User Technology Readiness and Acceptance of Mobile Human Resources Information Application

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ABSTRACT

The Mobile Human Resource Application was developed to provide convenience for users. However, in the implementation phase, they have not been used by all users. There are several reasons users do not use the application, namely, employees often forget because they are not ready to use new applications, employees often fail to absent because there are some bugs at the beginning of implementation where the support team is not ready to help users and the employees' insecurity when making a presentation using the face and location. The purpose of this study is to conduct empirical testing of the factors that influence the readiness and acceptance of users of the Mobile Human Resources Application. The Technology Readiness and Acceptance Model (TRAM) integrates technology readiness with technology acceptance into one model. TRAM is used to determine the effect of technology readiness on acceptance of the perceived ease of use factor and perceived usefulness will affect the intention to use. The result of the study showed that the Innovativeness and Perceived Ease of Use significantly influenced user technology readiness and acceptance of mobile human resources information application. Innovativeness dimensions of technology readiness have positive and significant effects on perceived ease of use. Perceived ease of use dimensions of technology acceptance has positive and significant effects on perceived usefulness and intention to use Mobile Human Resources.

Keyword: Readiness, acceptance, mobile human resources, innovativeness, technology readiness and acceptance model

1. Introduction

The development of mobile technology provides the potential for the development of information systems to expand access. Higher individual mobility will require more dynamic devices in carrying out activities. Human Resources (HR) is one of the important elements in an organization. HR needs to be managed effectively and efficiently to support the success of the organization. The HR division is often so busy with routine administrative tasks that they neglect to consider important things to come. Good human resource management will improve organizational performance[1]. Human Resource Information System significantly verifies the function of human resources and provides opportunities for HR professionals to increase their contribution to corporate strategy [1]. Human Resource Information System supports the effectiveness, efficiency, and competitiveness of companies[2].

The Human Resources Information System (HRIS) is growing rapidly with the existence of cloud and mobile-based HRIS products. HRIS is in the phase of 'The Cloud and Mobile Technologies' In this phase, there is a need for cloud based HRIS which can be accessed via mobile devices [3]. The HR - Mobile application was developed to make it easier for employees to carry out activities related to human resource management activities [4]. The convenience provided by the mobile-based system is expected to encourage the effectiveness of the HRIS application. The mobile platform is the main driver of HR Management innovation that will be able to improve operational activities, and processes and empower the short and long-term development goals of the company [5]. This is in line with the results of previous research conducted by [6].

An Information Technology Consultant Company has HRIS products and developed a mobile-based HRIS application which is expected to provide added value to meet user needs. Presence using mobile is the initial feature that was developed because this feature is very much needed by companies to perform employee attendance and leave in real-time during the Covid-19 pandemic.

Based on interviews with the Human Resources division stated that the Mobile Human Resources application has not been used by all employees in this one year. There are several reasons employees do not use the Mobile Human Resources application, namely, employees often forget because they are not ready to use new applications, users often fail to be absent because there are face recognition problems at the beginning

of implementation where the support team is not ready to help users, but these obstacles have been fixed by the technical team, the user's insecurity when making a presentation using the face and location, as well as the reluctance of employees because there are no regulations from the company that requires attendance using the Mobile Human Resources application.

These problems make the application not used by all employees so an analysis of the readiness to accept applications is needed from user perceptions based on the problems that occur. Are there other factors that affect the readiness and acceptance of users in the use of Mobile Human Resources? The dimensions of optimism and innovation on technology readiness had a positive effect on perceived usefulness and perceived ease of use, but discomfort and insecurity dimensions did not have a positive effect on them [7].

The implementation of Mobile Human Resources in human resource management is one of the factors that supports the company's transformation process [4]. Mobile Human Resources Application was built to make it easy for employees to carry out staff-related activities, especially during the current COVID-19 pandemic where employees work from home. This research will analyze the effect of user readiness on the acceptance of Mobile-based Human Resources Applications uses the Technology Readiness and Acceptance Model (TRAM) model developed by[8].

Research conducted by [7] showed that the optimism and innovativeness dimensions of technology readiness had a positive effect on perceived usefulness and perceived ease of use, but the discomfort and insecurity dimensions had no positive effect on them. Optimistic, innovative, safe but uncomfortable with technology. Furthermore, all treatment variables have a significant impact on perceived ease of use, and perceived usefulness is significantly influenced by optimism. User convenience and usability variables influence the user's intention to use Mobile Electronic Medical Records[9].

