The Importance of Trust and Security Issues in E-Commerce Adoption in the Arab World

Wasfi Al rawabdeh

Business Administration Department, HashemiteUniversity, Zarqa Jordan
E-mail: Rawabdeh@hu.edu.jo

Dia Zeglat

Business Administration Department, HashemiteUniversity, Zarqa Jordan
E-mail: Dia@hu.edu.jo

Abdelghafour Alzawahreh

Business Administration Department, Hashemite University, Zarqa Jordan
E-mail: zawahreh@hu.edu.jo

Abstract

The paper describes the importance of trust and security issues in E-Commerce (EC) adoption in the Arab World. This study also explains benefits of the internet and EC towards the organizations and businesses. The paper takes on the introduction regarding the EC and the internet in the Arab countries followed by the literature review on the studies that have been carries out on the trust and security issues of EC in the Arab World. The methodology used to examine the key elements is done by secondary research. Significance of the research along with recommendations is discussed in this paper. The finding of this research is that good security improves trust, and the perceptions of good security and trust will ultimately increase the adoption and use of EC in the Arab countries.

Keywords: E-commerce, Internet, Security, Trust, Arab World

1. Introduction

Telecommunications and information technology have created a new system of organized businesses, called the Internet. The popularity of the Internet has been growing at astonishing speed, which changes the overall objective of the defence to commercial applications (Turban, et. al. 2010). EC is one of the fastest gains of information technology leads to fundamental changes in a way to make businesses effective and efficient. The growth of EC provides and highlights the various advantages to companies and businesses. These benefits include the dissemination of information, development of new technologies, promote and sell products and services and cooperation between the supply-chain (Turban et al. 2006). EC also opens up an opportunity to promote the environment, which promotes the globalization of markets worldwide; particularly businesses on online basis (Laudon and Traver, 2009).

The Arab countries have a large economy; the economy is based on the free service. However, yet to experience the maximum benefits from adoption of Internet and EC technology (Aladwani, 2002; Mahmoud and Ugur, 2007; AlGhamdi and Drew, 2011). In recent years, while the use of the Internet at all levels has increased in the Arab region, EC activities are not progressing at the same speed. The cases of Internet fraud is increasing at an alarming rate, so that Arab companies using EC must have means to protect the transmission of personal data. Customers know what risks are

presented and phenomena which are consequences increasingly common as identity theft or data, so they feel a combination of distrust and fear. In this situation, expect companies to protect, and most people want more conclusive evidence that information is safe and secure (Yoon and Occeña, 2009).

The trust is a key factor in EC which is increasingly recognized in academic and professional communities as the main salient factor affecting the perception toward EC adoption (Lee and Turban, 2001; Salam, et. al. 2005; El-Said and Galal-edeen, 2009). In EC transactions, consumers' perceptions of the legitimacy of business confidence are necessary because the transfer of confidence in the electronic version of the physical world. However, empirical research in this area drowned in contradictory perceptions of trust. The research provides the effect of strengthening confidence in the development of EC in different cultural contexts and configurations. Therefore, the aim of the paper is to provide a study on the impact of trust in EC development and importance in the Arab countries (McKnight, et. al., 2002; Forsythe and Shi, 2003; Tan and Sutherland, 2004).

2. Literature Review

In the development of EC, security has always been the core and key issue that support its adoption (Zhang, et. al. 2012). Scholars believed that good security improves trust, and that the perceptions of good security and trust will ultimately increase the adoption and use of EC not just in the Arab countries but all over the world (Kima, et. al. 2010). In fact, customers' perceptions of the security and trust of e-payment systems, implemented by companies trading online, have become a major factor in the evolution of EC. It is clear, however, that the argument for the safety of consumer, and the end user has taken considerable reflections on the transaction importance (Gray, 2001; Warkentin and Vaughn, 2006).

Securirt, in the case of phenomena mass, such that the consumption of current products, methods of payment, transport system, health is an issue of risk management. These fields are a consideration of the diversity personal situations as well as the appropriate response to reduce within reason. This risk is the precautionary principle to the definition of the appropriate response, or "polluter pays" principle for definition of responsibilities. A number of reasons contribute to this debate, one of which is the usage of internet in this area. In countries such as Yemen and Iraq are still restrictions on transfers of foreign exchange and consumers have difficulty in transactions, and pay through online systems and portals (AAG, 2011). A number of studies show that in a number of Arab countries; regarding EC, there is a slow acceptance of consumers` awareness of the benefits of using the Internet and see it as the spread of Western values and Western cultures (Aladwani, 2002; AlGhamdi and Drew, 2011; Al-Mohamed, 2011).

