

Impact of Factors on the Application of Human Resource Management Software (HRM) in Insurance Business in Vietnam

Nguyen Zen Nguyen, Bich Hong Hoang, Thi Xuan Huong Le, Thi HuongTram Le, Minh Tu Pham
(University of Labour and Social Affairs, Vietnam)

Abstract: HRM (Human Resource Management) is the human resource management software in enterprises. HRM is considered an important and necessary tool for integration, but so far, the use of this software in Vietnamese insurance enterprises is still very low. With 170 valid questionnaires, the author conducted Cronbach's Alpha analysis for the scale. The results of multivariate regression and ANOVA show that all four components: Trust, perceived usefulness, perceived ease of use, and implementation cost affect the intention to use HRM software in Vietnamese insurance enterprises. The research team has also determined that these factors have a positive impact on the intention to use HRM in enterprises at different levels. The analysis results have served as a basis for proposing recommendations such as raising awareness about HRM software, changing the mindset of the leadership, or focusing on training human resources to use software that should be given top priority.

Key words: insurance enterprises; intention; HRM; Vietnam

JEL code: G200

1. Rationale

Management and development of high-quality human resources in insurance enterprises are facing two difficulties: shortage of qualified human resources, and ineffective talent retention policies and methods. The recruitment of non-professional human resources, in addition to incurring many costs such as knowledge training cost and soft skills development cost, has a lower attachment likelihood of employees who work in different fields than their majors compared to those who work in the fields similar to their majors. The situation in which qualified and highly appreciated human resources in insurance enterprises change their jobs after a period of attachment is quite common nowadays. Development of a fair remuneration and capacity assessment mechanism for human resources is one of the effective measures in management and also an urgent issue that needs to be implemented in enterprises. Human resource management (HRM) software applies technology that helps enterprises manage their human resources comprehensively and professionally, from building organizational

Nguyen Zen Nguyen, MA, University of Labour and Social Affairs; research area: insurance economics. E-mail: zennguyen89@gmail.com.

Bich Hong Hoang, Dr, University of Labour and Social Affairs; research area: insurance economics. E-mail: hoangbichhong.ulsaa@gmail.com.

Thi Xuan Huong Le, MBA, University of Labour and Social Affairs; research area: insurance economics. E-mail: lexuanhuong.ldxh@gmail.com.

Thi Huong Tram Le, Mac, University of Labour and Social Affairs; research area: accounting. E-mail: Huongtramle@gmail.com

Minh Tu Pham, MA, University of Labour and Social Affairs; research area: information technology.

structure, managing HR records, recruiting, training, to assessing human resources through KPIs... HR information is shown specifically through specific reports to help HR departments and enterprise owners have appropriate strategies for their enterprises. Although HRM brings many benefits in human resource management, so far, many insurance enterprises have not yet put this support tool into serving human resource management at their enterprises. So, what factors affect the application of HRM software in Vietnamese insurance enterprises today?

2. Theoretical Foundations and Research Hypotheses

2.1 Theoretical Foundations

Today, the role of human resource management is increasingly important because of the fierce competition and the increasing skills level of employees. Gray matter, knowledge, and experience of these employees will be a decisive factor for the competitiveness of enterprises and also a challenge for managers to create favorable conditions and environment for this team to develop and devote. Along with the development of information technology, HRM software was born to better support enterprises in managing enterprise resources. HRM provides basic functions such as developing human resource strategy, recruiting the right people, for the right positions, managing, evaluating and rating employees, building, developing and retaining talented people, complying with labor laws and handling labor disputes. Recognizing the advantages of HRM software, many Vietnamese enterprises have applied and achieved many positive results. Although the benefits of using a HRM software solution have been proven in many enterprises, the implementation of HRM software depends on many factors. In addition to the implementation costs such as operation and user training, the application degree of enterprises also greatly affects the royalty fee. Furthermore, there is an influence of the users themselves, for example, they do not want to absorb new applications or have not attached great importance to the development of information technology.

