

Consumer Awareness and Potential Market for e-Commerce in Saudi Arabia: Challenges and Solutions

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Abstract – This paper will explore the challenges faced by the e-commerce industry in establishing efficient facilities in Saudi Arabia. The primary challenges in the successful implementation of e-commerce in Saudi Arabia are: lack of government involvement, weakness of the postal delivery system, insecure online payment infrastructure, and the absence of e-commerce law. Furthermore, the paper proposes solutions to overcome these challenges in order to facilitate and expedite the process of developing e-commerce in Saudi Arabia. The proposed solutions to this issue are additional government support, establishing permanent home addresses, providing secure online payment, and introducing policy and regulation.

Keywords—: *e-Commerce, Saudi Arabia, Online Payment, e-Commerce Law and Regulations.*

I. INTRODUCTION

Since the invention of web technology in 1989, the internet has been widely used to provide useful technology services[1] and has played a significant role in shaping the trends of developing societies. E-Learning, e-commerce and e-government are new services that have been adopted in developed countries such as USA, Canada, and UK. These services have brought many advantages to society due to the ease of use, online shopping, or surfing the web. However, the extent of their influence is limited to the developed world as many countries in the developing world are still struggling to adopt such new services. Since the existing infrastructures within those countries are not suitable for effective implementation of these services.

The term “e-commerce” refers to the use of internet-related technologies to perform business processes such as online shopping, and online payment to name a few[2]. E-commerce is a web-based business. Web development has been a competition area for e-commerce providers such as

Google, Amazon, and eBay to enhance their services. Many organizations have encountered difficulties in transforming their businesses into web technologies, which has an impact on their businesses performance[3]. Web technologies have brought many advantages to corporations such as product promotions, cost saving, better customer services, timely information, better customer relationship, information consistency, and payments methods[4].

II. RELATED WORK

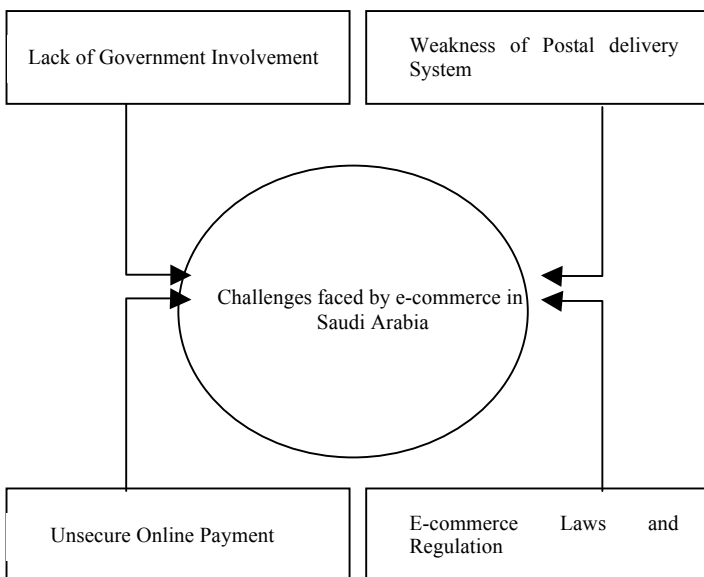
This study is investigating Saudi commercial websites from the marketing, human interaction dimension, knowledge dimension, e-Commerce. First, marketing is the way of offering products using web sites, and it has three features: targeting the right audience, providing customer-centric services, and customizability. Human interaction concerns are getting the customer to interact comfortably with a website. Human interaction can be measured through various means such as, the ease of use, obviousness, encouragement, availability, and safety. Knowledge concerns the web content, richness of the website, its applicability for different types of customers, and support for knowledge dissemination. E-Commerce dimension is using web technology to serve the customers, and it has six features: transaction processing, selling and buying facilities, trust, e-payment support, rewards and loyalty, and scalability[5]. There are many reasons influencing the customers' decision to take advantage of online retailers in Saudi Arabia . A qualitative approach has been used as research methodology by interviewing sixteen Saudi citizens. After data analyzing, the author stated some factors that were behind the lack of using e-commerce in Saudi Arabia, which are failure of postal system, issues with online payment, unclear regulation and legalizing, few re-retailer in the KSA, limited IT knowledge, issues with trust, privacy. The authors proposed some solution to these issues: government support, secure

