factors to the second empirical study and discuss them with the relevant organizations as described in chapter 7.

6.2.3 Technical factors

This section has three barriers with no enablers as illustrated in figure 6.7.

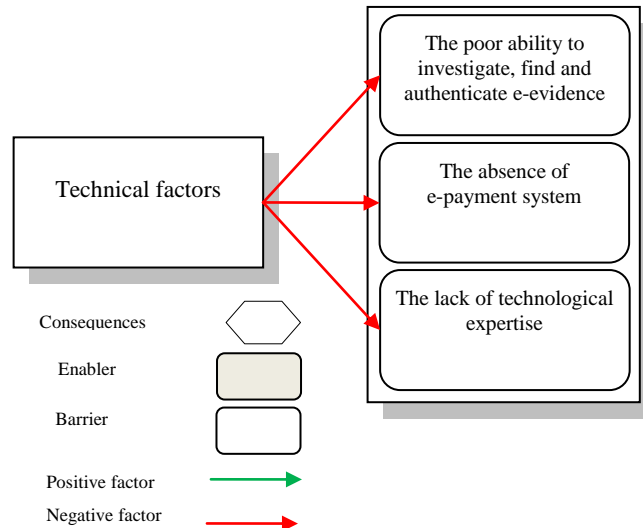


Figure 6.7 Technical factors

The research found that the poor ability to investigate e-crimes and to authenticate e-evidence is one of the major barriers that prevent consumers from adopting e-commerce. Many interviewees have a belief that the local authorities lack the required facilities to track and trace e-crimes. Therefore, they feel unsafe when shopping online as said by (W2),

“In case of Internet hacking, I do not know where to go and I am sure that the government does not have the required equipments and experts to investigate these electronic crimes.”

Consumers are afraid of hackers online and believe that local government is not able to investigate e-crimes. This issue, therefore, is raised during the second empirical study with the relevant organizations.

The second barrier is that SMEs' websites lack the appropriate electronic payment mechanisms as stated (W4),

“Saudi websites does not have an electronic payment system like other European and American websites.”

Consumers, therefore, feel there is a missing link that prevents them from buying online.

The final barrier is the lack of technological experts in the local market. According to an interviewee from the south region (S2),

“Companies have not developed their systems since ages. This is because of the lack of ICT professionals in Saudi Arabia.”

The lack of ICT companies and experts limit the expansion of businesses in the area of e-commerce. All these issues are raised with the relevant organizations in the second empirical study.

6.2.4 Suppliers' responsibilities

This section raised some of the factors related to suppliers from the consumers' perspective as illustrated in figure 6.8.

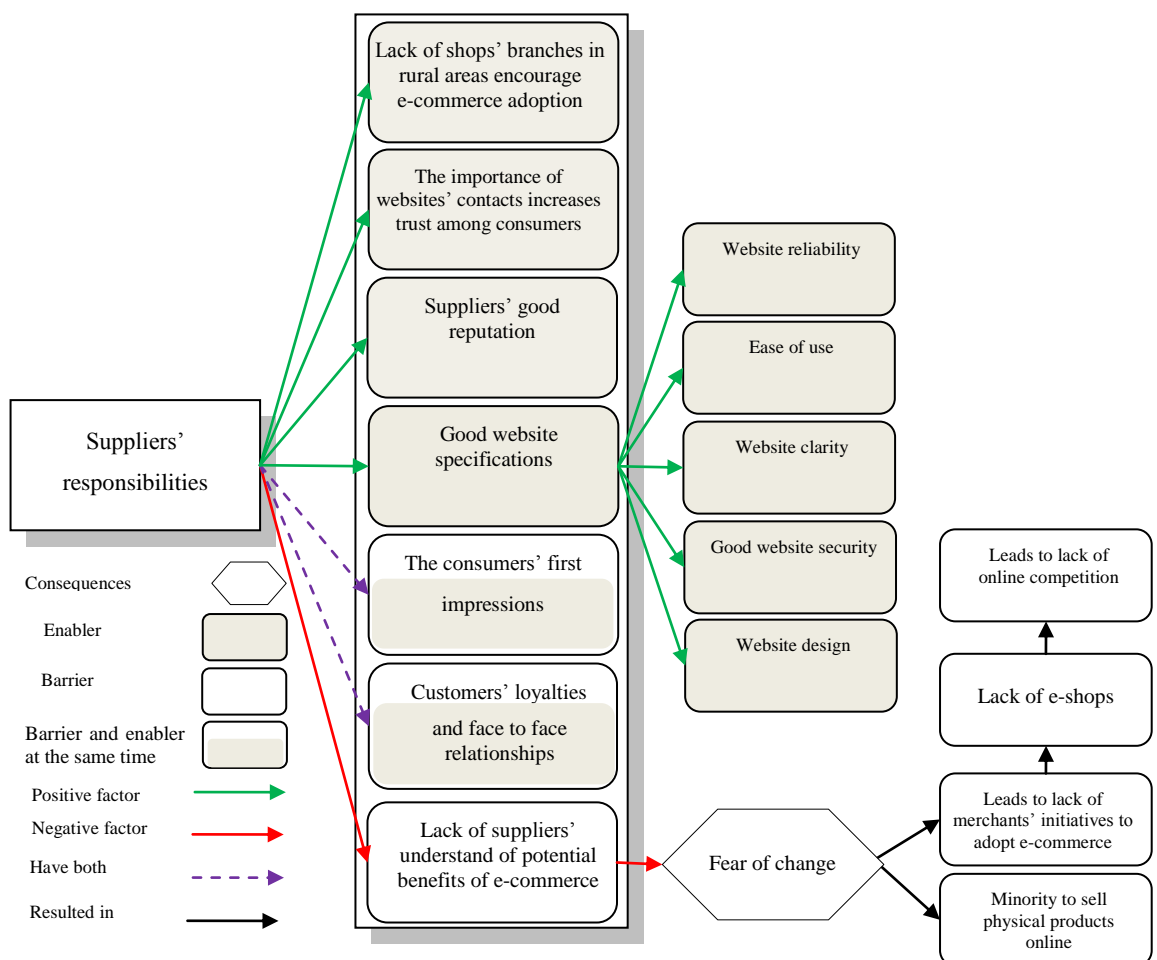


Figure 6.8 Suppliers factors

Before pointing out the barriers in this part, attention should be drawn to e-commerce enablers, which are referred to by the grey boxes. It has emerged that in rural areas in Saudi Arabia there is a lack of shopping malls, big stores and trademarks due to the low population ratio in these areas. (C2) said,

“Our village has only one small supermarket and therefore we buy everything from Riyadh.”

This offers a very good chance for suppliers to expand their businesses by developing e-commerce stores to serve these rural areas. This factor has a relationship to the geographical factors mentioned in section 6.2.11.

The second enabler in this section is that something as simple as suppliers providing contact information gives a great enhancement to consumers confidence for online trading as pointed out (N2) when said,

“I cannot trust an online-shop who does not post his address and contact numbers on his website.”

Therefore, this study revealed the importance of contact information such as physical addresses, emails and telephone numbers.

The third enabler is the firm's good reputation. Many participants highlighted that a supplier's good reputation is an important factor that increases the trust in a particular online shop as stated by (E4),

“I may buy online from well-known trademarks and some other shops who have a good reputation among people.”

The fourth enabler is that the participants confirm what is known from existing literature (reported in section 2.8.1), namely, that website specifications play a major role in encouraging them to buy online. Participants stated that a website's ease of use, design, reliability, security and clarity are important issues. (W3) said,

“I like to buy online if the website has clear information about products” and

“Security features are important for me in order to buy online.”

(W3) further added to her comments when she said,

“I do not like to buy online from some particular websites because it is difficult to use and surf.”

This research confirms the literature (section 2.8.1) that positive or negative first impression about e-shops is one of the factors that affect e-commerce adoption and should be taken into account when attempting to develop online stores. This is because; first impressions are very hard to change as illustrated by (S2)

“Once I surf an e-shop, I get the first impression about it. This first impression comes from the website design, colours, information, contacts and other issues. Therefore, from the first look, sometimes I get a negative impression about particular websites and sometimes I get good impression about other websites. This first impression lets me decide whether to stay or leave the e-shop.”

The other key finding was related to in-store sales staff, who in the hope of repeated sales commission, encourage their clients to come to their store instead of advising the online store, as said by (S1),

“I prefer to shop from particular shops in the high street because I have already created a long relationship with their salesmen. They give me advice and discounts.”

On the other hand, a consumer's loyalty encourages people to trust the e-shop and as a result buy online as stated by (C3),

“I will buy online from shops I already know and have dealt with before.”

This factor, therefore, can act as either as an enabler or a barrier.

Some large businesses in Saudi Arabia already have online stores. Telecommunications, banking and airlines companies are good examples of large businesses in Saudi Arabia. These businesses, however, offer digital services and no physical products that need to be delivered to consumers' homes. This issue is discussed

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in more detail in section 6.2.8, which deals with delivery factors. Unfortunately, SMEs still tend to be far away from this step. Therefore, citizens participating in this study blamed SMEs for not having online stores. According to an interviewee from the southern region (S4),

“There are some online shops. However, they are few. This is because traders were still dealing with trade in the old way and do not want to change” and “this is because most of the companies are still family businesses.”

As a result, the lack of e-stores among SME is considered a strong barrier in e-commerce adoption. Interviewee (C3) said,

“This is because there is no real competition between them yet.”

Therefore, customers face a lack of diversity and competition online. In addition, and according to consumers' perspectives, SMEs lack sufficient knowledge of the potential benefits of e-commerce on their businesses. For that reason, they are not paying attention to the current e-commerce developments among large companies. This makes SMEs far from developing their online stores. Therefore, this study encourages SMEs who have a good reputation to know their responsibilities as leaders and develop their online-stores and to be a good example for other SMEs to emulate. This encourages other SMEs to follow in order to survive.

Most of the previous barriers discussed in this section have relationships with other factors in this chapter and some cause further ones to develop. For example, the weakness in delivery services across the country encourages a minority to sell physical products online. Another example is that the lack of online comparison sites makes customers head directly to their local stores to compare prices and specifications rather than comparing online. As a result, they buy from the high street.

6.2.5 Financial factors

This section shows two enablers and six barriers as shown in figure 6.9.

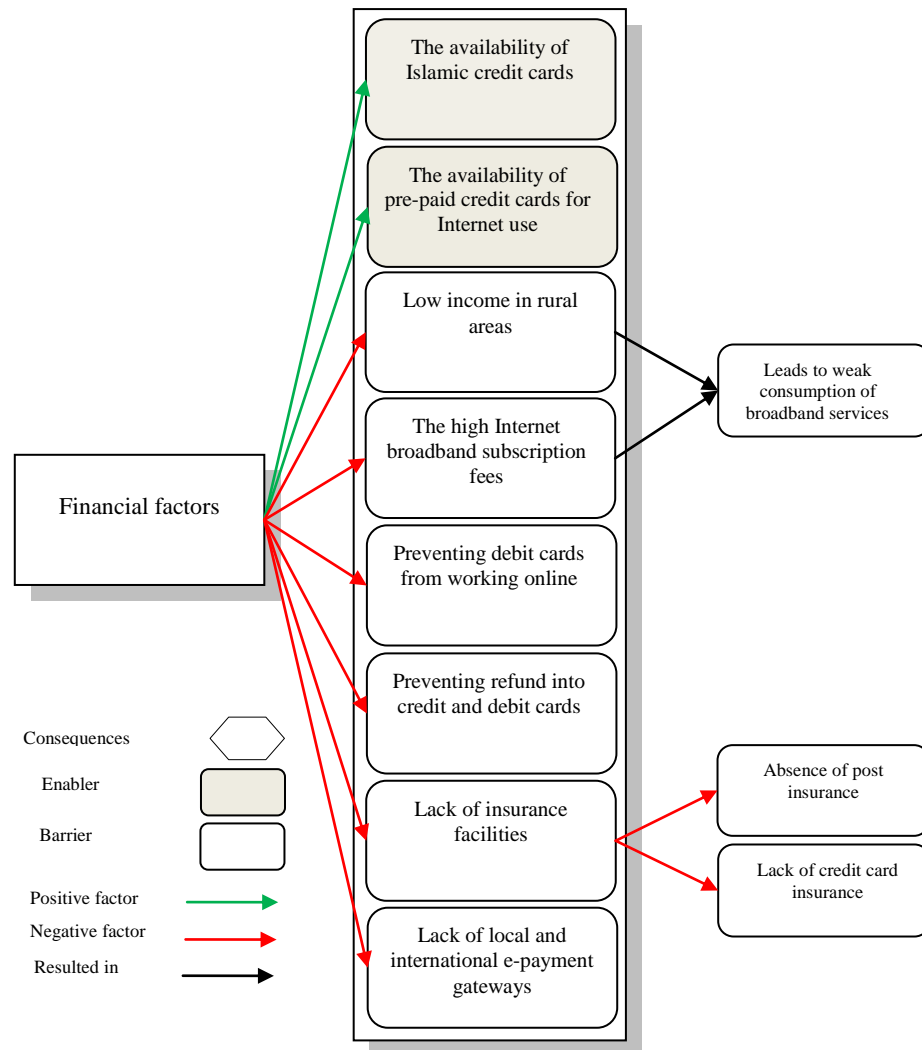


Figure 6.9 Financial factors

As stated in section 6.2.1 local banks have started to issue Islamic credit cards that are compliant with Islamic law ‘Shariah’. This type of credit card avoids dealing with interest ‘riba’ and Islamic scholars approve them. Therefore, credit cards are no longer prohibited by the Islamic religion and consequently it encourages the adoption of e-commerce among consumers. This factor continues to be discussed during the second empirical study in order to saturate it.

Local banks start issuing pre-paid credit cards, which can be used on the Internet.

This is a good enabler for e-commerce adoption as stated (C6),

“You can order an Internet card from your bank to buy online. This card has a small amount of money to spend.”

This study suggests, as discussed in chapter seven and eight, to distribute and expand the use of these pre-paid credit cards and allow people to buy them from local stores without any restrictions and with no need to link them to their bank account. This solution can encourage consumers to buy online without fear of fraud. These cards are a way of reducing credit cards frauds.

On the other hand, the first barrier in this section is the low income in rural areas. This is because Saudi Arabia lacks businesses and job opportunities in these areas, as stated by (N2),

“Most people in our areas are farmers or low income workers” and “most vendors and main suppliers are located in large cities seeking profit.”

The high cost of broadband services is another financial barrier, which has already been mentioned in section 6.2.2. Therefore, low income coupled with high monthly broadband fees has resulted in restricting people in these areas from subscribing to broadband Internet services.

The third barrier is the inability to use local debit cards online. Many interviewees have mentioned that local debit cards do not work online. This has led to difficulties in ordering products online. According to an interviewee from the western region (W1),

“I cannot purchase products online by my debit card. It does not work online”

Another participant from the east region (E3) said,

“Most of us have debit cards but unfortunately, it is not working online. Because of that, we do not think that e-commerce can succeed in Saudi Arabia.”

This factor (inability to use local debit cards online) is related to one of the cultural factors that were pointed out in section 6.2.1 i.e. the negative public perception

Chapter 6. The framework of the adoption of e-commerce from the consumers' perspectives of credit cards. Saudi citizens used debit cards in their daily lives but avoid credit cards. The former are not an acceptable method for online payment unlike the latter.

Figure 6.10 shows the missing link in the e-commerce process in Saudi Arabia that relates to debit cards.

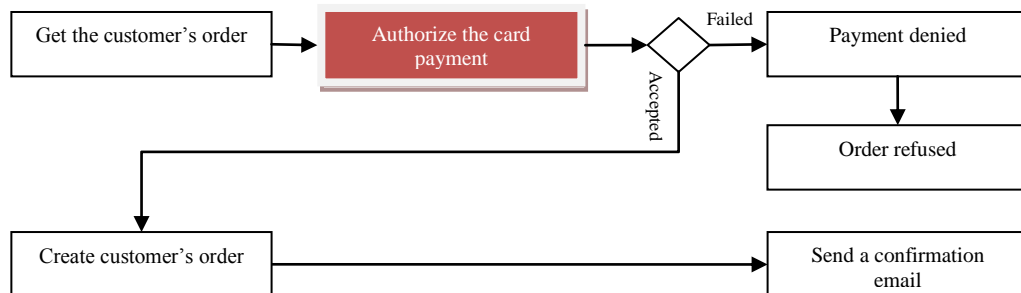


Figure 6.10 Simple workflow for the missing link (debit card) in the e-commerce process in Saudi Arabia

The fourth barrier is the failure to refund money onto local debit and credit cards. Consumers have stated that this depresses the process of e-commerce adoption. Participant (E2) said,

“In case I want to return a product, shops and other businesses in Saudi Arabia cannot refund money onto customers’ cards.”

This leads consumers to avoid buying online.

The fifth barrier is the lack of insurance facilities, which is a key factor in adopting e-commerce. According to participants, local markets lack insurance solutions. Several participants stated that Saudi banks do not protect credit cards from online hacking. This encourages customers’ reluctance to purchase online, as stated by (E1),

“Banks do not protect their credit cards in case of online hacking and believe that this is the consumers’ responsibility.”

Therefore, the need to insure and protect credit cards is an important issue and this issue is raised during the second empirical study. Moreover, participants state that deliveries are not insured. They are, therefore, fearful of loss and breakage during transit as pointed out (N4)

“The post office does not have insurance facilities. So, I will not buy online for deliveries that may be lost or break during delivery.”

The last barrier in this section is the lack of local and international e-payment gateways, which has been discussed in section 6.2.3, which dealt with technical factors. This factor is discussed in more detail in the second empirical study.

6.2.6 Awareness factors

This study noted that e-commerce in Saudi Arabia still does not receive enough government and suppliers' attention as illustrated in the figure below.

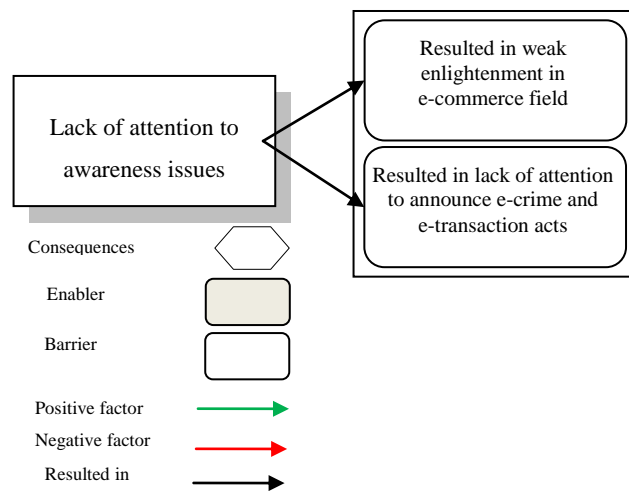


Figure 6.11 Awareness factors

Participants indicated that local TV, newspapers and radio provided no e-commerce enlightenment. Similarly, they have not seen booklets about e-commerce in schools, universities, shopping centres or government departments.

Interviewees pointed out the importance of giving awareness issues a high priority. An interviewee from the eastern region (E2) said,

“There is a need to educate citizens about e-commerce.”

Another interviewee from the central region (C5) said,

“People suffer from a lack of e-commerce knowledge. They should be encouraged

According to some of the participants, local media, schools and other related government's agencies have not taken the initiative to educate people about e-commerce. Therefore, this resulted in a lack of knowledge about e-commerce in Saudi Arabia.

The other factor is related to the enactment of e-crime and e-transaction acts, which was published in 2007. Most of the research's participants were unaware of these laws. Inertia to enact these laws is lacking and it acts as a barrier for e-commerce adoption in Saudi Arabia. A participant from the northern region (N4) said,

“I have no idea. I have not heard about an electronic trading law in Saudi Arabia.”

Another interviewee from the central region of the country (C6) said,

“There is no e-commerce law in Saudi Arabia.”

These awareness issues are considered one of the factors that influence consumers' adoption of e-commerce and are discussed in more detail with the relevant parties during the second empirical study.

6.2.7 Legal factors

This section is considered one of the major barriers that affect consumers' adoption of e-commerce in their daily lives. The legal category does not have any enabler as illustrated by figure 6.12.

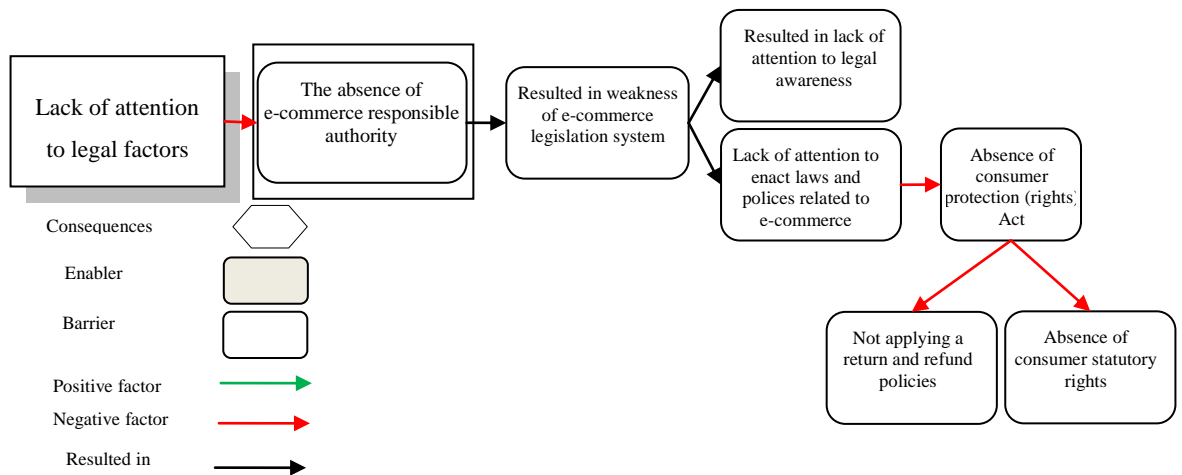


Figure 6.12 Lack of attention to legal factors

Consumers in Saudi Arabia suffer from the country's weak e-commerce legislation system. This is due to the lack of any responsible authority that controls and creates the appropriate environment to encourage e-commerce adoption among consumers. Responsibility is missing in the related government's agencies. Participants do not know who is responsible for issuing and executing related laws and to whom to complain if they experience a problem related to their online purchases. According to an interviewee from the central region of the country (C4),

“If I face a problem with my online purchase, and the online shop did not solve the problem, I may not go to complain because I have no idea where to go.”

Some participants reported that they already had been victims of fraud and could not find the appropriate party from which to seek protection and justice.

This situation has resulted from a lack of attention among the authorities to enact related e-commerce laws. For example, there is an absence of a consumer rights (protection) act, such as, consumer statutory rights and a return and refund policy. One of the participants (N1) said,

“Suppliers are controlling us because we do not know our statutory rights. Therefore nobody can protect us, even the government cannot protect us. We need such law that can show us our rights.”

As a result, consumers feel insecure online and prefer not to shop there unless they are covered by legislation.

A return and refund policy is found to be a critical concern in this study. This is because Saudi Arabia does not have any published policies regarding returns and refunds. According to an interviewee from the central region of the country (C6),

“I tried to return the purchased item back but they refused to accept it.”

Another participant (W2) said,

“It is very difficult to return purchased items because we do not have a returns policy.”

Therefore, consumers are forced to shop directly in stores, check products and then buy them. Consumers reported it is difficult to buy online while there is no clear return and refund policies.

The absence of a responsible authority has also resulted in the absence of legal knowledge among consumers in the e-commerce field. In 2007, CITC published the e-crime and e-transaction acts but, unfortunately, many interviewees stated that they had not heard about any such laws in Saudi Arabia. This was due to the lack of attention among authorities with respect to the importance of legal awareness. According to an interviewee who lives in the northern region (N4),

“I have no idea. I have not heard about an electronic trading law in Saudi Arabia.”

Another interviewee from the central region of the country (C6) said,

“There is no e-commerce law in Saudi Arabia.”

This factor, although a legal issue, is related to the awareness factors (section 6.2.6).

These factors count as obstacles in the adoption process and show the need for

6.2.8 Delivery factors

Consumers in this study exposed many barriers with no enablers that are related to the delivery process as illustrated by the following figure.

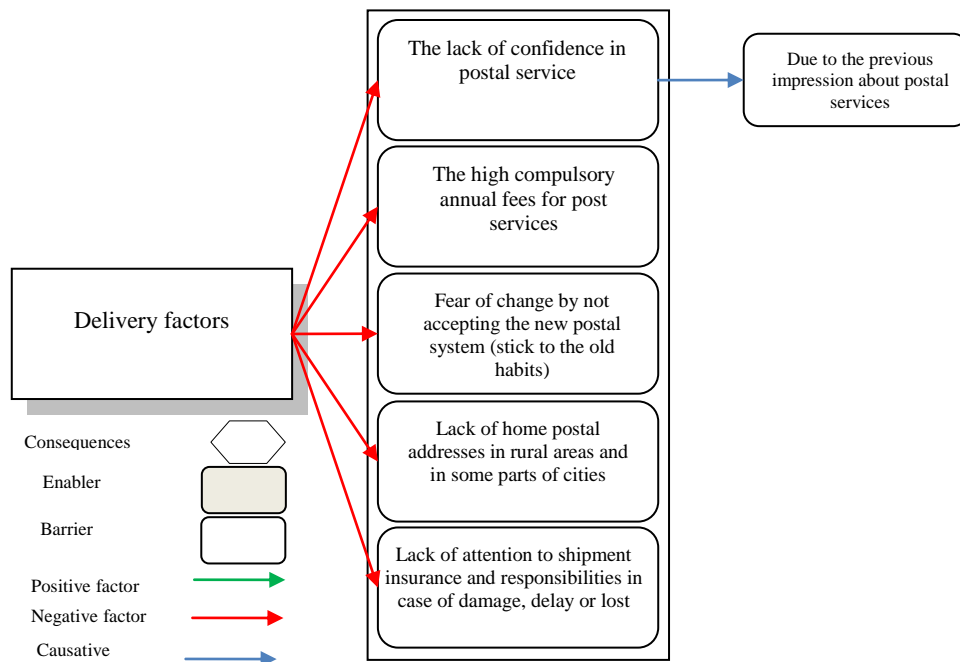


Figure 6.13 The delivery factors

To begin with, people still lack confidence in the national mail carrier even with its improvement in recent years as stated (S3),

“The material might be late, lost or damaged” and “I cannot trust the main post carrier.”

An interviewee from the eastern region (E2) said,

“The national mail carrier is not doing its job that well; however, other private mail carriers are covering the gap for much more money.”

One of the reasons is that first impressions are very hard to change as (C2) said,

“We know the national mail carrier for a long time and their services are not

good.”

Secondly, unfortunately people need to register and pay annual fees in order to get their regular post. Participants in this research reported that the poor services of the national mail carrier and the high subscription prices, which tripled the previous price, are the reasons for their negative response. An interviewee from the central region (C3) said,

“They increased the annually subscription fees to triple the original price, therefore, we do not like this service since we know their quality of service is under standard.”

The national post carrier in Saudi Arabia applied a new advanced version of a postal system that distributes mail to suppliers and homes instead of forcing their clients to pick up their mail at a post office normally located in the city centre. A mailbox was attached to each house, apartment and office in most cities. Unfortunately, the new system was refuted according to the following evidence. First, some participants declared that they collect their letters from the main post offices located normally in city centres on a weekly basis and they have been doing so for a long time. This effort becomes habitual, which they are reluctant to change. Only older people over 54 raised this factor, as said (S1),

“Everybody knows my post address since ages and I do not want to change. Also, I normally go there on a weekly basis and know everybody working there and sometimes I see other old friends.”

This factor needs further work to confirm or refute it as this study involved only two elderly people. Secondly, citizens destroyed many of these mailboxes. This can be taken as evidence for not accepting the new version of the post system. Participants stated that they do not like the new postal system even with its improved accessibility. This area, therefore, came subject to considerable discussion during the second round of empirical work with the relevant organizations.

The other barrier is the absence of home postal addresses in towns, villages and

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some parts of cities. Many rural areas still do not have official post addresses for their homes. As shown in figure 6.14, a missing link prevents the adoption of e-commerce in these areas.

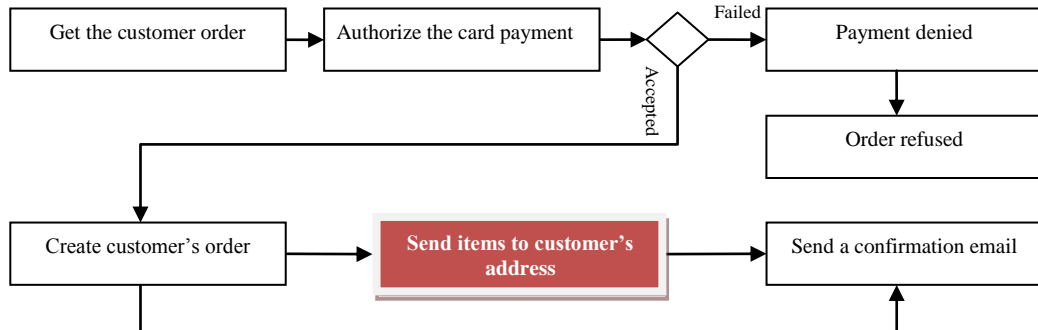


Figure 6.14 Simple workflow for the missing link (postal address)

The last barrier in this section is the lack of responsibility in the case of damage, delay or loss. Interviewees highlighted that both the national mail carrier and merchants failed to take responsibility in the case of lost or damaged products. (N4) said,

“I sent a dictionary device through special delivery by the national mail carrier to my brother and it has not arrived to him. Then I submit the claims form. But, until this moment, and in more than three months I have not received any reply from them.”

Consumers in Saudi Arabia are afraid that their post may be lost or damaged during delivery. Therefore, they prefer to buy directly from shops on the high street. A participant from the eastern region (E2) said,

“So what will happen if you order online and do not get it or receive a broken item? The national post and the online shop will not return it back and no one will be in charge. I prefer to see the item myself and check its status.”

This section raised many questions that need to be discussed during the second empirical study with suppliers.

6.2.9 Tangible and intangible end-user characteristics

This section has four factors that can be either enablers or barriers according to certain situations of the end-user as illustrated by the following figure.

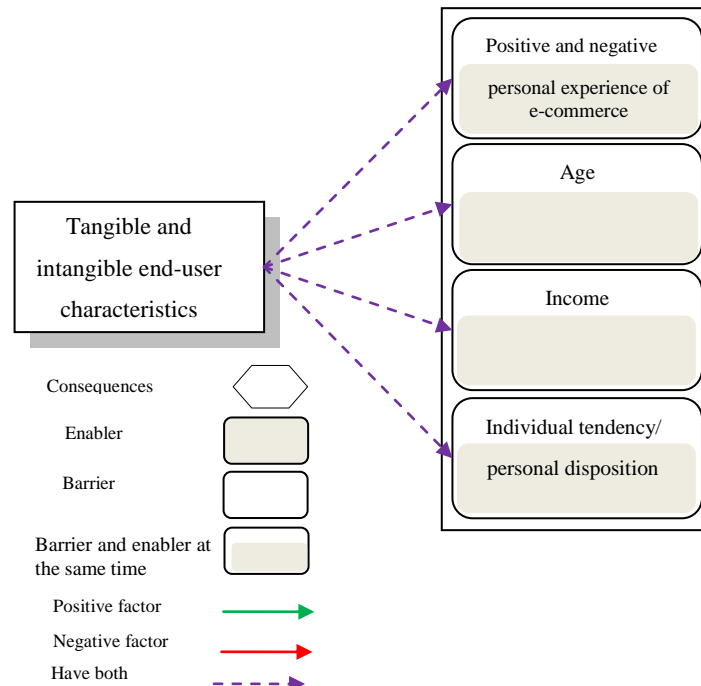


Figure 6.15 Tangible and intangible End-user characteristics

This research found that positive and negative consumers' experience of using the Internet in general and of e-commerce in particular has an influence on the latter adoption. The more people surf and know about Internet technology or have a positive experience when using e-commerce, the more individuals will adapt to e-commerce services. For example, interviewees who studied or worked in countries that had already adopted e-commerce stated that they are keen to purchase products from the Saudi websites. They are willing to accept and deal with e-commerce in Saudi Arabia. This is because they have a positive experience of dealing with e-commerce from their time abroad, as (C1) said,

“I am familiar with e-commerce and used to buy online when I was living in Europe and, therefore, I will be happy to buy online in Saudi Arabia once e-commerce is ready there.”

On the other hand, people who have suffered a bad experience during online shopping are less likely to buy from Saudi websites unless they are assured that it is safe and protected by the government or a trusted body. C4 pointed out,

“I cannot trust e-commerce in Saudi Arabia because, I have already been hacked and no one protected me” and “I had a bad experience seven months ago and will not buy online again unless I found a real protection.”

Another example is stated by (E4),

“Many people in Saudi Arabia had a bad experience with fake companies in the high street. There is no protection...so they will not trust any e-commerce website.”

The researcher conducted an interview with two of older citizens over fifty-four and found a reluctance to adopt e-commerce. The researcher understands that two interviews are not enough to draw conclusions about the whole population over the age of 54. However, due to the limitation of time, this issue can be considered more in further work. People less than 54 years-old are more interested in e-commerce services and have a strong belief in its benefits. Most young people between fourteen and seventeen do not have credit cards. During the first empirical study, the researcher observed some young people who were playing a particular online game. Many of them do not possess credit cards but have the ability to credit their accounts online by paying cash to their relatives and trusted friends who have credit cards and, therefore, are able to credit their accounts. This may suggest that trust in particular website increases the e-commerce adoption. The more people trust online shops the more they are able to adapt to e-commerce.

Income is the third factor. One of the interviewees, (N3), with a low income (less than 4000SR) said,

“I am not willing to shop online if there is a chance that I may lose my money.”

This indicates that people with low incomes are more cautious with their money and thus less likely to buy online in an immature market such as Saudi Arabia. By contrast, interviewees with high income (W3) said,

“If the online price is cheaper than local store, then I may buy online to check the website’s credibility.”

And as said by (C3) *“I am not going to buy any product from a local website unless it is not found locally and it cost a small amount of money. In this case I may buy it to check the website reliability.”*

This supports the premise that people with high incomes are more likely to buy online from immature markets even if they are not sure about the reliability and credibility of some of the e-commerce sites.

Human behaviour is the fourth factor as people are different in nature and traits. Some people like to take risks, while others do not. For example, some people stated that they do not want to lose money and find it almost impossible to take risks and this is relevant when, as in our case, e-commerce remains immature. On the other hand, some people like to take risks in their normal life. Therefore, they do not mind trying e-commerce and then judge their attempt, as was said,

“I am an adventurer in my daily life and, therefore, I do not mind taking a risk in order to check or examine anything such as online stores.”

6.2.10 Security factors

The security category is one of the major issues that worried consumers regarding e-commerce adoption as illustrated in the figure below.

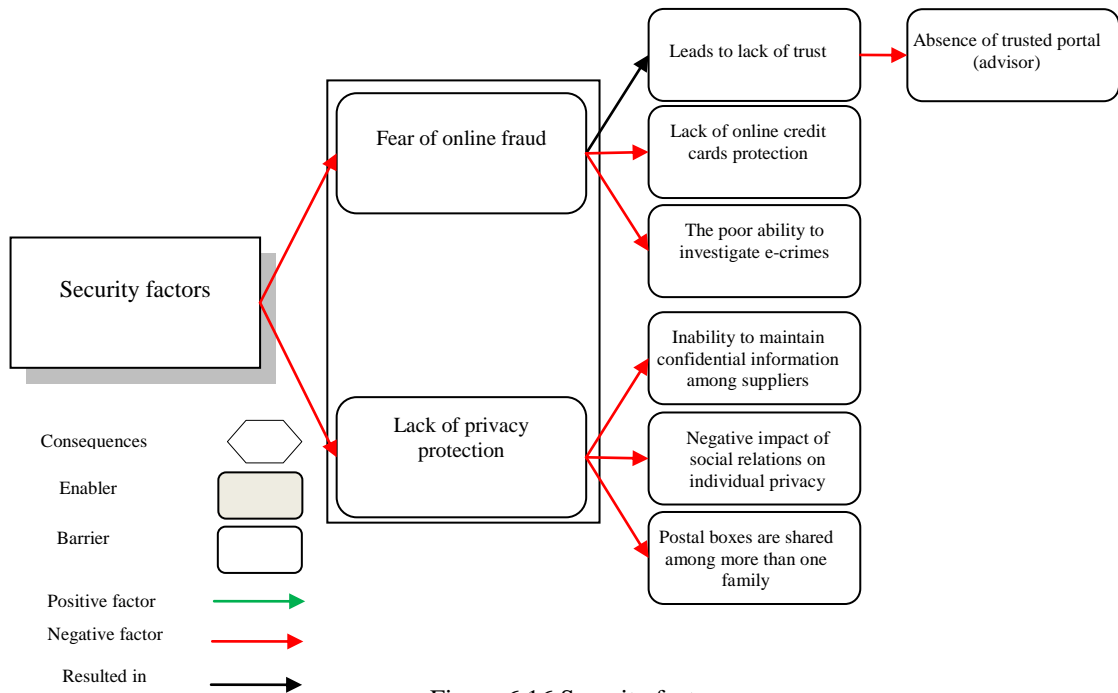


Figure 6.16 Security factors

Consumers in this category are fearful of online fraud. (C3) from the central region of the country said,

“I am afraid of buying online. This is because my money can be stolen online” and *“customers in Saudi Arabia do not know about most of the Saudi websites if it’s real or fake.”*

An interviewee living in the eastern region (E4) said,

“There is many fake companies even in Saudi Arabia that advertise and get the consumer’s money then disappear.”

She continued,

“Many people in Saudi Arabia had a bad experience with fake companies. So they will not trust any e-commerce website.”

This led to a lack of trust and it is one of the barriers to e-commerce. This study found that people had yet to trust e-commerce services in Saudi Arabia. They strongly believed that e-commerce in Saudi Arabia is immature and cannot work, as C4 said,

"I cannot trust e-commerce in Saudi Arabia because, I have already been hacked and no one protected me."

Interviewees stated that there is no online protection against hacking of credit cards issued by local banks. For example, W2 reported,

"If my credit card is hacked, no one will protect me." and "from my experience, Saudi banks do not protect their consumers for online transactions."

The belief exists among many consumers that the government is not able to investigate e-crimes due to the lack of equipment and experts. For example, (E4) said,

"People do not trust local e-commerce websites because they know that government is still far from the ability to investigate electronic crimes. There are no experts and no equipment that can help government to control the space of Internet."

Therefore, fear of online fraud is one of the main barriers to e-commerce adoption. This factor is related to insurance facilities that were mentioned in section 6.2.5.

On the other hand, and as stated in section 6.2.4 and 6.2.9 that once consumers trust a particular website, their fear of online fraud will decline.

Another barrier is the lack of privacy protection, which was previously mentioned in section 6.2.1. Therefore, privacy is a significant factor that inhibits e-commerce adoption. Interviewee (E3) said,

"I think there is no law in Saudi Arabia to force firms to maintain the confidentiality of our information. I cannot pass my secure information with no protection."

Therefore, some employees who have access to clients' information may disclose it to friends or family's members in good faith, as stated by (E3),

"I can now call one of my friends who have access to one of the company's databases and get the information I need. He does not know that this is against the law and it may harm other people."

Moreover, some citizens share their mailbox with neighbours or relatives in order to reduce the compulsory annual fees and to avoid going to the main post to collect their mail. This action can expose privacy. (N3) from the northern region said,

“My family and other neighbour families are sharing the same mailbox. A member of one of the other families brings our post every two or three weeks. So I cannot order private items through this mailbox.”

This factor is related to the delivery factors stated in section 6.2.8.

6.2.11 Geographical factors

The barriers in this section produced an enabler that encourages consumers to adopt e-commerce, especially in remote areas as illustrated in figure 6.17.

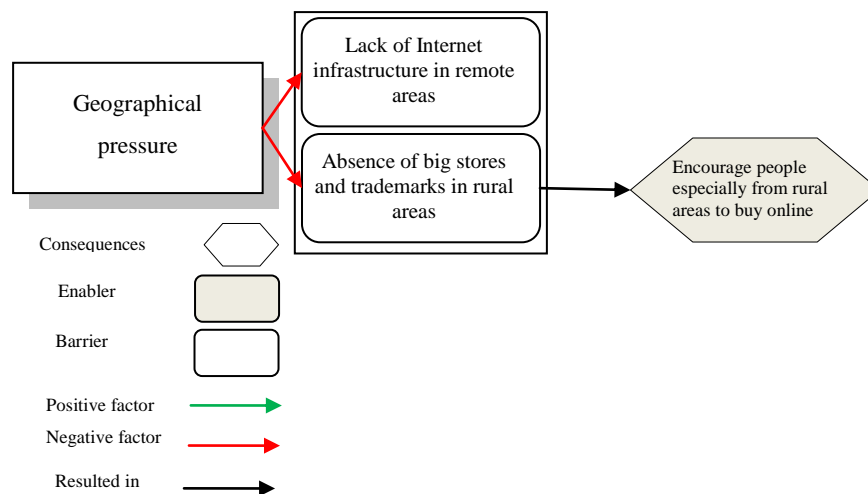


Figure 6.17 Geographical factors

The telecommunication and Internet infrastructure category has already raised the issue about the lack of broadband in remote areas as previously stated by C1, N1 and W2.

Consumers in this study stated that rural areas lack the required stores, malls and trademarks (already mentioned in the suppliers' category). Therefore, they shop in the nearest city. As stated (C2),

“Our village has only one small supermarket and therefore we buy everything

The lack of big stores and trademarks generate a consumers' enabler that encourage consumers to buy online instead of travelling to shop in the nearest city.

On the other hand, however, the lack of big stores and trademarks in rural areas and the long distance between remote areas and the nearest city are considered one of the advantages that can support the adoption of e-commerce among consumers. This encourages residents in rural areas to buy online instead of driving hours to buy from the nearest city. This issue is discussed in more detail during the second empirical study.

6.2.12 Government responsibilities

Government responsibility is the core category of this study as illustrated in figure 6.18a and 6.18b.