Internet has caused several issues and problems in the Arab world and has been influencing as a major problem until the mid-1980s. Most consumers do not used to surf the Internet at home, but used to go to Internet cafes. Most users use Internet connections to make cheap long distance phone calls and chat. Most Internet users are concentrated in the Gulf region (UAE, Saudi Arabia, Oman, Bahrain, Kuwait and Qatar), the region with a population less than 11 per cent of the total population of the Arab region (Al-Mohamed, 2011). For example, Saudi Arabia's Internet users spent around US$ 3 billion in 2010 on buying products and services through EC and Dubai accounts for almost 60 per cent of EC spending in the Gulf region in 2011 (AAG, 2011). In addition, consumers in the Gulf countries used EC to enjoy the ability to trade directly to the use of credit cards or other payment methods. In other countries such as Yemen and Iraq are still have restrictions on currency transfers and consumers have difficulty in transactions, and pay online, without these services (Corbitt & Thanasankit, 2003; AAG, 2011).

3. Arab Countries and EC Adoption

For many years, the Arab countries have suffered of being isolated from the global online trading that influence the economic growth and development in these countries (Kamel, 2005). To a large extent,

Arab countries face the same challenges that affect the adoption of EC technology elsewhere. Kamel and Hussein (2002), Aladwani (2003) and Warf and Vincent (2007) have studied the state of EC development in the Arab countries with a focus on the challenges that face Arab businesses when adopting EC technology. They found that most Arab countries are still facing major barriers that hinder the diffusion of Internet and EC with Internet security and customer trust were the most important barriers.

Most EC studies have often focused mainly in Western countries, and are seen as a global phenomenon. While it is directly relevant to whether EC in connection with the most developed countries, it is important to note that EC is also affected by the developing countries. Internet penetration in these countries is in a sharp curve (Hunter et. al., 2004). Most markets in developing countries do not always succeeded in technology adoption, which shows the reasons for the lack of acceptance. Researchers and practitioners also agree that there are still uncertainties in the importance of EC among consumers in developing countries in general and the Arab world in Particular; therefore, the benefits and use of Internet in these countries has not been fully realized (Cheung and Lee, 2006, pp. 482).

4. Internet Implications & Benefits

The Internet can also have important implications for the shape and intensity of competition in the Arab market. In the traditional economy, the organization plays an important role in determining its dominant position. Internet economy, however, each player will start at the same level. Small and larage organizations can play an important role in the market and compete effectively with each other for market share. This is simply untrue, as the organization's competitive position in the Internet market will depend on the breadth and depth of inventory and the physical size of the organization. Competition means, among other things, that the initiative and control moves to the hands from seller to buyer (Cheung and Lee, 2006).

According to Turban et al. (2006), the benefits of EC can be grouped into three broad categories: benefits to organizations, benefits to customers and benefits to society. Organizations use EC as a new marketing medium and as a source of information on their products and services for potential customers (Standing and Lin, 2007)). Customers too can benefit from the use of EC, as it gives users a wide variety of choices (products and/or services) from which to make purchases and increases their convenience of shopping (Berezowski, 2003). EC can benefit society as well by facilitating the delivery of public services such as education and health care (Richardson, 2006).

Most studies in the Arab world discuss the barriers that deter use of e-commerce, and only a few have tackled the benefits. Nour (2002), Aladwani (2003), Donini (2006), AlGhamdi and Drew, (2011), and Al-Mohamed (2011) pointed out several benefits that Arab countries were hoping to achieve when adopting e-commerce including faster and easier delivery of products and services to customers inside and outside the region, reduce operating costs, improved access to new markets nationally and internationally, improved commerce both within the Arab countries and with other nations, and improve the competitive position.

5. Arab Companies and E-Commerce

For companies in the Arab countries that transmit confidential information through the Internet, it is vital to gain the confidence of visitors to its website, as consumers are unwilling to leave data exposed to risks as identity theft. There is a general reluctance to provide confidential information such as credit card, passwords or other confidential information for fear that someone intercepted or that the website from which you sent is tamper harmful purposes (Al-Mohamed, 2011). The abandonment of transactions has become a liability for EC. According to a study on this issue, 21 per cent of Internet users have left purchases on occasion because they were concerned about data security and theft of credit card information (AAG, 2011).

