



Determining the Impact Factors of E-Commerce Adoption by Smes in Iraq: an Overview

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Abstract

The appearance for electronic commerce (e-commerce) has produced great benefits for enterprises; where e-commerce has become indispensable for Small and Medium Enterprises (SMEs) around the world, e-commerce is considered as an appropriate technique for selling, marketing and integrating online services that can play a significant role in determining, maintaining and getting customers. However, e-commerce adoption stays a vital yet evasive and complex phenomenon, with a quite little known regarding its determinants. This study aims to provide an overview of e-commerce adoption through SMEs. That identifies the e-commerce benefits realized through these SMEs; an intensive review of the related literature was conducted to cover the variables of this study. The study was performed utilizing a non-experimental study exploratory research design. This exploratory study included an essential investigation about secondary data. The study development and modeling of secondary data in order to highlight the final results of the research. Through reviewing the literature of the existing frameworks and models in e-commerce adoption. Therefore, it is recommended for future researchers to conduct a field survey by collecting primary data and conducting statistical tests on the critical factors that help to adopt e-commerce in Iraqi SME's.

Keywords: E Commerce, SME.

1. Introduction

The remarkable development of ICT has led to the development of several fields like commerce, economy, banking, customs, etc. (Rahayu & Day, 2017). Since time passes, the classic commerce will no extended be able to react the modern requirements. Therefore, new commerce techniques will be required. Hence, benefiting from novel and modern techniques like e-commerce in performing commercial functions can perform important roles in the achievement of commercial firms (Sebora, Lee, & Sukasame, 2008).

Electronic commerce is the selling and buying of services or products through electronic systems including the Internet and other computer networks. Usually modern electronic commerce uses the World Wide Web, e-mail, mobile devices and telephones (Akanbi & Akintunde, 2018). E-commerce has provided many advantages, this is why e-commerce has become very popular among companies and it is noted that, this interest by e-commerce companies from the growing growth of e-commerce use by companies from year to year. In 2009, 624 million internet clients had made online buys with income nearly \$8 trillion in total; and according to data reported through The Internet World Statistics (2015), the number had been forecast to have increased through year end 2013 to over \$16 trillion of transactions, like significant growth is as well seen in Asia.

It has to be pointed out that e-commerce has resulted in evolutions and dramatic modifications in commercial issues. That is, e-commerce has resulted in modifications and variations in selling and buying products and items, it has enhanced the relation and

connection between the clients and suppliers. In addition, it has produced fundamental modifications in business view in terms of better production and much better relationship between clients and producers (Yang, Pang, Liu, Yen, & Michael Tarn, 2015), specifically; SMEs in developing countries face important and special challenges in adopting all these technologies, which ought to have the enhancement of their fortunes (Sa'ad).

SMEs are an integral part of developed and developing market economies, and they contribute to the competitive business environments. For instance, SMEs in Slovakia represent 99.9% of all businesses and also account for 72% of all jobs in the business environment (Slovak Business Agency 2015). The report also indicates that SMEs in Slovakia are an important part of the Slovak economy, and they have the greatest potential for economic growth. It is apparent that for SMEs to contribute to the expansion of the Slovakian economy and to create jobs, they must embrace information technologies including various aspects of e-commerce. Given the importance of SMEs in the Slovakian economy, there appears to be a gap between what is needed by Slovakian SMEs to be competitive in the global market and to create jobs. Therefore, it is imperative to not only understand the determinants of e-commerce adoption but also examine those factors that distinguish between adopters and non-adopters of e-commerce among Slovakian SMEs (Walker, Saffu, & Mazurek, 2016).

SMEs considered like a positive power in Economic development and growth. Where SMEs have an active role in making sure fast development, increased usage of local sources, development of local technology and increasing the living typical,



the aforementioned, Government of Nigeria has made several attempts to developing SMEs in Nigeria, the several attempts are : National Economic Empowerment Development Strategy (NEEDS), National Economic Reconstruction Funds (NERFUND), Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), National Poverty Eradication Programme (NAPEP) and Small and Medium Industry Equities Investment Scheme (SMIEIS)(Taiwo, Ayodeji, & Yusuf, 2013).