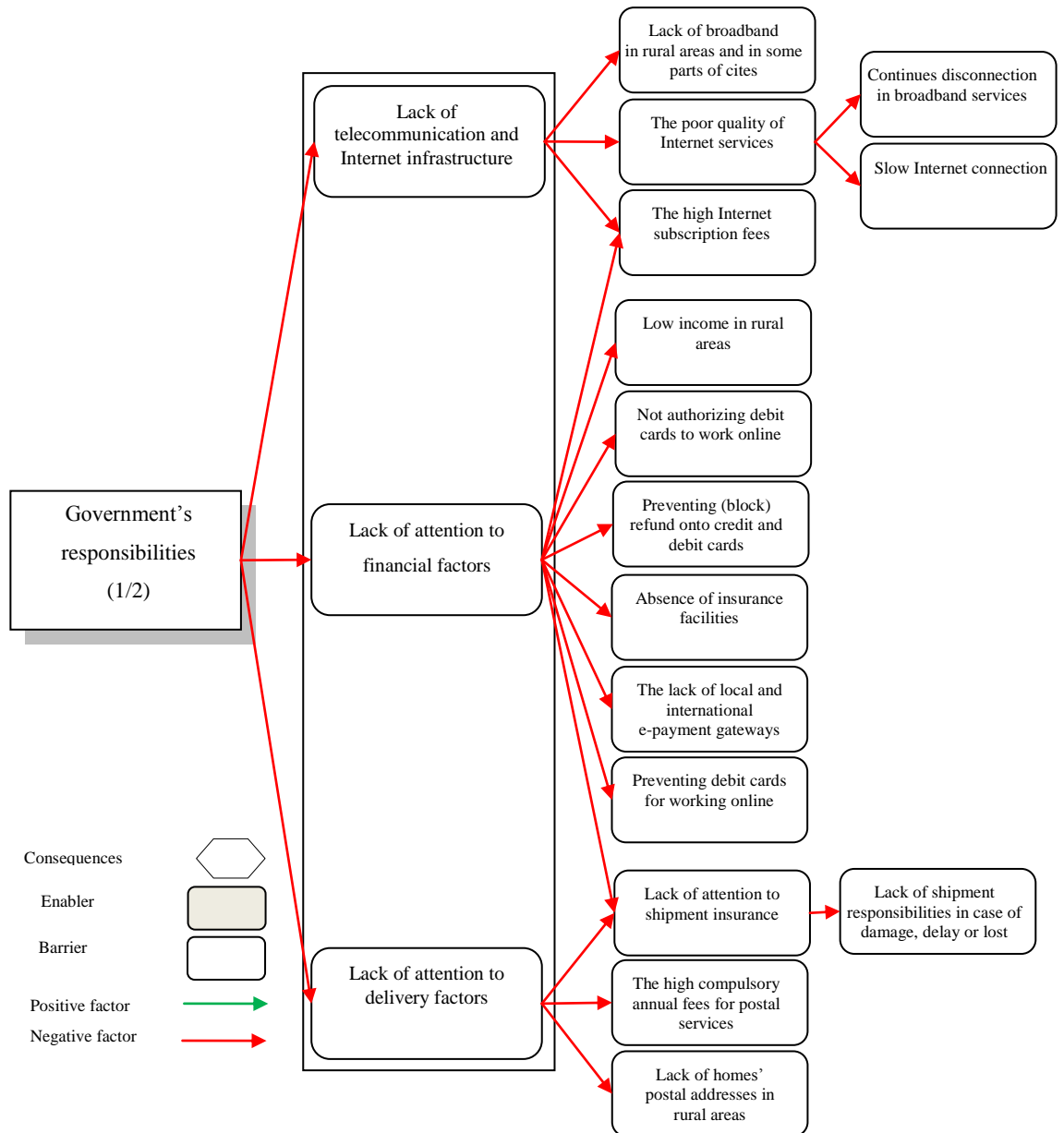


Figure 6.18a Government's responsibilities factors

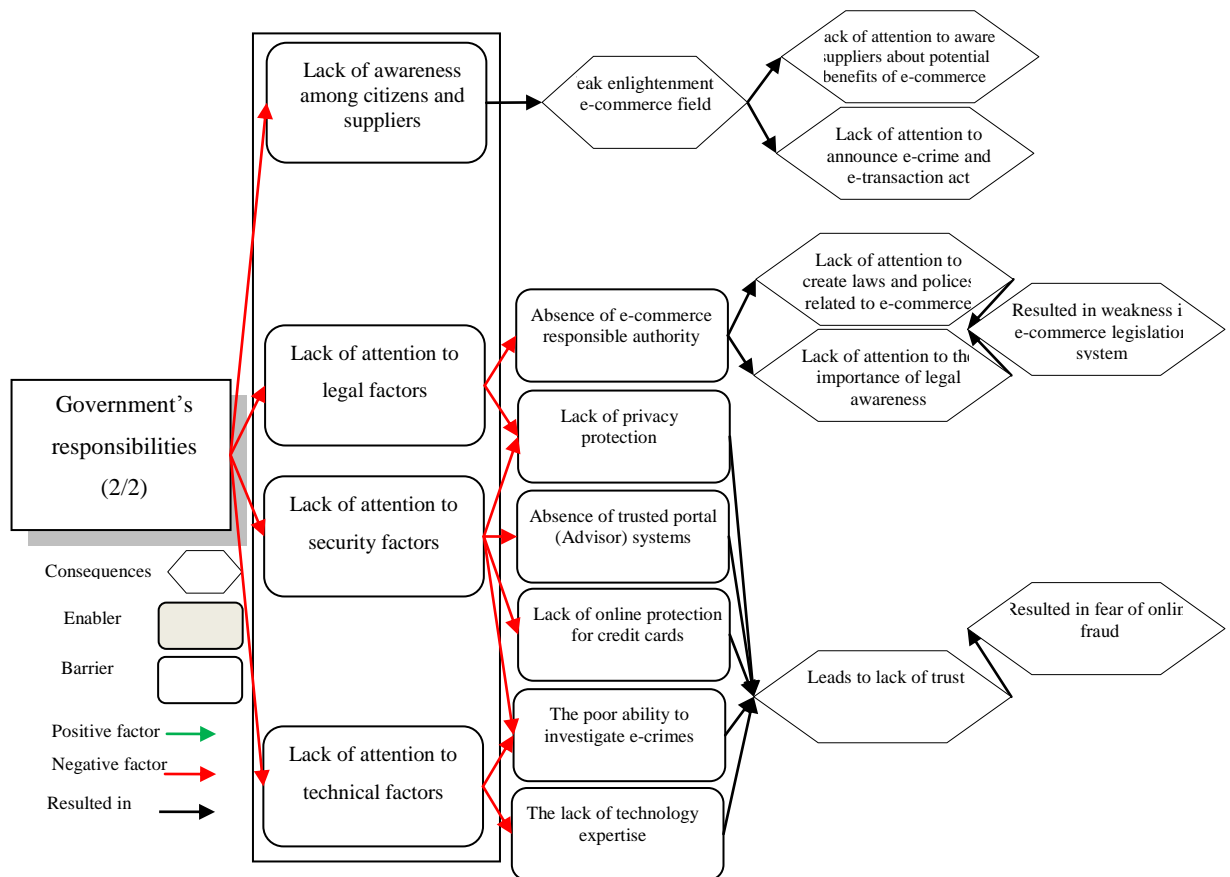


Figure 6.18 a Government's responsibilities factors

As defined in section 5.4.3, core category is,

“The central phenomenon around which all the other categories are integrated.”
 (Strauss and Corbin, 1990, p.116)

The government is considered responsible for most of the previous categories. E-commerce requires an appropriate environment that is composed of telecommunication and Internet infrastructures, law, finance, technical, delivery, awareness and security issues. All these categories relate to government responsibilities.

In 2005, the Saudi government has created an e-government project called ‘Yesser’ to provide electronic government services in the kingdom (Yesser, 2011). Consumers in this study blamed their government for not taking the initiative to build an appropriate e-commerce infrastructure as stated by one of participants who lives in

Chapter 6. The framework of the adoption of e-commerce from the consumers' perspectives
the central region of the country. (C3) said,

“Our government is concerned about e-government but did not take the initiative in the e-commerce field.”

E-commerce literacy and a lack of enlightened citizens about e-commerce are considered an obstacle in the adoption process. For example, many citizens (E4, W2) said,

“People suffer from the lack of e-commerce knowledge” and “they should read and learn more about e-commerce to feel confidence when purchasing online.”

Therefore, and as part of the second empirical study, the researcher interviewed related parties, such as, the CITC in order to enrich this study.

To organise e-commerce and encourage people to use it, a trusted authority (advisor) system should be developed and managed by a reliable party such as CITC. This helps people to trust e-commerce and encourage businesses to follow the CITC's rules and regulations.

Moreover, government should issue related e-commerce laws to protect personal privacy and to protect peoples' rights as well as from online fraud.

Government is responsible for some of the technical issues. For example, government should be able to investigate e-crimes and encourage ICT experts to join the local market.

Many financial issues are caused by the government, such as the lack of jobs in rural areas. This leads to the low-income factor previously mentioned. Another example is prohibiting debit cards from working online and not allowing credit and debit card refunds. This prevents consumers from adopting e-commerce and reinforces citizens' negative perceptions about credit cards. Moreover, the government needs to establish a solid base for insurance facilities to encourage this type of business to work across the country. The government needs to provide the appropriate rules and regulations.

Legal issues are a direct government responsibility, as government is responsible for issuing laws and applying them across the country. For example, government is responsible for issuing and protecting consumers' rights such as enabling a return and refund policies to operate properly as stated (C2),

“Shops are working upon their internal rules and no one is controlling them. Every shop has its own laws as some of them once you buy a product they never ever return it back in case you change your mind.”

According to this empirical study, there is no authority responsible for e-commerce that can promulgate e-commerce laws. In addition, local authorities do not recognise the importance of informing the public of their legal rights. Therefore, government has to apply policies and regulations, such as, return and refund.

Finally, delivery aspects have a strong relationship with government responsibilities, as government is responsible for developing and improving the infrastructure of postal services. The second empirical study focuses on organizations related to categories mentioned in this chapter.

As described above, government is responsible for most of the factors that affect e-commerce and not giving these aspects enough attention results in people not adopting e-commerce.

6.3 Study Implications and conclusion

This study (the first empirical study) explored the factors affecting e-commerce adoption among consumers in Saudi Arabia.

The respondents raised many issues from their own perspectives. These issues were viewed as either obstacles or enablers that affected their adoption of e-commerce. These factors were developed by this study and grouped into twelve categories. The core category in this study is government responsibility and it is related to most of the other categories in this chapter.

Based on the findings of this study, a second study is presented in the next chapter (chapter seven), which links consumers' perspectives to those of their suppliers in order to combine both sets of viewpoints. This synthesis is described and discussed in chapter eight. After the first empirical study GT theoretical sampling was applied to link this study with the second one in order to conduct interviews with relevant government departments and suppliers.

This study confirms some of the previous findings found in the literature and invalidates others. For example Siala et al. (2004, p.7), Zainul et al (2004, p.286) and Alfuraih (2008) considered Islam to be an obstacle to e-commerce adoption due to applying 'riba' in credit cards instalments. There is, however, a consensus among most participants in this study that the Islamic religion is not considered a barrier anymore that influences consumers' adoption of e-commerce. This is due to improvements in Islamic banking and finance and the new commercial transactions that are compliant with the principles of Islamic law (Shariah). The best example is the availability of the Islamic credit card, which avoids dealing with riba 'interest'. Further investigations regarding this subject can be found in the second empirical study.

This study shows that Arabic language is not a barrier to e-commerce adoption. This finding may supersede previous literature (Duan et al., 2010, p.361, Vatanasakdakul et al., 2004, p.10, Thanasankit, 2003, p. 263) that stated language was a barrier in accepting such technologies. Participants in the current study stated that the absence of the Arabic language had been a barrier in the past but not anymore. This is due to the availability of Arabic interfaces on many local websites across the Arab countries including Saudi Arabia.

The second empirical study discusses these two factors in more detail with relevant organizations to gather more information in order to confirm or refute these factors. The above result, which is contrary to previous research, contributes to knowledge.

The first study, on the other hand, confirms some previous studies' findings. For example, this study confirmed some security aspects such as fear of online fraud and

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privacy invasion (Sung, 2006, p.1167, Limayem et al., 2000, p.427, Shah et al., 2007, p.513).

Applying pay-offline technology can help consumers overcome the fear of online fraud. A paucity of e-commerce laws has limited the ability to protect consumers online. Consumers have stated that they are cautious when buying products. This is because consumers lack legal protection. They, therefore, prefer to buy directly from the store on a high street where they can physically check the products, which may have a negative effect on the e-commerce adoption among those consumers.

To conclude, the following paradigm model outlines the outcome of the first empirical study. It describes the research's phenomena, its causal conditions, context, intervening conditions, strategies and finally the potential consequences.

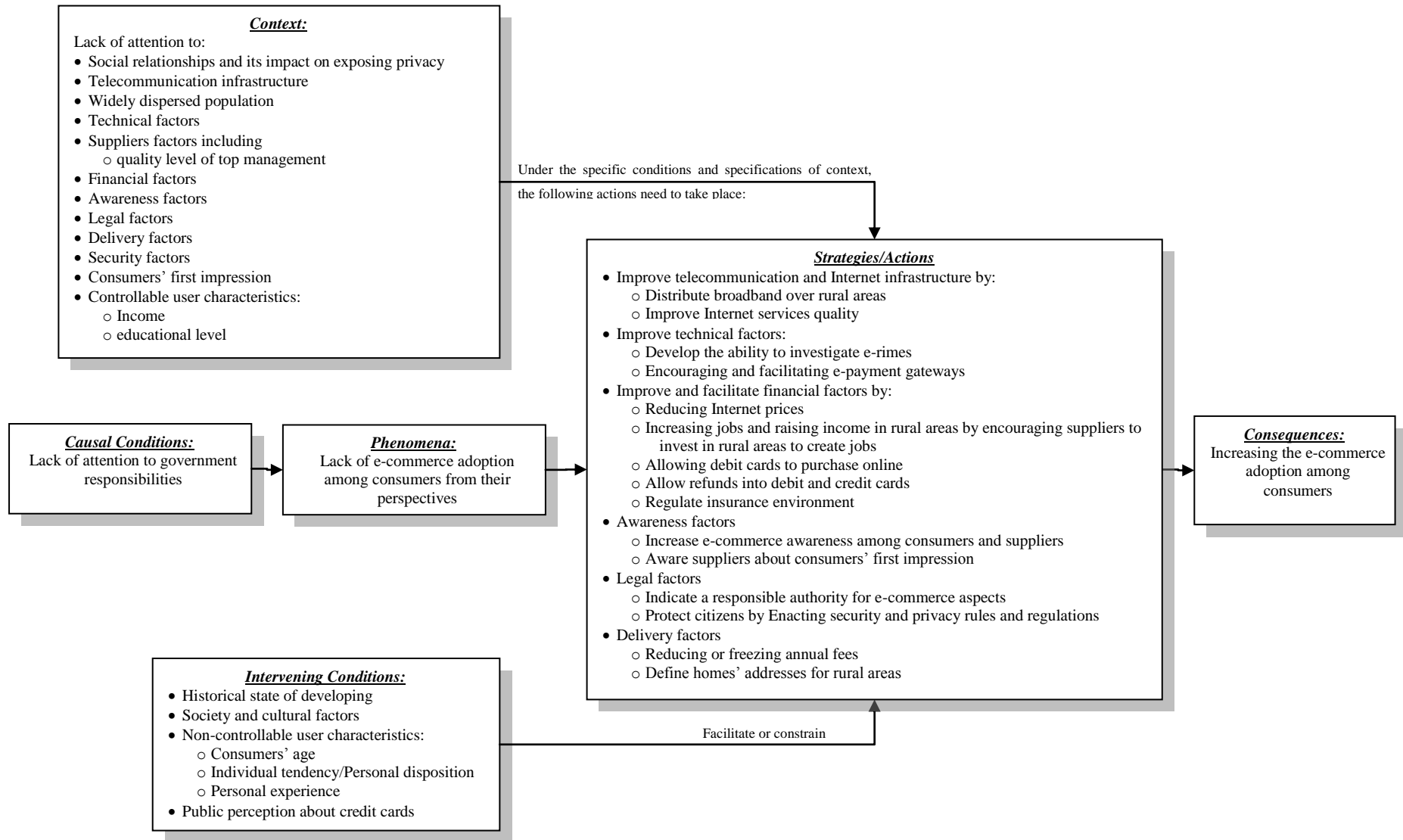


Figure 6.19 Model of the factors affecting consumers' adoption of e-commerce from their viewpoints

The above paradigm model (was described in section 5.4.4), is complementary for this chapter and considered to be the conclusion for the first empirical study. The model integrated the findings from the first empirical study and summarised it as the follows:

1. Causal conditions: As stated previously in this chapter, 'government responsibilities' is the core category for this study. Therefore, it is identified as the main condition that influences e-commerce adoption among consumers. Its failure negatively affects and creates most of the other categories.
2. Phenomenon: The first empirical study investigates the factors affecting e-commerce adoption among consumers in Saudi Arabia from their viewpoint.
3. Context: Is the barriers that can be controlled, ruled or directed by government in order to eliminate them. In other words, these barriers are negatively affected by government and need to be considered in order to plan a strategy or place an action to facilitate adopting e-commerce among consumers.
4. Intervening conditions: These are the non-controllable barriers that facilitate or restrict the strategies taken in order to adopt e-commerce among consumers. These barriers are hard/ difficult to change but can facilitate or restrict the taken action. For example, the historical state of development can not be controlled but it affects the actions that need to be taken in order to solve the problem.
5. Strategies/actions: These are the required actions that need to be taken in order to encourage e-commerce adoption among consumers. However, they are affected by context and intervening conditions. For instance, an action should be taken in order to eliminate the telecommunication infrastructure factors such as distributing broadband over the country, especially in rural areas. However, the negative and positive historical state of developing is non-controllable but can facilitate or restrict this particular strategy.
6. Consequences: They are the outcomes of the applied actions eliminating the barriers indicated in the context to increase e-commerce adoption among consumers.

As illustrated by figure 6.1, chapter seven discusses the findings of the second study by focusing on suppliers.

Chapter 7

Framework of the adoption of e-commerce from the suppliers' perspectives

7.1 Introduction

Consumer's perspectives drove the second empirical study. This study focused on suppliers in order to identify the factors affecting consumers from the supply point of view. After identifying the factors in the first empirical study, theoretical sampling was applied to connect to the second one and obtain relevant suppliers' samples (as described with respect to table 7.1 below).

Many researches in this field have focused on factors that influence consumers' adoption of e-commerce in developing countries from either the consumers or suppliers' perspectives only (Küster and Vila, 2011, Chen and McQueen, 2008, Zhao, 2008)

The main aim of the second empirical study is to discover suppliers' perspectives about their consumers' viewpoints that were revealed by the first study. Therefore, this research is different from other studies in this field due to the use of GT's theoretical sampling to uncover suppliers' responses to consumers' perspectives.

The field environment for the second empirical study is necessarily Saudi Arabia. Theoretical sampling directed the researcher to investigate private and public organisations that theoretically related to consumers' findings as illustrated in table 7.1.

Table 7.1 The participated private and public agencies in the second empirical study

Main sector's name	No. of organizations	Name of supplier/ government agency	E-commerce phase	No. of interviewees
Government agencies	4	CITC		3
		BIP		2
		Police		3
		MOCI		2
Telecommunication providers	2	Telecom provider 1	Integrated e-commerce	2
		Telecom provider 2	Integrated e-commerce	2
SMEs (Small and Medium Enterprises)	2	Bookstore company	Interactive e-commerce	1
		Self-employed business	Static e-commerce	1
Banks	3	Islamic Bank	Integrated e-commerce	1
		Non-Islamic Bank 1	Integrated e-commerce	2
		Non-Islamic Bank 2	Integrated e-commerce	1
Mail service carriers	2	National mail carrier	Integrated e-commerce	1
		Private mail carrier	Integrated e-commerce	1
Total	13			22

As seen in the above table, this empirical study investigated 13 organizations. Some are private organizations, including Islamic and non-Islamic banks, telecommunications providers and SMEs (Small and Medium Enterprises) while some others are from the public sector, such as, the Ministry of Commerce and Industry (MOCI), CITC, the police and The Bureau of Investigation and Prosecution (BIP). The researcher sent emails, called by phone or went directly to these organizations in order to arrange interviews as shown in appendix G. Twenty two interviews were conducted during this study. The duration of each interview was approximately sixty to ninety minutes and divided into five parts. The first part contained the introduction to the study, which included information about the research such as aims and participant's rights before, during and after the interview. During the second part of the interview, the researcher raised generalised open-ended questions to allow participants to reveal their knowledge about the subject under consideration and to help discover new areas not previously mentioned. The third part of the interview is where the participants, for

example suppliers or government agencies, were able to express their opinions about the issues under discussion. The fourth part of the interview allowed consumers' perspectives to be raised and suppliers to comment and provide their point of view about particular issues. The final part comprises the interview's conclusion and confirmation as shown in appendix D and E. As previously stated, discussion in this chapter focuses on those factors that affect consumers' adoption of e-commerce in Saudi Arabia as viewed from their suppliers' perspectives together with a critique of their consumers' viewpoints. The final result is presented in the next chapter and is generated by combining the two perspectives together to develop new insights.

The next section represents an overview of the second study.

7.2 Overview of the second empirical study and its findings

This section represents the key findings that originated from the suppliers' response to consumers' perspectives on factors affecting consumers' adoption of e-commerce in Saudi Arabia. Suppliers agree with consumers on some factors, disagree on others and raise new issues not discussed before. Figure 7.1 illustrates a general overview of the relationships between categories from the suppliers' viewpoints.

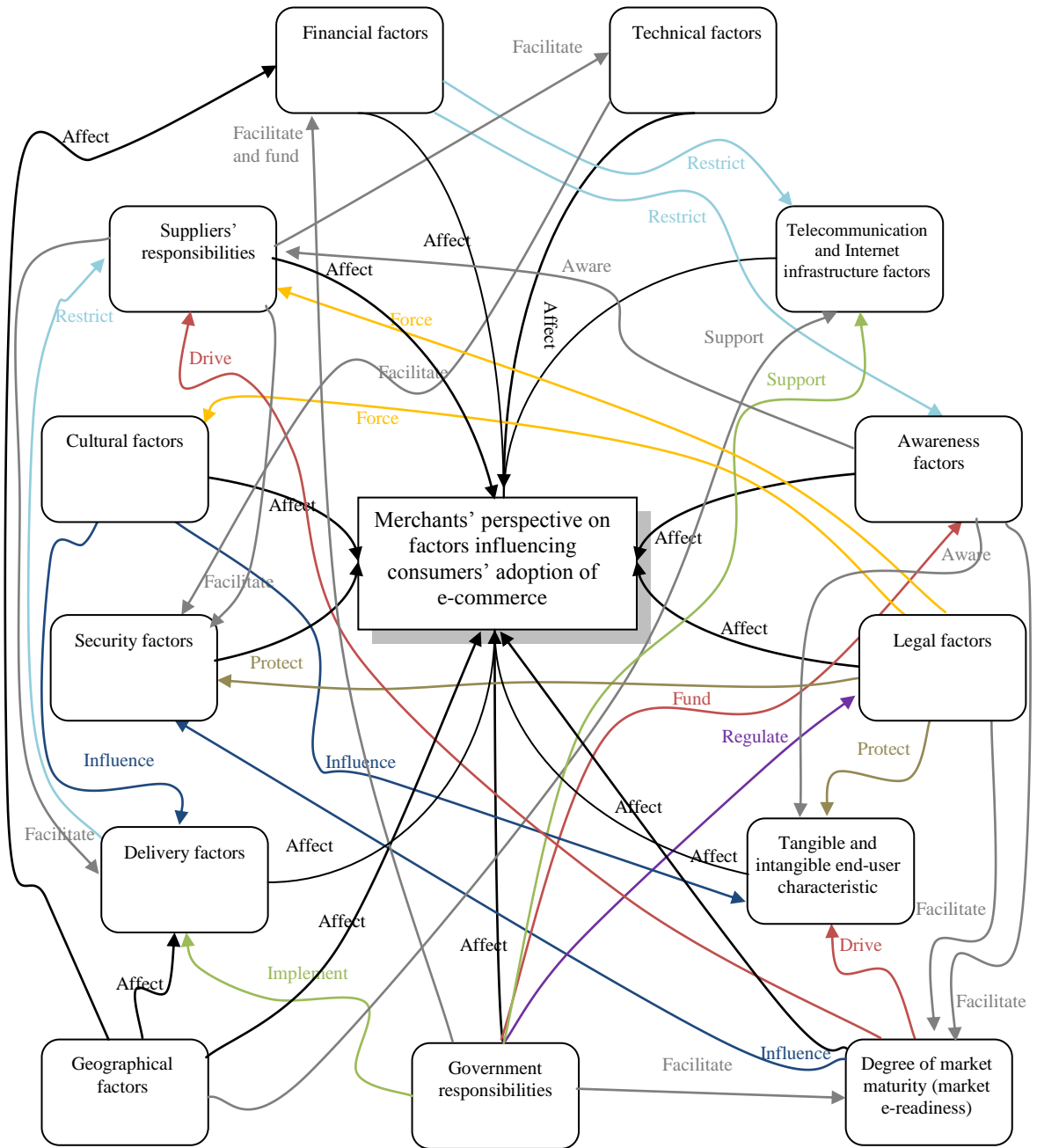


Figure 7.1 The relationships between categories from suppliers' perspectives on consumers' viewpoints

The following sub-sections present the findings of this empirical study as follows.

7.2.1 Cultural factors

Many cultural factors are involved in influencing consumers' adoption of e-commerce that are examined from suppliers' perspectives. These factors are illustrated in figure 7.2 below.

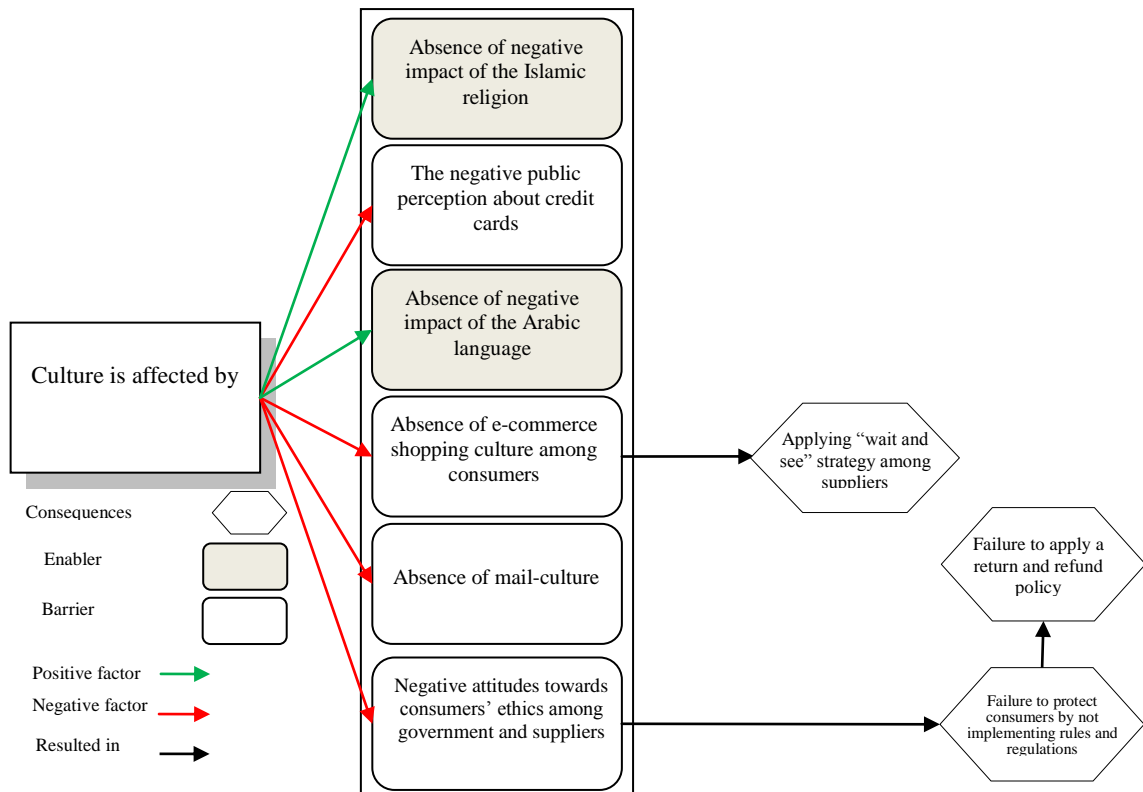


Figure 7.2 Cultural factors from the suppliers' perspectives

Islamic and non-Islamic banks in Saudi Arabia confirm the research finding in the first empirical study that the Islamic religion is not a barrier anymore that influences consumers' adoption of e-commerce. This is due to improvements in Islamic banking and finance and the new commercial transactions that are compliant with the principles of Islamic law (Shariah). The best example is the availability of the Islamic credit card, which avoids dealing with interest 'riba' as stated by an Islamic bank's representative,

"All our financial transactions have been reviewed by Islamic religious scholars and those include credit cards."

According to an Islamic bank's website,

"We have introduced a new Islamic credit card called 'Qassit'" and "all of our products are fully Islamic...there are no interest charges, no late fees for delayed payments, and no hidden charges" (Alrajhi Bank, 2008).

Therefore, the Islamic religion is no longer considered an obstacle to the adoption of e-commerce. On the other hand, the three bank's representatives stated that credit cards in general lack acceptance in Saudi society. This is because of the negative idea about them amongst Saudi citizens as discussed in section 6.2.1. This confirms the result of first empirical study that there is a negative public perception about credit cards in Saudi Arabia.

The third factor is an enabler whereby the Arabic language is no longer considered a barrier to e-commerce adoption in Saudi Arabia. This confirms consumers' perspectives expressed in the first empirical study, which is raised in more detail in section 7.2.3.

The fourth factor is the absence of a mail-culture among consumers. Suppliers exposed this factor. It seems that citizens do not have a culture of depending on mail services. Therefore, the government was not developing postal services. SME's said,

"There is no mail culture in Saudi Arabia among citizens. This is because normal mails do not come to your house but rather you should pick it up from the city centre where all the shops are."

Fifthly, consumers do not have an e-commerce shopping culture. Suppliers also exposed this factor. As stated by SME's,

"People do not have the culture of online shopping. They want to see products in front of them. Therefore, there is no need to build an e-commerce system as no one will use it."

As a result, in the meantime, suppliers applied a "wait and see strategy" as stated by SME's representative,

“The fact is that people are not willing to spend money online today. We did some research and a few people are willing to buy online. The percentage is 10-15% willing to buy online. So, I cannot spend millions of dollars for a minority of people. People right now are willing to search and compare prices but not willing to buy online.”

Moreover, government and suppliers have a negative attitude toward consumer ethics. For example, MOCI stated that there is no need for official return and refund policies in Saudi Arabia and stated that consumers should negotiate agreements with their suppliers before making any purchase. MOCI representative stated that this is because there may be an injustice to the dealer as many customers may return their goods after using them. This viewpoint agrees with SME's representative who said

“We do not return or exchange books or electronic devices. This is because some consumers copy the book and then return it back for refund” and “we do write in our bill that there is no returns and exchange.”

The CITC representative said,

“Refund and return policy depends on the ethics of the society. So, some societies follow the regulations and accept the rules and other societies do not follow the rules.”

This is a pervading negative attitude toward consumers' ethics. This results in a failure among government and suppliers to understand the need to respect consumers by implementing such rules and regulations.

To sum up, suppliers in this study came up with some of the new factors affecting e-commerce adoption such as the absence of a mail and e-commerce culture among consumers but they blame consumers for most of these factors.

7.2.2 Telecommunications and Internet infrastructure factors

The interviews with telecommunication providers and CITC in Saudi Arabia revealed many issues from their perspective and the researcher found some answers to consumer ones. Some of these factors were not raised during the first empirical study. Other factors were brought for explanation and justification as illustrated in figure 7.3.

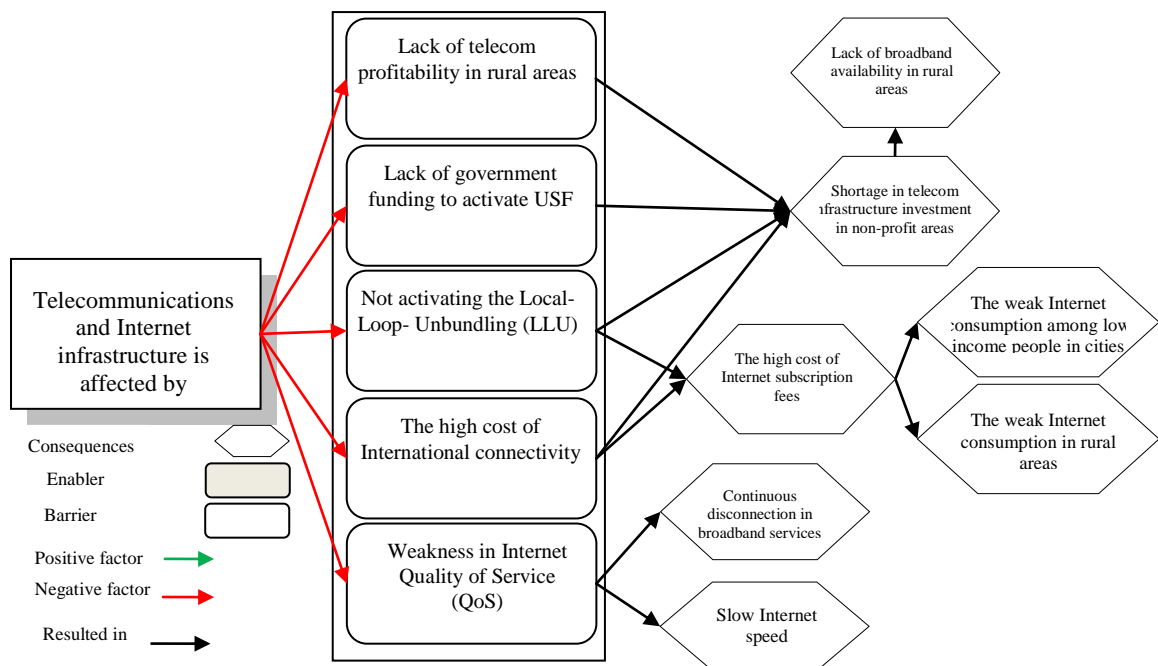


Figure 7.3 Telecommunications and Internet infrastructure factors

Telecommunications providers agreed with consumers' perspective on the lack of infrastructure in rural areas. They, however, justified this by the lack of profitability in these areas as they said,

"Telecommunication providers in Saudi Arabia, and we are one of them, are looking for the commercial profit in order to do telecommunication projects. Therefore, we will not do any project if there is no profit to the company owners."

They reported that they paid huge license fees to invest in the Saudi market and their main aim is to seek profit. This has led to a shortage of telecommunication investment in rural areas. For this reason, a consultant at the CITC was interviewed and the issue discussed. It was found that the CITC could not force telecommunication providers to cover low-profitability areas, as CITC stated in the interview,

“Right now, I have a bigger problem. Most of the Internet services is focused on cities. The small towns and villages in Saudi Arabia can be called isolated areas. No one of the Internet providers is interested to build the Internet infrastructure in these villages. This is because of the profitability factor, densely populated in these areas and low incomes which make it more difficult for telecommunication providers to invest in these areas.”

Therefore, the CITC formed the Universal Service Fund (USF) to support these rural areas. The Federal Communications Commission (2002) defined USF as a support mechanism to guarantee service availability, provide good quality but inexpensive services for everyone in the country. The Saudi government created the USF in 2006 (CITC, 2006) but unfortunately it has not been activated due to the lack of government funding. The CITC's representative said,

“Until this moment, no projects have started through USF.”

This has led to the lack of broadband availability in most Saudi villages and towns.

Not activating the local-loop unbundling (LLU) is considered a barrier in this section. This is because LLU is a good tool to increase competition among different telecommunication providers, reduce costs and raise the quality of services (QoS). CITC representative said,

“LLU is still not activated as only one telecommunication provider is allowed to offer broadband services to homes across the country through telephone lines.”

Therefore, LLU should be activated to allow other telecommunication providers to offer services through telephone lines.

The second study conducted interviews with two of the main Internet providers in Saudi Arabia. The two telecommunications providers agreed that the monthly Internet fee is quite expensive in Saudi Arabia and revealed that this is because of the high cost of international Internet connectivity (IIC). Saudi Arabia is far from the central Internet

connection and to provide Internet services for their consumers they have to connect to it, which costs a lot of money. CITC representative said,

“International connectivity means that all the Internet connections come from Europe and America. Our international connectivity in Saudi Arabia is low. Therefore, the cost of the Internet is expensive and the Latency (a measure of time delay experienced in a system) also will be more.”

This is in line with the report of the Working Group on Internet Governance, which said,

“Internet service providers (ISPs) based in countries remote from Internet backbones, particularly in the developing countries, must pay the full cost of the international circuits.”(wgig, 2005)

Internet quality was discussed with the telecommunication providers and with the CITC. The two telecommunication providers agreed with consumers. They explained that their work, in recent years, focused upon building their infrastructure to spread their services, however, they would focus on quality after the completion of their infrastructure and spreading their services into profitable areas across the country. They said,

“We are focusing right now on spreading our services into profitable areas across the country. Once we complete this stage, then we are going to focus on QoS.”

7.2.3 Technical factors

Consumers indicated, in the first empirical study in section 6.2.3, some technical factors that influence their adoption of e-commerce. Therefore, in the second empirical study, interviews were conducted with members of related organisations that have a relationship or are responsible for these factors. Figure 7.4 illustrates the factors that resulted from the second empirical study. The factors have one enabler and two barriers to e-commerce adoption among consumers.

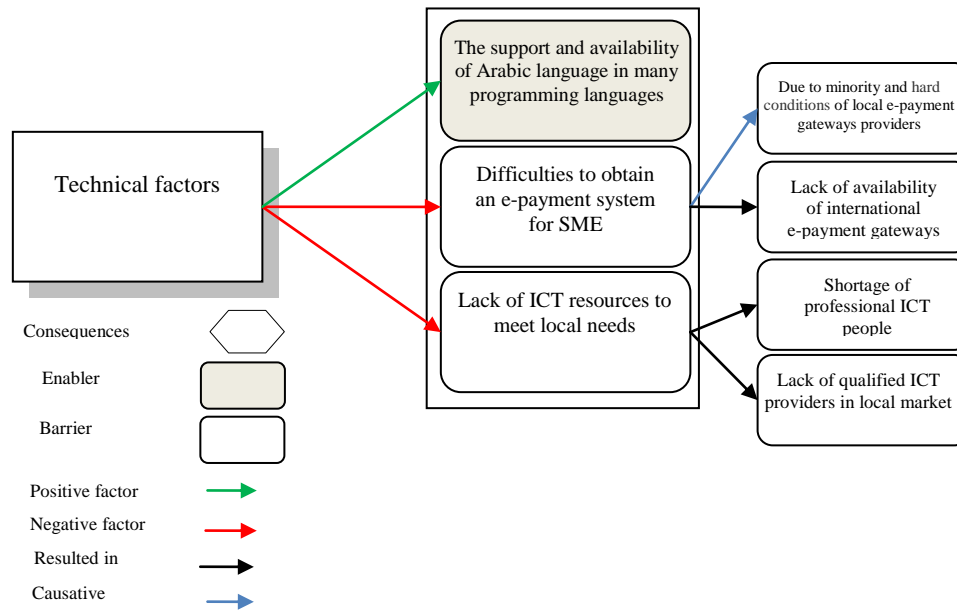


Figure 7.4 Technical factors from the suppliers' perspectives

Suppliers in the second empirical study have the same opinion as consumers in the first that the Arabic language is no longer a barrier in the e-commerce adoption from their perspective. Their justification is that most of the programming languages such as Java, Visual Basic, C and C# can develop an Arabic e-commerce website. The only challenge is when an e-shop has an Arabic and English interface, which means the need for a translation body to write the same information in both languages (Altayar et al., 2010). However, because consumers in the first empirical study stated that the Arabic version is the important issue for them, whereas the English version is viewed as an extra service, this challenge is eliminated by this study.

Moreover, this study found that an e-payment gateway is available in only two banks across the country and only large companies in Saudi Arabia can apply to integrate this gateway into their system/application, whereas SMEs remain unable to do so. The two banks justified that they cannot make the e-payment gateway available to everyone because they are not able to support a large number of clients. Both two banks have ICT departments that integrate the e-payment gateway with the client's website and are responsible for the gateway's technical support. Therefore, they do not have enough human resources to be able to open the door to SMEs. One of the Islamic banks in this study reported their plan in the near future to co-operate with some local ICT

firms and authorize them to access, implement and integrate the e-payment gateway for SMEs. They said,

“In the near future, we are going to list recommended ICT companies that can implement and integrate an e-payment gateway on behalf of us. These ICT companies also will be responsible for the technical support.”

The procedure of grounded theory is to analyse interviewing during the data collection phase. Therefore, data collection and analysis occur simultaneously. After acquiring the findings of the first empirical study, the plan was to interview only two banks in the second one (one Islamic and the other non-Islamic). After interviewing these two banks, the researcher found that the Islamic bank offered a conditional e-payment gateway whereas the non-Islamic bank did not offer this service for businesses. Furthermore, both bank representatives pointed out that another bank is also offering this service. Therefore, theoretical sampling was applied in this stage and the researcher conducted interviews with the third bank who offered an e-payment gateway. The reason for applying theoretical sampling here is to obtain more information, explanations and justifications about e-payment gateways in the local market. This third non-Islamic bank confirmed that they have strict conditions in order to access applications for this service.

Many international online payment gateways such as PayPal can send money but unfortunately cannot deposit money into Saudi's banks due to some restrictions (PayPal, 2011). This can limit the chance of applying an online payment gateway into SMEs in Saudi Arabia. In other words, there is no link between these online payment gateways and local banks to enable money to be transferred into company accounts.

The second barrier is the lack of ICT providers that provide and support such technologies and their associated human resources in the local market, which limit suppliers from developing their e-stores. A SME in Saudi Arabia stated that they have a plan to establish their e-commerce store. They are looking for ICT experts to start implementing their project but, unfortunately, they are unable to find the relevant skilled people in the local market, as they said,

“One of the problems that is facing us as a Saudi company is human resources. It is not easy to find the right person with good experience especially in the ICT field” and “Our e-commerce project needs good experience in managing large projects with a good knowledge of the ICT systems and this is the missing link. Therefore, it is very difficult to find the appropriate ICT experts. However, we need people inside Saudi Arabia to continue working with us as developers and providing system support. We have been seeking these specialists for more than 6 months until this moment.”

An SME stated that there was a,

“Lack of specialized people in Saudi Arabia to plan and run the full e-commerce projects.”

The lack of availability of ICT companies that provide and develop e-commerce websites in local market is a barrier to the e-commerce adoption as stated by an SME,

“We are looking for an ICT company that can handle the whole project but unfortunately did not find any until this moment.”

In the first empirical study consumers stated that government lacked the ability to investigate e-crimes. MOCI agreed with this viewpoint and stated,

“We face technical weaknesses in our Ministry because of the lack of equipment and qualified ICT people who can help.” Then he said, *“Because of that the ICT department in our ministry transferred to CITC as they have the required equipment and ICT experts.”*

CITC and BIP representatives confirmed that the CITC has the ability to investigate e-crimes. Therefore, this factor was eliminated in the second empirical study.

7.2.4 Suppliers' responsibilities

Unfortunately, the factors in this section are all barriers with no enablers as illustrated in the following figure.

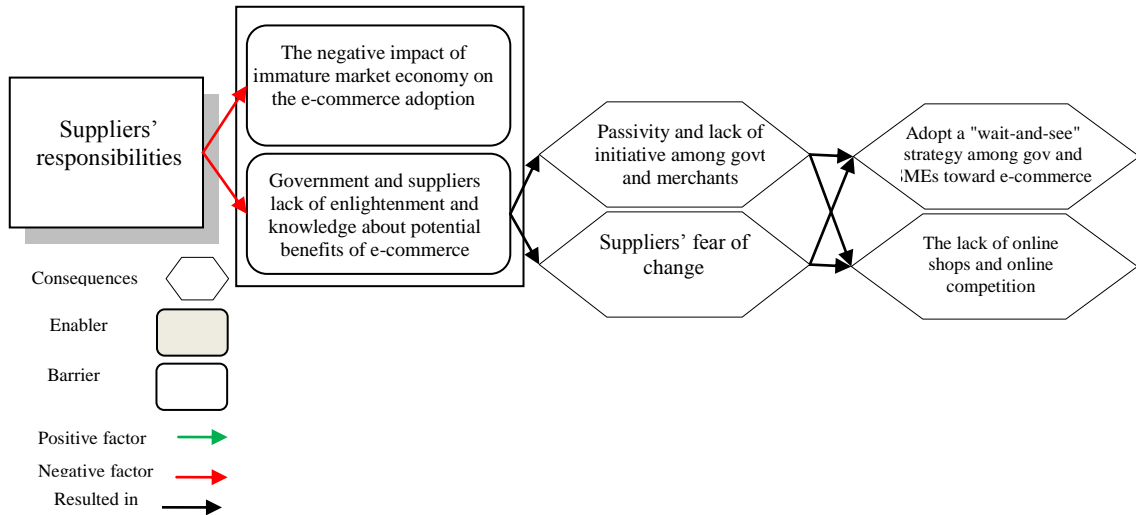


Figure 7.5 Suppliers' responsibilities from the Suppliers' perspectives

Suppliers believe that the Saudi market is still immature and therefore they will not invest money to build e-shops. It was said,

“Saudi economy is considered immature and needs a lot of work to reach maturity. Therefore, we will wait for a few years to see.”

CITC representative pointed out that there is a need for consumers' and suppliers' enlightenment and said,

“The main problem is in the absence of enlightenment not only on the consumers' side but also in the suppliers' side.”

This leads to the lack of initiative among government and merchants to adopt e-commerce across the country. Local government has taken the initiative to move to an e-government system but unfortunately does not facilitate the infrastructure for e-commerce. Similarly, SMEs are still not taking the initiative by starting to implement e-commerce applications and thus forcing local government to position e-commerce infrastructure in their plans. This has led to a lack of online stores and is considered a

barrier to the adoption of e-commerce in Saudi Arabia.

The lack of enlightenment directed suppliers to be fearful of change and, therefore, apply a 'wait-and-see' strategy as an SME said,

“Our question is why I should spend money without revenue/ profit? We know that this will not achieve the required profit. We need to start at the right time.”

From their point of view, suppliers do not like to invest money in online stores now. This may cause a delay in online competition in local markets.

Therefore, this study showed that the SMEs in our sample were not interested in developing their online-stores. They feel, in the meantime, that consumers are not ready to buy online and e-commerce will not increase their profit and number of consumers. It was said,

“The fact is that people are not willing to spend money online today. We did some research and a few people are willing to buy online. The percentage is 10-15% willing to buy online. So, I cannot spend millions of dollars for a minority of people. People right now are willing to search and compare prices but not willing to buy online.”

