STUDY OF RELATIONSHIP BETWEEN UTUAT FACTORS AND INTENTION TOWARDS USAGE E-MANAGEMENT IN LIBYAN PETROLEUM INDUSTRY

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ABSTRACT

Purpose of study: The main aim of this study is to investigate the relationship between Unified theory of acceptance and use of technology (UTAUT) factors and intention towards usage of e-management in Libyan petroleum industry.

Methodology: A series of appropriate literature is explored and a conceptual model is suggested and deliberated. A review of existing literature recommends numerous aspects affects behavioral intention of the users.

Main findings: This model is set to help the managers and decision makers to understand the importance of e-management.

Implications of study: Exploring the theoretical and empirical studies, the future study would be valuable and necessary to examine the relationship between expectancy and the overall job acceptance level of e-management including the mediating effect of perceived information quality.

Originality/Novelty of study: The proposed conceptual model is both novel and different that is positively contributed towards the improvement of the related literature.

Keywords: UTAUT; e-management; Perceived information quality; Behavioral intention; Libya.

INTRODUCTION

In 21st century E- Management has been the key focus on individual and organization, both have adopted the internet. Both are focusing on Internet-based technologies and electronic-based technologies. This is the time to upgrade with technology to compete for the world. For that purpose organizations and individual focusing on internet technologies. According to Sharma (2009) to increase the effectiveness in their businesses organization have adopted these technologies. Through these technologies organizations subsequently growing turnover, dropping their cost, refining their marketing and increasing their profit. This has been attained in advanced countries. Emerging countries these days are looking towards gathering with these countries in business. So for that purpose, they are moving towards the application of e-management in their organizations.

Implementation and usage of IT always were difficulties for the organization. However, enterprise-wide IT project like e-management is not a straightforward project focusing on the organization, but it relates 100% to the environment and human beings in the organizations (Yao, Othman, Aballama, & Mahdi, 2011).

In today's dynamic global networked economy, integration of information system has been a main fundamental for competitive advantage. Despite the substantial influence of oil and gas industry on the domestic economy of Libya, they are still facing the numerous difficulties to their development such as operational impairments, limited capability in operations, also a limited tactical planning and unproductive implementation of information technology.

Numerous studies have been done to describe the importance of the application of e-management. These studies explained about the obligation of application, certainty, and their part in human resource management. These studies also explain how individual accept for their services; further studies have explained the role of individual's beliefs towards acceptance of e-management for doing business and administrative functions. In past research, many contributions have been provided to the study of technology acceptance in examining the user's attitude. This research provides the main contribution to the information system literature on the several aspects of expectations about perceived values of information system users. From the organizational perspective, this study would be a doorstep to encourage them towards technology usage and adoption.

E-MANAGEMENT

E-management refers to the use of information technology (IT) to improve management and business processes of the organization and improving the flow of information within the organization.

Management must be consistent with the usage of the information system. According to Abdelali (2013) examined the key role of management in the acceptance of information system and identified some of the ideas of not using technology is due to absence of personal skills for the processing of data, technique was used for the communication is old-fashioned, inexperience of technology by the management as they do not recognize the basic purposes. Furthermore, Panigrahi, Zainuddin, and Azizan (2014) mentioned that consumers they using the technology if they are not gratified with technology, then there is less chance of adoption of such kind of technology. That is basic cause to the failure of the system.

In 2006 Twati and Gammack, explained the basic role of an information system through societal and traditional factors. The researcher confirmed the reputation of consciousness of traditional context in the role of information system in Libyan organizations. According to Hosen, Hui, Suliman, and Rahman (2011), that demographic features and social culture of the small and medium organization, private firms is highly effective in term of the management team and their controlling system. Despite, information is very crucial for the competitive advantage in a dynamic environment of the oil and gas industry; they do not strategically use information and networking to their advantage.

Nowadays modern manager are used to with latest technology, now in their hands a various kind of communication tools. Like ten year earlier people they did not know about them even these tools not exist that time. According to Fernando(2004), Electronic communications had been imperfect for periods to ordinary old telecommunication services such as telephone, fax, and answering machines.

UTAUT MODEL

The source and improvement of technology acceptance literature organize a main concern of information system (IS) research. As the purpose of this study is to expand an identifying on how and why organizations use this model. And acceptance of technologies the main focus is on the intensity of research that makes a purpose to use the system.

