Public Personnel Management

Unveiling the Value Creation Process of Electronic Human Resource Management: An Indonesian Case

Eri Wahyudi and Sung Min Park

The online version of this article can be found at:

Published by:

$SAGE

Additional services and information for *Public Personnel Management* can be found at:

Email Alerts: http://ppm.sagepub.com/cgi/alerts

Subscriptions: http://ppm.sagepub.com/subscriptions

Reprints: http://www.sagepub.com/journalsReprints.nav

Permissions: http://www.sagepub.com/journalsPermissions.nav

Citations: http://ppm.sagepub.com/content/43/1/83.refs.html

>> Version of Record - Feb 20, 2014

What is This?

Unveiling the Value Creation Process of Electronic Human Resource Management: An Indonesian Case

Eri Wahyudi[1] and Sung Min Park[2]

Abstract

Information and communication technologies (ICT) advancement, coupled with an ever-increasing demand for the human resource management (HRM) function to be more efficient, effective, and capable of supporting the strategic goals of every business function, has led to the adoption of electronic human resource management (e-HRM). This study aims to provide both insight and empirical evidence on the success enabler of e-HRM acceptance and e-HRM value creation in the public sector. The study confirms that perceived usefulness (PU) is found to be a strong predictor of e-HRM usage. From an organizational and managerial standpoint, HRM strength has a positive influence on e-HRM usage. In the creation of HRM values, we find e-HRM usage to be a strong predictor of perceived human resource (HR) service quality but not a predictor of the creation of a strategic role for the HRM function. Furthermore, the study indicates that HRM strength is an important direct predictor of the creation of HRM values. Hence, this relationship suggests the importance of policy clarity and consistency. To ensure that e-HRM is used in a more strategic way, the core business functions of an organization, HRM strategy and IT management, should be clearly aligned and integrated. A set of theoretical and practical implications as well as the limitations of this research are also discussed.

Keywords

e-HRM, perceived characteristics of technology, value creation, e-HRM acceptance, technology acceptance model, transformational leadership

[1]Ministry of Finance of the Republic of Indonesia Malang, Jawa Timur
[2]Sungkyunkwan University, Seoul, South Korea

Corresponding Author:
Sung Min Park, Sungkyunkwan University, 53, Myeongnyun-dong 3-ga, Jongno-gu, Seoul, 110-745, South Korea.
Email: sm28386@skku.edu

Introduction

The advancement of information and communication technologies (ICT) is altering the way of life and work, including business and government practices. It is believed that ICT development drives business processes and strategies of change. In human resource management (HRM), for example, organizations have finally realized the growing importance of using ICT in leveraging their HRM functions. Moreover, there is an increasing demand for the HRM function to be more efficient, effective, and capable of supporting the strategic goals of every business function, thereby leading to the organizational adoption of electronic human resource management (e-HRM). e-HRM has been considered as a means for an organization to innovate itself, both in private and public, in response to the demands and changes in the business.

Ruël, Bondarouk, and Van der Velde (2007) defined e-HRM as a way of implementing HRM strategies, policies, and practices in organizations through a conscious and directed support of, and/or the full use of, web technology-based channels. e-HRM has a wide range of uses; furthermore, it supports particular human resource (HR) activities, such as recruitment and selection, performance management, compensation and benefits, training and development, health and safety, employee relations, retention, policies on work–life balance (Enshur, Nielson, & Grant-Vallone, 2002), and managing employee information across the entire employment cycle (Parry & Tyson, 2011).

Today, the use of e-HRM is a common practice in many organizations, profit and nonprofit, and is expected to create value for them. Consequently, academic interest in e-HRM has increased in an attempt to investigate the value creation of e-HRM. Lepak and Snell (1998) suggested that e-HRM investment goals include the transformation of the HRM function to a strategic business partner. Strohmeier (2007) found that research on e-HRM has shown to alleviate the administrative burden as well as produce an increased accuracy of results and quality of HR activities. Similarly, Ruël et al. (2007) suggested the following four goals: cost reduction, improving HR services, improving strategic orientation, and global orientation. However, despite the great potential for HR functions to create value beyond administrative outcomes, in practice, many organizations utilize e-HRM more for an "automating" approach that focuses primarily on administrative efficiency rather than supporting strategic "human capital management" processes (Foster, 2010). According to Foster (2010), while process-based administrative tools are used by more than 90% of organizations, strategic HR technology tools have a much lower organizational penetration rate, typically at the 30% to 40% level (Foster, 2010).

It is expected that the adoption of information technology in the HR system will change the relationship between employees and the HR Department. Moreover, the dependency and interaction between employees and computers may increase. Therefore, the e-HRM implementation process must take into account the challenges of both management change and technology acceptance. Incorporation of the Technology Acceptance Model (TAM) into recent e-HRM studies has resulted in the notion, that the use of e-HRM by targeted employees is highly determined by the level

of usefulness and the ease of use of the technology (Ruta, 2005). However, previous studies have mostly either focused only on the technology acceptance dimension or have partially probed the relationship between possible HRM outcomes and the usage of e-HRM in a separate model. The attempt to reveal the empirical evidence for the success enabler of e-HRM acceptance along with the possible HRM outcomes created by the usage of e-HRM, by combining them into single and a comprehensive framework, are relatively scarce. Furthermore, recent studies on e-HRM usually lie in the private sector as their object. Hence, assuming that there are a set of individual antecedents and managerial predictors, such as perceived characteristics of technology and e-HRM acceptance in nurturing HRM values, this study aimed to investigate the success enabler of e-HRM adoption and e-HRM value creation in the public sector using an integrated model.

Recent Trends in e-HRM and Value Creation

The growing literature on the topic of e-HRM and value creation has discussed a range of broad goals for e-HRM introduction, including cost and efficiency savings, strategic aims and improvements in client services (Parry & Tyson, 2011). e-HRM has been defined as "an umbrella term covering all possible integration mechanisms and contents between HRM and information technologies, aiming at creating value within and across organizations for targeted employees and management" (Bondarouk & Ruël, 2009, p. 507). Ruël and Van der Kaap (2012) stated that e-HRM, as a relatively new technology-driven phenomena, has raised questions regarding value creation (Currie & Parikh, 2006), most importantly, whether e-HRM creates value and how value created by e-HRM can be measured.

According to Porter (1985), value creation occurs when organizations are developing new ways of doing things and using new methods. e-HRM provides a new approach to managing HRs. It changes the nature of HRM procedures, HRM practice, and HR policy by utilizing the advantages of information technology. With this new approach, organizations may be able to secure benefits or competitive advantages when such technology is successfully implemented. Following Haksever, Chaganti, and Cook's (2004) definition of value as "the capacity of a good, service, or activity to satisfy a need or provide a benefit to a person or a legal entity," we consider those potential benefits of e-HRM to the employee or organization as "value," which can be created through successful implementation of e-HRM.

Ruel and Van der Kaap (2012) confirmed that e-HRM usage significantly contributes to the creation of efficiency, in term of effectiveness, and HR service quality in an organization. Contextual factors facilitating e-HRM usage, such as data quality, HRM policy, and HR technology competencies, were found to be positively related to HRM value creation. For their study, Ruël & Van der Kaap (2012) developed a questionnaire for data collection. The explorative factor analysis was used to identify the three dimensions of the dependent variable, HRM value creation. In addition, the explorative factor analysis was also used to identify the four dimensions of the context

variable of HRM facilitation. The researchers tested their hypotheses using a hierarchical regression analysis on 151 valid questionnaires.

Parry's (2011) research from a large-scale survey across 12 countries revealed that e-HRM helps HR to increase its value by becoming more strategic; however, it found no evidence of cost savings due to HR headcount reductions. This finding suggests that organizations are using e-HRM to redeploy HR practitioners from transactional work to more strategic and value-added activities. Her investigation is based on cross-sectional data, targeted at the senior HR managers of each firm, as these professionals are presumed to be knowledgeable about the characteristics of their workforce as well as the existence of HRM practices within their organizations.

By means of a questionnaire as well as through face-to-face interviews with HR professionals, line managers, and nonmanagerial employees in the Belgian public service, Bondarouk and Ruël (2013) were also successful in finding two generally acclaimed strategic advantages of e-HRM: changing the role of HR toward that of a business partner and increasing the time available for strategic HR issues.

However, Marler and Fisher (2013) found very limited systematic empirical evidence concerning whether e-HRM is related to strategic outcomes, particularly organizational performance. Using an integrative synthesis to examine 40 studies in peer-reviewed e-HRM literature published over the last 12 years, they suggested that e-HRM is not implemented to achieve typical strategic outcomes (e.g., competitive positioning or performance) but primarily to improve employee welfare, such as increased HR services and better communication.

In e-government initiatives, strong leadership with vision and strategies is considered to be an important success factor that enables values and ideas to be shared by all stakeholders, goals and objectives to be achieved, and strategies to be implemented (Park & Rainey, 2012).[1] A new paradigm of leadership has begun to capture attention. Leadership is conceived to be transactional and/or transformational (Bass, 1985). According to the accumulated evidence, transformational leadership (TOL) can move followers to exceed the expected performance. According to Conger (1999), research shows "the advantages of the transformational leadership style over the more traditional forms . . . in terms of achieving organizational goals" (pp. 145-179). Transformational leaders motivate others to do more than they originally intended and often even more than they thought possible. They set more challenging expectations and typically achieve better performance. Factor studies, including those by Bass (1985) and Howell & Avolio (1992), have identified the four main components of TOL.[2] Park and Rainey (2008) also stated that TOL can have a direct relationship with organizational performance and an effect on individual and work-group performance through its effects on subordinates' satisfaction with their leader, a sense of empowerment and related responses. The behaviors of the transformational leader are extremely critical for communicating the need for change. A leader has to demonstrate strong sponsorship of the project because when people see their bosses fail to remain involved in the innovation introduced, they stop making efforts in the process. Evidence has accumulated that TOL can move followers to exceed the expected performance. Furthermore, there are very important TOL elements (i.e., inspirational motivation,

intellectual stimulation, idealized influence, individual consideration) that could engender a positive role of TOL in the e-HRM process.[3]

In recent years, the Internet has revolutionized the way individuals in organizations access information. In addition to channels, such as business to business and business to consumer, the Internet has permitted HRM to implement HR processes where business-to-employee (B2E) solutions are possible (Harris, Phifer, & Berg, 2002). Because more administrative tasks are available on HR portals, HR professionals are expected to have more time to engage in strategic HR activities (Ruta, 2005). There is a broad agreement, noted by Huselid, Jackson, and Schuler (1997), that strategic HRM involves the development and implementation of policies and practices, ensuring that human capital contributes to the organization's achievement of its goals (which are aligned with its business strategy).

Research Framework

Research Questions

This research study attempts to answer the following set of research questions:

> **Research Question 1:** What are the key success factors and enablers in the adoption of e-HRM?
> **Research Question 2:** To what extent does usage of e-HRM applications predict HRM value creation?
> **Research Question 3:** Is TOL considered to be a crucial contextual factor that provides moderation impacts on the relationship between user acceptance factors and e-HRM acceptance?

Research Variables

Antecedent variables: User acceptance factors. It has been noted that, as influential factors of e-HRM acceptance, users' attitudes toward and the acceptance of a new information systems (IS) have a critical impact on successful IS adoption (Davis, 1989). If users are not willing to accept the IS, it will not bring its full benefits to the organization (Davis, 1993).