In 1989, Davis introduced the Technology Acceptance Model (TAM) under the influence of perceived ease of use and perceived usefulness of technology on attitudes towards technology use. TAM is based on the Theory of Reasoned Action (TRA) described by Fishbein & Ajzen (1975) and the Theory of Planned Behavior (TPB) proposed by Ajzen (1991). To apply the technology acceptance model in research, we need to consider whether the components are suitable or not. According to Davis, perceived usefulness is the degree to which a person believes that using a particular technology would enhance his/her job performance. Accordingly, he also divided these statements into three groups: efficiency, productivity, and the importance of system to job. Next, the perceived ease of use factor is defined as the degree to which a person believes that using a particular technology would be free from effort, and he also identified it through three groups of factors including physical effort, mental effort, and expectation about personal experience that enables ease of use of the system.

HRM system is a kind of management software solution and an electronic technology product. Therefore, it is appropriate to apply TAM to study the factors affecting the application of HRM software in Vietnamese insurance enterprises. According to Davis, the intention that shapes the use of a technology product is based on trust, perceived usefulness, and perceived ease of use. The degrees of impact and proposed hypotheses are as follows:

Impact of trust. According to Yousafzai et al. (2003) in their study of e-trust model, the higher the trust, the lower the perceived risk, and users will have a positive view of the electronic system. If users do not have the trust,

the use of HRM software will not occur. The first hypothesis (H1) is proposed as follows: When trust is assessed to increase or decrease, the intention to use HRM software in Vietnamese insurance enterprises will increase and decrease correspondingly.

Impact of perceived usefulness. Davis argues that perceived usefulness is the degree to which a person believes that using a particular technology would enhance his/her job performance. The second hypothesis (H2) is proposed as follows: When perceived usefulness is assessed to increase or decrease, the intention to use HRM software in Vietnamese insurance enterprises will increase and decrease correspondingly.

Impact of perceived ease of use. According to Davis, perceived ease of use is the degree to which a person believes that using a particular technology would be free from effort. The third hypothesis (H3) is proposed as follows: When perceived ease of use is assessed to increase or decrease, the intention to use HRM software in Vietnamese insurance enterprises will increase and decrease correspondingly.

In addition, the author proposes one more hypothesis, which is the implementation cost. The major problem that still exists in enterprises today is the funding problem. The implementation of HRM software, in addition to large funds, requires enterprises to have appropriately trained human resources. All of these factors require funding. The fourth hypothesis (H4) is proposed as follows: When the implementation cost is assessed to increase or decrease, the intention to use HRM software in Vietnamese insurance enterprises will increase and decrease correspondingly.

2.2 Scale Development

Based on the Technology Acceptance Model (TAM) and additional hypothesis, the author has designed a survey questionnaire to assess the impact of the four factors: trust, perceived usefulness, perceived ease of use, and implementation cost on the intention to use HRM software in Vietnamese insurance enterprises. The scale, after being adjusted according to professional advice of experts implementing HRM software and opinions of surveyed enterprises, includes 16 observed variables. The scale uses 5-point likert with 5 being completely agree, and 1 being completely disagree. The symbol and content of each variable are synthesized by the research team and shown in Table 1.

Table 1 Observed Variables of Factors Affecting the Application of HRM Software in Vietnamese Insurance Enterprises

Scale and symbol	Observed variable name
Trust (TT)	
TT1	HRM is a software that has good security and users do not have to worry about business data leaks.
TT2	Using HRM software brings better efficiency in human resource management of enterprises.
TT3	HRM helps enterprises develop sustainably.
Perceived usefulness (NTHI)	
NTHI1	HRM software helps enterprises manage all human resource operations.
NTHI2	HRM software helps enterprises arrange human resources in the most efficient way.
NTHI3	Using HRM software helps increase operational efficiency of enterprises.
Perceived ease of use (DSD)	
DSD1	Employees can learn how to use HRM software easily.
DSD2	Modules on HRM are clear and easy to understand.
DSD3	Departmental employees can quickly master functional components of HRM.
DSD4	Employees can master the use of HRM software when they see others using it.

