E-Commerce growth in Saudi Arabia: challenges and obstacles

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ABSTRACT: *As we enter the third millennium, we are experiencing one of the most important changes to our daily lives, the move to an internet-based society. Internet has grown like a plant, and many welcome it as a tool for productivity and enlightenment. As a result, much has changed at home, school, work and even leisure activities. Some changes are already here and are spreading around the globe, others are just beginning. One of the significant changes is how developing countries are going to conduct their business and how can they harvest the benefits of internet trading. This paper presents a qualitative study that can provide the authorities, business owners, researchers as well as the readers with an overview of the current Electronic Commerce status in Saudi Arabia and the major factors that obstacle its growth and development. It is hoped that this study will narrow the gap of knowledge and furnished useful guidelines that could unleash e-commerce maturity in Saudi Arabia and developing countries as well.*

1. Introduction

One of the most popular activities on the web is shopping. It has much allure in it – you can shop at your leisure, anytime, and in your pajamas. Literally anyone can have their pages built to display their specific goods and services. Electronic commerce (e-commerce) has been defined as the process of buying, selling, transferring or exchanging products, services, and/or information via computer networks, including the internet [1]. E-commerce includes consumers purchasing goods and services online; as well as businesses selling and communicating with other businesses through the internet.

E-Commerce is not a new phenomenon. It has been around for at least three decades. Banks have used their own telecommunications lines since the early 1960's to transfer funds electronically from one branch to another and from one bank to another. This may be regarded as the earliest use of commerce executed by means of electronic data transferred through communications lines.

Ecommerce has a great deal of advantages over "brick and mortar" stores and mail order catalogs. Consumers can easily search through a large database of products and services. They can see actual prices, build an order over several days and email it as a "wish list" hoping that someone will pay for their selected goods. Customers can compare prices with a click of the mouse and buy the selected product at best prices.

Online vendors, in their turn, also get distinct advantages. The web and its search engines provide a way to be found by customers without expensive advertising campaign. Even small online shops can reach global markets. Web technology also allows to track customer preferences and to deliver individually-tailored marketing.

The basis for moving to an electronic commerce is a belief that electronic markets have the potential to be more efficient in developing new information-based goods and services, finding global customers and trading partners to conduct business. Electronic commerce via the Internet will change business institutions, operations and products/services as we know today, just as the telephone, TV, fax, and e-mail changed the way businesses and consumers communicate.

Therefore, e-commerce holds out enormous promises for producers in developing countries: easier access to the markets of developed countries especially B2C, and higher incomes resulting from these new trading opportunities.

This paper provides a qualitative study about the current e-commerce status in developing countries, in particular Saudi Arabia, and the major factors that obstacle its growth, implementation and development. The remainder of the paper is organized as follows: section 2 introduces the literature review, section 3 describes the global growth of e-commerce; section 4 presents statistics and information about

e-commerce in the developing countries, section 5 specifies the e-commerce situation in Saudi Arabia, section 6 explains the e-commerce barriers and obstacles in Saudi Arabia. The final section is a conclusion.

2. Literature review

The World Wide Web is one of the most innovative technologies that changes the business environment and has a dramatic impact on the future of electronic commerce (EC). The future of EC will accelerate the shift of the power toward the consumer, which will lead to fundamental changes in the way companies relate to their customers and compete with one another [2].

E-commerce, defined as "the buying and selling of information, products, and services via computer networks" [3] is radically changing the dynamics of the business environment and the way in which people and organizations are conducting business with one another.

Lee [4] suggests that e-commerce has altered the outlook of businesses from one focused on lean manufacturing (termed as economics of scarcity) to a focus on information which he terms as economics of abundance.

According to the definition of The Organization for Economic Cooperation and Development (OECD), Electronic Commerce or E-commerce as it is popularly called, refers to commercial trade in the open network integration, including that between the enterprise and enterprise (B2B), and that between the enterprise and consumer (B2C). Although transactions among businesses represent the bulk of electronic commerce, most attention has focused on business-to-consumer in internet sales.

Until the mid-1990s, electronic data interchange (EDI) [5], was the main solution for businesses to speed up processes such as orders, shipping documents, invoices and payments. However, EDI solutions are closed and proprietary, require high capital investments, and are subsequently used in large businesses and government organizations. Without companies of significant size with large budgets working with one another, many areas of the world could not utilize technologies such as EDI effectively. Internet technologies and e-commerce applications provide a means for smaller companies to work with one another and also reach a consumer base that in recent times did not exist (that is, Internet connected consumers). Since 1995, e-commerce has begun to replace EDI as a main solution for business and government organizations. It is less costly to implement, which is important for small firms; it is more flexible and offers real time transfers. The Internet is reducing transaction costs, and reducing the benefits of optimal integration and optimal size. Small firms can buy services from outside more cheaply, thus barriers to entry are falling. By increasing price transparency and competition, the Internet is forcing companies to streamline their processes and eliminate inefficiency. They are doing so by closely working with customers and suppliers in order to offer a better service and a better price. More and more e-commerce is conducted over non-proprietary IT solutions, which reduces costs and offers better ways of communication between companies with different systems. By adopting e-commerce solutions, companies are gaining in efficiency and productivity and are offering better services that are available 24 hours a day, seven days a week [6].

