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EXAMINING THE ADOPTION OF THE HUMAN RESOURCE INFORMATION SYSTEM IN THE CONTEXT OF SAUDI ARABIA

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ABSTRACT

The aim of this paper is to examine the factors influencing the adoption of the human resource information system (HRIS) in the Saudi context. A few researches have looked at the adoption of HRIS, but none of these studies have examined the adoption of such a system from the users' perspective in general and Saudi Arabia (SA) in particular. This study has developed a model that integrates service quality with perceived usefulness and perceived ease of use to investigate the factors affecting the users' adoption of HRIS. The model was empirically tested using the structure equation modelling by employing data collected from a survey of HRIS users. The findings and discussion presented in this study will help the Saudi organisations to understand the current status of their HRIS to improve it and benefit from it. This study provides guidelines for its implementation for theory and practices, limitations and future directions.

Keywords: Adoption, Human resource information system, Technology acceptance model, Service quality, Saudi Arabia.

1.0 Introduction

The Human Resource Information System (HRIS) is a type of information system that integrates systems used to gather, store and analyse information of an organisation's human resources comprising databases, computer applications, and hardware and software necessary to collect/record, store, manage, deliver, present and manipulate data for human resources function (Harris and Desimone, 1995). Such a system provides many benefits for the organisation, Beckers and Bsat (2002) have summarised four reasons which justify why organisations should use HRIS. First, it will help to shift the role of the human resource management (HRM) from transactions to strategic human resource management. Second, it will help to increase

competitiveness by developing and enhancing human resource activities and procedures. Third, it will re-engineer the whole HRM department of the organisation, and finally, it will help to create a range of many HRM reports.

The management of information is essential to the modern human resources (HR) function in any organisation in general and public organisations in particular (Al-khowaiter et al., 2012). At present, there are no existing research studies that are examining the HRIS adoption from the users' perspective. The HRIS adoption is considered a challenge as it can be costly and can take a long time; furthermore, the advantages identified prior to adoption may not be realised until much later, when HRIS has been assimilated (Ashbaugh and Miranda, 2002). The HRIS adoption by public bodies seems to be more challenging than in the private sector, for many reasons. Public sector organisations have various objectives which do not apply to the private sector. They are involved with multiple intangibles such as education and health, while the private sector firms are mainly profit-oriented and are driven by economic considerations (Kamal, 2006). Unlike private firms, which take a proactive approach to innovation, the public sector innovates reactively; that is, evidence is required of likely success before the decision is taken to adopt a certain system. Finally, there is an indication that the public sector has greater diffusion difficulties, which must be addressed in future researches (Troshani et al., 2011).

The Kingdom of Saudi Arabia (KSA) has experienced strong demographic changes which have influenced not only its political stability but also its economy. This has made the KSA the largest economy in the Gulf Cooperation Council (GCC). Furthermore, it has attracted as many as 7,000,000 foreign labourers by the end of April 2013 (Adelman, 2013). The flow of foreign labourers into Saudi Arabia is seen as having a negative impact on the region's economy and has to be reduced. One of the most negative impacts of foreign workers is that of repatriation of enormous amounts of money back to their families and communities while they work abroad. This makes the Kingdom of Saudi Arabia (KSA) the second highest sender of remittances after the United States of America (U.S.A.) at $103 billion (Adelman, 2013). The HR information system can support long range planning with information for labour force planning and supply and demand forecasts (Al-Shibly, 2011). It also allows firms to upgrade the capabilities of their human resources in executing their

roles rapidly and with greater accuracy. Therefore, introducing such a system will not only bring technical benefits, but also could reduce the need for foreign labourers in the Saudi workforce. Thus, the adoption of such a system in the Kingdom is important for local organisations.

