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EXPLORATION OF SUCCESSFUL ADOPTION OF E-HRM SYSTEMS

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Abstract

This study aims to investigate the key factors for the success of the E-HRM system with the updated DeLone and McLean IS Success Model on E-HRM adoption and to investigate the influence of the independent variables on the dependent variable in the Exploration of Successful E-HRM System Adoption. Specifically, the impact of: System Quality (X1) on System Use (Y1), Information Quality (X2) on System Use (Y1), Information Quality (X2) on E-User Satisfaction HRM (Y2), Service Quality (X3) on System Usage (Y1) on E-HRM User Satisfaction (Y2), System Use (Y2). System Usage (Y1) on E-HRM Successful Systems (Y3), E-HRM Successful Systems (Y3). The author of the study uses a quantitative approach. Data analysis from the research results used the structural equation modeling (SEM) test. Data collection uses the survey method by distributing a list of questions in the form of a questionnaire. The analytical method that the writer uses is descriptive statistics. The data that has been collected is then tabulated in tables, and a descriptive study is carried out. The tool used for data analysis is SmartPLS 4.0. From the process of testing the relationship between indicators and latent variables, testing the relationship between latent variables, and testing the fit of the model, a final model that fits simultaneously has been found. The results of the construct validity and reliability test values with the loading factor indicator values of the six variables tested showed a value of > 0.7; only two indicators were invalid. Of the nine hypotheses, there are six significant hypotheses, while three of them are not significant. And of the six variables, all are interconnected in driving the successful adoption of the E-HRM system.

Keywords: E-HRM; System Quality; System Use; User and System Satisfaction.

INTRODUCTION

The application of information technology (IT) in the area of human resource management (HRM) has gained popularity among businesses and academic attention recently. The practice of implementing HR strategies, policies, and activities within businesses while utilizing and supporting IT-based applications with the goal of enhancing organizational outcomes is known as electronic-HRM (e-HRM) (Ruel et al., 2004; Boundarouk and Ruel, 2009). Little is known about potential differences and patterns in e-HRM practices, their causes, and the results for organizations, despite the fact that research on the quantitative adoption of e-HRM is expanding (e.g., Florkowski and OlivasLujan, 2006; Strohmeier and Kabst, 2009; Panayotopoulou et al., 2010). (Strohmeier and Kabst, 2014). According to

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this viewpoint, more qualitative information is required to comprehend the various forms of e-HRM that are currently available, the factors that influence various forms of IT use in HRM, and the effects e-HRM has on businesses (Strohmeier and Kabst, 2014; Marler, 2009; Parry and Tyson, 2011). In order to achieve this, a configurational approach that assumes e-HRM to be a function of a combination of numerous dimensions rather than a single one proves useful (Martin-Alcazaret al., 2005). The current research examines the availability of several possibilities for employing IT in HRM based on potential aims, building on the few prior studies (Strohmeier and Kabst, 2014; Ferrat et al., 2005).

Due to widespread improvements in the field of information systems, academics are currently more interested in finding out how to successfully deploy information systems. The successful implementation of IS in firms strongly influences raising employee performance levels (Al-Mamary et al., 2019). The Original Delone & Mclean Success Model has been revised and changed to include new variables, such as service quality, based on additional research and studies. Additionally, they aggregate the effects on individuals and organizations into a new dimension called "net benefit." Numerous scholars have used the modified Delone and McLean SI models as prominent ideas in the study of information systems success.

E-HRM, as opposed to manual administrative handling and the labor-intensive use of HR in an automated way, is generally thought to offer a number of key benefits for organizations, including increasing efficiency and reducing costs associated with HRM, facilitating a shift in the role of HRM to a more strategic level, and improving client services. Recruitment, selection, performance management, training, leave administration, attendance management, business travel management, and payroll administration are just a few of the HRM tasks that may be performed with e-HRM solutions.