The reason E-Commerce became so visible in the second half of the 1990s was the commercial aspect of the Internet. Once the Internet was opened to commercial activity, this worldwide network became the major carrier of business-to-business electronic data exchange. The United Nations predicts 18% of purchases by firms and individuals will be conducted online by 2006 [7]. While the future of Web-based e-commerce in developed areas appears bright, consumers in developing countries, face a number of obstacles that may impact their view of e-commerce. Consumers and merchants in developing countries face a number of barriers to successful e-commerce, including less reliable telecommunications infrastructures and power supplies, less access to online payment mechanisms, and relatively high costs for personal computers and Internet access. These problems may cause consumers in developing countries to view e-commerce differently than consumers in developed countries.

Consequently, Electronic commerce has become very popular because of the benefits and the convenience it brings along. As shown in Table 1, the benefits include product promotion, cost saving, timely information, shortened remittance time, information consistency, better customer service, better customer relationship, customization of products, competitive advantages, and convenience of doing business [8]. Electronic commerce is no longer an alternative, it is an imperative. The only choice open is whether to start quickly or slowly. Many companies are still struggling with the most basic problem: what is the best EC model? Unfortunately, there is no simple answer for this question. Even companies in the same industry, of the same size, or with similar cultures are finding that one EC model does not fit all. Companies are required to review their EC models and rethink strategy in order to capitalize on the changing dynamics of the marketplace.

Benefit	Description
Product promotion	Through a direct, information-rich and interactive contact with customers, EC enhances the promotion of products. Electronic medium also allows interactivity and customization for advertising content, based on the customer

	profile or input. EC thus offers an opportunity for new promotion strategies, enhancing the branding of products
Cost saving	By using a public shared infrastructure such as the Internet and digitally transmitting and reusing information, EC systems lower the cost of delivering information to customers, including personnel, phone, postage, and printing costs
Timely information	Due to their instantaneous nature, EC systems allow a reduction of the cycle time required to produce and deliver information and services.
Shortened remittance time	With electronic funds transfer (EFT), customers send their remittances electronically to the company's bank. This arrangement eliminates the time delay associated with the remittance in the mail system
Information consistency	EC ensures the consistency and accuracy of information through sharing of information and use of electronic forms for doing business
Better customer service	The ability to provide on-line answers to problems through resolution guides, archives of commonly encountered problems and electronic mail interaction 24 hours a day, 365 days a year, builds customer confidence and retention
Better customer relationship	EC enables the learning about customers due to its ability to record every event in which a customer asks for information about a product, buys one, requests customer service, etc. Through these interactions, the needs of the customer are identified and will feed future marketing efforts
Customization of products	The information-based nature of the EC processes allows for new products to be created or existing products to be customized based on customers' exact needs.
Competitiveadvantages	EC enables a company to achieve competitive advantages of: cost saving based on reduced advertising/promotion costs; product differentiation by customizing products and timely response to market; customer focus through better customer relationships and better customer services
Convenience of doing business	There is no limit on time and location to conduct a business with related parties. The information delivered to manufacturers, suppliers and warehouses is almost real

Table 1. The benefits of electronic commerce

3. Global growth of e-commerce

The Internet provides an open global network and access to this network is relatively cheap; that is simply the basic idea. This has led to claims that Internet-based e-commerce will grow rapidly and help producers in developing countries to overcome problems of exclusion from the world economy and improve the terms of their participation.

To understand E-Commerce one must understand both the technologies that serve as the infrastructure and the business models taking advantage of the technologies. Both technologies and business models currently used are innovative and fascinating. However, we must realize that within several years almost all commerce will be e-commerce to some extent. No one considers doing business via telephone or fax as t-commerce or f-commerce. It is only a matter of time before we realize that there is no reason to call business that is executed digitally via the Internet or other networks "e-commerce".

If the promise of e-commerce is to be realized, poor countries must improve Internet access and get 'e-ready'. This is one of the core ambitions of the Digital Opportunities Task Force that was established by the governments of the G8 countries in 2000. But maximizing the benefits from e-commerce opportunities requires a broader strategy of both 'e-readiness' and 'commerce-readiness'. It also requires a healthy degree of skepticism about promises of dramatically reduced transaction costs and trade without intermediaries
The rapid growth rate of Business-to-Business (B2B) E-commerce is being driven in large part by the exponential expansion of B2B exchanges and the new environment they offer for relationship building, access to goods, and opportunities to participate in ways both large and small that were inconceivable only a few years ago. The low-cost connectivity and universal standards provided by internet technology are the driving force behind the explosion of e-commerce activities nowadays [9].