Recently, Saudi Arabia has employed all the possibilities to reduce the foreign workers in general and in public ministries in particular. Organisations such as the Ministry of Education started implementing the human resource information system as early as March 2011. Such a system helped them realise the competitive advantage for the national economy through shifting the role of human resource management from transactions to strategic human resource management. They raised Saudi labours productivity by providing them with the needed courses and training and, most importantly, to help supply data for the government or other statutory agencies which could help them to seek after qualified local labour. This will allow these organisations to replace the foreign labour force with qualified Saudis. Based on this, a study to examine the adoption of these systems is needed to gain some insights into human resource practices to acquire a better understanding of the current status of HRIS adoption in Saudi Arabia. This could help improve the Kingdom's human resource capability and develop expertise in familiarising the newly developed information technology systems such as HRIS.

By analysing the existing literature on HRIS adoption, two studies (Haines et al, 1997; Teo et al, 2007) have empirically examined the adoption of the system but mainly from the organisational perspective; neither have looked at the adoption from the users' perspective. The lack of empirical studies, specifically to measure the users' intention to HRIS adoption in general and to Saudi Arabia in particular, makes this study fill the gap by undertaking research in this direction.

Considering the above, it was deemed appropriate to conduct this study which is aimed at developing and empirically testing an extended technology acceptance model (TAM) that integrates service quality with the TAM constructs to investigate factors determining the users' intention to continue using HRIS in mandatory use.

This paper is organised as follows: the next section provides a brief discussion on the selection and justification of the theory used in this study. The third section presents

the research methodology used to collect the data. This is followed by the presentation of research findings in section four and a brief discussion of them in section five. The paper will conclude with a summary, discussion of the contribution and limitations of the study and suggestions for future research.

2.0 Research Model Development and Hypotheses

2.1 Theoretical Background and overview of the Research Model

A number of theories and models have been proposed to measure end-user acceptance of new technology such as the theory of reasoned action (TRA) (Fishbein and Ajzen, 1975); the technology acceptance model (TAM) (Davis, 1989; Davis et al., 1989); the theory of planned behaviour (TPB) (Ajzen, 1991); the diffusion of innovation (DOI) theory (Rogers, 1995); and the unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al., 2003). Many researchers have used these models to investigate the acceptance of technologies including e-commerce, e-government and a knowledge management system. However, only a few studies have utilised these theories to investigate the adoption of HRIS. One reason for the paucity of such studies is that the use of HRIS is mandatory especially in SA, which means that users are required to use these systems in order to perform their essential work duties (Hartwick and Barki, 1994).

It has been observed that TAM is the most widely used and quoted model in IS/IT research (Yi and Hwang, 2003). Davis (1989) introduced the technology acceptance model (TAM) based on the theory of reasoned action (TRA). TAM describes an individuals' acceptance of information technology by posits that perceived usefulness (PU) and perceived ease of use (PEOU). They determine an individual's intention to use BI, a system with intention to use serving as a mediator of actual system use. Perceived usefulness is also seen as being directly impacted by perceived ease of use. Researchers have simplified TAM by removing the attitude (AT) construct found in TRA from the current specification (Venkatesh et al., 2003).

TAM has been proven that it can explain a considerable proportion of variance (typically 40%) in practising intentions and behaviour; and that it compares favourably with alternate models such as TRA and TPB (Venkatesh, 1999). In fact,

TAM has proven to be among the most effective model in the IS literature for predicting user acceptance and usage behaviour.

TAM has been mainly developed for the voluntary use systems (Brown et al., 2002); a voluntary use environment is one in which users perceive the technology adoption or use a decision to be a wilful choice (Hartwick and Barki, 1994); yet, many of the behaviours in organisations, particularly those related to technology, are not volitional (Brown et al., 2002). Venkatesh and Davis (2000) have examined an extended form of TAM in a mandatory and voluntary context and found that the basic TAM model performed in the same way in both the voluntary and mandatory use systems. Similarly, Lee (2006) compared the model in both settings (voluntary and mandatory) and found that his findings of TAM in the mandatory setting confirmed the original findings of the TAM. Brown et al. (2002) have also found that when they examined the TAM in the mandatory use environment, the significant correlations between the TAM constructs were consistent with the theory as well as supported. Based on the previous discussion and given the fact that the examined HRIS is mandatory countenance used, the TAM has been adopted.

