SATISFACTION TOWARDS EHRM IN GOVERNMENT ORGANISATIONS OF MALAYSIA: A PROPOSED MODEL BASED ON FIELD THEORY

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ABSTRACT

Nowadays, organisations are increasingly concerned about ensuring that employees have gained satisfaction towards the IS that they use, as satisfaction is considered the surrogate of IS success. In order to improve the satisfaction, organisations need to investigate the opinion of the users about the system, and where its minus points lie. Besides, there has been a great number of researches in IS throughout the world. Less attention is given to investigate the influence of individual factors and organisational factors on IS success, particularly the implementation of EHRM in government organisations of Malaysia. This paper intended to contribute to the IS and Malaysian literature pertaining to the EHRM topic. Based on the review of literature on EHRM, user satisfaction, technostress, role stress, and organisational IS-related support and Field Theory, a model is presented and three main hypotheses will be tested in future. The future results of the research will provide useful insights in the EHRM area, particularly to the HRMIS implementation in Malaysia.

Field of Research: EHRM, technostress, role stress, organisational support, user satisfaction, HRIS.

1. Introduction

The rationale for the uptake of IT in organisations has been a belief that the use of these technologies is related to productivity, competitive advantage, cost reductions and customer services (Rawstorne, 2005). Definitely, the use of technology could reduce human resource transaction costs by up to 75% and regain costs associated with the technology in less than two years (Bell, Lee, & Yeung, 2006). In addition, 67% of companies reported that technology has led to improvements in overall organisational efficiency and 70% reported improvements in the quality and timeliness of human resource services to employees (Bell et al., 2006) added that. The innovation of IT in organization offers chances for conducting business in ways that are totally different from the past. Many more studies have proved that IT plays a significant roles in public and private organisations (i.e. Gardner, Lepak, & Bartol, 2003; Kohli & Devaraj, 2003; Melville, Kraemer, & Gurbaxani, 2004; Staples & Seddon, 2004). Therefore, many organisations are investing more than 4.2% of their incomes on the implementation of IT (Weill, Subramani, & Broadbent, 2002) especially in developing the application of information systems (IS) hoping that it provides more efficient and effective of operational, tactical and strategic processes.
Moreover, Gardner et al. (2003) mentioned that more than half of the United States (US) investments spending on new machines of IT.

Generally, the application and implementation of IT in HRM is called as electronic human resource management (EHRM) or human resource information systems (HRIS). These two terms are widely used in many IS studies related to HRM. Even, some scholars and researchers debated that EHRM and HRIS are two different concepts (Rue, Bondarouk, & Loose, 2004), however previous studies are used the terms interchangeably. Rue, Magalhaes, and Chiemeke (2011) claimed that the terms like EHRM, web based HRM, and information technology (IT)-based HRM are considered as developments of HRIS. Notably, the rapid development of technology especially Internet not only lead to several impacts on human resource functions but also leads to the way people define the phenomenon. As stated by Stone and Dulebohn (2013), HRIS became known as EHRM because organisations enabled human resource transactions through the Internet. They also briefly described the evolution of EHRM in their article.