In conclusion, early adoption is the main emphasis of the literature on the adoption and use of IT-based information systems (including E-HRM). Few studies have looked into intentions and behavior after adoption (Oghuma et al., 2015). According to earlier research (Oghuma et al., 2015), the elements that affect a person's decision to utilize technology might alter over the course of the adoption process, use phase, and post-implementation phase.

The causes of these variances are various personal encounters with perception and users. As a result, research on technology utilization during the post-implementation stage is necessary. When implementing E-HRM, users might exercise greater caution. Therefore, in order to guarantee the system's adoption, this study looks at the variables that affect the E-HRM system's adoption.

There were several research issues identified: Does system utilization (Y1) significantly depend on system quality (X1)? Does system quality (X1) have a major impact on user satisfaction with E-HRM (Y2)? Does the quality of the information (X2) have a big impact on how the system is used (Y1)? How much of an impact does information quality (X2) have on E-HRM user satisfaction (Y2)?

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Does system utilization (Y1) significantly depend on the service quality (X3)? Does service quality (X3) have a major impact on customer satisfaction with E-HRM (Y2)? Does system utilization (Y1) have a big impact on how happy users are with the E-HRM (Y2)? Does system use (Y1) have a major impact on the effectiveness of the E-HRM system (Y3)? Does E-HRM system success (Y3) significantly depend on E-HRM user happiness (Y2)?

METHODS

Employees of the Indonesian company ESQ Group in Jakarta participated in the survey. System quality (X1), information quality (X2), service quality (X3), system utilization (Y1), satisfaction (Y2), and E-HRM system success are the six indicators used in this sort of quantitative study (Y3). The population and sample are determined using the Hair formula, and the score is calculated using the Likert scale:

Minimum sample size = Number of indicators x 5

Additionally, there are 26 indicators, multiplied by 5 to get a minimum sample size of 130. Conducting data analysis in this study using SmartPLS 4.0 software, using inferential statistical analysis with six steps of structural equation modeling (SEM), which will be assessed descriptively.

RESULTS AND DISCUSSION

In the SEM test, there are at least 3 steps of analysis, namely: (1) testing the relationship between indicators and latent or construct variables (the outer model or measurement model); (2) testing the relationship between latent or construct variables (the structural model); and (3) testing the compatibility model. The results of the calculations on the construct validity and reliability tests are shown in Figure 1 below, which is the result of running the outer model test (measurement model).

Figure 1 below shows the results of the construct validity and reliability tests. Questions or indicators with a loading factor value of 0.7 will be excluded from the model when testing their validity (Hair et al., 2014). In Figure 1, it can be seen that the first running output shows that there is a loading factor value of 0.7, which will then be excluded from the model one by one, namely: λY1.3.3 = 0.567 and λY1.41.4 = 0.642. After running three times, the external model is obtained, which contains all indicators with a loading factor value of > 0.7.

The influence analysis between latent and construct variables in the SEM model is nothing more than testing the structural model in path analysis. In the inner model, the research hypotheses will be proven. In this study, the analysis used bootstrapping using SmartPLS software. The results of running calculations with Bootstrapping are shown in Figure 2 below, and the results of several stages of the analysis are explained below.