The ability of public agencies to harness the potential of e-HRM depends on a variety of factors. Among these, based on the TAM, which designates the factors that contribute to increasing the acceptability of new technology, the current study focused on the psychological and motivational aspects of employees in adopting and accepting changes, such as increased automation across and between functions within organizations. According to TAM, IS acceptance involving actual system use is determined by the factors of perceived usefulness (PU) and perceived ease of use (PEOU), all of which first might influence the intention to use and then influence behavior. The PU refers to the prospective user's subjective likelihood—that the use of a certain system will increase his or her performance. The PEOU is defined as the degree to which the

prospective user expects the potential system to be free of effort. As antecedents, we define "perceived characteristics of technology" as user acceptance factors consisting of PU and PEOU. These are expected to affect e-HRM acceptance variables significantly.

> **Hypothesis 1:** PU is positively associated with the acceptance of an e-HRM system.
>
> **Hypothesis 2:** PEOU is positively associated with the acceptance of an e-HRM system.

Traditional managerial actions can help manage change and develop successful IT implementation plans (Ruta, 2005). Moreover, IT, the strength of HR management and system, is likely to be a crucial contributor to the success of e-HRM. As the HRM system is the overall set of HR practices within an organization, HR practices of an organization can be seen as communication from employer to employee (Bowen & Ostroff, 2004). Through HR managerial practices, employees develop skills, knowledge, and motivation to contribute to the organization's strategy. Thus, through the HRM system, we expect that the perceptions, attitudes, and behaviors of employees are significantly influenced. Therefore, we considered a strong HRM system to be a value-creating factor.

To activate a strong HRM system, employees have to work in accordance with the strategy of the organization. With this motive, emphasis on improving the communication of HR practices to the employees is essential. The content of HR practices is a matter of secondary importance for achieving a strong HRM system. To achieve a strategic orientation of employees, HR practices should communicate unambiguous messages to employees as to what is appropriate and desirable organizational behavior. The two main criteria for measuring HRM strength are distinctiveness and consistency.[4] The stronger the HRM system, the clearer and more unambiguous the message is that organizations send to their employees about the desired appropriate behavior. For an organization to improve its strategic orientation, it should send clear and unambiguous messages to its employees continuously. Thus, this study attempted to posit that the strength of the HRM system is hypothesized to determine the success of e-HRM.

> **Hypothesis 3:** A strong HRM system is positively associated with e-HRM acceptance.

Mediating variable: Technology and e-HRM acceptance. According to Ruta (2005), literature on the management of IS describes the success of IT implementation mostly through IT system usage (Igbaria, Zinatelli, Cragg, & Cavaye, 1997; Straub, Limayem, & Karahanna-Evaisto, 1995) and user satisfaction. Discussing both measures, Al-Gahtani and King (1999) pointed out that system usage is a more precise measure of IT acceptance. Moreover, Igbaria et al. (1997) also defined system usage as the primary indicator of IT acceptance by stating, "System usage has a notable practical

value for managers interested in evaluating the impact of information technology" (p. 303). For these reasons, in this study, the success of HR portal acceptance was measured by the degree of usage.

Frequency of use is one of the most common metrics of usage exploited in IS research (Straub et al., 1995). It makes no sense to implement a system that is not used by end users. Users should notice the need for e-HRM in their daily activities and use the system intensively. Hence, this research included the appropriation of use as one of the measurements of technology acceptance. According to Orlikowski (1996), as cited by Ruël and Van der Kaap (2012), appropriation is the "continuous, progressive, and mutual adjustments, accommodations, and improvisations between the technology and the users." The implementation of an e-HRM system involves the process of appropriation. When implementing a new system or practice in an organization, management should be concerned with internalizing this system with the employees. Furthermore, management has to teach employees how they should use the system. Also, there should be a condition where employees are able to execute the applications in line with the purposes of the organization (Ruël & Van der Kaap, 2012).

Dependent variable: HRM value creation. HRM value creation consists of two main dependent variables: strategic HRM roles and perceived HR service quality (PSQ). One of the goals of organizations making steps toward e-HRM is to improve the strategic orientation of HRM (Lepak & Snell, 1998). As Kavanagh, Gueutal, and Tannenbaum (1990) stated, HR departments will be more involved in strategic planning processes if they are able to provide adequate, accurate, and fast information through the use of information technology. A related change for HR departments is that with the appropriate use of information technology, they can improve their client focus. That is, the HR group is expected to focus on providing services to internal stakeholders, for example, employees, line managers, and senior management, often by serving as an internal consultant (Kavanagh et al., 1990). In this research, we hypothesized whether the use of e-HRM (also referred to as e-HRM acceptance) can make an HRM function to be more strategic.

Hypothesis 4: The usage and acceptance of an e-HRM system will increase the strategic role of the HRM Department.

The implementation of e-HRM can create value for an organization by improving the service level of the HRM department. Service quality, measured by a comparison of expectations of HRM services that an organization offers to its employees with the performance of these services, involves not only the outcome of the e-HRM system but also the way the service is delivered. Service quality is an important value-creating factor because there are different kinds of gaps that exist between the perceptions of executives regarding service quality and the perceptions of the actual users. Based on TAM, we test as to whether e-HRM usage and acceptability could yield high perceived service quality to the user.

Hypothesis 5: The usage and acceptance of an e-HRM system will increase the perceived HRM service quality.

We also looked into how HRM systems and practices within an organization contribute directly to the creation of HRM values. For this purpose, we developed the relevant hypotheses as follows:

Hypothesis 6: A strong HRM system will have a significant positive impact on the SRHRM.
Hypothesis 7: A strong HRM system will have a significant positive impact on the PSQ.

To test whether the usage of e-HRM has a mediating role on the value creation of HRM, we developed the following hypothesis:

Hypothesis 8: The usage and acceptance of e-HRM mediates the relationship between user acceptance factors and HRM values.

A moderating variable: TOL. The contingency theory has been widely used and applied in IS and e-HRM studies. In most cases, contingency theory researchers suggest that outcome variables, such as organizational performance and effectiveness, depend on the "best fit" with independent variables, such as individual characteristics and organizational characteristics. It is not uncommon for aspects of the organizational context of IS research, and more specifically, IS usage, to be taken into consideration. When introducing an IT application, such as an HR portal, it is necessary to take into account the general context for change, considering there will be a new application for users, which will modify the relationship between the employee and the organization. According to Strohmeier (2007), contextual factors are obviously of relevance for e-HRM. In this study, the contextual factor that may affect user acceptance is the existence of TOL. As described by Ruta (2005), the behavior of the leader is extremely critical for communicating the need for change. The leader has to demonstrate a strong sponsorship of the project because when people see their bosses fail to remain involved in the innovation introduced, they stop making efforts to use the innovation.

There are very important TOL elements (i.e., inspirational motivation, intellectual stimulation, idealized influence, individual consideration) that could engender a positive role of TOL in the e-HRM process. For instance, by providing an intellectual stimulation, the TOL provides and enhances exploratory thinking and creativity by encouraging critical thinking, rationality, and rethinking of ideas by its group members. Park (2012) suggested that TOL helps to develop the followers' commitment to long-term goals, missions, and vision and to shift their focus from short-term objectives to long-term and fundamental solutions and objectives. We also expect that transformational leaders can provide a direct access to sensitive information, eliminating unnecessary control and building a strong team and employee empowerment culture (Bass, 1985).

Specifically, TOL has the potential benefits that could bring forth a positive and "transformational" impact in the e-HRM process, thereby adding brand-new values to the organization, for example, cultural or organizational change, strategic redirection,

and increasing innovation and service quality. Given that e-HRM is a way of implementing HRM strategies, policies, and practices in organizations through a conscious and directed support of, and/or the full use of, web technology-based channels, the TOL may help the organization to facilitate e-HRM adoption and implementation as a crucial moderator.[5] Using this argument, we propose that the TOL within an organization may have a booster effect that can strengthen the relationship between employees' perceptions on technology and e-HRM acceptance.

> **Hypothesis 9:** TOL has a moderating effect on the relationship between user acceptance factors (i.e., PU and PEOU) and e-HRM acceptance.

Research Model

Based on the literature review as well as on a set of theoretical and practical rationales, we developed and visualized our research model as seen in Figure 1.

This study conducted an inquiry to find empirical evidence as to what extent the implementation of e-HRM provides specific HRM-related values to an organization. For this purpose, we included two important values, HR service quality and strategic role of HRM function. Within this framework, we also investigated the factors that influence the acceptance of e-HRM. We probed two important factors from a TAM perspective, including PU and PEOU toward e-HRM, and performed a set of statistical tests to examine whether they play a significant role in enhancing the level of e-HRM acceptability within an organization.

The current research also takes specific and related organizational factors into account to determine their impact on technology acceptance. We proposed that HRM strength, as an important organizational (or sometimes governance level) factor, has an influence on the acceptance of e-HRM and HRM value creation. As certain types of leadership may have an impact on employee empowerment, this study conducted an inquiry into whether the relationship between individual perceptions of e-HRM (PU and PEOU) and e-HRM acceptance is also influenced by the characteristics of a leadership environment. We operationalized TOL as a contextual factor that may influence the relationship between perceived user acceptance and technology (e-HRM) acceptance. Furthermore, we posited that both TOL (as a moderating variable) and the perceived user acceptance factors (PU and PEOU as antecedents) are crucial predictors of the acceptance of e-HRM. To provide a clear understanding of each construct within the research framework, we summarized the conceptualization of all latent constructs of each variable in Table 1. Each concept is operationalized from the corresponding theories identified in the literature, such as the TAM, Leadership, HRM, and e-HRM.

Research Methodology

Scope of the study. The study was carried out at the Ministry of Finance, specifically at the Directorate General of Tax Services. We selected the Indonesian Taxation Authority to test the proposed model because ever since 2006, it has begun to implement an e-HRM application called SIKKA (Sistem Informasi Kepegawaian, Keuangan, dan
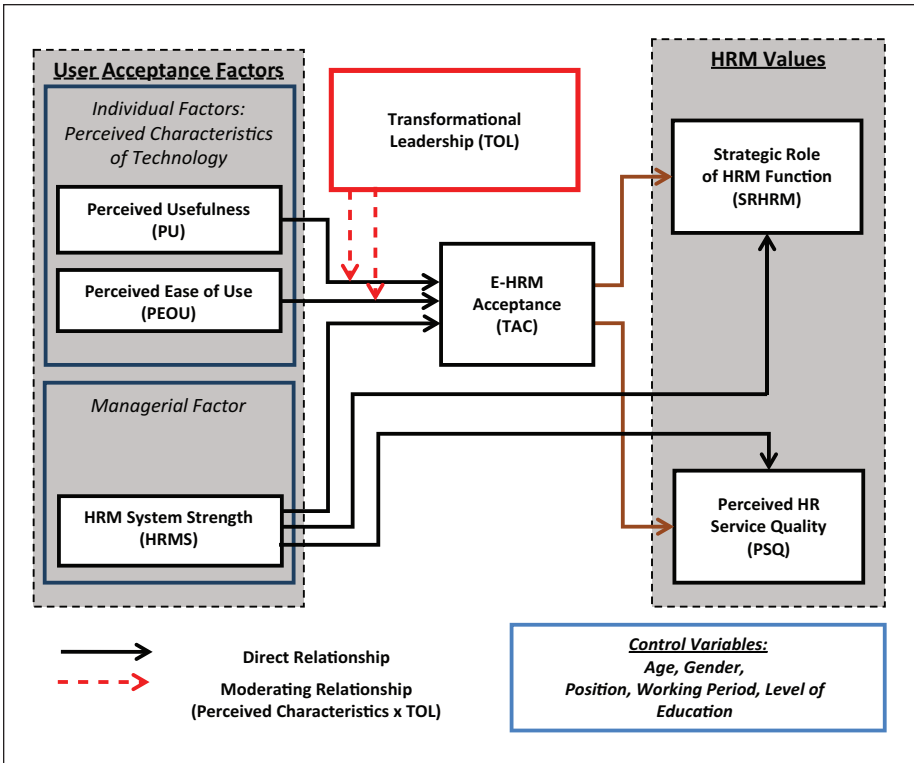
Figure 1. Research model.