Online retail sales in the U.S. are expected to grow about $20 billion to $30 billion each year for the next five years, reaching somewhere between $215 billion and $335 billion by 2012, according to two recently released reports on e-commerce.

In 2007, non-travel-related e-commerce sales reached $175 billion, a 21% increase over the previous year, according to Forrester Research Inc. In its report, titled "U.S. E-Commerce Forecast: 2008 to 2012," Forrester predicts that online retail sales will reach $204 billion in 2008, $235.4 billion in 2009, $267.8 billion in 2010, $301 billion in 2011, and $334.7 billion in 2012. Since the late 1990s, e-commerce has been the subject of a lot of hype and attention. And recently, more specifically it is business-to-consumer (B2C) e-commerce which has been receiving the most public attention.

eMarketer, the world's leading provider of internet statistics, also recognized as the authority on business online, reveals in their report [10] that B2C online sales in the USA alone (excludes travel, digital downloads and event tickets) will comfortably pass the $200 billion mark in 2013, reaching a new record total, which eMarketer projects will be $203.5 billion with an increasing ratio of 10.3% comparing with the current year 2009.

Looking at the Middle East, a recent report showed that the value of ecommerce has exceeded $4.87 billion in Kuwait, Lebanon, Saudi Arabia and the UAE in 2007. The analysis, which was based on face-to-face surveys in Kuwait and Lebanon, and online surveys in Saudi Arabia and the UAE, found that more than 5.1 million people in the four countries engaged in some form of e-commerce in 2007 [11].

4. E-commerce in developing countries

Developing countries are home to more than 80% of the world's population, and are the site for growing use of e-commerce. There are theoretical claims that e-commerce could bring significant benefits to firms in developing countries, but we know very little empirically about the actual outcomes of e-commerce implementation [12].

There is tremendous potential for e-commerce in developing countries. While the base of Internet use in these countries has been relatively low, the rate of growth has been high. Between 2000 and 2008 developing countries' Internet user population grew by more than 1000% to roughly 900 million, increasing their global share of all Internet users from 25% to58.4% [13] (Fig. 1). Despite the apparent benefits derivable from e-commerce adoption and use, Small to Medium Enterprises (SMEs) are slower to adopt the technology compared to their large business counterparts.
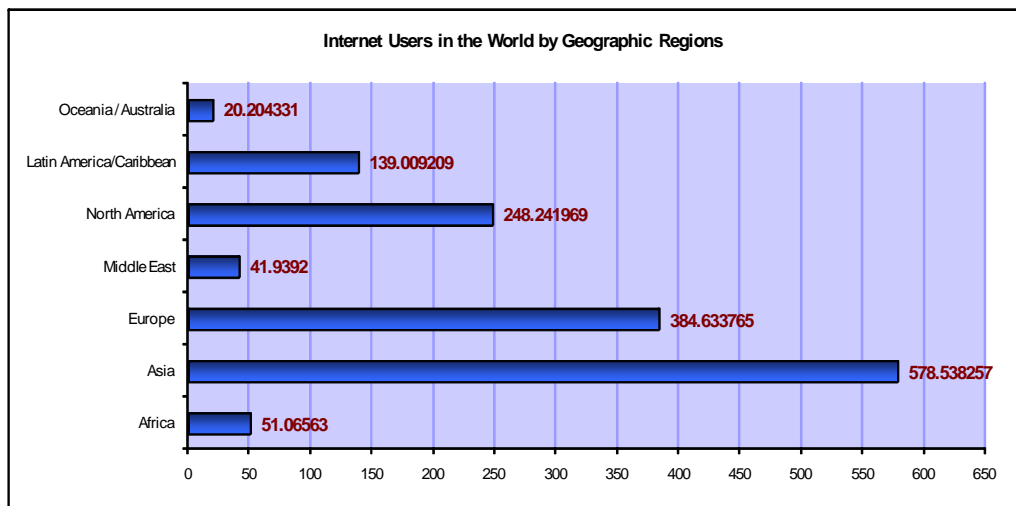

Figure 1. Internet users in the world by geographic region

This is particularly the case in developing economies such as Indonesia where factors such as the lack of telecommunication infrastructure [14], low average income of the population, the lack of credit card penetration [15], as well as cultural barriers [15, 16], further restrict the viability of using e-commerce technologies.