6. Methodology

The methodology for this research paper is based on secondary research, which is based on different journals, books and web-site resources. Secondary research also includes international magazines which highlights the issues of adoption of EC in the Arab World. The information is collected from various sources in order to make it more concrete. Though, secondary research has several disadvantages like it does not involve any primary data, opinions or surveys. The nature of the study mentioned here is descriptive (Laudon and Traver, 2009).

7. Discussion

There are many ways in which the Arab countries can combat the security issues that exist in the company. This is how they can make sure that the information that is held with the company is safe and secure. The confidentiality of the data should be ensured by the people of the company so that the customers can provide information without any fear of data theft. These ways will also ensure the companies that the data that are useful for them is safe and kept confidential. In this manner, they can make sure that the company does not suffer any loss and gains profit by earning the trust of the customers (Nudelman, 2011).

Earning the trust of customers has a value incalculable, and spending on technology needed to protect them is minimal compared with the advantages that reports and the overall costs of a company. If we review these factors, no doubts improve the security of EC website using SSL technology or other measures are essential to any company that wants to succeed on the Internet. The regular customers of a website and those who first visit will be much better protected if the company uses a security provider whose mark is the best known and most confidence-inspiring. VeriSign unrivalled in this respect, as its advanced solutions online safety deserve the absolute confidence customers and the most reputable in the industry (Meier and Stormer, 2009, 29).

There are many ways in which the companies can overcome the issue of security and confidentiality of the data. These techniques are used internationally; therefore, the Arab companies can also adopt the same technigues. These include data Encryption, Secure Socket Layer (SSL) Certificates and Certificates with Extended Authentication Validation (EV) and Trustmark as explained in the following sections.

7.1. Encryption

Encryption is a technique whereby the data is transformed into information that can only be unintelligible decipher its rightful recipient (Pavlou, 2003). Protection integrity and confidentiality are achieved with this method are fundamental to EC, and that partners and customers of an enterprise share information or make purchases on a website if they feel that do not pose any danger. The solution for who want to provide these guarantees is to adopt trust infrastructure based on technology encryption.

7.2. Secure Socket Layer (SSL) Certificates

SSL technology, the global standard security Internet, encrypts and protects the information transmitted in the network via the https protocol, whose use is greatly extended. With this system (compatible with all major operating systems, browsers and Web applications as well as server hardware), data in transit is protected, otherwise, data could be intercepted and manipulated. An SSL certificate is an electronic file that allows the encrypted communication and clearly establishes the identity an individual or website (Lee, et. al. 2006).

7.3. Certificates with Extended Authentication Validation (EV)

Certificates with Extended Validation (EV) offer a Authentication higher than any other SSL certificate, more structured and tight controls. First Instead, the contact person of the company must

provide a signed document confirming the request. In case that the certifying authority could not confirm identifying information of the company in a database official data, you may request documentation commercial registration (Laudon and Traver, 2009, pp. 84).

7.4. Trustmark

To earn the trust of their customers and enhance their income, EC companies not only need to protect data transmitted on their sites web, but also show how they are being done. The seals of certification authorities (also called trust marks) are a way to show customers that they are protected and gain their trust by a visible sign of security. The VeriSign seal is the most widely used security badge and recognized worldwide. Clicking on it shows the name of the certificate owner, the period of validity of this, information on services including security and other data on the validation process that follows VeriSign before issuing the certificate. In an analysis study, marks made to VeriSign in 2009 (VeriSign Brand Tracking Research), 11 per cent of respondents indicated that on occasion, the absence of the VeriSign seal was determining factor for not using a trade website mail or make purchases on it (Kassim, 2009).

8. Conclusion

The research reveals the significance of trust and security problems associated with the adoption of EC in the Arab World. The major finding of this research confirmed that security is one of the crucial issues affecting the development of EC in the Arab world. EC has a significant impact on customer loyalty and acts as an intermediary for each part of the quality of the user interface and data quality, and customer satisfaction (Kim, et. al., 2009). However, low consumer confidence in EC affects the purchasing decisions.

The user interface and the quality of information on EC sites were observed indirectly affect consumer loyalty in the Arab World. This underscores the importance of service quality of EC information and disclosures in the development of EC interface (Jacko, 2012). In addition, the risk level of security and confidentiality of customer perceived EC are important matters for our customers' confidence and, therefore, are important for the development of EC in Arab countries.

From this research, it should be noted that the current low level of participation in EC by Arab countries cannot be attributed to any lack of benefits for those countries. Rather, it has more to do with the special constraints that Arab countries face in this area, including security and trust issues. The research shows that companies can overcome the issue of security and confidentiality of the data by adopting sophisticated security measures such as Encryption, Secure Socket Layer (SSL) Certificates, Certificates with Extended Authentication Validation (EV) and Trustmark.

