



UNIVERSITI PUTRA MALAYSIA

***DETERMINANTS OF BUSINESS TO BUSINESS E-COMMERCE
ADOPTION AMONG PUBLIC-LISTED COMPANIES IN SAUDI ARABIA***

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GSM 2013 13



**DETERMINANTS OF BUSINESS TO BUSINESS E-COMMERCE ADOPTION
AMONG PUBLIC- LISTED COMPANIES IN SAUDI ARABIA**

ALHIJRIS, ALI ABDULLAH A

**Thesis Submitted to the Graduate School of Management, Universiti Putra
Malaysia, in Fulfillment of the Requirements for the Degree of Doctor of
Philosophy**

November 2013

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

**DETERMINANTS OF BUSINESS TO BUSINESS E-COMMERCE ADOPTION
AMONG PUBLIC LISTED COMPANIES IN SAUDI ARABIA**

By

ALHIJRIS, ALI ABDULLAH

November 2013

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This study investigates the factors that influence B2B e-commerce adoption among public listed companies in Saudi Arabia and determines the key organizational and technological issues that facilitate or hinder e-commerce adoption among these companies. It is also intended in the study to develop a theoretical framework which can help to understand and interpret B2B e-commerce adoption among public listed companies in Saudi Arabia. The study aims to identify a comprehensive set of determinants that influence Saudi companies e-commerce adoption. A questionnaire was used to collect data by means of personal interview with the companies. The final samples were able to be collected from 91 public listed companies, representing 62 percent of all Saudi companies listed in 2012.

The main findings of this study reveal that innovation characteristics, context factors, communications factors, and organizational culture factors play a significant role in influencing e-commerce adoption among the companies. A surprising finding was that environmental factors has negatively affected B2B Adoption of E-commerce. However, a closer examination on the study managed to explain this phenomena. This negative direct effect was actually found to be off-setted by the indirect positive effect of environmental factors on B2B e-commerce adoption. Therefore, the environmental

factors has indeed indirectly affected the adoption of B2B e-commerce by Saudi companies through its effect on the organizational culture.

This study has several limitations. First, since the data set is cross-sectional in nature, this research can only show associations among the variables but cannot be used to analyze longitudinal processes, such as e-commerce functional evolution or its impact on business in a dynamic context. Second, this study has only focused on companies in Saudi Arabia, which may not be the same with public listed companies from other Arab countries. Future research direction would be to expand this study into other countries, such as other Gulf Cooperation Council (GCC) states, to enable generalization of the finding be made on companies in the whole Arab world .



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

DETERMINANTS OF BUSINESS TO BUSINESS E-COMMERCE ADOPTION AMONG PUBLIC LISTED COMPANIES IN SAUDI ARABIA

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Kajian ini menyiasat faktor-faktor yang mempengaruhi penerapan e-dagang di kalangan syarikat (B2B) senaraian awam di Arab Saudi dan menentukan isu-isu organisasi dan teknologi utama yang memudahcara atau menghalang penggunaan e-dagang di kalangan syarikat-syarikat ini . Adalah juga menjadi tujuan kajian ini untuk membangunkan rangka kerja teori yang boleh membantu untuk memahami dan mentafsirkan penerapan e-dagang B2B di kalangan syarikat senaraian awam di Arab Saudi. Kajian ini secara khusus bertujuan untuk mengenal pasti suatu set komprehensif faktor penentu yang mempengaruhi penerapan e-dagang di kalangan syarikat-syarikat Arab tersebut.

Suatu soal selidik telah digunakan untuk mengumpul data melalui temuduga bersemuka dengan syarikat-syarikat berkenaan. Sebanyak 91 sampel akhir telah dapat dikumpulkan daripada syarikat-syarikat senaraian awam, yang mewakili 62 peratus daripada semua syarikat Arab Saudi yang disenaraikan pada tahun 2012.