online payment, having home address, education program, and web proficiency[6].
 The implementation of e-Government services in Saudi Arabia is facing many different challenges and barriers. Technological, cultural, organizational, social are the main issues to implement e-Government services. Based on the Alshehri & Drew author's findings, Lack of policy and regulation for e-usage, Lack of programs to promote e-government benefits and advantages, and Lack of strategic planning are the most significant issues that need to be solved to adopt e-Government in Saudi Arabia[7].

III. CHALLENGES FACES BY E-COMMERCE IN SAUDI ARABIA

The Saudi Arabian government has the potential to contribute in improving e-commerce marketing; however, the government has not provided an appropriate environment to expedite the process of developing the infrastructure of e-business. Additionally, the weakness of postal delivery system is a major hurdle in the course of e-commerce development. Currently the Saudi Postal Service, a government agency, lacks an efficient setup for delivering goods and services, making e-commerce a less viable option for consumers. Furthermore, unsecure online payment infrastructure poses a huge barrier to expediting e-business. Online payment fraud has been recorded as a high risk for implementing e-business in Saudi Arabia. Finally, the absence of e-commerce law is a significant reason behind the lack of e-commerce development in Saudi Arabia. The lack of clarity in existing laws to protect e-businesses in Saudi Arabia discourages international investment in the area, limiting overall growth of e-commerce.

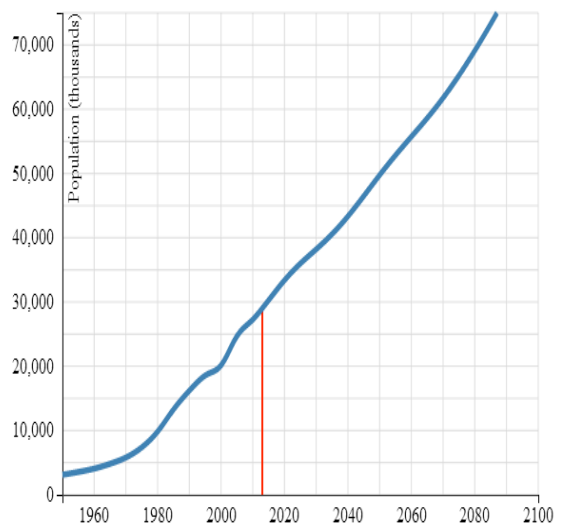
Model: Factors describing challenges faced by e-commerce in Saudi Arabia



A. Lack of government involvement

According to the ministry of economic and planning's report in Saudi Arabia for 2013, the estimated population is 29,994,272 million with growth rate 2.7%, [8]and per capita a GDP of US\$ 25,700 in 2012 with growth rate 6% . The GDP indicates that Saudi consumers have the ability to spend money to satisfy their needs and demands; however, the use of e-services has not been fully utilized. This gap in the availability of resources and their consumption is primarily due to the lack of government involvement in making services accessible to the population. Figure 2 below indicates that the Saudi Arabia Population has grown so rapidly , however this increase in population is not accompanied with a similar growth in consumer consumption of e-commerce services in Saudi Arabia.

Saudi Arabia Population Chart



B. Figure 2: Saudi Arabia Population

Although retail business has been growing rapidly and big international retail brands have entered the Saudi market, the Saudi government involvement in ensuring economic success has not reached the desired expectations. Perhaps it is the underestimated impact of e-commerce on Saudi economic growth that has prevented the government from getting fully involved in this venture. One of the major reasons behind the slow growth of the IT sector in Saudi Arabia is the delay in setting up the IT infrastructure. This has affected the process of development for e-commerce. As stated in the website of Ministry of commerce and industry , the ministry of commerce and industry appointed a committee to discuss the e-commerce process[9]. However, proper measures were not put in place to implement the suggestions made by the aforementioned committee to

