

CSFs of Electronic Information Sharing in Iraqi SMEs

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Abstract: Electronic information sharing can potentially reduce time, cost, augment effective production, accuracy of information and improve the decision making. Therefore, the organization in several countries utilizes Information Communication Technology (ICT) to improve sharing channels between its employees. The huge usage of ICT has altered various aspects of life; how businesses run, how people live and how organizations interact with their customer. Therefore, ICT will increase information sharing. Currently, the technical challenge plays an important role in information sharing. Therefore, SMEs should provide a good IT infrastructure and IT skills to share the information in this environment. The main objective of this study is to develop an electronic information sharing model for Iraqi Small and Medium Enterprises (SMEs). A quantitative study has been utilized to identify the Critical Success Factors (CSFs). Purposive sampling has been utilized and multiple linear questionnaires have been distributed to thirty enterprises in ten cities in Iraq. The returned responses were 200. Analysis on the feedbacks was carried out using SPSS. Our result shows that from the initial eight factors proposed, five factors are found to be of significance-IT capability, compatibility, risks, top management commitment and size of the enterprise. Moving on from here, we presented a model of electronic information sharing between the employees in Iraqi SMEs based on the five significant factors. Our model will significantly contribute to an overall improvement in the way Iraqi SMEs share electronic information.

Key words: Augment, improvement, model, contribute, compatibility

INTRODUCTION

As information sharing and SME's information societies becomes increasingly interconnected, Information Technology (IT) has gained a prominent role in conversations about responsibly and information of sharing (Yang and Maxwell, 2011; Kamal *et al.*, 2012). IT is important to SMEs in many ways. It is difficult to survive, gain competitive advantage and participate locally and globally without some implementation or adoption of IT (Crowther, 2014). IT is synonymous with performance and productivity improvement. Moreover, electronic information sharing can increase the resources such as the data and information and can also decrease the cost of getting those (Mohammed *et al.*, 2014), lead to improve the decision making, performance country and reduce time, the cost of sharing the information (Akbulut-Bailey, 2011; Bigdeli *et al.*, 2013).

SMEs plays important role in the development strategy in developed and developing countries around the world. Moreover, the reason for choosing this technology is because the SMEs need to use the electronic information sharing in order to solve the problems that they face. There are ample researches on

the importance of ICT in every aspect of SME's operation and management (Alam and Noor, 2009), especially how information sharing can benefit SMEs (i.e., sharing information electronically can reduce the time of receiving the information compared to the traditional way (paper sharing) (Mohammed *et al.*, 2015a, b). However, there is a gap in the knowledge of what aspect SMEs need to look into to make information sharing successful electronically. There are various factors SMEs need to pay their attention to. These factors are intrinsically localized. The role of local culture, economic prosperity, history and others are deciding factors. In this research, researcher interest is in discovering these factors specifically for SMEs in Iraq.

SMEs in Iraq have to realize that electronic information sharing is critical to the performance and productivity of their companies (Harash *et al.*, 2014). It is through electronic information sharing that the potential business functions such as gathering consumer feedback and business information, marketing them locally and globally, conducting electronic transactions and providing customer support can be performed. However, most SMEs in Iraq perceived the utilization of IT into their business processes as risky, expensive,

complex procedure, customer services and lack of technical expatriate (Abdullah and Hassan, 2015). Iraqi SMEs have been relatively slow in electronic information sharing adoption.

Currently, there is limited of studies on electronic information sharing area (Akbulut-Bailey, 2011; Bigdeli *et al.*, 2013). Most of these studies are the focus on public sectors (Mohammed *et al.*, 2014). Thus, in general, there is a need to study electronic information sharing in the private sector in order to give more understanding about it. The main problem that private sector faces is the utilized of electronic information sharing among staff in SMEs are little because they still use the traditional way (hardcopy) of exchange the information. That limitation can cause wasting time, effort and money. Therefore, the adoption of electronic information sharing in the private sector has been needed in order to provide more information within less time and effort.

However, SMEs often play an important role in economic development of a country and leads to economic improvement globally, researcher are interested in looking into the role of IT in the revival of SMEs in Iraq. Thus, this study will adopt electronic information sharing in SMEs in order to support the private sector. Therefore, electronic information sharing implementation is successful; it would have large repercussions on SMEs with their limited resources. However, SMEs in developed states have a higher success rate than developing states.