Implementation cost (KP)	
KP1	Enterprises focus on investing in quality management of human resources.
KP2	Enterprises always prioritize funding to implement enterprise human resource management software.
KP3	Do you think that the funding for information technology development in enterprises ensures these activities.
Intention to use (YD)	
YD1	HRM software meets the requirements of enterprises' human resource management.
YD2	I will use HRM software in enterprise human resource management.
YD3	I will recommend HRM software to other enterprises.

Source: Construction research team

3. Research Methodology and Scale Development

3.1 Data Collection Methods

Survey samples are taken by convenience method. Primary data is mainly collected by survey method, in which the first part is personal information that will be kept confidential during synthesis and processing, the second part is evaluation and scoring questions, and the last part is open-ended questions for enterprises participating in the survey about ideas to help enterprises apply HRM software. The questions are adjusted to accommodate the content of the study. In parallel with collecting primary data, in order to assess the difficulties and shortcomings in the implementation of HRM software in Vietnamese insurance enterprises, the research team also combines the secondary data collection method. The main sources of information are obtained from the enterprises' website about the application of software in business management.

3.2 Methods of Analyzing Collected Data

Literature review method: Theoretical contents are selectively inherited from research results of published scientific works on contents related to the Technology Acceptance Model (TAM) and human resource management software in HRM enterprises.

Method of analysis and synthesis: The author analyzes and synthesizes data collected from primary and secondary data sources. The article applies quantitative research method. To test the theoretical foundations stated, the study conducted a survey of Vietnamese insurance enterprises. The study used descriptive statistical analysis software SPSS 22.0 to process the collected information.

Scale reliability testing: Based on the Cronbach's Alpha coefficient to detect unreliable indicators in the research process.

Exploratory factor analysis (EFA) aims to dissect and arrange indicators measuring latent concepts and variables.

Multivariate regression analysis and ANOVA aim to evaluate the role of each component in the model.

Processing of data calculating relative numerical indicators aims to specify the factors affecting the application of HRM software in Vietnamese insurance enterprises.

4. Research Results

4.1 Current Status of Application of Human Resource Management (HRM) Software in Vietnamese Insurance Enterprises

Currently, on the commercial insurance market nationwide, as of December 31, 2019, there are 66 insurance enterprises (including 30 non-life insurance enterprises, 18 Vietnamese insurance enterprises, 02 reinsurance enterprises and 16 insurance brokerage enterprises) and 01 branch of a foreign non-life insurance enterprise. Insurance is an industry with a high growth rate compared to other industries, with the average growth rate of the non-life and life sectors of about 15%/year and 20%/year, respectively (According to statistics of the Insurance Association of Vietnam). In addition to the inevitable development due to the stable income of the people and the increasing demand for protection, the development of insurance industry is resulted from the increase of economic, environmental and epidemic instability. Because of the increasing development trend of the market, the problem of human resources working in the fields similar to their majors has not yet been solved, which is becoming increasingly difficult. There is a shortage of qualified and skilled human resources in insurance enterprises more than ever. Technology application in human resource management is an inevitable trend for integration, especially in the era of industrial revolution 4.0. The enterprises that have used HRM in Vietnam are mainly large enterprises and joint ventures or 100% foreign-owned enterprises. The application of HRM software in human resource management is considered an important and necessary tool for sustainable development, but it is still not properly understood and appreciated in insurance enterprises. According to the survey questionnaire results, less than 10% of insurance enterprises use HRM software. The research results presented below will show the impact of each factor on the intention to use HRM software in Vietnamese insurance enterprises.

4.2 Research Results

4.2.1 Scale Reliability Testing

Cronbach's alpha reliability testing is the first step to carry out exploratory factor analysis (EFA). Through processing the survey data, the author synthesized and made a table of scale reliability coefficient testing results. The datas in Table 2 show that the minimum total variable correlation of the components of the scale ensures the level > 0.5 which is suitable for the research purpose. Data on Cronbach's alpha coefficient, if eliminating (the largest) variable, is smaller than the Cronbach's alpha coefficient, ensuring concurrently satisfying both conditions for keeping the observed variables for the following analyses. With the data satisfying the requirements of the above reliability analysis, all variables included in the Cronbach's alpha analysis are kept for the following analyses.