Although TAM has generally been used to explain users' initial intention to adopt an information system after a brief period of interaction with the system, it has also been employed for predicting users' intention to use an information system after having a long period of experience with the system. Researchers Taylor and Todd (1995) have assumed that factors affecting the initial acceptance would be similar to those affecting continued usage. Similarly, some prior studies have employed the technology acceptance theory to explain the continued usage behaviour (Brown et al, 2002; Karahanna et al., 1999; Parthasarathy and Bhattacherjee, 1998,) and viewing the continuance as an extension of acceptance behaviour has improved the use of the TAM empirically by demonstrating its capability in predicting initial IS usage as well as use behaviour occurring long after the initial usage (Legris et al., 2003).

Studies that have attempted to measure the adoption in mandatory context such as those of Lederer et al. (2000) and Singletary et al. (2002) have ignored the attitude and/or behavioural intention. They have looked at the effects of PU and PEOU directly on usage as if the use of the software is mandatory. Whereas Rawstorne et al. (2000) and Brown et al. (2002) propose that usage as a dependent variable is rendered

unacceptable in situations where the usage is mandated by the organisations. They believe that since employees must use the system to perform their job there is no alternative to the actual use. Brown et al. (2002) also found that intention to continue using the system can explain 45 per cent of the variance.

In this research, system usage has been excluded as the authors believe, like Brown et al. (2002), that use cannot be an appropriate dependent variable in a mandatory context. Instead, the authors assume that to continue intention using to HRIS rather than the intention to use (which relates primarily to initial usage) is more appropriate as a dependent variable as the measure of the adoption of the system is from an actual user perspective than from the perspective of potential users.

Bhattacherjee (2001a) defines users' intention to continue using the system as users' will or lack of will to continue the use of a system. Lack of such will does not lead to interrupted usage in mandated environments; that is, if the loss of one's possibility to perform the job is not an option, the more likely it will lead to dissatisfaction with the actual information system and further to inefficient system use (Brown et al., 2002). Such a dissatisfaction with an IS may lower the job productivity. As a result, it is important to look at the factors that influence the continued intention in order to minimise user dissatisfaction and increase the use, which will lead to an increase in productivity.

As the users have to use the system in order to keep their job, they will be under pressure to take advantage of all the assistance they can have in order to learn how to use the system. Service quality (SVQ) describes the overall support delivered by the service provider regardless of whether this service is delivered by an internal department or outsourced to external providers (Al-khowaiter et al., 2013). Therefore, the authors assume that in the mandatory context, SVQ could play an important role to increase the use of the system. Furthermore, most of the studies examined the effect of the SVQ with an intention to adopt or on user satisfaction. They were in online services and based its effects on consumer behaviour rather than system users. For these reasons the authors have integrated service quality with TAM to measure the intention of HRIS users to continue using the system.

The proposed conceptual model (Figure 1) consists of three constructs from TAM and service quality. It postulates the perceived usefulness, perceived ease of use and service quality influence on the continued intention to use HRIS. The proposed model also suggests that perceived usefulness will be directly impacted by the perceived ease of use. Thus, four hypotheses have been formulated for empirical testing. The next section presents each construct and their related hypothesis**.**
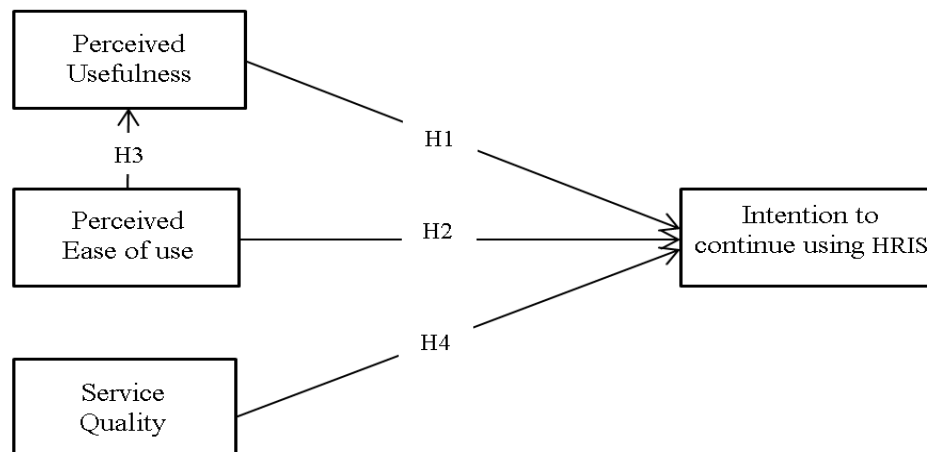
Figure 1: Proposed research model (Source: Adapted from Davis, 1989)