Aktiva—Integrated Human Resource, Finance, and Asset Information System). Taking into account the period of application implementation, this case allowed us to observe whether this business process innovation engenders significant improvement or added value to the organization; it also gave us an opportunity to examine the success factors of e-HRM implementation. For these reasons, the Directorate General of Tax Services was the most appropriate subject for this study.

Method of analysis. The proposed model was tested to find empirical evidence for the proposed arguments. To test the model, this study employed a quantitative analysis of employee perception and organizational characteristics related to the success enablers of e-HRM acceptance and value creation of e-HRM. Qualitative analysis was conducted through interviews, which was used for providing in-depth discussions of the research findings.

   Data for the quantitative analysis was collected through questionnaires, which were then recapped and analyzed using structural equation modeling. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were employed to ensure high

Table 1. Conceptualization of Variables.

No.	Concepts	Definition
PU	Perceived usefulness (Davis, 1989)	The degree to which a person believes that this system can improve his or her job performance. Usefulness can result in increased productivity of HR-related activities and a faster working process.
PEOU	Perceived ease of use (Davis, 1989)	The degree to which targeted users expect the IS not to involve effort.
TOL	Leadership (Park & Rainey, 2012)	The ability to "influence processes involving determination of the group's or organization's objectives, motivating task behavior in pursuit of these objectives, and influencing group maintenance and culture."
HRM Strength Dimension_1	HRM distinctiveness (Delmotte, De Winne, & Sels, 2011)	Features of HRM that allow a situation to stand out in the environment and to capture attention and interest.
HRM Strength Dimension_2	HRM consistency (Bowen & Ostroff, 2004; Delmotte et al., 2011)	Establishment of an effect over time and modalities regardless of the form of interactions. The consistency of an HRM system is high when it is consistent over time, people, and context. Consistency of HRM messages and the e-HRM system reassures employees that HRM practices will work in line with the main goals of the organization as well as with the personal goals of the employees.
e-HRM/ Technology Acceptance Dimension_1	Actual usage frequency (Straub, Limayem, & Karahanna-Evaisto, 1995)	The amount of actual usage of the system. The more the system will be used, the greater the success probability.
e-HRM/ Technology Acceptance Dimension_2	Appropriation (Beaudry & Pinsonneault, 2005)	The continuous, progressive and mutual adjustments and accommodations and improvisations between technology and users.
HRM Value	HR roles (Ulrich & Brockbank, 2005)	A set of norms and expectations that govern the behavior of HRM professionals and define their responsibilities and the content of the HRM work to be done.
HRM Value	Service quality (Parasuraman et al., 1985)	The expectations that arise for HRM services, which an organization offers to its employees, when they are used.

Note. PU = perceived usefulness; PEOU = perceived ease of use; TOL = transformational leadership; e-HRM = electronic human resource management; HRM = human resource management.

Table 2. Variables, Source of Scale, and Sample Item per Scale.

No.	Variable	Sample of measurement item	Source of scale
1.	Perceived usefulness	I find e-HRM helpful for dealing with my HR-related activities.	Venkatesh, Morris, Davis, & Davis, 2003
2.	Perceived ease of use	Interacting with e-HRM requires a lot of mental effort.	Venkatesh et al., 2003
3.	HRM distinctiveness	I am regularly informed about the initiatives taken by the HR Department.	Delmotte, De Winne, & Sels, 2011
		HR activities in my organization are easy to understand.	Delmotte et al., 2011
4.	HRM consistency	There is a clear fit between HR promises and deliverables.	Delmotte et al., 2011
5.	Actual usage frequency	I use Employee Self Service in my day-to-day work.	Ruël & Van der Kaap, 2012
6.	Appropriation	I use Employee Self Service in accordance with the manual.	Ruël & Van der Kaap, 2012
7.	Strategic HRM roles	HR professionals partner with line mangers to help them reach their goals.	Loijen, 2011
8.	Perceived HR service quality	The HR department provides its services at the time it promises to do so.	Parasuraman et al., 1985
		Ever since the introduction of e-HRM, HR services minimize error administration.	Parasuraman et al., 1985
9.	Transformational leadership	Managers try to help improve poor performers.	Park & Rainey, 2008

Note. e-HRM = electronic human resource management; HRM = human resource management.

reliability on measurements and estimates. Partial regression was utilized to test for any mediating effects.

Sampling plan. The target population of this study included all employees working at the Directorate General of Tax Services under the Ministry of Finance of the Republic of Indonesia. An employee was considered as the unit of analysis in this study. Due to the use of structural equation modeling, a sample consisting of 300 respondents was the minimum size that we aimed to obtain. The sample for the quantitative analysis was obtained through a simple random sampling method. For the qualitative analysis, purposive sampling was utilized, selecting only three to five key employees (holding at least a manager position) involved in HR and information technology management at the headquarters of the Directorate General of Tax Services.

Research instrument. The questionnaire was designed to ascertain the employees' perceptions on the success factors and the outcome of IT innovations and implementation on HRM.[6] Existing scales were used to measure most of the variables to generate a reliable measurement (Table 2).
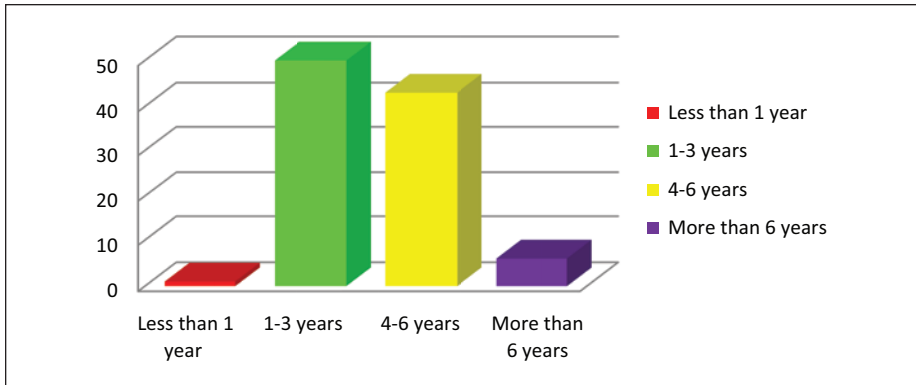
Figure 2. Respondents' e-HRM interaction experience frequency distribution.
Note. e-HRM = electronic human resource management.

Empirical Analysis

Data Collection

As aforementioned, questionnaires were randomly sent to the employees of the Directorate of Tax under the Ministry of Finance of the Republic of Indonesia to obtain the primary data for analysis. Overall, we managed to collect 356 respondents. The final sample included 306 respondents because 50 samples were removed due to incomplete filling. Data were collected from civil servants of different genders, positions, ages, work experience, and e-HRM interaction experience to provide a representative data sample from the population.

Descriptive Statistics

Respondents' demographic factors: Univariate analysis. Among the 306 respondents who participated in the survey, the male–female ratio was 78% to 22%, respectively. The age range of the participants was as follows: 8%, 20 to 25 years; 67%, 26 to 30 years; 19%, 31 to 35 years; 5%, 36 to 40 years; and 1%, 41 to 45 years. Given the sample size, the respondents were also classified based on their level of education. Among the respondents, 38% had a high school diploma, 58% had a bachelor's degree, and 4% had a master's degree. For work experience, we divided our sample into three categories: 33% had 1 to 5 years of experience, 50% had 6 to 10 years, and 17% had 10 to 15 years. Figure 2 illustrates the e-HRM interaction experience frequency distribution of the respondents. Fifty percent of the respondents had 1 to 3 years of interaction with e-HRM, 43% respondents had more experience with e-HRM, ranging from 4 to 6 years of interaction. Six percent of the respondents had more than 6 years of interaction experience, and only 1% of the respondents had less than 1 year of experience using e-HRM.

Table 3. Minimum, Maximum, Mean, and Standard Deviation of Variables.

	n	Minimum	Maximum	*M*	*SD*
PU	306	2.00	5.00	4.0467	.69956
PEOU	306	1.67	5.00	3.8900	.65999
HRMS	306	1.00	5.00	2.9433	.83827
TAC/e-HRM Acceptance	306	1.00	5.00	3.8450	.67306
SRHRM	306	1.00	5.00	3.1833	.82249
PSQ	306	2.00	5.00	3.6775	.68746
Valid *N* (list-wise)	306				

Note. PU = perceived usefulness; PEOU = perceived ease of use; HRMS = human resource management strength; TAC = e-HRM acceptance; e-HRM = electronic human resource management; SRHRM = Strategic Role of Human Resource Management Function; PSQ = Perceived HR Service Quality.

Multivariate descriptive statistic analysis of survey responses. Descriptive statistics of the survey responses, including the mean, standard deviation, maximum and minimum values of all variables included in this research, are presented in Table 3. For multivariate analysis purposes, we first generated the composite data of each latent variable. The value of each latent variable for each observation was obtained by taking the average value of all the factors associated with certain latent variables.

All the variables had minimum values ranging from 1.00 to 2.00, whereas their maximum values were all the same at 5.00. The PU had the biggest mean, valued at 4.0467, with a standard deviation of 0.69956. On the other hand, the smallest mean was for human resource management strength (HRMS), a variable that only generated a value of 2.9433 with a standard deviation of 0.83827.

Factor Analysis

We used factor analysis to identify a small number of factors that explained most of the variance observed in a much larger number of manifest variables. Factor analysis helped us to search for such joint variations in response to the unobserved latent variables. We conducted two types of factor analysis, including EFA and CFA.[7]

EFA. From the EFA output, we first looked at the determinant value to see whether the data had a multicollinearity problem. A determinant value of 0.005, which is greater than 0.001, reflects that the respondents' response data do not have any multicollinearity problems.