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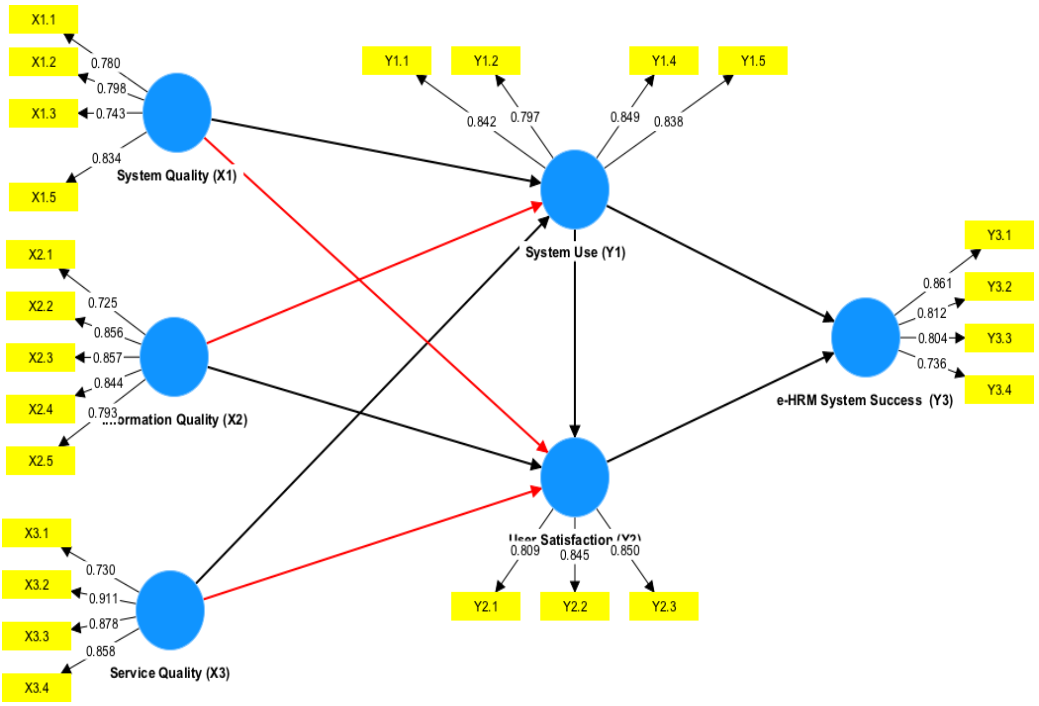

Figure 1. Test the validity and reliability of the construct

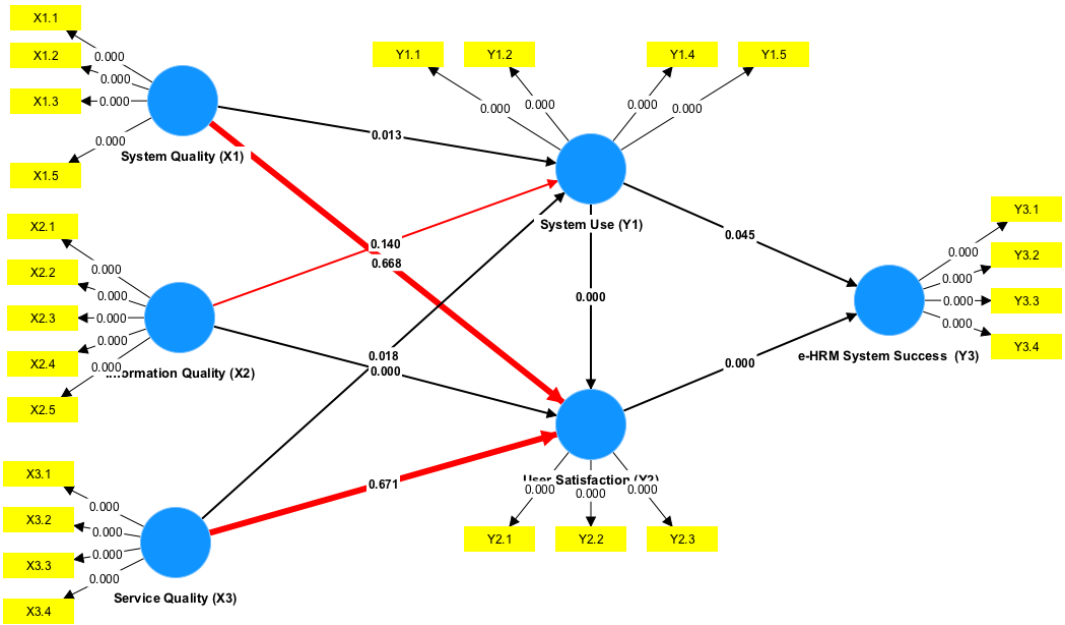

Figure 2. Research Hypothesis Test (Inner Model Test)

To complete the analysis in this study, the authors display a table of hypothesis test results. This can be seen in table 1.