2.2 Context and Constructs included in the Model and Associated Hypotheses

2.2.1 Perceived Usefulness

Davis (1989) refers to this construct as the degree to which a person believes that using HRIS would enhance his or her performance within an organisational setting. In the HR systems, context usefulness represents the improvement of the HR activities for HR employees which could be performed more efficiently with less time by using the system (Al-Shibly, 2011).

This construct has the strongest predictor of an intention voluntary setting (Alryalat et al., 2013). In mandatory settings, it continues to be significant as well (Brown et al., 2002; Chan et al., 2010). However, none of the studies in HRIS have looked at this construct on users' intention. As the construct performs significantly in the majority of cases, it is expected that users of HRIS really believe that using the system can help them perform better in their job and hence are more likely to use it. The following hypothesis can be derived from the above practical and theoretical evidence:

H1: Perceived usefulness will have a significant influence on intention to continue using HRIS.

2.2.2 Perceived Ease of Use

These constructs represent technical details of the examined systems interface and how users perceived it. Davis (1989) defined this principle as the degree to which a person believes that using a particular system would be free of effort. The ease of use therefore in this study refers to users' interaction with the system (e.g. integration of the system, easy to become an expert using the system)

In TAM, the ease of use is an important determinant of use of technology or systems, as is perceived usefulness (Davis, 1989). Mather et al. (2002) demonstrated that in a mandatory context, ease of use plays an important role in the acceptance of technology as well as perceived use of the system. As the constructs have been found significant in different mandatory sitting studies (Brown et al., 2002; Hsieh et al., 2007; Venkatesh et al., 2000), the authors expected that the ease of using the FARIS system might lead the users to use the system more. Accordingly, the related hypotheses are:

H2: Perceived ease of use will have a significant influence on continuation of intention to continue using HRIS.

H3: Perceived ease of use will have a significant influence on usefulness.

2.2.3 Service Quality

An information system comprises all of the support provided by the service supplier, regardless of whether it is a separate organisation or the IS department itself (DeLone and McLean, 2003). Very little research (e.g. Kim et al., 2009; Udo et al, 2010) has been conducted into the relation between the service quality and user intentions, and none in the mandatory use environment. In relation to HRIS studies, no study has looked at the relation of service quality and the intention of using the system. This hypothesis follows:

H4: Service quality will have a significant influence on the intention to continue using HRIS.

3.0 Methodology

Although there are several ways to collect the data for the purpose of examining the adoption of HRIS, the survey method was considered an appropriate method to collect data for this research. This is due to the fact that this research involves formulating and testing hypotheses from well-established theories (Choudri and Dwivedi, 2005). As the survey method was chosen, a closed-ended questionnaire was considered the best format (Dwivedi et al., 2006). A paper-based questionnaire was considered preferable for data collection for this study.