Penemuan utama kajian ini mendedahkan bahawa ciri-ciri inovasi , faktor-faktor konteks , faktor-faktor komunikasi, dan faktor-faktor budaya organisasi memainkan peranan penting dalam mempengaruhi penggunaan e-dagang di kalangan syarikat-syarikat berkenaan. Penemuan yang agak mengejutkan ialah bila mana faktor-faktor alam sekitar didapati memberi kesan negatif ke atas penerapan e-dagang B2B. Walau bagaimanapun , pemeriksaan yang lebih teliti telah berjaya menjelaskan fenomena ini. Kesan langsung negatif faktor ini sebenarnya didapati telah di atasi oleh kesan positif tidak langsung daripada faktor alam sekitar terhadap penerapan e-dagang B2B. Oleh itu , faktor-faktor alam sekitar mempengaruhi secara tidak langsung ke atas penerapan e-dagang B2B di kalangan syarikat-syarikat Arab melalui kesannya terhadap faktor budaya organisasi. Kajian ini mempunyai beberapa batasan. Pertama, oleh kerana set data adalah dalam bentuk keratan rentas, oleh itu kajian ini hanya mampu menunjukkan perkaitan di kalangan faktor-faktor mempengaruhi, tetapi tidak boleh digunakan untuk menganalisa proses rentas masa, seperti evolusi fungsi e-dagang atau kesannya ke atas perniagaan dalam konteks yang dinamik. Kedua, kajian ini hanya memberi tumpuan kepada syarikat-syarikat di Arab Saudi, yang mungkin tidak sama dengan syarikat-syarikat senaraian awam dari negara-negara Arab yang lain. Arah penyelidikan masa depan seharusnya menumpukan untuk mengembangkan kajian ini ke negara-negara Arab yang

lain, seperti negara-negara dalam Majlis Kerjasama Teluk (GCC), bagi membolehkan generalisasi hasil kajian dibuat ke atas syarikat-syarikat di dunia Arab secara keseluruhannya.