effectively introduce e-commerce services to the local population. The lack of initiative by the Saudi government has therefore prevented the successful spread of e-commerce across cities in Saudi Arabia. Even though customers are rapidly becoming aware of the benefits that they can potentially avail through utilizing e-commerce services, the weakness of existing infrastructure prevents them from taking full advantage of those services. The Saudi government needs to understand the utility of e-commerce services and the positive impact that they can have on development in the region. Additionally, the government should also invest resources in improving supplemental services such as the postal service system which is another hurdle that e-commerce industry faces in Saudi Arabia.

C. Weakness of postal delivery system

Saudi Arabia is considered to be of the fastest developing country; however, it is still in an earlier stage of developing services. One of these services is the Saudi postal system which is government- operated unlike other nations where the private sector also has a fair share in providing this service[10]. Aside from the bigger cities such as Riyadh and Jeddah, most of the streets and homes in Saudi Arabia do not have an address associated with them, which makes it difficult for the e-commerce industry to effectively serve them. Since the mail is still handled manually, most people pick up their mail from post offices [8]This operating environment is counterproductive for the growth of a new age system such as e-commerce which relies heavily on access to information of consumers.

The lack of an efficient postal system is equally detrimental to consumers as well. For e-commerce customers, delivery system is an important service in order to get their products on time and at a fair price[11]. However, when it comes to accesses to e-commerce services, customers in Saudi Arabia are still facing three major issues: lack of an assigned home address, getting their goods and services on time, and the cost of delivery services. This makes it challenging for consumers to take advantage of e-commerce services even though they are aware of its benefits. For instance, even if a college student in Saudi Arabia who is aware of the wide variety of products available through online retailers such as Amazon wants to order their products, he/she will face the issue of either ordering them to a mailbox due to the lack of a home address and will also incur an excessive cost for the shipment. Thus, even though the consumer is extremely interested in e-commerce services, the weaknesses in supplemental systems prevent him from using e-commerce like their counterparts in other countries.

D. Insecure online payment

Information security is a huge concern for online customers regarding their personal information that is being processed by gateway to execute the transaction. Most web users purchase their products without reading the privacy statement or taking adequate precautionary measures such as only accessing securing sites when engaging in online

transactions. There are many ways to protect the user's privacy such as turning cookies off or not replying to spammers[12]. If consumers adopt certain measures while engaging in online activities, they can prevent the potential compromise of personal information that can result from spamming. Of the various computer security risks, faced by consumers, spamming is a fast growing issue. Table1 shows the top 20 nations where users face the risk of infecting their computers. This data shows that Saudi Arabia is the one of the most spammed country in the world for 2011, ranking at number 13.

TABLE I. TABLE : THE TOP 20 COUNTRIES IN WHICH USERS COMPUTERS RUN THE HIGHEST RISK OF INFECTION VIA THE WEB [13].

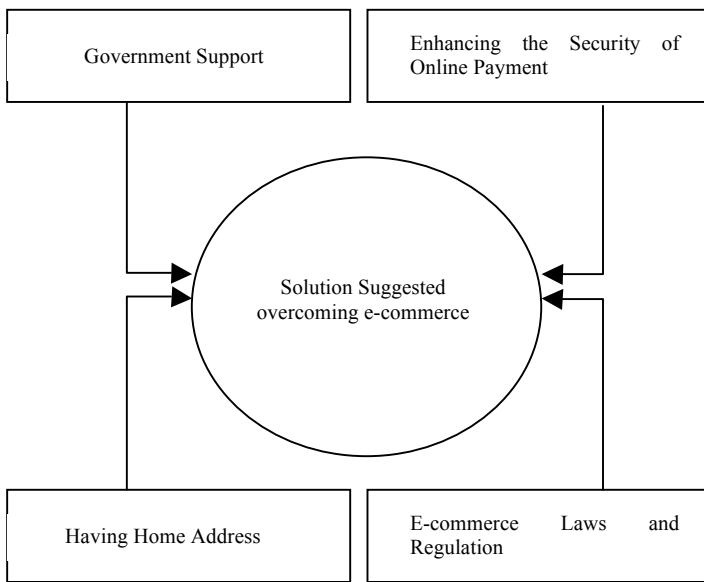
Rank	Country	% of unique users*
1	Russian Federation	55.9
2	Oman	54.8
3	United States	50.1
4	Armenia	49.6
5	Belarus	48.7
6	Azerbaijan	47.5
7	Kazakhstan	47.0
8	Iraq	45.4
9	Ukraine	45.1
10	Guinea-Bissau	45.1
11	Malaysia	44.4
12	Sri Lanka	44.2
13	Saudi Arabia	43.9
14	India	43.8
15	Sudan	43.5
16	United Kingdom	43.2
17	Tajikistan	43.1
18	Qatar	42.4
19	Kuwait	42.3
20	Canada	42.1