To date, many empirical studies represent a variety of contexts, factors and measures of EHRM (i.e. Bell, Won Lee, & Yeung, 2006; Bondarouk & Ruel, 2005; Bondarouk & Ruel, 2009; Gardner, Lepak & Bartol, 2003; Gupta & Saxena, 2011; Hoch & Dulebohn, 2013; Maatman, 2006; Marler & Fisher, 2013; Olivas Lujan, Ramirez, & Zapata Cantu, 2007; Ruel, Bondarouk, & Van der Velde, 2007; Sanaye & Mirzaei, 2008; Strohmeir & Kabst, 2009; Voerman & Veldman, 2007; Yusliza, Ramayah, & Haslindar, 2011; Yusliza & Ramayah, 2011; Zafar, 2013). However, continuous effort from the academician is needed as this topic is still in infancy stage (Ruel, Bondarouk, & Velde, 2007; Strohmeier, 2007). Now, organisations are increasingly concerned about ensuring that employees have gained satisfaction towards the IS that they use, as satisfaction is considered the surrogate of IS success (Baroudi, Olson, & Ives, 1986; Gudigantala, Song, & Jones, 2011; Igarbia & Nachman, 1990; Ives, Olson, & Baroudi, 1983; Sabherwal, Teyaraj, & Chow, 2006). Without employees’ satisfaction, smoothly running an organization is not possible (Gupta & Saxen, 2011). To improve the satisfaction, organisations need to investigate the opinion of the users about the system, and where its minus points lie. To date, a few attempts have been made to capture the overall evaluation by users of the use of IS, along with the antecedent factors that form satisfaction (i.e. Aggelidis & Chatzoglou, 2012; Bhattacherjee, 2001; Dastgir & Mortezaie, 2012; DeLone & McLean, 1992; Gudigantala et al., 2011; Tor J. Larsen, 2009; McKinney, Yoon, & Zahedi, 2002; Nadkarni & Gupta, 2007; Oliver & Richard, 1980; Tarafdar, Tu, & Ragu-Nathan, 2011; Venkatesh, Morris, Davis, & Davis, 2003). Many more efforts have to be done especially by the practitioners, scholars and researchers to deep dive the issue of system success, particularly the user satisfaction in EHRM topic. Consequently, in this paper, we try to contribute the advancing the EHRM research area.

As a starting point, we adapted a model developed by Tarafdar, Tu, Ragu-Nathan, and Ragu-Nathan (2011) in examining the influence of stress conditions and organisational mechanisms on job outcomes. The model is based on the “Transaction Theory” of stress by Lazarus (as cited by Tarafdar, Tu, Ragu-Nathan, et al., 2011). The study also applied a Field Theory by Lewin (1951).

The main objective of the study is to examine the influence of technostress, role stress, and organisational IS-related support on user satisfaction towards HRMIS in public sector. The contributions of the study include the theoretical contribution to the IS success literature, contribution to the field of EHRM or HRIS, and contribution by examining the influence of technostress, role stress and organisational support factors on user satisfaction. The outcome of the research could be used to assist in the implementation of EHRM in organisations, particularly HRMIS in government organisations. A research model is proposed using factors identified from the literature review.
1.1 HRMIS in Malaysia

In Malaysia, Human resource management information system (HRMIS) is introduced as one of the seven flagships under electronic government (EG) projects. It is an effort to provide public servants with an integrated system for human resource information management. Furthermore, the HRMIS project is implemented in tandem with the government’s vision in using information and communication technology (ICT) to transform the operations of human resource processes and subsequently propel the country into the era of the knowledge worker and the knowledge based economy (Eia, 2004, p. 6). The project was scheduled to be started on 12 April 1999 and completed on 30 September 2004 of phase 1. Now, the application of HRMIS still in the roll-out process to the rest of the government agencies with the value-added enhancement series from time to time. However, due to the unfavourable responses among users towards the systems, a special committee has been formed to redevelop and upgrade the HRMIS which is called as HRMIS2. At the end of 2012, a survey was conducted to examine the users’ perceptions towards HRMIS2. The results revealed that more than 50 percent of the HRMIS2 users are still not satisfied with the system. Based on the results, some issues can be raised. Are there any other unforeseen factors that contribute to the situation? As mentioned by Aladwani (2003) Au, Ngai, and Cheng (2002), and Guimaraes and Igbaria (1997), system’s factors, user’s situational factors or behavioural factors, and social factors or organisational factors have significant impacts on user satisfaction. Furthermore, Au and Ngai (2008) mentioned that a number of studies claimed that most systems fail to fulfill the objectives and outcomes held for them, not because they do not have technical skills, but because psychological and organisational issues are not well tackled during the development and implementation stages. Several studies were reported to investigate the HRMIS from various contexts and issues (MAMPU, 2011; McPherson & Ramli, 2004; Mohd Azman, 2011; Noraswati, 2011; Norshita, Halimah, & Tengku Mohammad, 2010) whereby a few of them tried to investigate the issue of satisfaction among users towards HRMIS. Besides, none of the studies reported on the influence of technostress, role stress, and organisational IS-related support on user satisfaction towards HRMIS in public sector.