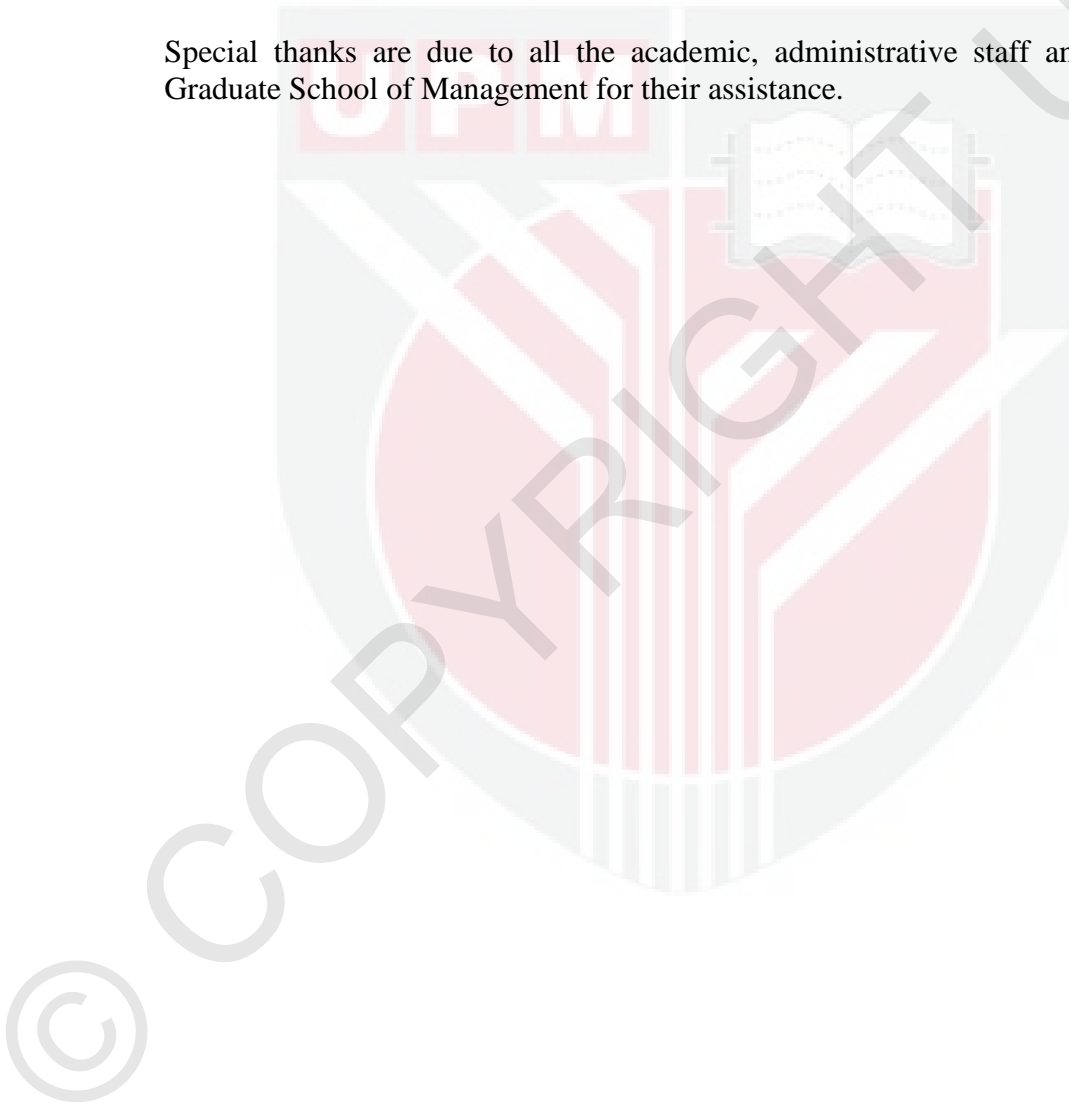


ACKNOWLEDGEMENTS

The research on which this thesis is based was undertaken at Graduate School of Management, Universiti Putra Malaysia, under the supervision of Dr. Rosli Saleh. The author is greatly indebted to Dr. Rosli for having provided this research opportunity and for his enthusiastic supervision, enlightening inspiration, continuing encouragement and invaluable technical suggestions throughout the course of this investigation. The author also appreciates the guidance given in improving his research skills.

Deep thanks also go to Dr. Alias Radam and Dr. Mohd Fuaad for their assistance and support during my study.

Special thanks are due to all the academic, administrative staff and students at the Graduate School of Management for their assistance.



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LIST OF ABBREVIATIONS

AMOS	Analysis of Moment Structures
B2B	Business-To-Business
B2C	Business-To-Consumer
B2E	Business-To-Employee
B2G	Business-To-Government
C2B	Consumer-To-Business
C2C	Consumer-To-Consumer
CAGR	Compound Annual Growth Rate
CVF	Competing Value Framework
CITC	Communications and Information Technology Commission
DSL	Digital Subscriber Line
DOI	Diffusion Of Innovation
E-commerce	Electronic Commerce
EDI	Electronic Data Interchange
EFT	Electronic Funds Transfer
G2C	Government-to-Consumer
GCC	Gulf Co-operating Council
GDP	Gross Domestic Product
IDT	Innovation Diffusion Theory
ISPs	Internet Service Providers
IT	Information Technology
KACST	King Abdulaziz City for Science and Technology
MIS	Management Information Systems
OCI	Organizational Culture Assessment Instrument
PC	Personal Computer
PEU	Perceived Ease of Use
PSP	Payment Service Providers
PU	Perceived Usefulness
SEM	Structural Equation Modeling
SMEs	Small and Medium Enterprises

SMS	Simple Messaging System
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
SPSS	Statistical Package for Social Science
WTO	World Trade Organization
WWW	Worldwide Web



1 Introduction

This chapter provides an overview of Internet and e-commerce establishment and growth in Saudi Arabia. It explains the purpose of this research project and outlines the objectives. It also presents the significance and scope of the study.

1.1 Overview

The Internet is more powerful than ever and will continue to grow in power and influence for the foreseeable future. The most important thing the Internet does is allow people to communicate over vast distances and across all boundaries. This was previously either very difficult or simply impossible. Moreover, the Internet fosters new kinds of relationships, from informal social relationships, to formal political, economic, and business relationships. The spread of the Internet has changed how human beings deal with relationships.

In fact, the Internet has become an essential platform for global business and trading (Sellitto and Martin, 2003). The number of products and services available online is growing at an exponential rate. In addition, many products and services can only be procured online, such as exclusive foreign products or daily financial reports on international and global companies (www.telegraph.co.uk). The basic commercial importance of the Internet is how it moves the world closer to a comprehensively knowledgeable market where everything for sale is advertised, every purchase is accessible somewhere, and buyers and sellers can contact each other at no cost.