As seen in the table above, Saudi Arabia is at a higher risk than several other nations when it comes to computer security. This is a result of both uninformed web usage by consumers and lack of initiatives to educate consumers about safe practices when using web, especially for financial transactions. In e-commerce, customers process their payment through the gateway using the web[14]. Since the customers in Saudi Arabia are using online payment, their exposure to the online attacks is significantly increased as indicated by the data in Figure 3.

E. Absence of e-commerce regulation

Like other forms of business transactions, there are certain legal terms and conditions that are applicable to e-commerce. Therefore, just as in any other business transaction, there may be instances where there are conflicts or issues between the service provider and the client[15]. Some of the major issues that have arisen in e-commerce practicing are related to trademarks, copyrights, and cyber related fraud. While these issues appear frequently, e-commerce law is set up to protect both involved parties from these issues and crimes. The Ministry of Commerce and Industry in Saudi Arabia has not set clear regulations to protect both local and international business[16]. Since cyber-attack crime is considered a threat, sanctions has not been cleared in the ecommerce regulation. Most regulation in Saudi Arabia is based on Sharah which is Islamic law[17]. Crimes' punishments are applied as mentioned and Quran and Sunna.

IV. MODEL: FACTORS DESCRIBING SOLUTION SUGGESTED BY E-COMMERCE IN SAUDI ARABIA



V. IMPLICATION OF THE MODEL

The e-commerce in Saudi Arabia is in its early stage since there are many factors needed to be established or developed. The model shows that there is weakness and absence of some e-commerce factors. In first model, the lack of Saudi government involvement has affected the process of the ecommerce development. It could help in improving other factors as the weakness of the postal delivery system since it's operated by the government. Since the government system is not federal and the government can get involved in the rules and regulation, the ecommerce regulations and rules

could be set up by the government. Moreover, unsecure online payment has affected a lot small businesses, since the government is not setting a clear regulation and rules to mitigate the recorded crimes in this section.

A. Government support

The kingdom of Saudi Arabia is one of developing countries and considered one of the richest countries in the world. It has all the potential to support the process of developing the ecommerce infrastructure by setting up IT infrastructure throughout the country, improving the Saudi post services to cover all the street and homes, setting up the regulation and rules to attract the international retailer, and participating in educating young users computer ethics[18]. Saudi government could benefit from supporting e-commerce by cutting down a lot of cost of services, providing huge marketplace, satisfying the customers' needs and demands, reducing the cost of operations and administrations, and improving the competition between local and international retail[19].

TABLE II. OVERVIEW OF THE INHIBITORS AND ENABLERS TO ADOPT E-COMMERCE IN SAUDI ARABIA.