2. Research Questions

Having a clear picture there are some unforeseen factors are involved in the EHRM success. The objective of EHRM implementation can be easily distorted by the factors if no effort has been taken to highlight the issue. Is it true that technostress, role stress, and organisational IS-related support influence the satisfaction among HRMIS users of public sector in Malaysia? Further research should be undertaken to capture the issue. Therefore, we pose three research questions arise for this study:

a. Do components of technostress such as techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty influence user satisfaction?

b. Do role stress factors such as role overload and role conflict influence user satisfaction?

c. Do organisational IS-related support factors such as literacy support, technical support, technology involvement facilitation and innovation support influence user satisfaction?
3. Literature Review

3.1 Electronic Human Resource Management (EHRM)

EHRM is often used interchangeably with human resource information system (HRIS), human resource management system (HRMS), and virtual human resource (HR). As defined by Ruel, Bondarouk and Looise (2004), E-HRM can be defined as a way of implementing HRM strategies, policies, and practices in organisations through the conscious and directed support of and with the full use of web technology based channels. Moreover, the technology is also referred to an application of IT for both networking and supporting at least two individual or collective actors in their shared performing of HRM activities (Strohmeir, 2007). In addition, EHRM is referred to the administrative support of the human resource function in organisations by using Internet technology (Voermans & Veldhoven, 2007). Tonya Bondarouk and Ruel (2009) claimed that E-HRM researchers have not standardized a definition of E-HRM. They put forward a new E-HRM definition which is represents the consensus-based understanding of E-HRM. They defined E-HRM as ‘an umbrella term covering all possible integration mechanisms and contents between HRM and technologies aiming at creating value within and across organisations for targeted employees and management’ (p. 507). The definition of EHRM by Bondarouk and Ruel (2009) will be adopted for the purpose of the study.

Several studies have contributed to the knowledge about the effects of E-HRM on various areas. To name a few, E-HRM towards HRM effectiveness (Tanya Bondarouk & Ruel, 2005; Tonya Bondarouk & Ruel, 2009; Ruel et al., 2007; Sanayeif & Mirzaei, 2008) attitude towards using E-HRM (Voermans & Veldhoven, 2007; Yusliza & Ramayah, 2011; Yusliza, Ramayah, & Haslindar, 2011) employees satisfaction towards EHRM (Gupta & Saxena, 2011), impact of EHRM on professional competence in HRM (Bell et al., 2006), and adoption of EHRM (Olivas-Lujan, Ramirez, & Zapata-Cantu, 2007; Strohmeier & Kabst, 2009).