9. Recommendation and Future Research

The research has some restrictions like it does not involve primary data. A number of studies have focused on identifying the characteristics of EC customers. In this study it was found that the adoption of EC is compromised of trust and security issues. The level of development is not significant and relative to the perception of customers' trust and security perception. The study provides result i.e. significant impacts of EC on Arab countries and dealers all over the world. The research results have important in practical implications of companies using EC applications in Arab countries. Arab leaders should help companies to better understand which factors are the key areas of EC applications should focus on improving satisfaction, trust and loyalty of online customers, improve EC services, and success (QI and Yan, 2009).

For simplicity, factors such as the acquisition of customer value and culture of Arab World and laws to protect online customers, and customer service before and after the online stores were excluded from this study. A further significance of EC website user interface is designed and influenced by the quality of every customer's satisfaction, trust and loyalty is the practical impact of training on the same. Therefore, additional studies may be carried out to investigate these factors is the level of satisfaction, trust and loyalty. In addition, future research will examine the impact of these factors suggested confidence,

satisfaction and loyalty in different cultures in the Arab countries offers opportunities to improve EC in the Arab World in general.

References

1]   AAG (Arab Advisor Group) 2011, Saudi Arabia's Internet users spent around US$ 3 billion in 2010 on buying products and services through e-commerce, Arab Advisor Group, viewed on 12/07/2012, <http://www.arabadvisors.com/Pressers/presser-170211.htm>.

2]   Aladwani, A. (2002), An empirical investigation of electronic shopping in Kuwait, *Journal of the Gulf and Arabian Peninsula Studies*. Vol. 21 No. 3, pp. 213-25.

3]   Aladwani, A., (2003). "Key Internet characteristics and E-commerce issues in Arab countries." *Information Technology and People*, Vol. 16, 1: 9-20

4]   AlGhamdi, R & Drew, S (2011), 'Seven Key Drivers to Online Retailing in KSA', in P Kommers & P Isaías (eds), Proceedings of the IADIS International Conference on e-Society, Avila, Spain, pp. 237-44.

5]   Al-Mohamed, K,(2011), Information about e-mail for research use, E-mail communication edn, Riyadh.

6]   Berezowski, M., (2003). An introduction discussion of E-commerce. Available from: http://66.102.1.104/scholar?hl=en&lr=&q=cache:AHgI42pYOIQJ:www.cs.ualberta.ca/~wfb/30 0/projects/berezowski.pdf+benefits+of+E-commerce+to+society, [Accessed 15 May 2012]

7]   Cheung, C.M.K. & Lee, M.K.O. (2006), "Understanding consumer trust in internet shopping: a multidisciplinary approach", *Journal of the American Society for Information Science and Technology*, Vol. 57 No. 4, pp. 479-92.

8]   Corbitt, B.J., Thanasankit, T. & Yi, H. (2003), "Trust and e-commerce: a study of consumer perceptions", *Electronic Commerce Research & Applications*, Vol. 2 No.3, pp.203-15.

9]   Donini, V. (2006). Bridging the gap: privatization policy, Internet and e-commerce in Jordan. Robert Schuman Centre for Advanced Studies. RSCAS working paper No. 2006/37. Available from: http://cadmus.iue.it/dspace/bitstream/1814/6317/1/RSCAS_2006_37.pdf

10]   E. Turban, J. Lee, M. King and H. Chug. (2010), Electronic commerce: A managerial perspective. NJ: Prentice Hall, pp. 105 – 109.

11]   El-Said, G. F. and G. H. Galal-edeen, (2009), "The role of culture in e-commerce use for the Egyptian consumers," *Business Process Management Journal*, Vol. 15, 1:34-47.

12]   Forsythe, S., Shi, B. (2003), "Consumer patronage and risk perceptions in internet shopping", *Journal of Business Research*, Vol. 56 pp.867-75.

13]   Gray, V. (2001), "Barriers to Internet penetration in the Arab World" Arab Region Internet and Telecom Summit, Muscat, Oman, pp. 55-63

14]   Hunter, L.M., Kasouf, C.J., Celuch, K.A. & Curry, K.A. (2004), "A classification of business-to-business buying decisions: risk importance and probability as a framework for e-business benefits", *Industrial Marketing Management*, Vol. 33 pp.145-54.