The factors that influence HR professional resistance, and the result is that regret avoidance, inertia, switching costs, and perceived threats affect resistance [6]. In previous studies, only a few have conducted research on the readiness and acceptance of mobile-based human resource applications. Therefore, this research will examine the readiness and acceptance of users of mobile-based human resources applications. The purpose of this study is to conduct empirical testing of the factors that influence and most influence the readiness and acceptance of users of the Mobile Human Resources Application.

2.   Research Method

The study takes the population of mobile-based Human Resources Application in Information Technology Consultant Company. The type of data used was subject data (self-report data), namely the type of research data in the form of opinions, attitudes, experiences, and characteristics of a person or group of people who were research subjects/respondents. Data collection was carried out by distributing questionnaires to respondents. Questionnaires were created using Google Forms and distributed via the WhatsApp Group.

Technology Readiness is the tendency of people to adopt new technologies to achieve personal goals or at work[10]. Technology readiness will affect the acceptance of technology and information systems. One of the methods used to test the user's readiness to implement the new system is TRI (Technology Readiness Index). The optimism component shows a favorable attitude toward technology and beliefs of its benefits in enhancing job efficiency and improving one's performance at work and at home. A favorable attitude toward technology and an understanding of the benefits of technology in promoting job efficiency and performance[11]. The innovativeness factor relates to a person's willingness to experiment with technology and to be among the first to try out new technological goods or services. Innovativeness is defined as a natural proclivity to be a technical trailblazer and thinking leader[12]. The discomfort factor indicates a lack of technological expertise and a sense of unease when employing cutting-edge technology. People believe that technology is difficult to utilize because it is sophisticated[13].

Davis introduced the Technology Acceptance Model (TAM) in 1989. The purpose of TAM is to explain the general determinants of computer acceptance that can explain user behavior over time[14]. TAM developed two factors, namely perceived usefulness, and perceived ease of use, which have major relevance to computer acceptance[15]. Perceived Ease of Use is defined as people's view of utilizing technology that is free of emotional strain and does not need a significant amount of time and effort[16].

TRAM is research that combines TRI and TAM. An analysis of the influence of user readiness on the acceptance of Mobile-based Human Resources Applications will be carried out at Information Technology Consultant Company uses the Technology Readiness and Acceptance Model (TRAM) model developed by [9]. This approach is chosen because it relates to study completed by [9] on nurses' preparedness to use mobile medical record systems. This study proposes the following research model:
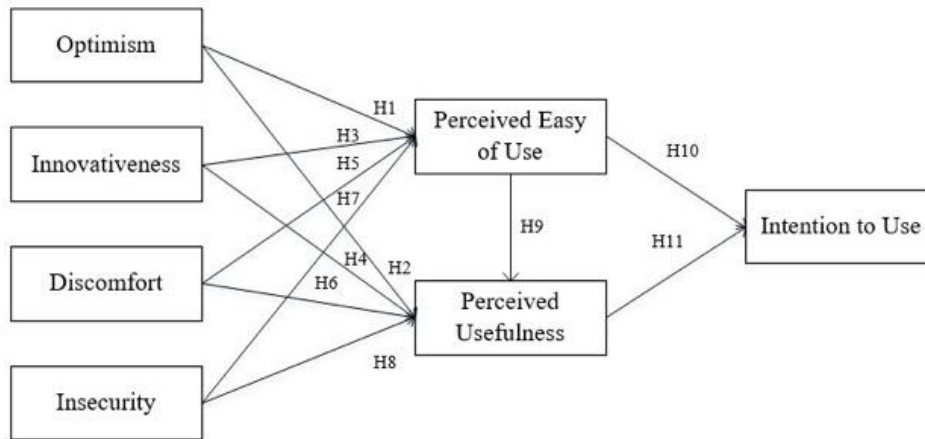
Figure 1 Research Model

Based on the research model, the following eleven hypoteses were constructed. H1, H2, H3, H4, H5, H6, H7, and H8 represent Technology Readiness and H9, H10, and H11 represent Technology Acceptance.
The definition optimism in this study as a positive feeling or perception conducted by users towards the adoption of Human Resource Applications. Optimism is as a favorable attitude toward technology and the assumption that technology gives them more control, flexibility, and efficiency in their life [17]. An optimistic person will see technology as useful and easy to use because they are not bothered by the negatives of technology [9].

