



**HUMAN RESOURCE INFORMATION SYSTEM (HRIS) USER
ACCEPTANCE AND USAGE MODEL FOR PUBLIC SERVICE
DEPARTMENT (PSD) OF MALAYSIA**

BY

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ABSTRACT

Nowadays, government organizations around the world have becoming strongly dependent on Human Resource Information System (HRIS) in HRM and have started allocating resources to implement it. However, the literature suggests that its adoption and benefits from using it have yet to be realised due to the lack of its acceptance and usage. Many technology acceptance theories and models have been developed for that purpose but have limitations due to scarce research in the area. This quantitative study, therefore, is undertaken with the primary aim of developing a conceptual model for HRIS acceptance and usage in the Public Service Department of Malaysia (PSD) in relation to its performance from the cultural perspective. The Technology Acceptance Model 2 (TAM2) developed by Venkatesh and Davis (2000) was used as a theoretical framework to build a conceptual model, while two additional constructs were utilized to measure the relationship of HRIS system usage with productivity and efficiency and the influence of national culture respectively. Finally, the modified TAM model was proposed to explain and test the HRIS system acceptance and usage in the PSD of Malaysia. Data were collected by survey in which a questionnaire was distributed to 1,547 employees from five main divisions at the PSD of Malaysia, having been validated using expert opinions and a pilot survey of 50 HR personnels. Eventually, 545 responses were analysed in line with the research questions and objectives. The SPSS and Structural Equation Modeling (SEM) using AMOS (Version 18) were conducted for descriptive and inferential statistical analyses. Out of 14 hypotheses being tested, 13 were consistent with the theoretical expectation. Overall, the findings indicate that performance factors in terms of efficiency as well as cultural factors have significant influence on the HRIS adoption in the PSD of Malaysia. Therefore, the modified research model in the study may add to the expanding base of other research investigating technology adoption models in other public sectors locally, and internationally.

ملخص البحث

في الوقت الحاضر، أصبحت المنظمات الحكومية حول العالم تعتمد بشكل كبير على نظام معلومات الموارد البشرية في إدارة الموارد البشرية وبدأت في تخصيص الموارد لتنفيذها. ومع ذلك، تقترح الدراسات الأدبية أن اعتماد وفوائد استخدامه لم تتحقق بعد بسبب عدم قبوله واستخدامه. هناك الكثير من نظريات ونماذج قبول التكنولوجيا قد طورت لهذا الغرض ولكن تبين أنها تواجه عقبات إلى جانب قلة البحوث في ذات المجال. وقد أجريت هذه الدراسة الكمية، بهدف وضع نموذج مفاهيمي لقبول نظام معلومات الموارد البشرية واستخدامها في إدارة الخدمة العامة فيما يتعلق بالأداء والجوانب الثقافية. وقد تم استخدام نموذج قبول التكنولوجيا رقم 2 (TAM 2) الذي وضعه فينكاتش وديفيز (2000) كإطار نظري لبناء نموذج مفاهيمي، بينما كل بنيتين إضافيتين تستخدمان لقياس العلاقة بين نظام معلومات الموارد البشرية وبين استخدام النظام في الإنتاجية والكفاءة وتأثير الثقافة الوطنية على التوالي. أخيراً، نموذج قبول التكنولوجيا المعدل والفرضيات الأربعة والعشرين المقترحة لشرح واختبار قبول نظام معلومات الموارد البشرية والاستخدام في إدارة الخدمة العامة. وتم جمع البيانات عن طريق الاستبانة التي تم توزيعها على 1,547 موظفاً من 5 شعب رئيسية في إدارة الخدمة العامة الماليزية، وقد تم التحقق من صحتها بأخذ رأي الخبراء ودراسة استطلاعية لخمسين (50) فرداً من موظفي الموارد البشرية، وتم تحليل 545 إجابة وفقاً لأسئلة البحث وأهدافه. وتم استخدام البرنامج الإحصائي للعلوم الاجتماعية ونمذجة المعادلة الهيكلية (SEM) واستخدام أموس (إصدار 18) للتحليل الإحصائي الوصفي والاستنتاجي. وقد أوضحت النتائج أن 13 من أصل 14 من الفرضيات تتفق مع توقعات النظرية. بصفة عامة تشير النتائج إلى أن عوامل الأداء من حيث الكفاءة وكذلك العوامل الثقافية لها تأثير كبير على اعتماد نظام معلومات الموارد البشرية في إدارة الخدمة البشرية الماليزية. ولذلك، فإن النموذج المعدل في هذه الدراسة يمكن أن يؤدي إلى توسيع قاعدة البحوث في القطاعات العامة الأخرى محلياً ودولياً.