Internet growth can be affected by many factors. Ahmed et al. (2006) and Velso (2000) suggest that the development of Internet commerce expanded as a result of a continuous decline in information technology (IT) product prices; heavy expansion in various platforms and distribution of Internet browsers; and the commercialization of the Internet, along with media-rich content.

In the business arena, the Internet enables companies to search for information and purchase products or services by directly interacting online with other companies (Sellitto and Martin, 2003). Today's technology allows for even more extensive data gathering. Basic database programs can merge to provide an in-depth profile of company purchases. Marketers can now accurately record details of a company's transactions.

The Internet provides great benefits for the trade and business sectors. Corbitt (2002) saw that Internet business use was more likely to help inexpensively increase the range of new suppliers and business hours. A business can search for new suppliers with more competitive products and prices. This is more efficient than other conventional methods, such as facsimile and telephone. Anderson (1995) suggests that electronic transactions and commerce reduce the trade transaction costs and improve profitability.

Fast online transactions, such as purchase orders, can reduce operating costs from holding surplus inventory (Corbitt, 2002). The Internet has crucial and significant implications for business and trading.

Kalakota and Whinston (1996) state that communications and transactions within an organization and with other parties, such as customers, suppliers and regulators, can be significantly improved through IT. As a result, e-commerce has a major role in how global business is conducted.

Many countries found that such technology is useful. Saudi Arabia is a case in point. Saudi Arabia joined the World Trade Organization (WTO) in 2005, which affected how it operates (Euromonitor, 2006). It opened up the local Saudi market to foreign investors, improving its investment environment by adopting Internet communication technologies.

Saudi Arabia has an exceptional, convergent mix of social conservatism, an expanding economy, and advancing technological expertise. The Saudi government has come up with some strategic measures, such as developing a legal framework for online transactions to support the country's e-commerce systems (Al-Somali et al., 2011).

1.2 Existing evidence on e-commerce in Saudi Arabia

1.2.1 Barriers to e-commerce from the Saudi consumers' perspective

In a study using a web-based survey that focused on the successful adoption of e-commerce in Saudi Arabia, Sait et al. (2004) found that consumers' attitudes represented one of the obstacles to e-commerce growth.

Aleid (2010) identified barriers that prevent consumers from using e-commerce. A qualitative method (grounded theory) was used for the study, which was distributed across the five regions of Saudi Arabia. Twenty-two in-depth interviews were conducted on a broad demographic

spread. Aledi found that people over the age of 55 were less adapted to e-commerce and less interested in dealing with new technology, such as computers. Interestingly, no differences were found between female and male respondents in terms of either technological trends or barriers. Furthermore, religion was not a barrier to adopting e-commerce. Table 1.1 summarizes barriers that prevent consumers from using e-commerce.

Table 1-1: Barriers to e-commerce from a consumer perspective in Saudi Arabia.

Barrier Type	Consumer Level
Communication issues	Lack of confidence in broadband services High cost of Internet Low Internet speed
Technical issues	Lack of facility to track and trace e-crimes Lack of technology experts in the local market
Supplier issues	Lack of online comparison features
Financial issues	Low income Lack of online credit card protection Lack of insurance solutions
Awareness issues	Lack of awareness
Legal issues	Gap in the law for consumers and suppliers Lack of return and refund policies
Delivery issues	Poor main postal services with high subscription prices No postal address systems for homes and shops Lack of clarity in insurance service
Consumer issues	Lack of consumer experience Lack of interest in educating people and society on electronic commerce

Security issues	Lack of online protection Fraud Low privacy protection
Geographical issues	Long distances between cities, towns and villages

Source: Aleid (2010)

In relation to e-commerce security problems, Alfuraih (2008) studied Saudi e-commerce by focusing on fraud and testing the completeness of the taxonomy by analyzing the appropriateness of a series of complex fraud cases. Table 1.2 shows that part of e-commerce security problems is related to credit cards.