Because of the increase in unemployment and the big companies, small and medium enterprises will be encouraged to solve the economic issues. For the ability of SMEs to provide and create jobs, address poverty and increase production. SMEs represent the backbone of the national economy in most countries all over the world. The SMEs through e-commerce and the use of the Internet will be able to enhance internal and external communication (Ahmed, 2018).

can find several factors that stand in the way of preventing e-commerce adoption by SMEs, the lack of support, internal resistance; unready customers; lack of IT resources, security issues; unready business partners, internal constraints, lack of support and lack of human resources like remain impediments factors of e-commerce adoption by SMEs (Jahanshahi, Zhang, & Brem, 2013) as well discovered that understanding of e-commerce, privacy issues, security, high maintenance cost and lack of knowledge were the major barriers confronted by SMEs in adopting e-commerce. Hence, the improvement of SMEs in a country will have a positive effect on the economic development of the country, and the opposite is true. However, majority of these studies were examined from the perspectives of the consumers. The aim of this study is to examine the influence e-commerce adoption on organizational level.

2. E-commerce

Previously, the term e-commerce was limited to the exchange of electronic data only, and the appearance of the Web predicted that this web-based trade will play an active role in the global economy (Nanehkanan, 2013). E-commerce literature has discovered that there are three procedures to achieve e-commerce. Some believe that e-commerce in Internet applications like e-mail and others see the achievement of e-commerce in terms of business activities such as communication between customers and suppliers and some see it as a combination of Internet applications and commercial activities (Ahmad & Jameel, 2018) or that, e-commerce can be defined by (Shahjee) as it has a great impact on the economy as it affects the costs of business and productivity and e-commerce conducts large-scale commercial activities through the Internet for products and services. (Hajli, Sims, & Shanmugam, 2014) shows that no common definition of e-commerce existed in the literature. E-commerce include carrying out commercial transactions via computer networks like the Internet described e-commerce like sales transactions which take place between organizations, businesses, and individuals via computer-mediated networks. Regarding buy and sell transactions, e-commerce is defined as buying, selling and trading of goods, services and information online using the electronic and communication technologies. Regarding use of technology, e-commerce involves communication, delivery and buy-sell of services, information and products over the computer network including the internet.

E-commerce is able to sell and purchase products and information via the Internet. E-commerce is changing the market place by transforming organizations business models, through framing relations between market actors, and by contributing to modifications in market structure. (Vadwala, 2017) also defined e-commerce as a technique of modern business

that addresses the require of business organizations, sellers and customers to decrease cost and increase the quality of items and services while raising the pace of delivery. Therefore, electronic commerce is provided a wide competitive advantage by finding new customers, markets and suppliers. It is faster to move to the international market. E-commerce is cost-effective, advertising and marketing at less cost than traditional methods, in addition e-commerce does not need a prominent physical location (Ahmed, 2018).

3. Small and Medium-sized Enterprises (SMEs)

Although there is no single and uniformly acceptable definition, SMEs are known globally to be effective in creating employment for young people and further enhancing economic development (Berisha & Pula, 2015). Small and medium enterprises are named by Qualities which Refers to size, therefore economists tend to partition them into classes based on some quantitative measurable symptoms. One of the most popular criterion to distinguish among small and large enterprises is the number of employees, Small enterprises size criteria vary by the industry within that the enterprise operates; services manufacturing, mining, trade, wholesale, retail trade transportation, and construction (Hatten, 2011). The World Bank utilizes three quantitative standards for defining SMEs: total assets in U.S. dollars, number of employees and annual sales in U.S. dollars (Berisha & Pula, 2015).

Based on the studies of (Mohammed, Almsafir, & Alnaser, 2013), SMEs play a critical role in the economic progress in developed and developing countries and account for 80% of the worldwide economic progress. In Vietnam, (Hoang, 2016) says that most of the firms are medium and small -size enterprises and although their achievements are important to the progress of Vietnam's economy. While SMEs are of super socio-economic importance. Even so, their long-term progress and competition has been affected by the chronic and often acute limitations on their obtain to formal-sector finance, between other institutional and systemic issues in developing countries. One of the main causes of SME inability is non availability of external finances (Abor & Quartey, 2010).

In Iraq can be define the small enterprises which has the number of employees less than 10 employees, and medium enterprises which has less than 30 employees. According to the Central Organization for Statistic and Information Technology (COSIT) in Iraq (Ahmed, 2018).