Therefore, CITC recognised that SMEs are applying a 'wait-and-see' strategy, as CITC representative said,

“Private businesses still did not find the required benefit from e-commerce. They are still unconvinced in the benefits of e-commerce. They may say that the consumer still not in need for the e-commerce.”

The CITC admit that suppliers have responsibility for the shortage of the online stores. Its representative said,

“There is a lack in the e-commerce services caused by suppliers.”

This has resulted in a lack of online shops and online-competition.

7.2.5 Financial factors

The factors in this section are two enablers and seven barriers that affect e-commerce adoption from the suppliers' perspectives as illustrated in the below figure.

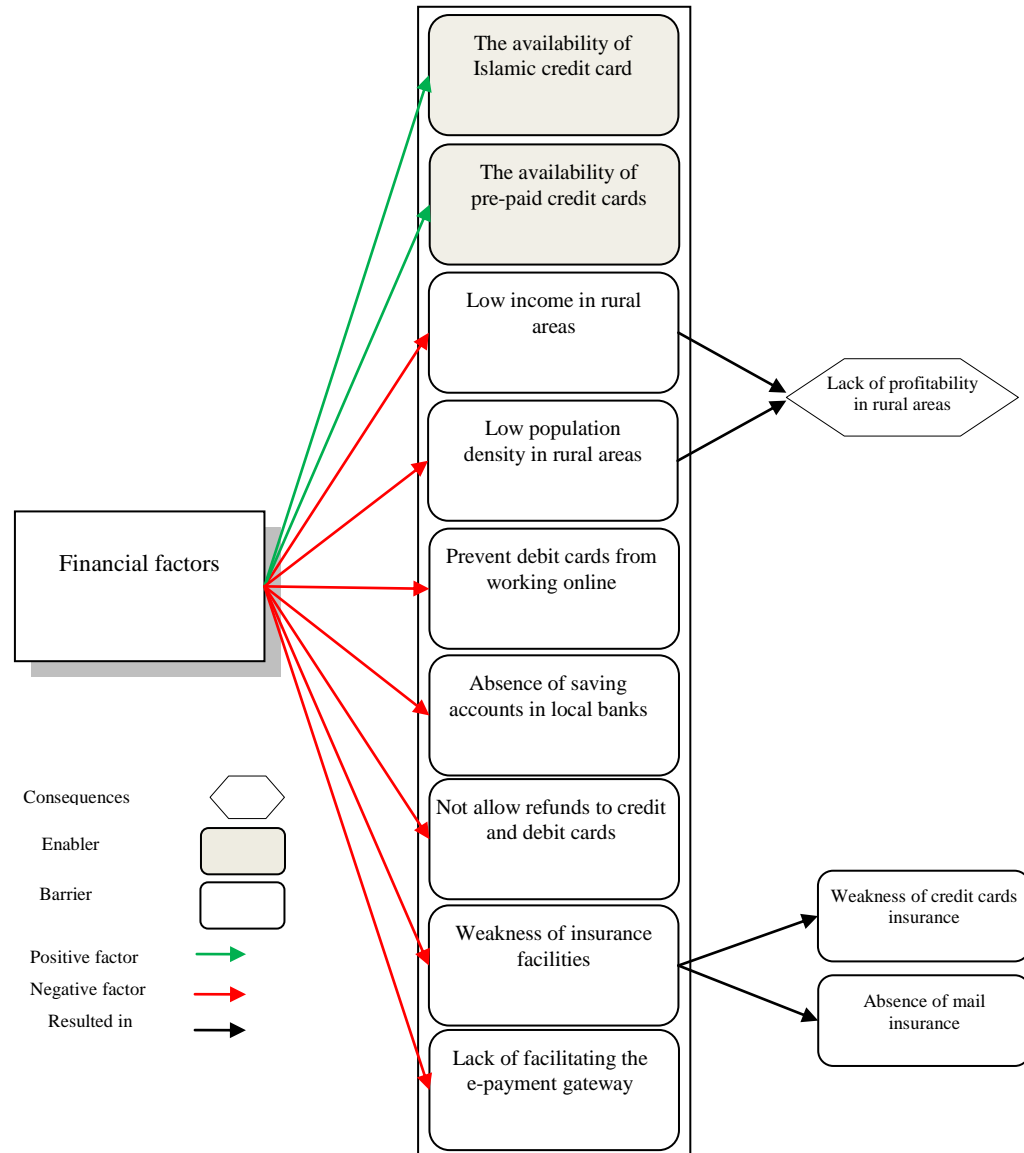


Figure 7.6 Financial factors from the suppliers' perspectives

The first enabling factor is related to cultural ones as discussed in section 7.2.1. Most of Islamic and non-Islamic banks in Saudi Arabia are able to issue Islamic credit cards that are recognized by Islamic scholars. A non-Islamic bank representative said,

“Our bank issues Islamic credit cards to provide customers’ desires.”

This can act as an important enabler for consumers' adoption of e-commerce in Saudi Arabia.

The second enabler in this section confirms the CITC's (2011a) report stated in section 3.3.2. This is because some of the Saudi Banks are able to issue credit cards with a limited amount of money (pre-paid credit cards) to give consumers online confidence and trust in order to avoid Internet fraud. A bank representative said,

"We have credit cards suitable for shopping online and can be topped-up with a small amount of money to help customers in buying online without being afraid of fraud."

This kind of credit card is a good enabler for both consumers and suppliers. The pre-paid credit cards encourage consumers to buy online with more confidence and results in increasing online sales. Only the banking sector is able to offer this kind of credit card. Therefore, there is a need to make this kind of credit card obtainable through other financial companies. For example, in the UK, there are some pre-paid credit cards that do not require bank accounts or credit checks such as Bread (2011).

On the other hand, some key financial barriers in this section have been confirmed to exist by consumers, suppliers and government. The first barrier is the low income among rural consumers. This has led to a low demand for telecommunication services in rural areas, such as, broadband. Low population density in rural areas is considered the second financial barrier. This barrier is related to the first (low income in rural areas). Therefore, low income with low population density in rural areas results in lack of profitability in these areas. One of the telecommunication providers said,

"When planning for any investment, we consider the profit that should be gained from this particular investment. Some districts do not have the minimum profit level that can encourage us to invest there."

Thus, telecommunication providers are not keen to develop Internet infrastructure in rural areas. This supported the need to activate USF mentioned in section 7.2.2.

The third finance barrier is that Saudi debit cards do not work online. A bank representative said, *"SAMA does not allow us to authorize debit cards to work online."* Prohibition of using debit cards for online purchases inhibits e-commerce.

This leads to the fourth barrier. A bank representative stated the reason that Saudi debit cards do not work online and this is because of the non-availability of saving accounts in Saudi banks. Another bank representative said (in the interview),

"SAMA does not authorize Saudi debit cards to be used on the Internet" and "this procedure has been applied to protect consumers from identity theft."

Another Saudi bank representative said,

"Most Saudis have all their money in their current account, which can be stolen online if their debit card details are subject to fraud."

The fifth financial barrier that is confirmed in this study by consumers and merchants is that local authorities in Saudi Arabia prevent money being refunded onto debit and credit cards. For example, even if consumers and merchants agreed to refund money then they cannot repay it through a consumers' debit or credit card. This has led people to prefer paying by cash and not by debit or credit cards. A bank representative said,

"Money cannot be refunded onto debit or credit cards in Saudi Arabia."

Weak insurance facilities are considered the sixth financial barrier to e-commerce adoption. In the United Kingdom, for example, credit card providers are jointly liable with vendors, for card purchases between £100 and £30,000, effectively insuring consumers against a failure of the vendor to meet their obligations (European Consumer Centre for Services, 2011). Whereas the bank representative in Saudi Arabia said,

"We cannot return a customer's money back into his/her account and as we are not responsible for their mistakes and because the consumer authorized the supplier to withdraw from his/her credit card."

The seventh financial barrier was stated in section 7.2.3. Many Saudi banks do not offer an e-payment gateway for their clients (traders) and other international e-payment gateway providers, such as PayPal, cannot offer these kinds of service due to government restrictions (PayPal, 2011).

To sum up, local banks together with some government's agencies are responsible for these barriers and they should work together to overcome them.

7.2.6 Awareness factors

This section has three barriers related to the awareness field as illustrated in the figure below.

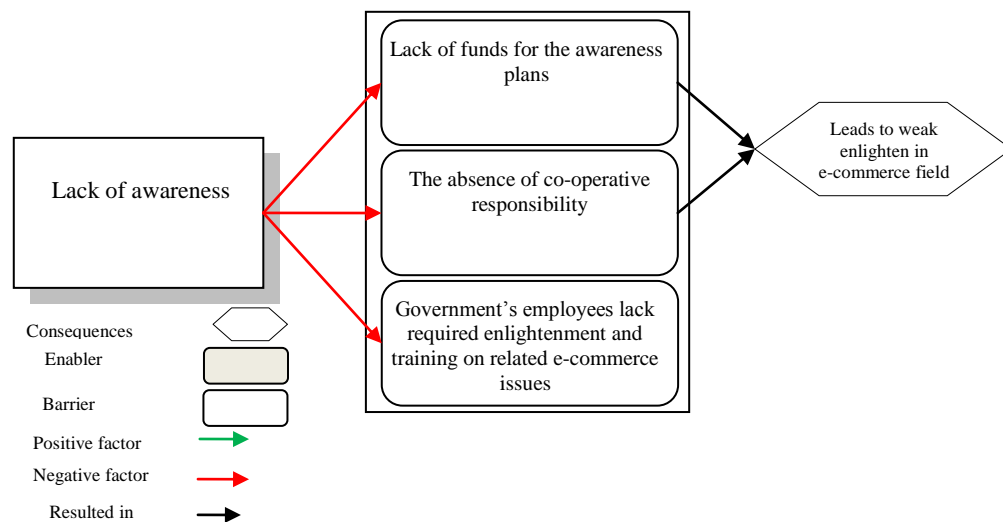


Figure 7.7 Awareness factors raised by suppliers

The first barrier is the lack of awareness funds. CITC published some awareness booklets, which can be found inside their building. Many consumers and suppliers who participated in this research stated that they have not seen these booklets or brochures in shopping centres, schools or in any other public places. The CITC responded to this point by stating that, the fund available for awareness issues is small and cannot support the awareness programmes as stated,

“It is very difficult to advertise in media like TV channels because it costs a lot of money and our budget is limited” and “we face difficulties. For example, CITC have to

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pay full charge to put our booklets in the shopping malls. Also, we cannot advertise on local TV because of the high budget that we cannot offer."

The second barrier is the absence of co-operation between related agencies. For example, there is an absence in the co-operation between CITC and other related parties in order to educate citizens, suppliers and government employees. As stated by the CITC,

"Even though local TV is belonging to government, we cannot advertise with discounted prices. They force us to pay like other suppliers even if it is for education purposes."

This study found that government employees who deal with e-commerce matters lack the essential training to be able to deal with e-commerce cases. For example, the BIP representative said,

"We do not have any knowledge about e-crimes" and "I investigated many e-crimes cases without attending any training courses related to e-crimes and therefore, do not know how to deal with it."

This resulted in the lack of an e-commerce awareness plan, which focuses on government, suppliers and consumers.

7.2.7 Legal factors

Legal factors are considered key ones in this study. Unfortunately, no enablers were found in the section that encourages consumers or suppliers to adopt e-commerce in Saudi Arabia as illustrated in the figure below.

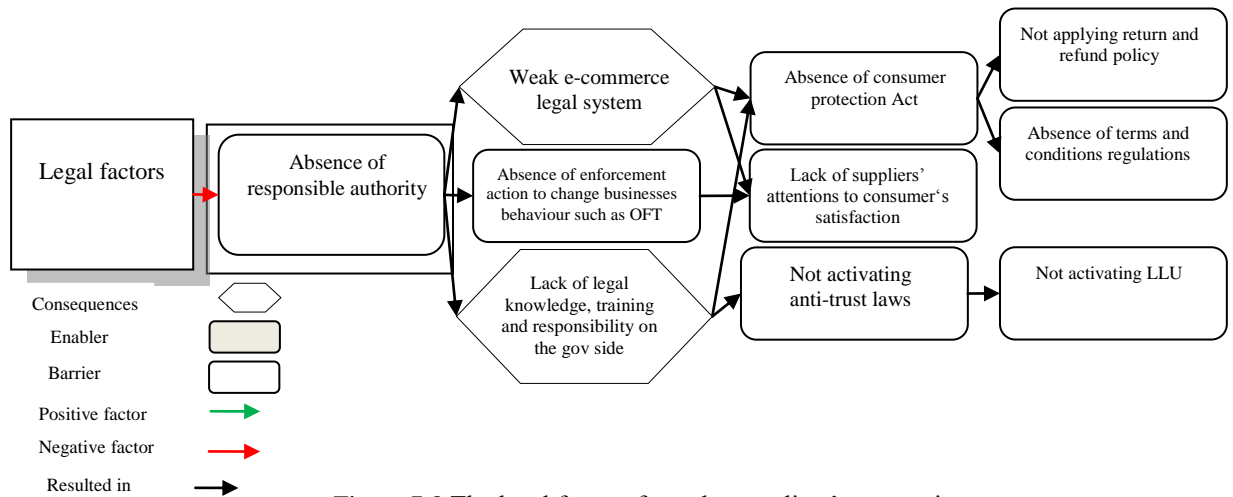


Figure 7.8 The legal factors from the suppliers' perspectives

The e-commerce industry in Saudi Arabia lacks a responsible authority that can regulate and organize it. The MOCI pointed out that the CITC is the responsible authority whereas the CITC felt that responsibility for all commercial activity including e-commerce fell upon the MOCI and this has resulted in a weak e-commerce legislation system. The e-commerce legislation system in Saudi Arabia is unclear. As a result, suppliers, consumers and government employees do not have a clear understanding about e-commerce regulations. For example, there is no clear policy for return and refund as stated in section 6.2.7, 7.2.1 and 7.2.5. Another piece of evidence came from a police representative, who said,

“We are not responsible for any e-commerce legal case.”

The lack of consumers' rights in Saudi Arabia is another barrier. This is due to the absence of a consumers' protection act, which should protect customers in Saudi Arabia. As a result, suppliers do not give attention to consumer satisfaction as stated by a self-employed participant

“Many suppliers do not give any attention to consumers' statutory rights.”

The big concern is that suppliers and the MOCI are both against applying a return and refund policy in local market. Therefore, the MOCI does not apply clear regulations for return and refund policies. They stated that these kinds of rules restrict local trade. Suppliers, the MOCI and the CITC agree on not applying a return and refund policy.

For example, SME said,

“I disagree with forcing shops to apply return and refund policy. This is because these policies will cost shops. In Saudi Arabia clients buy products and already know that they cannot return their goods back.”

MOCI representative said,

“It is not fair for suppliers to apply a return and refund policy.”

The studies mentioned in section 2.8.1 confirm that return and refund policies increase sales.

In addition, the interviewees revealed that there is a lack of understanding in the concept of ‘terms and conditions’. This is because the government and suppliers do not take terms and conditions into account when dealing with consumers. Suppliers in this study, including the Saudi post, do not give any attention to the importance of terms and conditions policies. For example, during this empirical study, terms and conditions were not found in local post offices or on their website (go to 7.2.8 for more details).

The absence of legal knowledge and responsibilities among many government agencies is another barrier. MOCI representative stated that consumers should go to court as a first step to register a complaint regarding online fraud. Investigation found that this is not true and the customer should go first to the police station to report his/her case. Unfortunately, the police representative stated that they are not responsible for e-crimes and victims should go directly to CITC. The correct procedure is that e-crime victims should report the case in the local police station. Then the police station transfers the case to BIP, which then involves a specialist in the field. For example, if the crime is over the Internet then the BIP asks CITC to investigate it and then report the full technical issues back to them (BIP) to be able to judge this particular case. Therefore, this research found that there is a gap in the responsibilities and co-operation among the different government’s agencies in Saudi Arabia.

This confirms what was stated previously (section 7.2.6) that government

employees who have responsibility jobs related to e-commerce lack the essential training to be able to deal with e-commerce's cases.

Another obstacle is weak law enforcement. Most suppliers and consumer participants agreed that there is a government weakness in forcing people and organisations to follow laws and regulations. For example, the MOCI representative declared that they are unable to force local shops to accept formal policies and legislation in local markets. He pointed out that consumers and suppliers should concur on a verbal agreement before affecting the sale by saying,

“The problem is that we (MOCI) cannot force shops to accept formal policy for refund and exchange. In Saudi Arabia, as usual the buyer and the seller agree from the beginning on the refund policy. So, they may agree to refund in the same day or no refund or any other agreement.”

In another example, Saudi banks are aware of the credit cards regulations, as a bank representative said,

“One of the credit card conditions is that consumers have the right to return products in a certain time but the problem is that suppliers do not follow rules and regulations, do not agree to return the product and we cannot force them to follow credit cards rules.”

This confirms that even local banks do not force suppliers to follow credit cards regulations.

To sum up, there is a need for a clear and strong legislative system related to e-commerce. Government agencies need to know their responsibilities in any e-commerce legal case. There is a need to force suppliers and consumers to follow rules and regulations, such as, credit card and return and refund policies. There is a need to educate and train government employees on issues related to their responsibilities and jobs about the rules, regulations and the workflow process of e-commerce cases.

7.2.8 Delivery factors

Before stating the different factors in this section and as part of the privatization process, the Saudi government transferred the national mail carrier from the public to a joint public-private business under the supervision of the Saudi government (Ministry of Economy and Planning, 2011).

This section has ten barriers with no enablers as illustrated in figure 7.9 that prevent consumers from adopting e-commerce. Therefore, the CITC representative attributes part of the e-commerce failure to the national mail carrier and said,

“The problem is products need delivery.”

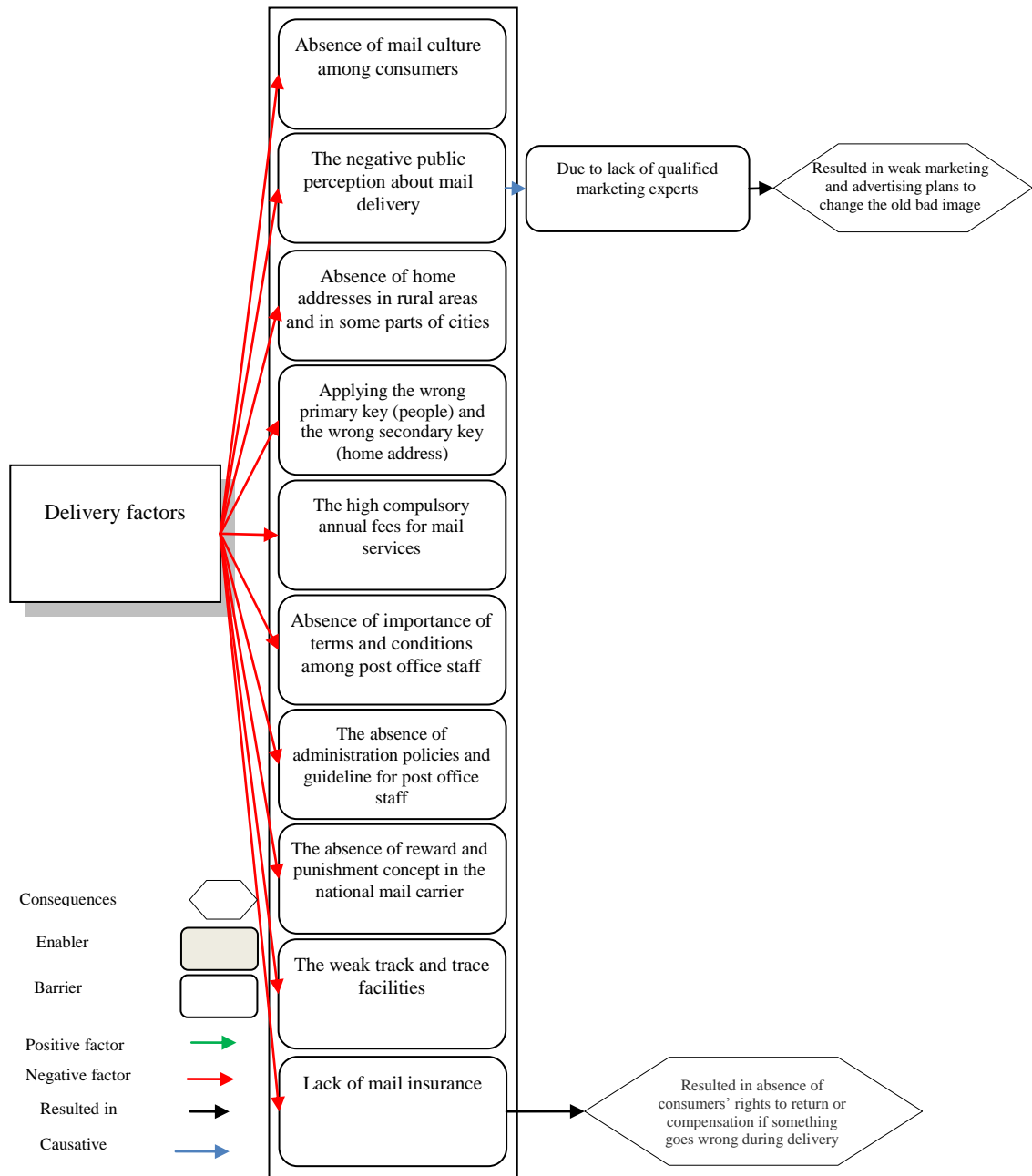


Figure 7.9 Delivery factors from the suppliers' perspectives

The first barrier is the absence of a consumers' mail culture previously mentioned in section 7.2.1. Saudi citizens do not depend on receiving mail in their daily lives. SME representative said,

“There is no mail culture in Saudi Arabia among citizens. This is because normal mail does not come to your house but rather you should pick it up from the city centre where all shops are.”

This factor led to the second barrier, which is the bad public perception of postal services among its citizens. People and suppliers retain a bad image of the national mail carrier. Both consumers and suppliers complained about loss of and failure to deliver, letters and parcels. A bank's representative said,

"We have many complaints that our products do not get delivered to our consumers" and further said, *"We cannot track our packages. Therefore, we are forced to deal with the private post carriers."*

Citizens damaged many of the new post boxes after they were attached to their houses. This is because the marketing department did not study consumers' basic needs. The post office participant said,

"We may not have the qualified people in the marketing field. I think the reason that let young people destroy these boxes is the wrong marketing plan. They may get the wrong message."

In addition, the local post office did not give the required attention to improve their reputation. The national post carrier representative said that this is because of the lack of qualified and experienced people in the field of marketing.

The third barrier is that rural areas and some parts of cities still do not have home addresses. As stated in the first empirical study (section 6.2.8) some participants declared that they have no official postal address for their homes. The national mail participants said,

"We are focusing right now on large cities and will move to rural areas once finishing these cities."

This barrier can prevent those who do not have home addresses from adopting e-commerce.

The fourth barrier is that the new Saudi Arabian postal system uses the citizens' names as the primary key and home addresses as the secondary one. In other words, the home address cannot be activated unless one pays the annual postal fees and registers

the names of the people who reside at that address. Because of these rules, customers need to register their names and pay the compulsory annual post fees to be able to receive deliveries. By contrast, in most developed countries, mail services deliver products to home addresses without the need for registration and payment of annual fees such as the British Royal Mail (Royal Mail, 2011).

Fifth, the compulsory annual fee paid in order to receive mail. The fees have trebled with the new postal system and because of that, citizens, especially in low income groups have rejected the new postal services as described in section 6.2.8. The national mail carrier in Saudi Arabia (who is responsible for the new system) stated that this increase is needed to cover the costs of the added services they offer,

“We have new services for our customers such as delivery to homes instead of picking up the post from the main post office.”

When, however, one compares the national mail carrier's services and charges with the British Royal Mail we find that the Royal Mail offer its services with no annual fees (Royal Mail, 2011). Therefore, annual fees negatively affect e-commerce adoption among consumers.

The sixth barrier is the lack of attention to terms and conditions with respect to the national mail carrier (mentioned in the legal section 6.2.7 and 7.2.7). There are no terms and conditions on their website, in their bills or inside the post office. Their participant said,

“Customers do not need to know about our terms and conditions therefore it is located in our head office.”

This quotation declared that the national mail carrier does not give terms and conditions policy any attention.

The seventh barrier is that there is no official guidance or clear procedure at the front desk in national post offices. The regular post office seems to depend on the employee's knowledge and experience. There is no official procedure to follow, as one

Chapter 7. Framework for the adoption of E-commerce from the suppliers' perspectives
of the employees said,

“We do not have a manual but we depend on ourselves and on our experience.”

Unfortunately, this leads to common mistakes and the inability to answer customers' enquiries.

The absence of a reward and punishment concept in the post office is considered another key barrier. The national mail carrier is being privatized but it is still managed by the same government staff and mentality, as many of its employees including top management still occupy the same positions. The main post office representative raised this factor when he said,

“The problem is that there are no rewards for people who work hard and no punishment for lazy employees or for employees who cause lost or damaged items.”

The ninth barrier is that suppliers have highlighted the importance of “trace-and-track” services. Unfortunately, the national mail carrier has disregarded this point. Thus, banks and some other firms avoid sending their valued goods via the national mail carrier as described earlier in this section. They stated that some of their post, such as credit cards, is lost during delivery and cannot be traced or tracked. Therefore, they use private mail carriers.

The last barrier is the weak insurance facilities as pointed out in section 7.2.5, therefore, consumers and firms do not trust the national mail carrier's services. The national mail carrier needs to apply insurance facilities in order to regain suppliers and consumers' trust. For example, the absence of consumers' rights to a refund, repair or compensation if something goes wrong during delivery leads to a lack of trust among people and firms. The national mail carrier declared that they are not responsible for any faults during the delivery. They claimed that the package might have been originally faulty or broken before delivery, especially with wrapped and closed packages as stated,

“Most of our delivered items are packed originally and therefore, we cannot check their original status. As a result, we are not responsible for things inside the

Consumer, (N4), as stated in section 6.2.8 said,

“I sent a dictionary device through special delivery by the national mail carrier to my brother and it has not arrived to him. Then I submitted the claim form. But, until this moment, and in more than three months, I have not received any reply from them.”

Therefore, there is a need for improvement and the offering of insurance facilities in order to satisfy their customers.

7.2.9 Tangible and intangible end-user characteristics

Consumers themselves can act as barriers to their adoption of e-commerce from the suppliers' point of view. This study raised three barriers from the suppliers' perspectives as illustrated in figure 7.10.

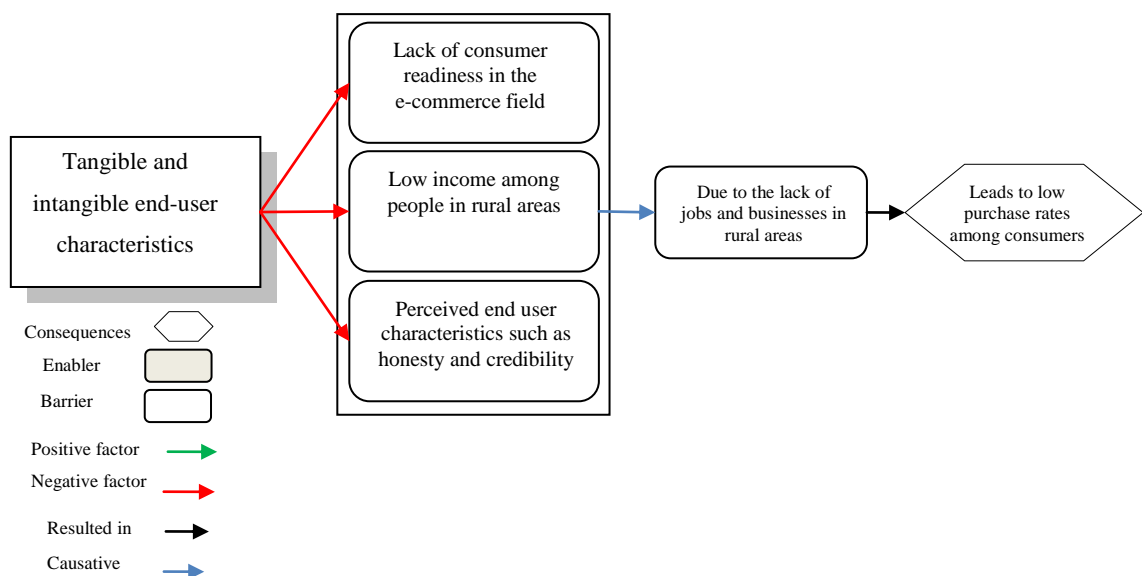


Figure 7.10 Tangible and intangible end-user characteristics factors from suppliers' perspectives

The first barrier is the lack of consumer readiness with regard to e-commerce and this is one of the major factors preventing suppliers from investing in e-commerce. Suppliers pointed out that consumers are not ready to deal with the e-commerce environment. The head of the Business Information Systems department in SME stated, according to their local studies, that citizens now are unwilling to buy or sell online.

They may compare and then buy from the high street, which was stated previously in section 7.2.1.

People's income, especially in rural areas, is considered one of the barriers. Many suppliers invest in large cities and leave the rural areas for unprofitable purposes. Therefore, people living in these areas are more likely to receive a low income due to the lack of job opportunities. This has led to migration to large cities as indicated in chapter three. This results in a low purchasing ratio in rural areas.

This study blames government and private business for the lack of jobs and low level of income in rural areas. This encourages citizens in these remote areas to migrate to the cities. The following figure shows that this factor forms a closed circle that needs to be broken in order to solve it.

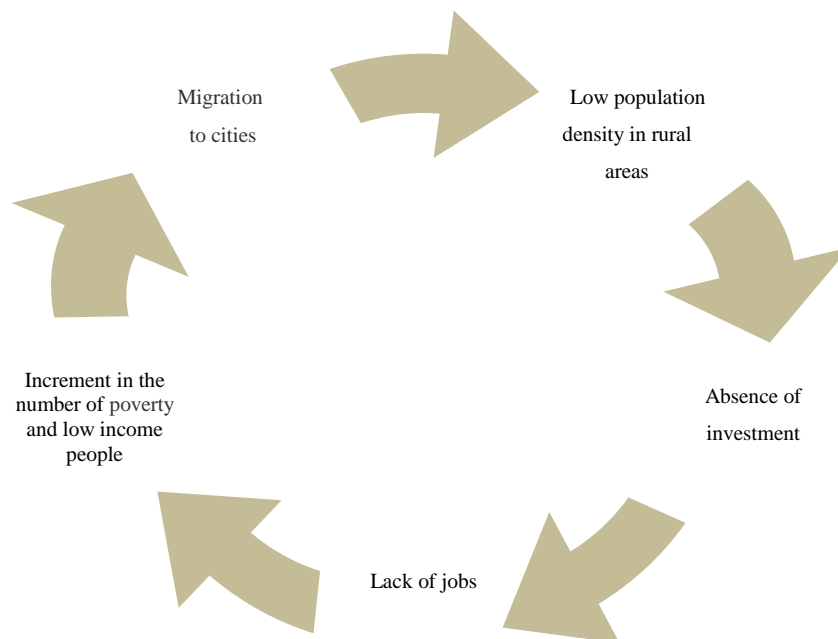


Figure 7.11 The impact of low population density on remote areas

Suppliers and government agencies are against a return and refund policy, as they are afraid that people may use their rights to overcome some of the suppliers' rules. As mentioned in section 7.2.7, the MOCI refused to apply a return and refund policy to protect suppliers from consumers, so ignoring the need to protect consumers' rights. The MOCI and suppliers anticipate that consumers may use this policy in a way that is detrimental to their interests. They justified this action by stating that not all consumers

act in good faith, with honesty and credibility. Therefore, not applying a return and refund policy prevents consumers from adopting e-commerce as they will not be able to return products if it is necessary.

7.2.10 Security factors

Suppliers raised three barriers with no enablers as illustrated in figure below.

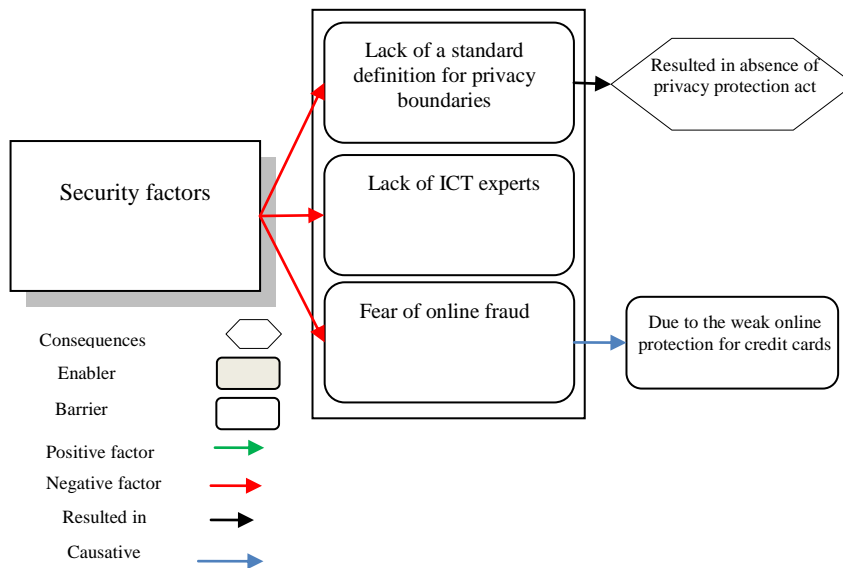


Figure 7.12 Security factors from the suppliers' perspectives

The first security barrier is the lack of privacy protection as there is no specific definition for privacy in Saudi Arabia among many suppliers and government agencies. MOCI stated that Saudi Arabia is different compared to other countries and cannot import the definition of privacy from others. For example, as stated by MOCI, date of birth is private information in some countries whereas in Saudi Arabia it is not. This is because people in Saudi Arabia cannot benefit from a person's date of birth and cannot use it for the purposes of identification. By contrast, because Saudi Arabian society is conservative, people believe that the names of wives, mothers and sisters are private information. Therefore, there is a need for an official definition of privacy and its boundaries. As stated by the MOCI representative,

“Saudi society is different from the west. This is because date of birth in the western countries is considered as private information and should be secure whereas

date of birth in Saudi Arabia is useless and no one can benefit from using it. ”

This results in no privacy protection act to protect personal information and to force suppliers to keep consumers' information private.

The second barrier is the lack of ICT experts especially in the information security field. Some of the government's agencies confirmed that they lack the appropriate qualified people in ICT. For example, the MOCI representative said,

“We face technical weaknesses in our Ministry because of the lack of equipment and qualified ICT people who can help.”

The third barrier is related to financial factors, which were described in section 7.2.5. A bank representative said,

“People are responsible for protecting their credit cards by not surfing and buying from suspicious websites. Therefore, we are not responsible for the improper use of credit cards.”

To sum up, suppliers in the second empirical study confirmed the consumers' viewpoints in the first empirical study.

7.2.11 Geographical factors

This category acts as an enabler for consumers and suppliers and at the same time as a barrier to e-commerce adoption as illustrated by the following figure.

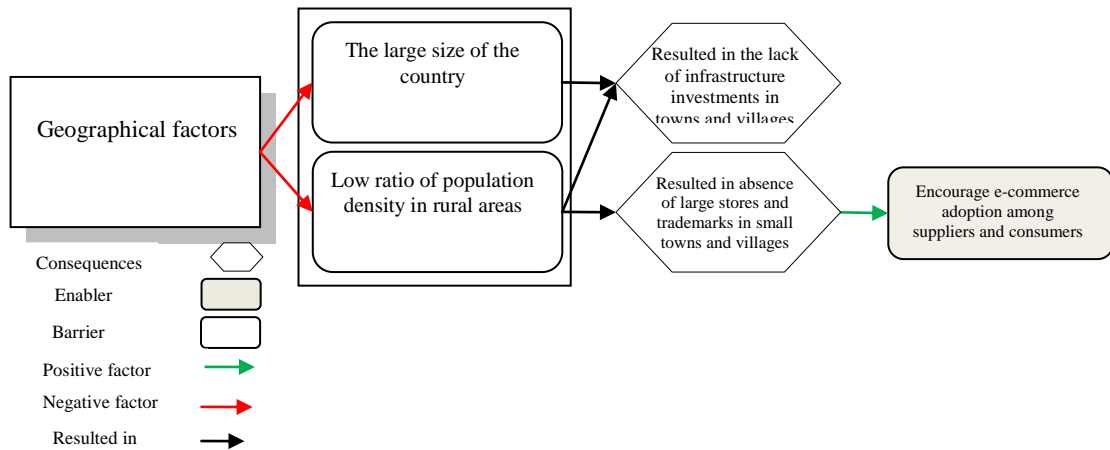


Figure 7.13 Geographical factors from the suppliers' perspectives

Saudi Arabia is a large country (its area covers 2.25 million square kilometres). The long distances between cities, towns and villages have resulted in the slow spread of the country's telecommunication infrastructure, such as, broadband to its rural areas. Internet providers tend to ignore rural areas and concentrate on the cities. Telecommunication providers justify this in terms of seeking profit and they will not invest in low profit rural areas (section 7.2.2). A telecommunication provider said,

“We cannot invest in low profit areas as we are looking for profit in the first place.”

Moreover, rural areas have low population density, which prevents businesses from investing in these unprofitable areas. Therefore, these areas lack large stores and trademarks. This, however, should encourage suppliers to extend their online businesses and encourage consumers to purchase online since there are no large stores in rural areas.

7.2.12 Government's responsibilities

Government responsibilities have the following factors as illustrated in the following three figures.

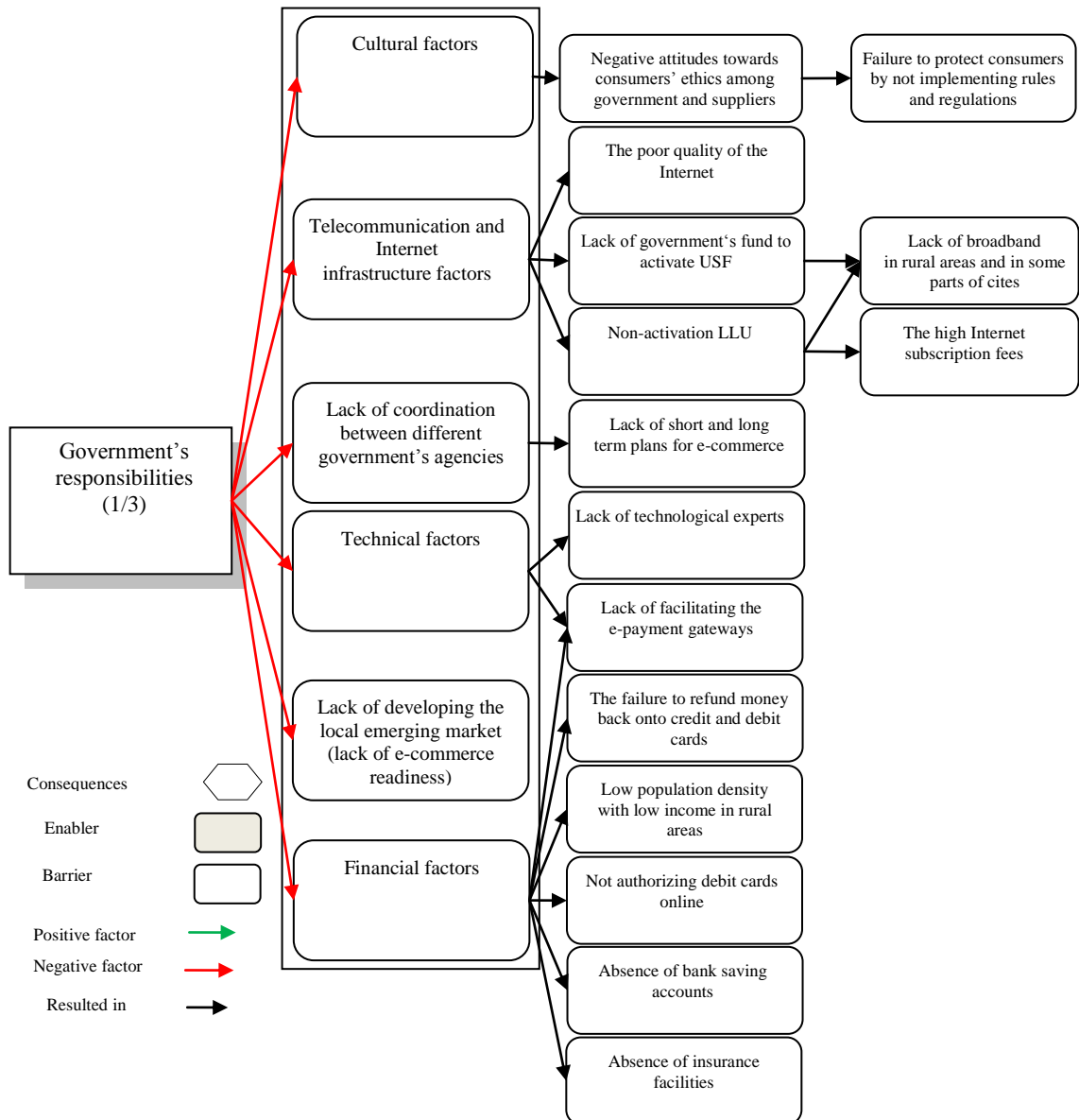


Figure 7.14a Government's responsibilities from the suppliers' perspectives

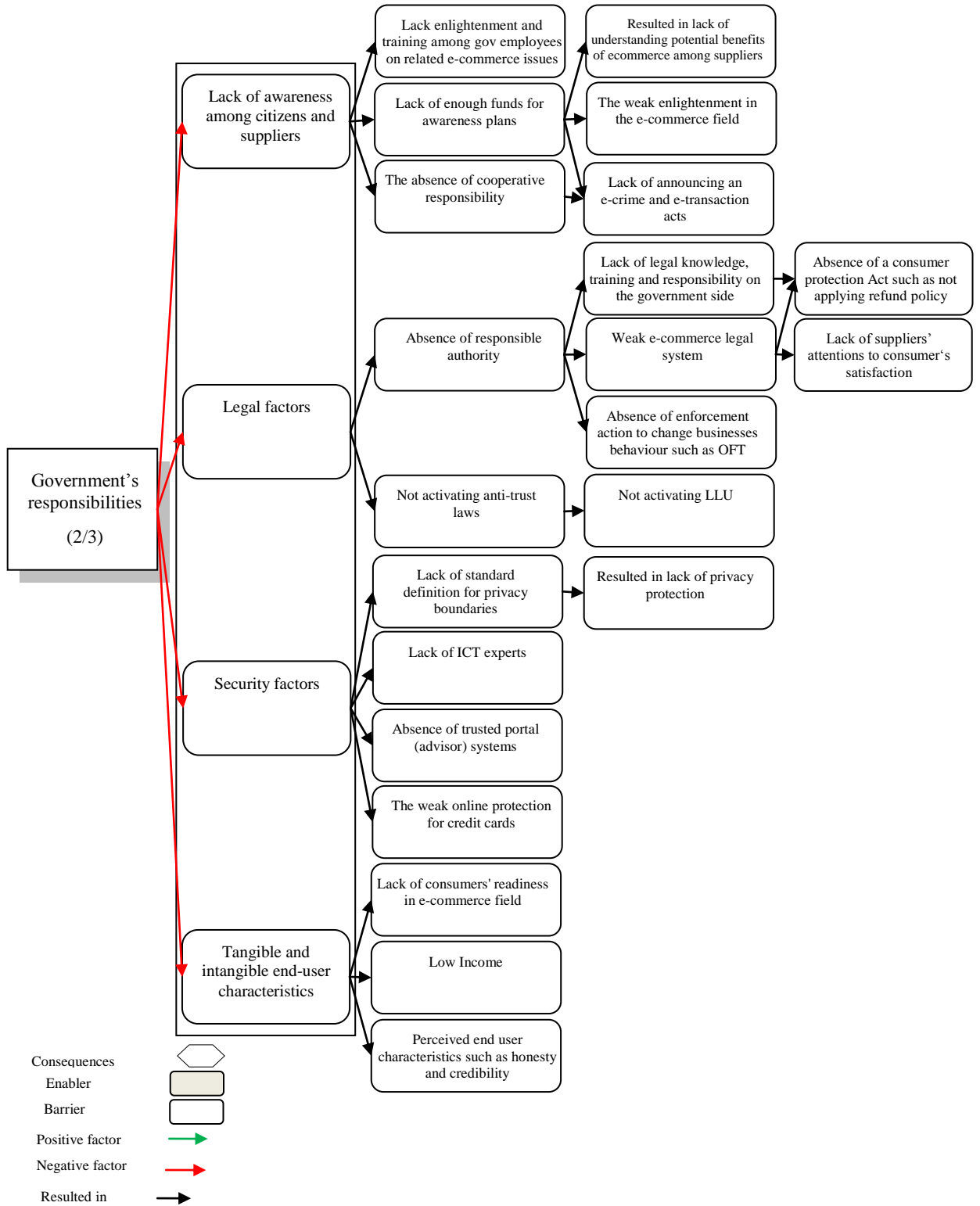


Figure 7.14 a Government's responsibilities from the suppliers' perspectives

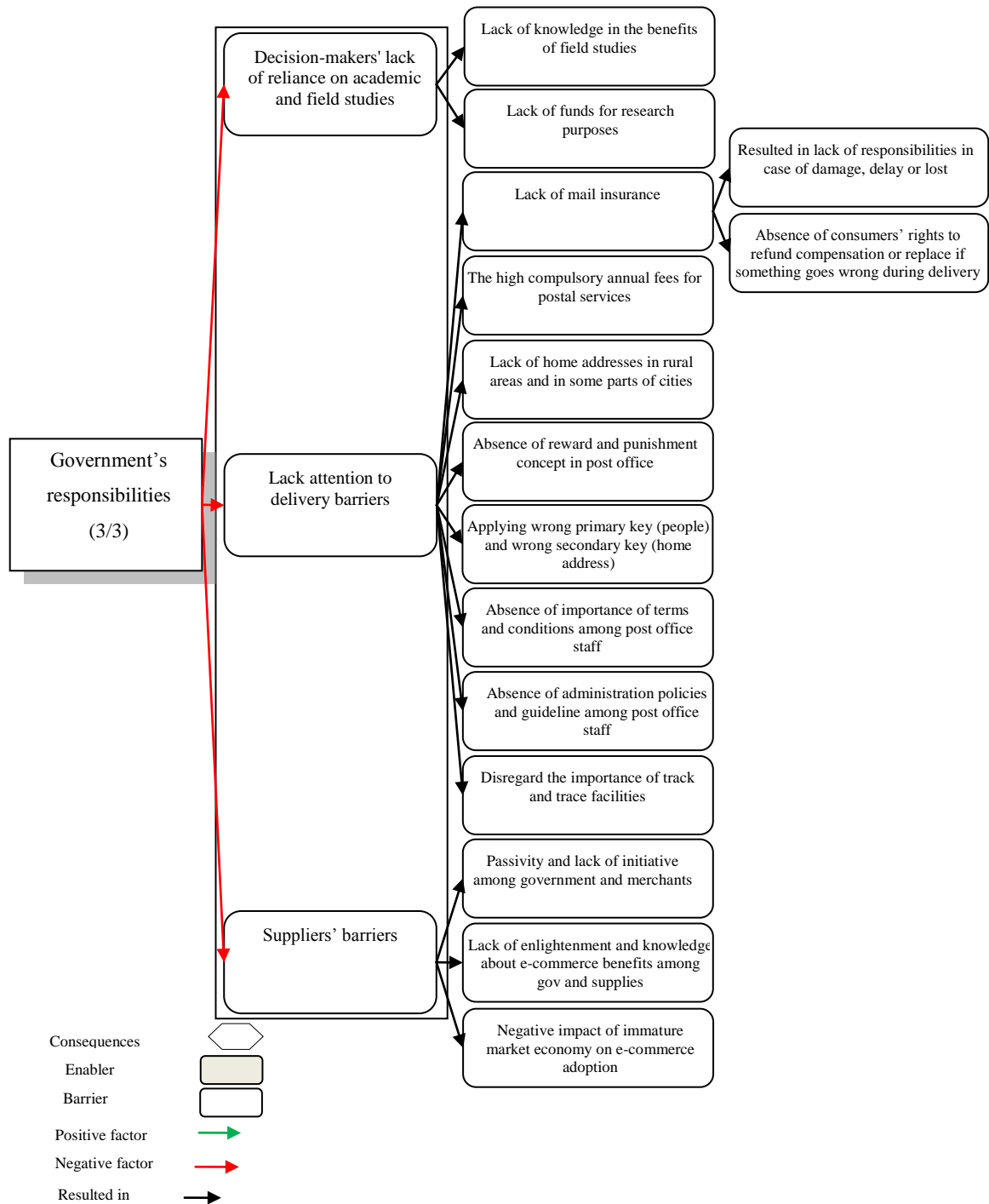


Figure 7.14 b Government's responsibilities from the suppliers' perspectives

The above factors are all barriers and have a strong relationship with previous categories mentioned in this chapter such as legal, telecommunications, technical, financial, delivery, security and awareness factors. Therefore, the second empirical

study confirmed the first that government responsibility is the core category for this study.

