The Effect of Technology Usefulness, Top Management Support and User Commitment on Human Resource Information System Performance

Grace Orlyn Sitompul
Adventist University of Indonesia
s.graceorlyn@gmail.com

Abstract

A review of related literature has revealed that there are still unanswered questions concerning Human Resource Information System (HRIS) and its performance factors. Prior research findings have revealed that HRIS performance is influenced by several factors such as technology usefulness, top management support, and user commitment. The purpose of this study was to found the effect of technology usefulness, top management support, and user commitment using Structural Equation Modelling. The endogenous variable for the study was HRIS performance, and the exogenous variables were technology usefulness, top management support, and user commitment. For data collection, a combination of online and face-to-face surveys were used. A questionnaire composed of 4 instruments was administered to HRIS users for data collection. A total of 222 HRIS users of selected business organizations in the Philippines and Indonesia completed the survey. The result indicated that HRIS performance model developed from analyzed collected data explains 68.5% of the variance of HRIS performance, while the two factors such as technology usefulness ($r = 0.216$, $p < 0.05$), and user commitment ($r = 0.247$, $p < 0.05$) were found to have a direct positive effect on HRIS performance in the model. Top management support was the important factor that has a significant role in the success of HRIS performance. In the present study, it seems that top management support affect HRIS performance indirectly through other factors such as technology usefulness and user commitment. From the findings of the study, it can be concluded that technology usefulness, top management support, and user commitment have a significant role in organizations, helping employees to accept technology innovation at the work place and ultimately influencing HRIS performance.

I. INTRODUCTION

Economic trends indicate that business organizations are becoming more knowledgedriven and technology-oriented. Garcia (2011) states that "the emergence of the new knowledge based economy has altered the way business organizations must operate and remain competitive" (p. 1). Technological advances have helped to improve productivity in workplaces so that corporations can survive and cope with the competition (Payos & Zorilla, 2003). With increased globalization and business competition, the study of human resource management has become very important. It is in this context that Human Resource Information System (HRIS) in the organizations can be utilized to increase human workforce capability and ultimately organizational competitiveness (Sanaa, 2008). HRIS is a formal system and process devised for the management of people within an organization, and according to Kovach and Cathcart (1999), HRIS is defined as "a systematic procedure for collecting, storing, maintaining, retrieving, and validating data needed by an organization about its human resources, personnel activities, and organization unit characteristics" (p. 1). Information management has become very important to the survival and growth of companies, and because of this, HRIS has gained prominence.

A review of related literature seems to suggest that technology usefulness was important to the performance of HRIS. Technology competently keeps the business data, takes the information quickly, and generates the complete plan to meet the business needs (Davis, 1989). The success of HRIS performance also depends on the "explicit and implicit top management support" (Mohapatra, 2009, p. 114). According to

Altarawneh and Al-Shqairat (2010), one of the problems of implementing the HRIS is the lack of top management support and commitment.

Armstrong and Baron (as cited in Hirvonen, 2011) state, "Managers' support cannot be taken for granted. It is very crucial to have the support of the mangers [*sic*] to succeed with the implementation of new HR strategies" (p. 10). The top management should work together with the employees in convincing them and in building their trust to accept HRIS and to make it work efficiently (Kontakos, 2014). Therefore, it can be argued that top management support important for HRIS performance. Another exogenous variable was user commitment which is an asset to any organization and also crucial to the performance of HRIS. The implementation of a new system, such as HRIS, does not always make a positive impact on the worker; hence, the user commitment is really needed to support the changes of HR functions and to achieve HRIS performance (Pare & Tremblay, 2007; Razali & Vrontis, 2010).

Statement of the Problem & Research Questions

In the 21st century, business organizations have become dynamic and highly competitive. At the same time, management are demanding higher levels of quality products/services from business organizations. In this context, it is pertinent that HRIS performance must be considered as an outcome of a multidimensional process (Edelhauser, 2012). However, many HRIS performance studies have been done in developed countries, and findings of previous studies might not be applicable to developing countries such as Indonesia and the Philippines. This study focuses on the effect of technology usefulness, top management support, and user commitment on HRIS performance as perceived by employees by using structural equation modelling (SEM). This study will specifically answer the following questions:

1. Does top management support effects technology usefulness?
2. Does top management support effects user commitment?
3. Do top management support, technology usefulness, and user commitment affect the HRIS performance?

Null Hypotheses

1. There is no significant effect between top management support and technology usefulness.
2. There is no significant effect between top management support and user commitment.
3. There are no significantly affect between top management support, technology usefulness, user commitment, and HRIS performance.

II. REVIEW OF RELATED LITERATURE

The use of the HRIS has dramatically changed the way HR management activities and functions are performed in an organization (Obeidat, 2012). In today's globalized context, the size of the company is no longer considered to be a barrier in using HRIS. It is relative and depends upon the management decision and according to

Hendrickson (2003), large and small businesses are now using HRIS as their HR function in the organization. Furthermore, in the 21st century, according to Edelhauser (2012), "Advances in technology have made focus on the humancomputer interface a prime objective. The Internet has changed the way most businesses engage with customers and even their own employees" (p. 756). Thus, today's business organizations are dependent on technology such as HRIS for better information gathering, processing, and disseminating leading to better HR processing (Arnold, 2007).