Prior to the extraction of the factors, several tests were used to assess the suitability of the respondent data for factor analysis. These tests included Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. Our results included a KMO value of 0.829 (above 0.5), which implied that the data in our sample were adequate and appropriate for factor analysis. Furthermore, it also indicated that the pattern of correlation was relatively compact, and thus factor analysis should yield distinct and reliable factors.[8]
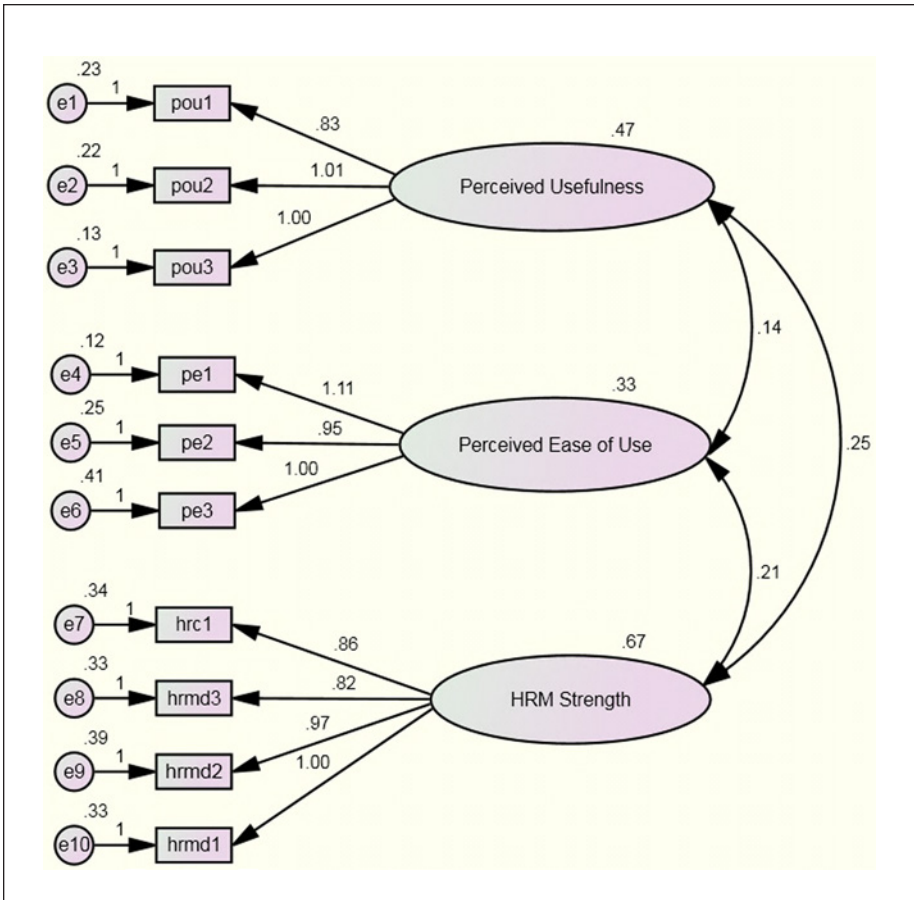
Figure 3. Confirmatory factor analysis of user acceptance factors.

CFA. Based on our EFA results, we conducted a CFA, which enabled us to test whether the data fit the hypothesized measurement model.[9] Figure 3 shows the CFA model. From the model fit output, the results of the chi-square / *df*, Tucker–Lewis index (TLI), normed fit index (NFI), IFI = incremental fit index, comparative fit index (CFI), root mean square error approximation (RMSEA) and standardized root mean square residual (SRMR) demonstrated that the entire model is within acceptable levels. For example, the CFI was 0.988 (greater than 0.90 is acceptable) and the RMSEA was 0.041 (less than 0.08 is acceptable). This reflected that the models of user acceptance factors could be considered a very good fit for the observed data (Table 4).

The analysis results conveyed that all observable variables measuring these three latent constructs had significant factor loadings (the standardized parameter estimates) on the factors based on the *t* test (significantly different from 0; Table 5).

Table 4. Overall Fit Indexes From CFA Output.

Model (valid N = 100)	df	χ^2	χ^2 / df	TLI	NFI	IFI	CFI	RMSEA	SRMR
Suggested cutoff values			<3	>0.90	>0.90	>0.90	>0.90	<0.08	<0.08
Proposed model score	32	37.387	1.168	0.983	0.925	0.988	0.988	0.041	0.03

Note. CFA = confirmatory factor analysis; TLI = Tucker–Lewis index; NFI = normed fit index; IFI = incremental fit index; CFI = comparative fit index; RMSEA = root mean square error approximation; SRMR = standardized root mean square residual.

Table 5. Regression Weights From CFA Outputs.

	Estimate	SE	CR	p	Label
hrmd1 ← HRMS	1.000				
hrmd2 ← HRMS	0.966	.117	8.262	***	par_1
hrmd3 ← HRMS	0.818	.103	7.952	***	par_2
pou3 ← PU	1.000				
pou2 ← PU	1.012	.111	9.151	***	par_3
pou1 ← PU	0.826	.098	8.456	***	par_4
pe3 ← PEOU	1.000				
pe2 ← PEOU	0.950	.154	6.168	***	par_5
pe1 ← PEOU	1.112	.175	6.343	***	par_6
hrc1 ← HRMS	0.861	.106	8.104	***	par_7

Note. CFA = confirmatory factor analysis; CR = Critical Ratio; HRMS = human resource management strength; PU = perceived usefulness; PEOU = perceived ease of use.
***significant at the .001 level.

Table 6. Overall Fit Indexes From SEM Analysis.

Model (valid N = 306)	df	χ^2	χ^2 / df	TLI	NFI	IFI	CFI	RMSEA	SRMR
Suggested cutoff values			<3	>0.90	>0.90	>0.90	>0.90	<0.08	<0.08
Proposed model score	140	203.582	1.454	0.931	0.843	0.945	0.943	0.068	0.043

Note. SEM = structural equation model; TLI = Tucker–Lewis index; NFI = normed fit index; IFI = incremental fit index; CFI = comparative fit index; RMSEA = root mean square error approximation; SRMR = standardized root mean square residual.

Structural Equation Modeling

Model fit testing. Several goodness-of-fit indices indicated that the hypothesized structural equation model accurately explained the data. From seven model fit indexes, the chi-square value produced significant results, which were not consistent with a good model fit. However, the values of TLI, IFI, and CFI exceeded those that pointed to an overall good model fit (see Table 6). In addition, RMSEA and SRMR were 0.068 and 0.043, respectively, suggesting a relatively well-fitting model (cutoff value is 0.08). We added an error covariance among several indicators and performed

a re-specification of the model to attain a lower value of the chi-square, following some possible modification index (MI) suggestions. For example, we added an error covariance between $e1$ and $e4$ of the latent variable HRM strength. In the end, we discovered that our model provides a good explanation of the dependent variables. Figure 4 and Table 6 show the proposed model in structural equation model (SEM) as well as the assessment of the model fit, respectively.

The mediator variable e-HRM acceptance (TAC) has an R^2 value of .703, estimating the predictors of TAC to explain 70.3% of its variance. More specifically, the error variance of TAC is approximately 29.7% of the variance of TAC itself. However, PSQ and Strategic Role of Human Resource Management Function (SRHRM) have R^2 values of .674 and .761, respectively, reflecting that the model provides a good explanation of the PSQ and SRHRM.

Research hypotheses testing. Hypotheses testing was conducted based on the regression output generated by AMOS software from SEM analysis. Table 7 summarizes the regression estimates, which we used to decide whether the proposed relationships among the variables in the research model were significant or not.

First, we prove whether user acceptance factors are statistically supported in predicting e-HRM acceptance. From Table 7, we can observe that PU directly, significantly, and positively influences e-HRM acceptance, (TAC) with a coefficient regression value of 0.496 at the 0.001 level of significance. This implies that Hypothesis 1 is supported by the observed data. However, we find that PEOU is not a predictor of e-HRM acceptance (TAC). The observed data only generates a coefficient regression value of −0.050 (very weak relationship) and a p value of .524 (bigger than .05), which causes a failure in rejecting the null hypothesis of Hypothesis 2.

Hypothesis 3 posits that a strong HRM system has a positive effect on e-HRM acceptance. From Table 7, we can conclude that this hypothesis is supported. In the prediction of e-HRM acceptance (TAC), the regression weight for HRMS is significantly different from zero at the 0.05 level (two-tailed). Given a regression coefficient of 0.128 with a p value of .041, it reflects a positive and significant relationship.

Moving to value creation from the acceptance of e-HRM, Hypothesis 4 posits that the usage of an e-HRM system will increase the strategic role of an HRM Department. The regression analysis output indicates that the relationship between TAC and HRSR has a p value of .099, meaning that we should not have rejected the null hypothesis of Hypothesis 4. Hence, we can conclude that the usage of e-HRM is not followed by an increase in the strategic role of an organization's HRM function. As hypothesized, e-HRM Acceptance (TAC) has a significant positive effect on PSQ at the .001 level. The regression analysis produces a high slope coefficient on TAC over PSQ, which amounts to 0.962. This finding supports Hypothesis 5.

To observe how the HRM governance practice in an organization contributes directly to the creation of HRM values, we check into the relationship between HRMS and HRSR and the relationship between HRMS and PSQ. The regression analysis confirms Hypothesis 6 that a strong HRM system will significantly shift the HRM function to have more strategic role. The regression coefficient for this relationship is 0.897 (significant at the .001 level). We also find that Hypothesis 7 is supported.
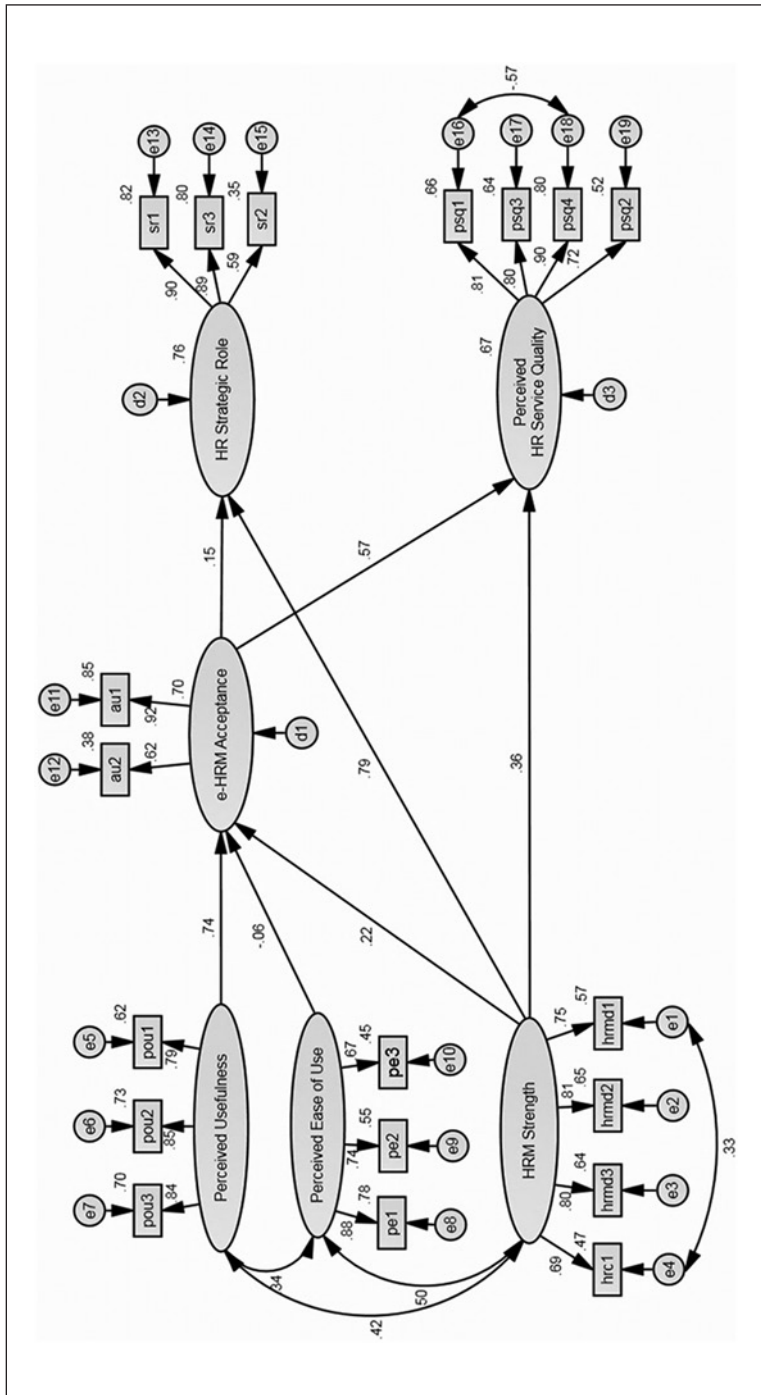
100

Figure 4. Structural path estimates.