H1 Optimism positively and significantly influences Perceived Ease of Use
H2 Optimism positively and significantly influences Perceived Usefulness

The author defines innovativeness as someone who is a technological leader. Users which are already willing to try new things will be eager to adopt HRIS mobile. Innovativeness is the human tendency to be a successor among turning technology users and concept leaders [17]. People with high levels of inventiveness, on generally, have a good perception of the usefulness of new technology [18].

H3 Innovativeness positively and significantly influences Perceived Ease of Use
H4 Innovativeness positively and significantly influences Perceived Usefulness

The author's discomfort is characterized by the assumption that technology works magnificently in regulating it. Users who are anxious will be less inclined to use the Mobile Human Resources Application. Discomfort is the perception that technology cannot be controlled so that users will be overwhelmed [17]. Someone who has a high discomfort with technology because they consider the technology to be complex because it is less easy to use [18].

H5 Discomfort positively and significantly influences Perceived Ease of Use
H6 Discomfort positively and significantly influences Perceived Usefulness

The authors describe insecurity as a user's feeling of uncertainty when using Mobile Human Resources. Insecurity is an attitude of distrust of technology because the technology cannot work properly, and one is worried about the potential dangers of using technology [17]. The main barriers to technology acceptance are security and privacy issues. This will result in suspicion it will reduce the level of perception of use [18].

H7 Insecurity positively and significantly influences Perceived Ease of Use
H8 Insecurity positively and significantly influences Perceived Usefulness

The researchers defined Perceived Ease of Use in this study as user impressions of the ease of use of Mobile Human Resources Application. Perceived ease of use is one of the factors of success in mobile satisfaction in the cellular industry [19]. Perceived Usefulness clearly shows or pinpoints the variables that influence actual use and intention to continue using technology [20].

H9 Perceived Ease of Use positively and significantly influences Perceived Usefulness

The Technology Acceptance Model demonstrates that perceived ease of use and perceived usefulness both influence an individual's behavioral intention to use technology [14].

H10 Perceived Ease of Use positively and significantly influences Intention to Use
H11 Perceived Usefulness positively and significantly influences Intention to Use

The variable intention to use is used by researchers because the Mobile Human Resources application will later be marketed so it is necessary to know what factors can influence the intention to use the Mobile Human Resources application.

3.   Result and Analysis

The questionnaires were obtained from 49 Information Technology Consultant Company who use the Mobile-based Human Resources application. The analytical method used in this study is Structural Equation Modeling (SEM) - Partial Least Square (PLS). The author designed a model based on using SmartPLS software version 3.3.7 which is known as the path model. The use of SmartPLS software version 3.3.7 is used to help test the validity, reliability, and hypotheses of the data that has been collected.

3.1 Measurement Model

This study will test the validity of the data by comparing the value of convergent validity on the Average Variance Extracted (AVE) value and the value of the loading factor.

Table 1 Average Variance Extracted (AVE)

Variable	Average Variance Extracted (AVE)	Standard	Result
Optimism	0,764	0,50	Valid
Innovativeness	0,672	0,50	Valid
Discomfort	0,711	0,50	Valid
Insecurity	0,640	0,50	Valid
Perceived Ease of Use	0,714	0,50	Valid
Perceived Usefulness	0,759	0,50	Valid
Intention to Use	0,738	0,50	Valid

The results of testing the validity of variables using the Average Variance Extracted (AVE) have a value above 0.5 so that all these variables meet the validity test requirements well.

Table 2: Reliability Final Test Result

	Cronbach's Alpha	*Composite Reliability*
Optimism	0,848	0,907
Innovativeness	0,837	0,891
Discomfort	0,664	0,831
Insecurity	0,720	0,842
Perceived Ease of Use	0,866	0,909
Perceived Usefulness	0,891	0,926
Intention to Use	0,646	0,849

Reliability tests were carried out to measure reliability through Composite Reliability and Cronbach's Alpha. The indicator has good reliability if it has Composite Reliability values above 0.70 and Cronbach Alpha values above 0.60.

3.2 Structural Model

Evaluation of the structural model is the R-square value which shows the effect of exogenous latent variables on endogenous latent variables. This study consists of three endogenous variables, namely Perceived Ease of Use, Perceived Usefulness, and Intention to Use.