As stated earlier, most of the factors in this study have a strong relationship to the government responsibilities category. For example, many legal factors are the responsibility of local government, such as protecting consumers' rights in order to adopt e-commerce among them. Government needs to enact laws and regulations to control the e-commerce field. The absence of enforcement action to change business behaviour is one of the government's responsibilities too. For example, the Office for Fair Trading (OFT) in the UK aims to make markets work well for consumers (Office of Fair Trading, 2010) but there is no similar body in Saudi Arabia. Furthermore, government is responsible for not activating the anti-trust laws to open competition leading to lower prices. The CITC's participant revealed that they have an anti-trust scheme, which helps to spread Internet services over the country but it has not been activated. For example, LLU in Saudi Arabia remains inactivated as stated by the CITC representative.

The absence of coordination and responsibilities across different government's agencies is another legal factor. The evidence is that MOCI reported that they are not responsible for e-commerce in Saudi Arabia; the CITC is the responsible party. On the other hand, the CITC stated that MOCI is the responsible party for issues related to trading in Saudi Arabia. This leads to the absence of long and short term plans to meet consumers' needs. The government remains lined-up with suppliers and both disregard consumer needs as stated by participants from MOCI.

The third key barrier is the lack of awareness among consumers, suppliers and government's employees. For example, an officer in a police station stated that they have not attended any training courses on e-crime. Therefore, they do not know the right procedure for these kinds of crimes. In addition, employees in BIP notified the researcher that they are not knowledgeable about e-crimes and ways to investigate it. The BIP participant said,

“When I first started to work here, I did not take any training about the Saudi

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acts. I start the work and with time, I learned more and more. However, this is a big mistake; the staff should take training courses about these acts before they start joining the investigation team” and “I am right now investigating e-crime cases while I do not have the basic knowledge about the new technology.”

Disregarding, ignoring and not considering academic studies were found to be one of the factors that acted as a barrier. The Saudi post representative reported that many government decision-makers are continuing to ignore the importance of scientific research in their projects. This resulted in lack of funds to conduct research and lack of appreciation of the benefits of doing such research.

Government is also responsible for many telecommunication and Internet infrastructure factors. For example, activating the USF is considered one of their responsibilities. The USF remains inactive, this has resulted in not giving rural areas enough resources and, therefore, they lack the right infrastructure. Activating LLU is another responsibility. Once it is activated, LLU and USF can reduce Internet prices and help to distribute it over the country.

Government is also responsible for some of the technical factors, such as, the lack of e-payment gateways. Government needs to authorise international e-payment gateways and allow them freedom to operate in Saudi Arabia to help spread this service.

Government needs to educate and train its staff about consumers' rights. Government and suppliers needs to understand that in every society there are good and bad people. Therefore, they should enact laws and regulations to protect their consumers.

Many financial barriers in this study are the responsibility of government. For example, the government did not facilitate debit and credit card refunds, not authorising debit cards to work online, not building the required infrastructure in rural areas to stop migration to main cities and not facilitating insurance for protection purposes.

Many security issues presented in this chapter enjoy a relationship with government. For example, there is no standard definition of privacy in Saudi Arabia as

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declared by the MOCI. There is a need for a trusted portal that is controlled by a competent agency, such as, the CITC to encourage consumers and suppliers to follow rules and regulations and to increase trust among citizens.

Regarding delivery factors in this study, government still manages the national mail carrier. Therefore, it is responsible for this category, such as, the lack of insurance in the national mail carrier, not reducing or eliminating the compulsory annual post fees, the lack of home addresses in rural areas and in some parts of cities and the weak “trace-and-track” facilities.

The government is responsible for some of the suppliers' factors. The Saudi government is still not taking the initiative to build the correct base for e-commerce, not educating suppliers about the benefits gained if e-commerce is activated in their businesses and not trying to move the economy from an immature to a mature state.

Moreover, government is responsible for some of the end-user factors such as the lack of awareness among consumers, the lack of jobs in rural areas, which leads to a low income among citizens in these areas and the need to build the right e-commerce infrastructure to encourage people to adopt e-commerce in their daily lives.

The following section is a summary, which contains implications for this study.

7.3 Chapter summary and implications

This chapter presented the suppliers' perspectives on consumers' viewpoints regarding the adoption of e-commerce in Saudi Arabia. It has been demonstrated that some consumers and suppliers' perspectives are congruent while for others a disparity exists. In addition, some new viewpoints were found during the second empirical study.

While many researchers consider that Islam is a barrier to the adoption of e-commerce, this research eliminated the religious factor and it is no longer considered an impediment to e-commerce adoption as described in section 7.2.1.

As stated by consumers in the first empirical study (section 6.2.1) and by suppliers

in the second one (section 7.2.1) the Arabic language is also no longer considered a barrier to e-commerce adoption. This is because most of the programming languages are able to develop an Arabic interface for e-commerce websites. The only challenge is when developing a bilingual e-commerce website since a translation body is required to post products in both languages (Altayar et al., 2010). This, however, is not a problem among consumers in Saudi Arabia since they are satisfied with the Arabic interface. The English version is an extra service for them.

It has been found during the first empirical study that in rural areas income is low, which leads to low demand for telecommunications services due to their high subscription fees. In the second empirical study, telecommunications providers stated that they are looking for profit and cannot invest in non-profit areas. Unfortunately, the CITC has still not activated USF and LLU. The CITC should accelerate this process. This helps to increase competition between Internet service providers (ISPs) in order to reduce their charges. Therefore, this study found the need for activating the USF to develop these poor areas and to encourage suppliers to invest there by offering them incentives.

As a bank representative said,

“SAMA does not authorize Saudi debit cards to be used on the Internet” and “this procedure has been applied to protect consumers from identity theft.”

Another Saudi bank representative said,

“Most Saudis have their money in their current account, which can be stolen online if their card details are purloined.”

Therefore, preventing the use of debit cards online inhibits the adoption of e-commerce. This study also shows the need for savings accounts to protect consumers' money that is not used for daily expenses. Furthermore, it shows that pre-paid credit cards and the application of pay-offline technology positively affect e-commerce adoption among consumers. This will enable the consumer to top-up with limited money to avoid online fraud.

This research recommends the need for a return and refunds policy, the need to authorize refunds to be debited onto debit or credit cards and the need to apply terms and conditions.

This empirical study reported the weaknesses in banks' acceptance of responsibility to protect their cards against online fraud and the lack of credit card insurance.

This study raised awareness issues. Suppliers need to know more about the benefits of e-commerce and the need for funds to promote citizen, supplier and government's employee awareness.

Furthermore, it appears no government agency is clearly responsible for e-commerce in Saudi Arabia. As a result, there is a failure to develop long and short-term plans for the e-commerce environment.

The research highlighted many delivery issues such as mail insurance, the need to reduce or cancel the compulsory fees in order to receive mail and the need for effective "trace-and-track" facilities in the national mail carrier.

People in rural areas are more likely to have lower incomes compared to people living in cities. This is because rural populations have less job opportunities due to the absence of commercial investment in these areas. This can result in preventing them from adopting e-commerce.

Many consumers stated they do not trust Saudi websites. Therefore, there is a need for an official platform or portal, administered by a trusted party such as a government agency (for example CITC). The e-commerce portal will have trusted suppliers and website links regulated through criteria applied by the CITC, MOCI and any other related government's agency. This promotes trust in local e-shops.

The following paradigm model includes a description of the phenomenon, its causal conditions, the context, intervening conditions, action/ strategies and finally the potential consequences.

Chapter 7. Framework for the adoption of E-commerce from the suppliers' perspectives

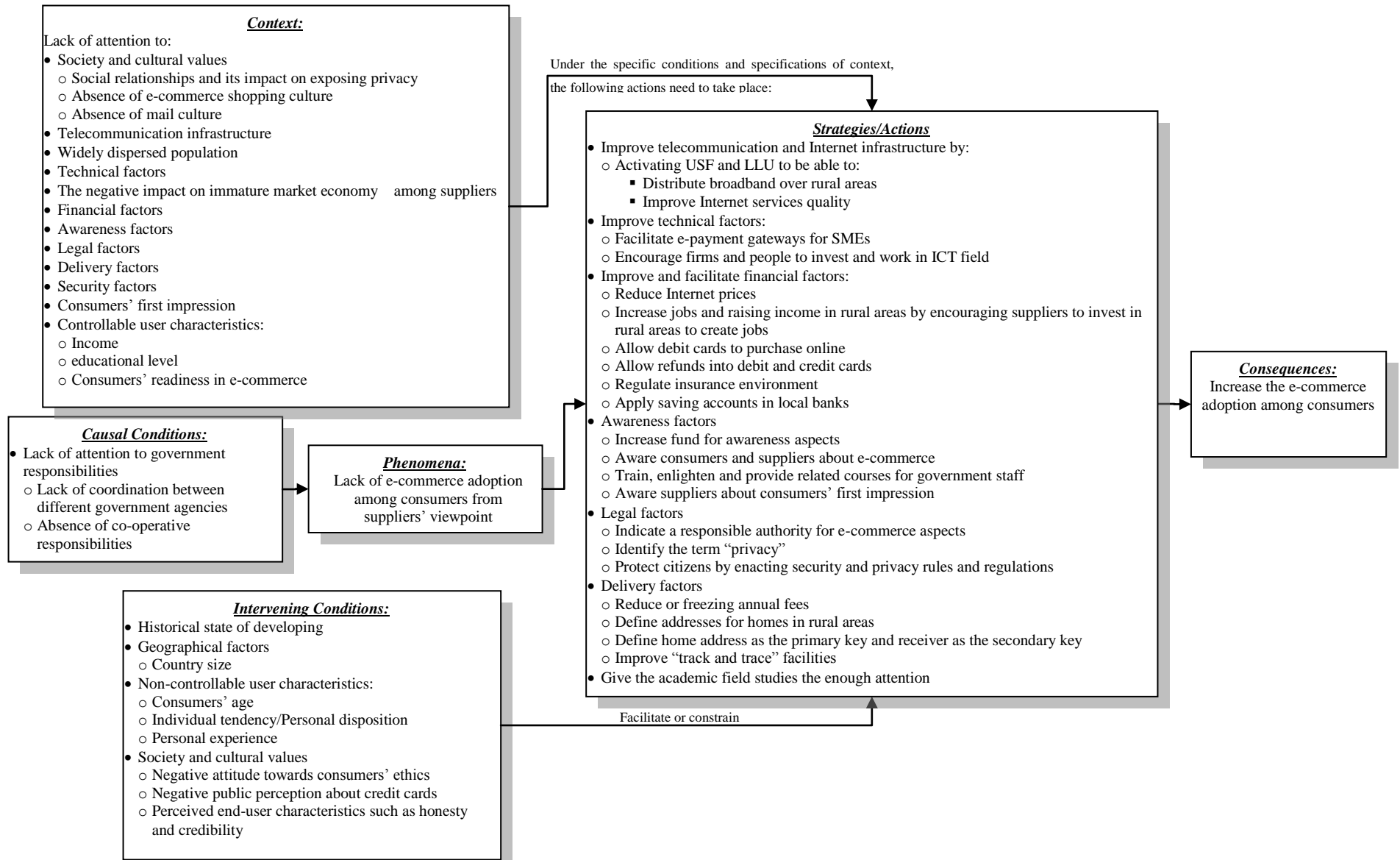


Figure 7.15 Model of the factors affecting consumers' adoption of e-commerce from suppliers' perspectives viewpoints

The above paradigm model is considered to be the conclusion for the second empirical study. It shows the following:

1. Causal conditions: The second empirical study identified 'government responsibilities' to be the core category for this study. Therefore, it is the main condition that influences other barriers in this study. For instance, government failed to regulate the local market, and therefore, a need for action to solve this issue is necessary.
2. Phenomenon: The second empirical study investigates the factors affecting e-commerce adoption among consumers in Saudi Arabia from the suppliers' perspectives.
3. Context: Is the controllable barriers that can be eliminated by putting in place the appropriate strategies and actions. These barriers are negatively affected by government. As a result, these barriers need to be considered in order to plan a strategy or put in place an action to facilitate the e-commerce adoption among consumers.
4. Intervening conditions: These are the non-controllable barriers that facilitate or restrict the strategies taken in order to adopt e-commerce among consumers. These barriers are hard/difficult to change but can facilitate or restrict the action taken. For example, the negative public perception about credit card plays a role in limiting the actions taken to eliminate the cultural barriers.
5. Strategies/actions: These are the required actions resulting from the second empirical study which need to be taken in order to increase e-commerce adoption in Saudi Arabia. For instance, an action should be taken in order to eliminate financial barriers such as reducing Internet prices, creating jobs and raising incomes by encouraging suppliers to invest in rural areas. However, the country size may limit this particular action.
6. Consequences: These are the outcomes of the applied actions eliminating the barriers. The second empirical study model resulted in increasing e-commerce adoption among consumers.

As seen in figure 6.1, the next chapter presents a discussion of the combined framework that has been derived from the consumers' perspectives that were discussed in chapter 6 and those of their suppliers that have been identified during this chapter.

Chapter 8

Reflection on the combined framework of the consumers' and suppliers' perspectives

8.1 Introduction

This chapter presents the combined framework that was developed from the two empirical studies presented in chapters six and seven. This framework, therefore, is a combination of consumers and suppliers' perspectives on factors affecting consumers' adoption of e-commerce. Consequently, this study confirms, refutes and reveals some of the previous factors mentioned in the literature that influence consumers' adoption of e-commerce in Saudi Arabia in particular and developing countries in general.

The first empirical study raised some enablers and barriers to the e-commerce adoption from the consumers' perspectives. The second empirical study applied GT's theoretical sampling to select relevant suppliers in order to capture their perspectives about their consumers' viewpoints and to investigate further any new issues that arose. As a result, this chapter presents the final findings for this study. As described in this chapter, consumers raised issues related to the subject under consideration. Their remarks have been passed to the suppliers for comments. The two parties were able to agree some of the factors while others drew differences of opinion. In addition, new factors come to the surface.

Figure 8.1 shows the combination perspectives and illustrates the relationships between different categories. The core category in both studies is the same: 'government's responsibilities'.

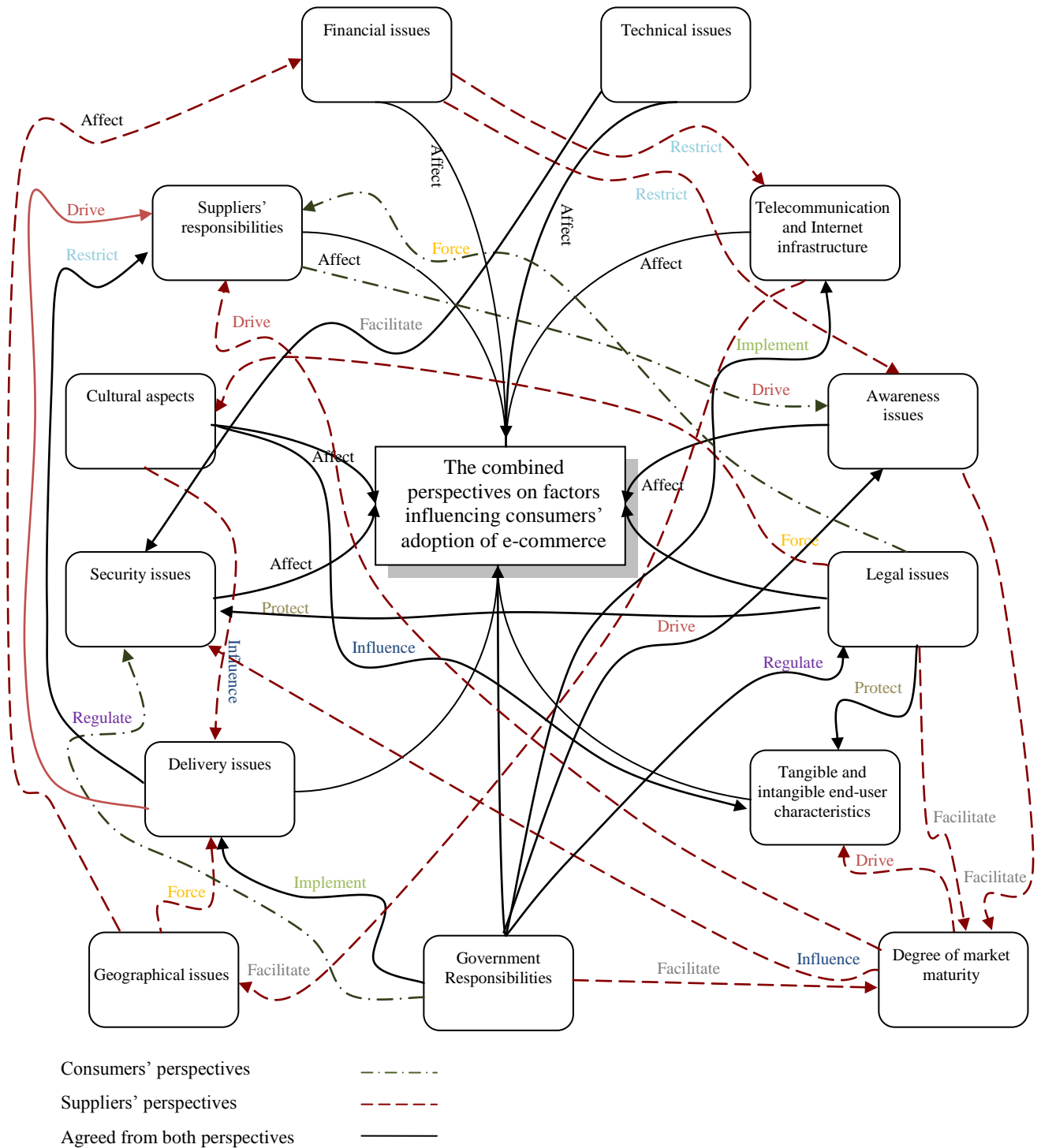


Figure 8.1 The combined relationships on factors affecting consumers' adoption of e-commerce from the consumers' and suppliers' perspectives and their relationships

Many issues were exposed by the first empirical study, such as, the influences of the Islamic religion and the Arabic language. These factors were raised during the second empirical study to obtain suppliers' answers and comments toward these issues. In addition, new factors were revealed during the second empirical study that were not mentioned previously, such as, activating the USF, co-operative responsibilities, market maturity and anti-trust laws. Grounded theory and the application of theoretical sampling during the first and second empirical study helped to enrich them by achieving answers, comments and identifying new factors. All these issues are discussed in more detail in the following sections.

8.2 Overview of the combined framework of the consumers' and suppliers' perspectives

This section combined the findings of the first empirical study with those of the second into one framework.

8.2.1 Cultural dimension

This section merges the cultural factors found in the first and second empirical studies into one framework as illustrated in figure 8.2. The cultural dimension has four barriers and four enablers. Two of the enablers came from consumers' perspectives (dark rectangle with a single red line) and both suppliers and customers agreed the other two (dark rectangle with double blue lines). Regarding the barriers, three come from the suppliers' perspectives (rectangle with single green-line) and the others were agreed among consumers and suppliers (rectangle with blue double line).

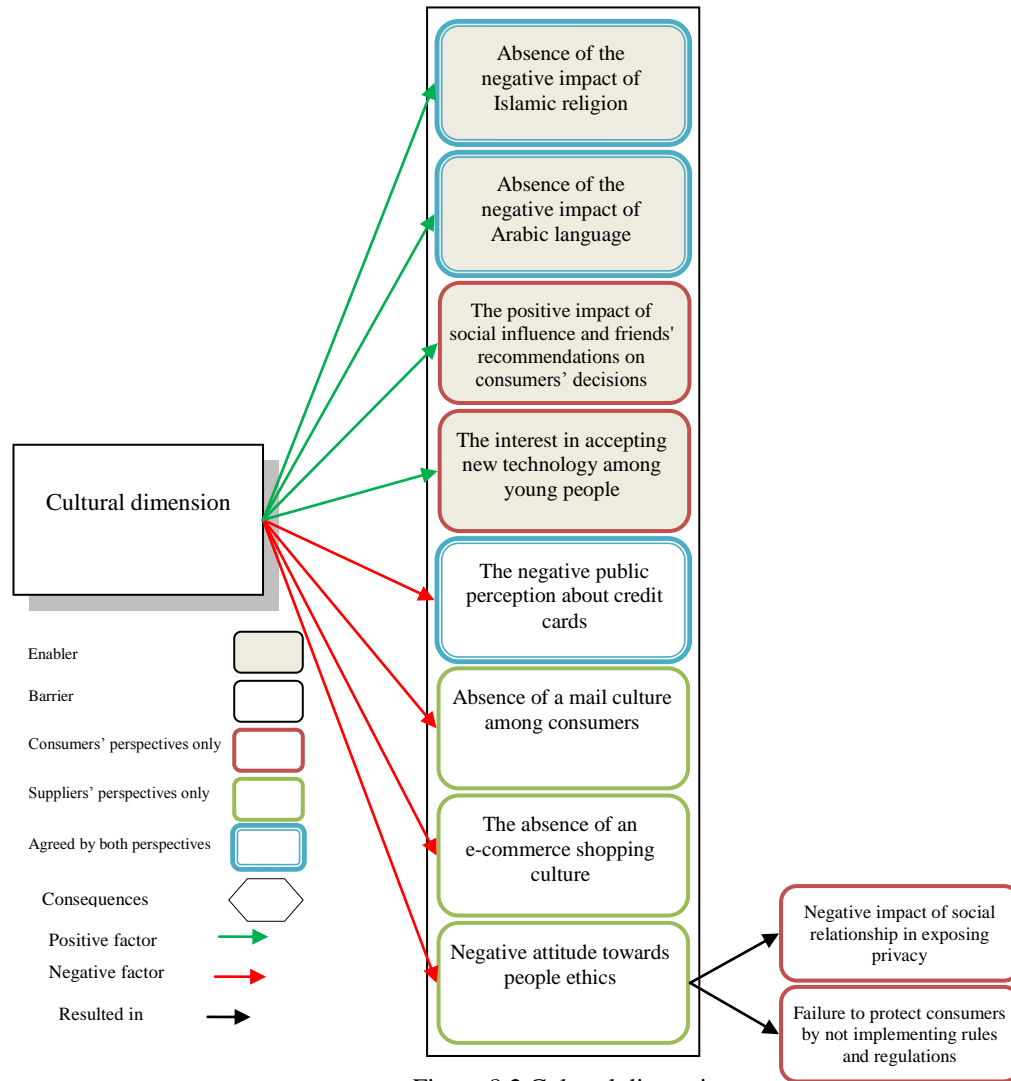


Figure 8.2 Cultural dimension

One of the key factors in this dimension is that suppliers confirm what consumers stated. The Islamic religion is no longer a barrier to e-commerce adoption. As stated in section 6.2.1 and section 7.2.1 this is due to the improvement in Islamic banking and finance such as the availability of Islamic credit cards, which avoid dealing with riba (interest) and are, therefore, authorized by Islamic scholars.

Although there are Islamic credit cards, a negative public perception still attaches to credit cards in general among consumers in Saudi Arabia. This issue was discussed in sections 6.2.1 and 7.2.1 where suppliers share this concern with consumers.

Another key factor in this dimension, which contrary to previous literature, is that

the Arabic language is no longer considered a barrier to e-commerce adoption. The justification is that most programming languages such as Java, VB, C and C++ can develop an e-commerce Arabic interface. The only challenge is when an e-shop requires both an Arabic and English interface. This means that a translation body to write the same information in both languages is required (Altayar et al., 2010). Consumers in the first empirical study stated that the Arabic language is the important issue, not the English version, as the former is their native tongue and eliminated this challenge from the study.

The third enabler in this section is the positive impact of social influence and friends' recommendations on consumers' decisions. People trust e-commerce websites that are recommended by others. Moreover, this research shows the interest among the young in Saudi Arabia to accept new technologies which confirmed the literature (Limayem et al., 2000, p.427).

Consumers in Saudi Arabia do not seem to possess a mail culture. They do not rely on the post in their daily lives, which may result in slowing e-commerce adoption among consumers in Saudi Arabia. In addition, consumers have not developed an e-commerce shopping culture. They still prefer to buy from the high street. Moreover, suppliers and the MOCI are both agreed upon not applying return and refund policies, fearing its exploitation by some consumers. Therefore, there is a negative impression among suppliers' and government participants concerning consumers' ethics. This has resulted in a failure to protect consumers by not applying the necessary rules and regulations. On the other hand, consumers believe that any social relationship exposes privacy by good faith.

This research has contributed to knowledge in this section. Many previous studies counted the Islamic religion (Siala et al., 2004, p.7, Zainul et al., 2004, p.286, Alfuraih, 2008) and Arabic language (Duan et al., 2010, p.361, Vatanasakdakul et al., 2004, p.10, Thanasankit, 2003, p. 263) as barriers that prevent consumers from adopting e-commerce in most Islamic and Arabic countries. Whereas this study brings to light that neither the Islamic religion nor the Arabic language are any longer considered barriers to e-commerce adoption as described in section 6.2.1 and 7.2.1.

8.2.2 Telecommunication and Internet infrastructure dimension

This dimension contains three telecommunication's barriers agreed among consumers, suppliers and related government agencies. These barriers are the high-priced subscription fee for Internet usage, the lack of broadband availability in rural areas and weak Internet quality as illustrated in figure 8.3. These three factors have their own consequences, which need to be eliminated.

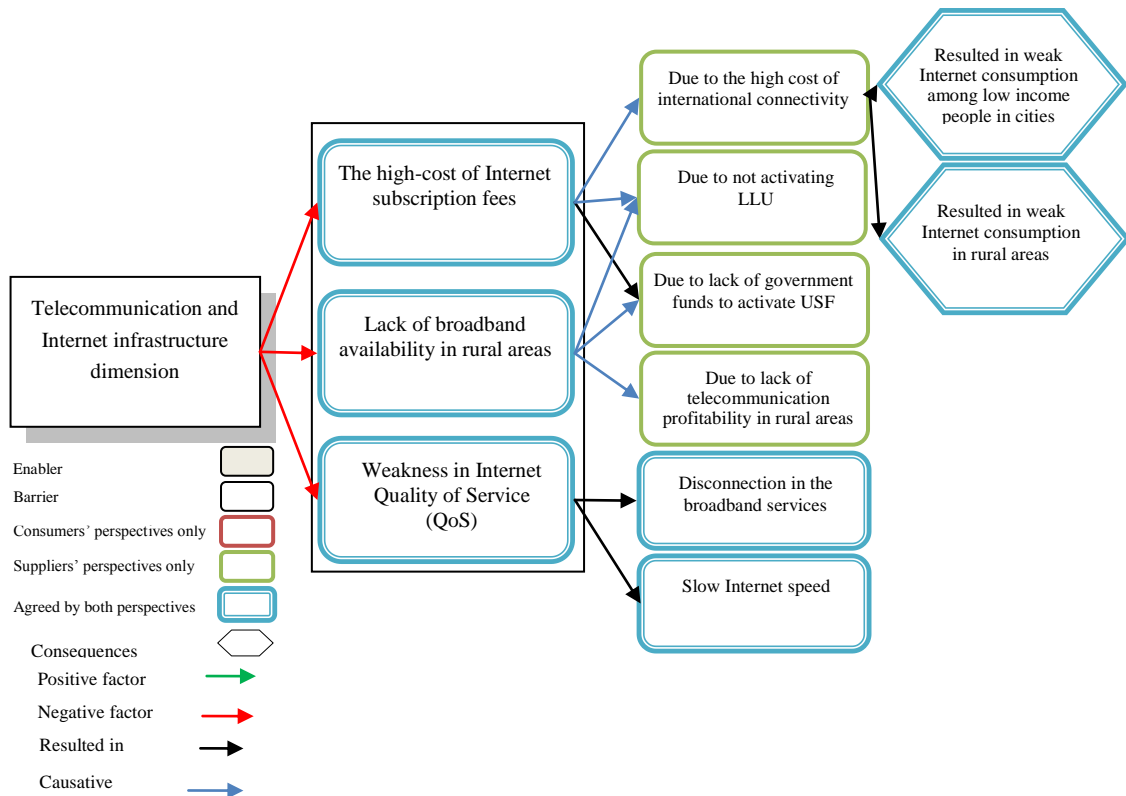


Figure 8.3 Telecommunication and Internet Infrastructure dimension

The high price of the Internet is one of the barriers that prevent consumers from adopting e-commerce due to the following three reasons (causatives). The first one is the high cost of IIC that connects Saudi Arabia to the core of the Internet as described earlier in section 7.2.2. The second reason is that the CITC have not yet activated the USF to support rural areas with the required infrastructure. The third reason is not activating LLU in Saudi Arabia, which would increase competition and prevent a monopoly in the telecommunication sector. Therefore, USF and LLU are both good solutions that are able to support these areas and reduce Internet prices in order to

encourage citizens to surf the Internet and then adopt e-commerce.

The third barrier is poor Internet quality in Saudi Arabia. This is because Internet providers are currently concerned with distributing the Internet over the country (profitable areas only) and will improve the QoS (Quality of Service) as soon as they have covered profitable areas. Therefore, this study encourages local government to activate USF and LLU.

To sum up, lack of broadband availability, the high cost of Internet subscription and poor Internet quality can prevent consumers from adopting e-commerce.

8.2.3 Technical dimension

This dimension has one enabler and two barriers as illustrated in figure below.

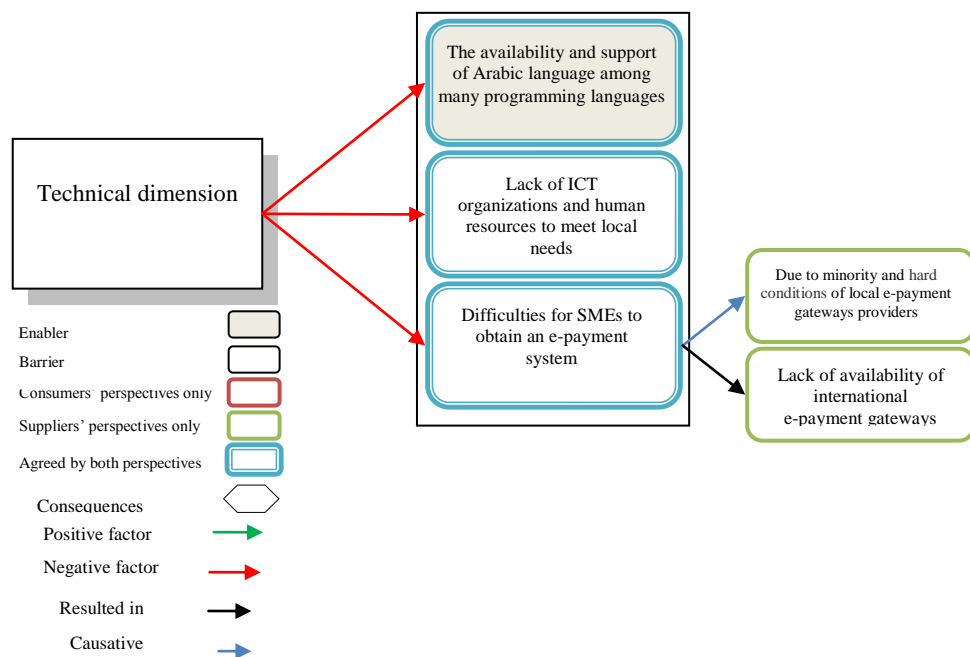


Figure 8.4 Technical dimension

The two empirical studies revealed that the Arabic language is available on most local websites. Some of these websites have both Arabic and English versions. Therefore, the Arabic language is no longer a barrier to e-commerce adoption as it is well supported by most programming languages. The only challenge that may face online-shops, as previously described, is if a website is bilingual. This is because there

may be a need for more effort to post information about a product in both languages (Arabic and English) and the need for a translation body each time when posting a product (Altayar et al., 2010). Bilingual sites are not considered a barrier in our case, as the consumers are Arabs and seek the Arabic version. They pay more attention to the Arabic language as it is their mother tongue.

The lack of organizations and human resources associated with ICT to meet local needs is the first barrier in this dimension. This has resulted in a limited number of e-payment gateway providers that have the facilities to integrate e-payment gateways into suppliers' systems. The first empirical study raised a barrier, which is the government's poor ability to investigate e-crimes and then to authenticate e-evidence. This barrier, however, has been eliminated because the second empirical study showed that the CITC has the ability to investigate and authenticate e-crimes. There remains, nevertheless, a need to raise people's awareness about this issue to give them the required confidence in order to adopt e-commerce.

The next dimension represents the suppliers' factors.

8.2.4 Suppliers' responsibilities dimension

This dimension has nine factors that affect the e-commerce adoption among consumers. Suppliers exposed two barriers and another two barriers are shared among consumers and suppliers. The remaining factors are provided by consumers, as illustrated in the following figure.

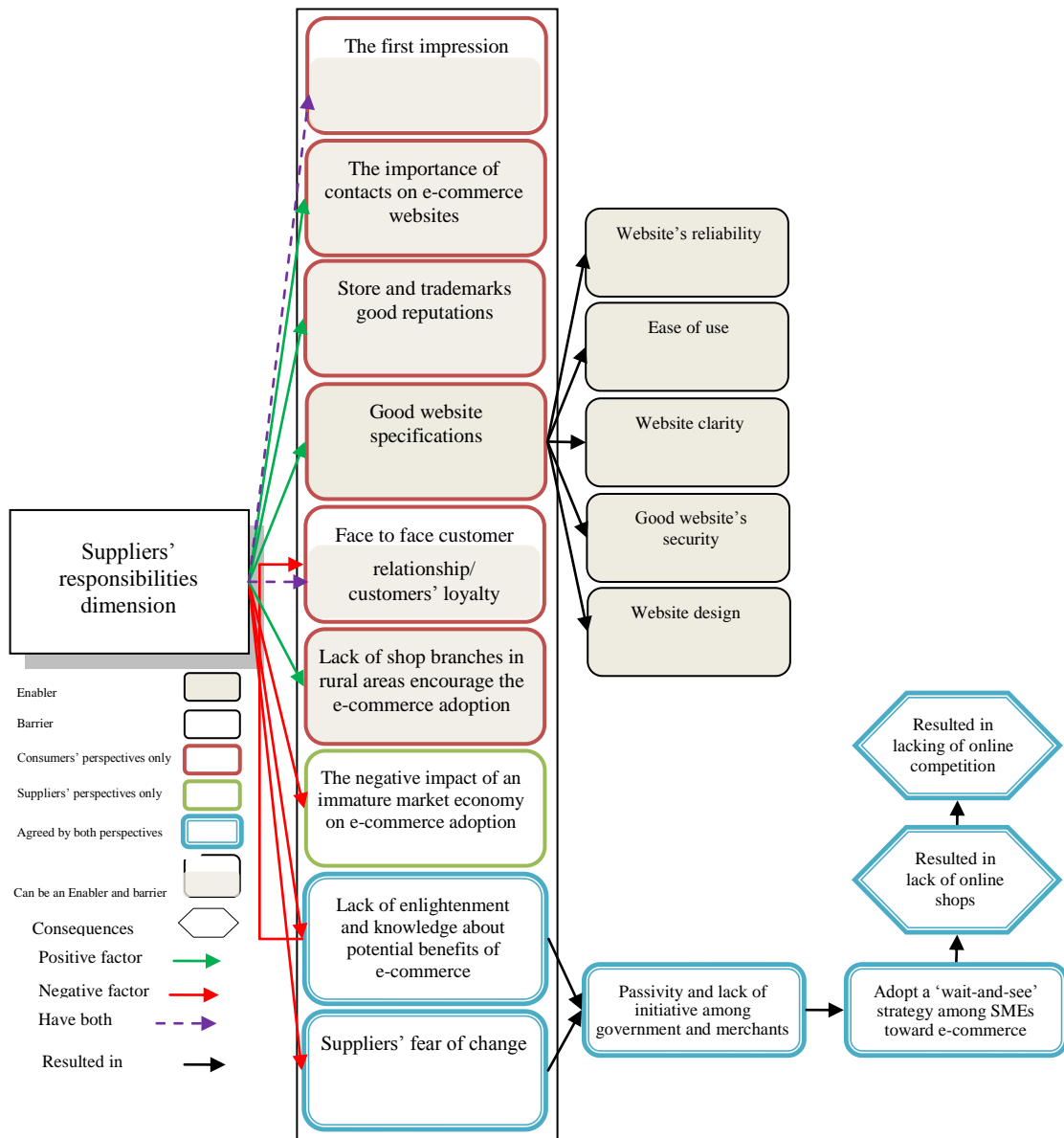


Figure 8.5 Suppliers' responsibilities dimension

This study confirms the literature that first impressions (either good or bad) can affect consumers positively or negatively to adopt e-commerce. The availability of supplier contacts on e-commerce websites, the company's good reputation and the quality of the website's specifications (i.e. website reliability, ease of use, clarity, security and website design) encourage e-commerce adoption among consumers.

In addition, face-to-face customer relationships (customer loyalty) can act as an enabler and a barrier for e-commerce adoption. This is because some consumers prefer

to go directly to a particular shop to obtain a further discount instead of buying online. On the other hand, customer loyalty can be an enabler. This is because consumers can trust the online shop in the case that they know someone working in the store, and will, therefore, trust the e-shop and buy online.

Furthermore, lack of shops and trademarks in rural areas encourage consumers to buy online as stated by (C2),

“Our village have only one small supermarket and therefore we buy everything from Riyadh” and “we will be very happy if we can call by phone or order online from large stores in Riyadh.”

The immature market economy of Saudi Arabia has a negative impact on e-commerce adoption among suppliers. As pointed out in section 7.2.4, immature local economies need regulations and rules that relate to the 12 dimensions such as legal and financial ones to transform them into developed systems.

Both consumers and suppliers agree that a lack of suppliers' enlightenment and knowledge about the potential benefits of e-commerce and their fear of change (by adopting a 'wait-and-see' strategy) has a negative impact on e-commerce adoption. For example, suppliers and MOCI in Saudi Arabia do not want to apply a return and refund policy because of their belief that such a policy may reduce sales. In fact studies have confirmed that a returns policy increases sales (Whyatt and Koschek, 2010, p586, Business Fraud Awareness, 2010). The passivity and lack of initiative among government and merchants has a negative impact on e-commerce adoption. As seen in section 6.2.12, local government does not give e-commerce sufficient attention. Suppliers are seen (section 7.2.4) to have applied a “wait and see” strategy and they have not taken the initiative at this time.

8.2.5 Financial dimension

Consumers and suppliers both agree on most of the financial factors. These factors are two enablers for e-commerce adoption while the remainder are barriers as illustrated in figure 8.6.