Table 1-2: Saudi fraud cases and reasons

	Reason	Visa	M/C	Total
1	Merchant has no authorization	96	160	256
2	Authorization cancelled	14	24	38
3	Charged my expired card	6	11	17
4	Transaction not recognized	19	32	51
5	Cancelled recurring	3	3	6
6	Paid by other mean	46		46
7	Charged twice	25	19	44
8	Service not rendered	25	8	33
9	Goods returned but not money	5	6	11
10	Item received late	14		14
11	Amount not correct	3		3
12	Incorrect currency	1		1

Source: Alfuraih (2008)

Al-Ghaith et al. (2010) looked at factors influencing adoption and use of online services in Saudi Arabia by applying the diffusion of innovations (DOI) theory to the online environment. Factors were empirically tested against survey data collected from 651 participants. Complexity was the most significant factor affecting e-service adoption in Saudi Arabia. Privacy was the second most important factor, followed by compatibility. The quality of the Internet and its relative advantage also had a notable effect on e-service use. Therefore, respondents who perceived the Internet and

e-services as easy to use, had no difficulty accessing it from home or work, and had no problem using English for their Internet operations were more likely to adopt the e-service. The next section will discuss the types of e-commerce applications used in Saudi Arabia.

1.2.2 Types of e-commerce applications utilized in Saudi Arabia

According to Aleid (2009), Saudi companies can be classified into four different categories according to their stage in e-commerce. The first category incorporates large companies, the banking sector, and telecommunications companies. These large companies have their own websites and sell, serve, advertise and deliver online. For example, Saudi airlines allow customers to buy e-tickets, pay online by credit card, and then receive the e-tickets in their email. Telecommunications companies' websites allow customers to check statements and pay online. However, customers must collect purchased items at a regular shop. The banking sector also gives customers full online account services, such as online statements, facilities to transfer money, sell and buy stocks, and send hardcopy monthly statements through the Saudi postal system. The majority of Saudi banks also request that customers collect their debit or credit cards at bank branches, or at private shipping-company branches. This is due to lack of clarity about home addresses in parts of Saudi Arabia.

The second category of companies consists of shops that have an online website offering information, addresses, and catalogues with prices. This group offers no online transactions. A good example is Jarir Bookstore (jarirbookstore.com), which has approximately 20 bookstores throughout Saudi Arabia.

The third category refers to shops with a basic website just providing information such as addresses, locations, and contacts. An example is a chain of stores called Extra (extra1.com), which has branches across Saudi Arabia.

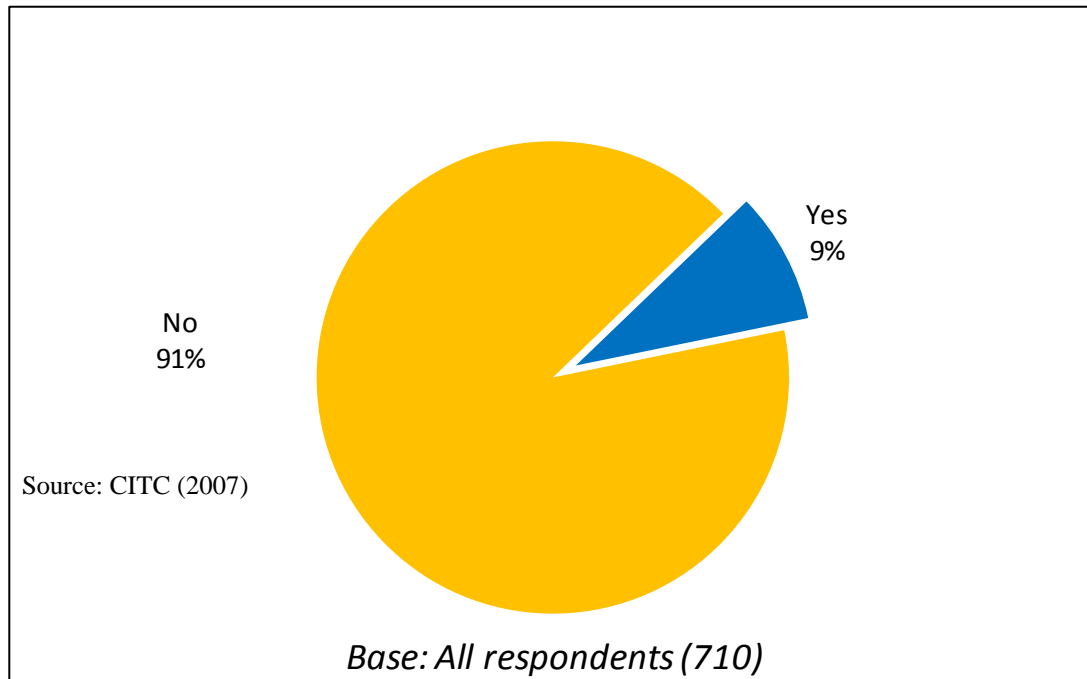
The fourth category, which is the most common, consists of shops that do not have websites.