Table 2 Scale Reliability Coefficient Testing Results

No.	Scale	Initial observed variable	Cronbach's Alpha	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Remaining observed variable
1	TT	3	0.909	0.798	0.891	3
2	NTSHI	3	0.929	0.815	0.927	3
3	DSD	4	0.876	0.676	0.862	4
4	KP	3	0.777	0.577	0.740	3
5	YD	3	0.903	0.799	0.869	3

Source: Survey data processing results.

4.2.2 Exploratory Factor Analysis (EFA)

The author performed exploratory factor analysis for each component scale. Table 3 Synthesized results of exploratory factor analysis (EFA) for each scale show that the KMO (Kaiser-Meyer-Olkin) coefficient is > 0.5 for all scales. Next, we can see the value Sig is < 0.05 , which ensures the standard for all the scales of the independent variable components, the total variance explained is greater than 50% as prescribed and all converge on a single

common factor, with all factor loadings being greater than 0.5. After completion of step one of the exploratory factor analyses, we obtain all the observed variables that are eligible to be included in the exploratory factor analysis.

Table 3 Synthesized Results of Exploratory Factor Analysis (EFA) for Each Scale

Scale	KMO coefficient	Sig	Total variance explained	Number of factors eliminated	Number of converging factors
TT	0.752	0.000	85.069	0	1
NTSHI	0.753	0.000	87.512	0	1
DSD	0.759	0.000	72.857	0	1
KP	0.696	0.000	69.264	0	1
YD	0.754	0.000	83.806	0	1

Source: Survey data processing results.

The research has conducted factor rotation, showing that 13 observed variables of the independent variable converge on 4 factors including trust, perceived usefulness, perceived ease of use, and implementation cost. The dependent variable is the intention to use HRM software in Vietnamese insurance enterprises with all factor loadings being greater than 0.5.

4.2.3 Research Model and Hypothesis Testing

To evaluate the connection and impact direction of the group of components including trust, perceived usefulness, perceived ease of use, and implementation cost, the study uses regression analysis method supported by SPSS software. The equation used in this study is a multivariable regression equation, aiming to determine the important role of each component in assessing the relationship between factors and the intention to use HRM software in Vietnamese insurance enterprises.

Based on the linear regression results in Table 4, Adjusted R square = 0.6 (> 0.5) shows that 4 components have an impact on the intention to use HRM software in Vietnamese insurance enterprises. Looking at the regression analysis results, we see that the preconditions for the regression analysis are satisfied. Thus, we can consider the regression analysis results to be reliable. However, this goodness of fit is only true for the sample data. To test whether the model can be inferred for the real population, we must test the model's goodness of fit.

Table 4 Linear Regression Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.780 ^a	.609	.600	.65899	.609	64.248	4	165	.000

a. Predictors: (Constant), KP, TT, NTHI, DSD

b. Dependent Variable: YD

Source: Survey data processing results.

Table 5 OVA Testing

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.604	4	27.901	64.248	.000 ^b
	Residual	71.655	165	.434		
	Total	183.258	169			

a. Dependent Variable: YD

b. Predictors: (Constant), KP, TT, NTHI, DSD

Source: Survey data processing results.

The ANOVA testing results show that the F-test value reaches 64.248 at the significance level $\text{sig} = 0.000 < \alpha = 0.1$. Thus, we reject hypothesis H0, accept hypothesis H1, that is, 4 components of independent variable including TT, NTSHI, DSD, KP, and dependent variable YD have relationship with each other. Therefore, the model fits the data set and can be generalized to the population.

Table 6 Results of Multivariate Regression Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.177	.244		.727	.468		
	TT	.169	.071	.149	2.382	.018	.606	1.649
	NTHI	.369	.063	.399	5.902	.000	.518	1.930
	DSD	.238	.077	.211	3.101	.002	.513	1.949
	KP	.248	.069	.203	3.615	.000	.749	1.334

a. Dependent Variable: YD

Source: Survey data processing results.