Note. e-HRM = electronic human resource management; PSQ = Perceived HR Service Quality; HR = human resource.

Table 7. Unstandardized and Standardized Total Effects.

Directionality between variables in SEM			Unstandardized estimates	Standardized estimates	SE	t value	p value	Results
TAC	←	PU	0.496	0.744	0.096	5.159	0.000***	Supported
TAC	←	PEOU	−0.050	−0.063	0.078	−0.637	0.524	Unsupported
TAC	←	HRMS	0.128	0.223	0.063	2.043	0.041**	Supported
SRHRM	←	TAC	0.303	0.152	0.183	1.652	0.099	Unsupported
HRSR	←	HRMS	0.897	0.785	0.136	6.619	0.000***	Supported
PSQ	←	HRMS	0.350	0.364	0.096	3.631	0.000***	Supported
PSQ	←	TAC	0.962	0.574	0.208	4.626	0.000***	Supported

Note. SEM = structural equation model; TAC = e-HRM acceptance; HRSR = Strategic Role of Human Resource Management Function; PSQ = Perceived HR Service Quality.
**significant at the .05 level (two-tailed).
***significant at the .001 level (two-tailed).

Table 7 confirms that HRMS has a direct, positive and significant influence on PSQ with a slope coefficient of 0.350 (significant at the .001 level). Table 8 summarizes the direct effect, indirect effect, and total effect among variables in the model.

We also conducted the Sobel test using bootstrapping to confirm whether there is a significant mediation role of TAC on the value creation of HRM. Because PEOU and HRSR do not have a significant relationship with TAC, the mediation test is only applied to the relationship between PU → TAC → PSQ and HRMS → TAC → PSQ. From the t test, we confirm that TAC is a significant mediator of PU on PSQ with an indirect effect of 0.440 (standardized estimates) and a significant p value at .002 (less than .05). Furthermore, we revealed that TAC does have a partial, but significant, mediation role on the relationship between HRMS → TAC → PSQ because the indirect effect of this relationship is 0.132 with a p value of .025 (significant at the .05 level). This finding confirms that Hypothesis 8 is supported for the relationship between both PU → TAC → PSQ and HRMS → TAC → PSQ, depicting the important role of TAC (e-HRM acceptance) on providing excellent HR service quality within an organization.

Moderating Test

We examine the moderation effect of TOL on the relationship between user acceptance factors and e-HRM usage using an ordinary least squares (OLS) regression model, a separate (partial) test outside the SEM analysis. More specifically, we attempt to confirm whether the strength and/or direction of the relationship between user acceptance factors and e-HRM usage is influenced by the existence of TOL of the employee's supervisor. Instead of a mediation effect, we seek a moderation effect, although the hypothesized causal relationship is weak or empirically not found. Thus, we test the moderation effect both on the relationship between PU and TAC and

Table 8. Direct, Indirect, and Total Effect.

Model	Standardized estimates			
	HRMS	PEOU	PU	TAC
Direct				
TAC	0.223 (0.106)	−0.063 (0.564)	0.744 (0.002)	—
PSQ	0.364 (0.011)	—	—	0.574 (0.003)
SRHRM	0.785 (0.004)	—	—	0.152 (0.191)
Indirect				
TAC	—	—	—	—
PSQ	0.132 (0.025)**	0.065 (0.254)	0.440 (0.002)**	—
SRHRM	0.029 (0.058)	0.014 (0.192)	0.097 (0.088)	—
Total				
TAC	0.202 (0.033)	0.100 (0.255)	0.675 (0.002)	—
PSQ	0.429 (0.001)	0.065 (0.254)	0.440 (0.002)	0.651 (0.001)
SRHRM	0.763 (0.001)	0.014 (0.192)	0.097 (0.088)	0.144 (0.103)

Note. Numbers in bracket are *p* values. HRMS = human resource management strength; PEOU = perceived ease of use; PU = perceived usefulness; TAC = e-HRM acceptance; HRSR = Strategic Role of Human Resource Management Function; PSQ = Perceived HR Service Quality.
**Mediation relationship is significant using the two-tailed *t* test with bootstrapping at .05.

between PEOU and TAC. The proposed regression equation for the moderating relationship is as follows:

$$TAC = a + b1PU + b2TOL + b3|PU - TOL| + \varepsilon. \tag{1}$$

$$TAC = a + b1PEOU + b2TOL + b3|PEOU - TOL| + \varepsilon. \tag{2}$$

To minimize multicollinearity in moderation testing, we first transform the data of the independent variable, mediator variable, and interaction term into mean-centered variables. Several authors have demonstrated that if the first-order variables are mean-centered (i.e., transformed from a raw-score scaling to a deviation-score scaling by subtracting the variable mean from all observations), the resulting product term will be minimally correlated or uncorrelated with the first-order variables if the variables are more or less bivariate normal.

Moderation test of TOL on PU–TAC. The model has an R^2 value of .487, which means that 48.7% variance of the TAC is explained by the predictors included in the proposed model. With an *F* value of 30.337, significant at the .05 level, depicting the predictors of TAC included in the model has a significant and simultaneous influence on TAC. From the regression output, MOD_PUTOLTAC, the interaction effect only has −0.051 of regression coefficients with a *p* value of .308 (*p* value larger than .05), suggesting that TOL does not have any significant moderating effect on the relationship between PU and TAC. From the plots analysis in Figure 5, we can see that the
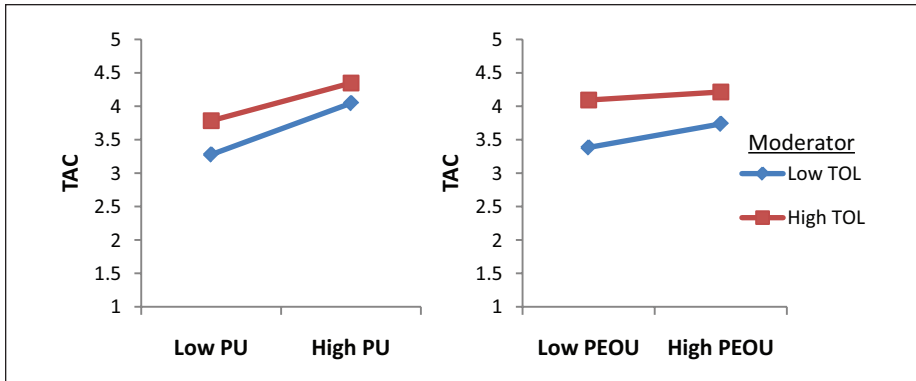
Figure 5. Plot for the moderating effect.
Note. TAC = e-HRM acceptance; e-HRM = electronic human resource management; PU = perceived usefulness; PEOU = perceived ease of use; TOL = transformational leadership.

slope does not change according to the level of TOL. Hence, we can conclude that that leadership environment does not influence the strength or direction of the relationship between PU and TAC.

Moderation test of TOL on PEOU–TAC. The second test of the moderating effect of TOL is conducted on the relationship between PEOU and TAC. The regression results indicate that the model produces an R^2 value of .487. With an F value of 13.663, significant at the .05 level, depicting the predictors of TAC included in the model has a significant and simultaneous influence on the TAC. The regression analysis shows regression coefficients of interaction effect only −0.058 with a p value of .216 (p value larger than .05), suggesting that TOL also does not have any significant influence on the relationship strength or direction between PEOU and TAC. From this result, we can conclude that Hypothesis 9 is not supported.

Discussion

The research findings suggest that PU has a direct and significant relationship with e-HRM usage. This finding is consistent with the previous studies conducted by Maier, Laumer, Eckhardt, and Weitzel (2013), Davis (1993), Pikkarainen, Pikkarainen, Karjaluoto, and Pahnila (2004), and Lederer, Maupin, Sena, & Zhuang (2000), which are based on new technology acceptance, such as e-HRM. The finding refers to the fact that employees use e-HRM for the benefits it provides in dealing with HR-related activities. However, this study does not fully support the TAM argument because we find that PEOU is less important than the expectation of being a critical factor for e-HRM acceptance. This finding is consistent with a study on e-HRM implementation by Loijen (2011), which found that usefulness has a positive significant relation with usage, whereas easiness has no significant relation with usage. This finding is also confirmed by Pikkarainen et al.[10]

Bondarouk and Ruël (2009) stated that HRM practices have the potential to support the targeted employees of an introduced software application. The HRM system strength should influence organizational effectiveness through individual behavior (Bowen & Ostroff, 2004). This is the reason why we take HRM strength into account as one of the predictors of e-HRM acceptance in our model, which is measured by HRM distinctiveness and HRM consistency. Based on the regression results, HRMS has a positive influence on e-HRM usage, with a β value of .128 and a *p* value of .041 (significant at the .05 level). This result confirmed Loijen's (2011) finding that the HRM system strength has a positive significant effect on the usage of a system.

Moreover, we found that e-HRM usage (TAC) has a significant positive effect on PSQ with a direct effect of 0.574. The Sobel test also confirms that TAC fully mediates PU to the PSQ, with an indirect effect of 0.472 (significant at the .05 level). According to this finding, after the technology of e-HRM is accepted by the employee with his or her consideration of e-HRM benefits, the PSQ will become higher. This finding is consistent with that of previous studies. For example, Strohmeier (2007) discovered that research on e-HRM so far has shown to alleviate the administrative burden and improve the accuracy of the results and quality of HR activities. It leads to better information responsiveness and more information autonomy. Bondarouk and Ruël (2009) also confirmed that e-HRM usage produces higher service quality consisting of a decrease in information errors, improvement in tracking and control of HR actions, service delivery improvement, and an increase in transaction speed.

Here, we also find that HRMS has a significant and positive effect on the creation of PSQ. However, the direct effect of e-HRM usage (TAC) on PSQ is higher than the direct effect of HRMS on PSQ. Statistical output confirms that the direct effect of TAC on PSQ is 0.574 with a *p* value of .003, whereas the direct effect of HRMS on PSQ is only 0.364 with a *p* value of .011. This finding suggests that the usage of e-HRM has a critical role in providing HR service quality to the user (employee). Nevertheless, based on the Sobel test that we conducted, TAC was not proven to significantly mediate the relationship between HRMS and PSQ.