The questionnaire used for data collection included two types of questions: the first was multi-choice in nature and aimed at capturing data of demographic characteristics (such as age, gender and experience) of the respondents. The second type contained a total of sixteen Likert-scale questions for testing the proposed hypotheses and the proposed conceptual model. The respondents were asked to rate each question on a 7-point Likert scale. The categories were: 1 = 'Strongly disagree'; 2 = 'Disagree'; 3 = 'Slightly disagree'; 4 = 'Neither agree nor disagree'; 5 = 'Slightly agree'; 6 = 'Agree' and 7 = 'Strongly agree'. The original items have been modified to fit the context of the study. Table 1 lists items for each construct included in this survey, and Appendix A presents the final questionnaire.

The original questionnaire was developed in English; however, as the first language in the KSA is Arabic, the questionnaire was translated into Arabic using a professional translator as some of the respondents did not speak English.

Before circulating the questionnaire, a pilot test was conducted to identify any confusing statements or errors especially after translating the questionnaire. The authors circulated the pilot to seventeen employees. Their feedback was positive, and the employees found the questions clear and easy to understand. As there were no suggestions from them, the questionnaire was finalised as designed initially.

Table 1: Survey measurements

Constructs	Items	Sources
Perceived Usefulness (PU)	I find the FARIS system useful to accomplish tasks	Venkatesh et al. (2003)
	Using the FARIS system enables me to accomplish tasks more quickly	
	Using the FARIS system increases my productivity	

	Using the FARIS system improves my job performance	
Perceived Ease of use (PEOU)	My interaction with the FARIS system is clear and understandable	Venkatesh et al. (2003)
	It is easy for me to become skilful at using the FARIS system	
	I find the FARIS system easy to use	
	Learning to operate the FARIS system is easy for me	
Service quality (SVQ)	IT employees will never be too busy to respond to user requests	Pitt et al. (1995)
	The behaviour of IT employees instils confidence in users	
	The IT employee unit has the knowledge to carry out its tasks	
	Employees of the IT unit understand the specific needs of users	
Intention to continue using the system	I will use the FARIS system on a regular basis in the future	Mathieson (1991)
	My intentions are to continue using the FARIS system rather than any alternative means	
	In future, I will consider the FARIS system to be my first choice to perform tasks	Bhattacharjee (2001b)
	In future, I intend to increase my use of the FARIS system.	

The final questionnaire was distributed to employees of the Human Resources Department in the Ministry of Education in Saudi Arabia who have access to the system. It was distributed in person to a total of 1,400 employees. The data was collected between mid-July and August 2013. A total of 195 completed questionnaires were received by the end of August; these were included in the analysis.

The data was analysed using the SEM of AMOS (version 20) software packages. The use of SEM is appropriate as it allows the examination of more than one regression relationship at a time (i.e. an entire theory). Also, SEM estimates and removes measurement error leaving only the common variance thereby incorporating the unreliability of measurement in the model (Ullman and Benter, 2003). The next section presents the findings of this study.

4.0 Findings

4.1 Respondents' Profile

Table 2 below presents the demographic characteristics of the respondents that participated in this study in terms of age, gender and experience.

Table 2: Demographic characteristics

Variable	Group	Frequency	Percentage %
Age	18–24	22	11.3
	25–38	156	80
	39–49	17	8.7

	50–60	0	0
	Over 60	0	0
	TOTAL	**195**	**100%**
Gender	Male	107	54.9
	Females	88	45.1
	TOTAL	**195**	**100%**
Experience	less than 3 months	15	7.7
	3–8 months	64	32.8
	9–13 months	78	40
	14–18 months	36	18.4
	19–23 months	2	1
	24 months or more	0	0
	TOTAL	**195**	**100%**

4.2 Descriptive Statistics of Constructs and Survey Measures

Table 3 below shows the mean and standard deviation (S.D.) of all the four constructs.