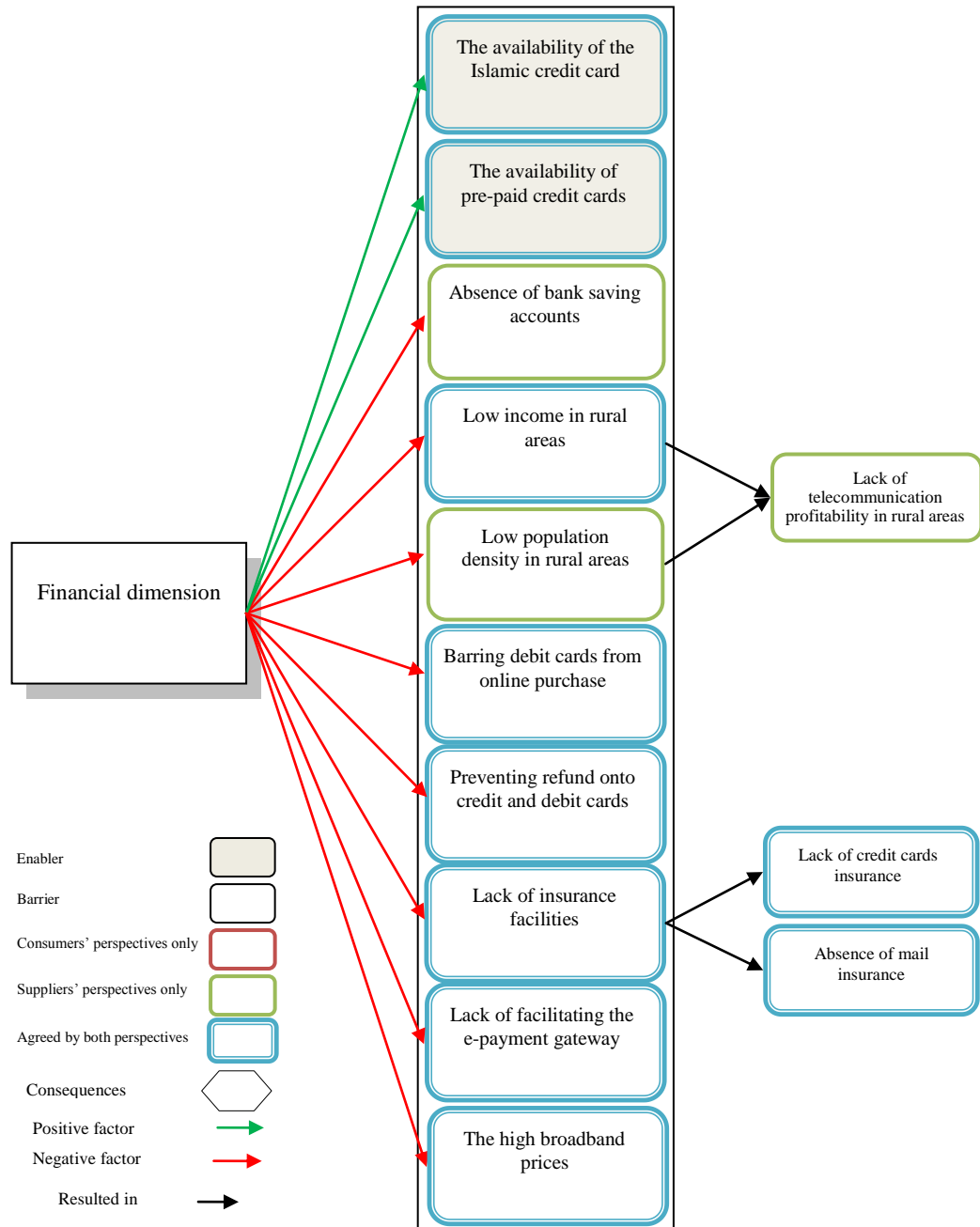


Figure 8.6 Financial dimension

The availability of the Islamic credit cards and pre-paid credit cards promotes e-commerce adoption and encourages consumers to buy online. Providing these cards through financial companies increases the adoption process, such as, Bread (2011). This study raises the issue of the absence of saving accounts in local banks and the need to provide these to save clients' current accounts from online fraud.

The third and fourth barriers have a relationship with one another because low income in sparsely populated rural areas results in a lack of profitability for Internet providers. This deters them from building the appropriate infrastructure in these areas. Activating USF and LLU and encouraging private businesses to invest there (by offering incentives) helps to eliminate this factor, reduce broadband prices and provide job opportunities in these areas. Furthermore, the responsible government's agency prevents debit cards from purchasing online and prevents suppliers from refunding money back onto credit and debit cards.

The fifth barrier is the weak insurance facilities in Saudi Arabia. For example, Saudi's bank representatives stated that they are not liable for credit card purchases. This is because consumers sometimes buy from unreliable websites and authorize vendors to charge their credit cards, whereas British credit card providers are jointly liable with vendors for card purchases (European Consumer Centre for Services, 2011). Therefore, there is a need to develop and establish OFT to force such suppliers to follow rules and regulations as explained in section 8.2.7.

The Saudi national mail carrier does not offer insurance to cover its deliveries against loss and damage. For example, the "recorded signed for" service of the British Royal Mail covers the full value of goods up to a certain amount of money and customers are entitled to a refund equivalent to a maximum value of 100 first class stamps. The sender can also, ask for additional insurance that covers higher value items (Royal Mail, 2011).

Lack of facilitating an e-payment gateway is the sixth barrier in this dimension. Vendors face difficulties when they want to integrate an e-payment gateway into their e-shop. Only two banks across the country are able to offer this facility. The difficulties arise because the two e-payment providers require many harsh conditions to be satisfied in order to integrate the e-payment system into the trader's website. Therefore, this system is not available to every trader. International e-payment providers such as PayPal do not have the authority to connect their system to Saudi's banks. For example, a Saudi trader cannot benefit from PayPal by integrating their e-payment gateway into a vendor's system to be able to sell online. This is because PayPal and other international

e-payment gateways are not able to credit money into suppliers' bank accounts in Saudi Arabia (PayPal, 2011).

To sum up, low income with low population density in rural areas, not authorizing paying online by debit cards, not permitting refunds onto credit and debit cards, the absence of insurance facilities, not providing savings accounts for clients and the lack of facilitating an e-payment gateway can negatively affect the adoption of e-commerce among consumers. On the other hand, the availability of Islamic credit cards among Muslim societies and top-up electronic purchase can encourage the adoption of e-commerce among consumers.

8.2.6 Awareness dimension

This dimension has three barriers to e-commerce adoption as illustrated in the figure below.

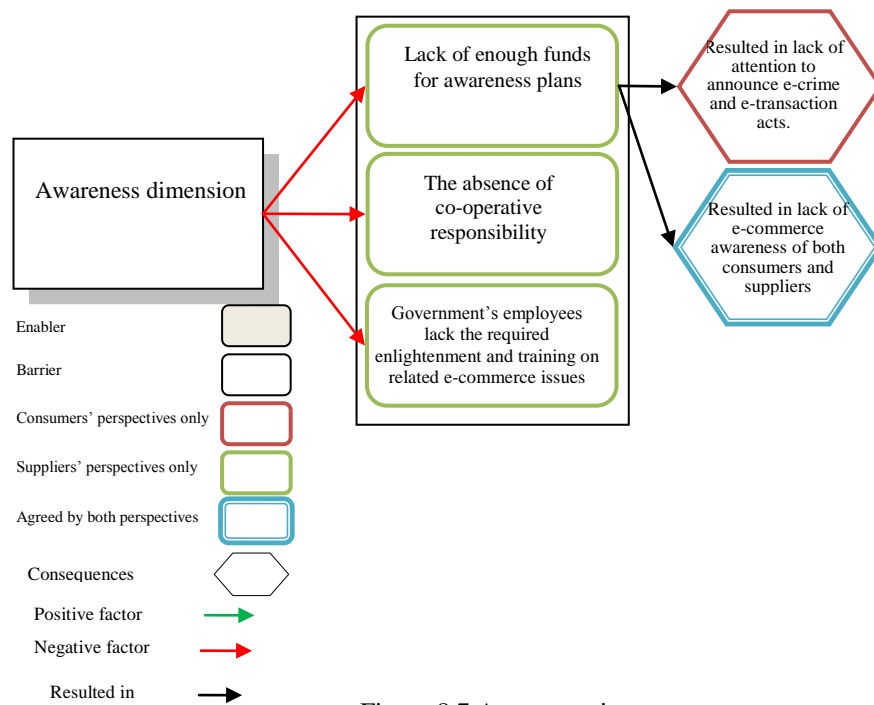


Figure 8.7 Awareness issues

As seen in the above figure, there is a lack of funds to promote initiatives to raise consumers and suppliers' awareness as pointed out by the CITC's representative in section 7.2.6. This factor leads to lack of attention in announcing e-crime and

Chapter 8. Reflection on the combined framework of the consumers' and suppliers' perspectives
e-transaction acts in Saudi Arabia. These acts were published in 2007 (see section 6.2.6 and section 7.2.6) but very few participants know about them.

The second barrier found in this study is the absence of co-operative responsibility among different government agencies. For example, the CITC stated that they lack funding to raise awareness about e-crime and e-transaction acts. They blame the Ministry of Finance (MOF) for not funding the awareness plans. Moreover, the CITC blames the Ministry of Culture and Information (MCI) for not co-operating in advertising these two laws on local TV and radio.

The last barrier in this dimension relates to the government staff that are responsible for e-commerce issues, such as, the investigation for e-crimes. Here there seems to be a lack of essential training, as pointed out in section 7.2.6.

To sum up, lack of announcements about the e-crime and e-transaction acts, already published in 2007, have left citizens unaware of these laws. Furthermore, the lack of funds for awareness plans and the absence of co-operative responsibility among different government departments negatively affect the adoption of e-commerce among consumers.

8.2.7 Legal dimension

The factors in this dimension are all barriers with no enablers as illustrated in figure 8.8.

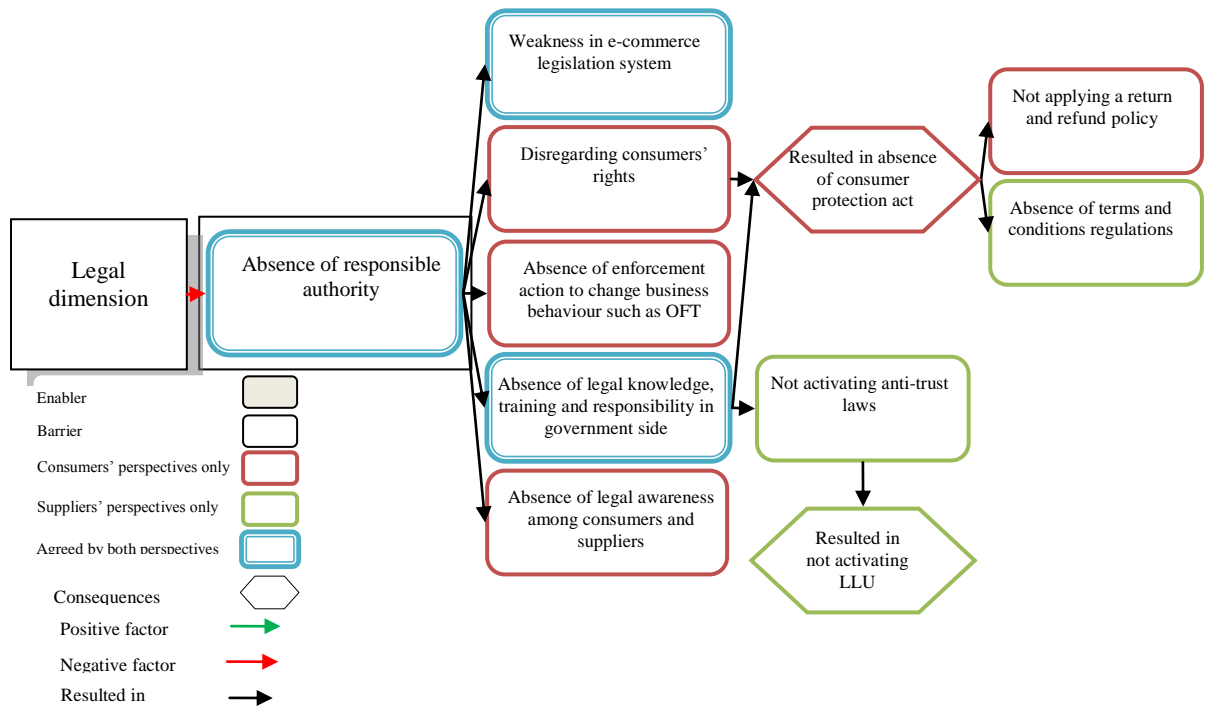


Figure 8.8 Legal dimension

It seems that e-commerce aspects are lost between different government agencies. This is because there is no particular ministry that has responsibility for it. This has resulted in weak legal protection for both consumers and suppliers.

Furthermore, this has resulted in the absence of consumers' rights. For example, both MOCI's representative and SME's participant agreed not to apply a return and refund policies. In addition, self-employed participant admitted that suppliers do not give any attention to consumers' statutory rights as noted in section 7.2.7.

Absence of legal awareness among consumers, suppliers and government agencies is another barrier that prevents consumers from adopting e-commerce. This is because, although the CITC issued the e-crime and e-transaction acts in 2007, consumers and vendors have little knowledge and idea about these laws due to an underfunding of the awareness fund as stated by the CITC.

Lack of law enforcement, such as OFT, is another barrier that prevents consumers from adopting e-commerce in Saudi Arabia. For example, the MOCI stated that a return and refund policies is not a fair one for suppliers, therefore, it is not enforced. Vendors

do not acknowledge existing credit card regulations, as stated by the bank representatives in the second empirical study. This is because banks and government do not force suppliers to follow the rules to protect consumers. There, however, should be an awareness plan aimed at government and suppliers about this issue.

Moreover, government staff such as the MOCI, police and the BIP, lack the knowledge, training and responsibility over e-commerce regulations in general and e-crime and e-transaction acts in particular. Therefore, this study found an absence of responsibilities in legal issues among these agencies. The lack of knowledge about e-commerce legislation is credited to be one of the key factors in this section. For example, the BIP's representative stated that they lack knowledge and training about e-commerce law. They pointed out that they have not attended any training courses to understand how to investigate e-crime cases.

The above barrier resulted in not activating anti-trust laws, which resulted in not activating LLU, mentioned in the telecommunication and Internet infrastructure dimension, to allow multiple Internet providers to use the same telephone exchange in order to provide the service (Internet) to their customers. Anti-trust laws help to prevent monopolies by applying LLU. Therefore, an anti-trust law with LLU helps to increase competition and reduce Internet prices in the Kingdom.

To sum up, the lack of a responsible authority to regulate e-commerce has resulted in the absence of e-commerce legislation, consumers' rights, awareness among consumers, suppliers and government employees, legal knowledge and responsibility on the government's side, weak law enforcement and not activating anti-trust laws and LLU have negatively affected the adoption of e-commerce among consumers.

8.2.8 Delivery dimension

This section presents the delivery dimension that affects the adoption of e-commerce adoption among consumers as illustrated in figure 8.9. Unfortunately, all the delivery's factors are barriers with no enablers.

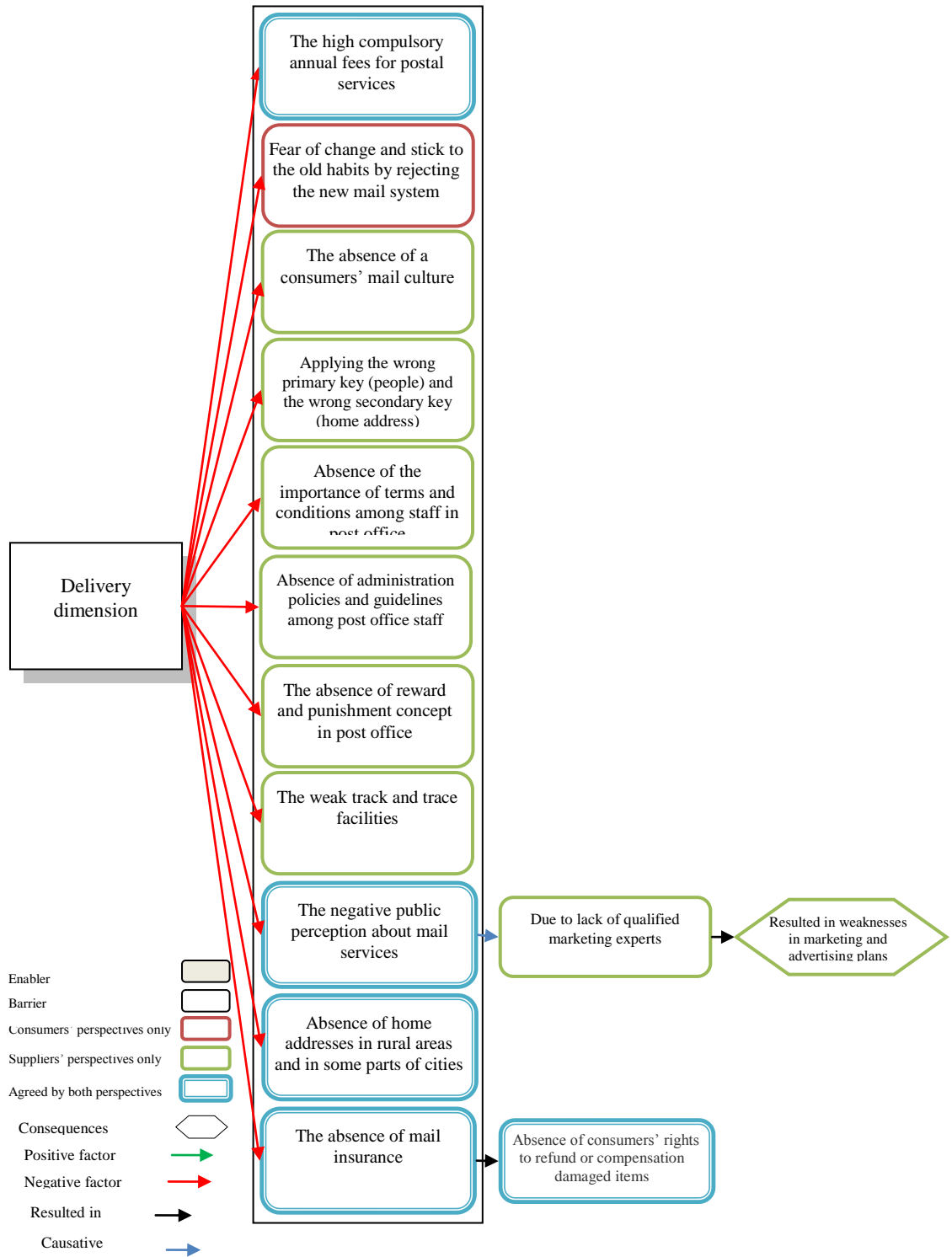


Figure 8.9 Delivery dimension

The compulsory high annual fee for mail services is considered one of the barriers that prevent consumers from adopting e-commerce. The national mail carrier in Saudi

Arabia requires consumers to register their names and pay 100SR annually in order to receive mail and this fee increased to 300SR with the new post system whereas traders pay between 1000SR and 3000SR annually in order to deliver their mail (Saudi Post, 2011). By contrast, the British Royal Mail does not require registration or annual fees in order to receive mail. The only requirement is to stamp the parcel in order to deliver it (Royal Mail, 2011).

Consumer resistance to change and retaining old habits is another barrier to e-commerce adoption. This study shows that people over 54 years of age favour the old mail system preferring to pick up their mail themselves from main post offices in city centres. They stated that this is an old habit, which they do not want to change as they go there on a weekly basis and meet old friends. Only people over 54 years old exposed this barrier and because this study was conducted with only two people of this age, further work may be needed to confirm or refute this impediment.

The absence of mail culture among consumers in general is another barrier. It appears from the results that consumers do not depend on postal services in their daily lives. Suppliers stated that consumers use postal services for utility bills only and no important products are sent by post. Therefore, there is a lack of mail culture among consumers.

Another important barrier is that the national mail carrier uses people's names as the primary key and home addresses as the secondary one. This means that people need to register and pay the annual fees in order for their post to be delivered to their homes. On the contrary, postal systems in developed countries use home addresses as their primary key and people living in developed countries, such as the UK, are not required to register their names with Royal Mail and to pay annual fees in order to receive their post.

The fifth barrier is the absence of terms and conditions of the national mail carrier. Terms and conditions are ignored due to the lack of knowledge about the importance of these regulations.

The sixth barrier is the absence of administration policies and guidelines/guidance

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among post office employees. This leads to different decisions depending on the employees' experience.

The seventh barrier is the lack of attention to the reward and punishment concept practised by the national mail carrier. This means there is no motivation for staff to improve their services. As stated in section 7.2.8 and as part of the privatisation process, the Saudi government transferred the national mail carrier from the public to a joint public-private sector business under its supervision (Ministry of Economy and Planning, 2011). It, however, is still managed by the same government employees with the same public sector mentality.

The eighth barrier is the weak "trace-and-track" facilities of the national mail carrier. Because of that, many suppliers such as banks (section 7.2.8) do not deal with them anymore due to the poor "trace-and-track" facilities.

The poor perception about the national mail carrier is the ninth barrier. There is a fear among consumers and suppliers, revealed during both empirical studies, about dealing with the national post carrier. They fear loss or damage of goods during delivery. As a result, many large businesses in Saudi Arabia such as banks have turned to dealing with private post carriers. The representative of a SME admitted, however, that they could not deal with these private post carriers due to the high cost of their services.

The national mail carrier representative declared that there are weak marketing and advertising plans that aim to change the poor, old, image of the national mail carrier. As a result, citizens have destroyed the new post boxes attached to their homes. The representative of the national mail carrier attributed the reason for this action to the weak marketing and advertisement plans during the launch of the new post system, due to the lack of marketing experts employed by main post carrier.

In addition, there is an absence of home addresses in rural areas, which can prevent e-commerce deliveries. Rural areas lack large shops and trademarks, therefore, citizens in these areas are more likely to adopt e-commerce if all of the barriers are removed. Consumers in rural areas require e-commerce services to deliver their needs to their doors. Unfortunately, this cannot be done without home addresses.

The absence of mail insurance is another barrier. This factor coupled with the poor, old, image (stated above) leads to a lack of confidence in the national post carrier among consumers and suppliers. Consumers want their parcels to arrive on time, in good condition with no damage or loss. The absence of parcel insurance deters consumers from dealing with the national post carrier. This policy annuls consumers' rights to a refund, replacement or compensation if something goes wrong during delivery.

8.2.9 Tangible and intangible end-user characteristics dimension

This section presents six factors affecting e-commerce adoption among consumers as illustrated in the figure below.

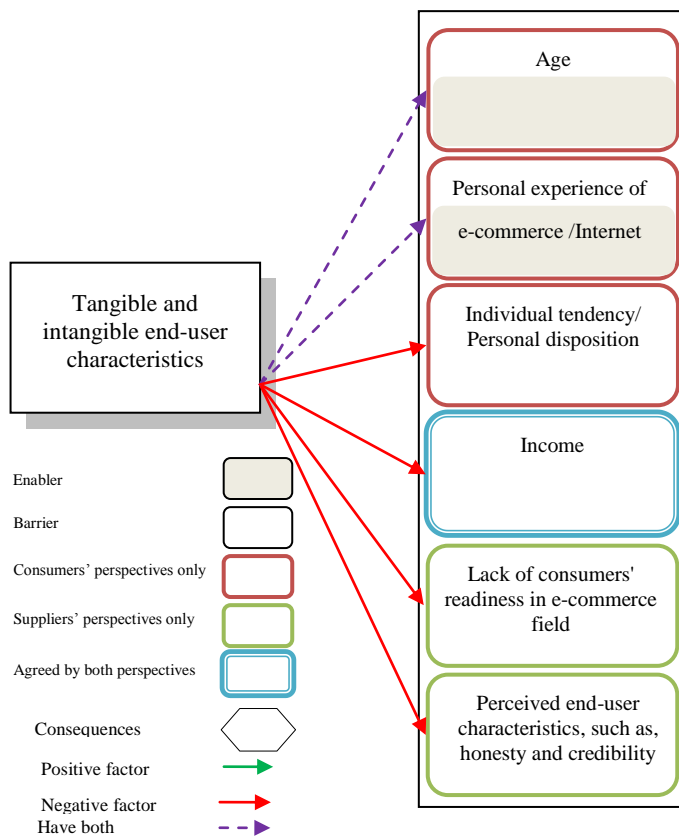


Figure 8.10 Tangible and intangible end-user characteristics

Age plays a role in e-commerce adoption, as older people in this study were not willing to adopt e-commerce and preferred to buy directly from the high street through

face-to-face contact, whereas young people are more interested in adopting e-commerce as described in section 6.2.9.

Moreover, personal experience is another factor in which Internet and e-commerce experience has an impact among people. This study shows that previous bad experiences of e-commerce lead to a resistance to adopt e-commerce, whereas previous good experiences of e-commerce facilitate its adoption. For example, consumers in this study who had already faced a bad experience in e-commerce pointed out that they are not going to repeat this unsuccessful experience.

Personal behaviour is another factor in this section. This study shows that people behave in different ways and each person has his/her own personal behaviour. Therefore, some people are adventurous and like to take a risk and others are reserved or cautious and do not like to take risks in their daily lives. Therefore, depending on personal behaviour people will decide to go forward and try to deal with e-commerce or will wait until it is safe.

The fifth factor is income, which has an impact on e-commerce adoption. This is because Saudi Arabia still lacks an e-commerce infrastructure that can protect consumers. Consumers with low incomes are not willing to adopt e-commerce, as they are afraid of online fraud and losing their money, whereas people with high incomes are willing to try to buy online with a small amount of money to test particular websites (i.e. e-commerce status) as said (C3)

“I am not going to buy any product from a local website unless it is not found locally and it costs a small amount of money. In this case I may buy it to check the website reliability.”

The lack of e-commerce readiness among consumers is the fourth barrier in this dimension. Suppliers exposed this factor, as they are not willing to spend money to develop online-shops so long as consumers are not prepared to use them. They mentioned that consumers might compare prices online and then buy from the high street as stated in section 8.2.4.

Suppliers and government agencies purvey a negative perception about consumers' ethics and honesty, which impedes the enactment of regulatory laws such as for a return and refund policy. This is because they believe that consumers can return goods after using them, which negatively affects suppliers, by believing this they ignore a consumer's right to return or exchange goods. They also lack the knowledge that many studies have reported that a return and refund policy increase sales as stated in section 2.8.1.

The next sub-section illustrates the security findings.

8.2.10 Security dimension

Security dimension has three barriers with no enablers as illustrated by figure below.

First barrier in this dimension is the lack of privacy protection. This is due to the lack of standard definition of privacy and the difficulty to identify its boundaries as stated by MOCI in section 7.2.10. As a result, there is no privacy protection act in Saudi Arabia. People do not like to receive private or personal items through the post. This is because families share the same post box.

The second barrier is the lack of qualified ICT experts (people and firms) in the local market as stated by consumers and SME's representatives. This security shortage leads to the poor infrastructure in information security and increases the fear of online fraud for consumers and suppliers.

The third barrier in this dimension is the fear of online fraud among consumers. This factor has a relation to many other factors in this study such as legal, financial, awareness and government's responsibilities dimensions. Consumers fear online fraud due to the lack of law that can protect them.

The next dimension illustrates the geographical dimension.

8.2.11 Geographical dimension

This dimension presents two factors affecting e-commerce adoption among consumers as illustrated in figure 8.12.

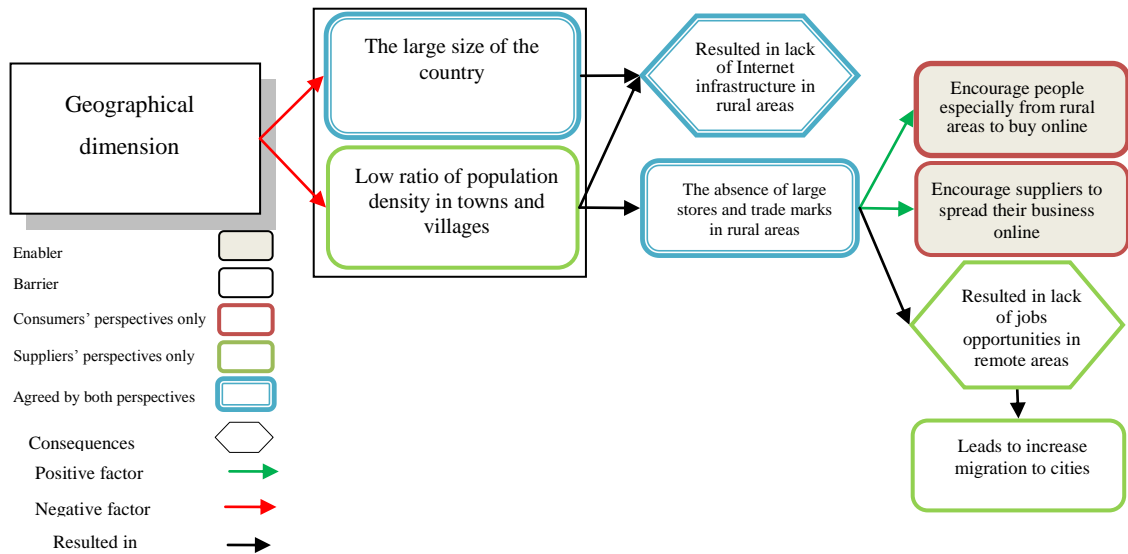


Figure 8.11 Geographical dimension

The large size of the state, the long distances between cities, towns and villages with a low ratio of population density in remote areas leads to lack of profitability for Internet providers in these areas. This is because telecommunication providers do not invest for infrastructure unless they return a reasonable profit. Unfortunately, the small population in rural areas does not encourage Internet providers to invest there as stated in section 7.2.11. Therefore, there is a need to activate USF and LLP to be able to serve these areas.

This has led to the absence of commercial services, such as, big stores and trademarks in rural areas, which should encourage suppliers to spread their businesses online and encourage people, especially from rural areas, to buy online. But the lack of jobs in these areas increases migration to cities.

The following represents the government's responsibilities, which is the core category of this study.

8.2.12 Government's responsibilities dimension

The second empirical study confirms the first one and finds that government responsibilities are the core category in this research. This is because it has a strong relationship and a strong impact on most developed categories as seen in the following three figures.

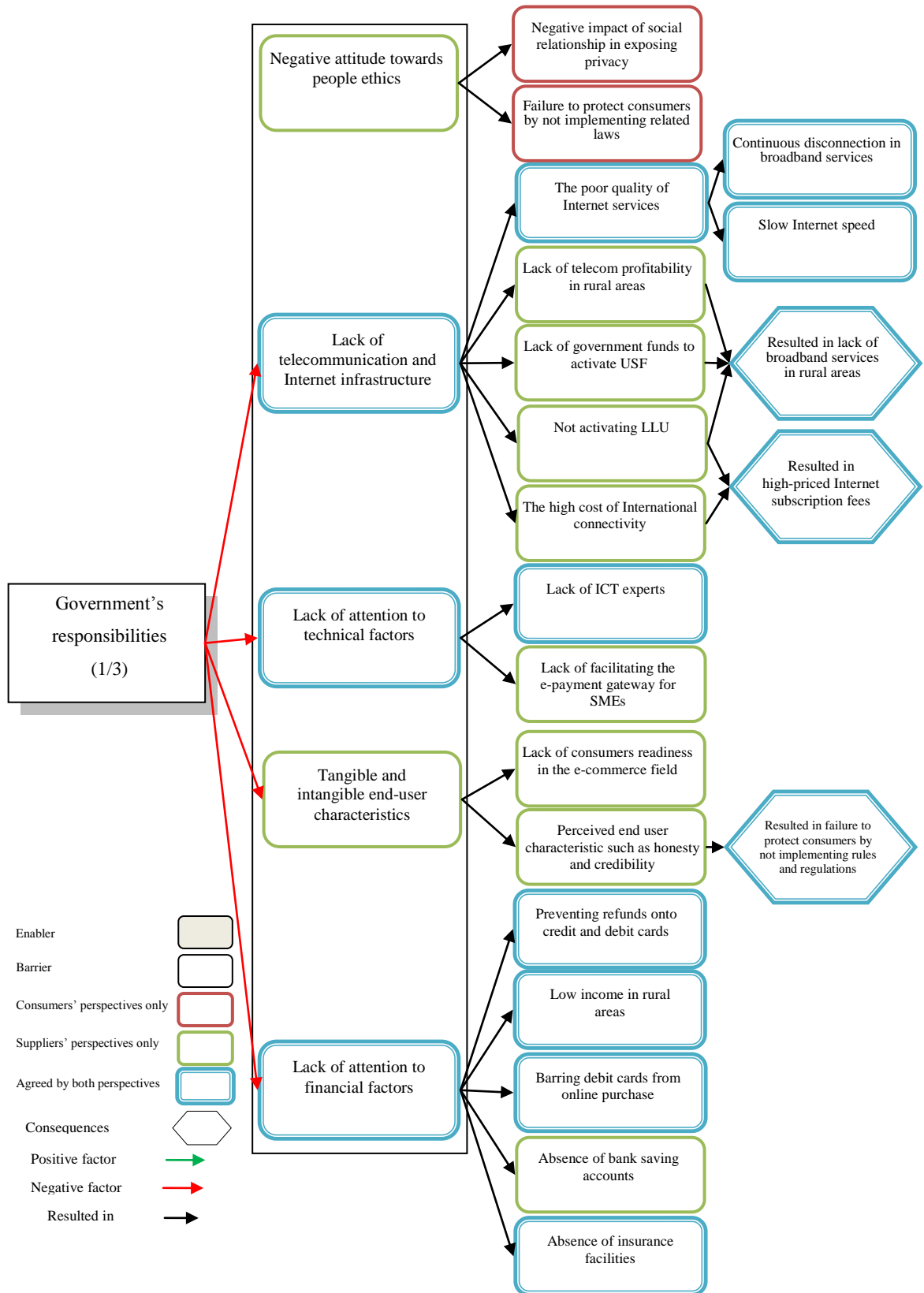


Figure 8.12a Government responsibilities dimension

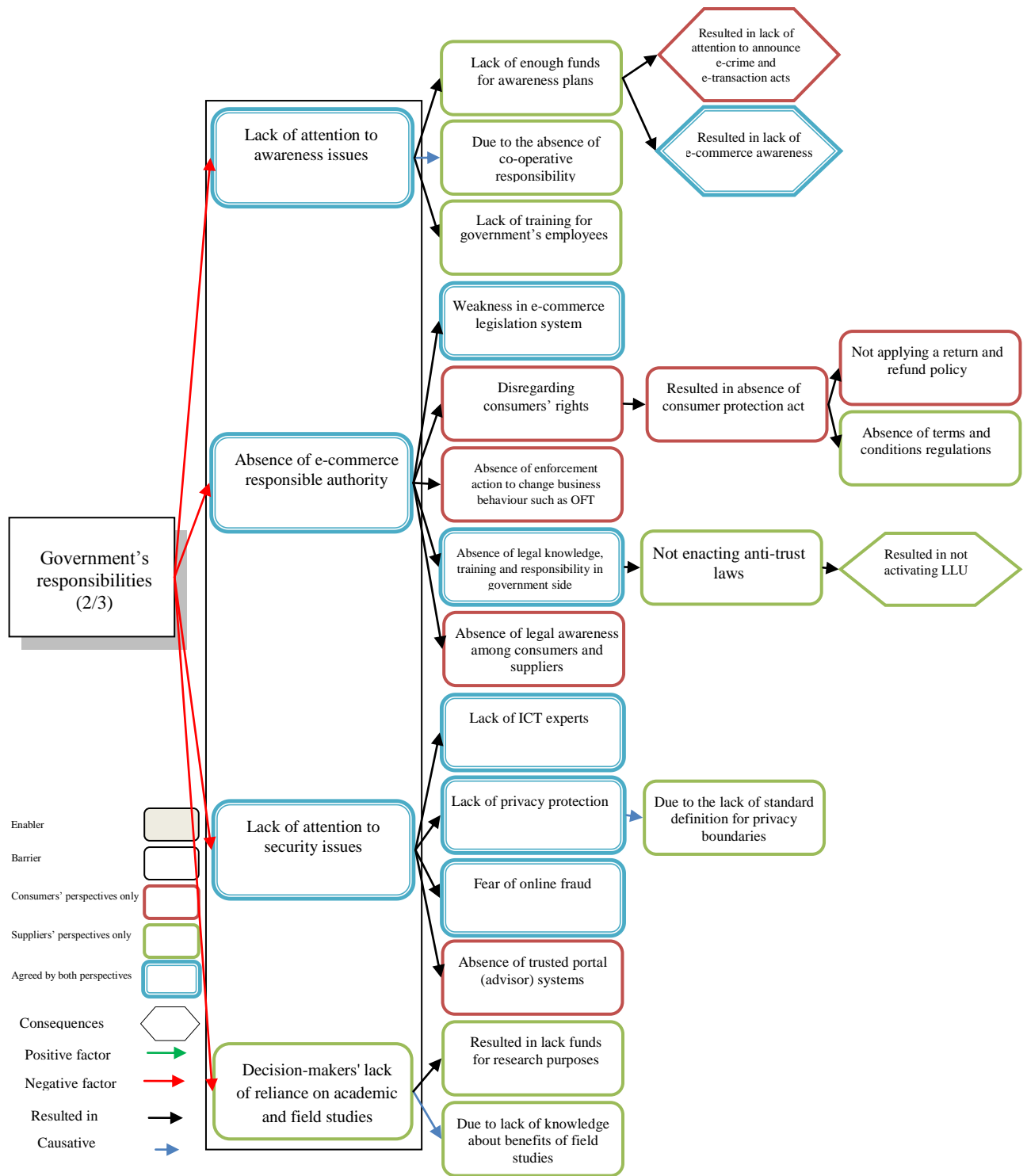


Figure 8.13b Government responsibilities dimension

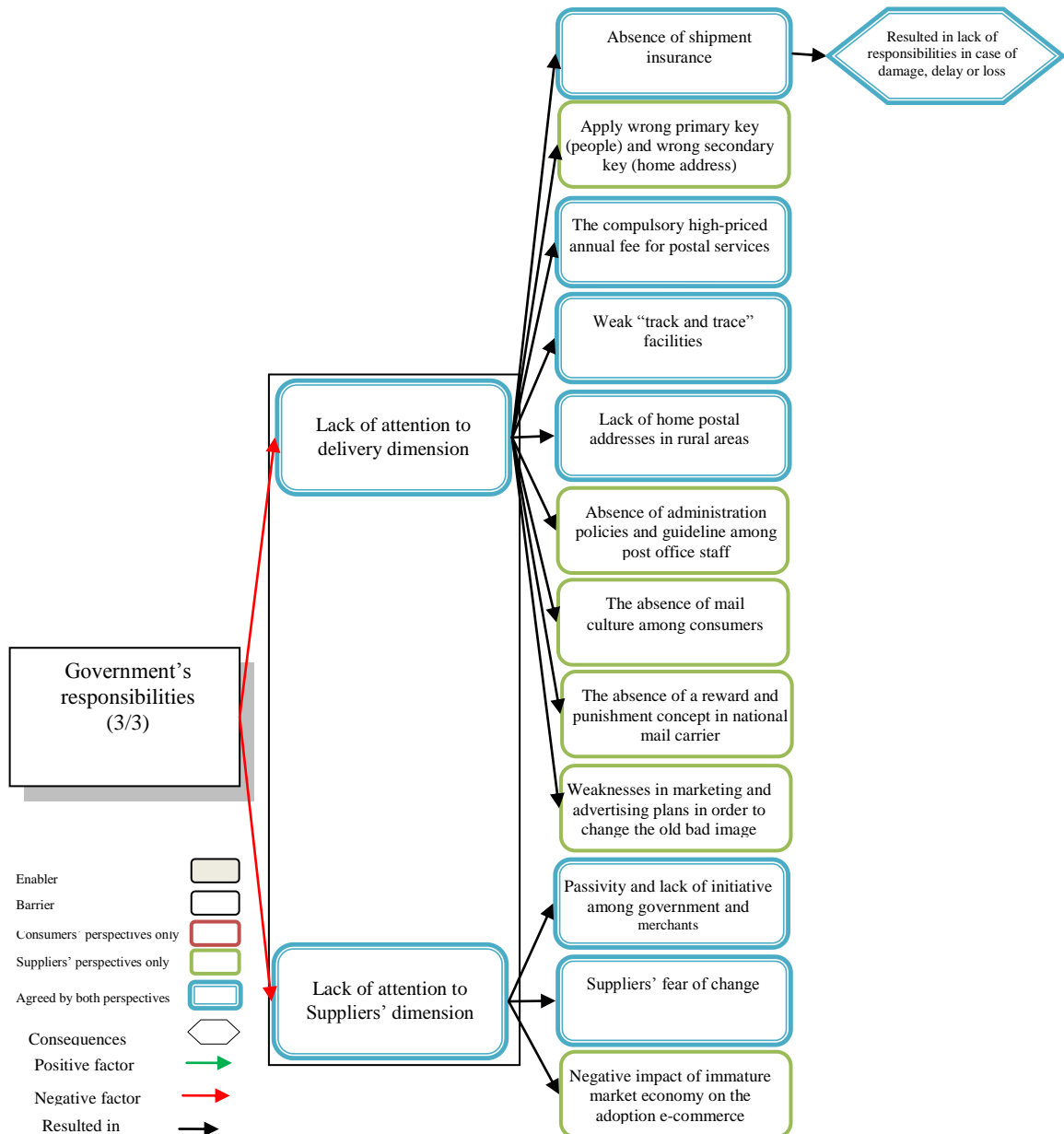


Figure 8.14c Government responsibilities dimension

Government responsibilities have many factors that affect a consumer's adoption of e-commerce. Most of these factors are related to previous dimensions that are illustrated in this chapter.

This study demonstrates that local government is responsible for the weak telecommunication infrastructure such as the Internet broadband in rural areas, by not activating USF to support the infrastructure in non-profit areas. Moreover, the

government is responsible for not activating anti-trust laws and LLU to prevent monopolies, increase competition and thus reduce Internet prices.

Government is responsible for many of the technical factors, such as, not facilitating e-payment gateways for SMEs. This is because only two banks over the country are able to offer this facility to certain clients who meet their harsh conditions. Furthermore, international e-payment gateways such as PayPal are not able to offer e-payment gateways for suppliers in Saudi Arabia due to legal and financial restrictions. The government needs to facilitate these issues in order to allow suppliers and consumers to adopt e-commerce. A lack of ICT providers and experts is another technical factor. Government needs to build the appropriate base for ICT in order to encourage technology firms to offer their services to the local market.

Besides that, the government is liable for issues related to consumers such as providing and facilitating jobs in rural areas to raise people's incomes.

The government is responsible for the lack of readiness for consumers and suppliers and needs to raise consumers and suppliers awareness about e-commerce. For example, they need to publish and distribute awareness booklets and brochures and educate citizens and suppliers about e-commerce.

As described in section 8.2.9 some government agencies and suppliers have almost a mandatory negative perception with respect to consumers' ethics. This matter prevents consumers from obtaining their rights. The government seems to restrict certain rules and regulations from being published such as a returns and refund policy.

The government in this study is responsible for some of the financial factors that prevent consumers from adopting e-commerce. For example, the government prevents the use of local debit cards for online purchases. This prohibits consumers who do not have credit cards from buying online. The government is responsible for preventing refunds onto Saudi's debit and credit cards, which may discourage consumers from buying online using these cards. The lack of insurance facilities is another factor. For example, the national mail carrier does not offer insurance to their customers. Another example is that local banks are not clear about insuring and protecting credit cards from

online fraud. The absence of saving accounts in local banks is another financial issue that is related to government.

Government is also responsible for some of the legal factors. For example, the government has yet to activate the anti-trust laws such as LLU. Moreover, the government is responsible for protecting citizens by issuing and validating the customers' rights acts. The best example of government inertia is not applying a return and refund policy over the country. The government represented by MOCI stated that they could not force suppliers to apply a return and refund policy as it may involve them in losses, but as stated in section 2.8.1, research has pointed out that a return and refunds policy increases sales (Whyatt and Koschek, 2010, p586, Business Fraud Awareness, 2010). Another example, as pointed out by a bank representative, is that suppliers do not follow Visa and MasterCard regulations. This may lead to the need for a strong enforcement agency to change suppliers' behaviour such as an Office of Fair Trading (OFT) as in the UK. The OFT mission is,

“to make markets work well for consumers. We achieve this by promoting and protecting consumer interests throughout the UK, while ensuring that businesses are fair and competitive” (Office of Fair Trading, 2011).

Furthermore, government staff lack knowledge, training and responsibility about e-commerce law and e-commerce cases, such as BIP and police employees.

The government does not treat security and privacy issues with great concern. There is no privacy protection law that can protect customers from having their personal information disclosed. MOCI stated that there is no standard definition for privacy in Saudi Arabia. Moreover, local markets lack ICT experts, especially in the information security field and the government need to encourage firms to invest in this sector. There may be a need for a government e-commerce portal that has links to trusted local websites and contains useful information that educates people and firms about different aspects of e-commerce.

Most of the delivery barriers discussed in this chapter is related to the government. This is because the national mail carrier is still controlled by the government (Ministry

Chapter 8. Reflection on the combined framework of the consumers' and suppliers' perspectives of Economy and Planning, 2011). For example, the high-priced annual fee is considered one of the barriers, as customers need to register and pay the annual fee in order to have parcels delivered. The annual fee was tripled when the new postal delivery system was introduced. This resulted in the destruction of the post boxes that were attached to consumers' homes. Moreover, and as stated before, no insurance facilities are offered by the national post carrier and, therefore, people are afraid that their goods may become lost or damaged during delivery.

The government is responsible for some of the suppliers' dimensions, such as the need to develop the local economy by providing sufficient infrastructure for all the other dimensions mentioned in this study, to be able to progress toward developing a mature economy. The Saudi government is concerned about e-government (Yesser, 2011) but unfortunately it is not giving e-commerce the appropriate attention. This results in discouraging suppliers to take the initiative on e-commerce.

Another aspect is that government needs to rely on academic studies and not put them aside as stated by government's representative.

8.3 Study Implications and conclusion

This chapter presented the combined framework that originated from the two empirical studies conducted in Saudi Arabia, which were presented in chapter six and seven.