Literature review: In recent decades, governments worldwide have come to terms with the fact that Small and Medium Enterprises (SMEs) contribute enormously to the improvement of a nation's economy. SME's are the largest provider of employment in most countries and a major source of technological innovation and new products (Harash *et al.*, 2014). They have the capacity to create enough levels of semi-skilled and skilled employment, innovation, the long-term development and growth of both developing and developed countries. In Iraq, they have been the major source of employment and revenue for decades. In postwar Iraq, their roles are even more important. According to Harash *et al.* (2014), it is estimated that >99% of total enterprises are SMEs in enterprises which include beverages and food followed by textile and apparel sector, metal and metals products and wood and wood products (Harash *et al.*, 2014).

Despite the important role of SMEs in the postwar Iraqi economy, academic research involving SMEs seems lacking. It is particularly true especially studies that attempt to investigate the impact of ICT on SMEs

operation. With a few rare exceptions, Iraqi SMEs, like most SMEs in developing countries have not yet fully utilize and exploit new technologies. This is due to the work habits, a lack of resources and culture (Abdullah and Hassan, 2015). An unfavorable and uncompetitive environment building over the years and a lack of institutional support have impeded their development and success.

However, signs of normalcy began to appear in 2003. The war has ended and a new government was formed. Nation building with the aims of providing employment and eradicating poverty became the main agenda. One of the strategies was to ease financing conditions that were once within the realm of government banks. Private financial institutions began to offer arrangements to finance projects. If the internal conflict can be circumvented, the outlook for a stable economy with a positive long-term prospect looks promising due to the ability and ease of financing and favorable government policies (Harash *et al.*, 2014). However, the countries are not fully stable and recover from the devastation brought about by the Gulf War. Despite that, SMEs revival has started and on the route for exponential growth towards nation building, albeit at a slow pace initially.

SMEs considered percent of the total institutions and companies as a whole in Iraq and they should use local technology method with a limited technology requirement (electronic information sharing). It is considered to be the essential source of innovation, flexibility and dynamism in developing and developed countries as well as to the economies of most countries (Tarute and Gatautis, 2014).

In SMEs, there are several issues related to electronic information sharing including technological, organizational, environmental and cost (Bigdeli *et al.*, 2013; Mohammed *et al.*, 2015a,b). SMEs in most countries around the world have these issues especially in Iraq. SMEs have a different kind of barriers such as lack of qualified staff how to enter the markets, lack of knowledge of potential markets and limited resources and law (Abdullah *et al.*, 2011). SMEs have limited financial support (Harash *et al.*, 2014) thus; they mostly face issues of adoption new technology (Abdullah and Hassan, 2015). SMEs are usually feeder companies for larger companies and they are essential for development and economic growth. Moreover, electronic information sharing is not an expensive technology, especially for SMEs. In addition, electronic information sharing can be adopted by using a social network such as Facebook. The desired outcome of information sharing is to improve enterprise overall performance and process (Tarute and Gatautis, 2014). By information sharing, the enterprise has

been able to improve their strategic performers and operational (Calo *et al.*, 2012). Moreover, SMEs in developed countries have a higher success rate than developing countries. Finally, electronic information sharing can provide more benefits to private sector and customers (Calo *et al.*, 2012). Thus, this study will adopt electronic information sharing in SME in order to support the private sector.

MATERIALS AND METHODS

This study seeks to develop a model of perceived CSFs for Iraqi SMEs. According to many researchers, the importance of electronic information sharing to SMEs are like maximize the benefit of local services, provide jobs and investment costs low (Akbulut-Bailey, 2011; Calo *et al.*, 2012), support economic growth, produce goods and services to be exported, considered appropriate for innovation and creativity especially in the industrial sector environment gives workers the skills may help to move to better jobs and start Small new enterprise and finally, electronic information sharing can provide more benefits to private, public and customers. Thus, this study will adopt electronic information sharing in SMEs in order to support the private sector (Table 1).