Table 1: (classification of enterprises in Iraq)

Small enterprise	Medium enterprises
1-9 employees	10-29 employees

4. Benefits of E-Commerce in SMEs

E-commerce has played an active role in the advancement of SMEs where these companies have identified many benefits from the adoption of e-commerce and there are many studies examined and summarized the benefits brought by the electronic commerce of these companies (increasing sales, improving the company's image, cost advantage, improving external communications, enhance competitiveness, improving processing speed, access to new markets and increasing employee productivity).

A study in turkey shows that the benefits which can be gotten via the adoption of e-commerce are: obtain to new markets, improve competitiveness and cost advantage (Aydemir, 2013). There is also a study on Indonesian SMEs that have proven that

electronic commerce is expanding market access, increasing sales, improving external communications, improving the company's image, improving processing speed and increasing employee productivity (Rahayu & Day, 2017).

One of the most important benefits that small and medium enterprises can get from the use of electronic commerce is: higher potential for partnerships, differentiation of product and service, flexibility in administration and communication, accessibility, capacity to enter supply chain for larger companies to obtain a wider range of markets, information, enhanced customer services, upgrading of information and reduce transaction costs. Another study depends based on tested of three independent variable (customer allegiance, attracting new customers customer retention, and customer retention) the findings show the benefit of adoption e-commerce is customer allegiance (Al-Abdallah, 2013)

Small and medium enterprises which adopted e-commerce in their business operations grew more rapidly and greater their customer base. On the other hand, small and medium-sized enterprises which un adopted e-commerce in their businesses may encounter a decline in productivity profitability and profitability. Where SMEs in one geographical region can look above their local markets and contend with larger organizations for customers on a worldwide scale to expand profitability, develop brand awareness and motivate progress. Thus, to endure and grow, adopting e-commerce is one of the impressive means through which businesses may remain competitive in this age of quick technological growth (Ekanem & Abiade, 2018).



Figure 1: Benefits of E-Commerce in SMEs

5. Barriers of Adoption E-Commerce in SMEs

E-commerce has many benefits to SMEs, but at the same time has barriers to their adoption. (Kwadwo, Martinson, Evans, & Esther, 2016) has conducted several studies in Ghana to identify some of these barriers, then they found the cost of e-commerce infrastructure and its execution is expensive such as setting-up, training employees, buying ICT tools for execution, consultancy fees, design and servicing of website and other infrastructures, Security issues and lack of regulatory frameworks, the Organizational culture, Lack of electricity, lack high speed of internet, Lack of skilled ICT personnel, Economic and political instability and Lack of payment systems and credit cards among clients and SMEs, All these are considered barriers and challenges preventing SMEs from adoption e-commerce. (Agwu & Murray, 2015) Showed through a study to Verification the barriers of using e-commerce in SMEs, the worry of scam and threat of loss like a major challenge to e-commerce.

Additional noted which e-commerce could offer clients savings in time, even so, utilizing the internet for commercial reasons may show to be too time ingesting for several clients. There are several reasons for this: registration procedures needed to obtain services, challenges to Determination web sites products services cost of a computer and internet, doing price comparisons, lack of pleasure and hard to determine items are barriers to adoption e-commerce by SMEs.

(MacGregor & Kartiwi, 2010) presented some more succinct barriers that (tangible) items have the wanted characteristics (e.g. colour, material, design, fit), which leads to a quality evaluation barrier to e-commerce. Also (Dube & Tofara, 2010) revealed that the require to feel and touch was the dominating obstacle for many home-shopping services. Likewise, (Shahjee, 2015) added, there are many barriers which limit the development and growth of e-commerce. Many studies determine the various types of barriers, and several of them concentrate on security as becoming one of the biggest inhibitors to and concerns for e-commerce. all kinds of enterprises have comparable barriers but with various emphasis such as Commercial Infrastructure, Technology Infrastructure, Internet Infrastructure, Security, Interoperability of systems and Lack of Qualified Personnel (Shahjee, 2015).

6. Related Work

Presently, given that technological instruments and advanced communication tools are developed and produced quickly and exchange the classic and outdated processes and operations, the niche of commerce has likewise commenced like a trend by giving up traditional and old style operations and using novel technology-based e-commerce (Ueasangkomsate, 2015) the principle of information and communication technology (ICT) has appeared as a new and powerful event in the world. It has started to impact people's lives directly or not directly through its great influence on social, political, cultural and economic structures. E-commerce has induced obvious modifications and evolutions in the classic foundations of the management of the societies through presenting a new system of administration (Apāvāloaie, 2014; Jai, Burns, & King, 2013). It must be noted that e-commerce is just not a brand innovative principle but it has got growing and unforeseen developments in the latest years. In fact, internet may be regarded as the significant reason for the development of e-commerce. Inasmuch as successful management and execution of e-commerce call for a careful plan.