As stated before, many researchers considered Islam as a barrier to consumers' adoption of e-commerce. This research, however, eliminated the religious factor and it is no longer considered a barrier to e-commerce adoption in Saudi Arabia.

Similarly, the Arabic language is no longer a barrier to e-commerce adoption. This is because most of the programming languages are able to develop Arabic websites. The only challenge faced by online-shops is if the website needs to be bilingual. Then more effort will be needed to post product information in Arabic and English. There will also be the need for a translation body each time when posting a product. Bilingual does not

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present a barrier (see chapter six and seven) in our case as consumers are Arabic natives and Arabic websites meet their needs. Therefore, the Arabic language factor can be eliminated as a barrier.

Moreover, the national mail carrier, as declared before, uses people's names as the primary key and home addresses as the secondary one. Therefore, people cannot receive mail until registering in the post office and paying the annual fee. This procedure is not applied in most of the developed countries such as the UK. For example, Royal Mail does not ask citizens to register their names and pay annual fees in order to receive their post.

It can be deduced from the above findings that the Saudi business field, including e-commerce, remains an emerging market. Some government agencies are not proving to be the enablers they should be. For example, there is no fund for the USF; there is a lack of co-operation among government agencies in relation to e-commerce and the absence of related e-commerce laws, such as, a return and refund policy.

People in rural areas are more likely to have lower incomes compared to people living in cities. This is because rural areas have less job opportunities due to the absence of commercial investment in these areas. As a result, rural areas are considered to be non-profit areas for the telecommunication providers. This can prevent them from adopting e-commerce. Therefore, the government should encourage telecommunication providers to build the appropriate infrastructure by activating the USF. In addition, government needs to stop migration to cities by encouraging and developing rural areas and offering businesses chances for suppliers to increase job opportunities in these areas.

Moreover, barring the online use of debit cards inhibits the adoption of e-commerce. This study presents the need to apply savings accounts (for money not used in daily expenses) to protect consumers' money and to then authorize debit cards to work online.

This research presents the need for a return and refund policy and to authorize refunds to be debited onto debit or credit cards.

The study reported the reluctance of banks to accept responsibility to protect credit cards against online fraud.

The study also pointed out that suppliers need to become more enlighten about the benefits of e-commerce.

Furthermore, it appears that no government agency is clearly responsible for e-commerce in Saudi Arabia. As a result, there is a failure to develop short and long-term plans for the e-commerce environment.

Unfortunately, the CITC has still not applied LLU across the country. LLU accelerates and increases competition between ISPs and then reduces prices.

Research shows the need for postal insurance in order to regain suppliers and consumers' trust.

Many consumers stated they do not trust Saudi websites. Therefore, there is a need for an official platform or portal that is run by a trusted party such as a government agency, for example, the CITC. The e-commerce portal will have links to trusted suppliers regulated according to certain criteria. This can help promote trust in e-commerce.

These factors should be taken into account in order to achieve e-commerce growth and maturity in Saudi Arabia.

The following paradigm model presents the research's phenomenon, its causal conditions, the context, intervening conditions, action/ strategies and finally the potential consequences.

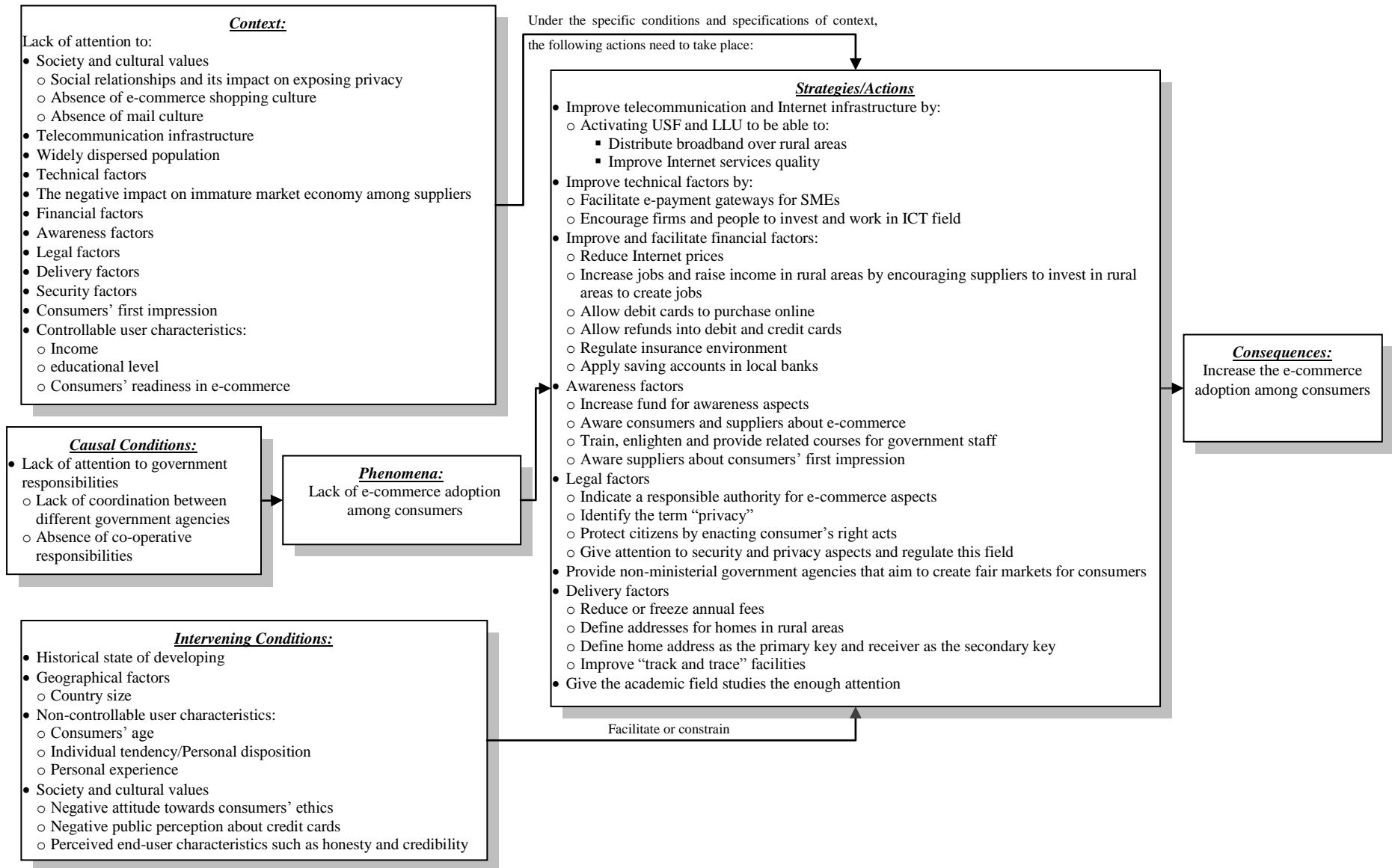


Figure 8.15 the combined model for factors affecting consumers' adoption of e-commerce from consumers and suppliers' perspectives

The above paradigm model is the combined model of the two previous studies presented in chapters 6 and 7. It shows the following:

1. Causal conditions: Both empirical studies identified 'government responsibilities' to be the core category for the whole study. Therefore, it is the main condition that influences other barriers in this study.
2. Phenomenon: This thesis investigates the factors affecting e-commerce adoption among consumers in Saudi Arabia from consumers and suppliers' perspectives.
3. Context: Is the controllable barriers that need to be eliminated by putting in place the appropriate strategies/actions. These barriers are negatively affected by government and need to be considered in order to plan a strategy or put in place an action to facilitate the e-commerce adoption among consumers.
4. Intervening conditions: These are the non-controllable barriers that either facilitate or restrict the strategies taken in order to adopt e-commerce among consumers. These barriers are hard to change but can facilitate or restrict the taken action. For example, even with the availability of Islamic credit cards, still consumers in Saudi Arabia are not interested in applying for them. This is because there is a negative public perception about credit cards in Saudi Arabia which can reduce the benefit from this enabler.
5. Strategies/actions: These are the required actions resulting from both empirical studies which need to be taken in order to increase e-commerce adoption in Saudi Arabia. For instance, an action should be taken in order to eliminate legal barriers such as identifying the term "privacy" and protecting citizens by enacting consumer's right acts. However, negative attitude towards consumers' ethics and perceived end-user characteristics such as honesty and credibility can limit this particular action.
6. Consequences: This is the final result that appears after putting in place the appropriate actions in order to eliminate barriers. The combined model aims to increase e-commerce adoption among consumers.

As seen in figure 6.1, the next chapter explains the thesis's finding from different

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theoretical positions.

Chapter 9

Explains the thesis's findings from different theoretical positions

9.1 Overview

This chapter provides a summary on theories that are widely applied in the Information System (IS) field and then discusses how the findings from this thesis could be explained from different theoretical positions. To begin with, there are more than eighty theories that are used in the information systems field such as Structuration Theory, Critical Theory, ICT4D (capability approach), Diffusion of Innovations theory (DOI), Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Theory of Planned Behaviour (TPB), Unified Theory of Acceptance and Use of Technology (UTAUT) and more.

This chapter explains the thesis's findings from the perspective of some of these theories and will begin with Structuration theory as seen below.

9.2 Structuration Theory

The theory is developed by Anthony Giddens in 1979, and has received great attention in the Information Systems (IS) field. It explains the "relationship between structure and action in social systems" (Orlikowski and Robey, 1991). It explains how "man actively shapes the world he lives in at the same time as it shapes him" (Giddens, 1984). Giddens "regarded all his work as one continuous project" (Ritzer and Stepnisky, 2011; Mingers and Willcocks, 2004; Jones, 2000). He proposed that "structure and human agency should rather be understood as a mutually constitutive duality" (Mingers

and Willcocks ,2004, p300). The theory attempts to supersede any deficiencies by presenting how social structures are both constituted by human agency and at the same time, the very medium of this constitution. This is what is referred to as the duality of structure, where the central concept of Giddens theory attempts to avoid a dualism of agency and structure.

Giddens (1993, p 20) in his book differentiates between nature and society. He stated that nature “is not created by human action” whereas society is created by participants “made to happen by human beings”. Giddens (1976, p161) stated that social structures are shaped by human agency, and explaining how “structures are constituted through action, and reciprocally how action is constituted structurally”.

Giddens (1986, p 377) defined structure as “the rules and resources, recursively implicated in the reproduction of social systems; structure exists only as memory traces, the organic basis of human knowledge ability, and as instantiated in action”. This means that “structure enables or constrains human behaviour, while structure itself only exists through the behaviour of human beings”, and the knowledge of structure makes people capable of action” (Ehrenhard, 2009, p70). The Structuration theory can offer a new way of looking at cross-cultural working and information systems. The theory uses the structure as memory traces in the human mind. The action draws on behaviour and ability to deploy resources and by such action will produce and reproduce the structure (Leidner and Kayworth, 2012).

Giddens (1984, p29) defined three dimensions of the duality of structure which are:

- Signification dimension: Human actors/people in their communications with each others have interpretive schemes (stocks of knowledge) which “make sense of their own and others’ actions” (Schutz, 1974), (Ehrenhard, 2009, p71). Therefore, they produce and reproduce structures of meaning (Walsham & Han, 1991).
- Domination: Giddens found that people produce and reproduce structure of domination through the ability to allocate material and human resources. Moreover, Giddens differentiated between authoritative power (command

over people) and allocative power (command over goods, materials, or objects).

- Legitimation: in order for human beings to approve or sanction their actions, they draw standards of morality or norms to be able to produce and reproduce social structure of legitimation (Walsham & Han, 1991).

Therefore, Structuration theory is primarily focused on the reproduction of structure in the mind and the expanded social structures within societies that will undergo the process of routinisation of activity. As a result, it will strengthen the current structures (Leidner and Kayworth, 2012). The structure has three dimensions namely: forms of power relations, systems of meaning and sets of norms. The IS represents the systems of meaning, provides resources and encapsulates norms, and are thus deeply involved in the modalities that connects action and structure. These structural properties are those which are considered as structures of social systems that extend across time and space (Leidner and Kayworth, 2012).

This paragraph gives some examples about the findings from this study and how it could be explained from the Structuration theory position. To begin with, and as stated by Indeje and Zheng (2010) “people go through a socialisation process and become dependent of the existing social structures, but at the same time social structures are being altered by their activities” which can be applied in the cultural dimension, that there is a negative public perception about credit cards among citizens in Saudi Arabia. This means that social structures in which credit cards have a negative public perception among citizens are being altered by their activities.

Moreover, one of the findings in the suppliers' responsibilities dimension is that there is a lack of enlightenment and knowledge about the potential benefits of e-commerce in the society. In regard to the Structuration theory, this means that there is a lack of material and human resources which are necessary for people to produce and reproduce a structure of domination (through the ability to allocate material and human resources).

9.3 Critical Theory

Critical theory is considered to be a type of social theory that aims to critique and change society and was developed by a group of sociologists and “associated with the work of the Frankfurt school” (Churton and Brown, 2010, p24; Dahms,2011). It aims “to liberate human beings from the circumstances that enslave them” (Horkheimer 1982, p244). According to Max Horkheimer that critical theory should meet three criteria “it must be explanatory, practical, and normative, all at the same time” (Bohman 2013). In other words, “it must explain what is wrong with current social reality, identify the actors to change it, and provide both clear norms for criticism and achievable practical goals for social transformation” (Buhalis & Darcy, 2011, p74).

Hartas (2010, p45) stated “the critical theorists argue that, to examine social reality, we need to understand structure and agency, regularity and normativity, stressing that research should have a moral rather an instrumental role, and is expected to challenge human oppression and achieve emancipation”. Critical theory is “concerned not merely with how things were but how they might be and should be” (Bronner, 2011, p1). Research is critical when “it is motivated by the intention to change social realities and promote emancipation” (Stahl, 2008a).

This thesis is rather trying to understand and explain the situation and not trying to change society, but in this section, the researcher explains the thesis's findings from the perspective of critical theory. In critical research, people can change their circumstances (Orlikowski and Baroudi, 1991, p.19). Therefore, and from a critical viewpoint, understanding and explaining is not enough and the researcher needs to focus upon relationships, conflicts and contradictions in order to eliminate them (Myers, 1997, p.3). As a result, the researcher in critical theory aims in “Freeing individuals from power relations around which social and organizational life are woven.” (Fournier and Grey, 2000). For example, in the cultural dimension, there is a negative public perception about credit cards among individuals who have not tried it before. They have only heard about it. As a result, critical theory tries to free individuals from this belief and to let them try it themselves. Another example which has already been stated in this thesis is

that girls might not order personal/private goods for fear of exposing their privacy in case the postal address is shared with other people. As a result, critical theory is going to free girls from this belief by encouraging and educating them on how to buy and package personal items. The next sub-section is about ICT4D (capability approach).

9.4 ICT4D (capability approach)

This section frames a review of ICT4D within the human development and capabilities approach and then applies the findings from this study according to the view of this theory. To begin with, Hamel (2010) reported that health, education, and income are considered to be the basic dimensions of human development. He also stated that “a human development and capability approach in particular sees development as a multidimensional and multidisciplinary process of enlarging people's choices and freedoms” (Hamel, 2010, p1). The aim of human development is "to expand people's freedoms – the worthwhile capabilities people value – and to empower people to engage actively in the development processes, on a shared planet. People are both the beneficiaries and the agents of long term, equitable human development, both as individuals and as groups" (Alkire, 2010, p40). Many researches such as the UN (2000), Rezaian (2006) and Hamel (2010) stated that ICTs are advocated to play an important role as enablers of development. Therefore, ICT4D is “the use of ICTs to reach development objectives but their potential impact lies in the uniqueness of these new tools, such as mobile phones and the World Wide Web, which have revolutionised the ease with which people are able to exchange and share information across vast distances” (Hamel, 2010, p5).

The Capability Approach concerns the quality of life that can be achieved by people. Therefore, it is analysed in terms of “functionings” and “capability” concepts. The functionings are ‘being and doing’ such as having shelter. On the other hand, “Capability is a set of valuable functionings that a person has effective access to. Thus, a person's capability represents the effective freedom of an individual to choose between different functioning combinations – between different kinds of life” (Thomas, 2012).

Amartya Sen (2009) stated that capabilities are “doing and beings” such as being in good health. It is the “skills, aptitudes, endowments and potentials that individuals have to make choices in their lives, and in consequence live the life of their choosing. Nussbaum (2000, p12) stated about Capability Approach: “Instead of asking about people’s satisfactions, or how much in the way of resources they are able to command, we ask, instead, about what they are actually able to do or to be”. Capabilities are bound by freedom and represent the essence of a person's potential in life, what they can achieve under their current circumstances, whether those limitations are inherent or imposed” (Hamel, 2010, p6). Amartya Sen (2009, p5) reported that “capability reflects a person's freedom to choose between different ways of living”. People can make better judgments if they have the access to knowledge and to the right information that is shared through technologies such as ICTs (Hamel, 2010, p7). Sen (1984, p302) confirmed this by stating that “informational limitation restricts or distorts consequential judgments”. Therefore, technologies by themselves do not contribute to human development, but, it is the use of these technologies that allow people to reach their development aims and objectives (Hamel, 2010, p7).

During the 20th century, several changes have been developed to improve global economy for the governance of nations. To be able to achieve this, some of the improvements were made in order to enhance the connection between the human development and capabilities approach to understand to potential effect of technologies on the lives of the people. A growing concern with regard to the development of the community is closely connected to the swiftly rising usage of ICT and its importance to the development of the International Telecommunications Union (ITU) during the early 1980s (Hamel, 2010, p. 5). The studies have shown that ICTs and the networks that connected them should be further reinforced all over the world to be able to share the benefits that these technologies to the health and other social services, trade and commerce, administration and to act as a stimulant to ensure economic growth for the improved quality of life for all. This later became known as information and communication technology for development “ICT4D” (Hamel, 2010, p.5).

The information and communication technology for development or “ICT4D” is

closely connected to the human development and capabilities approach. The basic dimensions of human development shall consist of the essential dimensions of its achievements such as health, education, income, facets of participation and empowerment. This will serve as an evaluation on whether ICTs have produced positive outcomes in these areas of human development. The physical objectives of ICTs shall cover overpowering the boundaries of present procedures of information storage and sharing.

The ICTD offers a broad network of researchers globally and the strategy was conceptualised from the concerns of development practitioners that since it has presently evolved as the world is meeting new challenges. The different views on the approach are based on the work of Amartya Sen on the global Human Development Report (HDR) which gives a deep comprehension of the purpose of human development, which is to broaden the liberty given to the public and at the same time, provide valuable capacities and to give them empowerment and boost that they need. The beneficiaries and the agents of this long term equitable human development are individuals and groups (Hamel, 2010, p. 4). The essential component of this type of condition is to give special relevance to the concept of human development, which is a mechanical process that shall have participative and empowering effects on the public. It is believed that the fundamental principles of such an approach are intended to serve human development (Hamel, 2010, p.10).

The practitioners of ICT4D have realized that understanding the technology itself will not contribute to human development. The major difference in the lives of the general public is that the use of such technology, with the aid of individuals and groups inside the communities, had achieved their growth objectives. The primary concern aims to design and import new technologies to substitute the traditional method of accomplishing issues in life. The policy makers and practitioners give the proper technologies that are required in the development of strategies. The new technologies replaced the old methods of accomplishing tasks that will certainly serve as compromises and hidden charges that will be applicable for the analysis of ICT4D sponsors (Hamel, 2010, p.7).

It bears stressing that ICTs have the capacity to improve peoples' lives using the ICTs as tools to gain potential benefits for human development. However, ICT4D is only a representation of the possibility of expanding the opportunities and capabilities using technology. It can also result in escalating inequality in various parts of the globe and will be beneficial to those countries that are able to profit from the new opportunities. Therefore, even if the ICTs have been applied, there is also a greater tendency that the interests of the poor will be completely neglected or disregarded to the advantage of some privileged nations.

As pointed out by Whitman and Woszczyński (2004, p.210), the concept of system in this theory that makes it different from the conventional IS use of the term or its use based on the concept of systems theorists. The structures can be repeatedly reproduced as the system reaches a more stable condition. As the people continuously produce new structures, there is a high probability that the systems will change. The beauty of the Structuration theory to IS scholars is that it makes human agents part of the system that makes it possible for the people to interact with technology which makes lesser predictability of IT use for group consumption (Whitman and Woszczyński, 2004).

For this study, the researcher applied Amartya Sen's theory which stated that individuals are endowed with a set of capabilities that give individuals the freedom and escape from poverty. Sen's five freedoms are (Sen, 1999, p19):

- Political freedoms: the freedom of people, such as the ability to choose what principles, the ability to elect who govern them, the right to evaluate and criticise authorities, the ability to participate in public discussions, and the free media. Contrarily, the constraints of political freedoms have many ways such as the constraints on access to information and the constraints on use to telecommunications (Removingunfreedoms, 2007).
- Economic facilities: population should have the facilities to use the economic recourses for production and trade purposes. People need to access these facilities otherwise it will be called unfreedom which may cause the unemployment that may have resulted because of the social constraints. For example, the labour market

should be open, and people should be able to access the product markets. Whereas, no access to credit, transport, and market, and not improving the urban economics are examples of the constraints of economic security.

- Social opportunities: providing opportunities for the basic requirements for citizens to be able to obtain good health, childcare, basic education, and gender equity. At the same time, not having access to medicine and water, working children under ten years old, and being inaccessible to the police are some examples of constraints of social opportunities.
- Transparency guarantees: people should be provided with openness, the right to the required information, and should be guaranteed that the tangible evidence clearly defines the social contract between the administration/government and their citizens. Absence of corruption and the mechanism for seeking justice are some examples of the freedom for transparency guarantees. On the other hand, not involving the civil society in the public projects, not facilitating the reporting of crimes (such as rapes), and the absence of law for potential conflicts of interest are examples of the constraints of transparency guarantees.
- Protective security: undertaking the required measures to provide the freedom in order to access the protection of a social security net aiming to protect citizens from poverty. The country should also support people who are suffering from natural disasters. Good examples of protective security are shelters, emergency facilities, supporting victims, and protecting people from extreme deprivation. On the other hand, lacking access to emergency food, the nature of resettlement, lack of access shelters are examples of the constraints of protective security.

From Sen's perspective, poverty is the deprivation of basic capabilities. Therefore, Sen stated that people should be able to decide where to work and what to produce. For example, he supports the end of bondage and use the term "free labour" in the economic freedom dimension, and supports the electoral democracy in the political freedoms dimension.

Sen's viewpoint called the capability approach, which, as we stated above, is the

basic concern of human development as he stated “our capability to lead the kind of lives we have reason to value’, rather than the usual concentration on rising GDP, technical progress, or industrialisation” (Sen, 1999, p285). His approach “inescapably focuses on the agency and judgment of individuals” (ibid, p288). This includes individuals capability, responsibility, and opportunity. Therefore, it aims to raise the human capability to improve people choices, wellbeing, and their freedom; their role in influencing social change; and their role in influencing economic production (O’Hearn, 2009).

This paragraph explains the thesis’s findings from ICD4D’s perspective (capability approach). To begin with, and as stated above that there should be an effective freedom of an individual to choose between different functioning combinations (Thomas, 2012). This study found that the cost of the Internet is too high, there is a lack of Internet connection in rural areas and therefore, people do not have the freedom to choose or to decide. Moreover, not improving the urban economics such as the lack of Internet connection in rural areas and the lack of shops in rural areas are considered to be one of the constraints of economic security. The passivity and lack of initiative among local government is also considered to be one of the constraints of political freedom. The lack of basic education about e-commerce is considered to be one of the constraints of social opportunities. The absence of terms and conditions when purchasing products is an example of the constraints of protective security.

9.5 Diffusion of innovations theory (DOI)

As seen on the figure below, DOI has four elements. The first element is the innovation which is the idea that either spreads quickly or in a slow way.

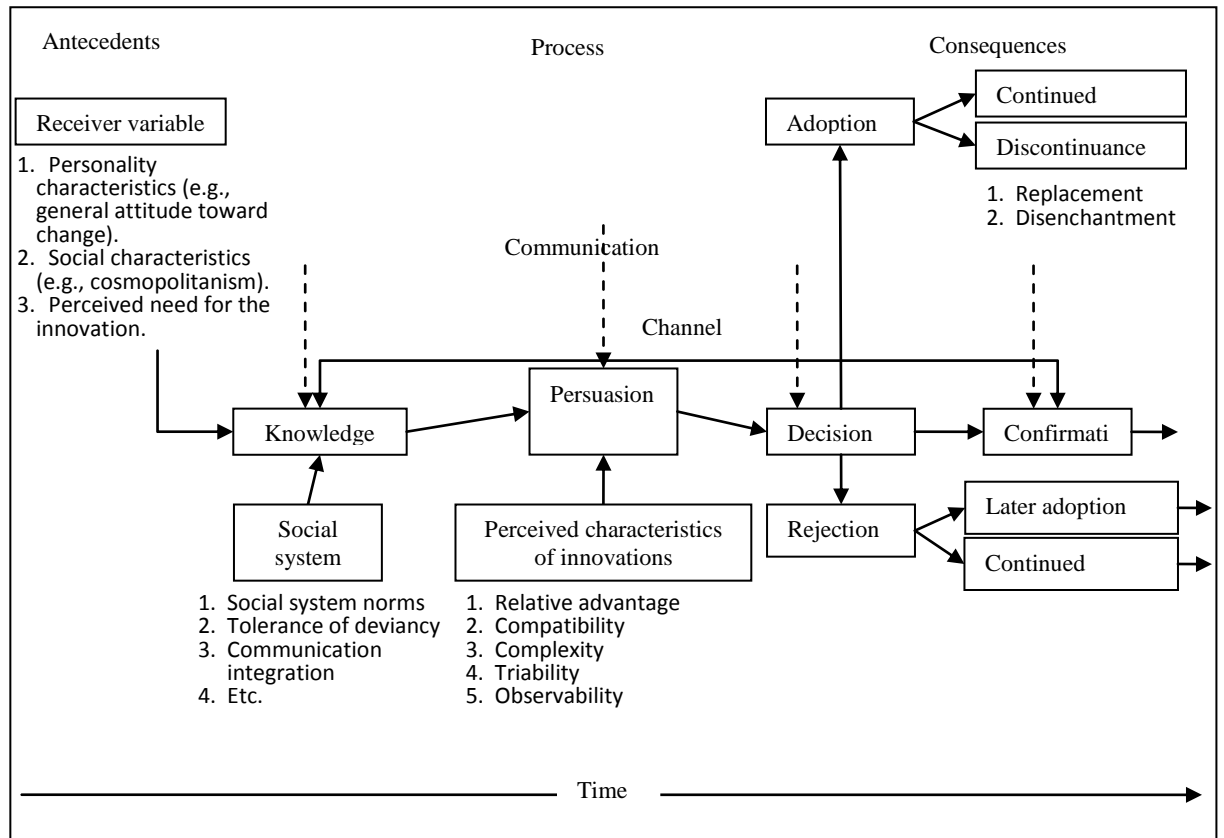


Figure 9.1 Diffusion of innovation model
Rogers (1995)

The second is the communication channels and sources such as media channels and interpersonal channels. These channels can influence the person's decision either to adopt or reject the innovation.

The third element is the time factor. This is because the process of innovation-decision involved overtime. For example, an individual need time to move from first knowledge about innovation to form an attitude about the innovation to make a decision either to accept or reject the new idea and to confirm it. Therefore, there is a 5 step process for each individual. The first is knowledge in which the individual becomes aware of particular innovation. The second is that the individual forms a positive or negative attitude toward this particular innovation. Thirdly is the decision either to adopt or reject the innovation. Fourth is using the innovation after accepting it or leave it if the decision is rejection. The fifth is the confirmation step where the individual evaluates his/her decision. Time is also involved in diffusion as individuals have different speeds in the adoption process which can be called "rate of adoption". Some

people adopt innovation quicker than other people. For example, there are innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%), and laggards (16%).

The fourth element is the social system which is a set of interrelated units (individuals, groups, or organizations) which may engage or influence the decision.

After explaining and defining the DOI theory, the following explains the thesis's findings from DOI position. To begin with, the innovation here is the e-commerce technology that is either adopted quickly or slowly over Saudi society.

The second is the communication channels such as media channels, society and interpersonal channels. These channels can influence the person's decision either to adopt or reject the innovation. This thesis finds that social influence and friend's recommendation are communication channels that affect the consumers' decision. For example, this thesis finds that there is a positive impact of friends on a consumers' decision; there is a negative public perception about credit cards; the negative impact of social relationship in exposing privacy; the negative impact of the immature local market economy on e-commerce adoption. As a result, there is a lack of enlightenment and knowledge about the potential benefits of e-commerce among people.

As stated before, the third element in DOI is the time factor which consists of a 5 step process for each individual. The first is knowledge in which the individual becomes aware of particular innovation. In this step, many individuals in Saudi Arabia who participated in the study were lacking the knowledge about the benefits of e-commerce. This is due to the lack of awareness among those people. Therefore, and when moving to the second process, which is the persuasion in which the individual forms a positive or negative attitude toward this particular innovation, it will be found that individuals lack the perceived characteristics of e-commerce, such as the advantages and compatibility. As a result and when reaching the decision point, they have no awareness and knowledge to make a decision. Therefore, most individuals reject the adoption of e-commerce until reaching the point where they know more about this innovation to be able to adopt it later.

The fourth element (the social system) is also addressed in this thesis as many social factors affect the adoption of e-commerce in this study. For example, this thesis finds that there is a positive impact of friends on a consumers' decision, there is a negative public perception about credit cards, and there is a negative impact of the immature local market economy on e-commerce adoption.

9.6 Theory of reasoned action (TRA)

TRA was developed by Martin Fishbein and Icek Ajzen. It can be considered as a development of information integration theory (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975).

TRA has three components as illustrated in the below figure which are: behavioural intention (BI), attitude (A), and subjective norm (SN). TRA stated that people's behaviour depends on person's attitude about a particular behaviour and subjective norms. It declared that in the case of a person wanting to behave in a certain way then he/she is most likely to do it. In other word, TRA suggested that attitude consist of beliefs about the outcomes/consequences of two things which are performing the behaviour and the evaluation of these consequences (Fishbein & Ajzen, 1975). For example, behaviour is predicted by the person's attitude toward his/her behaviour and how he/she believes that people may see him/her during performing this behaviour.

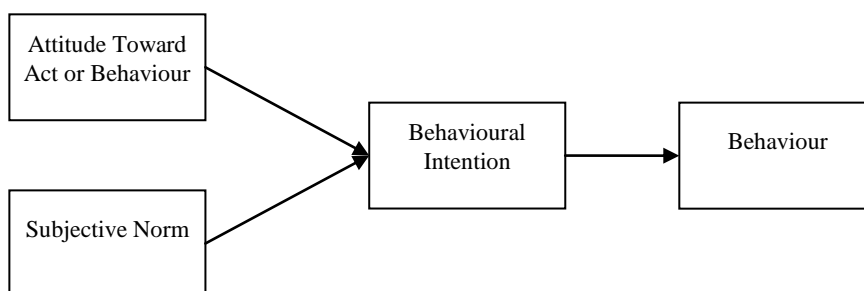


Figure 9.2 Theory of reasoned action (TRA)
Fishbein, M., & Ajzen, I. (1975)

The three components illustrated in the figure above are:

- Attitudes: which consist of behaviour and the evaluations of a particular

behaviour. For example, if a person believes that exercise is good for his/her health and at the same time, this particular exercise needs time and effort. In this case, the person will decide which one is more important for him/her and will weigh both sides to be able to decide which one to get (the health on one side or the time and effort needed for this exercise on the other).

- Subjective norms: which means that social environment affects the influence of people on a particular behavioural intention. For example, and according to the findings of this research, if a woman believes that e-commerce is useful for her but the post address belongs to another person, then she might not order private goods fearing exposure of her privacy.
- Behavioural intention: consists of attitudes toward a behaviour on one hand and subjective norms toward that behaviour. This compensation predicts actual behaviour. For example, if a person wants to buy online (attitudes) but is afraid of fraud (subjective norms), then, and after weigh both sides, the decision will lead to the intention to buy or not, which will then lead to the actual behaviour.

In conclusion, TRA indicated that behavioural intention is caused by attitude and our subjective norm. For example, attitude leads a person to do something but our subjective norm suggests that this action should not be done because it is against our norms. Moreover, TRA separated behaviour from behavioural intention because there are some factors or situations limiting the influence of attitude towards behaviour.

Table 9.1 TRA theory
(Venkatesh et al., 2003)

Theory of reasoned action (TRA)	Core Constructs	Definitions
Drawn from social psychology, TRA is one of the most fundamental and influential theories of human behavior. It has been used to predict a wide range of behaviours (see Sheppard et al. 1988 for a review). Davis et al. (1989) applied TRA to	Attitude Toward Behaviour	“an individual’s positive or negative feelings (evaluative affect) about performing the target behaviour” (Fishbein and Ajzen 1975, p. 216).

<p>individual acceptance of technology and found that the variance explained was largely consistent with studies that had employed TRA in the context of other behaviours.</p>	<p>Subjective Norm</p>	<p>“the person’s perception that most people who are important to him think he should or should not perform the behaviour in question” (Fishbein and Ajzen 1975, p. 302).</p>
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The following explains the thesis’s finding from the TRA position. To begin with, the security dimension (section 8.2.10) raised attitudes towards acts or behaviours as one of the factors that influence the e-commerce adoption. It stated that consumers fear online fraud and therefore, they will decide which is more important for them either the expected benefits from adopting e-commerce or avoiding the online fraud by not buying online and will weigh both sides to be able to decide which one to get (the e-commerce benefits on one side or the online fraud on the other side).

Section 8.2.9, (tangible and intangible end-user characteristic dimension), counted subjective norm as one of the factors to the e-commerce adoption which influence the consumers’ behavioural intention and predicts his/her actual behaviour. The tangible and intangible end-user characteristic dimension (section 8.2.9) stated that the individual tendency (personal disposition) factor shows people behave in different ways and each person has his/her own behaviour. Therefore, depending on personal behaviour, people may decide to proceed in dealing with e-commerce even with the surrounding risks whereas others may stop buying online afraid of fraud and will wait until they feel it is safe. This behaviour depends on the personnel subjective norms.

9.7 Technology acceptance model (TAM)

Davis et al. (1989) is the founder of this theory which was adapted from the Theory of Reasoned Action (TRA). TAM is considered to be one of the well-known theories that examine users’ attitude towards technology as seen in the figure below.

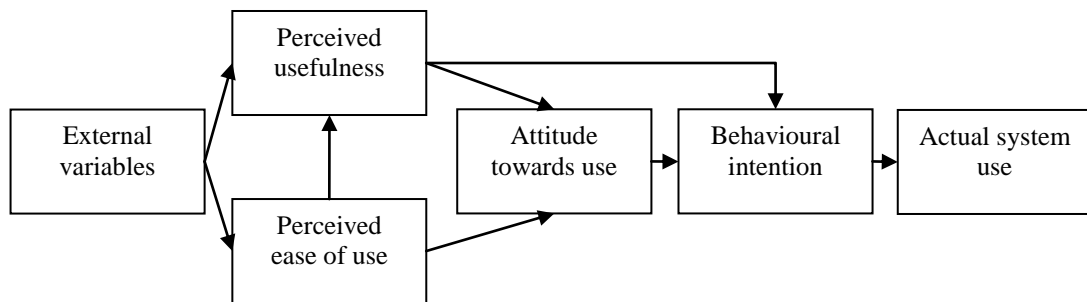


Figure 9.3 The initial modified version of TAM
(Davis et al., 1989)

The above model is the first modified TAM which proposed to predict individual's technology acceptance. It expects that attitudes towards use is caused by perceived usefulness and perceived ease of use. However, this version of TAM has been modified and resulted in the final version of TAM as illustrated in the figure below.

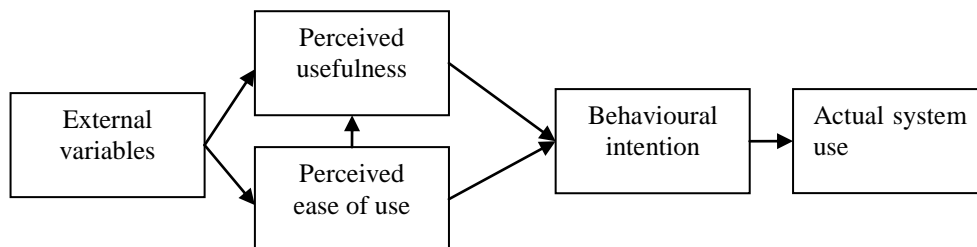


Figure 9.4 The final version of TAM
Davis et. al. (1989), Venkatesh et. al. (2003)

The final version of TAM has eliminated the variable "attitude toward use". This is because it has been found in Davis et al. (1989) study that perceived usefulness and ease of use have a direct influence on behavioural intention. The external variables contain many factors such as users' training and characteristic of the system (Venkatesh and Davis, 1996).

The thesis's finding can be explained from TAM's position. To begin with, and as stated in the TAM theory that there are two external variables which are the perceived usefulness and perceived use that affect the person's behavioural intention.

The thesis's findings are in the line of TAM's position. For example, and as stated in the cultural dimension, there is an absence of perceived usefulness of e-commerce among large segments of the population which leads people not to intend to apply e-commerce in their daily lives. The same issue can be found in the telecommunication

and internet infrastructure diminution as people are more likely to not intend to apply e-commerce due to the high cost of the internet subscription when comparing the benefits they may gain from it.

On the other hand, the perceived ease of use is already raised in this thesis's findings from the consumers perspectives, as mentioned in the cultural dimension that only young people believe that buying online is easy as they are already likely to deal with the information revolution, such as e-commerce. It is also mentioned in the technical dimension that the availability and support of the Arabic language makes dealing with e-commerce easier. But, on the other hand, it (the perceived ease of use) has been found as a barrier in the technical dimension, as the SME found, , it is not easy to apply the e-payment gateway into their systems which resulted in not applying the e-commerce technology among their activities.

The suppliers dimension stated that both consumers and sellers believe that shopping from the main street (face to face) is more useful than buying online. This is because, consumers may gain more discounts and employees can get commission from face to face deals. On the other hand, the minority of shops in rural areas brings the belief that e-commerce can be useful for them and at the same time, are more likely to shop online rather than shopping from the nearest large city.

The perceived usefulness has been found in the financial and geographical dimension. For example, suppliers (telecommunication providers) feel that rural areas cannot be a commercial destination for them due to the low population density. This led to the absence of Internet infrastructure there. This view has resulted in the high Internet subscription prices for consumers. As a result consumers believe that e-commerce is still useless when comparing it to the benefits they may gain if they apply it. On the other hand, perceived ease of use has also been found in the financial dimension. For example, consumers stated that refunds online are not easy due to the restrictions applied from SAMA that prevent local debit and credit cards getting refunds online.

Delivery dimension found that perceived usefulness is one of the main barriers in regards to applying e-commerce. For example, consumers and suppliers believe that

delivery services and postal services are not useful for them and therefore, they disregard this service. Both, government and private businesses in Saudi Arabia do not have any clue about the benefits of terms and conditions for the local market.

9.8 Theory of planned behaviour (TPB)

TPB is a theory proposed by Ajzen (1991) and considered to be an extension of TRA. It aims to predict people intentions and their behaviours as illustrated in figure below.

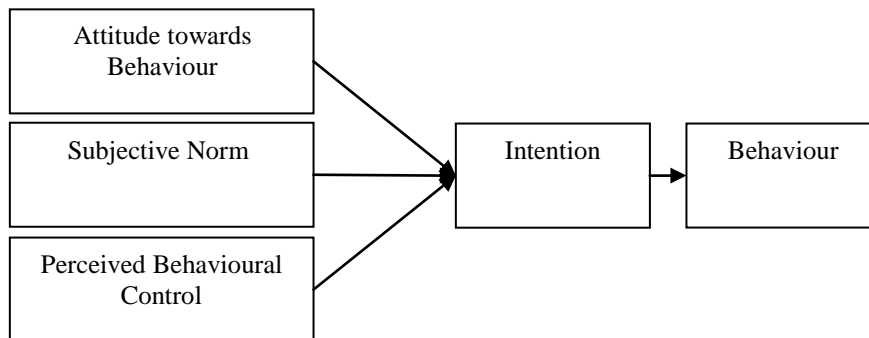


Figure 9.5 Theory of planned behaviour (TPB)
(Ajzen, 1991)

TPB stated that there are three factors affected the behavioural intentions in order to perform an action. These three factors are:

- Attitude towards the behaviour: in which whether the person is willing or in a favour to do a particular behaviour or not.
- Subjective norms: in which how much the person estimates, respects, and evaluates the society opinion and social pressure to do it.
- Perceived behavioural control: Ajzen (1991, p. 188) identifies perceived behavioural control as “the perceived ease or difficulty of performing the behaviour”.

These three factors influence the individual's decision either positively or negatively through behavioural intention which is explained more in the following table.

Table 9.2 TPB theory
(Venkatesh et al., 2003)

Theory of planned behaviour (TPB)	Core Constructs	Definitions
TPB extended TRA by adding the construct of perceived behavioural control. In TPB, perceived behavioural control is theorized to be an additional determinant of intention and behaviour. Ajzen (1991) presented a review of several studies that successfully used TPB to predict intention and behaviour in a wide variety of settings. TPB has been successfully applied to the understanding of individual acceptance and usage of many different technologies (Harrison et al. 1997; Mathieson 1991; Taylor and Todd 1995b). A related model is the Decomposed Theory of Planned Behaviour (DTPB). In terms of predicting intention, DTPB is identical to TPB. In contrast to TPB but similar to TAM, DTPB “decomposes” attitude, subjective norm, and perceived behavioural control into its the underlying belief structure within technology adoption contexts.	Attitude Toward Behaviour	Adapted from TRA.
	Subjective Norm	Adapted from TRA.
	Perceived Behavioural Control	“The perceived ease or difficulty of performing the behaviour” (Ajzen 1991, p. 188). In the context of IS research, “perceptions of internal and external constraints on behaviour” (Taylor and Todd 1995b, p. 149).

The thesis's finding can be explained from TPB's position. To begin with, and as stated in the TPB's theory, there are three factors that influence the behaviour intention to perform the behaviour or not, which are counted in the above table.

The attitude towards Behaviour has already been stated in this thesis. For example, and in the suppliers' dimension in section 8.2.4, some of the suppliers have an attitude towards e-commerce and therefore, they decided into not to invest in this area and therefore, applied a 'wait and see' strategy'. This factor (attitude towards e-commerce) has resulted in the lack of online shops and lack of online competition.

Perceived behavioural control is also stated in this thesis finding. For example, suppliers' responsibilities dimension in section 8.2.4 mentioned this factor. Suppliers believe that it is not easy to apply e-commerce in Saudi Arabia. This is because the local market is sill immature and needs more work to be able to do so.

9.9 Unified theory of acceptance and use of technology (UTAUT)

This theory was developed by Venkatesh et al.(2003) after reviewing many models and theories that explain IS usage behaviour (Venkatesh et al., 2003). It aims to unify the view about theories on the user acceptance of information technology. The main motivation in defining this theory is that many existing theories are similar in nature. This led to integrating them to be able to create unified theory (Venkatesh et al., 2003) (Williams, 2011). These theories are: Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Motivational Model (MM), Theory of Planned Behaviour (TPB), Combined Theory of Planned Behaviour/Technology Acceptance Model (C-TPB-TAM), Model of PC Utilisation (MPCU), Innovation Diffusion Theory (IDT), Social Cognitive Theory (SCT).

The theory has four keys which are the construct of the theory (Venkatesh et al., 2003):

- Performance expectancy: it is the degree to which users believe that using the system will increase their job performance.
- Effort expectancy: it is the degree or level of easiness related to the use of the system.
- Social influence: it is *“the degree to which an individual perceives that it is important others believe he or she should use the new system”* (Venkatesh et al., 2003).
- Facilitating conditions: it is the *“degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system”* (Venkatesh et al., 2003).

Moreover, the theory also assumes that these core constructs are moderated by:

- Gender
- Age
- Experience

- And voluntariness of use

UTAUT aims to help researchers to gain an understanding of different problems in the IS adoption and diffusion (Williams, 2011). Therefore, the authors of this theory aimed to help future researchers by creating a unified theory to avoid searching, collecting, and integrating constructs from different theories. The following figure is the UTAUT's model which combined the eight theories above in one theory.