Kovach and Cathcart (as cited in Benfatto, 2010) was the first to define HRIS as "any system for 'collecting, storing, maintaining, retrieving and validating data needed by an organization about its human resources'" (p. 7). However, The HRIS definition has an expanded meaning from time to time in accordance with the technology advancement in today's digital era. In this study, HRIS is defined as "a system that is used to 'acquire, store, manipulate, analyze, retrieve, and

distribute information about an organization's human resources'" (Tannenbaum, as cited in Benfatto, 2010, p. 7). There are some benefits of Human Resource Information Performance such as the improvement of accuracy in operating, controlling, and planning activities in human resources. It also allows users to access the information faster and on time, and it saves cost (Ngai & Wat, 2006). According to Ankrah and Sokro, (2012) "a) Increase competitiveness by improving HR practices; b) Produce a greater number and variety of HR operations; c) Shift the focus of HR from the processing of transactions to strategic HRM; d) Make employees part of HRIS, and e) Reengineer the entire HR function" (p. 9). The effect of globalization and technology growth today makes the organizations start to use the information system for their HR functions in their departments. Another successful perception is the usefulness of the system that can benefit the organization and can satisfy their employees, staff, and all the users (Bal, Bozkurt, & Ertemsir, 2012). In this study, there are ten indicators of HRIS performance: namely, sufficient information, accessible information, expected information, ability performance, accurate information, skills improvement, access performance, detailed information, system impact, and enhancement performance.

Technology usefulness is defined as "the degree to which a person believes that using a particular system would enhance his/her job performance" (Davis, as cited in Henderson & Divett, 2003, p. 386). Usefulness is also defined as how much functionality meets the users' needs. In other words, technology usefulness should be effective, helpful, convenient, suitable, and fit the needs of the organization (Ziefle & Holzinger, 2011). The theory behind technology usefulness is the technology acceptance model, which explains how HRIS users will make use of technology (Davis, 1993). Even though technology may be important to businesses, there needs to be more thought done on how useful it is. The new system or new innovation should help us in solving problems, and the new system should meet organizational needs to be useful. Usefulness seems to be an important factor in adopting new systems. Therefore, usefulness of technology seems to be more important than other factors, because it is the main function of adopting a new innovation system. In this study, technology usefulness is measured by the following ten indicators: prompt accomplishment, organizational performance improvement, increase in productivity, enhancement of effectiveness, information availability, system usefulness, improvement of job performance, work efficiency and effectiveness, and flexibility of job.

According to some studies, technology usefulness is related to HRIS performance. It is understandable that technology usefulness is important and has a major part in achieving HRIS performance. Technology is not only important to enhance organizational performance, but it is supposed to be consistently useful. According to a study by Normalini et al. (2012), technology usefulness is positively related to HRIS usage. The findings of this study are based on a questionnaire used to collect data through a purposive sampling technique, which includes selected companies using HRIS in 35 Penang, Malaysia. In a similar way, Lippert and Swiercz (2005) used 11 propositions at Drexel University in Philadelphia to explore the relationship between HRIS and technology usefulness, which is the utility having key parts that affect the HRIS performance through technology trust. Another study by Al Shibly (2011), which used quantitative research design among 18,000 full-time staff members in Jordan, found that perceived HRIS usefulness is positively and indirectly linked to HRIS performance. Therefore, it can be said that HRIS performance is directly and indirectly affected by technology usefulness because if the system is useful, the users can maximize their productivity.

Success in using a new system requires the support of the management since the management can ensure that any resistance will be smoothed out. Besides, the management needs to socialize with the employees and communicate well the importance of how the system can help the organization (Mohapatra, 2009). Top management support is defined by Young and Jordan (2008) "as devoting time to the (IS) program in proportion to its cost and potential, reviewing plans, following up on results and facilitating the management problems involved with integrating ICT with the management process of the business" (p. 3).

Accordingly, top management support has become the most critical factor in the success of information systems, for on a management level you need to be constant and consistent during the implementation process from the beginning to the end (Elbanna, 2012). While the new system is being implemented in the organization, problems may arise due to many barriers. One barrier is lack of management support and commitment (Altarawneh & Al-Shqairat, 2010). To achieve success in using HRIS, support should come first from the management. The authors Mooney, Mahoney, and Wixom (2008) stated that top management support and commitment are critical factors and are crucial to HRIS performance. Therefore, top management support is very important to HRIS performance because top management has authority, rights, and responsibility to make changes or any innovations that will bring them to compete with others and to improve their own future performance.

The measurement of management support can be reflected through satisfaction because full support from the general management and immediate superior is received. On the other hand, management support will also bring successful changes to the organization (Hoffmann, Ineson, & Stewart, 2014). However, due to many barriers, lack of top management support and commitment is one of the biggest problems in HRIS performance (Altarawneh & Al-Shqairat, 2010). In this study there are ten indicators which reveal top management support: namely, effort, attention, awareness, encouragement, eagerness, connection, values, organizational strategy, commitment, and concern of the management.