Table 3: R Square Result

Variable	R Square
Perceived Ease of Use	0,470
Perceived Usefulness	0,535
Intention to Use	0,335

Based on Table 3 explains that the Perceived Ease of Use variable has an R square value of 0.470 or 47%. This means that this variable is influenced by the Optimism, Innovativeness, Discomfort, and Insecurity variables by 47% while the remaining 53% is influenced by other variables that are not in this research model. The Perceived Usefulness variable has an R square value of 0.535 or 53.5%. This means that this variable is influenced by the Optimism, Innovativeness, Discomfort, and Insecurity variables by 53.5% while the remaining 46.5% is influenced by other variables that are not in this study. The Intention to Use variable has an R square value of 0.335 or 33.5%. This means that this variable is influenced by the variables Perceived Ease of Use and Perceived Usefulness by 33.5% while the remaining 66.5% is influenced by other variables that do not exist in this study.

The next step is to see the significance of the effect of the independent variable on the dependent variable by looking at the statistical significance value of t and the value of the parameter coefficients. The test was conducted to determine the effect of the independent variable on the dependent variable by looking at the T-Statistics and P-Values values. A variable is said to have a significant effect if the T-Statistic value is more than 1.96 and the P-Values value is less than 0.05.

Based on Table 4, shows that there are eight relationships between variables with a T-Statistic value smaller than the t-table value and a p-value greater than 0.05, namely Optimism towards Perceived Ease of Use, Optimism against Perceived Usefulness, Innovativeness to Perceived Usefulness, Discomfort to Perceived Ease of Use, Discomfort to Perceived Usefulness, Insecurity to Perceived Ease of Use, Insecurity to Perceived Usefulness, and Perceived Usefulness to Intention to Use. Thus, the relationship between the exogenous latent variable and the endogenous latent variable is not significant.

Table 4: T – Statistic and P Values Result

	T - Statistic	P - Values
Optimism → Perceived Ease of Use	1,336	0,182
Optimism → Perceived Usefulness	0,627	0,531
Innovativeness → Perceived Ease of Use	3,339	0,001
Innovativeness → Perceived Usefulness	1,130	0,259
Discomfort → Perceived Ease of Use	0,132	0,895
Discomfort → Perceived Usefulness	0,873	0,383
Insecurity → Perceived Ease of Use	0,943	0,346
Insecurity → Perceived Usefulness	0,571	0,568
Perceived Ease of Use → Perceived Usefulness	2,918	0,009
Perceived Ease of Use → Intention to Use	2,605	0,004

	T - Statistic	*P - Values*
Perceived Usefulness → Intention to Use	0,575	0,566

Based on the results of the analysis of 11 hypotheses from the research model using SmartPLS, it was found that three hypotheses were positively and had a significant effect. The remaining eight hypotheses were rejected and had no significant impact on the readiness and acceptability of the Mobile-based Human Resources application at Information Technology Consultant Company. According to the findings, the aspect that determines the readiness and adoption of The Mobile Human Resources Application is its innovativeness and perceived ease of use.

Table 5: Result

Relationship	*Conclusion*
Optimism → Perceived Ease of Use	H1 Not Significant
Optimism → Perceived Usefulness	H2 Not Significant
Innovativeness → Perceived Ease of Use	H3 Significant
Innovativeness → Perceived Usefulness	H4 Not Significant
Discomfort → Perceived Ease of Use	H5 Not Significant
Discomfort → Perceived Usefulness	H6 Not Significant
Insecurity → Perceived Ease of Use	H7 Not Significant
Insecurity → Perceived Usefulness	H8 Not Significant
Perceived Ease of Use → Perceived Usefulness	H9 Significant
Perceived Ease of Use → Intention to Use	H10 Significant
Perceived Usefulness → Intention to Use	H1 Not Significant

4.   Conclusion

The purpose of this study was to conduct exploratory research in a small IT company to determine employee technology readiness and to analyze whether the four Technology Readiness personality factors, including optimism, innovativeness, discomfort, and insecurity, are associated with employee perceptions of the ease of use and usefulness of Mobile Human Resources, and influence employee intentions toward Mobile Human Resources use.

The innovativeness and readiness dimensions of technological readiness have a positive and significant impact on perceived ease of use. Perceived usefulness and intention to use Mobile Human Resources are positively and significantly influenced by the perceived ease of use components of technology acceptance.

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