The table of regression results shows that the regression coefficients of the factors TT, NTHI, TDSD, and KP all have positive signs and $R = 0.780 > 0$ showing that the components including trust, perceived usefulness, perceived ease of use, and implementation cost have a positive impact on the intention to use HRM software in Vietnamese insurance enterprises. At the same time, the table of regression results also shows that the variance inflation factor VIF is < 2 , which meets the best conditions, proving that we do not have the problem of multicollinearity in this study. Thus, the regression equation for standardized Beta coefficients is as follows:

$$YD = 0.149TT + 0.399NTSHI + 0.211DSD + 0.203KP \quad (1)$$

Based on the Equation (1), we see that the intention to use HRM software of Vietnamese insurance enterprises depends on four factors: trust, perceived usefulness, perceived ease of use, and implementation cost. The results also show that the biggest influencing factor is perceived usefulness. Perceived usefulness increases by 1, then the intention to use increases by 0.399. The second biggest factor influencing the intention to use HRM software is perceived ease of use with a beta coefficient of 0.211. Implementation cost ranks third with a beta coefficient of 0.203, and the last is trust with a beta coefficient of 0.149.

5. Discussion of Results

The development of information technology is pushing enterprises that want to stand firm to constantly enhance the quality of management and improve the production process. HRM is the most comprehensive human resource management tool and solution available today. Therefore, the implementation of HRM in Vietnamese insurance enterprises is absolutely necessary. Based on the survey data results and the assessment of the impact of each factor on the intention to use HRM software in Vietnamese insurance enterprises, the author proposes some recommendations as follows:

First, enterprises providing and consulting HRM need to promote their consultation and introduction to raise awareness and understanding of the HRM system for enterprise leaders and users, helping them understand the benefits of the application of HRM in human resource management. The results from the multivariate regression

model also show that the component that has the greatest impact on the intention to use HRM software in enterprises is perceived usefulness. It can be seen that the survey respondents all said that HRM software has not brought many benefits to enterprises, or in other words, the implementation cost does not bring commensurate efficiency. When enterprises provide software that helps customers realize the real benefits of the application, the intention to use HRM software in Vietnamese insurance enterprises will increase significantly.

Second, it is necessary to change the mindset of enterprise leaders. Due to the short establishment and development time, Vietnamese insurance enterprises lack a lot of things from finance, technology to people. It is these things that make enterprises not choose to invest in information technology first, even though it brings many benefits to enterprises. Currently, these enterprises mainly follow the traditional direction with each department having different software. Therefore, to solve this problem, it needs the determination of the business leadership team. By applying methods such as organizing exchanges on business forums or directly visiting enterprises that have successfully applied HRM software, it will help the leadership team of Vietnamese insurance enterprises have new awareness and thinking about the application of HRM software in management.

Third, it is necessary to train human resources to use HRM proficiently. User training is the most important factor affecting the successful implementation of HRM system in Vietnamese insurance enterprises. Typically, for most software projects, user training is often the last thing to be considered and often one of the first items to be cut down when a project starts to fall behind schedule; however, for HRM projects, enterprises need to avoid this. All users must be trained to take full advantage of the system's capabilities. It is important that users receive training early and regularly throughout the project. If possible, users should also participate in the HRM system commissioning.

Fourth, implementation cost. Although this factor does not have a great impact on the intention to use HRM software in Vietnamese insurance enterprises today, it is also a positive factor. Therefore, the cost-benefit optimization should also be considered. Enterprises need to clearly define the necessary modules when surveying and implementing HRM in enterprises. Accordingly, implementing enterprises should choose a suitable HRM provider that can provide a HRM system with maximum flexibility and ease of customization. In such cases, time and costs can be minimized.

References

- Ajzen I. and Fishbein M. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*, Addition-Wesley, Reading, MA.
- Davis F. D. (1989). "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13, No. 3, pp. 318-330.
- Insurance Association of Vietnam (2020). *Vietnam Insurance Market Data for the First 9 Months of 2020*, Insurance Association of Vietnam, Hanoi, Vietnam
- Insurance Supervisory Authority (2019). *Vietnam Insurance Forum and Exhibition 2019*, Insurance Supervisory Authority, Ministry of Finance, Hanoi, Vietnam.
- Ministry of Finance (2020). *Insurance Market Overview in 2020*, Ministry of Finance, Hanoi, Vietnam Ministry of Finance (2020).