3.2 The Kurt Lewin’s Field Theory

Lewin pointed out that behaviors are influenced by the total interrelationships between the individual, contextual, and social environment which is referred to as the field. In the field theory, “field” is a totality of coexisting facts which are conceived of as mutually interdependent (Lewin, 1951, p. 240). In the organisational context, various forces are at work in the workplace and influence individuals’ behavior or work outcome and perceptions. However, in many situations the way in which people respond is determined by the social situations. Moreover, the field theory has been validated that psychological and non-psychological forces influence behaviors or outcomes and perceptions. For example, Ellie-Dit-Cosaque, et al. (2012) in their article mentioned that personality traits such as trait anxiety and individual differences such as gender, age, and IT experience influence IT-related behaviors such as end-user satisfaction. They added that social support such as peers support or managerial support also has been reported to show similar results. They also conducted a study among IT end-users in France. The results shown that increasing autonomy, offering appropriate managerial support, reducing work overload, and perceives innovativeness with IT can reduce computer anxiety and increase perceive behavioral control towards IT. In this context, end-user satisfaction (behavior/work outcomes) is influenced by the person’s feeling of technostress and role stress and also by the organisational IS-related support. According to Moreland (1996), life space in the field theory consists of primarily of internal representation namely individual thought, feeling (i.e. stress) and so on. Moreover, the individual factors such as computer anxiety (Ellie-Dit-Cosaque, Pallud, & Kalika, 2012), cognitive styles, personality, and demographic/situational variables have been referred to individual differences that may significantly influence IT-related behaviors or outcomes.
Field Theory is applied because it is a social psychology theory, which has long been established and widely used in the organisational behavior and work outcome contexts (Miner, 2003). Even a number of theories being applied to study satisfaction such as, Bandura’s social cognitive theory (SCT), IS success model (DeLone & McLean, 1992), expectation-confirmation theory (ECT) (Oliver & Richard, 1980) and expectation-disconfirmation theory (EDT) (McKinney et al., 2002), and Unified Theory of Use and Acceptance of Technology (UTAUT) (Venkatesh et al., 2003), however they are not suitably in the context of the study. Hence, this study attempts to apply Field Theory in explaining the relationships in the research model.

3.3 Past Studies on User Satisfaction

The measures of user satisfaction have appeared in a large number of IS research. The studies represent a variety of measures and settings. What is more important, various factors have been identified to have an impact on end-user satisfaction. Notably, the role for user satisfaction has been tested as a dependent variable (Aggelidis & Chatzoglou, 2012; Au et al., 2002; Dastgir & Mortezaie, 2012; Gudigantala et al., 2011; Karimi, Somers, & Gupta, 2004; Tor. J. Larsen, 2009; Nadkarni & Gupta, 2007; Oliver & Richard, 1980), an independent variable (Cho, Cheng, & Hung, 2009) and as a mediator to other variables (Bhattacherjee, 2001; McGill & Klobas, 2008; Schaupp, 2010; Wixom & Todd, 2005). Interestingly, a summary of major literature on end-user information system satisfaction from 1981 to 1999 can be found in Au et al. (2002). Moreover, Mahmood, Burn, Gemoets, and Jacquez (2000) synthesized and validated the construct of end-user satisfaction by using a meta-analysis. They analyzed the empirical results of 45 end-user satisfaction studies published from 1986 to 1998 and by focusing on relationships between EUS and nine variables (perceived usefulness, ease of use, user expectations, user experience, user skills, user involvement in system development, organisational support, perceived attitude of top management and user attitude) in different setting. They claimed that positive support was found for the influence of all variables on end-user satisfaction. In a related study, Bokhari (2005) undertook a meta-analysis to examined the relationship between system usage and user satisfaction. The study focused on explaining and understanding the nature and strength of the relationship between the variables by resolving the inconsistencies in the IS research. The finding reveals a significant positive relationship between system usage and user satisfaction although not very strong.

Dastgir and Mortezaie (2012) conducted a study to investigate factors that are affecting the end-user satisfaction of accounting information system. The sample consists of 80 companies listed in Tehran's stock exchange. The instrument was designed from the studies by Doll and Torkzadeh (1988) and Bailey and Pearson (1983). The finding indicates that the information content, ease of using accounting information system, accuracy and correctness of information, format of the reports and timeliness of information have an impact on end-user satisfaction of accounting information system.

A study conducted by Bal, Bozkurt and Ertemsir (2012) found positive and high level relationships between the HRIS perception and HRIS satisfaction among human resource employees in Turkey. In a related study, Ramezan (2009) examined IS effectiveness through assessing user satisfaction about system quality and information quality among users who are using HRIS in four companies in Ministry of Petroleum in Iran. Finding indicates a significant relationship between system quality and information quality with user satisfaction.