According to a study by Altarawneh and Al-Shqairat (2010), top management support is related to HRIS performance; however, a lack of management support and commitment is one of the four HRIS implementation barriers in an organization. The findings of their study were derived using quantitative analysis of ANOVA among 230 HRIS users in Jordanian public universities. Another study by Hussein (2005) among 201 users from four central Malaysian government agencies using perceptual measures has found a direct influence of top management support on HRIS performance. Moreover, Wong et al. (as cited in Lin, 1997b) among a sample of 240 managers from directories of the Human Resources Development Association and Chinese Human Resource Management Association in Taiwan found that the context of the findings reported is deemed important to ensure the success of HRIS implementation with the acceptance for "the most needed support comes from top management" (p. 3). Furthermore, according to Lin (1997a) the implementation of HRIS depends upon the support of the management, the IS department, the human resource leaders, the human resource staff, the computer knowledge of HR staff, and training the user in order to achieve the HRIS performance. In addition, top management support is like a guarantee or assurance that should be given to the users. As the organization adopts a new system, it needs backing. Without any support from the management, the ideas, inputs, or suggestions coming from the workers will never be heard, and there will be no changes at all. In addition, support from the top management is one of the important factors for the adoption of technology and will affect user acceptance. In a study by Rouibah, Hamdy, and Al-Enezi (2009), using SEM among 382 information system users in public organizations in Kuwait, it was concluded that among the organizational variables, top management support was found to have the strongest effect on HRIS performance. For that reason, top management support is needed and is important to assure the users' positive attitude and perception in adopting technology through new innovation to achieve HRIS performance.

Commitment is a two-way process between one person engaged with another or with an organization. Meyer and Allen (as cited in Dixit & Bhati, 2012) define commitment as "a psychological state that characterizes the employees relationship with the organization and has implication for the decision to continue membership in the organization" (p. 36). In addition, Sarwar and Khalid (2011) state that user commitment had important impacts on organization through its effects on employee that performance, turnover, and absence, and it influences customer attitudes to the bottom line. As employees are focused and committed to the organization, the use of a new program or system will be much easier,

applicable, and effective to achieve performance (Khan, Jam, Akbar, Khan, & Hijazi, 2011). Furthermore, there are three forms of commitment: namely, affective commitment, which refers to an employee's emotional attachment to, identification with, and involvement in the organization; continuance commitment, which refers to commitment based on the costs that the employees associate with leaving the organization; and normative commitment, which refers to an employee's feelings of obligation to remain with the organization (Meyer & Allen, 1991). Therefore, it can be said that user commitment is one of the important factors after user knowledge and skill in user characteristics. If the users have the knowledge and skills to do the job, but they do not have commitment to do their work properly, it is not acceptable to the organization.

Some indicators of the existence of user commitment in the organization can be seen through increased in job satisfaction, job performance, total return to shareholders, and sales. Other indicators are seen through decreased employee turnover, and to search for alternative employers (Sarwar & Khalid, 2011). Additional indicators of a user's commitment include job involvement and organizational commitment as those factors have a significant impact on organizational and individual performance (Khan et al., 2011). A high commitment to work will produce positive results. In this study, user commitment is measured by the following ten indicators: user responsibility, user capability, user commitment, open-mindedness, HRIS interconnection, performance improvement, organizational belongingness, system assurance, user efficiency, and system clarity.

A few studies have shown the relationship between user commitment and HRIS performance. As committed users are the valuable assets in organizations, user commitment is also important to achieve a competitive advantage in the organization. A study by Razali and Vrontis (2010), using the multiple regression analysis among 250 employees selected from the contractor of Malaysian Airlines System, found that there is a positive influence of organizational change of system on user commitment to the organization. However, another study by Hirvonen (2011) among 7000 employees in about 50 countries focused on the change management process and balancing sustainability in Finland. It found that user commitment does not always have a positive impact on business results and performance of HRIS. For that reason, even though user commitment does not have many studies related to HRIS performance, the employee commitment did have an important role to its success. This is because users are employees in the organization and therefore it can be said that user commitment has both a direct and an indirect relationship on HRIS performance.

III. METHODOLOGY

There are two methods of surveys under the research design, such as the cross sectional and longitudinal surveys (Fraenkel & Wallen, 2007). This study uses a cross sectional survey, whereby the data was collected at one time from a determined sample. This type of research design is used to attain the current characteristics such as feelings, judgment, connection, and reasons among a group of people related to a particular topic, through asking questions anonymously (Garcia, 2011). The statistical tools were used to answer the research questions of the study. Relationships among the variables of the study were tested using correlation analysis. The *SEM* was used to determine the causal relationship between four variables under examination.

The sample for this study was taken from the population of business organizations comprising of the manufacturing sector, service sector, and mining sector in the Philippines and in Indonesia. Only companies using HRIS for their businesses were selected because the study concerned the perceptions of employees about using HRIS. The choice of geographic location from where the companies were selected was made based on factors such as the nature of the countries, cost efficiency, access convenience, and availability of the business organizations. The respondents in this study were comprised of HRIS users as well as HR Directors, HR Managers, HR staff, and other employees who are using HRIS in their work to do the HR functions. They were working in selected business organizations in Indonesia and the Philippines and have been working in their

respective organization for at least one year. A saturation sampling procedure of respondents using HRIS was chosen for the online and face-to-face surveys as it was acceptable to obtain a representative sample of HRIS users for this study. The saturation sampling procedure is a method of sampling which involves all members of the population at one time as a sample of research (Sue & Ritter, 2012). The final data collection for this study took place over a period of three months. With the purposive and saturation sampling procedure, I distributed questionnaires through online and face-to-face surveys to 305 respondents and was able to collect 239 questionnaires. As mentioned by Kline (2005), to be able to use *SEM*, the sample size should be at least 200. The research instrument for data collection in this study is a questionnaire. The questionnaires employed in this study measured the variables of top management support, technology usefulness, user commitment, and HRIS performance.