There is a variety of e-commerce stages in Saudi Arabia. Some companies are at an advanced stage, whereas others are not involved in e-commerce and have no plans to do so. The following section will show the level of e-commerce usage among Saudi companies.

1.2.3 Level of e-commerce usage among Saudi companies

The incidence of e-commerce is still relatively low among corporate organizations in Saudi Arabia. According to a study conducted by the Communication and Information Technology Commission (CITC) (2007), only 9 percent of all private companies have implemented e-commerce activities (Figure 1.1), although the proportion is slightly higher among companies within the manufacturing sector. E-commerce usage amongst government companies is also extremely low, with only 3 percent implementing such activities. Only medium and large companies are involved in e-commerce. Furthermore, only 73 percent of private companies that have implemented e-commerce are actually selling products and services on-line (CITC, 2007).

Figure 1-1: Practice of E-commerce



The CITC (2008) performed a similar study of 1,614 organizations from the private sector a year later. Table 1.3 shows the sectors covered in the sample.

Table 1-3: The different sectors covered in the study

	2007	2008
Base: All	1,296	1,614
Construction	20%	21%
Food	13%	17%
Manufacturing	12%	12%
Service	11%	14%
IT/Communications	9%	9%
Oil & Gas	5%	5%
Other Sectors	30%	21%

Source: CITC (2008)

Almost half of all corporate organizations have their own website, as one would expect. This is influenced by the size of the organization. The larger the organization, the more likely it is to have a website, as Table 1.4 shows.

Table 1-4: Organizations that have their own website.

	ALL		SMALL		MEDIUM		LARGE	
	2007	2008	2007	2008	2007	2008	2007	2008
Base: All organizations using the Internet	410	471	180	200	133	130	92	90
Hosts websites	39%	48%	26%	35%	41%	61%	64%	68%

Source: CITC (2008)

Moreover, 10 percent of organizations with Internet access use it to make purchases, which was a slight increase from 6 percent in 2007. The most popular online purchases these organizations make are for software, spare parts, and travel tickets. Table 1.5 shows the proportion of corporations that have implemented e-commerce.

Table 1-5 : The proportion of corporations that have implemented e-commerce.

		2007	2008
Proportion of corporations that use the Internet		52%	59%
Type of Internet connection	Broadband	69%	91%
	Dial Up	27%	7%
Web browser usage	Internet Explorer	96%	94%
	Netscape	4%	4%
	Mozilla Firefox	-	2%
Proportion of corporations that use mobile Internet		8%	9%
Satisfaction with Internet services	Satisfied	71%	64%
	Dissatisfied	10%	10%
Perception of Internet costs	Expensive	30%	19%
	Affordable	40%	48%
Concerns about Internet filtering		12%	11%
Receiving spam emails		23%	40%
Corporations with websites		39%	48%
Proportion of corporations with e-commerce		9%	10%

Source: CITC (2008)

This study shows that e-commerce was least popular among smaller organizations (CITC 2008).

1.3 Problem statement

The rapid changes in the political and technical fields are creating new business environments, in which E Commerce is considered a business carrier. In fact, E-commerce tools are a matter of company survival. Companies that is reluctant to go online risk losing out in global competition.

Eid et al. (2002) stated that companies which do not use e-commerce tools risk losing customers

who will browse competitors' sites for information. E-commerce offers B2B companies a low-cost method of undertaking transactions (Deeter et al., 2001). A number of benefits in developed countries have been linked with e-commerce (Claycomb, et al., 2005). There are sufficient reasons to consider that there is some truth in these suppositions. Therefore, it is important to look more directly at how a company could benefit from e-commerce using web-based online transactions. However, some companies ignored the potential of e-commerce B2B transactions (Dos Santos and Peffers, 1998).