Ironically, the rate of Internet users in the Middle Eat which includes mostly Arab countries is very low 21.3% compared to the population, even less than the world average 21.9%, which is not the case in USA, and Canada where the rate exceed 70% of the population (Fig. 2). Therefore, as global competition increases, nations are forced to adopt new trading practices in order to gain market share and increase export revenues. Liberalizing and opening the economies has become an imperative to survival in the global community, but one that also often jeopardizes local culture and beliefs. The need to use more sophisticated methods, to improve the telecommunication environment, to adopt common and harmonized procedures and standards, make electronic commerce and other information technology

and harmonized procedures and standards, make electronic commerce and other information technology solutions valuable options to pursue in improving regional trade. Furthermore, the focus on implementing technology to enhance trade at the regional level also presents an opportunity to increase total Arab trade without sacrificing culture and beliefs.

5. E-commerce situation in Saudi Arabia

Saudi Arabia has the biggest IT market in the Gulf region, with spending of US$ 3.4 billion in 2008 expected to rise to US$ 5.6 billion by 2013, a compound annual growth rate (CAGR) of 11%. The IT market should continue to grow, driven by a robust economy and infrastructure investments in major verticals such as oil and gas, power, financial and telecoms [17].
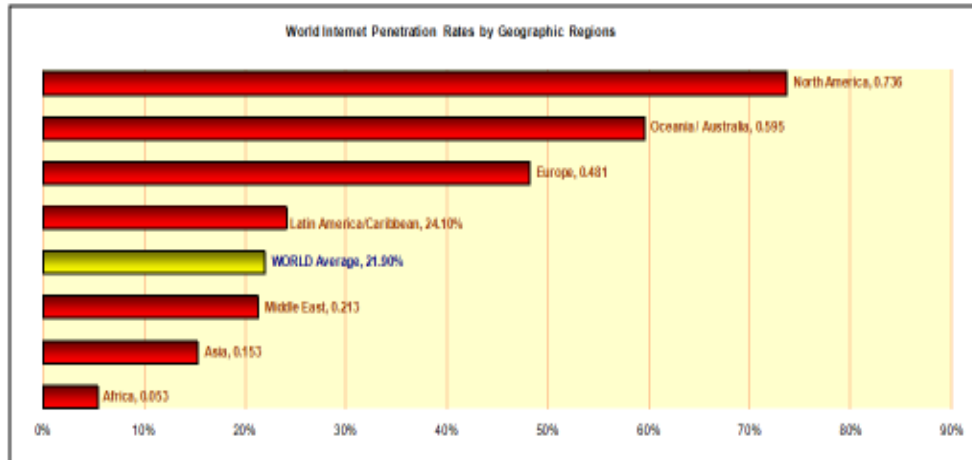

Figure 2. World Internet penetration rates by geographic region

BMI predicts that per-capita IT spends will rise 42% to US$ 200 by 2013, with PC penetration also rising, to nearly 30%. Saudi Arabia accounts for around 40% of IT spending in the Middle East region. Youthful population demographics, a regional economic boom fuelled by high oil prices and a buoyant real estate sector, and specific factors such as the growing popularity of e-banking, will all drive retail growth. In 2008 substantial budgets were leveraged for e-government infrastructure development. Manufacturing and trading firms are seeking efficiencies, while demand for advanced IT services such as outsourcing, is expected to show a strong growth trend.

The most dramatic growth will be in broadband penetration, which is projected to rise from 6.4% last year to 31.2% by 2013. By 2012 there will be an estimated 8.9 million broadband users in the Kingdom. Investment in broadband and government initiatives has seen an improvement in e-services development and utilization, which was reflected in the UN's most recent e-government rankings, in which Saudi Arabia raised 10 places.

The Arab Advisors Group has released the results of a survey showing that e-commerce has achieved noteworthy popularity in the Kingdom of Saudi Arabia. The survey showed that 48.36% of internet users in Saudi Arabia had purchased products online or using their mobile phones in the last twelve months. That represents more than 3.5 million e-commerce customers, or 14.26% of the Kingdom's total population. The results have estimated that these transactions totaled $3.28 billion [18].

An earlier study published by the Communications and Information Technology Commission [19], Saudi Arabia, reveals that internet penetration in Saudi Arabia was 30.5% out of the total population and nearly one third of the Saudi population have used internet at least in the last 2 weeks (Fig. 3).

Recent statistics cited by MiniWatts Marketing Group [13] from the internet World Stats reveals that Saudi Arabia has 6,380,000 internet users as of December 2008, in comparison to 200,000 in 2000 (see Table 2). This indicates that the internet use in Saudi Arabia has nearly duplicated three thousand times in a space of eight years [20].