(Okadapau & Emaase, 2016) investigated the influence of five socio-cultural factors such as decision making process, trading partner relationships with the company, maintenance of a good company image, Personal innovation and creativity and socializing on e-Commerce. However, it is observed that the most important socio-cultural factors rated by respondents in applying e-commerce applications were: relationship of trading partners and suppliers with the company, develop business contacts by socializing, and finally maintain the image of the company.

According to (Choshin & Ghaffari, 2017) e-commerce may be identified as the procedure of selling, transferring, buying, changing products, information and services by using computer networks, mostly the internet and e-commerce guided to remarkable modifications and evolutions in commercial issues. Which is, e-commerce has guided to diversity in selling, buying goods and products, has enhanced the relationships and connection among the providers and clients, whereas e-commerce have great potential in the economic development of any country. The relationship among technology and commerce has long been continued and existed. Multiple advances and developments of information and communication technology (ICT) at the latest decades,

guided to several developments in several fields like worldwide business. As a result, the processes involved on areas like trade, customs, banking, economy, etc. have developed and modified. There are four core variables that create the success rate of e-business: customers' satisfaction, costs, infrastructure, and awareness. In addition, the factor such as loyalty for SMEs is as important as trust in security and privacy factors.

Ramanathan et al., looked into the influence of e-commerce in operational performance and marketing in medium and small Taiwanese companies (Ramanathan, Ramanathan, & Hsiao, 2012). Utilizing a questionnaire and statistical methods, they suggested a conceptual model so that they can check out and analyze the influence of e-commerce on small and medium Taiwanese firms. The outcomes received in that study pointed out that three primary factors were accountable for the usefulness of e-commerce in Taiwanese firms:

Operational factor: basic web design, inner communications, quality enhancement, comprehensive information, security of online payment. Marketing factor: brand recognition online advertisements and customers' awareness. Performance factor: enhancement of procedure and competitive benefit, customers' pleasure

Rahayu, R., & Day, J. (2017) e-commerce could aid SMEs in the following significant aspects: enhanced communication with suppliers and clients, raised revenues, rising market reach, better employees productivity, rapid process, better firm image. Additional, empirical results present that Indonesia's SMEs, a developing country, increase the E-commerce adoption level increase the profit. Noted, it is necessary to know the barriers and inspiration before e-commerce adoption; there is scarcity of check into what occurs to SMEs after adoption e-commerce.

Finding from (Hajli, et al., 2014) The main factors effects of e-commerce adoption are (Awareness and Organizational readiness). There is a good relation among e-commerce adoption and organizational readiness and the relation among awareness of e-commerce and its adoption is both positive and strong. The adoption of E-Commerce has many benefits, E-Commerce decreases costs related with actions of the enterprise, it also assists in simplifying processes doing them smoother. E-Commerce likewise increases the enterprise's market get to and receptive new business Prospects, it likewise enhances operational performance in the short and long terms. Moreover, E-Commerce assist firms establish better relation with suppliers and business partners, as it increases the process of buying and selling items by both the enterprise and the client, that essentially impact the overall efficiency. However, about the adoption of the E-Commerce, are mainly affected by two theories, the Theory of Planned Behavior and Technology Acceptance Model.

From the point of view (Mohammed, et al., 2013) the factors that influence the adoption is essential to guarantee the achievement of adoption and to allow the decision creators and business proprietors focus a lot more on these factors to ensure that they can ensure the feasibility of adoption and execution of e-commerce by SMEs and they can obtain the predicted benefits and conquer the difficulties. The primary factors influences of adoption e-commerce are (perceived usefulness, Security, willingness of manager, perceived ease of use, company readiness, customers' needs and relative advantages), wherever the results show that the relation among adoption e-commerce by SMEs and manager willingness is significant and Relative advantage has the second highest frequency, Customer needs had been discovered to become marginally significant. E-commerce has created an innovative medium for SMEs where they can find great new opportunities and potential benefits like reducing business and

operation cost, streamlining of business processes, global outreach, 24/7 business, improving operational efficiencies, better access to new customers, suppliers and trading partners, creating new ways of selling existing company products and services, rapid time-to-market, greater competitive advantage, expanding market penetration, boosting revenue and more benefits. Moreover, SMEs play an essential role in the economic progress in developing and developed countries and account for 80% of the worldwide economic progress. Therefore, SMEs are recommended to conduct an evaluation of external and internal factors in an attempt to understand the readiness of their sectors in relation to the capacity and electronic market to endure in the e-commerce sector. Additionally, the evaluation of factors presents valuable information if an enterprise has to adopt e-commerce. Precisely, the evaluation of environmental factors shows the readiness of the enterprise's sector to electronic market that is one of the most significant factors for SMEs to think about before coming into e-commerce sector.