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DECLARATION

I hereby declare that this dissertation is the result of my own investigation, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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This dissertation is dedicated to my beloved parents (Haji Zainudin & Hajah Salma), my wife (Anismawati) and children (Farissa Almira, Fathirah Alzahra & Muhammad Fariz), my siblings (Noraini, Norhayati, Nordiana & Norshazwani) and all family members and relatives who support me along the PhD journey. Thank you so much.

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CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND OF THE STUDY

Rapid economic growth and increased competition has caused the exponential growth of information technology (IT) application in Human Resource Management or HRM (Saleem, 2012). Compared to the 1960s and 1970s, the combination of HRM and IT was more conducive in the 1980s through the introduction of Human Resource Information System or known as HRIS (DeSanctis, 1986). According to Ahmer (2013), HRIS has been used to convert manual human resource operations to computerized information to gain the effectiveness of human resources in organizations (Lippert & Swiercz, 2005; Toshani, Jerram, & Gerrard, 2010; Toshani, Jerram, & Hill, 2011), as they are the ultimate source of core competitive advantage (Wei & Feng, 2013).

Human Resource (HR) professionals and researchers also believe that organizational objectives can be achieved through the adoption of modernized Information Systems (IS) like HRIS (Saleem, 2012). The adoption of HRIS is critical for the maintenance of employee related data and generating appropriate HR reports which are expected for administrative efficiency (Tripathi, 2011). This could be achieved through faster information processing, improved employee communications, greater information accuracy, lower HR costs and overall HR productivity improvements which can enable strategic focus of HR (Shiri, 2012; Kassim et al., 2012; Wiblen, Grant, & Dery, 2010).

The use of HRIS is crucial for HR professionals and executives to become strategic partners with top management in the organizations (Ankrah & Sokro, 2012; Lengnick-Hall & Moritz, 2003). It provides strategic value by assisting in decision-making concerning vital HR functions (Farndale, Scullion, & Sparrow, 2010) such as employment, separations and applicant qualifications and development with information on training programmes, salary forecasts, pay budgets and labour/employee relations with information on contract negotiations and employee assistance needs (Al-Shibly, 2011).

However, researchers, the industry and academia seem to agree that HRIS adoption still remains under-research (Blount & Castleman, 2009; Henriksen & Mahnke, 2005). It has been realized that the linkage between the two disciplines is still cutting edge and needs more exploration especially in the public sector (Absar & Mahmood, 2011; Saleem et al., 2011; Mishra & Akman, 2010).

Public sectors are more confronted by some negative elements which have already existed within the internal and external environments of the organizations for IT adoption like HRIS. Aspects such as absence of market incentives, multiple conflicting goals, higher level of accountability, lower work satisfaction and organizational commitment impede successful adoption of IT. The organizations are also confronted with more rules and regulations, more bureaucracy, lack of term planning and rigidity of the procurement process (Robertson & Seneviratne, 1995; Salmela & Turunen, 2003). Thus, the acceptance of the use of HRM information technologies and systems by HR employees is an important research field that should be looked into (Murat Esen & Nihat Erdogmus, 2014).

Generally, organizations spend huge sums of money in implementing various information systems such as e-government, e-learning, online stock trading and e-

HRM (Lean, Zailani, Ramayah, & Fernando, 2009; Ramayah, 2010; Ramayah, Rouibah, Muniandy, & Rangel, 2009; Schaupp, Carter, & McBride, 2010; Yusoff, Ramayah, & Ibrahim, 2011), but the usage among end users remains low especially in developing countries (Ramayah, 2011). It gets worse when the benefits expected are not achievable despite huge investments made for the technology (Adam & O'Doherty, 2003; Bingi et al., 1999; Davenport et al., 2004). In the United States of America (USA) for instance, the federal government had spent \$65 billion on 1,087 IT projects in 2006, but failed to achieve the objective of utilizing it effectively among end users (Gartner, 2006). The same thing happened in the public sector in countries like Jamaica (Jamaica, 2003; Ministry, 2009) and the Netherlands (Boonstra, 2003).