Inhibitors	Enablers
people's habits in not using online transactions	Providing trustworthy and Enhancing the security online payment options
Absence of regulation and rules e-commerce in KSA	Government support to improve the regulation and assistance for e-commerce
limited of e-commerce experience	Developing IT Infrastructure
Limited of online payment options in KSA to help build the trust of customers	Providing Educational programs for young people and building the awareness of customers in the country
Weakness of delivery systems	Mailbox services to cover all the street and homes

B. Having home address

One of the main reasons behind the success of ecommerce is the ease of reaching the customers to deliver their goods. Many countries have a good postal system that helps the governments to provide e-governments and e-commerce services. However, Saudi government just started using geographic information system (GIS) to establish a postal code system. GIS helps the Saudi post to divide the country into regions, and regions into branches, which will help the e-commerce to expedite the delivery system. Implementing the GIS project will take a certain time to finish, which will affect the developing of the e-commerce services[8].

C. Enhancing the Security of online payment

Customers always submit their transaction through the payment gateway to be processed, however, the security at the payment gateway sometimes has been hacked: customers' information will be stolen and might be used to process another transaction without user's permission. Customer's awareness is an important factor to reduce the cybercrime by knowing the difference between web spoofing and phishing and defacement[20]. Web spoofing is misleading the customers submit his/ her information through a fake website[21], similar to the original. Therefore, most Countries are suffering from such techniques that cost their economy a lot. The ministry of commerce and industry could help the e-business by providing latest technology used in online payment[22]. Providing training sessions to online marketplace providers would enhance the opportunity to face the online payment threat, for instance, using latest technology as TLS, avoiding web Spamming[19].

D. E-commerce regulation and law

The Saudi government could play a huge role by shaping the rules and regulations for local ecommerce system[23]. Not only focusing on rules to overcome the conflict between parties, but also being so clear about the punishment for computer crimes is also an important factor in e-commerce regulation. Moreover, conveying the international ecommerce law and adopting it in the country is very significant for both local and international business to have a better understanding about the international regulation. International trade law is based on two sources: international legislation and international custom[24].

VI. RESEARCH METHODS

For the purposes of this paper, research conducted by various trusted sources was utilized. Upon analyzing the information that collected it for the purpose of this research, it is possible to assess that the successful implementation of e-commerce industry in Saudi Arabia. Currently faces severe challenges that must be dealt with in order to achieve marked progress. The results of survey conducted by Al-Otaibi, M. B., & Al-Zahrani, R. M, shows us that government involvement is a key factor in reaching desired goals. Also, the data received from the risk of infection via the web , shows that customer vulnerability in Saudi Arabia is significantly higher than that in other countries. Data taken from per capita (PPP) in Saudi Arabia 2011 proves that customers in Saudi Arabia have the Finance ability to do online shopping. Additionally, the result of survey conducted by AlGhamdi, Drew, & Alshehri proves that effectiveness of consumer awareness of e-commerce options is limited by the vulnerabilities that those consumers face in accessing web services. This is primarily due to the lack of stable laws regulating e-commerce. Furthermore, the research conducted by Aladwani, speaks of the infrastructural deficiencies that exist in Saudi Arabia

which present a barrier to e-commerce growth in Saudi Arabia.

VII. CONCLUSION

E-commerce in Saudi Arabia is still in its early stages. The Saudi government has the potential to expedite the process of ecommerce development by further engaging in development efforts with the private sector[25]. However, it currently faces certain challenges such as postal delivery system, insecure online payment, and absence of ecommerce regulation and rules. These difficulties prevent the government from taking advantage of the international business prospects which can bring extensive development opportunities to the country[26]. Additionally, there is a lack of understanding of the advantages that the aforementioned opportunities will bring to Saudi Arabia. Although the consumers in Saudi Arabia are well aware of the benefits of e-commerce, this sentiment has not trickled into the Saudi government as of yet.

Therefore, some solutions have been proposed to overcome these challenges. These include, assigning home addresses to the general population and businesses, securing online payment to prevent online fraud, and establishing a set of e-commerce regulations that can be exercised over both national and international entities[27]. Since the government exercises excessive influence in Saudi Arabia, it can play a significant role in the implementation of these recommendations by stepping into the overseer role and providing appropriate assistance to both the private sector and general population. Government assisted e-commerce development can rapidly transform the existing state in Saudi Arabia and generate new opportunities of social and economic growth.

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