Moreover, according to the Saudi Network Information Center [21], more than 15556 new internet domain names have been registered in Saudi Arabia under the top level domain of Saudi Arabia (.sa) as of March 2009 in comparison to 2803 domain names were registered in 2000. (Fig. 4)

On the other hand, the Saudi Government has given the e-commerce issue a noticeably consideration and established a standing committee on e-commerce in February 1999 under the chairmanship of the undersecretary of State for the Ministry of Commerce for Technical Affairs. It has also launched a portal in 2005, providing some government services (www.yesser.gov.sa). However, the effects of this
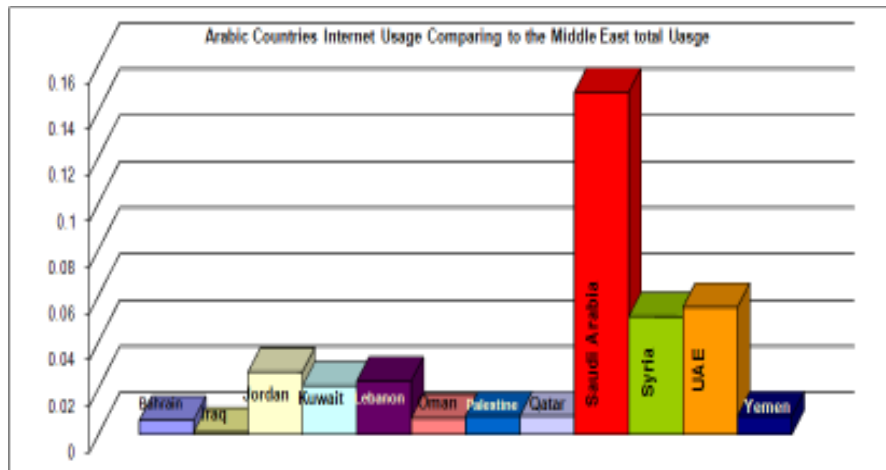
Figure 3. Arabic countries usage as of December 2008

YEAR	Internet Users	Population	% Pop.
2000	200,000	21,624,422	0.9 %
2003	1,500,000	21,771,609	6.9 %
2005	2,540,000	23,595,634	10.8 %
2007	4,700,000	24,069,943	19.5 %
2008	6,380,000	28,146,657	22.7%

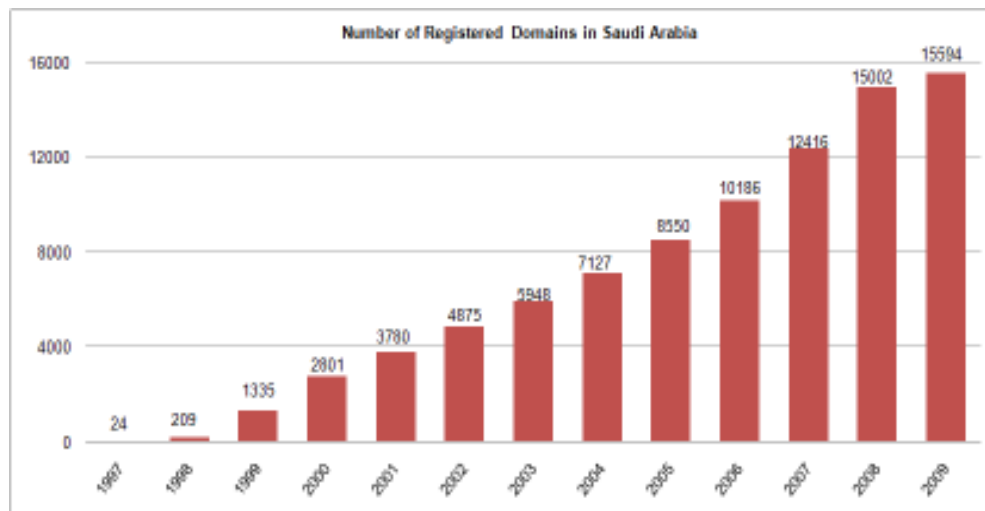*Table 1. The benefits of electronic commerce*

Figure 4. Number of registered domains in Saudi Arabia up to March 2009

portal are still not evident due to its recent launch and have still not exhibited the effects of the local perception of e-commerce. The Ministry of Education in Saudi Arabia, under the auspices of the royal authorities, has taken up initiatives to introduce an Information Technology to students in its educational institutions through two project: "Watany", which is a project that envisages provision of a computer per ten students, connecting all schools with the national network, and providing LAN service in each school, while "Ta'heel"
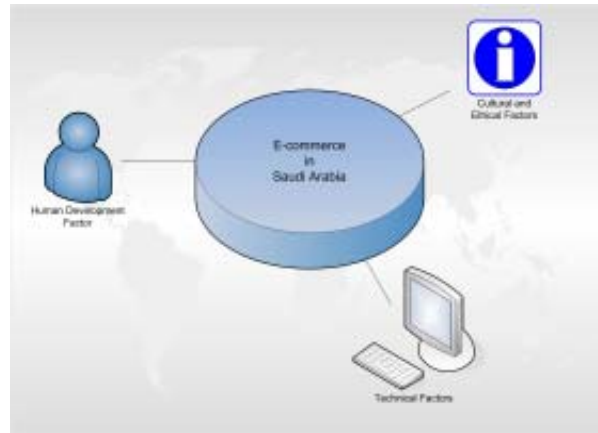
Figure 5. e-commerce barriers' factors in Saudi Arabia