For many years, researchers have been examining the factors which might affect the acceptance of new technologies. Among models that have been developed based on the past studies includes by the Davis (1989) Technology Acceptance Model, TAM, and Theory of Reasoned Action, TRA by Fishbein & Ajzen(1975), Theory of Planned Behavior, TPB by Ajzen(1991). But after reviewing these theories along with other theories on motivation and social exchange, Venkatesh et al (2003) resulted in UTAUT that had refined the serious factors associated to the expectation of interactive intention to habit technology in organizational contexts primarily. Below is the explanation on the importance of UTAUT model for predicting variance in behavioral intention.

Venkatesh et. Al; (2002) identified the main intention and technology acceptance, the research tactics to UTAUT model that integrates the fragmented theory and research on individual acceptance of information technology capturing essential elements of previously established technology models (i.e. TRA, TPB, TAM, MM, IDT and Social Cognitive Theory) (Venkatesh, Morris, Davis, & Davis, 2003). This research has adopted UTAUT model that captures perception of managers to use the e-management system.

The researcher found in the UTAUT model, performance expectancy, effort expectancy, and social factors have direct effects on behavioral intention, and also soothing circumstances have direct effects on user behavior.

UTAUT has four main constructs (i.e., performance expectancy, effort expectancy, social influence, and facilitating conditions). That directly affects the behavioral intention to use a technology and technology use. This study adapts these ideas including perceived credibility as an additional factor replacing facilitating conditions.

Performance Expectancy

Performance expectancy is the step to which personally believes that the usage of the system will help him or her to gain in work performance. Performance expectancy consists of technology acceptance models, motivation model, PC utilization model, innovation diffusion theory, and social cognitive theory (Fred D Davis, Bagozzi, & Warshaw, 1989; Venkatesh & Davis, 2000; Venkatesh et al., 2003).

According to Straub (2009) "user's adoption innovations addresses key constructs like emotions, contextual concerns, and cognitive approach." The end user's satisfaction is the key indicator of system performance including its high increase in acceptance, (Mahmood et al., 2000). Perceived usefulness, perceived ease of use, user's involvement, user's expectations, user's skills and user's participation were considered as factors involved in the advancement of the system, support towards the organization, the perceived attitude of top management and user's attitude towards information systems.

Since the study evaluates the use of the e-management system by the managers on a daily basis rather than industrial employees, performance expectancy questions were adapted to daily activities more than work uses. In the UTAUT model, performance expectancy is related to behavioral intention.
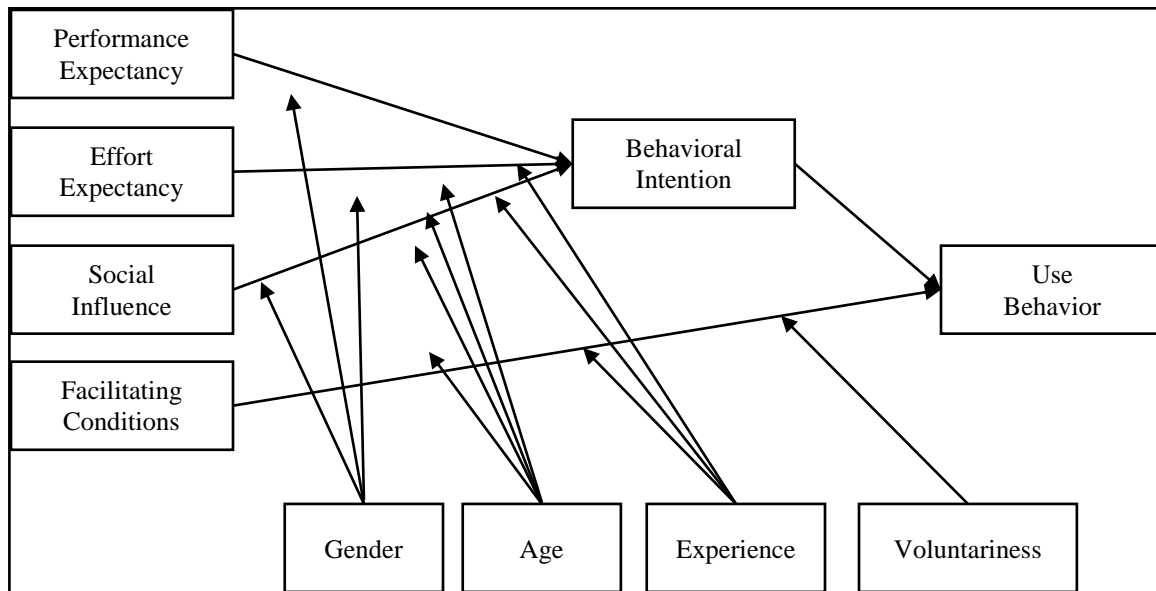
Figure.1: UTAUT Research Model

Effort Expectancy

Effort expectancy is the extent of convenience perceived for using the system. Similar constructs in other models and theories from semantic viewpoints are technology acceptance model, PC utilization model and diffusion innovation theory. In 1997 Ditsa and MacGregor determined a extensive variety of user satisfaction models and identified the important aspects like the value of the information from the Information System, the user interface features of the IS, the support provided by employees, the involvement of the user in the planning, advancement and implementation of the information system and the attitude of users toward the information system adoption. Lau and Woods (2008), found that "user's belief and attitude have a significant influence on behavioral intention and accurately use of the objects or systems."