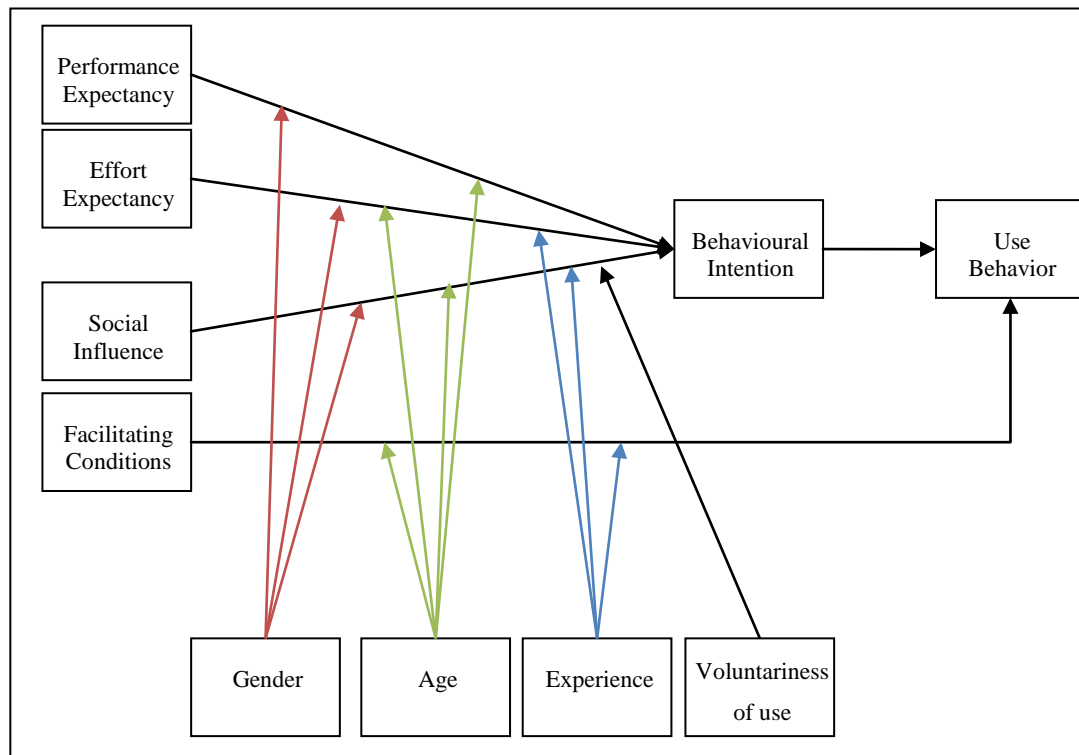


Figure 9.6 Unified theory of acceptance and use of technology (UTAUT)
(Venkatesh et. al., 2003)

As seen in the above figure UTAUT has two dependent factors which are behavioural intention and user behaviour. Also, it has eight independent factors which are performance expectancy, effort expectancy, social influence, facilitating conditions, gender, age, experience, and voluntariness of use.

In regard to this thesis, section 8.2.1 (cultural dimension) stated that there is a performance expectancy which was represented in the absence of an e-commerce shopping culture. This factor means that people do not know what benefits they may gain in case they applied e-commerce in their lives. This factor has resulted in a

negative attitude in applying e-commerce whereas young people have positive performance expectancy in regard to e-commerce adoption. This is because; they had already adopted the latest technologies in their lives.

This thesis finds that e-commerce adoption needs more effort expectancy and therefore, there is an absence of the co-operative responsibilities among government agencies such as ministry of trade, CICS, ministry of education, ministry of information (section 8.2.6).

Moreover, the social influence is also determined in the thesis findings. For example, section 8.2.1 (cultural dimension) stated that social influence has negatively affected the adoption of credit cards among the community members.

The third factor is the facilitating conditions which are also explained in this thesis. For example, the findings from this thesis have found that facilitating conditions is considered to be one of the barriers in adopting e-commerce. There are many examples such as the high cost of the Internet subscription, the lack of broadband services in rural areas, and the weakness in broadband quality which was counted in section 8.2.2. Section 8.2.4 brings another example which is the absence of enlightenment and knowledge about the potential benefits of e-commerce. The absence of saving accounts in local banks is another issue that slows down e-commerce adoption

Section 8.2.9 identified gender, age, and experience that play roles in the adoption of e-commerce in Saudi Arabia. For example, tangible and intangible dimensions stated that older people are not willing to adopt e-commerce. At the same time, society does not expect technology knowledge among older people. This belief gives older people freedom from such pressure.

9.10 Conclusion of the chapter

This chapter describes and explains the thesis's findings from different theoretical positions which are the Structuration theory, critical theory, ICT4D (capability approach), Diffusion of Innovations Theory (DOI), Theory of Reasoned Action (TRA),

Technology Acceptance Model (TAM), Theory of Planned Behaviour (TPB), and Unified Theory of Acceptance and Use of Technology (UTAUT).

Most of the theories mentioned in this chapter can fit with this research. But, from the researcher's perspective, the Structuration theory and ICT4D fit better. This is because the Structuration theory can offer a new way of looking at cross-cultural working and information systems. Moreover, ICT4D (capability approach) can also fit with this study because it concerns the quality of life that can be achieved by people.

On the other hand, explaining the findings from different theoretical positions gives more credibility to the research under investigation.

As seen in figure 6.1, the next chapter presents conclusions and recommendations for this thesis.

Chapter 10

Conclusions and Recommendations

10.1 Overview

This chapter presents the thesis conclusions including its contribution to knowledge, implications of the study, research evaluation, limitation, recommendations and further work that are derived from the two empirical studies presented in chapters six, seven and eight. These three chapters presented the factors affecting consumers' adoption of e-commerce in Saudi Arabia and in light of this; this research has added knowledge to academic research in area under study as shown in this chapter.

10.2 Summary of the thesis

This thesis investigates the factors that influence consumers' adoption of e-commerce in Saudi Arabia aiming to bring a good foundation/base for further studies in other developing countries. It was conducted by two empirical studies. The findings from the first empirical study (consumers' perspectives) drove the researcher to the second (suppliers' perspectives) by applying theoretical sampling to develop an integrated model that can be used by business and government agencies in order to accelerate the adoption process.

Chapter six presented the outcomes of the first empirical study from which twelve categories emerged grounded in the data. Chapter seven presented the outcomes of the second empirical study, which confirmed, denied or brought new factors to light.

The final result emerged in chapter eight, which described and brought to light the combined framework. It involved the combined categories related to e-commerce adoption where suppliers and government agencies can benefit by understanding the

needs of consumers as well as the obstacles in order to establish a good foundation for an e-commerce environment across the country.

10.3 Research questions Revisited

The overall research question in this study presented in chapter one was,

“What are the key factors (enablers and barriers) that influence consumers’ adoption of e-commerce in the Kingdom of Saudi Arabia?”

This question was answered in chapters six, seven and eight by proposing the paradigm model, categories and its related factors. In order to answer the research question in more detail, a set of supplementary questions were defined.

Q1: What are the enablers and barriers that influence consumers in order to adopt e-commerce in Saudi Arabia from their own perspectives?

This question was answered in chapter six, which illustrated the enablers and barriers that influence consumers in order to adopt e-commerce from their own perspectives.

Q2: What are the enablers and challenges that face private sector organizations in order to adopt e-commerce in their businesses with respect to consumers?

Chapter seven has answered this question by representing the suppliers’ perspectives on factors affecting them in order to adopt e-commerce.

Q3: What are the suppliers’ comments on consumers’ perspectives?

Chapter seven also answered this question by applying theoretical sampling to be able to capture the appropriate organizations that can answer and comments on consumers’ viewpoints.

Q4: What is the combined framework that integrates consumers’ perspectives and suppliers’ perspectives together?

The initial combined framework can be found in chapter eight, which emerged from the synthesis of consumers’ viewpoints with supplier and government agency

perspectives.

By addressing the gap in the literature and then combining the consumers and suppliers' perspectives together, this research answered the main research question and its sub-questions.

10.4 Research contribution to knowledge

The research findings helped deepen the understanding of the factors affecting consumers' adoption of e-commerce in Saudi Arabia and in any other country that has sufficiently similar conditions and characteristics. The study is distinctive in identifying the factors that influence consumers' adoption of e-commerce from both the consumers' and suppliers' perspectives. To achieve this, grounded theory method was applied to provide the desired tools to be able to exploit the outcomes from the first empirical study and transmit them to the next stage. The thesis's findings, therefore, are supported by literature review and evidenced by two empirical studies that contribute to the following:

1. The thesis provides a better understanding and a good explanation regarding consumers' adoption of e-commerce in Saudi Arabia in particular and in developing countries in general by developing an integrated model to help draw a roadmap for suppliers and government agencies to facilitate the success of e-commerce projects. It offered solutions to some of the shortcomings in e-commerce adoption as discussed in chapter eight.
2. Much of the previous literature such as Siala et al. (2004, p.7) and Zainul et al (2004, p.286) stated that the Islamic religion counted as an obstacle to the consumers' adoption of e-commerce. For example, Zainul et al (2004, p.286) said, "*Normally, e-commerce use credit cards as the mode of payment, but Muslims should avoid using credit cards because it involves interest (Riba).*" Therefore, this study contributes to knowledge as it differs from previous literature and found that the Islamic religion is no longer a barrier as stated in chapter eight. There was a widely held view among participants (consumers and suppliers) in this study that the

Islamic religion is not any more a barrier to e-commerce adoption. This is due to improvements in Islamic banking and finance that are compliant with the principles of Islamic law (Shariah). Moreover, and as many interviewees pointed out, paying interest is the only barrier. Many local banks have solved this problem by introducing Islamic credit cards with no interest. Currently, many Islamic scholars endorsed and approved the use of these Islamic credit cards. Islamic scholars are working with the Saudi Banks to make sure they follow Islamic finance laws. Consequently, the Islamic religious factor should no longer be considered an obstacle to e-commerce adoption in Saudi Arabia.

3. Much of the literature such as Duan et al. (2010, p.361), Vatanasakdakul (2004, p.10) and Thanasankit (2003, p. 263) mentioned that language counted as an obstacle to the adoption of e-commerce. This study brought new evidence, which indicated that the Arabic language is no longer a barrier that negatively influences consumers' adoption of e-commerce. Many programming languages, such, as Java, VB and C# support Arabic; therefore, programmers are able to develop Arabic websites. The only challenge that may face e-shops is that if the website is bilingual (for example, the Arabic and English versions). This is because more effort may be required to post product information in both languages and the need for a translation each time when posting a product. Bilingualism, however, is not considered a barrier in our case as the consumers are Arabs and prefer the Arabic version. As a result, the Arabic language is no longer a barrier to consumers' adoption of e-commerce as was stated in previous literature.
4. Previous researches already identified the delivery category and its related factors. Therefore, this study confirms it and added a key element inside this category which is the primary and secondary address key. As a result, this research finds that the national mail carrier uses people's names as the primary key and home addresses as the secondary one. This means that people need to register and pay the annual fees in order for their post to be delivered to their homes. On the contrary, postal systems in developed countries use home addresses as their primary key and people living in developed countries, such as the UK, are not required to register their names with Royal Mail or to pay annual fees in order to receive their post.

5. The failure of banks to authorise debit cards online is a government responsibility that counts as a barrier to consumers' adoption of e-commerce. This factor was rarely mentioned in the literature.
6. This study confirmed some of the findings in previous literature such as the absence of law enforcement and the lack of government responsibility. For example, MOCI stated that they are unable to force local shops to accept formal policies and legislation in the local market. Another barrier that is reaffirmed by this study is the inability of debit and credit cards to refund consumers' money if needed. This research confirmed that government is a barrier in the adoption process as stated by Molla and Licker (2005b) and Ang (2003). This research confirms the findings of previous literature that the legislative system and government employees' knowledge and training in legal issues is an obstacle in the adoption process. A decision-maker in MOCI disagreed with the idea of forcing shops legally to apply a return and refund policy. This research, however, found that not having a return and refund policy coupled with a lack of awareness of the importance of this strategy on the government's side are obstacles to the adoption of e-commerce. As a result, consumers were afraid of the impossibility of returning or exchanging items bought online. Furthermore, this research agreed with the literature that the absence of legislation, of statutory rights and the lack of consumer rights protection are all barriers to adoption of e-commerce. Furthermore, this research agreed with previous literature (eg Molla and Licker, 2005b, Ang, 2003) that lack of co-operation between governmental parties is considered to be one of the factors in the government's responsibilities towards consumers. For example, there is a lack of co-ordination between government agencies in reporting online crime. This factor counted as one of the barriers that relate to government. All the above issues, which are considered government barriers, suggest that the local market is immature and not fully developed as was previously seen in table 3.2.

10.5 Implications of the study

This research has theoretical, practical and methodological implications from which academics, governments and firms can benefit.

To begin with, this study has a theoretical implication related to its research design through using the frameworks developed in this study and applied as an initial framework for future studies.

The practical implications of this study can help firms and governments to understand consumers' needs in order to attract them to use e-commerce in their daily lives. This research finds many motivations and obstacles that influence consumers in adopting e-commerce. Such governments and suppliers can apply the benefits from these developed frameworks in chapters six, seven and eight when studying e-commerce in similar circumstances, such as, environments and cultures with similar conditions to those in this study.

The practical implications in this thesis have many issues that need to be considered through the responsible body that can solve these raised points (barriers). In order to explicit the roadmap for the practical implications, research focused on three aspects which are the barriers that need immediate action, responsible bodies who can perform the action, and the priority for each action. The factors in this study have been divided into three stages and each stage has the related factors with its own priorities. The table below explains these three dimensions in regard to the practical implications.

Table 1010.1 The stages, its barriers and the responsible body

Stage	Priority	Barriers	Responsible body
	1	Negative attitude towards people ethics	Ministry of Commerce
	2	Lack of qualified organizations and experts in ICT	CITC, Ministry of Commerce
	3	The high-cost of Internet subscription fees	CITC
	4	Lack of broadband availability in rural areas	CITC

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No. 1	5	Weakness in Internet Quality of Service (QoS)	CITC
	6	Difficulties for SMEs to obtain an e-payment system	CITC, Ministry of Commerce
	7	Lack of ICT organizations and human resources to meet local needs	CITC
	8	Lack of enlightenment and knowledge about potential benefits of e-commerce	CITC, Ministry of Commerce, Ministry of information, Ministry of Education
	9	Perceived end-user characteristics, such as, honesty and credibility	CITC, Ministry of Commerce, Ministry of information, Ministry of Education
	10	Lack of privacy protection	CITC, Ministry of Commerce
	11	Barring debit cards from online purchase	SAMA
	12	Preventing refund onto credit and debit cards	SAMA
	13	Lack of insurance facilities	Ministry of Commerce
	14	Lack of facilitating the e-payment gateway	CITC
	15	Fear of online fraud	CITC, Ministry of Commerce
	16	Lack of enough funds for awareness plans	CITC, Ministry of Commerce, Ministry of information, Ministry of Education
	17	The absence of co-operative responsibility	CITC, Ministry of Commerce, Ministry of information, Ministry of Education
	18	Government's employees lack the required enlightenment and training on related e-commerce issues	CITC, Ministry of information
	19	Absence of responsible authority in legal dimension	Ministry of Justice
	20	The high compulsory annual fees for postal services	Saudi Post

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	21	Applying the wrong primary key (people) and the wrong secondary key (home address)	Saudi Post
	22	The weak track and trace facilities	Saudi Post
	23	The negative public perception about mail services	Saudi Post
	24	Absence of home addresses in rural areas and in some parts of cities	Saudi Post, CITS
	25	The absence of mail insurance	Ministry of Commerce, Saudi Post
No.2	1	The absence of an e-commerce shopping culture	CITC
	2	The negative public perception about credit cards	SAMA, CITC, Ministry of Commerce
	3	Absence of bank saving accounts	SAMA
	4	Suppliers' fear of change	CITC, Ministry of Commerce, Ministry of information
	5	Low income in rural areas	Minister of Economy and Planning, Ministry of Commerce
	6	Low population density in rural areas	Minister of Economy and Planning
	7	Absence of the importance of terms and conditions among staff in post office	Ministry of Commerce, CITC
No. 3	1	Absence of a mail culture among consumers	Saudi Post, CITC, Ministry of information
	2	Absence of administration policies and guidelines among post office staff	Saudi Post
	3	The absence of reward and punishment concept in post office	Saudi Post
	4	Fear of change and stick to the old habits by rejecting the new mail system	Saudi Post, CITC, Ministry of information

Finally, this research provides a methodological implication. It provides a good example of the use of a grounded theory method, the application of theoretical sampling and paradigm model. It is a good exemplar for future researchers in Saudi Arabia and surrounding countries to learn from grounded theory as the information systems community in Saudi Arabia and the Arab world rarely uses it. Therefore, this research helps to spread understanding by using such a method.

10.6 Research evaluation

This study was evaluated according to the four criteria developed by Lincoln and Guba (1985, 1989), illustrated in section 5.6, to prove and assure the rigour of this research. Before stating these four criteria, there is a need to raise some related issues. To begin with, interviewee privacy was ensured. Interviewees were informed about the research aims, procedure, benefits and any possible risks. Participants were thus helped to make their decision whether to accept or reject participation in this research (Emanuel et al., 2000, Dickson-Swift et al., 2008). Confidentiality and anonymity of interviewees' details was of significant concern in this research (Christians, 2008). Participants were informed about their right to have their details kept secure and about other privacy concerns. All data was kept in safe storage and could only be accessed by the research team (Carpenter and Suto, 2008). Efforts were made to ensure that participants were not affected in a negative way by participating in this study (Dickson-Swift et al., 2008). Accuracy was promoted by vigilance against fake materials. The study, therefore, was supported with official documents, emails and audio recordings (Christians, 2008, p.145).

The four criteria developed by Lincoln and Guba (1985, 1989) were adopted to ensure the rigour as follows:

10.6.1 Credibility

Credibility has been applied to this study to judge its reliability and authority of the research and to ensure that explanations fit descriptions (Liamputtong, 2009, p.21,

Tobin and Begley, 2004, p.391). Conscious effort was made to ensure that what participants said was represented exactly in the study by providing interviewees' quotations during the analysis part and with the findings (Padgett, 2008). Moreover, detailed information about participants illustrated in table 6.2 shows their geographical and demographic spread and their setting, which validated the reliability of the data and the research findings (Johnson and Waterfield, 2004, p.128). Applying theoretical sampling to select participants according to their knowledge and characteristics gave credibility to the research (Carpenter and Suto, 2008). Credibility was also achieved in this study because participants were asked to recognise the description and interpretation of the researcher to see if they fitted with participants' points of view (Waterfield 2004). Triangulation was used to strengthen the qualitative research's credibility by combining multiple sources to confirm data (Carpenter and Suto, 2008, p.152). As a result, data triangulation (source triangulation) was applied in this research by obtaining multiple participants who revealed the same experiences as others (using multiple quotations that involved multiple participants) and by collecting data from different locations (Sands and Roer-Strier, 2006, p.238, Carpenter and Suto, 2008, p.153). For example, data was collected from consumers in more than ten places in Saudi Arabia. The researcher in qualitative research is considered to be part of his research, therefore, reflexivity admits that the researcher plays an important role in shaping and analysing data (Angen, 2000). As a result, the researcher's beliefs and experience may influence the research and should be acknowledged when discussing the research's strengths and limitations in section 10.7 (Liamputtong, 2009, p.25, Malterud, 2001). This study provides some of the emails that were sent to suppliers during the second empirical study (Appendix G). Interviews were recorded to ensure the reliability of the study. Field notes and data are collected from multiple sources such as interviews, documents and official websites. This research used peer review to reduce bias and to increase credibility (Sandelowski, 1998, p.470, Morse, 1994). For example, the researcher presents findings in ICDP's seminars and in academic conferences. Supervisors also make comments on the research. Therefore, a translation expert was employed to translate from Arabic to English with reverse translation.

10.6.2 Transferability

Transferability has been proved in this research by justifying the selected methodology as illustrated in chapters four and five. Therefore, this research clearly justified and illustrated all research steps such as the selection of the research paradigm, the research's methodology and by illustrating the detailed steps in order to develop the research findings. Furthermore, detailed information was given about the context and the environment of the study in Saudi Arabia. For example, rich information was found about participants and suppliers as illustrated in table 6.1 and 7.1 (Johnson and Waterfield, 2004, p.128). This helps researchers who want to apply the same procedure, methodology and research findings to any other research to understand the complete situation, conditions and limitations of the study.

10.6.3 Dependability

As stated in chapter five dependability is the degree to which the study is documented to allow researchers from outside to follow and trace the research process (Padgett, 2008). Therefore, the researcher described and gave details about any changes that took place in the setting and how these changes influenced the way that this research was approached. Therefore, the researcher kept an audio recording of interviews with an audit trail, which is a written account of the research process that reports what happened while conducting the research.

Consequently, dependability in this study is clearly assured as the researcher confirmed the ability to trace the research process and that the study was well documented (Tobin and Begley, 2004, p.392). Therefore, the researcher ensured that findings fitted the derived data by documenting the research process until reaching the findings of the study (Carpenter and Suto, 2008, p.150).

10.6.4 Confirmability

Confirmability has already been achieved in this study as the researcher confirmed that the findings were clearly linked to the data (Padgett, 2008) and determined by the

respondents and not by the researcher's perspective (Lincoln and Guba, 1985, p.290). For example, this research has quotations from participants as shown in chapters six, seven and eight (Liamputtong, 2009, Carpenter and Suto, 2008, p.156). As well as, Appendix F, this shows the way that concepts and categories were grounded in the data.

10.7 Limitations

Like any other study, this research has limitations that need to be acknowledged. But, before discussing these limitations, the researcher would like to announce his previous experience and current field of work in order to help other researchers validate this study and to acknowledge the way the researcher influenced this study (see section 4.2.2 and 10.6.1). The researcher has a computer science background through achieving a Bachelor of Science in Information Systems and a Master of Science in Distributed Systems and Networks. Currently the researcher carried out the work described in this thesis for the degree of Doctor of Philosophy at De Montfort University. Moreover, the researcher has fifteen years experience in the field of computing and has held many positions in Saudi Arabia, as a programmer, networking administrator, system analyst and as a project manager. The following indicates the limitations that should be considered in this thesis:

1. The theoretical framework of this research is limited to one country, Saudi Arabia and it cannot be generalised unless more research is done in order to confirm its findings. Other researchers who want to apply this study in their research should understand the complete situation, conditions and limitations of the thesis before conducting their study.
2. In regards to the generalisation part, the findings from this study are limited to particular events, people, location, culture, groups, and organisations. Therefore, it cannot be representative of others (Bryman 2008, p.391). But, it can be considered as a good basement for further work bearing in mind to apply different research methods for validation purposes.

3. Timing may play a major role in the findings of this research. This is because, findings have limits with regard to technology and findings may differ when circumstances in society change.
4. This research was conducted by applying grounded theory method as a qualitative approach. Some may argue that the research samples in this study cannot represent the whole population. As seen in table 6.1 the researcher spread the interviews demographically during the first empirical study to improve representativeness. This research, however, is a qualitative one and by its very nature, the number of interviews is limited. The main aim of the research is to identify and obtain a better understanding of the factors affecting consumers' adoption of e-commerce and not to quantify the problem under consideration.
5. As seen in chapter six and table 6.1 most of the participants are educated and they have experimented with the Internet. This is because Saudi Arabia is ranked third in the world in terms of public expenditure on education and third in total government spending at twenty-seven percent of total national income (NationMaster, 2011, UNSD, 2011). Therefore, it is important to note the number of citizens with low education or who are illiterate among the Saudi population is small compared to some other developing countries.
6. Even though this thesis complies and meets the regulations in terms of translating from Arabic to English and from English to Arabic, There may be a bias during the translation process.

10.8 Ethical considerations

This section presents the perceived ethical considerations, how the researcher ensured that these did not arise, and finally, the perceived ethical issues in regards to this study.

The researcher took into account the ethical considerations from the beginning of this study and during all phases of the research plan. Because this study focuses on people (consumers and suppliers), the researcher ensured that ethical approval had been obtained before starting the empirical study. The researcher gave his utmost effort to:

- Protect participants from any harm, damage, discomfort or pain such as psychological, financial, or social harm.
- Made sure to treat the received data in a confidential way, and made sure to consider the right to privacy and anonymity for all participants.
- Ensured that the researcher explained his findings afterwards.

Furthermore, the study evaluated the potential ethical harm that may arise and then ensured to:

1. Behave according to appropriate ethical standards.
2. Consider how this research might negatively affect participants.
3. Protect researcher and his supervisors from being faced with ethical problems or situations.

As a result, this study is aware of the potential ethical issues that may occur during the empirical work and, therefore, the researcher gave his utmost effort to ensure that potential ethical problems were avoided. As a result, the researcher considered different ethical issues that may have arisen as seen below and gave his utmost effort to avoid these potential problems (Homan, 1991), (Bulmer, 1982), (Sieber, 1982):

1. Voluntary participation: This study ensured to let participation be voluntary and not forcible. Participants were told that there would be no negative consequences in case participants did not participate in this research as stated in section 5.3.1. During the empirical study, the researcher avoids interviewing people at certain times such as during prayers time and in case prayer time is due to be performed. On the other hand, and during the interviews with suppliers, the researcher ensured that he clarified to participants that their organization has permitted this interview and at the same time, ensured that participants understood that participation was voluntary, understood that there was no consequence for not participating in this study, and understood that there was some information that will not be given to their organization/employer.

2. **Informed consent:** The researcher ensured that participants understood the questions and were informed about any potential negative consequences in regarding to participation in the research as seen in appendix B. The letter showed information about the project under consideration, the participants' rights, all the sufficient information to ensure participants were able to decide whether to participate or not, information about the researcher, a brief on how participants are selected, contacts information, and a complaint form.
3. **Confidentiality:** In regarding to confidentiality, the researcher was aware of the utmost importance of this issue as this study ensured that no one knew who the participant was and at the same time, the participant's identity was not exposed in any of the study reports. For example, and as seen in table 6.1, each participant in this study is referred to as two characters such as "W2" and "C3". This means that participant called "C3" is the third participant from the central region and so on. Moreover, it has been put in consideration to not raise any information that may benefit other competitors.
4. **The potential for harm:** This study considered the importance of protecting participants from any physical and emotional harm. However, this research discussed the e-commerce adoption and therefore, it had less potential for any harm or offense that may occur when comparing it to other studies such as examining sexual harassment. But, in some cases where the participants are belonging to a particular organization and in order to protect him/her, the researcher agreed with the organization's senior management to not give them the participants' information. Moreover, the researcher provided participants with information on the appropriate support organizations/advisors which can help in case of any harm which occurred.

In spite of these considerations, there should be issues that may be perceived as an ethical concern. For example, the Saudi Arabian cultural Bureau (SACB) had supported the researcher with an official letter to help in performing the particular empirical work and as a key helper in order to get access to some of the government agencies. But, on some occasions, it may give a reverse reaction from some government agencies which

may have custody to deal with and fearing liability.

10.9 Reflection on the role/biases of the researcher:

This section presents the biases of the researcher in this study and it is a complementary to sections 5.3.2, 5.6.1, 5.6.4, and 10.7 which have mentioned some issues in biases.

Because, this study is driven by the researcher where his options play a major role in deciding the road map of the research as stated by Denzin, (1989, p. 12) "Interpretive research begins and ends with the biography and self of the researcher". In other words, researches in general are affected and influenced by the researcher's beliefs and values. But, at the same time, a researcher in qualitative research is playing an important role in the process and cannot be separated from the topic under investigation. Therefore, this section presents the role/biases of the researcher in this study and what the researcher did in order to reduce the impact of his biases.

In regarding to sampling, qualitative research is more purposive and therefore, participants were selected in order to get useful data for the study. Sometimes, selective samples were affected by the researcher. Therefore, in order to avoid this bias, the first empirical study was conducted with 23 participants from the five regions in Saudi Arabia as shown previously in table 6.1. The research, in each region, was conducted in public areas such as shopping malls, coffee shops and in the street with no appointments. At the beginning of the study, participants were chosen at random from these regions while taking into account the application of theoretical sampling to answer questions not answered by the randomly selected participants. The random selection in the first empirical study was useful for reducing the impact of the researcher's bias.

Official papers were carried from De Montfort University showing the importance and purpose of the study and from the sponsor of this study, the Saudi SACB in London, asking the authorities and people in Saudi Arabia to help. These two papers helped to save time and avoided the potential risk of not having the authority to conduct this study. But, at the same time, it may influence or affect the participants' answers by bringing a possibility for a negative impact on the second empirical study which was conducted

with the public and private organizations inside Saudi Arabia. The organizations may and may not speak freely since this study is sponsored by one of the government's agencies.

During interviews, the findings should not reflect the bias of the researcher and therefore, after each interview, as illustrated in section 5.4, the audio-recorded responses were transcribed to provide an initial analysis for grounded theory process purposes. The questions during the interviews were direct and simple and the researcher avoided placing a participant under pressure in order to confirm an answer or situation. After each interview, the researcher gave an opportunity to each interviewee to end their interview with their own comments. Finally, the researcher confirmed his understanding of the interviewee's answers. This technique increased the credibility of the research as pointed out in section 5.6.1.

Following GT analysis, the transcripts were read repeatedly (Regmi et al., 2010) and GT coding procedures (which are open, axial and selective coding) were applied. During this empirical study, all twenty-three interviews were transcribed in the Arabic language and then translated into English by the researcher. The translation was submitted to a focus group (PhD researchers who are fluent in English and Arabic) to make sure that the translations were correct. Twenty-five percent of the total interviews (five interviews) randomly selected were reverse translated using different translators. This proved that the original translation had been sufficient reliability with no discrepancies in meaning (Regmi et al., 2010, p.20). During analysis, some participants were re-contacted and were asked to clarify certain parts of their responses. After each interview, the participant was allowed to lead the researcher to issues or ideas that were not taken into account during the interview. Theoretical sampling (explained in section 5.2.2), was conducted in order to find answers to some of these questions or to confirm some critical issues such as finding new participants according to some criteria or returning to previous participants (who authorized the researcher to contact them again) to ask further questions. The research then reached data saturation point (illustrated in section 5.2.3), where no new ideas or data could be gathered that could help this study. Therefore, the first empirical study had reached completion.

Despite the researcher having good background knowledge, he was not steeped in the literature that pertains to this particular area of research. This was because a GT method seeks discovery (Strauss and Corbin, 1990). The researcher, however, came to the research with some background in the technical literature such as academic papers and non-technical literature such as diaries and other reports to commence the study and derive the list of questions. Some questions and topics were added after the first interview by conducting a GT data analysis. This facilitated in identifying new topics to include any that had surfaced during the interview. After the two empirical studies were completed, the researcher engaged in a detailed review of the relevant literature to compare it with the research's findings.

10.10 Recommendations

This research makes some recommendations. To begin with, awareness is considered an important issue in this study that influences consumers' adoption of e-commerce. TV, newspapers, booklets, brochures, flyers and other kinds of media play a major role to instruct and inform people and suppliers about e-commerce as illustrated in sections 6.2.6, 7.2.6 and 8.2.6.

Second, there is a need for relevant e-commerce laws and policies in Saudi Arabia. For example, a return and refund policy does not apply in Saudi Arabia (see sections 6.2.7, 7.2.7 and 8.2.7). This research exposes the need for anti-trust/competition law and LLU to maintain and promote competition in local markets (section 7.2.7 and 8.2.7). For example, the European Union applies the European Union competition law and United States applies the anti-trust law that maintain competition within their borders.

Moreover, this study reveals the need to activate USF to meet universal service goals and support rural areas with a telecommunication infrastructure such as distributing Internet broadband in these areas (see sections 7.2.2 and 8.2.2). Local governments need to give attention to the importance of USF activation as most Internet providers are profit seeking.

Local governments need to authorise the use of debit cards online and allow its

consumers to be able to purchase online by using them. They also need to authorize refunds to be debited into debit and credit cards (see sections 6.2.5, 7.2.5 and 8.2.5).

This study suggests, as discussed in chapters seven and eight, to distribute and expand the use of these pre-paid credit cards and allow people to buy them from local stores without any restrictions and with no need to link them to their bank account. This solution can encourage consumers to buy online without fear of fraud. These cards are a way of reducing credit cards frauds.

Local governments need strong co-operative responsibilities among its different agencies such as MOCI, BIP and the police (see sections 7.2.6 and 8.2.6).

Insurance facilities need to be improved, such as, mail and credit card insurance (sections 6.2.5, 6.2.8, 7.2.5, 8.2.5 and 8.2.8).

This study recommends an official platform or portal that is administered by a trusted authority such as CITC as illustrated in sections 6.2.12, 7.2.12 and 8.2.12. The e-commerce portal contains information, recommendations and warnings on the one hand and links to trusted suppliers and related government agencies according to certain government criteria on the other to help promoting trust among consumers.

Delivery services need to improve in order to adopt e-commerce. For example, there is a need to provide home addresses in rural areas, eliminate or reduce compulsory annual post fees and apply the right primary and secondary keys (sections 6.2.8, 7.2.8 and 8.2.8).

Privacy needs to be defined in Saudi Arabia and the appropriate privacy laws enacted to protect people and firms (see sections 6.2.10, 7.2.10 and 8.2.10).

10.11 Further work

Further work may build upon this research in a number of areas:

1. The framework models for this research were based on Saudi Arabia; therefore, further work may needed to apply this framework to other countries such as the Gulf States, Arabic countries, Islamic countries and countries outside this region. It would be possible to conduct a quantitative study to establish the extent of the phenomenon that has been reported in this thesis.
2. This thesis suggests conducting this study in a different environment, culture, circumstances and time scale to extend the research findings. For example, there may a need for further research conducted other developing countries such as, Eastern Europe.
3. Some of the findings originated from only one or two participants. For example, people over 54 years were not willing to adopt e-commerce and were resistant to change as seen in section 8.2.8. Therefore, there may be a need for further work to confirm these findings. It was not possible for the researcher to pursue this issue owing to the constraint of time.
4. The USF should receive more consideration in further work. This is because this study found a lack of attention to fund the USF, which resulted in the delay of e-commerce adoption in rural areas. A further investigation may need to discover factors that affect governments in order to activate and fund the USF. This can help to overcome some of the obstacles related to this factor.

10.12 Summary

This study applied grounded theory as a qualitative research approach to investigate factors affecting consumers' adoption of e-commerce. Saudi Arabia was used as the context of the study. This research conducted two empirical studies in Saudi Arabia. The first one was focused on consumers' perspectives and the second one on suppliers' and government's perspectives. The first empirical study linked with the second one by applying theoretical sampling in order to move theoretically from the former to the latter. The researcher analysed the first empirical study and theoretically linked the results with the related suppliers and government agencies to convey to them consumers' perspectives. This allowed suppliers and government agencies to express

their opinion upon the consumers' comments and if possible add new factors not mentioned in the first empirical study. These two empirical studies were formed into a combined framework presented in chapter eight.

This research revealed many findings. It confirms many issues in previous literature such as security, privacy, delivery concerns and some of the government's issues. Moreover, it contains a contribution to knowledge by contradicting some issues that are found in the literature but no longer count as barriers to e-commerce such as the influence of the Arabic language and the influence of the Islamic religion.

This research has theoretical, practical and methodological implications, as stated in section 10.5, that help researchers, governments and private businesses to understand factors that enable or prevent consumers from adopting e-commerce.

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Appendix A: Ethics Approval

ADVANCE APPROVAL OF ACTIVITIES INVOLVING HUMAN RESEARCH ETHICS

Title of Activity:

An investigation of the factors influencing consumers' adoption of e-commerce: Saudi Arabia empirical study

Researcher / Student Name: Fahad Aleid**Supervisor Name:** Professor Simon Rogerson**Brief description of activity objectives:**

This study is about the factors affecting consumers' adoption of e-commerce in Saudi Arabia. A qualitative research approach will be adopted to investigate the factors mentioned above and identify an initial framework to help governments and suppliers in understanding these enablers and barriers to the consumers' adoption of e-commerce. The following is a brief description of activity objectives:

1. Identify the main factors (enablers and barriers) for consumers' adoption of e-commerce from their perspectives.
2. Identify the enablers and challenges that face private sector organizations to adopt e-commerce system in relation to consumers and get their comments on consumers' remarks.
3. Develop a model for governments and suppliers to promote consumers' acceptance.

If the review of the activity results in major ethical issues being identified (outcomes 3 or 4) describe the issue(s) and procedures in place to address them (outcome 3 only)

Review of activity

Has the research proposal identified any of the following research procedures?

1. Gathering information about human beings through: Interviewing, Surveying, Questionnaires, Observation of human behaviour
2. Using archived data in which individuals are identifiable
3. Researching into illegal activities, activities at the margins of the law or activities that have a risk of injury

If any of the above occurs, does the proposal satisfactorily identify the ways in which the researcher / student will be dealing with the following (tick boxes for "YES"):

- Providing participants with full details of the objectives of the research
- Voluntary participation with informed consent
- Written description of involvement
- Freedom to withdraw
- Keeping appropriate records
- Signed acknowledgement and understanding by participants
- Consideration of relevant codes of conduct

Do the procedures identified necessitate formal assessment? YES NO

If so, has the assessment been carried out? N/A

Other factors that could/will give rise to ethical concerns:

There are four possible outcomes from reviewing the activity against the three categories and the procedures in place:

1. no ethical issues
2. minor ethical issues, which have been addressed and concerns resolved
3. major ethical issues, which have been addressed and concerns resolved
4. ethical issues that have not been resolved

Tick the outcome of the review: 1 2 3 4

Authorisation

- The reviewer authorises those activities in the first three outcomes.
- Activities in the third outcome are reported for information only to the Faculty Committee
- Activities in the fourth outcome are submitted to the Faculty Committee for resolution

Signature of researcher/student	: Fahad Aleid	Date: 26 July 2007
Signature of supervisor	: Professor Simon Rogerson	Date: 26 July 2007
Authorising signature	:	Date

Appendix B: Information Letter to Participants (Research Consent Letter)

Dear

This letter is to give you information in the hope that you will participate in a study for a project as part of my PhD study in Information Technology at De Montfort University. This study will inform my project on factors influencing e-commerce adoption among consumers for the degree of PhD at De Montfort University.

The discussions will be so that I can gain knowledge of e-commerce status in Saudi Arabia, to gain understanding of the factors affecting the adoption of e-commerce among consumers and to learn more about the topic area and develop my research skills.

Participation in this study is voluntary. It will involve an interview of approximately 30 to 60 minutes in length.

You may decide not to answer any of the interview questions if you wish. You may also decide to withdraw from this study at any time by advising me (Fahad Aleid). I may ask for clarification of some points some time after the interview but you will not be obliged in any way to clarify or participate further. Beyond that, I will not seek any more interviews or make any further contact with you about this after the interview unless you ask me to.

If you request, the information you provide can be considered confidential, except that with your permission anonymised quotes may be used. If you request confidentiality, beyond anonymised quotes, the information you provide will be treated only as a source of background research, alongside book and web-based research [and interviews with others].

If you request, your name or any other personal identifying information will

not appear in the course project paper resulting from this study; neither will there be anything to identify your place of work or business.

Notes collected during this study will be retained for the rest of the academic year in a secure location and then destroyed, if you request. The information gained from this interview will only be used for the above objectives. It will not be used for any other purpose and will not be recorded in excess of what is required.

I may present the study findings to the class, a conference and for some other academic purposes.

Moreover, my supervisors, internal and external examiners will also have access to the interview data itself (unless there is mention of illegal behaviour in the interviews). There are no known or anticipated risks to you as a participant in this study (unless you mention issues of illegality).

If you have, any questions regarding this study or would like additional information then please ask me before, during or after the interview.

I can assure you that this study has been reviewed and approved by my supervisors and the higher committee of the university.

Thank you for your assistance in this project.

Yours Sincerely,

Fahad Aleid
PhD researcher
De Montfort University, UK

Appendix

I have read the information presented in the information letter about a study being conducted by Fahad Aleid for his PhD course project at De Montfort University.

I have had the opportunity to ask any questions related to this study and received satisfactory answers to my questions and any additional details I wanted.

I am also aware that excerpts from the interview may be included in the PhD thesis to come from this research. Quotations will/will not be kept anonymous. I do/do not give permission for my identity to be revealed in research reports.

I was informed that I may withdraw my consent at any time by advising the student researcher.

With full knowledge of all foregoing, I agree to participate in this study.

Participant Name: _____

Participant Signature: _____

Interviewer Name: _____

Interviewer Signature: _____

Appendix C: An example of a translated interview with consumers

Hello, my name is Fahad Aleid and I am a Ph. D. student at De Montfort University. I am doing a study, which focuses on Saudi's perceptions and practices regarding electronic commerce in Saudi Arabia. Do you have time to talk to me about my research? If possible, I would like you to participate in this study by having me do an interview with you that take between 30 minutes to one hour. If you do not mind, I need to record this interview for academic purposes. Participation is voluntary and there are no risks in participating, as explained on this sheet.

Thank you,

Researcher: Do you use the Internet?

Participant: Yes, I use the Internet.

Researcher: Do you use it regularly?

Participant: Yes, I use the Internet regularly.

Researcher: How often do you use it?

Participant: I use the Internet daily.

Researcher: For how long?

Participant: For long time may be seven to nine years.

Researcher: How many hours do you use it daily?

Participant: I surf the Internet for two hours daily and sometimes more.

Researcher: You mentioned that you use it for two hours and sometimes more in the

daytime. So, what are you using it for?

Participant: I surf the Internet for academic purposes, news, email, messenger, connecting with people and relatives, electronic commerce, buying from the Internet, reading newspapers. This is what I mostly use it for and also for e-banking.

Researcher: Excellent. You mentioned that you already used e-commerce in your answer, is that right.

Participant: Yes, I already deal with it.

Researcher: So could you please tell me what the meaning of e-commerce is?

Participant: Electronic commerce is the shopping over the Internet. I can surf the Internet while I am staying in my house and can search for products then compare to find the cheapest price. I use Google to search for products and services then buy it online to be delivered to my house.

Researcher: Do you mean just compare or compare and buy?

Participant: First compare. Everything in my hand. I can find the cheapest price. Also it is easier for me and more convenient than the normal way by taking the car and searching for what I want. However, with e-commerce products and services will arrive at my house. For example, when I was in the USA I was living in a small town. Sometimes I cannot find my needs in this small town so I surf the Internet to buy it then it will be delivered to my house.

Researcher: So, what about the barriers that prevent consumers from adopting e-commerce?

Participant: Do you mean e-commerce in Saudi Arabia or anywhere?

Researcher: In general then in Saudi Arabia.

Participant: I think e-commerce does not have any disadvantages in developed countries. I feel it is in the right way. For instance, e-commerce in the UK and in the USA is excellent, suitable and comfortable for use. Moreover, if you are not happy

about product you can return it back. However, in Saudi Arabia there are many barriers. Because of that I am afraid of buying online. This is because my money can be stolen online. How do I know that this website is reliable? Customers in Saudi Arabia do not know about most of the Saudi websites if it's real or fake. There is no e-commerce law in Saudi Arabia. The second issue in KSA is that consumers are not protected. Third issue, Internet in Saudi Arabia is in very bad condition. Sometimes, the Internet is disconnected for hours or even for the whole day. Fourth issue, computers crime act (law) is not activated in KSA. If an online crime happened in KSA, authorities cannot prove it or provide evidence. Also, in some cases where credit cards information have been stolen online, the Saudi banks will not protect you nor return your money. Fifth issue, there are no addresses for our houses. However, my mails, such as letters, are delivered to our mailbox, which is located in the main post office in city centre. This post office is far a way from my home. It is easier for me to go and buy from the shopping malls rather than buying from the Internet and pick it up from post office. The shopping centre is closer to my house than the main post office. Do you know that in order to get our mails we should pay annual fees? They increased the annually subscription fees tripled the original price, therefore, we do not like this service since we know their quality of service is under the standard. Sixth issue, those shops in KSA do not have a return policy. If I buy anything from shops, it will be very difficult to return it back because we do not have a return policy. I feel e-commerce in Saudi Arabia will not be successful in dealing with consumers unless it follows and include the same policies that developed countries cover. This will let consumers in Saudi Arabia feel more satisfy.... Our government is concerned about e-government but did not take the initiative in the e-commerce field.

Researcher: This means you have already bought or sold through the Internet.

Participant: Yes I did.

Researcher: What sort of things?

Participant: Everything. I bought clothes, books and whatever.

Researcher: Lot of things.

Participant: I bought different things, Laptop, Desktop.

Researcher: All these things inside Saudi Arabia!

Participant: No, I have not bought online in Saudi Arabia. All those things from outside Saudi Arabia.

Researcher: That means you have not deal with electronic commerce inside Saudi Arabia.

Participant: If I want to deal with electronic commerce inside Saudi Arabia, where should I go! And where should I search! Nothing is there. No websites available in Saudi Arabia.

Researcher: Do you mean that there are no websites related to the Saudi market?