is a two year training course in five areas of informatics: desk top techniques, system development, internet, computer networks, and computer maintenance for high school graduates. The main goal of those projects is to educate people on how to operate the system and use the internet as well as leveraging their Information Technology (IT) skills. It is quiet obvious from the previously mentioned figures and statistics that the internet is now being embraced by Saudi business. However, e-commerce is still in its infancy. Contacts will sometimes have e-mail addresses on their business cards but this is by no means a certainty. It is still quite common for business people (and some government officials) to use a hotmail or yahoo style address rather than a corporate domain [22].

5.1 Immaturity of E-commerce

The immaturity of e-commerce could be referred to three major factors; educational (illiteracy and lack of computer related skills), cultural/ethical (confidence in the products and the availability of redress), and technical (speedy transport and efficient payment systems) factors (Fig. 5).

5.1.1 Human development factor

5.1.11. Illiteracy

A major remark is it seems important from the data in table 3 that the number of illiteracy is increasing over the world from 1970-2000 (847million to 862 million). If we try to analyze the details of the table is that: The number of illiteracy is decreasing over the period of 1970 till 2000, and it is estimated to be reduced to 35 million in 2015 Only in more developed countries that, which is not the case in the Arab countries, it started with 48 million and grew to 67 million in 2000, and it is estimated to be raised to 71 million. Even the statistics demonstrate that the situation is critical for Saudi Arabia, where the adult illiteracy rate (age 15 and above) is about 16% of the total, taking in consideration that 60% of the population are aged 15-64, comparing to the illiteracy rate of most of the EU countries , Canada and the US countries which is 0% [23].

The increasing of the rates of illiteracy is an indicator of the low education and at the same time it could be considered as an obstacle to the local and International firms to reach the Saudi consumers.

Years	World	Arab
1970	847	48
1980	871	55
1990	879	62
1995	872	65
2000	862	67
2005	847	69
2010	824	71
2015	799	71

Table 3. Adult illiteracy rate globally and in the Arab World

5.1.2 Lack of computer-related skills

Another factor that may have a negative effect on the accessibility to the Saudi market is the low skills in computer, both the providers and users of Internet-based services require new skills. The lower the skills base, the higher the cost for implementing information technology and training in Saudi Arabia - and the lack of information about the consumer behavior are variables that can be the rationale way for introducing e-commerce by firms in developing countries.

Saudi Arabia has low penetration rates in 2007 for proportion of households with computers and Internet of 43% and 35% respectively, comparing to 79% and 74% and 83% and 79% for Singapore and Sweden respectively [24].

5.2 Technical Factors

Countries are usually at very different starting positions in the task of building their digital infrastructure to facilitate the development and diffusion of e-commerce applications. A robust, well-functioned financial sector is vital for economic growth and successful electronic activities, especially for developing countries.

5.2.1 Speedy transport

There is no point trying to sell products that cannot be delivered at reasonable cost to the buyer's desired location. For digital products this is not a problem, but most developing country exports are not digital, they are materials. Electronic transactions often raise expectations for faster delivery, making the transport infrastructure even more critical for the development of e-commerce. The policy lesson is that addressing the 'old' issues of providing efficient road and rail links, port facilities and fast customs clearance is essential for operating in the 'new economy'.

5.2.2 Efficient payment systems

E-commerce requires low-cost and reliable payment systems. While various solutions to the problem of payments for e-commerce transactions are being developed, it is essential that banks in developing countries must participate to make these attributes of payment systems as a criterion of helping the firms to get access Saudi market.

Credit cards are important facilitators of e-commerce as they provide a credible payment channel for online transactions. However, because of the Islamic prohibition of interest, in Saudi Arabia, there has long been a debate about the acceptability of owning and using credit cards. Accordingly, Saudis were generally skeptical about credit cards during the early years of their introduction into the country. Saudi Arabia has a low CCPR (Credit Card Penetration Rate) of 15% comparing to 140% and 273% in Korea and Singapore for example [25].

5.3 Cultural and Ethical Factors

An increasingly important issue regarding the global Internet diffusion is the unavoidable cultural and moral conflict. As such, the applications of standards that would apply globally and could be recognized by all governments have often failed. Critics have found plenty to fear on the Internet: too many extreme political beliefs, too much sex, and too many strange religions [26].