Therefore, the quest for understanding the acceptance and usage of IT is vital (Amoako-Gyampah & Salam, 2004; Venkatesh, 1999) as the antecedents of many IT adoptions still could not ensure of its usage in the future (Davis, 1989; Jeyaraj, Rottman & Lacity, 2006; Venkatesh & Davis, 1996; Venkatesh, 2000; Venkatesh, Davis & Morris, 2003; Venkatesh, Morris, Davis & Davis, 2007). This has encouraged many researches to be conducted especially in the 1970s to identify factors that impact the integration of IT into business (Legris, Ingham & Collette, 2003). The effort continues until the mid-1980s whereby scientists started to focus on development and evaluation of models that could help predict the IT adoption (Chau, 1996; Cheney, Mann & Amoroso, 1986; Legris et al., 2003).

Several theories and models for technology acceptance have been developed including Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB), Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) and Innovation Diffusion Theories (IDT) (Amoako-Gyampah, & Salam, 2004; Chau & Jen-Hwa Hu, 2002; Taylor & Todd, 1995). Such existing

technology acceptance theories are based on the applicability to an organization versus an individual, also known as firm level and individual level (Jiang & Chen, 2010). One of the underlying concepts based on individual behaviour-adoption refers to Technology Acceptance Model (TAM). It is the most popular contemporary technology acceptance models used in the majority of researches (Lai & Li, 2010; Jan & Contreras, 2010; Chuttur, 2009; Gefen & Straub, 2000; Taylor & Todd, 1995).

However, it has been argued that the majority of the studies were conducted in the context of developed countries (Al-Gahtani, 2014; Tarhini, Hone & Liu, 2014a; Teo, 2010). It is equally important that focus is given to understand the acceptance and usage of IT in developing countries especially in their local or national contexts (Li & Kirkup, 2007). Ramayah (2011) stresses that such importance of understanding what determines the successful use of HRIS should be done including in Malaysia.

The government of Malaysia has invested a lot over the last ten years to transform the public sector towards achieving greater productivity and efficiency through the HRIS in the HRM. Thus, it is important to investigate the reaction of employees in the Malaysian public sector toward HRIS, and to examine the relationship of HRIS usage with the organization's performance. The extended version of TAM known as TAM2 is introduced here to lay the groundwork for this research and it is modified with the cultural dimension of Hofstede (1980) namely power distance (PD) and individualistic/collectivism (I/C). This is in line with previous researchers' views that the original TAM alone may not be sufficient to explain intention as suggested in the literature and the extension of it could validate an extended TAM2 for HRIS acceptance usage in the Public Service Department (PSD) of Malaysia.

1.0.1 Human Resource Information System (HRIS)

The adoption of IT in the area of Human Resource Management (HRM) is due to the role of HRM as the brain and soul of organizations. The significant role of HRM is described by Ulrich (1997, pp.473-496) in terms of transition from operational to strategic, policing to partnering, short-term to long-term, functionally oriented to business oriented, reactive to proactive, and activity-focused to solution-focused. As a matter of fact, Khatri (2006) has demonstrated the roles of IT in enabling HR activities components namely in administrative, operational and strategic components.

This combination of IT and HRM is known as Human Resource Information System (HRIS). According to Ball (2001), Bedell et al. (2007), and Bondarouk and Ruël (2009), HRIS becomes a tool or component that human resource department could leverage to provide services, improve the organization's workforce and gain competitive advantage against other organizations. Due to such expectations, several descriptions have been made about HRIS such as sophisticated versus unsophisticated system (Martinsons, 1994); the system which provides information, automation and transformation (Tansley et al., 2001; Zuboff, 1988); the system that is operational, relational and transformational (Lepak & Snell, 1998) and the system that has both front-end and back-end (Panayotopoulou, Galanaki & Papalexandris, 2010; Strohmeier, 2007). The impact of HRIS's role could be described by investigating how HRIS is accepted and adopted by users in the organization.

1.1 INFORMATION TECHNOLOGY (IT) ADOPTION

1.1.1 User Acceptance

The aspect of user acceptance is considered amongst the significant factors for effective adoption of IT. It has been recognised by most researched areas in the