In this study, technology usefulness was measured by ten indicators. It was measured with ten modified items based on a reliable and validated questionnaire (Godoe & Johansen, 2012). Permission through e-mail was obtained from the instrument developer to use these items. The items measured respondents' perceptions of the 80 quantitatively demanding performance of the HRIS. Items were scored on a 6-point frequency scale, covering 1 = *strongly disagree*, 2 = *disagree*, 3 = *somewhat disagree*, 4 = *somewhat agree*, 5 = *agree*, and 6 = *strongly agree*. Items with higher scores represent a higher level of quantitative technology value in the organizations. Similarly, items with lower scores represent the lesser technology value that the employees experience in their organizations. The Cronbach's alpha for these items was moderately ranged from 0.68 to 0.84 in Great Britain (Godoe & Johansen, 2012). The Cronbach's alpha of these 10 items in the pilot test was 0.93 among the 40 employees of business organizations in Indonesia and the Philippines.

Top management support was measured by ten indicators. It was measured with ten modified items from the work of Dammen (2001).

Permission through e-mail was obtained from the instrument developer to use these items. The items measured respondents' perceptions of the quantitatively demanding performance of the HRIS. Items were scored on a 6-point frequency scale, covering 1 = *strongly disagree*, 2 = *disagree*, 3 = *somewhat disagree*, 4 = *somewhat agree*, 5 = *agree*, and 6 = *strongly agree*. Items with higher scores represent a higher level of quantitative top management support in the organizations. Similarly, items with lower scores represent the lesser top management support that the employees experience in their organizations. The Cronbach's alpha in the pilot test for these 10 items was a moderate 0.95 among the 40 employees of business organizations in Indonesia and the Philippines.

User commitment was measured by ten indicators. It was measured with ten modified items from the work of Meyer and Allen (1991). Permission through e-mail was obtained from the instrument developer to use these items. The items measured respondents' perceptions of the quantitatively demanding performance of the HRIS. Items were scored on a 6-point frequency scale, covering 1 = *strongly disagree*, 2 = *disagree*, 3 = *somewhat disagree*, 4 = *somewhat agree*, 5 = *agree*, and 6 = *strongly agree*. Items with higher scores represent a higher level of quantitative user loyalty in the organizations. Likewise, items with lower scores represent the lesser user loyalty that the employees experience in their organizations. The Cronbach's alpha in the pilot test for these 10 items was a moderate 0.92 among the 40 employees of business organizations in Indonesia and the Philippines.

The HRIS performance was measured by ten indicators. It was measured with ten modified items based on a reliable and validated questionnaire (Al Shibly, 2011). Permission through e-mail was obtained from the instrument developer to use these items. The items measured respondents' perceptions of the quantitatively demanding performance of the HRIS. Items were scored on a 6-point frequency scale, covering 1 = *strongly disagree*, 2 = *disagree*, 3 = *somewhat disagree*, 4 = *somewhat agree*, 5 = *agree*, and 6 = *strongly agree*. Items with higher scores represent a higher level of quantitative HRIS performance in the organizations. Similarly, items with lower scores represent the lesser HRIS performance ability that the employees experience in their organizations. The

Cronbach's alpha for these items was a moderate 0.80 among a sample of 230 employees in Jordan (Al Shibly, 2011). The Cronbach's alpha of these 10 items in the pilot test was 0.94 among the 40 employees of business organizations in Indonesia and the Philippines.

Data Analysis

The data analysis process were *SEM* using Anlysis of Moment Structures version 21 was used to answer Research Questions 1, 2, and 3 in this study. The reason for using *SEM* is to determine the relationships between latent variables or the unobserved exogenous variables that contribute to HRIS performance. Another purpose for the use of *SEM* is that the relationships among the variables can be represented in a graphical diagram (Bell, Rajendran, & Theiler, 2012). In a measurement model, specification involves using the observed variables and their relations with parameters to see if these are influenced by the latent variables. The latent variables are represented as a circle (O) and the observed variables are represented as a rectangle or square (□).

IV. ANALYSIS AND INTERPRETATION

Data was collected by employing the purposive sampling method in 22 business organizations in the manufacturing, mining, and service sector in Indonesia and the Philippines. The response rate of the participants was 78.3% of the 305 distributed questionnaires. The specific number of respondents from each business organization that participated in the study was determined based on the number of employees who are using HRIS in the business organizations for up to 200 of the 239 collected respondents. Therefore, the greater the numbers of HRIS users, the more participants were selected for the study, and vice versa (the number was estimated based on the HRIS users in the business organizations). The different observable indicators of unobservable variables were measured in order to choose the most appropriate indicators to measure the unobserved variables. AMOS was used in the analysis process. Unobserved (latent) variables such as HRIS performance, technology usefulness, top management support, and user commitment cannot be measured directly. The measurement model is measuring the latent variables through the correctness of a number of observable indicators.

HRIS

Based on the results of regression weights, the reliability *(r*2) and the significance of the latent variable HRIS performance indicated that all the 10 items for the latent variable HRIS performance had satisfactory factor loadings (> 0.35) and were statistically significant. However, since the structural equation model requires a model to be as parsimonious as possible, some questions were supposed to be removed. The items were removed to keep only the most appropriate items that measure the variable based on a high correlation between indicators (> 0.70). A residual covariance matrix with a value >±1.96 indicates that there is a problem in the matrix. Redundancy means that if a component of the latent variable has several indicators representing it, the least reliable will be removed. According to the measurement model modification process, some items had to be removed from the HRIS performance variable. The item numbers hp5 to hp8 were removed based on redundancy as they had the least reliability. Additionally, the items hp2, hp7, hp9, and hp10 were removed based on high correlation and standardized residual covariance matrix. Item hp2 was removed because of its high correlation with item hp1. Both the items appear to measure the employee perception of HRIS performance. Table 1 shows the initial ten items of HRIS performance with factor loading, reliability, and *p*-value. However, item hp1 seems to be more significant in measuring the employee perception of HRIS performance. An observation of the measurement model after the removal of the items shows six indicators that are satisfactory and have potential to measure the HRIS performance. Table 1 shows the final six items of the variable *HRIS performance* with satisfactory factor loading, reliability, and *p*value.