Previous empirical studies of IS also concerned about the influence of individual situational factors and organisational factors towards end-user satisfaction. Doubtless, IS failure is usually due to psychological and organisational issues rather than technological issues (Au & Ngai, 2008). In addition, users attributes
have an impact on the success of information system implementation (Aladwani, 2003; Guimaraes & Igbaria, 1997). User related constructs such as user experience, user training, user attitude and user participation are expected to have significant relationships with user satisfaction (Sabherwal et al., 2006).

Little research has examined on the relationship between technostress and user satisfaction, particularly in EHRM field by adoption of Field Theory. To date, there was one study examined the relationship between technostress and user satisfaction (Tarafdar, Tu, & Ragu-Nathan, 2011). However, the study was conducted in United States among 233 end users of information communication of technology (ICT) and most of them worked at operational levels in middle-management positions in public sector. The findings of the study indicated that factors that create technostress reduce the satisfaction of individuals with the ICT. In other words, there are significant relationships between both variables. In a related study, Tarafdar, Tu, Ragu-Nathan, et al. (2011, pp. 117-118) reported that they found seven consequences of technostress-creating condition. The consequences are professional are associated with role overload and role conflict, technostress is linked to reduced job satisfaction, professionals experiencing technostress face decreased innovation in their tasks while using IS, professionals experience reduced productivity while using IS in their work, professionals experiencing technostress are dissatisfied with the IS they use, and technostress creating conditions are associated with reduced commitment of professionals to their current organisations’ goal and values.

In Malaysia, a few studies were reported to investigate the issue of satisfaction among users towards EHRM (MAMPU, 2011; McPherson & Ramli, 2004; Mohd Azman, 2011; Noraswati, 2011). However, these studies were examined the users’ satisfaction from different contexts. More efforts are needed especially from the academics and practitioners to highlight and deep dive the issue of EHRM.

4. The Proposed Research Model and Hypotheses Development

A topic of EHRM has received such scant attention in the literature (Yusliza, Ramayah, & Haslindar, 2010). Therefore, it is necessary to draw the antecedents contributes to user satisfaction towards EHRM by reviewing the literature from other disciplines. On top of that, in this paper, we therefore have limitation in proving the relationship between the variables since very limited study have conducted in this area akin to the present’s study research model.

The research model of the present study is adapted based on the transaction based model (Tarafdar, Tu, Ragu-Nathan, et al., 2011) . The research framework used in their study is shown in Figure 1. In this model it is depicted that factors that create stress (i.e. technology) and organisational mechanisms (i.e. technical support provision, innovation support, literacy support and technology involvement facilitation) explain the overall outcomes for the individual (i.e. end-user satisfaction). The model also highlights the effect of organisational mechanisms in reducing stress. However, the present study only investigates the effect of variables on end user satisfaction, as shown in Figure 2. As illustrated in figure 2, the study also expects that role stress has significant relationship with user satisfaction towards HRMIS. An individual computer self-efficacy also is expected to moderate the relationships between the variables.

In a study conducted by Tarafdar, Tu, and Ragu-Nathan (2011), found that the negative effects of technostress on the extent to which end users perceive the applications they use to be satisfactory and can improve their performance at work. Based on the five conditions of technostress, they explained that managers tend to communicate more information than is necessary and receive more information than they can effectively process and also receive more information than they can process and use.
effectively. As a result, they are unable to identify that is actually useful information. Thus, it will lead
them to dissatisfaction with the content and outputs of the systems they use. This situation is referred
to techno-overload. Techno-invasions address that users feel that they are never free of technology and
they think that they are always under supervision and their live has been invaded. They feel of blurring
of boundaries between the home and the workplace, making them unsatisfied with the application they
use. With regard to techno-complexity, users have to spend more time in learning how to use ICT.
Sometimes they feel that the variety of applications and functioning intimidating and they do not
understand how and why they need to use it. Furthermore, due to the system is still unstable and the
technical support is not always available when they need it, users feel that systems are not friendly,
timely, or accurate. As a result, dissatisfaction and frustration will exist. Due to techno-uncertainty,
systems are always in upgrading and maintaining processes that require users to regularly learn how to
work with new applications. These constant changes will make users unsatisfied with the systems.
Finally, users will threaten of losing their jobs, due to inability to adapt with the work processes relating
to new ICT. Thus, users have negative assessments about system user-friendliness and adequacy of
computer knowledge, leading to dissatisfaction with the system used. The findings of the study
indicated that factors that create technostress reduce the satisfaction of individuals with the ICT. In
other words, there are significant relationships between both variables.