The present study focuses on firms that have <200 employees. Microenterprises with <10 employees have been left outside this study. The e-questionnaire methodology has been used to collect the data. Thus, participants from different cities in Iraqi. In this research, the population comprises of 30 Iraqi SMEs in ten states in Iraq namely Mosul, Arbil, Najaf, Duhok, Kirkuk, Salahaddin, Sulaymaniyah, Baghdad, Basra and AL Anbar. The sampling frame of this research consists of the administrative employees of the chancellery office of each SME in these thirty SMEs. A total of 200 questionnaires have been collecting. The reason for this selection is based on employees who have work in Iraqi SMEs. The sampling method utilized in the current research is probability sampling. The selection of elements for the sample is random; thus, the sampling method is the random sampling.

Table 1: Perspective of EIS in private SME

Perspectives	Factors
Technological perspective	IT capability Compatibility Risks Cost
Organizational perspective	Size Top management
Environmental perspective	Policy Trust

RESULTS AND DISCUSSION

The model of this research consists of three considerations such as Technological, organizational and environmental; each one has several CSFs. collaboration and relationships among employees in SMEs (Dawes, 1996; Bigdeli *et al.*, 2013; Mohammed *et al.*, 2015a, b). Technology refers to the use of internal and external technologies to ascertain explain that information sharing and technology are practically connected with one another because electronic information sharing is deemed as an IT project (Dawes 1996; Akbulut-Bailey, 2011). This study concentrates on the following CSFs which has IT capability, compatibility, risks and cost CSFs. Organizational consideration means the internal CSFs that have an influential effect on enterprise, thus encouraging the employees to share information electronically with other employees. This study focuses on the following CSFs: which has top management support and size. Environmentally refers to the influences of the environment on the processes of the private enterprise. Researchers have explained several influential effects from the external environment that the enterprise cannot disregard this focuses of the study are on the following CSFs which as policy and trust (Fig. 1).

IT capability: The finding of this research shows IT capability supported ($p = 0.005$). The result showed that these SMEs need to have the necessary technology to increase the electronic information sharing among employees. These SMEs seemed to have already a certain level of IT infrastructure and their staffs were trained in utilizing IT infrastructure but they are looking for a more increasing level of hardware, software and IT skills. In general, most of this SMEs lack in IT infrastructure and their staff have limited knowledge and IT skills.

Compatibility: The finding of this research shows compatibility factor is supported ($p = 0.00$) based on the result, SMEs need to have compatible IT infrastructure among employees (that is terms of hardware, software and skills) in order to increase and facilitate the electronic information sharing among them. In general, technologies that enable to share the information electronically may differ among employees. Moreover, knowledge and IT skills need to be updated among the employees in SMEs. In summary, the SMEs should collaborate in order to provide more organizational compatibilities and technological among them.

Risks: The result of this research shows risks supported ($p = 0.000$) based on the result, risks is considered as one