Table 1
Initial Measurement Model of HRIS Performance

Question #	Factor Loading	Reliability (r^2)	*p*-value
hp 1	0.657	0.432	< 0.01
hp 2	0.716	0.512	< 0.01
hp 3	0.786	0.617	< 0.01
hp 4	0.756	0.572	< 0.01
hp 5	0.676	0.457	< 0.01
hp 6	0.720	0.519	< 0.01
hp 7	0.759	0.576	< 0.01
hp 8	0.751	0.564	< 0.01
hp 9	0.738	0.545	< 0.01
hp 10	0.671	0.450	< 0.01

Table 2
Final Measurement Model of HRIS Performance

Question #	Factor Loading	Reliability (r^2)	*p*-value
hp 1	0,639	0.408	< 0.01
hp 3	0.807	0.651	< 0.01
hp 4	0.751	0.564	< 0.01
hp 5	0.686	0.470	< 0.01
hp 6	0.727	0.529	< 0.01
hp 8	0.696	0.484	< 0.01

Technology Usefulness

The latent variable technology usefulness had 10 items. The results of the analysis showed that all items had satisfactory factor loadings (< 0.35) and were statistically significant. For parsimony reasons of the model, items number tu12 and tu20 were removed based on the residual co-variance. Next, items tu16, tu17, tu18, and tu19 were removed based on the high correlation among the four indicators (> 0.70). Item tu16 had a high correlation with item tu17. Item tu18 had a high correlation with item tu19. Item tu15 was also removed based on redundancy and least reliability (< 0.35). The table 3 below shows the initial ten items with factor loading, reliability, and *p*-value. Here, the ten items were reduced to three items; however, this does not potentially decrease the capacity to measure the usefulness of technology as a whole in a significant approach to increase the HRIS performance. Table 4 shows the final three items of technology usefulness with satisfactory factor loading, reliability, and *p*-value.

Table 3
Initial Measurement Model of Technology Usefulness

Question #	Factor Loading	Reliability (r^2)	*p*-value
tu 11	0.747	0.559	< 0.01
tu 12	0.720	0.518	< 0.01
tu 12	0.729	0.532	< 0.01
tu 14	0.775	0.600	< 0.01
tu 15	0.560	0.313	< 0.01
tu 16	0.754	0.568	< 0.01
tu 17	0.810	0.655	< 0.01
tu 18	0.867	0.752	< 0.01
tu 19	0.767	0.588	< 0.01
tu 20	0.737	0.543	< 0.01

Table 4
Final Measurement Model of Technology Usefulness

Question #	Factor Loading	Reliability (r^2)	*p*-value
tu 11	0,790	0.624	< 0.01
tu 13	0.784	0.615	< 0.01
tu 14	0.876	0.767	< 0.01

Top Management Support

The results of the analysis of the 10 items for the latent variable top management support showed that all items had satisfactory factor loadings (< 0.35). Some items were removed based on the residual covariance matrix and a high correlation between the items. Items tms21 and tms24 were removed from the list based on the residual covariance matrix and the least reliability. For parsimony reasons of

the model, further removal of other items was done based on high correlation with other items. Item tms24 had a high correlation with tms25, and item tms26 had high correlation with tms27. Those four items had a high correlation with item tms28 and appeared to measure the employees' perception of management support when using HRIS; however, item tms28 seemed to have a more significant meaning in measuring employees' perception of management support. Therefore, tms24, tms25, tms26, and tsm27 were removed. Table 5 shows the ten initial items of top management support with factor loading, reliability, and *p*-value. Item tms29 had a high correlation with item tms30. Both the items appear to measure the employees' commitment and well-being as given by the top management. However, item tms29 was removed, and item tms30 was retained because it seemed to be more significant in measuring employees' perception of commitment at work. Table 6 shows the final items of top management support with satisfactory loading, reliability, and *p*-value.

Table 5
Initial Measurement Model of Top Management Support

Question #	**Factor Loading**	**Reliability (r^2)**	***p*-value**
tms21	0.625	0.390	< 0.01
tms 22	0.835	0.698	< 0.01
tms 23	0.735	0.541	< 0.01
tms 24	0.535	0.287	< 0.01
tms 25	0.769	0.591	< 0.01
tms 26	0.810	0.656	< 0.01
tms 27	0.789	0.623	< 0.01
tms 28	0.824	0.679	< 0.01
tms 29	0.816	0.665	< 0.01
tms 30	0.790	0.624	< 0.01

Table 6
Final Measurement Model of Top Management Support

Question #	**Factor Loading**	**Reliability (r^2)**	***p*-value**
tms 22	0,817	0.667	< 0.01
tms 23	0.744	0.554	< 0.01
tms 28	0.760	0.577	< 0.01
tms 30	0.747	0.558	< 0.01

User Commitment

The results of the analysis of the 10 items of the latent variable user commitment showed that all items had satisfactory factor loadings (< 0.35). Item uc32 and uc33 were removed based on the residual covariance matrix and high correlation. Item uc34 was also removed based on a high correlation with item uc35. The reason is probably that the same meaning appears among the items. Item uc36 and uc37 had a high correlation with item uc38. Those three items appeared to measure the employees' commitment in using HRIS at work. Item uc38 seemed to be more significant in measuring the employees' commitment in using HRIS at work. Item uc39 had a high correlation with item uc40 and was deleted from the model. Table 7 shows the ten initial items of user commitment with factor loading, reliability, and *p*value. The remaining four items of user commitment have satisfactory factor loadings, reliabilities, and *p*-values as shown in Table 8.