Participant: Yes, it is difficult to find e-commerce websites in Saudi whereas in the UK, just press a button and you will find thousand of websites.

Researcher: What about if you are in Saudi Arabia and you want to buy products from outside Saudi Arabia.

Participant: This depends on the foreign websites and if it does deliver to Saudi Arabia. However, I have not thought about buying from outside Saudi Arabia.

Researcher: When was last time you bought or sold online?

Participant: Ten days ago or two weeks.

Researcher: At this time you where you inside or outside Saudi Arabia?

Participant: Yes I was outside Saudi Arabia.

Researcher: You mentioned that you haven't dealt with e-commerce inside Saudi Arabia and you mentioned the barriers like the Saudi post. (**Participant** interrupts and said)

Participant: Websites security is one of the barriers that limit the use of e-commerce in

Saudi Arabia. As I mentioned before the law in Saudi Arabia is another barrier. Also the difficulties in returning products in Saudi Arabia are another issue. No one in the Saudi market thing about customer satisfaction. Also, do not forget credit cards.

Researcher: Please give me more information about credit cards?

Participant: Do you mean with e-commerce?

Researcher: Yes please.

Participant: I have a credit card but it is not from Saudi's banks.

Researcher: Do you feel that credit card is a barrier in dealing with e-commerce in Saudi Arabia?

Participant: No, credit card is not a barrier in dealing with e-commerce. However, I am not planning to use it in Saudi Arabia. I already used it outside Saudi Arabia.

Researcher: Why not issuing the Saudi's credit cards

Participant: Now a days, most of the Saudi's banks are able to issue Islamic credit cards and, therefore, people are more likely to issue it. But, before couple of years, Islamic scholars prohibit the using of credit cards because it may have Riba (interest), which prohibited in Islam. However, I am afraid from the Saudi's banks. They are not going to protect me in case of online fraud. The system in Saudi Arabia is not clear and as I said before there is no rights for consumers.

Researcher: Do you think credit cards discourage e-commerce in Saudi Arabia? Or do you think there are other things more important?

Participant: Credit cards are not a problem. You can order credit card easily from the Saudi banks with a limited amount of money for example SR 2000. The problem as I mentioned before are the returning policies. Are they going to allow consumers to return products bought online? Another issue, even if you want to buy products or services in Saudi Arabia, you definitely will not find online shops. This is because there is no real competition between them yet. Also, there are no standards for everything.

Moreover, which policies are they going to follow? Many questions need a clear answer from the Saudi's authorities.

Researcher: Returning to the benefits of e-commerce, what makes you interested in buying or selling through the Internet?

Participant: I like to buy or sell from Internet because it is easy and more convenience. Also comparing between products make me prefer to buy through the Internet. This makes market close to my hand with just one click.

Researcher: Do you think products will be cheaper?

Participant: For sure, it will be cheaper.

Researcher: What sort of things could prevent you from buying or selling through the Internet?

Participant: Saudi post does not deliver products to our houses. Also, there are no clear policies to deal with consumers in Saudi Arabia. Moreover, there is a poor infrastructure, which includes e-commerce law system to protect both sides. Also, there is a weakness in the law system in dealing with consumers. The third point is that there are no websites related to e-commerce in Saudi Arabia, which lead to the disappearance of competition. So if I want to buy online in Saudi Arabia, I am sure that there are less than three websites to surf. This is leads to lack of choices. It is like a big area with just one or two or three small shops.

Researcher: You mentioned that there are one, two or three online shops in Saudi Arabia can you please count them.

Participant: I do not remember them and I do not trust them.

Researcher: Why you do not trust them?

Participant: I almost trust American and European shops.

Researcher: What about Saudi ones?

Participant: I am not going to buy any product from a local website unless it is not found locally and it cost small amount of money. In this case I may buy it to check the website reliability. Also, I will buy online from shops I already know and have dealt with them before.

Researcher: What about if a famous shop in Saudi Arabia starts to sell online

Participant: I trust famous and big companies inside Saudi Arabia such as “Extra” and “Carrefour”, however, it depends on the price and delivery options. Sometimes, it is easier for me to go and buy directly from shops located on the street rather than buying online then go to the city centre where my post office is located.

Researcher: Which one you trust more the online shop (visual shop), which does not have branches in Saudi Arabia or the one, which has branches on the main street in Saudi Arabia?

Participant: Of course I trust online shops, which have locations and shops on the main street. However, I will trust shops that offer and show their addresses on their websites, and who build a good trust with their consumers in Saudi Arabia. This is because e-commerce in Saudi Arabia does not reach the level of maturation. We need to concentrate right now on the law, consumers’ satisfaction and consumers protections.

Researcher: Have you had a bad experience or someone told you about bad experience?

Participant: I have not had any bad experience in Saudi Arabia and abroad.

Researcher: What about the good experiences or someone told you about either good experience.

Participant: When I was abroad, I have not faced any problem. This is because; everything is clear such as policies, regulations, products’ informations and so on.

Researcher: If you had or one of your families a bad experience does it prevent you from dealing with e-commerce.

Participant: The answer is no but it may prevent me from dealing with this website. This may be because I am dealing with e-commerce long time ago.

Researcher: What about if you had or one of your families had a bad experience in one of the Saudi websites does this reduce your trust with e-commerce in Saudi Arabia?

Participant: Of course yes.

Researcher: Why?

Participant: No, regulations leads to no trust. For example, there are no return policies in Saudi Arabia. Once I paid, shops will not return the goods. This can happen in the main street, so, and certainly, they will not return it in case of online shopping.

Researcher: Will this prevent you from dealing with e-commerce in Saudi Arabia.

Participant: Yes. However, we hope that e-commerce can be improved in Saudi Arabia soon.

Researcher: What sort of things make you like to buy or sell from a particular website rather than another website?

Participant: I like to buy from websites that have professionalism in designing. Also, I like to buy from websites that have the right security issues. These things are very important in Saudi Arabia but in general, I do not have any problems. Also, I like to buy from the famous e-shops.

Researcher: What do you prefer more, shopping directly (personally) or online?

Participant: I prefer to shop online rather than go and shop from the shops but as I said before; this is not possible in Saudi Arabia.

Researcher: Why?

Participant: As stated before, there are many barriers preventing me from shopping online in Saudi Arabia. However, I like to shop online to comparing between prices, easy shopping, delivery to your home and more convenience.

Researcher: You said that there is no e-commerce act in Saudi Arabia. Have you investigated or searched for this issue?

Participant: I think there isn't an e-commerce law in Saudi Arabia. I have not heard about it.

Researcher: Who would you ask about this law in case you need to know more about it?

Participant: If I am in trouble or want to ask about e-commerce act, I may ask Ministry of Commerce.

Researcher: Why Ministry of Commerce?

Participant: Because it is in general the responsible authority of commerce in Saudi Arabia.

Researcher: Is there any other related authorities? (**Participant** interrupts).

Participant: The Communication and Information Technology Commission....I am not sure but I think Ministry of Commerce is responsible for e-commerce Act in KSA.

Researcher: Who do you think is responsible for legislating and organizing this law?

Participant: I think that Ministry of Commerce, the Communication and Information Technology Commission and the Saudi Arabian Monetary Agency are both responsible for legislating and organizing EC law in KSA. Ministry of Commerce is responsible for shops on the main street. Virtual stores by default are connected to banks, which make the Saudi Arabian Monetary Agency responsible also. The three parties are responsible for legitimating and organizing this law.

Researcher: So what about if you want to ask about this law, where should you go?

Participant: It is really confusing, either Ministry of Commerce or the Communication and Information Technology Commission.

Researcher: What about if you face a problem when dealing with e-commerce in Saudi

Arabia. Where you may go?

Participant: First, I am not going to buy any products that cost much money. Second, I do not know where to complain in case I am in trouble. Even if I complained, nothing will happen and they will blame me because I bought online.

Researcher: Do you think your money will be returned to you by the Saudi's bank?

Participant: I do not think so. They will not protect me and will say why you buy online.

Researcher: At the end of this interview, do you have any suggestions or do you like to add comments or questions?

Participant: I think you covered everything such as barriers and motivations. As I mentioned before the barriers are no home address in Saudi Arabia, lack of e-commerce law, no policies for consumers and no consumers' satisfactions. All these things influence the credibility of e-commerce in Saudi Arabia. In developed countries, you have the right to return products within 14 days but in Saudi Arabia once you paid, you do not have the rights to return products.

Researcher: Thank you very much for your cooperation. Can I contact you later, in case I need more information or in case I need some explanations?

Participant: Please do.

- Sex: Male.
- Age: 25-34
- Education: Higher Education (PhD)
- Monthly Income in Saudi Riyal (£1 = SR 7.2): 8000-12000
- Job title: Government Employee (Working with government)
- Living in: City
- Living area: In the central region (Riyadh).

Appendix D: An example of a translated interview with suppliers

Hi, this is Fahad Aleid, PHD student at De Montfort University in the UK. My research is about the adoption of e-commerce in Saudi Arabia. My research went into 2 stages. The 1st one is interviewing the consumers in streets, shopping malls and other public places such as coffee shops. The first empirical study with consumers resulted with many motivations and barriers in order to adopt e-commerce in Saudi Arabia. In this second empirical study, the researcher wants to interviewee the related organizations such as your organization. Therefore, do you have time to talk? If possible, I would like you to participate in this study by having me do an interview with you that takes between one hour to one and a half hour. If you do not mind, I need to record this interview for academic purposes. Participation is voluntary and there are no risks in participating, as explained on this sheet.

Researcher: Could you please let us know the department that you are working on right now?

SME: I am working on Business Development Department. Our department is concern on the marketing, business and e-commerce issues.

Researcher: Do you have an ICT department?

SME: Yes, we have. However, it is for the technical support only. The e-commerce is related to the business department.

Researcher: So, who is responsible for your company's e-shop/website?

SME: The marketing department is the responsible department. However, one of the problems that facing us as a company is the human recourses. It is not easy to find the right person with good experience especially in the ICT field. Our website has been developed in the recent three years. However, the bookstore's website is still far from

the development.

Researcher: Why is that?

SME: There are many reasons that did make our website is not one of our priorities. First reason is the poor usage among people who want to buy online. The second reason is that local market at the moment is not in a need for e-commerce. Third reason is that people do not have the culture of online shopping. They want to see products in front of them. Forth reason, there is no mail culture in Saudi Arabia among citizens. This is because normal mails do not come to your house but rather you should pick it up from the city centre where all shops are there. Therefore, no need to build an e-commerce system as no one will use it.

Researcher: Could you please explain in more details these barriers?

SME: Of course. There is a Lack of specialized people in Saudi Arabia to plan and run the full e-commerce projects. On other word, we lack of ICT experience. Right now, we are planning to set up an e-commerce department. The main aim for this department is to build our e-commerce system and continue developing the e-commerce system. However, we are still looking for specialized people for this department and could not find. There is a lack in ICT expertise in local market. The other issue is that people is still not willing to buy online. Therefore, we will wait until feeling that people are ready to shop online. Moreover, deliveries will cost us and, therefore, people may find the same product on the main street and will believe that we are expensive. Also, we need the right staff to depend on them. Also still, there is a lack of the right infrastructure for e-commerce in Saudi Arabia. There are no payment systems in Saudi Arabia to connect with Saudi's banks. Even PayPal is not working in Saudi Arabia due to some of the restrictions. Culturally, Saudis do not like issuing credit cards and are willing to issue the normal debit cards, which are not working online.

Researcher: What about the motivations that may lead you to apply e-commerce in Saudi Arabia?

SME: Right now and in the meantime, everything in Saudi Arabia are forcing us to not apply e-commerce. We are looking for profit and will not develop e-commerce system

unless we are satisfied that there will be a good profit.

Researcher: Do you mean that your company's plan is to develop your warehouse locally.

SME: Yes, that is right; we are going to buy the appropriate e-commerce system. However, the software is not enough to build the e-commerce system. We need the data warehouse, integration, logistics, Enterprise Resource Planning (ERP), payment like visa and MasterCard, protection against fraud, products' delivery carrier such as ARAMAX and order delivery cycle. All these will be integrated with our software. Also, do not forget the customer satisfaction, as many organizations in Saudi Arabia do not pay attention to this issue such as queries, questions and customers' problems. All these issues need a special department to control. Therefore, we need the right human recourses.

Researcher: So, you are not going to give it to a specialized company that can do all these issues and submit the whole project as a one complete project.

SME: We are looking for ICT company that can handle the whole project but unfortunately did not found any until this moment. Then we changed our mind and found that; it is very difficult to give one company all the work. It is impractical to give it to one company and then get the full project because our project has an operations. We are going to import the software but our e-commerce specialist will do the integration with the current system and with our local warehouse. Also, they will responsible for the support and other things related to this system. We have to have the ownership of the software. Because, I cannot depend on the other companies as they may terminate, stop or change their nature of work.

Researcher: You mentioned that your company did not find the specialist human resources in the Saudi Market. So, did you search outside Saudi Arabia or among Saudi universities?

SME: Yes, you are right but we are not looking for fresh graduated because our e-commerce project needs a good experience in managing large projects with good knowledge of the ICT systems and this is the missing link. Therefore, it is very difficult

Appendix

to find the appropriate people. Also, we do not want people from outside Saudi because we need ICT specialist inside Saudi Arabia to continue working with us as developers and system support. We are seeking for these specialists for around 6 months ago until this moment.

Researcher: Did you do an initial plan for this project?

SME: Yes, we did.

Researcher: What about the budget?

SME: Still do not have a price in mind. However, it may cost between 2-3 million dollars.

Researcher: So, you are going to establish an e-commerce department that can take care of the ecommerce system.

SME: Yes, that is right and our ICT department will be the technical support for this department. We need people who know the shoppers' behaviours.

Researcher: Do you deliver products to homes?

SME: No

Researcher: Do you have a plan in the future to deliver products with the new e-commerce system?

SME: Our plan is to get a third party for the delivery process such as Aramex and DHL.

Researcher: So, what about your deliveries between your other branches?

SME: We are contracting with private post carriers such as Aramex.

Researcher: What about the national post services?

SME: The national post carrier is much cheaper but we can not depend on it because our products are expensive such as laptops, TVs and other expensive goods. The national post carrier has a bad image since ages because it is more likely to lose or

damage products during deliveries. Also, they do not have a good tracking system, which can help us to know the delivery time between our branches. We need professional post carrier who can pay us in case of delay, lost or damage during deliveries. The national post carrier is still managed by the old mentality. They are not working for profit as other private carriers. Their employees are not qualified and no one supervisor and observe them and therefore there are a high percentage of delays and lost during deliveries.

Researcher: Have the private sector take the initiative in the field of e-commerce.

SME: Our question is that why I spend money without revenue/ profit? We know that this will not achieve the required profit. We need to start at the right time. There are differences between facts and perceptions. The fact is that people are not willing to spend money online today. We did some research and a few people are willing to buy online. The percentage is 10-15% willing to buy online. So, I cannot spend millions of dollars for a minority of people. People right now are willing to search and compare prices but not willing to buy online. Right now, we are in a technology race. Many other competitors are working on plans for their e-commerce websites. We have a draft plan and we are going to start phase one on Jan 2010 and the second phase on June 2010 and so on. We should employ the right person for this project before January 2010. Therefore, phase one is a search engine only. Then stage two, is to check the product availability and then reserve it online and then go to buy it from our bookstore. Right now, we are very active advertising online. We do advertising in many websites and send an advertisement emails to consumers.

Researcher: Let me ask you about the return and exchange products on your bookstore, what is your policy?

SME: We have three days for return and exchange. However, we do not return or exchange books or electronic devices. This is because some consumers copy the book and then return it back for refund. Also, we do write in our bill that there is no returns and exchange but the local manager of each branch has the ability to return products if it is not opened or has a factory fault.

Researcher: Does local authorities asked you or forced you to apply return policies?

SME: No one can force us to apply such policies and I disagree with forcing shops to apply return and refund policy. This is because these policies will cost shops. In Saudi Arabia clients buy products and already know that they cannot return their goods back.

Researcher: So what is your plan for return and exchange policies in the online shopping?

SME: Even if consumers bought online, there will be no return of the goods. This is because we send the product to consumer by third party and this cost us. Therefore, if customer returns it back we will lose money.

Researcher: What about if consumers change their mind and do not like the product or refused to accept it from the private post carrier such as DHL?

SME: Consumers already paid the product price online and DHL are not responsible to return it back to us. They will leave it in front of your house or keep it in their store until you sign that you got the product.

Researcher: What factors that make your company more interested to start the e-commerce project?

SME: First of all, for the future and the potential opportunity online. People start to spend their time surfing the internet. It is important to be present with people even online. Right now, our aim is not sell online but we need to be present online as much as we are on the main street. As said in wisdom far from eye, far from heart.

Researcher: Do you have a marketing plan for your future e-commerce website?

SME: Of course, yes. We should have a marketing plan. It is the same as if we open a new branch. We should give reasons to people for visiting our online website.

Appendix E: An example of a translated interview with government's agency

CITC

Hi, this is Fahad Aleid, PHD student at De Montfort University in the UK. My research is about the adoption of e-commerce in Saudi Arabia. My research went into 2 stages. The 1st one is interviewing the consumers in streets, shopping malls and other public places such as coffee shops. The first empirical study with consumers resulted with many motivations and barriers in order to adopt e-commerce in Saudi Arabia. In this second empirical study, the researcher wants to interview related organizations such as your organization. Therefore, do you have time to talk? If possible, I would like you to participate in this study by having me do an interview with you that take between one and one and a half hour. If you do not mind, I need to record this interview for academic purposes. Participation is voluntary and there are no risks in participating, as explained on this sheet.

Researcher: Some of the consumers mentioned that there is a reduction in the Internet prices. However, it is still expensive comparing to other countries. What are your comments?

CITC: We did two surveys through a famous specialised marketing company. The first wave has been published in our website. You can search by "Internet survey result." Also, our 2008 survey has been finished and not yet published in our website. Our 2007 survey has contacted 2000 person and one of the questions is about the Internet consumers' satisfaction. The thing that surprising me that people are happy about the Internet services in Saudi Arabia. This is the benefit of survey that everyone is talking. Because, in the street just people who are not happy will talk and people who are happy about the service will not talk. People who are not happy believing that our Internet service can be better. However, if comparing with developed countries, the Internet

broadband prices in Saudi Arabia and the neighbouring countries is still expensive but if you compare the Saudi Internet broadband price with the neighbouring countries like UAE and Bahrain, you will find Saudi Arabia cheaper than these countries on the 1 mega bit per second. If you go to UAE there is an Internet monopoly. Also, if you are talking about Internet dial up, I think the price is fair, which is 0.05 SR/minute. However, if you are talking about the dial up Internet speed I am with you as it is very slow. The quality is bad and there is a disconnection between times to time. So, I am agree with you in the Internet services and do not agree with you in the prices specially comparing with neighbouring countries.

Researcher: Why not comparing with the developed countries.

CITC: This is a very good question. I hope that we can be like the developed countries. This is because the developed countries have the following criteria. First, the developed countries have a very good comparison environment in their data services field. On the other hand, we just start to issue Internet licenses in Saudi Arabia. The second point is the international connectivity means that all the Internet connections come from Europe and America. Our international connectivity in Saudi Arabia is low. Therefore, the cost of the Internet are expensive and the Latency (is a measure of time delay experienced in a system) also will be more. We need some time to achieve the European level and to have a good infrastructure. However, not all the European countries have the same Internet services level. The west of Europe is not like the east of Europe. I hope to be like Europe and do a comparison with them and I think this must be our aim. Right now, I have a bigger problem. Most of the Internet services focused on cities. The small towns and villages in Saudi Arabia can be called isolated areas. No one of the Internet providers is interested to build the Internet infrastructure in these villages. This is because of the profitability factor, densely populated in these areas and low incomes which make it more difficult for telecommunication providers to invest in these areas. So, there are two important things. These are, the availability of services and acceptance of these services, it is supply and demand. The services infrastructure is expensive for the telecommunication companies. As you know that, Saudi Arabia has a huge area with less population. So, it is difficult for the telecommunication companies to provide services for small number of people who live hundreds of kilometres from the nearest

service area. Secondly, people who are living in villages have low incomes, which make it more difficult to be interested in the Internet services. This make them not interested in ordering the Internet service into their home. Thirdly, is it worth to invest money to build the telecommunication networks for a small number of people with low income? We believe that this is a huge problem. In Europe, it is not a problem. As their countries, have small areas with balanced distribution of population such as the UK, France and Germany but it is a problem in countries like USA, Canada, North America and Russia. USA has difficulties in their Internet broadband. In summary, I believe that we can be better in the Internet services but it is not one of the factors that affect e-commerce in Saudi Arabia.

Researcher: Some of the people who are living in these villages stated that Internet broadband is unavailable and they forced to use the dial up service. What are your comments?

CITC: That's true. Many areas in Saudi Arabia do not have the Internet broadband infrastructure. As I told you that profitability is one of the barriers as Saudis villages and towns have a small number of population.

Researcher: The main telecommunications providers stated that they are applying WI-MAX technology in order to reduce the infrastructure cost among rural areas. What are your comments?

CITC: This is not true. As the STC already have the wired broadband and they do not want to make a competition between the WI-MAX and their wired Internet broadband. Also, as we know that most STC consumers are wired broadband users only. Also, Mobily has the main company, which called Mobily and also owned Bayanat Alola company. As Bayanat Alola Company work in the data transformation field which the Internet services is part of their work. So, Mobily has the 3G Internet connection and also have the WI-MAX through Bayanat Alola. However, their WI-MAX is working on 3 cities only in Saudi Arabia and they focused on the 3G USB connection. The question is as the following: Is Mobily going to buy the WI-MAX equipments to install it in these small villages. I doubt it. We have all the numbers and we know everything about the telecommunication status in Saudi Arabia. For example, the percentage of using the

Internet broadband in Najran or Albaha is 2% of population. It is a shameful result.

Researcher: Why not force the telecommunication providers who got the license to work in Saudi Arabia to distribute their infrastructure around the kingdom.

CITC: Ten years ago, the Saudi government was working on the telecommunication services. So, there were not any telecommunications companies involved in these services. Therefore, the Saudi government was the only owner of the Saudi telecommunication sector. Then recently, it has privatized this sector and gave the STC a license to manage and work the telecommunication sector. After 5 years, the Saudi government sold some of its STC shares. However, it is still monopolize and control of the Saudi market. In 2004, the Saudi telecommunication market has started to be opened. From this year, telecommunication providers have started to work in the Saudi Market. However, these telecommunication providers have competition between each others, have owners and their first aim is to gain profit. These companies has what called the “Rollout obligation”, which means the terms and conditions of their services. They did an excellent service in the mobile services. They almost covered all the Saudi areas. This is because there is the competition. They covered around 98% of the whole population in Saudi Arabia, not the Saudi area. This is because most of the Saudi lands are depopulated and empty of people. So, it is not logical to force these companies to do infrastructure in the desert. Ok, let’s talk about the fixed lines. Most of the fixed line providers have problems even in western world such as British Telecom in Britain. The British telecommunication market start its liberalization in the eighties calendar. And still the BT owns this infrastructure. The Britain’s regulator forced BT to do the Local Loop Unbundling (LLU or LLUB) and takes many years to be agreed. In 2007, Saudi has announced that licenses gave to three new fixed line telecommunication companies to work in the Saudi telecommunication sector. Just one company out of these three called “Atheeb” has started to work in the Saudi market. It has started in few cities. However, Atheeb cannot use Saudi telecommunication telephone lines to offer broadband for citizens. The problem is that Saudi telecommunication provider already covered most of the country which lead to unfair competition. This is because LLU still not activated as only one telecommunication provider is allowed to offer the broadband services to homes across the country through telephone lines. The fixed line does not

have that much profit. Therefore, the Saudi government and in order to attract investors they asked these companies for 3% obligation/terms and condition to the fixed line, which means they should attract 3% of the population in 8 years time. Therefore, the progress is very slow in the landlines because landlines do not have that much profit. So what other countries did in order to solve this problem such as Canada, USA and Australia? I do not like to compare European countries to Saudi Arabia but Saudi Arabia can be compared as mentioned to USA and Canada. This is because huge area with no population. So, there are areas that are commercially profitable such as the large cities. Therefore, these companies start their services in the large cities. However, sometimes they start their services in part of the city, which may be the city centre or the downtown where the affluent people who can pay their fees. Then they work to extend their services by time. Then after some period, they start to reach non-profitable areas. However, telecommunication providers are private companies they pay annual license fees. So, it is not logic to ask them for the national services or roles. The best way to solve this problem is that the Saudi government should deduct part of its profits in this sector and then invest it in the infrastructure in these poor areas and this has been done in countries such as Australia, Canada and the USA.

Researcher: Does CITC has ideas like these idea, which applied in USA, Canada or Australia?

CITC: Yes, we have but unfortunately, we do not have the enough funds to do it. So, we can get the idea that these poor areas are funded by the government to build their infrastructure. Therefore, a fund needed too for these projects in these villages and small towns. It is like a bank that funds these projects in the non-profits areas, which called “Universal Service Fund” or “USF” and can be found in many countries. USF identifies the areas that need these services and cannot be served by these private telecommunication providers and announce it with the specification needed in this project, which can be found in the project proposal or scheme. So, the government wants someone to do a specific infrastructure with agreed fees, which will be the same fees as the large cities for limited period for example 25 years. And as you know, any private sector that is going to build the infrastructure in poor areas with these low-fee prices will fail and will not gain any profit, as there is less peopling and will not cover

the infrastructure cost. So, the financial return is less than the operating expenses or the capital expenditures. So, these companies will be competitive with each others and one may offer withdraw 100 million from the USF and other may asked for 70 million from the USF with the same government requirements and specifications. Therefore, the winning company is that who provide the agreed services with fewer funds needed.

Researcher: Did you start this USF project?

CITC: The USF has been established before 18 months.

Researcher: What are the projects that have funded by USF?

CITC: Until this moment, no projects have started through USF. However, the USF has published the draft strategy plan and now we are waiting for companies' feedback then the final version will be prepared after doing the necessary amending. USF should start this year with two pilot studies to make sure that the system and other regulations are working properly. The USF will ask for 500 million riyals from the ministry of Finance to extend the telecommunication services in the non-profit areas. However, this will take time and it is not a quick solution. During the financial crisis, most of the countries did what has been called "estimation package" to stimulate and encourage the economy. All these plans focused in distributing the Internet broadband such as USA, Finland, Canada and Australia. Fortunately, Saudi Arabia has not affected that much by the financial crisis like the above countries. Therefore, the Saudi government did not fund the USF but it did help some of the Saudi banks only. In England, their estimation package to stimulate and encourage the economy does not have the broadband components as a priority but the Prime Minister has asked to study this issue and if there is a need to include the broadband components to this estimation package. I think the needs to encourage the broadband components are less as the UK has good broadband services and this is because, it is a small island and it has a good infrastructure. In conclusion, this is one of the ideas to serve these far way areas in Saudi Arabia. Now, let's return to your question regarding e-commerce. This is because I already have been asked about this question. One of the audiences has asked me the following question. Why e-commerce is not used in Saudi Arabia comparing to the European countries. I am right now in Saudi Arabia and the Internet speed is not that

much but I can use the e-commerce to buy products from outside Saudi Arabia. For example, I already bought airlines tickets from the Lufthansa Airlines, did a hotel reservations and already bought some products from the USA while I am in Saudi Arabia. Therefore, the same result will appear if you buy from Saudi Arabia or outside Saudi Arabia. So, the case is the adoption of the business environment. So, my answer to this question is that CITC aim is to enable and create an environment that does of help but would not do e-commerce or e-business. This is because we are an organization party. We do not do operations; we just create a good environment to help people and organizations to establish using e-commerce. Right now, there are e-transaction act that help in electronic signatures and e-transactions to be justified in the court. Also, there is the e-crimes act that has been published and recognized by courts. Therefore, the legal environment has been existed. So, I think the main problem is in the absence of enlightenment not only on the consumers' side but also in the suppliers' side. For example, I tried to do a hotel reservation with particular hotel in Mecca but I did not find the online reservation on their local website. However, I can reserve the room by the their main website but I did not. Therefore, I called them by phone. So, you can see here that there is a lack in the e-commerce services caused by suppliers, which is in this case this particular hotel in Mecca. E-commerce has Business-to-Business and Business-to-Consumers and because you did your interviews with the consumers, this means you did your research in the consumers' side and not Business-to-Business. The business-to-business environments in Saudi Arabia and I am talking about the big companies such as SABIC and ARAMCO. They are forcing their businesses to deal with the business to business environment. So, their distributors should deal with SABIC and ARAMCO online otherwise, they cannot get what they need. If you talk about business to consumers, it is still absent in Saudi Arabia. Part of it is the suppliers enlighten and then enlighten the consumers about these new online services.

Researcher: Is enlightening part of CITC job?

CITC: To be honest, enlightening should be done by many parities. However, it is part of our task. Sultan who you talk to him before me is the responsible person for the awareness side. However, any effort we do is not enough.

Researcher: I was impressed by the booklets advertisements and awareness, which published by CITC and can be found in the CITC's main building only. However, I have not seen these advertisements on the street, TV and shopping centres. Your comments please?

CITC: In earlier this year, we did advertisements and awareness about the e-transactions but could not advertise on the TVs because of the low budget for the advertisement side. We are a government party and not private business so we control our income and outcome.

Researcher: Did you tried to go to the local TV and ask for discount to enhance the people awareness in the e-commerce transactions in Saudi Arabia

CITC: They are not responsible for our tasks. Another issue, a few percentages of people sees the local TV because of the availability of other free good channels.

Researcher: So what about the advertisement in these channels?

CITC: *It is very difficult to advertise in media like TV channels because it cost a lot of money and our budget is limited.* However, we advertise on the local radio, brochures and with local newspapers but the TV is very high budget for us. There are the legal systems in Saudi Arabia and we need to do the necessary enlighten to let people get more knowledge about the e-commerce benefits and disadvantages. Also, e-commerce adoption needs sometimes to work in Saudi Arabia. My evidence is the e-commerce adoption in the European countries. This adoption has taken much time to let people and suppliers adapt to it. Also, the consumers' adoption of e-commerce is depending on the people knowledge on how to use computers. For example, my brother asked me to reserve a double room for him in Canada because his technology knowledge and surfing the Internet is low. I believe that buying services online is easy at Saudi Arabia but the problem with products need delivery. When I buy products online, I buy small things and normally ask DHL and not the national post. I don't trust national post. I subscribed for national geographic journal and have not seen half of my journals. So, we have a problem with Saudi post. Therefore, people go with the private mail companies even with the expensive cost. However, it is not the national post problem; it is the shipping

process problem. This is because many e-commerce businesses depend on the private mail companies in Europe. Most of my orders through e-commerce are services and not products.

Researcher: What about the English version of the e-crimes act and e-transaction act?

CITC: I am not sure if there is an English version. However, the main language in Saudi Arabia is the Arabic version. CITC is the party who asked to issue these acts. However, the English version is not one of the factors that prevent e-commerce in Saudi Arabia.

Researcher: Do you have the authority to control and force the Internet providers in order to give them the appropriate licence?

CITC: There are two issues. First, as mentioned earlier there is the Rollout obligation, which the service provider should cover the specific area in limited time such as 5 years less or more and this is one of our conditions to get the license. Second, the quality of service, if the provider's services are not reaching our standards then there is a plenty on the Internet provider. So, this company should improve the quality of services in order to meet the requirements of the service. These are the things that we control by law. Sometimes, mayors in some towns receive many complains about the telecommunication services, which is not one of the compulsory services for these companies in this area because, of the low profit. So, we write a friendly letter to the responsible company and ask them gently to do the service in this low profit area.

Researcher: Do you control the content of the Saudi e-commerce websites? In other word, do you have the ability to validate these websites?

CITC: We do not regulate and control the websites content. However, we have the e-crime act and can help if there is a case and someone has complaint about the content of the particular website. Also, we have the ability to block the websites that contain irregularities. We send orders directly to the Internet providers to block the websites that contain irregularities. Blocking websites either from CITC or from security organizations like the Ministry of Interior. Also, some websites make a fake copy of the Saudi banks websites trying to fishing the consumers' information. The responsible

body for blocking these kinds of websites is the Saudi Arabian Monetary Agency (SAMA). They send us the information about these websites and then we ask the providers to block it. So, we block it in the same day.

Researcher: What about the Saudi domain (.sa)? Do you have a regulation regarding that?

CITC: Of course, there are regulations, such as; we need to make sure that the name is related to the organization. Also, we need prove with the license company. So, we need the relationship between the domain name and the person who asked for this domain.

Researcher: Do you have the ability to accept complaints from people?

Yes, we accept complaints and we have forms regarding every department. Also, we have the plan to what called “dispute resolution” for the domain names. Right now, we have the dispute resolution between the telecommunications providers. However, still not have the dispute resolution for the domain names but anyone can make complain and we do our investigation regarding his complain.

Researcher: As you know that, it is easy to open a company from paper and then register the domain name then establish an e-commerce website. The question is are you able to control this company and accept consumers’ complaints. For example, if someone complains that this website did steal his/her money, what is your procedure?

CITC: In this case, we go under the e-crime act and this case is considered to be a crime even if a person has not register in our records. However, the responsible is the court.

Researcher: There is a conflict between your answer, the police and the Bureau of Investigation and Prosecution. This is because the Bureau of Investigation and Prosecution stated that consumers should go firstly to the police station and the police station then transfer the case to Bureau of Investigation and Prosecution. Then they ask you (CITC) to provide them with the technical information.

CITC: They are right. I remember last month, one person stated that other person

insulting him and they went to the court. Then the other person stated that he insulting this person on the Internet. Then the judge ruled in the case without reference to us.

Researcher: What about the consumers' privacy in the Saudi act?

CITC: We have the rules that save the consumers' privacy. We asked the telecommunications providers companies to not give any information about any one unless we ask for this information. Even the police cannot get this information. They should go through us. This way we can make sure that no one can get these private information. For example, no one in the ministry of interior can ask us about any information. We just accept from one person in the whole Ministry of Interior. So, there is a contact point, however, this is different that the security control over the telecommunication in Saudi Arabia. We believe this control can be found in all the countries. So, any telecommunications providers should connect with the Ministry of Interior.

Researcher: You have mentioned that the private sector did not do their duty regarding the e-commerce field in Saudi Arabia. Please explain why.

CITC: Yes, private businesses still did not find the required benefit from the e-commerce yet. They are still unconvinced in the benefits of e-commerce. They may say that the consumer still not in need for the e-commerce.

Researcher: Is there any lack of ICT solutions in the e-commerce field?

CITC: I think this is not true as there are many ICT solutions in Saudi Arabia. Moreover, many e-commerce systems are already available as universal portal and the local companies just need to change the interface to the Arabic version. I mean that it is easy to find these systems from outside Saudi Arabia. So, I do not believe that this is a barrier.

Researcher: What about the Saudi government initiates to develop the e-government plan and did not take the initiates regarding the e-commerce in Saudi. What are your comments?

CITC: Because Saudi government is a government body, they should start to repair themselves before trying to repair others. Therefore, they take the initiatives to develop the e-government system, which called “Yasser”. However, still the e-government programme has not achieved the citizens’ aspirations/aims yet. Regarding e-commerce, who owns it? And who is the responsible party? In USA, the e-commerce has established from the needs and not through the USA government.

Researcher: So, do you recommend that we wait until the private sector takes the initiatives?

CITC: I am not sure. However, the Saudi government did the legal environment. Also, the credit cards have spread over the Saudi citizens over the recent years. Also, there is a new payment system called “SADAD.” However, the situation is not that bad. This is because people recently have used to pay their services bills such as the electricity bill, mobiles bills and other bills through the banks’ electronic payments or through the ATM machine, which is part of the e-commerce.

For example, when the ATM machines start published in Saudi on the year of 1989 people afraid to use it and they do not trust it. However, it takes them 10 years to trust the ATM machines in the end of 1999. Right now, all the Saudi banks working in the same network called SAM. So, it will take time. The Internet usage in Saudi Arabia is around 36% of the whole population. Which is very good percentage.

Researcher: When was this study?

On 2007, it was 31% then in 2008, it is 36%. This mean, that every family has at least one person who know how to use the Internet. STC has stated that they have around 2 or 3 millions Saudi user registered and been using STC portal. So, there is an adoption in the e-commerce services such as telecommunications sector services and banks sector services. Therefore, we have a problem with the physical products and not with the digital services.

Researcher: So, what about the refund and return policies in Saudi Arabia?

CITC: Refund and return policy depends on the ethics of the society. So, some

societies follow the regulations and accept the rules and other societies do not follow the rules. So, we are missing the values in our society. We do not follow our religion. Many things in our religion are prohibited and we do it. In some shops, you cannot return the products after paying even if you are still in the shop. It is not fair to use products and then return it back. We did the draft of e-crime and e-transaction act and then many other organizations take part in this act. Also, there are regulations explanatory for these acts and can be founded in our website.

Researcher: So, why Bureau of Investigation and Prosecution did not mentioned this regulations explanatory.

This is because it is related to the e-transaction act and not to the e-crime act.

Researcher: Do you want to add any comments?

CITC: No thanks, I hope that I covered all the possible areas regarding your study and please contact me if you need more information.

Appendix F: An example of GT's data analysis

(The complete data analysis is available for inspection if required)

Category	Concept	Code Name/Label Name	Interviewee	Quotation
Cultural dimension	Absence of negative impact of Islamic religion		C1	"In the past, there was an Islamic barrier in dealing with e-commerce but now we easily can issue Islamic credit cards and do our transaction in a fully Islamic way."
			Islamic Bank	"All our financial transactions have reviewed by Islamic religious scholars and those include credit cards."
	Absence of negative impact of Arabic language		S4	"All the websites I know has the Arabic version and some of them have the English version as an extra service."
	The positive impact of social influence and friends' recommendations on consumers' decision		N2	"I like to buy online from websites recommended by friends"
	The interest in accepting new technologies among young people		C2	"We like new technology, especially if it is related to the Internet, gaming and mobile phones"
	The negative public perception about credit cards		C6	"The bank sent me a new credit card as part of their marketing but I returned it back and asked to cancel it."
	The negative public perception about credit cards		S4	"I do not like credit cards because it bring bankruptcy and allows you to spend money you do not own."
	Absence of mail-culture		SME	"There is no mail culture in Saudi Arabia among citizens. This is because normal mails do not come to your house but rather you should pick it up from the city centre where all shops are there."
	The absence of e-commerce shopping culture		SME	"People do not have the culture of online shopping. They want to see products in front of them. Therefore, no need to build an e-commerce system as no one will use it."
	Negative attitude towards consumers' ethics among government and suppliers	The negative impact of social relationship in exposing privacy		W4
			E2	"Many people are able to find an employee of a private or a public organization who has access to database and get the other people private information."
Failure to protect consumers by not implementing rules and regulations			SME	"We do not return or exchange books or electronic devices. This is because some consumers copy the book and then return it back for refund" and "We do write in our bill that there is no returns and exchange."
			CITC	"Refund and return policy depends on the ethics of the society. So, some societies follow the regulations and accept the rules and other societies do not follow the rules."

Appendix

Category	Concept	Code Name/Label Name		Interviewee	Quotation	
Telecom and Internet infrastructure dimension	The high Internet subscription fees			E1	“The Internet cost is cheaper than before” but “however, compared to other countries, it is really expensive.”	
		The high cost of international connectivity		CITC	“International connectivity means that all the Internet connections come from Europe and America. Our international connectivity in Saudi Arabia is low. Therefore, the cost of the Internet are expensive and the Latency (is a measure of time delay experienced in a system) also will be more.”	
			weak Internet consumption among people with low income in cities	N4	“The Internet price is still expensive. I do not think that my parents are able to pay the broadband monthly fees.”	
			Lack of telecom profitability in rural areas	Telecom provider	“Telecommunication providers in Saudi Arabia, and we are one of them, are looking for the commercial profit in order to do telecommunication projects. Therefore, we will not do any project if there is no profit to the company owners.”	
		Not activating the Local- Loop- Unbundling (LLU)		CITC	“LLU still not activated as only one telecommunication provider is allowed to offer the broadband services to homes across the country through telephone lines.”	
		Lack of government fund to activate USF		CITC	“Until this moment, no projects have started through USF.”	
	Lack of broadband in rural areas			C1	“There is no broadband services in our town. We are still surfing the Internet using dial up.”	
		Lack of broadband in some parts of cites		W2	“You have to wait for long time to get the broadband services.”	
		Lack of telecommunication profitability in non-profit areas		CITC	“Right now, I have a bigger problem. Most of the Internet services focused on cities. The small towns and villages in Saudi Arabia can be called isolated areas. No one of the Internet providers is interested to build the Internet infrastructure in these villages. This is because of the profitability factor, densely populated in these areas and low incomes which make it more difficult for telecommunication providers to invest in these areas.”	
	Weakness in Internet Quality of Service (QoS)				Telecom provider	“We are focusing right now on spreading our services into profitable areas across the country. Once we complete this stage, then we are going to focus on QoS.”
		Disconnection in the broadband services			C3	“Sometimes, the Internet is disconnected for hours or even for the whole day.”
		Low Internet speed			E4	“The Internet speed is slow even if you order a high speed connection. We feel that there is a high load on the Internet.”
		Low Internet speed			E1	“Sometimes, I cannot surf the Internet and I turn off my computer because the Internet is slow and I feel bored to death.”

Appendix

Category	Concept	Code Name/Label Name		Interviewee	Quotation
Technical dimension	The support and availability of Arabic language in many programming languages			S4	“All the websites I know has the Arabic version and some of them have the English version as an extra service.”
	Lack of ICT resources to meet local needs	Lack of qualified ICT organizations in local market		S2	“Companies have not developed their systems since ages. This is because of the lack of ICT professionals in Saudi Arabia.”
				MOCI	“We face technical weaknesses in our Ministry because of the lack of equipments and qualified ICT people who can help.” Then he said, “Because of that the ICT department in our ministry transferred to CITC as they have the required equipment and ICT experts.”
		Shortage of professional ICT people		SME	“One of the problems that facing us as a Saudi company is the human resources. It is not easy to find the right person with good experience especially in the ICT field” and “Our e-commerce project needs a good experience in managing large projects with good knowledge of the ICT systems and this is the missing link. Therefore, it is very difficult to find the appropriate ICT experts. However, we need people inside Saudi Arabia to continue working with us as developers and system support. We are seeking for these specialists for more than 6 months until this moment.”
				SME	“Lack of specialized people in Saudi Arabia to plan and run the full e-commerce projects.”
				SME	“We are looking for ICT company that can handle the whole project but unfortunately did not found any until this moment”
	Difficulties for SMEs to obtain an e-payment system	Minority and the hard conditions of local e-payment gateway providers		Islamic Bank	“In the near future, we are going to list recommended ICT companies that can implement and integrate e-payment gateway on behalf of us. These ICT companies also will be responsible for the technical support.”
		Lack of availability of international e-payment gateways		SME	“Still PayPal not able to connect with Saudi Banks”

Appendix G: Sample of emails to suppliers and government agencies

Subject: An interview for an e-commerce research

From: aleid@dmu.ac.uk

To: -----

Dear -----

My name is Fahad Aleid and I am doing a research in the adoption of e-commerce among consumers in Saudi Arabia. I need some time to talk to you regarding this issue and to make a recorded interview for academic purposes.

Could you please let me know the appropriate time for you to discuss this issue and if possible to answer some of the questions related to this matter.

Furthermore, I am going to explain to you the subject under study in details and the aim of this interview. Also, I am going to let you know the benefits from doing this interview and the possible disadvantages if any. This interview is optional and you have the right to refuse or cancel the interview before or during the interview. You, also, have the right to ask for not recording this interview. Hope you can find the appropriate time to meet with me in the appropriate place that suit you.

I am looking forward to hearing from you.

Kind regards,

Fahad Aleid.

PhD researcher.

De Montfort University.

Tel: ----

Appendix H: List of Publications

Aleid, F., S. Rogerson, et al. (2010). A Consumers' Perspective on E-commerce: Practical Solutions to Encourage Consumers' Adoption of E-commerce in Developing Countries – A Saudi Arabian Empirical study. *IEEE International Conference on Advanced Management Science (IEEE ICAMS 2010)*. Chengdu, China.

Aleid, F. A., S. Rogerson, et al. (2010a). A suppliers' perspective on e-commerce: Suppliers responses to consumers' perspectives on e-commerce adoption in developing countries: A Saudi Arabian empirical study. *Digital Information Management (ICDIM), 2010 Fifth International Conference*. Thunder Bay, Canada.

Aleid, F., Rogerson, S. & Fairweather, N. B. 2009. Factors affecting consumers' adoption of ecommerce in Saudi Arabia from a consumers' perspective. *IADIS International Conference e-Commerce*. Algarve, Portugal