One of the important inquiries of this study was to examine whether e-HRM is able to provide a higher strategic role of the HRM function. According to Caldwell (2003), the implementation and use of new systems, such as HRIS, enables a transformation of HR from a largely administrative role to that of a strategic partner, change agent, or employee champion in organizations. Research studies by Strohmeier (2007) and Bondarouk and Ruël (2009) also noted that e-HRM implementation can increase the strategic role of an HR department. However, we could not find any significant relationship between e-HRM usage (TAC) and a strategic role shift of HRM function (HRSR). This finding is consistent with what most researchers find to be the primary goal of e-HRM, that is, improving HR's administrative efficiency or achieving cost reductions. This role entails supporting the execution of the business or HR strategy, rather than e-HRM, which explicitly has a pivotal role in such a strategy. The possibility of e-HRM adoption is triggered by the availability of HRIS technology, rather than the specific strategic HR deliverables and business drivers. When the decision to introduce e-HRM is made primarily to establish additional infrastructure in the absence of

strong relations with the business, the strategic value of e-HRM is not likely to be achieved.

However, based on the interview with one of the key people involved in the establishment of the system, we found that the e-HRM application was built to provide a reliable web-based system that could support not only the HR department to automate their administration process but also to support the core business of the Directorate of Tax. Previous systems of HRIS existed but no longer matched the needs of the organization. Such previous systems were not connected to the performance appraisal system, not conformed to the business flow of the organization, and did not provide employee self-service and online data retrieval for the decision support system. Features of the newly developed e-HRM system were designed in accordance with the workflow and business process characteristics of the organization. Both a top-down and bottom-up approach were used. The top-down approach applied to the development of the main architecture, infrastructure, and enforcement. The bottom-up approach was used for the involvement of all employees in building the database and verification of the data. Here, we found one success factor of e-HRM usage that was not included in the model: employee participation. According to Barki and Hartwick (1994), users who participate in the development of the system are likely to develop beliefs that a new system is good, important, and personally relevant. Thus, they will form a positive attitude toward the system, thereby leading to a greater usage probability of the system (Hartwick & Barki, 1994). As employees become more involved in the implementation process, the probability that they will have a positive attitude also becomes greater, and thus there is a greater probability of success.

Based on the interview, continuous development of the system is being conducted by considering the suggestions and propositions of the employees to provide a system that can really fulfill the needs of the employees and the organization as a whole. However, the intention and the implementation in reality could be different. As noted by Tansley and Newell (2007), although the strategic intent for e-HRM may be present, there are many complications in the system development and implementation that may stand. They studied two different development teams to examine factors that could help these teams realize the intended goals of e-HRM. As a result, they found that leadership competencies were very important, such as the ability to bring together individuals from different role perspectives (e.g., IT and HR). Project leaders in this context must be able to identify, manage, and dispel political issues that have the potential to derail the project. The role of HR practitioners is also critical to the creation of e-HRM strategic value. Many HR professionals still view e-HRM as merely an administrative tool and its role in the development of strategic HR practice is often disregarded (Foster, 2009).[11]

This study also confirmed that the creation of strategic value of e-HRM is significantly influenced by HRMS. The governance practice of HR, consisting of policy clarity (distinctiveness) and consistency, plays a critical role in the creation of a strategic role for the HR function. This assertion suggests that when an organization intends to create absolute value in its HRM, the implementation of e-HRM is not sufficient. It should be complemented and supported by policy clarity and consistency.

Without good governance practices, implementation of such technology cannot provide strategic value to the organization. Instead, it will just serve as a tool of automation and cost reduction within the administrative areas.[12]

Conclusion and Implications

Conclusion

This research examines a couple of core questions regarding e-HRM implementation: To what extent does the usage of e-HRM applications explain HR value creation? What are the key success enablers of e-HRM implementation? Furthermore, this study investigates an innovative question as well: Should the existence of TOL be considered as a contextual factor having a moderating effect on the relationship between user acceptance factors and e-HRM usage? From an organizational perspective, HRMS has a positive influence on e-HRM usage. In the creation of HRM value, we find both e-HRM usage and acceptance (TAC) to be strong predictors of PSQ. However, this study indicates that e-HRM usage does not make the HRM function more strategic. Previous studies also support this finding. From the Sobel test, we confirm that e-HRM usage also fully mediates the relationship between PU and PSQ. Furthermore, this study also indicates that HRM strength is an important direct predictor of the creation of HRM values in an organization, both for PSQ and HRSR. It suggests that an organization should have its attention on its governance practices, particularly in HRM policy clarity and consistency, to create HRM value in the organization. Furthermore, we find that HRM strength (HRMS) is a strong predictor of the strategic role of HRM function (HRSR). However, we are unable to generate evidence that e-HRM usage impacts the strategic role of HRM function.[13]

Theoretical Implications

This study has several theoretical implications for e-HRM research, as it makes contributions to the existing theories. First, this study adds to the evidence that e-HRM usage provides a creation of HRM value within an organization. Second, our research indicates that the PEOU is less likely to be a critical factor in the acceptance of e-HRM than how it was proposed in the TAM by Davis (1989). This finding is in line with other TAM studies, which found that PEOU has less of an impact on technology acceptance than PU (Pikkarainen et al., 2004; Venkatesh, 1999; Yousafzai, Foxall, & Gordon, 2012). This finding might lead to the argument that despite the level of ease in using a certain new technology, people tend to rely on their PU in accepting or using new technology, including e-HRM. Another relationship could be developed for PEOU, which may contribute to the acceptance of e-HRM indirectly through PU. As it was stated by Venkatesh (1999), considering both time and experience, the effect of PEOU has been found to be indirect and will operate through PU.

Third, the TAM is strengthened by the finding that there is no significant influence of the leadership environment on the employee, which may confound the direct

relationship between user acceptance factors (PU and EOU) and e-HRM usage and acceptance (TAC). The absence of a moderation effect suggests that PU is a strong predictor in the usage of e-HRM. Fourth, in investigating the value creation of HRM, the involvement of organizational factors, such as policy consistency and/or policy clarity, is beneficial for confirming the real power of e-HRM usage as well as for predicting the creation of HRM value. This finding suggests that e-HRM usage (TAC) provides a stronger prediction power of PSQ compared with the direct effect of HRMS with regard to the PSQ. Furthermore, HRMS provides an explanation as to why e-HRM usage fails to make a significant contribution to the role shift of the HRM function to be more strategic (HRSR). Based on our finding, this outcome variable is significantly explained by HRMS through a direct relationship. This argument is in line with Foster's (2009) study, which indicated that many HR professionals still view e-HRM as merely an administrative tool and that its role in the development of strategic HR practice is often neglected.

Policy Implications and Recommendations

Our research suggests that e-HRM usage/technology acceptance (TAC) is a strong predictor of PSQ. However, this study reveals that e-HRM usage does not make the HRM function more strategic. According to the findings, the value in the form of service quality is created through the implementation of e-HRM. The success factors are also very clear, as the acceptance of e-HRM is predicted by the perceived of usefulness and HRM strength. What does that mean for HR professionals? As the findings of this study indicate, e-HRM implementation is not perceived as a key trigger for changing the HRM function to be more strategic. In accordance with Steijn and van den Muyzenberg (2012), e-HRM can help an organization to become more strategic but only where the traditional HR functions have already played a strategic role and consciously used e-HRM to achieve such goal. HRM professionals should pay attention to this. That is, the strategic role of HRM cannot be created only by relying on the adoption of technology. e-HRM could lead to strategic HRM only when an organization has a set of internal and external resources as well as traditional HRM systems that could initiate, implement, and actualize certain organizational strategies per se. We also hypothesized that a certain level of TOL within an organization may have a moderating effect on the relationship between PU/PEOU of employees and e-HRM acceptance; however, the result suggests that TOL has no significant moderating effect. This study has some implications for practice, and moreover, it provides an insight for organizations to find the right strategy to obtain the maximum benefit from the adoption and implementation of e-HRM.

e-HRM as strategic role enabler. According to Bell, Lee, and Yeung (2006), e-HRM frees up time, which was previously spent on administrative tasks, for HR professionals; they can now spend their time on strategic tasks. As the findings of this study indicate, e-HRM implementation is not perceived as a key trigger for changing the HRM function to be more strategic. One of the key points that should be noted is to

know how to utilize e-HRM and exploit the strategic potential from it. The fact that the HR personnel are known to use e-HRM only as a tool for automation of their routine tasks could be the reason as to why e-HRM cannot contribute to the strategic role of the HRM function (Ngai & Wat, 2006). To ensure that e-HRM is used in a more strategic way, the core business strategy of the organization, the HRM strategy, and IT management should be clearly aligned and integrated.

Strong leadership to transform the HRM function paradigm from an administrative to a strategic one is critical. The mind-sets and behaviors of HR personnel, line managers, and employees concerning e-HRM need to be changed. For this purpose, facilitation of education in the field of strategic human resource management (SHRM) will be essential. Cooperation between the HRM division and the functional division should also be strengthened to ensure that the HRM division supports the functional division's strategic goals through e-HRM. Another precondition for e-HRM to be successfully utilized for more than just administrative purposes is that strategic considerations should be taken into account in the decision-making process around the implementation of e-HRM. The use of e-HRM for services with "strategic added values," such as learning, career development, connection to the business process and model, and facilitating work-related dialogues between managers and employees through virtual collaboration, will most likely place the e-HRM system in a position to enable HRM functions to become more strategic.

Policy clarity, consistency, and e-HRM content aspect. Given our research finding, which suggests PU as a strong predictor of e-HRM acceptance, a profound amount of attention should be paid to ensure that the organization members have a clear idea as to the reasoning behind online HR tools. The philosophy underlying the usefulness of the technology should be internalized and incorporated into the day-to-day business process. When employees can be assured of these aspects, then acceptance for the solution and creation of its value can be accomplished. Another important aspect is that e-HRM should not run as a "too technology-driven" solution. It should aim to incorporate the real needs of line managers, employees, and HR departments. As the results of this study support previous heuristic arguments regarding the importance of policy clarity, consistency and content aspects of e-government solutions for e-policy success, organizations should also ensure that the implementation route map is clear and understandable.

Limitations and further research. The study has a few limitations that should be considered when making critical decisions. The limitations of the research are derived, first of all, from the fact that the sample of respondents was relatively small in the SEM analysis. We only managed to collect responses from 306 individuals. This condition might lead to a potential impairment on the reliability and accuracy of the estimates. Second, the sample only included employees in one specific organization and therefore may not be representative for another type of organization. Third, the respondents were dominated by young employees and males, which might reduce the generalizability of the results to the general population. Moreover, the data collected with regard to the independent and dependent variables all come from the respondents who

participated in our study using the same questionnaire, thereby creating a single source bias. A mixed methods research would be a way to overcome these biases. Fourth, we have dealt with ordinal data not by using ordinal approaches to SEM but rather by following the old-style approach of treating ordinal measures as intervals. While many researchers advocate that the traditional method is still acceptable and legitimate, particularly in the realm of public sector research, we reflect on this in the discussion section as a research limitation that should be overcome in the following future research.[14] Another limitation is that we collected all empirical data at one time during the implementation, when the system went live. Hence, we do not know how the perceptions of HR service quality and the role of HR functions may have differed prior to the implementation of e-HRM. For future research, we encourage researchers to utilize another method to investigate the influence of contextual factors using hierarchical linear modeling. Furthermore, we suggest that other factors, beyond the most commonly included contextual factors in other research fields, within organization and management studies may help to explain the value creation of e-HRM. Suggestions for such variables include implementation approach, change management, communication, user involvement and commitment, structure (unit, department, group), culture (organization and group), and project management.