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Table 1: Hypothesis Test Results

	Original sample (O)	Average sample (M)	Standard deviation (STDEV)	T statistic (|O/STDEV|)	P_values	Information
System Quality (X1) → System Use (Y1)	0.222	0.221	0.089	2.490	0.013	Accepted
System Quality (X1) → User Satisfaction (Y2)	0.022	0.020	0.052	0.429	0.668	Rejected
Information Quality (X2) → System Use (Y1)	0.247	0.245	0.168	1.475	0.140	Rejected
Information Quality (X2) → User Satisfaction (Y2)	0.794	0.798	0.068	11.613	0.000	Accepted
Service Quality (X3) → System Use (Y1)	0.363	0.366	0.153	2.376	0.018	Accepted
Service Quality (X3) → User Satisfaction (Y2)	-0.029	-0.027	0.067	0.425	0.671	Rejected
System Use (Y1) → User Satisfaction (Y2)	0.213	0.209	0.054	3.934	0.000	Accepted
System Use (Y1) → e-HRM Sustem Sucess (Y3)	0.193	0.193	0.096	2.006	0.045	Accepted
User Satisfaction (Y2) → e-HRM Sustem Sucess (Y3)	0.651	0.653	0.086	7.592	0.000	Accepted

Source: Data processed, 2022

Shown in Table 1 above is the calculation result of bootstrapping to test the inner model, which describes the research hypotheses in the SEM model simultaneously. The results of the path analysis explaining the direct effects of one construct on another are as follows:

1) H1: System quality (X1) has a significant effect on system use (Y1) with a p-value of 0.013. So the first hypothesis is proven.
2) H2: System quality (X1) has no effect on user satisfaction (Y2) with a p-value of 0.668. So the second hypothesis is not proven.
3) H3: Information Quality (X2) has no significant effect on System Use (Y1) with a p-value of 0.140. So the third hypothesis is not proven.
4) H4: Information quality (X2) has a significant effect on user satisfaction (Y2) with a p-value of 0.000. So the fourth hypothesis is proven.
5) H5: Service quality (X3) has a significant effect on system usage (Y1) with a p-value of 0.018. So the fifth hypothesis is proven.
6) H6: Service quality (X3) has no significant effect on user quality (Y2) with a p-value of 0.671. So the sixth hypothesis is not proven.
7) H7: System use (Y1) has a significant effect on user satisfaction (Y3) with a p-value of 0.000. So the seventh hypothesis is proven.
8) H8: System use (Y1) has a significant effect on the E-HRM Success System (Y3) with a p-value of 0.045. So the eighth hypothesis is proven.
9) H9: User satisfaction (Y2) has a significant effect on the E-HRM Success System (Y3) with a p-value of 0.000. So the ninth hypothesis is proven.

Model Fit Testing

At the stage of testing the suitability of the model, there are five kinds, among others, by looking at the coefficient of determination (R square), f square, q square, the standardized root mean square residual (SRMR), and the NFI value. In this paper, researchers only

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used two model fit tests, namely R square and SRMR. The initial stage of testing the suitability of the model is to determine the value of the coefficient of determination (R square). The results of calculating R2 are shown in Table 2 below.

Table 2. The coefficient of determination (R square)

Variable Names	R-square	Adjusted R-square
System Use (Y1)	0.593	0.583
User Satisfaction (Y2)	0.902	0.899
e-HRM Sustem Sucess (Y3)	0.658	0.652

Source: Data processed, 2022

Table 2 shows that there is a significant effect.