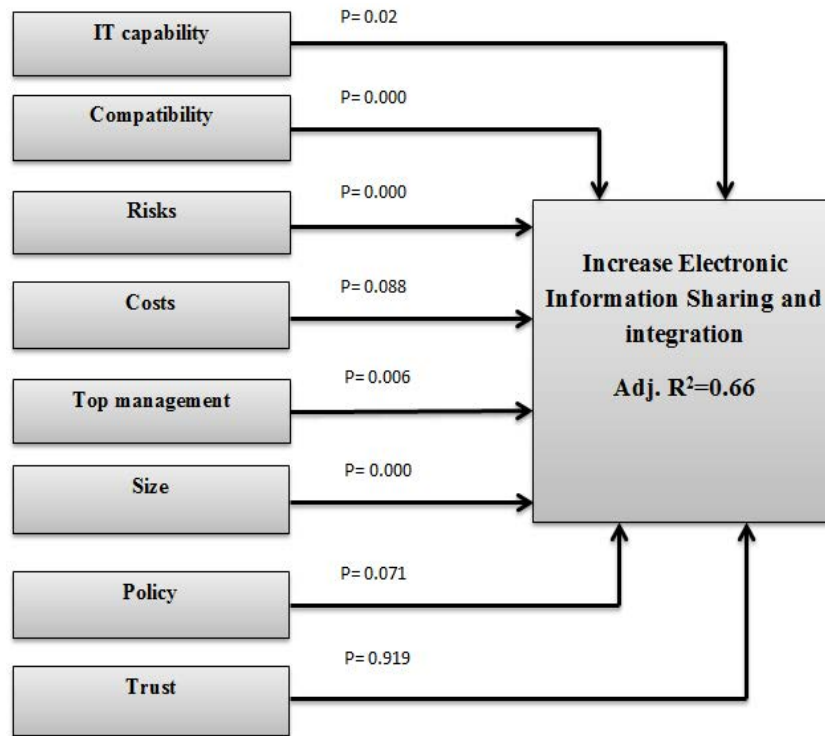


Fig. 1: Model of electronic information sharing in Iraqi SMEs

of the main issues that decrease employees participation on electronic information sharing in the private sector. Moreover, based on these findings; it can be argued that risks might decrease the electronic information sharing among employees in SMEs. Therefore in order to increase the electronic information sharing among employees in these SMEs, the electronic information sharing system could be designed in a way to reduce all the risks while sharing the information electronically.

Costs: The result of this research shows cost CSF in electronic information sharing and integration is not supported ($p = 0.088$). The previous researches of electronic information sharing show that there is an important effect of the cost CSF (Akbulut-Bailey, 2011; Bigdeli *et al.*, 2013; Mohammed *et al.*, 2014). However, SMEs has increased its expenses for its enterprises in the last few years in order to enhance the communication system. Also, SMEs pays all the cost of building any new project for any enterprise. Therefore, there is no financial problem for the SMEs in order to adopt new technology (Abdullah and Hassan, 2015). However, based on these results, it can be argued that costs might influence the increasing of electronic information among employees in SMEs. Therefore in order to increase participation, the electronic information sharing technology could be reduced costs of the share the information among employees.

Top management support: The influence of top management support for SMEs in order to increase the electronic information sharing was found supported ($B = p = 0.006$). Based on the result, top managers consider sharing the information electronically among employees is an important feature to support their SMEs. They also encourage employees to share their information electronically. Moreover, the can motivate their employees to increase the sharing by offering incentives or rewards. In general, the top managers of the SMEs are interested in sharing and integrate the information electronically among each other. Moreover, according to the result, top management is needed to ensure that necessary resources and funding can be obtained for electronic information sharing.

Size: The result of this study shows the size factor is supported the electronic information sharing ($p = 0.000$). The Smaller organizations usually lack the technologies and resources needed to electronic information sharing. Moreover, the size of organization can be measured in terms the amount of organizational assets or number of employees. The smaller organizations usually lack the technologies and resources needed to electronic information sharing (Akbulut-Bailey, 2011).

Policy: The result of this research shows policy CSF in electronic information sharing is not supported

($p = 0.071$). SMEs mentioned the need for clear technical standards among employees information sharing as well as effective legal mandates and binding contracts. Based on these findings, it can be argued that the existence of a policy to organize electronic information sharing initiatives might influence to participation in electronic information sharing among employees.

Trust: The quantitative study results found trust CSF does not support ($p = 0.91$). Whereas the themes that emerged from the open-ended survey questions and the case study findings provided moderate support. It was observed that the relationships between the local and state agencies have been problematic to some degree and agencies had concerns in terms of trusting each other.

CONCLUSION

Electronic information sharing is a technology that many IT SMEs are likely to adopt for its benefits such as improve their service quality, decision making and performance and reduce time and costs (Akbulut-Bailey, 2011; Yang and Maxwell, 2011; Bigdeli *et al.*, 2013; Ouma, 2014). Thus, our study developed a model for increase sharing the information electronically in Iraqi SMEs. SMEs were selected because they have an important place in the economy, especially from the point of view of the development of local economies. However, SMEs considered 99% of the total institutions and companies as a whole in Iraq and they should use local technology method with a limited technology requirement (electronic information sharing) (Harash *et al.*, 2014). Moreover, five supported factors can be used to increase the electronic information sharing among employees in Iraqi SMEs. The CSFs analysis test showed the only loaded items >0.5 . The regression and correlation tests proved five CSFs as supported (IT capability, risks compatibility, top management and size) while three CSFs are not supported (trust, costs, policy).

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