15]   Jacko, J. A. (2012). The human-computer interaction handbook: fundamentals, evolving technologies, and emerging applications (3rd ed.). Boca Raton: Taylor & Francis, pp. 12-26

16]   Kamel, Sh. and Hussein, M. (2002). "The emergence of e-commerce in developing nation: case of Egypt". *Benchmarking: An International Journal*, Vol. 9, 2: 146-153

17]   Kassim, N. M. and S. Ismail, (2009) "Investigating the Complex Drivers of Loyalty in E-commerce Settings," *Measuring Business Excellence*, Vol. 13, 1:56-71.

18]   Kim, D. J., L. F. Donald, and H. Raghav Rao, (2009), "Trust and Satisfaction, Two Stepping Stones for Successful E-Commerce Relationships: A Longitudinal Exploration" Information Systems Research, Vol. 20, 2:237-257.

19]   Kima, Ch. Taoa, W. Shin, N. and Kima, S. (2010), " An empirical study of customers' perceptions of security and trust in e-payment system", *Electronic commerce Research and Applications*, Vol. 9 No. 1. pp. 84-95

20]   Laudon, K.C., Traver, C.G. (2009) E-Commerce. Business, Technology, Society. 5th Edition. Prentice-Hall, pp. 81 – 85.

21]   Lee, H.Y., Ahn, H. & Han, I. (2006), "Analysis of trust in the e-commerce adoption", Proceedings of the 39th Hawaii International Conference on System Sciences, Big Island, HI, pp. 39-46

22]   Lee, M.K.O. & Turban, E. (2001), "A trust model for consumer internet shopping", *International Journal of Electronic Commerce*, Vol. 6 No. 1, pp. 75-91.

23]   Mahmoud M. & Ugur Y. (2007) "An analysis of E-business practices in the Arab culture" Cross Cultural Management, Vol. 14 No. 1, pp. 68-73.

24]   McKnight, H.D., Choudhury, V. & Kacmar, C. (2002), "Developing and validating trust measures for e-commerce: an integrative typology", Information Systems Research, Vol. 13 No. 3, pp. 334-59.

25]   Meier, A., & Stormer, H. (2009). EBusiness & eCommerce: managing the digital value chain. Berlin: Springer, pp. 25-36

26]   Nour, S. (2002). ICT Opportunities and Challenges for Development in the Arab World. Discussion Paper No. 2002/83. Available from: http://www.wider.unu.edu/publications/dps/dps2002/dp2002-83.pdf

27]   Nudelman, G. (2011). Designing search UX strategies for ecommerce success. Indianapolis, IN: Wiley, pp. 78-89

28]   Pavlou, P.A. (2003), "Consumer acceptance of electronic commerce: integrating trust and risk with the technology acceptance model", *International Journal of Electronic Commerce*, Vol. 7 No.3, pp.101-34.

29]   Qi, F. and L. Yan, (2009) "Competitive Determinants of Consumer Satisfaction in E-commerce," *Journal of Academy of Business and Economics*, Vol. 9, 1:79-83.

30]   Richardson, W. (2006). Current Issues in Marketing in the Information Age, 2nd ed.

31]   Salam, A., Iyer, L., Palvia, P. and Singh, R. (2005), "Trust in e-commerce", *Communications of the ACM*, Vol. 48 No. 2, pp. 72-7.

32]   Standing, C. and Lin, C. (2007). "Organizational Evaluation of the Benefits, Constraints, and Satisfaction of Business-to-Business Electronic Commerce". *International Journal of Electronic Commerce*, Vol. 11 No. 3, pp. 107–134

33]   Tan, F.B. & Sutherland, P. (2004), "Online consumer trust: a multi-dimensional model", *Journal of Electronic Commerce in Organizations*, Vol. 2 No. 3, pp. 40-5.

34]   Turban, E., Lee, J., King, D. and Viehland, D. (2006). E-commerce: A Managerial Perspective. Prentice Hall

35]   Warf, B. and Vincent, P. (2007). "Multiple geographies of the Arab Internet" *Area*, Vol. 39, 1: 83-96

36]   Warkentin, M., & Vaughn, R. (2006). Enterprise information systems assurance and system security: managerial and technical issues. Hershey: Idea Group Pub, pp. 45-59

37]   Yoon, H. S., & Occeña, L. G. (2009). Focusing on consumer-to-consumer trust in electronic commerce with age and gender factors. Columbia, Mo.: University of Missouri--Columbia., pp. 29-41

38]   Zhang, Y. Deng, x. Wei, D. and Dengc, Y. (2012), "Assessment of E-Commerce security using AHP and evidential reasoning", *Experts Systems with Applications*, Vol. 39. No. 3, pp. 3611 – 3623.