The perception that Saudi religious and political authorities have of the internet is negative. Conservative religious groups have frequently denounced the internet as a mode of Western cultural imperialism that will eventually transport negative values to the Saudi society. They are afraid that ordinary people access pornography and secular ideas. This was a reason for authorities to disallow ordinary Saudis to have an internet home access until the year 2000. Even after allowing internet home service, the Saudi authority has heavily exercised censorship [27, 28]. Besides pressure from religious groups, the political authority feels concerned about the political influence of the internet. Providing every government employee with an internet connection increases the likelihood of viewing internet contents that authorities deem politically critical or ideologically corrupt. Literature suggests that authoritarian governments are less likely to encourage adoption of technologies or allocate resources for the development of technologies that might threaten their political existence. Even at private organizations, some authoritarian-modeled management are skeptical of establishing online discussion forums that would allow average people to provide their opinions criticizing the services and products they offer [29].

Moreover, today, the frequent instances of online crime such as hacking, cracking encryptions, information snooping, identity theft and so forth, are grim indicators of the blurred concept of Internet ethics for many users. Though these acts are comparable to real life criminal behavior such as theft, forgery, fraud, and so forth; many people fail to make this connection. Often this is attributed to the immediacy of the medium, the lack of face-to-face interaction, and apparent anonymity. Also the absence of social and penal deterrents is another significant factor. Often, instances of online vandalism and crime are perceived as achievements by both the perpetrator and society at large [30].

5.4 Confidence in the product

Buyers must be confident that the product being purchased meets the desired specifications. Product specifications are becoming increasingly complex as industrialized economies impose norms relating to product safety and labeling, as well as for labor and environmental standards. This makes e- commerce purchasing more hazardous for the buyer.

5.4.1 The availability of reimbursement

As in all other forms of commerce, customers must be confident that they can obtain reparation if something goes wrong. The seller's assurance may not be sufficient. E-commerce may be enhanced by online ADR (alternative dispute resolution) mechanisms offering rapid, low-cost redress for disputed transactions. These mechanisms are not intended to replace (slow and expensive) court adjudication, but to supplement it.

To some extent, new e-commerce relationships are already providing some of the solutions to support transaction arrangements. E-commerce portals that bring together buyers and sellers are providing an increasing range of services - from secure payment systems to links with logistics providers, insurance providers and customs clearance services. There are also new private certification agencies developing online certification schemes addressing international quality standards and environmental and employment standards (ISO 9000, ISO 14000 and SA 8000, respectively). Certification schemes are being developed by intergovernmental organizations such as the European Union and the UN agencies as well as by producer associations in developing countries. Some service providers even offer to collect samples from potential suppliers and dispatch them to potential customers. Although such solutions are beginning to become available, their reach is likely to be confined to large producers in developing countries whose operations are based in large urban centers.

6. Conclusion

The e-commerce market is driven by a relatively conservative attitude and online culture, which has not yet opened up fully to online purchases and commerce in Saudi Arabia. Although, large numbers of consumers are embracing e-commerce, there is still a struggle to full acceptance. Even though it being the electronic age with internet usage growing at a tremendous rate, but when it comes to ordering online, organizations and individuals still face resistance. Thus, the e-commerce industry in Saudi Arabia has a daunting task of convincing customers of secure transactions and protection of personal data.

Much still needs to be done to encourage e-commerce in Saudi Arabia. Key steps include the rapid development of human resources, greater attention paid to e-literacy among citizens and activities to build capacity, particularly to provide a skills base among SMEs for ecommerce. Governments should encourage business start-ups and incubation projects that advance this activity, including through public-private partnerships.

In addition, policies need to address infrastructure development, which is key to the developing electronic commerce. Infrastructure that can play an important role for businesses includes cost-efficient communication technologies such as broadband, satellite connections and Voice over Internet Protocol (VOIP). It is important to raise awareness and to offer training programs that target the business community in particular and the public in general.

For future work, this research could be extended further by conducting an empirical study, to scientifically identify the e-commerce growth and diffusion obstacles and barriers in Saudi Arabia and then a healing strategy could be developed and implemented in order to change the perception in e-commerce.

References

[1] Turban, E. et al. (2006). *Electronic Commerce 2006: A Managerial Perspective*, 4th ed., Prentice-Hall, Englewood Cliffs, NJ.

[2] Slywotzky, A.J. (2000). *The future of commerce*, Harvard Business Review, January-February, p. 39.

[3] Kalakota, R., Whinston, A. B. (1997). *Electronic commerce: A manager's guide.* MA: Addison-Wesley.

[4] Lee, C.-S. (2001). An analytical framework for evaluating e-commerce business models and strategies. *Internet Research, 11* (4) 349.