With Saudi Arabia's admission to the WTO in 2005, it should be easier for foreign companies to sell online to Saudis. Albarq (2014) has strongly believed that E-Commerce could drive the Saudi economic forces for the current century. E-commerce market share in Saudi Arabia will hit SR50 billion by 2015, according to Saudi Post sources. It is consistently adopting new buyers and improving revenue.

On the other hand, Saudi entrepreneurs have often cited the challenges to opening an e-commerce startup in the Kingdom. Many note that Saudi companies' utilization of e-commerce is still relatively low, as compared to their volume of involvement in global trade. According to a CITC study (2007), only medium and large companies are actively using e-commerce, while implementation is extremely low among government organizations (CITC, 2007).

Moreover, some Saudi sectors are slow to adopt e-commerce technologies for business transactions technologies and for running their business transactions, and that is due to an internal set of factors (related to organizations) or an external set of factors (related to

infrastructure and governmental support). The factors affecting the adoption decisions have been well-documented but there is a paucity of empirical studies that examine the adoption of e-commerce in developing economies in the Arab world (Albarg, 2014; Al-Hudhaif and Alkubeyyer, 2011). Indeed, there have been a number of attempts to identify the determinants of B2B e-commerce adoption (Archer & Yuan, 2000; Avlonitis & Karayanni, 2000; Chan & Swatman, 2001; Eid et al., 2002; 2006); most of them have been either descriptive or theoretical/speculative, so there is a lack of solid models to guide future research in this area. It is widely acknowledged that theories and management practices developed in the context of industrialized and developed countries in the West need to be reexamined in the context of developing countries to fit the cultural context of the recipient nation. This is because issues which might seem trivial for developed countries may play an important role for e-commerce adoption in developing countries. Yet, it seems that there is a paucity of writing in the context of developing economies in the Arab world and the patterns of organizational adoption of e-commerce remain a largely unexplored area.

Indeed, B2B e-commerce research is still in its infancy, especially in less developed countries such as Saudi Arabia. Therefore, there is a need for research that aims to fill this gap and investigate factors that influence B2B e-commerce within Saudi Arabia and determines key organizational and technological issues that facilitate or hinder e-commerce adoption for these companies.

1.4 Study objectives

The main objective of this research is to identify a comprehensive set of determinants that influence Saudi e-commerce. This research adapts an interdisciplinary approach that uses

traditional B2B, online and international marketing, IT, and information systems literature. This is in line with Gatticker et al. (2000), who state that researchers should investigate e-commerce with an interdisciplinary approach. Because e-commerce makes use of IT and IS, this research also considers the appropriateness of the various theories that underpin research into IT and IS implementation.

Innovation diffusion theory (IDT), which is often associated with technology innovation research (Rogers, 1995) and technology acceptance modeling (TAM), which explains computer usage behavior (Davis et al., 1989), can give a better understanding of the adoption of the technology itself. However, each theory explores the process from a single perspective, by either focusing upon the factors or the process. In reality, implementation factors, and processes cannot be separated, since they are interrelated. Therefore, this research combines TAM and IDT to better understand the adoption of e-commerce applications.

Although these theories explain why some companies have adopted IS/IT technology and others have not, we need to understand how companies that adopt e-commerce achieve their objectives. Consequently, this research adopts and extends IDT and TAM to explore B2B e-commerce adoption. The specific objectives of the research include:

1. Examining the extent of e-commerce adoption among companies in Saudi Arabia
2. Investigating factors influencing e-commerce adoption among Saudi companies
3. To explain structural interrelationships between variables derived from the conceptual framework.

1.5 Study importance

In today's globalized world, Internet technologies are becoming increasingly important for companies to stay viable and gain a competitive edge. This study describes the impact of e-

commerce on companies in Saudi Arabia. The study provides guidelines for companies, policy-makers, and consumers.

1.5.1 To companies

Little research has been done on topics related to the level of e-commerce among Saudi companies (Ahmad and Agrawal, 2012), so the expected outcome of this study should assist e-commerce scholars and practitioners to understand what propels companies in Saudi Arabia to use B2B e-commerce, better understand acceptance and usage of e-commerce, and identify ways of enhancing companies' online experience. The results of the study's findings will also be useful to major, global industrial countries.

Moreover, this study can help guide business practitioners when they employ e-commerce systems. By examining some of the factors involved in e-commerce, companies will be able to understand the important factors that may affect e-commerce adoption.