Appendix

Construction of Indices

1. **Perceived of Usefulness (Standardized Cronbach's α: .887)**
   a. I find electronic human resource management (e-HRM) helpful for dealing with my human resource (HR)–related activities.
   b. Using e-HRM, I can realize the HR-related activities faster.
   c. Overall, I find the system useful for my HR-related activities.
2. **Perceived Ease of Use (Standardized Cronbach's α: .839)**
   a. I find it easy to use e-HRM application in dealing with my HR-related activities.
   b. My interaction with e-HRM is clear and understandable.
   c. Interacting with e-HRM does not require a lot of mental effort.
3. **Human resource management (HRM) Strength (Standardized Cronbach's α: .869)**
   a. HR activities in my organization are easy to understand (HR Distinctiveness).
   b. The HR department undertakes those actions that exactly meet my needs (HR Distinctiveness).
   c. The HR department in our organization gets full support from top management for HR activities (HR Distinctiveness).
   d. There is a clear fit between HR promises and deliverables (HR Consistency).
4. **e-HRM Acceptance (Standardized Cronbach's α: .773)**
   a. I use the Employee Self Service in my day-to-day work when dealing with HR-related activities (Actual Use Frequency).
   b. I use e-HRM in accordance with the manuals instruction (Appropriation).

(continued)

Appendix (continued)

5. **HR Strategic Role (Standardized Cronbach's α: .847)**
    a. HR professionals partner with line managers to help them reach their goals.
    b. e-HRM helps me to link the organization's achievements to individual performance.
    c. HR professionals contribute to ensure organizational development.
6. **Perceived HR Service Quality (Standardized Cronbach's α: .886)**
    a. The HR department provides its services at the time it promises to do so.
    b. Ever since the introduction of e-HRM, HR services minimize error administration.
    c. Ever since the introduction of e-HRM, the HR department responds quickly to the requested HR service.
    d. Overall, HR service quality is increasing after the implementation of e-HRM.

Note. This is the original/English version. For actual use, they have been translated to Bahasa Indonesia.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

Notes

1. Leadership refers to the ability to "influence processes involving determination of the group's or organization's objectives, motivating task behavior in pursuit of these objectives, and influencing group maintenance and culture" (Park & Rainey, 2012). Leadership in the public sector is an important aspect of the work environment for employees (e.g., Park & Rainey, 2012). Van Wart (2003) has summarized that effective leadership within an organization provides beneficial outcomes, such as higher-quality and more efficient goods and services, a sense of cohesiveness, personal development, and higher levels of satisfaction among those conducting the work, an overarching sense of direction and vision, an alignment with the environment, a healthy mechanism for innovation and creativity, and a resource for invigorating the organizational culture.
2. The four main components of transformational leadership (TOL) are as follows:
    1. *Charismatic leadership or idealized influence.* Transformational leaders behave in ways that result in their being role models for their followers. The leaders are admired, respected, and trusted.
    2. *Inspirational motivation*. Transformational leaders behave in ways that motivate and inspire those around them by providing meaning and challenge to their followers' work. The leaders get followers involved in envisioning attractive future states. The

leaders create clearly communicated expectations that the followers want to meet, and they demonstrate their commitment to the goals and shared vision.

3. *Intellectual stimulation.* Transformational leaders stimulate their followers' efforts to be innovative and creative by questioning assumptions, curbing problems and approaching old situations in new ways. Creativity is encouraged. New ideas and creative problem solutions are solicited from followers, who are included in the process of addressing problems and finding solutions.

4. *Individualized consideration.* Transformational leaders pay special attention to each individual's needs for achievement and growth by acting as a coach or mentor. Followers and colleagues are developed to successively higher levels of potential. Individualized consideration is practiced as follows: New learning opportunities are created along with a supportive climate, and individual differences, in terms of needs and desires, are recognized.

3. The current electronic human resource management (e-HRM) literature distinguishes three types of e-HRM: operational e-HRM, relational e-HRM, and transformational e-HRM (Ruël, Bondarouk, & Van der Velde, 2007). Within all three types of HRM, choices have to be made in terms of which HRM activities will be offered face-to-face and which will be offered through web-based HR (i.e., e-enabled). For the operational type of HRM, this issue amounts to a choice between asking employees to keep their own personal data up-to-date through an HR website or having an administrative force in place to do this for them. In terms of relational HRM, there is a choice between supporting recruitment and selection through a web-based application or using a paper-based approach (advertisements, paper-based application forms and letters, etc.). Finally, in terms of transformational HRM, there is a choice between creating a change-ready workforce through an integrated set of web-based tools, which enable the workforce to develop in line with the organization's strategic choices and by using paper-based materials. Transformational impact redefines the focus of HR by emphasizing the strategic focus of HR (Snell, Stueber, & Lepak, 2002).

4. An HRM system is distinctive when its effect is highly observable for the employees. This situation is achieved when the HR practices in the system are visible, understandable, relevant, and have a legitimacy of authority (Bowen & Ostroff, 2004). The consistency of an HRM system is high when the HRM system is consistent over time, people, and context. This means that employees should receive the same reaction to their behavior, that the intention behind the operation of the system and the actual functioning of the system should be the same, and that the HRM message itself should be consistent (Bowen & Ostroff, 2004).

5. This article included two methodological techniques in the causal analysis, which are closely related and often confused. Suppose we have three variables, *X, M,* and *Y*. We say that *M* is a mediator of the effect of *X* on *Y* if *X* carries its influence on *Y* at least partly by influencing *M*, which then influences *Y*. This is also known as an indirect effect of *X* on *Y* through *M*. On the other hand, we say that *M* moderates the effect of *X* on *Y* if that effect varies in size, sign, or strength as a function of *M*. This is also known as an interaction. Although these concepts are fairly simple, the statistical issues that arise in estimating and testing the mediation and moderation effects turn out to be rather complex and subtle.

6. The responses were measured using a 5-point Likert-type rating scale. We measured the responses as follows: *strongly agree* (SA) = 5; *agree* (A) = 4; *neutral* (N) = 3; *disagree* (D) = 2; *strongly disagree* (SD) = 1. The items in the questionnaire were ordered per variable. This helped the respondent place the question within a specific subject and helped to decrease the time needed to complete the questionnaire.

7. Exploratory factor analysis (EFA) is used to identify the complex interrelationships among items and group items that are part of unified concepts, where the researcher makes no "a priori" assumptions about the relationships among factors. Meanwhile, confirmatory

factor analysis (CFA), a more complex approach, tests whether the items are associated with specific factors and uses structural equation modeling to test a measurement model in which loading on the factors allows for an evaluation of relationships between the observed variables and unobserved variables.

8. Bartlett's test measure evaluates the null hypothesis that the original correlation matrix is an identity matrix. Therefore, we wanted this test to be significant. The result showed that Bartlett's test was significant, which meant that the variables would meet the assumption to load together properly. In the end, each question was categorized to each factor with a corresponding factor loading value after rotation. Using varimax as a rotation method, we had Factor 1 with four questions related to HRM Strength (HRMS), Factor 2 with three questions related to PU, and Factor 3 with three questions related to PEOU.

9. Based on one of the reviewer's observation, we have added more information regarding CFA. To test both the convergent and discriminant validity of all the latent variables in the model, we performed CFA. The CFA and modification indexes suggest that both convergent and discriminant validity of all the latent variables in the model are quite good. Here are the findings.
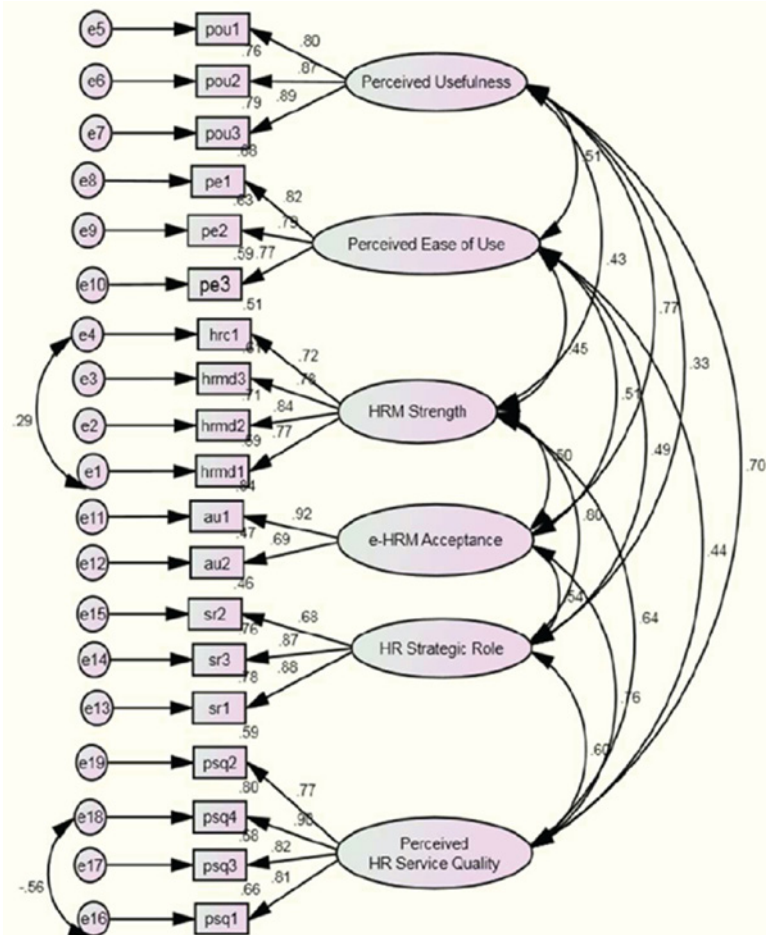
The model fit for the CFA is as follows:

Model (valid N = 176)	df	χ²	χ² / df	TLI	NFI	IFI	CFI	RMSEA	SRMR
Suggested cutoff values			<3	>0.90	>0.90	>0.90	>0.90	<0.08	<0.08
Proposed Model Score	135	226.55	1.678	0.946	0.902	0.958	0.957	0.062	0.034

Note. CFA = confirmatory factor analysis; TLI = Tucker–Lewis index; NFI = normed fit index; IFI = incremental fit index; CFI = comparative fit index; RMSEA = root mean square error approximation; SRMR = standardized root mean square residual.

10. This study on the acceptance of an online banking system in Finland found that the PEOU is not a critical factor in the acceptance of new technology. They argue that their finding is in line with other TAM studies, which assert that PEOU has less of an impact on technology acceptance than PU. This relationship is explained by the fact that as users learn about PEOU, its impact becomes instrumental. More specifically, PEOU impinges on the acceptance through PU (Pikkarainen, Pikkarainen, Karjaluoto, & Pahnila, 2004). Meta-analysis of TAM conducted by Yousafzai et al. (2012, p. 230) confirmed the same finding of this research.

11. In the case of the Directorate of Tax, the unsuccessful efforts of e-HRM usage in providing a more strategic role for the HRM function might have been caused by the intervention of the higher authority to develop a unified e-performance application for the whole organization of the Ministry of Finance. Previously, the e-HRM system was developed exclusively by the Directorate of Tax to fulfill the needs of that organization. Nevertheless, the higher authority wanted to develop a new e-HRM system focused on e-performance, which had to be applied by all organizations under the Ministry of Finance. This decision caused some features on the current e-HRM in the Directorate of Tax to be abolished, which led to a system that was no longer integrated. Therefore, the e-HRM systems no longer fit well with the needs and characteristics of the Directorate of Tax, hence reducing its ability to support the strategic practice of the HRM function.