[5] Cox,B., Ghoneim,S. (2000). Electronic data interchange, trade facilitation and customs procedures, *In*: Hoekman,B., Kheir-El Din, H., editor, Trade policy developments in the Middle East and North Africa, Washington DC, World Bank Institute, p 229 - 243

[6] Pons, A., Aljifri, H., Fourati, K (2003). E-commerce and Arab Intra-trade. Information Technology & People 16 (1) 34-48

[7] UNCTAD (2002). World Investment Report. Available at: www.unctad.org/sections/dite_dir/docs/wir02br_pogatsa_en.pdf

[8] Wen H.J., Chen H-G., Hwang H-G. (2001). *Information Management & Computer Security*, 9 (1) 5-12(8)

[9] Laudon, J., Laudon, K. (2008). *Management Information Systems, Managing the Digital Firm,* 9th ed., Pearson Education, Trenton, NJ.

[10] eMarketer (2009). eMarketer Revises E-Commerce Forecast for 2009. Available at: *http://www.emarketer.com/Article.aspx?id=1006948*. Last Accessed on 26 March 2009.

[11] Field, R. (2008). *UAE leads in e-commerce poll*. ITP Digital, Vol. 18, 5 February. Available at: *www.itp.net/news/510347-uae-leads-in-e-commerce-poll*. Last accessed 23 March 2009.

[12] Molla, A., Heeks, R. (2007). Exploring E-Commerce Benefits for Businesses in a Developing Country. *The Information Society* 23, 2 (Mar. 2007), 95-108.

[13] MiniWatts Marketing Group (2008). Internet usage in the Middle East. Internet World Stats. Available: *www.internetworldstats.com/stats5.htm#top*. Last accessed 23 March 2009.

[14] Sheth, J. N., Sharma, A. (2005). International e-marketing: Opportunities and issues. *International Marketing Review, 22*(6), 611-622.

[15] Hawk, S. (2004). A comparison of B2C e-commerce in developing countries. *Electronic Commerce Research, 4,* 181-199.

[1] Paul, J. (2002). Narrowing the digital divide: Initiatives undertaken by the Association of South-East Asian Nations (ASEAN). *Program: Electronic Library and Information Systems, 36*(1), 13-22.

[2] Business Monitor International (2009). *Saudi Arabia Information Technology Report Q1 2009*. Available: http://www.mindbranch.com/Saudi-Arabia-Information-R302-5249. Last accessed 28 March 2009.

[3] Smith, Q. (2008). *Half of Saudi internet users embrace e-commerce*. ITP Digital, Vol. 18, 17 April. Available:http://www.itp.net/news/516867-half-of-saudi-internet-users-embrace-e-commerce. Last accessed 22 March 2009.

[4] Communications and Information Technology Commission (2007). Internet Usage in the Kingdome of Saudi Arabia. Available: http://www.citc.gov.sa/NR/rdonlyres/2DB93B05-EAFA-4D8F-A680-3AC5CAD2F45A/0/Internet_Usage_Study_in_KSAAll_sectorsEN.pdf. Last accessed 26 March 2009.

[5] MiniWatts Marketing Group (2008). *Middle East – Saudi Arabia*. Internet World Stats. Available: www.internetworldstats.com/middle.htm. Last accessed 23 March 2009.

[6] Saudi Network Information Center (2009). *Saudi Domains Statistics*. Available: http://www.nic.net.sa/page.php?page=4&lang=1. Last accessed 24 March 2009.

[7] New Zealand Trade and Enterprise (2006). *Saudi Arabia Country Brief*. Available: http://www.marketnewzealand.com/common/files/saudiarabia-cb.pdf. Last Accessed 28 March 2009.

[8] UNESCO Human Development Report (2008). *Saudi Arabia The Human Development Index - going beyond income*. Available: http://hdrstats.undp.org/2008/countries/country_fact_sheets/cty_fs_SAU.html. Last accessed on 29 March 2009.

[9] International Telecommunications Union (2009). *Measuring the Information Society* - The ICT Development Index, 2009 Edition. Available: http://www.itu.int/ITU-D/ict/publications/idi/2009/index.html. Last accessed 29 March 2009.

[10] Karake-Shalhoub, Z and Al Qasimi, L (2006). *The diffusion of e-commerce in developing economies: a resource-based approach*. London: Edward Elgar Publishing. 273.

[11] Postrel, V. (1998). A net of plenty. Forbes ASAP Supplement, April.

[12] Al-Tawil, K. (2001). The internet in Saudi Arabia, T*elecommunications Policy,* 25 (8) 625-34.

[13] Anderson, J. (2000). *Producers and Middle East internet technology: getting beyond impacts*. Middle East Journal, Vol. 54, pp. 419-31.

[14] Al-Shohaib, K, Al-Kandari, A, Abdulrahim, M (2009). Internet Adoption by Saudi Public Relations Professionals. *Journal of Communication Management*, 13 (1) 21-36

[15] Sait, Sadiq M., Al-Tawil, Khalid, M., Sanaullah, Syed., Faheemuddin, Mohammed. (2007). *Impact of Internet Usage in Saudi Arabia: A Social Perspective*. International Journal of Information Technology and Web Engineering, 2 (2), 81-115.