In addition, the study will highlight the importance of understanding e-commerce adoption as a fundamental issue and how it is unique, by identifying the important differences between e-commerce and traditional company IT. Most importantly, the study will provide guidelines for researchers and e-commerce exponents at the national level in better preparing companies for e-commerce. Furthermore, this study is a significant endeavor to promote e-commerce awareness among companies that are still hesitating to adopt it.

1.5.2 To policy makers

For e-commerce adoption to succeed, the government must ensure that the cost of implementation is not higher than investment returns. The Saudi government must choose the

right organization to deliver high quality services at competitive prices. The findings of this study could provide the government with information about Saudi companies' level of e-commerce adoption. Moreover, the findings will help decision makers avoid problems when they implement e-commerce projects on a national level. Finally, the findings will help decision makers understand the obstacles to effective implementation of e-commerce in companies.

1.5.3 To consumers

The findings of the current study may enhance consumer knowledge and experience with successful companies that implement e-commerce. Results could also show consumers the economic importance of e-commerce. Consumers will understand which factors play a critical role in e-commerce adoption among companies.

In light of the above, this paper will propose an exhaustive classification of key organizational and technological issues in relation to e-commerce for Saudi Arabia as a whole. It will fill the gap in the literature on e-commerce adoption in Saudi Arabia.

1.6 Study scope and significance

B2B e-commerce adoption in Saudi Arabia is a new focus in the field of e-commerce, both from practitioners (Allen and Fjermestad 2001; Angeles 2001; Chan and Swatman 2000) and researchers (Avlonitis and Karayanni, 2000; Duggan and Deveney, 2000; Eid, 2002; 2006).

Although several articles and books have reported on B2B e-commerce in terms of performance and technological issues (Anderson, 1995; Hofacker, 2001; Porter, 2001), there is still little empirical research regarding B2B e-commerce adoption in Saudi Arabia. Therefore, this research attempts to fill the gap.

1.7 Significance to researchers

First, and foremost, the study is an original attempt based on the literature review of the subject, at establishing a conceptual framework and its dimensions to outline the adoption of e-commerce for B2B companies. As theory in the field of B2B e-commerce in Saudi Arabia is not well established, this study can be a step toward building theories. It clarifies confusion surrounding the concepts and practice of B2B e-commerce in Saudi Arabia. This has been done by drawing information from literature review and empirical data gathered from company surveys.

1.8 Significance to practitioners

The results from this research will greatly benefit top management, marketers, IT executives, business managers, and others using, or planning to use, e-commerce for business purposes. This study intends to help practitioners better understand B2B e-commerce adoption from a holistic view. Finally, it helps practitioners make a more thorough analysis of the process and understand how the management of certain elements can improve effectiveness and competitiveness of e-commerce adoption.

This study was restricted to Saudi Arabia. Generalizing these findings beyond a Saudi context should be made with caution, due to cultural and e-commerce differences between this part of the world and elsewhere. However, the findings may apply to other countries, especially neighboring Gulf and Arab countries, as they display similar social and cultural values.

1.9 Thesis organization

This thesis is divided into eight chapters. **Chapter One** provides an overview of the thesis and background to research, such as the problem and objectives. It also discusses the importance of the study and outlines its scope. **Chapter Two** gives background details on Saudi Arabia, as well as the benefits and limitations of e-commerce. **Chapter Three** reviews the literature on the history of e-commerce. Since monetary transactions are an important part of e-commerce, different payment systems in e-commerce are explained. **Chapter Four** this chapter emphasizes a review of Studies of B2B E-commerce Adoption. **Chapter Five** discusses the research framework. A framework was developed by reviewing the relevant literature. A conceptual model and a series of research hypotheses were also formulated. **Chapter Six** discusses the research design and methodology. It also describes the processes involved in data collection and questionnaire design for dependent and independent variables. Finally, it discusses statistics for the main areas of analysis used in this research and the issues involved in measuring variables. **Chapter Seven** presents the findings. Descriptive statistics, such as frequencies, mean and percentages, systematically and meaningfully display data for reporting the characteristics of those companies surveyed and providing adequate statistical support to the findings. **Chapter Eight** discusses the conclusions from the findings of this quantitative study. Moreover, it discusses limitations and contributions of the study are discussed, and suggestions for further research.

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