The evaluation of internal factors (knowledge factors, organizational factors, and technology factors) shows the enterprise's ability to endure in the electronic market. It revealed the following factors: the technological factor, the exterior factor, and the organizational factor. In addition, the benefits of these pointed out factors: moving into the new market location and the development of the competitive capacity and cost benefits. In terms of risks, it revealed that there was no foreword of information technology to stay in charge of the different processes and security issues. Likewise, it was discovered that probably the most applied stage of an e-commerce system has been at the first stage that it has been the exceptional chance to connect to the Internet. Even so, the non-public use of website for showing items was at the second stage which it was primarily utilized for showing the items. On the other hand, the barriers to adoption e-commerce in SMEs are the following: the size of the enterprise, the lack of technical staff, the opinion of the management or owner, a wish to avoid risk and complex applications, financial constraints, a low level of market share, the lack of IT infrastructure, there being no perceived benefits, and a lack of government support.

(Kenneth, Rebecca, & Eunice, 2012) showed the main factors effects of e-commerce adoption are (leadership style, resources, infrastructure, competition and positioning). The most recent years have seen a grow in the variety of electronic commerce all over the world as an outcome of the distribute information and communication technologies (ICT) utilization. Where the efficient national Internet and information and communication technology infrastructure (ICT) performs a significant role in the efficiency of B2B e-marketplaces. In spite of the excellent chances envisaged from the e-commerce adoption by SMEs, basic ICT's utilization designs continue to present slower progress especially in commerce-oriented activities. Where SMEs face impediments to the adoption of e-commerce technologies, such as business owners' and employees' preference of doing business 'the traditional way' and a lack of implementation-related and usage-related know-how. In addition, it is because of limited resources by which, financial, human and technological sources impact the adoption of e-commerce to a great extent.

With the amount of literatures reviewed above, it shows that a number of studies are already carried out on the e-commerce adoption and its effect on organizations at a private sector and SMEs. These studies are carried out in different environments, countries, and industries. These studies showed that the e-commerce adoption is constantly evolving, and it became necessary for the different processes and activities within SMEs, and this requires the organizations to apply it and use. Despite the importance of e-commerce adoption and its role in activating the role of responsibility accounting in Iraq to enhance the company's

performance, there was a lack of researches and studies on the factors which effect of e-commerce adoption in term of the technology readiness in Iraqi SMEs. As a result, there is a knowledge gap. This study aims to fill that gap.

7. Conclusions

In this study, the existing ofadoptione-commerce frameworks for SMEs in developing countries as well as Iraq has been discussed briefly. A review of these studies showed that the SMEs in Iraq needs continued attention to get government support, Iraqi SMEs services have limited developed over the latest years in the different levels of field and w-commerce services: tertiary, secondary and even the primary level, as well as in measuring the practicality of the existing approach.

The findings indicate that interventions and programs designed to increase the e-commerce adoption need to include a focus on the practice level because that is decision making regarding adoption occurs, in addition to help IT managers within SMEs to change their workflow to obtain the most services, along with addressing privacy concerns and explicitly acknowledging. Additionally, the study will suggest a variety of SMEs settings in order to ensure higher generalizability associated with the outcomes. All these results can be mainly relevant and timely with regard to decision maker who presently face the obstacle of e-commerce adoption in the Iraqi SMEs environment.

The limitations of this study includes that there was single-source bias, as the collection of information was from secondary sources only. Also the study has more of a judgmental conclusion as there is no post data assessment. SMEs should figure out how to rationalize their employee's needs and priorities, applications, and their own premise information, and after that merge their framework accordingly. Therefore, it is recommended for future researchers to conduct a field survey by collecting primary data and conducting statistical tests on the study variables test the variables implicated in the findings of this study.

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