1) System Quality (X1) → System Use - Accepted, Information Quality (X2) → System Use (Y1) - Rejected, and Service Quality (X3) → the value of the coefficient of determination, R^2 = 0.593 (59%), indicates system acceptance (Y1).
2) Similarly, there is a significant influence System Quality (X1) → User Satisfaction (Y2) - Rejected, Information Quality (X2) → User Satisfaction (Y2) - Accepted, and Service Quality (X3) → User Satisfaction (Y2) - Rejected, and System Use (Y1) → User Satisfaction (Y2) - Accepted are indicated by the coefficient of determination, namely R^2 = 0.902 (90%)
3) Then system use (Y1) → e-HRM system success (Y3) - accepted and user satisfaction (Y2) → e-HRM system success (Y3) - accepted are indicated by the value of the coefficient of determination, namely R^2 = 0.658 (65%).

With R squared: system use (Y1) of 59%, user satisfaction (Y2) of 90%, and e-HRM system success (Y3) of 65%, it indicates that the model developed meets the requirements of this study. The final step is to look at the standardized root mean square residual (SRMR) value. The calculation of the SRMR value is shown in Table 3 below.

Table 3. SRMR values in the model

	Saturated model	**Model estimates**
SRMR	0.098	0.098
d_ULS	2.865	2.905
d_G	not available	not available

Source: Data processed, 2022

The value that describes the model's mismatch based on the residuals is known as the SRMR value. Therefore, the model is better and more accurate the smaller the SRMR value. If the SRMR value is 0.08, the model is considered to be fit; if it is between 0.08 and 0.10, the model is said to be marginal; and if it is greater than 0.10, the model is said to be bad (unsuitable) (Garson, 2016: 68). Given that the fit model is marginal and acceptable, Table 3's SRMR value of 0.098, which falls between 0.08 and 0.10, indicates.

After going through the process of testing the relationship between indicators and latent variables, testing the relationship between latent variables, and testing the fit of the model,

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a final model that fits simultaneously has been found. As explained above, there are nine hypotheses tested in the analysis of the successful adoption of the E-HRM system.

1) Influence of system quality (X1) on system use (Y1). The results of hypothesis testing have proven that there is a significant relationship between the effect of the variable Effect of System Quality (X1) on System Use (Y1). This can be seen from the magnitude of the power of influence of 0.013 divided by the influence of other variables. From these findings, it can be said that hypothesis 1 strengthens the previous theory edited by the author, namely the Delone and Mclean Updated Model, and thus this hypothesis is very feasible to be used in subsequent studies. Furthermore, it also provides an explanation of how companies can encourage the success of system adoption through the variables of system quality and system use.
2) Effect of System Quality (X1) on User Satisfaction (Y2). The results of hypothesis testing have proven that there is no significant effect of the system quality variable (X1) on user satisfaction (Y2), with a p-value of 0.668. It can be said that in this study, the effect of system quality (X1) on user satisfaction (Y2) is the second-weakest influence. For this reason, even though this is not in accordance with the model used, it can at least be interpreted that the information system should be of high quality, so that it can be said that the current information system in a given way must be of high quality.
3) Effect of Information Quality (X2) on System Use (Y1). The results of hypothesis testing have proven that there is no significant relationship between the information quality variable (X2) and system use (Y1). This can be seen from the magnitude of the power of influence of 0.140 divided by the influence of other variables. This finding illustrates that information quality does not have a significant effect on system use or the success of system adoption. This can be interpreted as a shift in the influence of the model used. Therefore, the quality of the information should be good because this is a basic need.
4) Effect of Information Quality (X2) on User Satisfaction (Y2). The results of hypothesis testing have proven that there is a significant effect of the information quality variable (X2) on user satisfaction (Y2). This can be seen from the magnitude of the power of influence of 0.000 divided by the influence of other variables. The factor loading test value for each variable shows a value of > 0.7 and a path coefficient value of 0.000, so the tested variable is valid. This finding illustrates that information quality has an influence on system adoption through user satisfaction. Given that user satisfaction is an important variable related to system adoption, these findings strengthen the TAM and UTAUD models used in this study. So that the existence of this hypothesis can be used as a reference for subsequent research.
5) Effect of Service Quality (X3) on System Usage (Y1). The results of hypothesis testing prove that there is no significant effect of the service quality variable (X3) on system use (Y1). This can be seen from the magnitude of the power of influence of 0.018 divided by the influence of the variables. This finding illustrates that service quality has a strong influence on system use in a successful E-HRM system.