Table7
Initial Measurement Model of User Commitment

Question #	**Factor Loading**	**Reliability (r^2)**	***p*-value**

uc 31	0.768	0.590	< 0.01
uc 32	0.713	0.508	< 0.01
uc 33	0.764	0.583	< 0.01
uc 34	0.862	0.742	< 0.01
uc 35	0.856	0.733	< 0.01
uc 36	0.867	0.752	< 0.01
uc 37	0.814	0.663	< 0.01
uc 38	0.747	0.559	< 0.01
uc 39	0.874	0.763	< 0.01
uc 40	0.805	0.648	< 0.01

Table 8
Final Measurement Model of User Commitment

Question #	**Factor Loading**	**Reliability (r^2)**	***p*-value**
uc 21	0,712	0.507	< 0.01
uc 25	0.809	0.655	< 0.01
uc 28	0.778	0.606	< 0.01
uc 30	0.819	0.671	< 0.01

Results

Research question 1 and 2 shows that the relationship of top management support to technology usefulness is $r = 0.461$, $p < 0.05$. The relationship of top management support to user commitment is $r = 0.779$, $p < 0.05$. Research question 3 shows technology usefulness was found to have a direct positive effect on HRIS performance in the model ($r = 0.216$, p 0.05). User commitment was found to have a direct positive effect on HRIS performance ($r = 0.247$, $p < 0.05$). Top management support does not have an effect on technology usefulness. The findings, however, show a significant direct positive effect of top management support on technology usefulness ($r = 0.551$, $p < 0.05$). So the null hypothesis was rejected, and it was mentioned that top management support has a direct effect on technology usefulness. This result supports the findings of a prior study (Huang et al., 2011), where the supporting intervention of the organization potentially enhances users' technology acceptance. Similarly, another study by Pan et al. (2005) also stress the significant role of the management in supporting the technology acceptance model of system innovation through technology usefulness. Here, unless the management gives support, awareness, encouragement, strategy, and concern to employees, it would be difficult to inspire and help them in using technology. Therefore, the results of this study support the above proposition that top management's support is strongly connected with technology usefulness. However, even though there are not many studies about user commitment in relation to HRIS performance, user commitment still has an important role in its success. Here, unless employees are prepared with responsibility, interconnection, assurance, and clarity of the system, it would be difficult to motivate and facilitate them in developing new innovation. Therefore, the results of the present study support the findings of the prior studies. This finding regarding the commitment of the users gives the most valuable asset to the organizations.

V. SUMMARY & FINDINGS

In the theory, top management support was the important factor that has a significant role in the success of HRIS performance. In the present study, it seems that top management support affect HRIS performance indirectly through other factors such as technology usefulness and user commitment. It is most probably because of the nature of the study, which deals with an adoption of new innovation, where the support and involvement of the management only is not enough without the equipment, expertise, and capability that the technology and user has. Likewise, user commitment was also found to have no positive relationship with user satisfaction. This is probably due to the nature

of the study, where user's commitment with which the employees of the present study are involved. In organizations dealing with HRIS, committed employees are required to work to their full ability, following designed procedures and regulations. They should have a plan with their job and also a sense of choice to explore their creativity.

Implications

Technology usefulness and user commitment have a direct relationship with HRIS performance may help leaders, managers, practitioners, and users realize the significant role they can play in system improvement providing sufficient, expected, accurate, and detailed information related to HR functions in business organizations. Technology usefulness helps employees to accomplish tasks on time, increase productivity, and enhance effectiveness in using the system, especially if they feel that it could be useful for them. This result implies that HRIS performance needs to focus on how to emphasize the advantages and benefits that can be gained from implementing it into the organization.

Top management support directly influences technology usefulness and user commitment. This result demonstrates that the support of the management towards HRIS performance is influenced by the awareness, encouragement, and concern of the management regarding the availability of technological factors and user characteristics. This effect of top management support on technology usefulness and user commitment suggests that in order to increase and affect technology usefulness and user commitment, there should be support from the top management to employees by providing the employees with technology user friendliness and ease of use of HRIS and giving an adequate HRIS training, workshops, seminars, and other activities that will give them opportunities to be exposed to the technology and experience using it.

The findings of this study may expand existing knowledge by explaining how variables such as top management support was significant in indirectly influencing HRIS performance in business organizations. The concept of top management support has been considered in this study to be a growing concept on which to build a new model for HRIS performance. This approach might help leaders, managers, academicians, practitioners, and employees in accepting the changes in new innovation with the full support of the management, which will make potential users believe that HRIS offers numerous benefits that will enhance HRIS performance, improve efficiency and effectiveness, and increase productivity.