Table 3: Descriptive statistics

Constructs	Sample size	# of Items	Mean	Standard Deviation
Perceived usefulness (PU)	195	4	4.482	1.79
Perceived ease of use (PEOU)	195	4	4.353	1.60
Service quality (SVQ)	195	4	4.481	1.17
Intention to continue using the system	195	4	4.578	1.47

4.3 Reliability of Survey Measures

A reliability test was applied to assess the internal consistencies of the items that were used in forming the survey for this study. The reliability analysis was conducted using Cronbach's alpha for all the constructs shown in Table 4. A greater alpha value is indicative of a greater internal consistency of the individual items for each construct. This research applied the reliability classification by Hinton et al. (2004), where the alpha values could be interpreted across four different reliability types (≥ 0.90 is excellent; between 0.90-0.70 is high; between 0.70-0.50 is moderate, and less than or equal to 0.50 is low. Three out of the four constructs were excellent and the fourth (service quality) was high.

Table 4: Reliability test

| Constructs	Sample size	# of Items	Cronbach's alpha (α)	Reliability Type
Perceived usefulness (PU)	195	4	.932	Excellent
Perceived ease of use (PEOU)	195	4	.981	Excellent
Service quality (SVQ)	195	4	.788	High
Intention to continue using the system	195	4	.967	Excellent

4.4 Structural Model fit

Any model estimation includes two steps. The first is to examine the model fit result of the proposed model. Table 5 presents the entire model fit index. These indices have exceeded their respective acceptance levels suggested by experienced researchers (Hair et al., 1998). Therefore, the structural model shows an excellent fit with the data provided.

Table 5: Fit indices of HRIS

Fit Index	Recommended Value	Obtained value
Chi-Square(χ^2)/Degree of Freedom (DF)	≤ 3.000	1.915
Goodness of Fit Index (GFI)	≥ 0.900	.90
Adjusted Goodness of Fit Index (AGFI)	≥ 0.800	.86
Normative Fit Index (NFI)	≥ 0.900	.95
Comparative Fit Index (CFI)	≥ 0.900	.97
Root Mean Square Error Approximation (RMSEA)	≤ 0.080	.06

The second step is to examine the significance of each of the hypotheses' path in research and variance explained by each path. Figure 2 shows all the structural relationships between the studied constructs. The result shows that the model explains 65 per cent of variance on intention use. This shows the importance of the factors PU, PEOU and SVQ in predicting the users' intention to continue using HRIS.
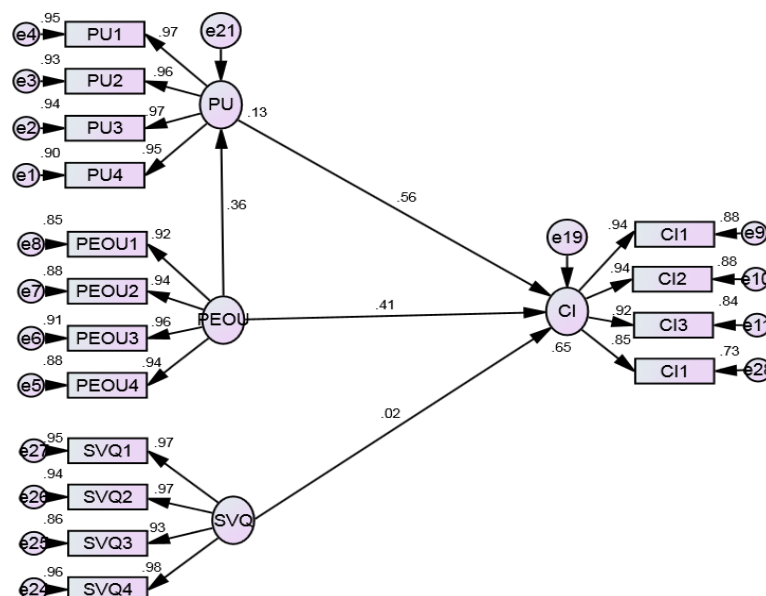
Figure 2: Validate research model to measure users' intention countenance using HRIS

For peer hypotheses, all the path coefficients including the perceived ease of use on perceived usefulness ($\gamma = 0.36$, $p < 0.001$) and perceived usefulness ($\gamma = 0.56$, $p < 0.001$), ease of use ($\gamma = 0.41$, $p < 0.001$) on intention to continue using the system were found to be significant at the level of 0.001, whereas service quality ($\gamma = 0.02$, $p > 0.05$) was not found to be significant. As a result, all the study hypotheses (H1, H2, and H3) were found to be supported and H4 was not supported.