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6) Effect of Service Quality (X3) on User Satisfaction (Y2). The results of hypothesis testing prove that there is no significant effect of the service quality variable (X3) on user satisfaction (Y2). In the factor loading test, each variable indicator of service quality and user satisfaction shows a value > 0.7, so the variable is valid. However, in the variable model compatibility test, it shows a path coefficient value of 0.671, which is divided by the influence of other variables. In the test of this variable, it shows that this variable is weak in determining the picture that service quality has a weak influence on user satisfaction in a successful E-HRM system.

7) Effect of System Use (Y1) on User Satisfaction (Y2). The results of hypothesis testing prove that there is a significant effect of the system use variable (Y1) on user satisfaction (Y2). This can be seen from the magnitude of the power of influence of 0.000 divided by the influence of other variables. In the system usage variable factor loading test, it shows a value of > 0.7 with a path coefficient value of 0.000. In addition, through the model fit test, the relationship between the influence of the variables System Use and User Satisfaction shows a value of 90%, which means the hypothesis of the variable System Use and User Satisfaction has a real and strong influence in illustrating how System Use influences the E-HRM system's success.

8) Effect of System Use (Y1) on a Successful E-HRM System (Y3). The results of testing the hypothesis prove that there is a significant effect of the system use variable (Y1) on E-HRM system success (Y3). This can be seen from the magnitude of the power of influence of 0.045 divided by the influence of other variables. The results of the factor loading test for each variable indicator of system use and the E-HRM success system show a value of > 0.7 and a path coefficient value of 0.045,, so that the variable hypothesis is valid. The value of the model fit test showsannumber ofo58%,8%,his hypothesis variable shows a strong influence that the use of the system has onhe system and the successandl adoption of the E-HRM system.

9) Effect of User Satisfaction (Y2) on E-HRM System Success (Y3). The results of hypothesis testing prove that there is a significant relationship between the real influence of the user satisfaction variable (Y2) and the success of the E-HRM system (Y3). The test results for the loading factor values for each variable indicator of user satisfaction and the E-HRM Success System show a value > 0.7 and a variable coefficient value of 0.000, so that the variable is valid. The results of the model fit test also show a value of 65%. This finding illustrates that user satisfaction has an influence on system use and the successful adoption of the E-HRM system.

CONCLUSION

Information quality, service quality, user happiness, and the E-HRM Success System are other variables' findings that can still be applied to more study without altering the construct indicators. Additionally, there are two variables with erroneous variable indicators, namely the variable indicators X1.4 is an E-HRM, which promptly responds to my inquiries, and Y1.3 is a E-HRM, which enhances my performance at work, where these indicators fail to yield results when tested using an inner test model. Furthermore, System Quality (X1) on User Satisfaction has a coefficient of determination of 90%,

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indicating that it has a value for the influence of the relationship between the main factors when assessed using a model. It is advised to take into account the fact that although the E-HRM system has been implemented, users perceive it as something that is indeed helpful in assisting the HR management process, it has not yet reached a satisfactory level. As a result, the agency continues to review the system's quality and infrastructure to ensure that its use is maximized, but at the same time, it is also necessary to improve the quality of human resources and policies for users with different types of needs. It is advised that additional research look into other variables that may have the ability to affect the success of adopting the E-HRM system because the coefficient of determination of the system's use variable only reached R^2 = 59%.

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