REFERENCES

Al Shibly, H. (2011). Human resources information systems success assessment: Anintegrative model. *Australian Journal of Basic and Applied Sciences*, *5*(5),157-169. Retrieved fromhttp://ajbasweb.com/old /ajbas/2011/157-169.pdf

Altarawneh, I., & Al-Shqairat, Z. (2010). Human resource information systems in Jordanian universities. *International Journal of Business and Management, 5*(10), 113127. Retrieved January23, 2013, from http://www.ccsenet.org/journal/index .php/ijbm/article/viewFile/7638/5867

Ankrah, E., & Sokro, E. (2012). Human resource information system as a strategic tool in human resource management. *Problems of Management in the 21st Century, 5*, 6-15. Retrieved from http://oaji.net/articles/450-1391966089.pdf

Arnold, J. T. (2007, June). Moving to a new HRIS.
HRMagazine, 52(6), 125-126, 129-130, 132. Retrieved from http://www.aiias .edu:2050/docview/205060965

Bal, Y., Bozkurt, S., & Ertemsir, E. (2012). *The importance of using human resources information systems (HRIS) and a research on determining the success of HRIS*. Paper presented at the Management, Knowledge and Learning International Conference, 2012. Retrieved February 1, 2013, from http://www.issbs.si/press/ISBN/978-961-6813-10-5/papers/ML12_029.pdf

Bell, A., Rajendran, D., & Theiler, S. (2012). Spirituality at work: An employee stress intervention for academics? *International Journal of Business and Social Science, 3*(11), 68-82. Retrieved from http://users.monash.edu.au/~hwatt/students/Bell_etal_IJB&SS_2012.pdf

Benfatto, M. C. (2010). *Human resource information systems and the performance of the human resource function* (Doctoral thesis). Retrieved March 12, 2013, from http://eprints.luiss.it/653/1/benfatto-20100224.pdf

Dammen, K. J. (2001). *The effects of organizational structure on employee trust and job satisfaction*. Retrieved from http://www2.uwstout.edu/content/lib/thesis/2001/2001dammenk.pdf

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance ofinformation technology. *MIS Quarterly, 13*(3), 319-340. doi:10.2307/249008

Davis, F. D. (1993). User acceptance of information technology: System characteristics,user perceptions, and behavioral impacts. *International Journal Man-Machine Studies, 38*, 475-487. Retrieved frohttp://deepblue.lib.umich.edu/bitstream/handle/2027.42/30954/0000626.pdf&embedded=true?sequence=1

Dixit, V., & Bhati, M. (2012). A study about employee commitment and its impact on sustained productivity in indian auto-component industry. *European Journal of Business and Social Science, 1*(6), 34-51. Retrieved from http://www.ejbss.com/data/sites/1/septemberissue/ejbss-12-1147astudyaboutemployeecommitment.pdf

Edelhauser, E. (2012). Human resource information system in Romanian organizations.*Revista de Management Comparat International, 13*(5), 756-767. Retrieved fromhttp://www.aiias.edu:2050/docview/1355867088/C6A4261u8706647BDPQ/1?accountid=42729

Elbanna, A. (2012). Top management support in multiple-project environments: An inpracticeview. *European Journal of Information System, 2012*, 1-17. Retrieved from http://www.academia.edu/1231505/Top_management_support_in_multiple-project_environment_an_in-practice_view

Fraenkel, J. R., & Wallen, N. E. (2007). *How to design and evaluate research in education* (6th ed.). Boston, MA: McGraw-Hill.

Garcia, I. A. (2011). *Managerial perceptions of factors contributing to the performance of business organizations* (Doctoral dissertation). Adventist International Institute of Advanced Studies, Cavite, Philippines.

Godoe, P., & Johansen, T. S. (2012). Understanding adoption of new technologies:Technology readiness and technology acceptance as in integrated concept.*Journal of European Psychology Students, 3*, 38-52. Retrieved from http://jeps.efpsa.org/index.php/jeps/article/viewArticle/59/61

Henderson, R., & Divett, M. J. (2003). Perceived usefulness, ease of use and electronic supermarket use. *International Journal of Human-Computer Studies, 59*(3), 383-395. doi:10.1016/S1071-5819(03)00079-X

Hendrickson, A. R. (2003). Human resource information system: Backbone technology of contemporary human resources. *Journal of Labor Research, 24*(3), 381-394. Retrieved from http://connection.ebscohost.com/c/articles/10134127/human-resource-information-systems-backbonetechnology-contemporary-human-resources

Hirvonen, M. (2011). *Planning and implementation of HRIS to support change management* (Master's thesis). Retrieved from http://www.theseus.fi/bitstream/handle/10024/38681/Hirvonen_Milla.pdf

Hoffmann, B., Ineson, E. M., & Stewart, M. I. (2014). *Personality as an indicator of organisational commitment.* Retrieved from http://pc.parnu.ee/~htooman

/EuroChrie/Welcome%20to%20EuroCHRIE%20Leeds%202007/EuroCHRIE%20Leeds%20Conference%20Preceedings/Full%20Papers/Ineson,%20Elizabet2.pdf

Huang, R. T., H., Deggs, D. M., Jabor, M. K., & Machtmes, K. (2011). Faculty online technology adoption: The role of management support and organizational climate.*Online Journal of Distance Learning Administration, 16*(2). Retrieved from http://www.westga.edu/~distance/ojdla/summer142/huang_142.html

Hussein, R. (2005). *The contribution of organizational, technological and individual factors on information system success in the Malaysian public sector* (Doctoral thesis). Retrieved from http://psasir.upm.edu.my/406/

Khan, T. I., Jam, F. A., Akbar, A., Khan, M. B., & Hijazi, S. T. (2011). Job involvement as predictor of employee commitment: Evidence from Pakistan. *International Journal of Business and Management, 6*(4), 252-262. Retrieved from http://www.aiias.edu:2050/docview/863434802/1765706DA2244ECBPQ/1?accountid=42729

Kline, R. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York, NY: Guilford.