Stress will also exists when one is encountered with contradictory requirements from different aspects
of one’s role or from different people that one interacts with (Tarafdar, Tu, Ragu-Nathan, & Ragu-
Nathan, 2007). This condition is known as role stress. Role stress has been widely investigated in
previous studies. However, most of the studies investigated the influence of role stress on other work
outcomes. For example, LeRouge, Nelson, and Blanton (2006) have examined the relationship between
the match in IT developers’ preferred and perceived actual role stress with job satisfaction and
organisational commitment. The study was conducted on IT developers in 12 Fortune 500 companies.
The results indicated that role stress was positively related to job satisfaction and organisational
commitment. Conversely, in another study conducted by Karatepe, Yavas, Babakus, and Avci (2006)
examined the effects of role stress on frontline service jobs by focusing gender as moderator. The
findings reveal that role conflict has a stronger negative impact on job satisfaction, especially for female
employees. Even though literatures on role stress is considerably quite extensive, none of the studies
have mentioned about the effects on end-user satisfaction. In the context of IS, it is important to
investigate the situation as user satisfaction is related to job satisfaction. In addition, role stress has
been proved to have relationship with technostress (Tarafdar et al., 2007) and technostress was
significantly related to job satisfaction and user satisfaction (Tarafdar, Tu, & Ragu-Nathan, 2011). These
studies can be used as a proxy to predict that role stress also has an effect on user satisfaction. In
summary role stress is expected to be related to end-user satisfaction.
Figure 1: Creating conditions, outcomes, and inhibiting mechanisms of technostress. Source: (Tarafdar, Tu, Ragu-Nathan, et al., 2011)

Figure 2: Proposed research model
Tarafdar, Tu, Ragu-Nathan, et al. (2011) confirmed that literacy facilitation, technical support provision, technology involvement, and innovation support have significantly related to technostress creators, job satisfaction, organisational commitment, role conflict, role overload, employee innovation, employee productivity and end-user satisfaction. These four mechanism also referred to situational factors that can increase end-user satisfaction and moderate on the relationship between technostress and end-user satisfaction (Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu, 2008). Rouibah, Hamdy, and Al-Enezi (2009) investigate the influence of organisational factors and human motivations on IS/IT usage and user’s satisfaction in Kuwait. They claimed that, training and organisational support have received the most attention in IS studies. Conversely, user involvement was under studied. They assumed that user involvement in the design of IS/IT would lead to the IS success. Results of the study indicated that among the organisational factors, top management support was found to have the strongest effect on IT/IS usage and user’s satisfaction, and followed by availability of training and user involvement. Therefore, we predict organisational IS-related support will have positive relationship with user satisfaction. Based on the discussions above, the following main hypotheses are thus proposed in this study.

H1: Technostress (techno-overload, techno-invasion, techno-complexity, techno-uncertainty, techno-unsecurity) is related to end-user satisfaction.

H2: Role stress (role over load, role conflict) is related to end-user satisfaction.

H3: Organisational IS-related support (literacy support, technical support, technology involvement facilitation, innovation support) is related to end-user satisfaction.

5. Conclusion

In this paper, we discuss an overview of EHRM and Lewin’s Filed Theory. In addition, a compilation of previous study on user satisfaction is also presented. Based on the arguments, three main hypotheses have been proposed to be related with user satisfaction. The future results from the present’s research model will provide useful insights in the EHRM area. Besides, the findings can be used as a guide in understanding the phenomenon of technostress and role stress, particularly in the EHRM implementation.

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