It is apparent from the above analysis that the perceived ease of usefulness and perceived ease of use have a strong positive relationship with intention, whereas service quality has a non-significant relationship with the intention of using HRIS. Moreover, perceived ease of use also has a strong significant but indirect relationship on continued intention to use the system through perceived usefulness.

5.0 Discussion

The research has empirically examined the influence of factors such as perceived usefulness, perceived ease of use and service quality on intention to continue using HRIS by system users. As anticipated, usefulness and ease of use of the system have a significant positive relation to intention to continue using it. Although other studies have applied TAM in a mandatory context (e.g. Brown et al., 2002), they found that ease of use is the primary determinant of intention. The authors findings indicate that usefulness is the primary significant determinant of the user intention to use the FARIS system with a standardised coefficient of 0.56 (H1). These findings also provide further support for the previous studies (Chan et al., 2010; Haines et al 1997; Lee, 2006; Teo et al, 2007; Venkatesh and Davis, 2000) that resulted in a similar conclusion; the study's findings also consist of these study findings that perceived ease of use (with $\beta=0.41$) is a second strong predictor on continuance intention.

In addition, we also found the positive and significant empirical evidence of the perceived ease of use on perceived usefulness. This finding consists with the previous finding of (Chiu and Wang, 2008; Hsieh et al., 2007; Venkatesh et al, 2000). As far as the FARIS system is concerned, the authors believe that the more the system is free of effort in use, the more useful users perceived it.

One possible explanation for the positive strong effect of PU and POEU is that the Ministry of Education has provided training for the HR employees before putting the system into place. The training was varied based on job function; such training could possibly increase the users' confidence in performing their job. That also could be the reason for the positive effect on the ease of use of the system. This might have significantly influenced the users' belief that using the system will enhance their performance which, in turn, will impact their intention to use HRIS at the result level.

Another reason is that 72 per cent of the users are in the early stages of experiencing the system (basically 3–18 months); the early experience using the computer system shows that users perceive it as an easy way to use and therefore they are willing to use such a system (Al-Ghatani, 2007). This finding is supported by Venkatesh and Davis' (2000) finding in their study; they found that the early experience in using the system resulted in less effect of perceived ease of use on the users' intention in mandatory use.

In addition, the authors have also looked at the effect of the service quality provided by the IT unit on the continuance intention to use the FARIS system. We found that SVQ does not affect the users' intention. The early experience and the training could also be the reasons for a non-significant relationship between service quality and the intention to use the system. As the users have the required knowledge and skills to use the system, there will not be a need for any additional support (e.g. IT unit).

The result shows that the model explained 70 per cent of the variance between the independent constructs toward to intention to continue using the system the comparison of previous studies (Brown et al, 2002); for the adjust R^2 obtained for this research (.65) indicated an appropriate performance of the validate of the proposed model. This means that TAM is appropriate for understanding the mandatory use of FARIS system in the Saudi context.

6.0 Conclusion

The purpose of this research was to examine the adoption of HRIS in a mandatory context from the users' perspective. A conceptual model was developed by adopting factors from the technology acceptance model and service quality. A survey was used

to empirically test the model and data was collected from 195 users of HRIS. The results were analysed using SEM. The key conclusions of this study are:

- If the human resource information system (in this study, the FARIS system) is easy to use, it will lead to a stronger perception of usefulness and would influence the user intention to continue using it
- In the early stages of experiencing the system, system quality does not have a significant effect on the intention to use the system
- Using the FARIS system enhances the user performance and hence the intention to continue using the system.

6.1 Implications for theory and practice

This research contributes to IS/IT adoption literature by developing and validating an extended technology adoption model for users' adoption of HRIS in general and a mandatory context in particular. More specifically, the findings will contribute to both theory and practice of HRIS in the Middle Eastern (particularly Saudi Arabia) context. One of the unique contributions of this research is that it illustrated a direct effect of service quality on the intention to continue using the system. Furthermore, this study has looked at the performance of the technology acceptance model on the mandatory use environment and users' intention to continue using the system.