Kontakos, A. M. (2014). *Global HR information systems.* Retrieved from http://www.ilr.cornell.edu/cahrs/research/whitepapers/upload/GlobalHR_InfoSystems.pdf

Kovach, K. A., & Cathcart, C. E., Jr. (1999). Human resource information systems (HRIS): Providing business with rapid data access, information exchange and strategic advantage. *Public Personnel Management, 28*(2), 275-282. Retrieved fromhttp://www.aiias.edu:2050/docview/215941253/2C160303A96946C5PQ/1?accountid=42729

Lin, C. Y. Y. (1997a). Human resource information systems: Implementation in Taiwan.*Research and Practice in Human Resource Management, 5*(1), 57-72. Retrieved from http://rphrm.curtin.edu.au/1997/issue1/taiwan.html

Lin, C. Y. Y. (1997b). Human resource management in Taiwan: A future perspective. *The International Journal of Human Resource Management, 8*(1), 2943.Retrieved from http://ba.nccu.edu.tw/staff/yylin/pdf/38.HRM%20in%20Taiwan.pdf

Lippert, S. K., & Swiercz, P. M. (2005). Human resource information systems (HRIS) and technology trust. *Journal of Information Science, 31*(5), 340-353. doi: 10.1177/0165551505055399

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*, 61-89. doi:10.1016/1053-4822(91)90011-Z

Mohapatra, S. (2009). Framework for HRIS implementation in non-IT sector. *Journal of Convergence Information Technology, 4*(4), 111-117. doi: 10.4156/jcit.vol4.issue4.16

Mooney, A., Mahoney, M., & Wixom, B. (2008). Achieving top management support in strategic technology initiatives. *Current Issues in Technology Management, 12*(2), 1-3. Retrieved from https://www.stevens.edu/howe/sites/default/files/MooneyMahoneyWixom_0.pdf

Ngai, E. W. T., & Wat, F. K. T. (2006). Human resource information systems: A review and empirical analysis. *Personnel Review, 35*(3), 297-314. Retrieved from http://www.aiias.edu:2050/docview/214798236/67D5E2A3CE5F44AAPQ/1?accountid=42729

Normalini, K., Ramayah, T., & Kurnia, S. (2012). Antecedents and outcomes of human resource information system (HRIS) use. *International Journal of Productivity and Performance Management, 61*(6), 603-623. Retrieved from http://people.eng.unimelb.edu.au/sherahk/Papers/2012/IJPM%202012.pdf

Obeidat, B. Y. (2012). The relationship

between human resource information system (HRIS) functions and human resource management (HRM) functionalities. *Journal of Management Research, 4*(4), 192-211. Retrieved from http://www.macrothink.org/journal/index.php/jmr/article/view/2262/1982

Pan, C. C., Sivo, S., Gunter, G., & Cornell, R. (2005). Student's perceived ease of use of an eLearning management system: An exogenous or endogenous variable? *Journal of Education Computing Research, 33*(3), 285-307. Retrieved from http://www.editlib.org/p/69287/

Pare, G., & Tremblay, M. (2007). The influence of high-involvement human resources practices, procedural justice, organizational commitment, and citizenship behaviors on information technology professionals' turnover intentions. *Group & Organization Management, 32*(3), 326-357. doi: 10.1177/1059601106286875

Payos, R. P., & Zorilla, O. S. (2003). *Personnel management in the 21st century* (7th ed.). Manila, Philippines: Rex.

Razali, M. Z., & Vrontis, D. (2010). The reactions of employees toward the implementation of human resources information systems (HRIS) as a planned change program: A case study in Malaysia. *Journal of Transnational Management, 15*(3), 229245. doi: 10.1080/15475778.2010.504497

Rouibah, K., Hamdy, H. I., & Al-Enezi, M. Z. (2009). Effect of management support, training, and user involvement on system usage and satisfaction in Kuwait. *Industrial Management & Data System, 103*(9), 338-356. Retrieved from http://www.cba.edu.kw/krouibah/Publications/2009-IMDS7017-IS-Usage - Satisfaction%20In%20Kuwait.pdf

Sanaa, F. A. S. (2008). *A study of factors influencing the adoption of human resource information system among private companies in Yemen*. Retrieved fromhttp://etd.uum.edu.my/299/2/Fawaz_Ahmed_Saleh_Sanaa.pdf

Sarwar, A., & Khalid, A. (2011). Impact of employee empowerment on employee's job satisfaction and commitment with the organization. *Interdisciplinary Journal of Contemporary Research in Business, 3*(2), 664-683. Retrieved from http://www.aiias.edu:2050/docview/878741556/2A61D2050DB94C48PQ/1?accountid=42729

Sue, V. M., & Ritter, L. A. (2012). *Conducting online surveys*. Washington, DC: SAGE.

Young, R., & Jordan, E. (2008). Top management support: Mantra or necessity? *International Journal of Project Management*. doi:10.1016/j.ijproman.2008.06.001

Ziefle, M., Rocker, C., & Holzinger, A. (2011). Perceived usefulness of assistive technologies and electronic services for ambient assisted living. In *Proceedings of the 5th International ICST Conference on Pervasive Computing Technologies*. Retrieved from http://www.comm.rwthaachen.de/files/ucdpha_2011_ziefle_et_al_with_reference.pdf