The positive attitude of the user toward the computers has been found to be expected indicator of software products acceptance, and there is solid support for dependence between attitudes and satisfaction, by F.D. Davis (1989); and Satzinger & Olfman (1995).Researcher discourse the capability to predict users computer acceptance from a degree of their intentions regarding their attitudes. Further, Al-Khaldi and Al-Jabri (1998) found that where attitudes affect systems utilization, influencing these attitudes will affect utilization.

Social Influence

Social influence is defined as "the degree to which an individual perceives that important others believe he or she should use the new system" (Venkatesh et al., 2003, p.451). If the manager's colleague, top executives or competitors, and their social surroundings recommend the use of the e-management system; they are more likely to adopt it and recommend it to others. Motivation is the idea used for maintaining the needs, achievement, and for control. The human needs concept is very crucial to recognize various social or interpersonal influences that control motivation. According to Ajzen(1991), the theory of planned behavior suggests that human behavior is expected through intellectual self-regulation, rather than an individual's disposition such as their universal societal attitudes or personality trait.

The need for autonomy reflects the desire to self-organize experience and behavior and to have acted with an integrated self. The need for competence involves the desire to affect the environment and attainment of valued customers. Finally, the need for relatedness involved the desire to feel connected and understood by others.

It is important to understand that social influence includes an image, social factors, and subjective norms. Thus social influence in the study performed by (Venkatesh et al., 2003) was found to be a good predictor of behavioral intention to use new technology.

Perceived Credibility

Perceived credibility of managers means that how believable the users think of the information they received (Meyer, 1988). Internet currently has become a worldwide phenomenon with its benefits of high-speed networks, integrity, the comfort of use with additional graphics and devotion contagious features (Kostkova, de Quincey & Jawaheer, 2010, Malka, 2012). The information provided by the system is perceived to be convincing, believable and credible when it can be accessed leading towards positive attitude and eventually higher intention to accept the technology.

The information sources of perceived credibility are best implicit, however, as a purpose of the nature of the source. It depends on individual characteristics how they perceived the information as a consumer or as a receiver. This is a different perception of information. For example, information or capability of an individual might affect the ranges to which they recognize a specific motion and may, therefore, influence on their credibility decisions.

According to Lu et al., (2014) Trust and credibility are dynamic and important issues in manipulating individual's behavior. In 2009 Yagci, Biawas & Dutta examined the positive evaluative beliefs on credibility subsidize significantly to individual's attitudes. Managers recognize a highly considerable and credible information to have higher credibility, which helps them to in establishing their attitudes toward the information and in turn, impact their behavioral intention (Panigrahi et al., 2014).

Perceived Information Quality

Perceived information quality (PIQ) is associated with the quantity of information gathering, diversity of information, gratified productivity and navigation (Ilsever, Cyr, & Parent, 2007). It is a predominant societal perception and an important antecedent of complete user satisfaction (Aggelidis & Chatzoglou, 2012). According to DeLone & McLean (1992), the impacted of the perceived value of the e-commerce system, and information systems success. It is critical in the formation of a trust constructed relationship (Keen & Balance; Kim et al., 2013) via the dependable, appropriate and personalization of information exchanges (Salaün & Flores, 2001).

The effect of information quality on flow experience already initiates by previous research. In 1996 McQuillan & Conde stated in his research, according to his research on flow experience in reading, there appear to be signed. In his statement information attainment usually, occur in some extent level of flow. In 2000 Chau, Au, & Tam examined that the way of information accessible on the Internet have an important influence on the user experience.

Behavioral Intention

Behavioral intention is defined as the grade to which an individual has conveyed sensible plan to achieve or not achieve some specific behavior in future. According to the theory of reasoned action (TRA), behavioral intention can predict the performance of behaviors that are under the individual's control. According to TRA, exterior variables that affect behavior to do such a straight influence attitude, particular customs or their relative weights. TRA also helps to expect behavioral intentions connected to the acceptance of technology and evaluate fundamental relations between beliefs, attitude, opinions of referent others, motivation to obey, individual rules and behavioral intentions.