Since this is one of the first empirical studies to examine HRIS adoption in the Saudi Arabian context, it will form the foundation for future research on this topic as researchers may extend the validated model by integrating constructs of their interest in order to explore various aspects of HRIS adoption in the Saudi context.

The findings have also an implication for the Saudi ministries. It will help them understand the current situation in deploying the FARIS system before expanding it to other branches in Saudi Arabia. It will also help them overcome any resistance to its use from future users. As both ease of use and usefulness were found to be significant determinants, the study suggests that the Ministry of Education needs to add as much functionality as possible to enhance the usefulness of the system and make it simple and easy in terms of operation. The findings of this research indicate that ease of the system use will lead to greater usefulness and intention to use the system. The authors

recommend to the Ministry of Education to place an emphasis on the ease of use of the FARIS system through providing additional training.

6.2 Limitations and future direction

One limitation of this study is that it has used only actual users; a future study could examine the potential users of the FARIS system. The conceptual model examined in this study focuses on factors such as PU and POEU; however, beyond technology and individual factors, social factors also influence the system usage (e.g. Gallivan, 2001); specialised training to learn the target system can facilitate use (Lippert and Forman, 2005); and peer behaviour affects individual use (Gallivan, 2001). All these can be included in future studies.

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Appendix A: Research questionnaire
(Sources for measurements adapted: Venkatesh et al. (2003); Pitt et al. (1995); Mathieson
(1991) and Bhattacharjee (2001b)

Please answer all questions:
Are you:
□ Male   □ Female

How old are you?
□ 18-24   □ 25-38
□ 39-49   □ 50-60
□ Over 60

Your experience of using the FARIS system is:
□ less than 3 months   □ 3-8 months
□ 9-13 months   □ 14-18 months
□ 19-23 months   □ 24 months or more.

Using a rating scale of 1 to 7, where 1 = "strongly disagree"; 2 = ""Disagree"; 3 = ""Slightly disagree";
4 = ""Neither agree nor disagree"; 5 = ""Slightly agree"; 6 = ""Agree" and 7 = "Strongly agree".
Please circle the number that indicates your level of disagreement/agreement with the following
statements:

NO	STATEMENTS							
PU1	I find the FARIS system useful to accomplish tasks.	1	2	3	4	5	6	7
PU2	Using the FARIS system enables me to accomplish tasks more quickly.	1	2	3	4	5	6	7
PU3	Using the FARIS system increases my productivity.	1	2	3	4	5	6	7
PU4	Using the FARIS system improves my job performance.	1	2	3	4	5	6	7
PEOU1	My interaction with the FARIS system is clear and understandable.	1	2	3	4	5	6	7
PEOU 2	It is easy for me to become skilful at using the FARIS system.	1	2	3	4	5	6	7
PEOU 3	I find the FARIS system easy to use.	1	2	3	4	5	6	7
PEOU 4	Learning to operate the FARIS system is easy for me.	1	2	3	4	5	6	7
SVQ1	IT employees will never be too busy to respond to user requests	1	2	3	4	5	6	7
SVQ2	The behaviour of IT employees instils confidence in users	1	2	3	4	5	6	7
SVQ3	The IT employee unit has the knowledge to carry out its tasks	1	2	3	4	5	6	7
SVQ4	Employees of the IT unit understand the specific needs of users	1	2	3	4	5	6	7
CI1	I will use the FARIS system on a regular basis in future.	1	2	3	4	5	6	7
CI2	My intentions are to continue using the FARIS system rather than any alternative means.	1	2	3	4	5	6	7
CI3	In future, I will consider the FARIS system to be my first choice to perform tasks.	1	2	3	4	5	6	7
CI4	In future, I intend to increase my use of the FARIS system.	1	2	3	4	5	6	7