12. According to Yousafzai et al. (2007), although TAM has been proven to be a robust model with highly predictive validity, the results from a variety of studies suggest that in some circumstances, the model does not provide a complete understanding of the phenomenon studied. More specifically, in some cases, the predictive efficacy of an independent variable and/or the form of relationship may vary systematically as a function of some other variable(s). Therefore, we attempt to inquire into whether the relationship between PU and PEOU in e-HRM usage is influenced by the direct leadership environment of the employee. The moderation test of this relationship produces insignificant results. These results suggest that PU is, in fact, an essential factor in the acceptance of e-HRM. Hence, in the development of an e-HRM system, an organization needs to pay much attention to the content and the real benefits of the system to the end user.

13. Through a qualitative analysis of the interviews we conducted, we find that at the initial stage, e-HRM applications are intended to support the core business strategies of the Directorate of Tax. The organization wanted to develop such a web-based integrated HRM system in accordance with the workflow and business process characteristics of

the organization. However, after 6 years of implementation, some interventions from the higher authority were pushed, impacting a substantial change to the system, which led to the use of a "double system." This situation could be one reason as to why e-HRM failed to shift the HRM function to be more strategic.

14. Our additional ordinary least squares (OLS) regression analyses would mitigate the possible methodological shortcomings coming from our conventional structural equation model (SEM) approach, as we have transformed the latent variables into observable variables. However, we acknowledge an appealing feature of the Bayesian approach. For example, the Bayesian approach enables us to (a) obtain point and interval estimates for the factor scores of each individual, (b) formally compare the factor scores for different subjects, (c) assess whether a particular subject's factor score has changed over time, (d) identify the outlying subjects in the tails of the latent variable distribution, (e) assess relationships that may not be fully captured by the basic modeling structure (e.g., Is the association between latent traits linear and apparent across the range of factor scores or predominantly due to the more extreme individuals?).

References

Al-Gahtani, S., & King, M. (1999). Attitudes, satisfaction and usage: Factors contributing to each in the acceptance of information technology. *Behaviour & Information Technology*, *18*, 277-297.

Bass, B. M. (1985). Leadership and performance beyond expectations. New York, NY: Free Press.

Barki, H. and Hartwick, J. (1994). Measuring User Participation, User Involvement, and User Attitude. *MIS Quarterly*, *18*, 59-82.

Beaudry, A., & Pinsonneault, A. (2005). Understanding user responses to information technology: A coping model of user adaptation. *MIS Quarterly*, *29*, 493-524.

Bell, B. S., Lee, S., & Yeung, S. K. (2006). The impact of e-HR on professional competence in HRM: Implications for the development of HR professionals. *Human Resource Management*, *45*, 295-308.

Bondarouk, T., & Ruël, H. (2013). The strategic value of E-HRM: Result from an exploratory study in a governmental organization. *The International Journal of Human Resource Management*, *24*, 391-414.

Bondarouk, T. V., & Ruël, H. J. M. (2009). Electronic human resource management: Challenges in the digital era. *The International Journal of Human Resource Management*, *20*, 505-514.

Bowen, D. E., & Ostroff, C. (2004). Understanding HRM-firm performance linkages: The role of the "strength" of the HRM system. *Academy of Management Review*, *29*, 203-221.

Caldwell, R. (2003). Models of change agency: A fourfold classification. *British Journal of Management*, *14*, 131-142.

Currie, W., & Parikh, M. (2006). Value creation in web services: An integrative model. *Journal of Strategic Information Systems*, *15*, 153-174.

Conger, J. (1999). Charismatic and Transformational Leadership in Organizations: An Insider's Perspective on these Developing Streams of Research. *Leadership Quarterly*, *10*, 145-179.

Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*, 319-340.

Davis, F. (1993). User acceptance of computer technology: System characteristics, user perceptions. *International Journal of Man-Machine Studies*, *38*, 475-487.

Delmotte, J., De Winne, S., & Sels, L. (2011). Towards an assessment of perceived HRM system strength: Scale development and validation. *The International Journal of Human Resource Management*, *23*, 1481-1506.

Enshur, E., Nielson, T., & Grant-Vallone, E. (2002). Tales from the hiring line: Effects of the Internet and technology on HR processes. *Organizational Dynamics*, *31*, 224-244.

Foster, S. (2009). Making sense of e-HRM: Transformation, Technology and Power Relations. In Bondarouk, T. V., Ruël, H. J. M., Oiry, E. & Guiderdonijourdan, K. (Eds.), *Handbook of Research on E-Transformation and Human Resources Management Technologies: Organizational Outcomes and Challenges*. IGI Global.

Foster, S. (2010). *Creating HR value through technology*. Strategic Direction, *26*(8), 3-5.

Haksever, C., Chaganti, R., & Cook, R. G. (2004). A model of value creation: Strategic view. *Journal of Business Ethics*, *49*, 291-305.

Harris, K., Phifer, G., & Berg, T. (2002). *Business to employee: The road map to strategy*. Stamford, CT: Gartner Group.

Hartwick, J., & Barki, H. (1994). Explaining the role of user participation in information system use. *Management Science*, *40*, 440-465.

Howell, J. M., & Avolio, B. J. (1992). The ethics of charismatic leadership: Submission or liberation? *Academy of Management Executive*, *6*(2), 43-54.

Huselid, M. A., Jackson, S. E., & Schuler, R. S. (1997). Technical and strategic human resource management effectiveness as determinants of firm performance. *Academy of Management Journal*, *40*, 171-188.

Igbaria, M., Zinatelli, N., Cragg, P., & Cavaye, A. L. M. (1997). Personal computing acceptance factors in small firms: A structural equation model. *MIS Quarterly*, *21*, 279-305.

Kavanagh, M. J., Gueutal, H. G., & Tannenbaum, S. I. (1990). *Human resource information systems: Development and application*. Boston, MA: PWS-Kent Publishing.

Lederer, A. L., Maupin, D. J., Sena, M. P., & Zhuang, Y. (2000). The technology acceptance model and the World Wide Web. *Decision Support Systems*, *29*, 269-282.

Lepak, D., & Snell, S. (1998). Virtual, HR: Strategic human resource management in the 21st century. *Human Resource Management Review*, *8*, 215-234.

Loijen, Y. (2011). *E-HRM and value creation: Does organizational context make a difference?* (Master's thesis). University of Twente, Utrecht, The Netherlands.

Maier, C., Laumer, S., Eckhardt, A., & Weitzel, T. (2013). Analyzing the impact of HRIS implementations on HR personnel's job satisfaction and turnover intention. *Journal of Strategic Information Systems*, *22*, 193-207.

Marler, J., & Fisher, S. (2013). An evidence-based review of e-HRM and strategic HR. *Human Resource Management Review*, *23*, 18-36.

Ngai, E. W. T., & Wat, F. K. T. (2006). Human resource information systems: A review and empirical analysis. *Personnel Review*, *35*, 297-314.

Park, S. M. (2012). Toward the trusted public organization: Untangling the leadership, motivation, and trust relationship in U.S. federal agencies. *The American Review of Public Administration*, *42*, 562-590.

Park, S. M., & Rainey, H. G. (2008). Leadership and public service motivation in U.S. Federal Agencies. *International Public Management Journal*, *11*, 109-142.

Park, S. M., & Rainey, H. G. (2012). Work motivation and social communication among public managers. *The International Journal of Human Resource Management*, *23*, 2630-2660.

Parry, E. (2011). An examination of e-HRM as a means to increase the value of the HR function. *The International Journal of Human Resource Management*, *22*, 1146-1162.

Parry, E., & Tyson, S. (2011). Desired goals and actual outcomes of e-HRM. *Human Resource Management Journal*, *21*, 335-354.

Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). Consumer acceptance of online banking: An extension of the technology acceptance model. *Internet Research*, *14*, 224-235.

Porter, M. E. (1985). *Competitive advantage*. New York, NY: Free Press.

Ruël, H., Bondarouk, T., & Van der Velde, M. (2007). The contribution of e-HRM to HRM effectiveness: Results from a quantitative study in a Dutch Ministry. *Employee Relations*, *29*, 280-291.

Ruël, H., & Van der Kaap, H. (2012). E-HRM usage and value creation: Does a facilitating Context Matter? *German Journal of Research in Human Resource Management*, *26*, 260-281.

Ruta, C. D. (2005). The application of change management theory to HR portal implementation in subsidiaries of multinational corporations. *Human Resource Management Journal*, *44*, 35-53.

Snell, S., Stueber, D., & Lepak, D. (2002). Virtual HR departments: Getting out of the middle. In R. L. Henneman & D. Greenberger (Eds.), *Human resource management in virtual organizations* (pp. 81-101). Greenwich, CT: Information Age Publishing.

Steijn, B., & van den Muyzenberg, M. (2012). Human resource management in the information age. In I. Snellen, M. Thaens, & W. Donk (Eds.), *Public administration in the information age: Revisited* (pp. 252-263). Amsterdam, The Netherlands: IOS Press. doi:10.3233/978-1-61499-137-3-252

Straub, D., Limayem, M., & Karahanna-Evaisto, E. (1995). Measuring system usage: Implications for IS theory testing. *Management Science*, *41*, 1328-1342.

Strohmeier, S. (2007). Research in e-HRM: Review and implications. *Human Resource Management Review*, *17*, 19-37.

Tansley, C., & Newell, S. (2007). A knowledge-based view of agenda-formation in the development of human resource information systems. *Management Learning*, *38*, 95-119.

Ulrich, D., & Brockbank, W. (2005). *The HR value proposition*. Boston, MA: Harvard Business School Press.

Van Wart, M. (2003). Public sector leadership theory: An assessment. *Public Administration Review*, *63*, 214-228.

Venkatesh, V. (1999). Creation of favorable user perceptions: Exploring the role of intrinsic motivation. *MIS Quarterly*, *23*, 239-260.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, *27*, 425-478.

Yousafzai, Shumaila Y., Foxall, Gordon R., & Pallister, John G. (2007). Technology acceptance: a meta-analysis of the TAM: Part 1. *Journal of Modelling in Management*, *2*, 251-280.

Yousafzai, Shumaila Y., Foxall, Gordon R., & Pallister, John G. (2012). Technology acceptance: a meta-analysis of the TAM: Part 2. *Journal of Modelling in Management*, *2*, 281-304.

Author Biographies

Eri Wahyudi is currently working as a staff coordinator of Information and Evaluation Section, Malang Regional Office of Finance Education and Training Agency, Ministry of Finance of the Republic of Indonesia. He obtained the degree of master of public administration on global e-policy and e-government at Sungkyunkwan University in 2013. His main research interests are HRIS, human resource management, and administrative leadership in the public sector.

Sung Min Park is an associate professor in the Department of Public Administration/Graduate School of Governance at Sungkyunkwan University. His primary research interests are public management, public human resources management, organizational behavior, and quantitative research methods. His works appear in *American Review of Public Administration, Review of Public Personnel Administration, International Public Management Journal, Public Personnel Management, International Journal of Human Resource Management, International Review of Administrative Sciences*, and *Public Management Review*.