Alam and Rashid (2013) mentioned that acceptance of renewable energy is influenced by the attitude of the users towards new technology. The analysis showed that attitude positively mediates intention to use. Ramayah et al., (2009) investigated the facilitating effect of attitude towards equivalent imports in customer behavior linkage with buying intention and found that in the consumer behavior and buying intention association, attitude towards similar import goods facilitates the connection partially and fully mediates with import channels. Masood (2012) mentioned that working attitudes mediate the relationship of Person-Organization fit and turnover intention.

This research is concerned with investigating to what extent managers of Libyan oil and gas industry perceives that e-management would provide efficient information sharing, improved coordination, and risk minimization. While building on existing literature, two research gaps were filled.

Thus in the absence of prior studies on perceived information quality and UTAUT dimensions we may reach to preliminary conclusions that the impact of UTAUT factors (performance expectancy, effort expectancy, social influence, perceived credibility) may be bigger that may have limited adoption of e-management. A literature review of the four UTAUT variables affecting intention to use e-management and their linkage with perceived information quality and actual usage were reviewed and a preliminary model is proposed that postulates an effective relationship between them. A review of studies based on technology acceptance reveals that survey questionnaires were the best methodological approach to investigate the purpose and research concept.

Performance expectancy, effort expectancy, social influence, perceived credibility is considered as independent variables. Perceived information quality works as mediating role on the enhancement of behavioral intention to use e-management. The proposed model based on UTAUT theory does not intend to simply examine the relationship between UTAUT factors, perceived information quality, and actual usage. This relationship has been examined very thoroughly in the past.

CONCLUSION AND IMPLICATIONS

Despite the undeniable fact that UTAUT theory has made a lot of improvement, there is still some vagueness around the concepts of information quality towards adoption and usage of technology. Adoption of technology is one of the main factors that motivate and enhance the management capabilities. Many studies showed that an effective social influence and perception could improve adoption and usage of technology. However, lack of such researchers has focused on e-management adoption in Libyan oil industry.
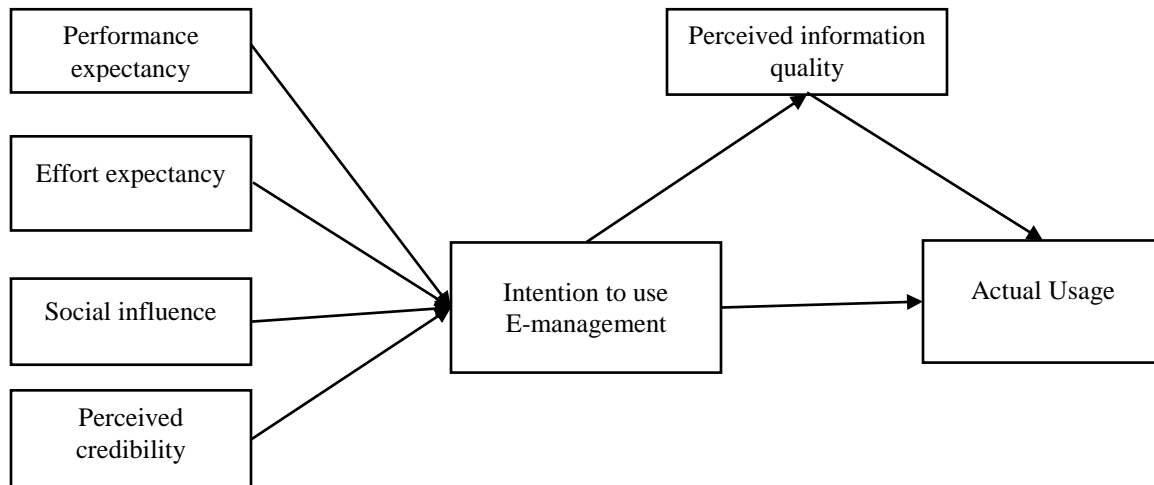
Figure. 2: Proposed Framework based on UTAUT model

The expectation from the technology has a great impact on its performance. It was also noted that there is a link between the expectation and motivation within the management and achieving performance. Expectation and credibility of the technology have influenced the behavior of the management towards change. Therefore, by changing habits of managers, the behavior of them alters by the motivation and expectation of manager that empowers the managers for the corporate mission.

Improving the overall manager's specifically the availability of better-trained managers in technology will allow them to increase task efficiency and effectiveness. As the manager adapts the local realities, it becomes useful and relevant to maintain law in addition to moral and social issues above the marketplace of ideas. Exploring the theoretical and empirical studies, future study would be valuable and necessary to examine the relationship between expectancy and the overall job acceptance level of e-management including the mediating effect of perceived information quality.

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