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# **Factors Influencing the Intention of Leaders to Use HRIS Software in Small and Medium-Sized Enterprises**

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## **Abstract**

**Purpose:** This study aims to identify the factors that influence the intention of small and medium-sized enterprise (SME) leaders in Hanoi to use human resource information system (HRIS) software.

**Design/methodology/approach:** The quantitative research method with a sample size of 416 SME leaders, combined with the Theory of Planned Behavior (TPB), Theory of Reasoned Action (TRA), Task-Technology Fit Acceptance Model (TTF-TAM), and Task-Technology Fit Unified Theory of Acceptance and Use of Technology (TTF-UTAUT) models.

**Findings:** The research results show five leading factors that affect SME leaders' intention to use HRIS: perceived usefulness, perceived ease of use, Social influence, facilitating conditions, and Task-technology fit. HRIS software companies can use the research findings to develop marketing and sales strategies focusing on the factors that drive SME leaders' intention to use HRIS.

**Originality/value:** SME leaders can use the research findings to better understand the factors that influence their intention to use HRIS software and make informed decisions about adopting HRIS. Effective HRIS adoption can help SMEs improve their HR management efficiency and increase productivity and profitability. This study narrows the gap in understanding the factors influencing SME leaders' adoption of HRIS, providing valuable insights for software companies to address management skepticism and promote HRIS usage in SMEs. The integrated approach of combining different theoretical models and focusing on the specific context of SMEs in Hanoi is a novel and unique feature of this study.

**Keywords:** Human Resource Information System (HRIS), Intention to Use, Leaders, Small and Medium-sized Enterprises (SMEs), Technology Acceptance Model.

**JEL Classifications:** C01, C12, C51, C83, D22, H32, L25, M12, O15

## 1. Introduction

The advancement in the use of information technology in the past decades has revolutionized the business environment (Amoako et al., 2022). Information technology is a driving force for developing all sectors and fields of social life. Thanks to information technology, a series of scientific, industrial, and service sectors have developed accordingly, allowing businesses to solve development problems and overcome difficulties and bottlenecks in the management and operation of organizations.

Information technology not only plays a leading role in breaking through the construction of economic and social infrastructure but also contributes significantly to administrative reform, institutional reform, human resource development, improving living standards, cultural development, information transparency, and social fairness. It is apparent that the current wave of technological advancement has revolutionized all aspects of life, and the human resources industry is no exception to this general trend. The application of information technology in human resources management has given rise to various HRIS solutions (Hendrickson, 2003).

In recent years, HRIS has garnered the attention of many experts, researchers, and organizations. Therefore, managers and leaders in various organizations have realized the need to use technology to improve the effectiveness of their human resources functions (Lengnick-Hall & Moritz, 2003). HRIS is not only designed to automate HRM activities to achieve administrative advantages (Ngai & Wat, 2006) and improve employee behavioral outcomes (Ololade et al., 2023) but also to improve decision-making and support competitiveness (Haines & Petit, 1997).

In addition, HRIS provides data on employee turnover rates, quality of work, and development potential. This data allows leadership to establish a basis for adjusting goals and tailoring activities to the specific personnel structure of different departments across various periods. A study by Beadles et al. (2005) shows that 90% of HR managers are satisfied with the system, and 80% believe that their HR staff are also satisfied (Beadles et al., 2005).

HRIS is being implemented in many organizations around the world, but like other technologies, translating their potential benefits into improvements can be a challenge (Tursunbayeva et al., 2020), especially since this type of software is not yet widely known in Vietnam. Information technology projects like HRIS can fail because they can be time-consuming, financially draining, or receive a lackluster commitment from senior leaders and managers (Ngai & Wat, 2006). Therefore, senior management support is the most important aspect of the overall success of the HRIS plan (Ololade et al., 2023).

In Vietnam, Hanoi is one of the cities that has made the most significant contributions to the economy. Most enterprises in the capital are small and medium-sized, generating substantial tax revenue and many jobs, making an essential contribution to the country's GDP. However, SMEs in Hanoi face many problems related to human resource management with conventional management practices, resulting in inefficient use of the enterprise's resources (Nguyen et al., 2019). Putting this issue in the context of digital transformation being an inevitable trend worldwide, it is clear that the management of SMEs in Hanoi

needs to adopt practical technology innovations to address the ongoing issues and streamline human resource management tasks, thereby improving the competitive advantage of their businesses. Moreover, with its status as a cosmopolitan, Hanoi benefits from a pool of high-quality workforce and a modern infrastructure system. At the same time, workers in the capital have gradually adjusted to remote work and have had greater access to virtual workplace environments and technological advancements, including applications and software, during the COVID-19 pandemic. Consequently, Hanoi is ripe with the potential to pioneer the use of HRIS (Nguyen et al., 2023).

In particular, the article is based on a combination of the Theory of Planned Behavior (TPB) and Theory of Reasoned Action (TRA), the Task-Technology Fit – Technology Acceptance Model (TTF-TAM), and the Task-Technology Fit - Unified Theory of Acceptance and Use of Technology model (TTF-UTAUT) to explain the intention of leaders to use HRIS software, which has not been mentioned in previous studies. Therefore, the article will fill the theoretical gap and have practical implications. Firstly, this article identifies the model of factors influencing the intention of leaders to use HRIS software. Secondly, this article explored four directly influencing factors: perceived usefulness, perceived ease of use, social influence, and facilitating conditions, as well as one factor with indirect impact: the fit between task and technology. Thirdly, the article demonstrates that task-technology fit and perceived ease of use indirectly affect intention to use through perceived usefulness. Fourth, TPB and TRA, TTF-TAM, and TTF-UTAUT serve as a sound foundation to explain the relationship between the factors affecting the intention of leaders to use HRIS software, which adds to the theoretical framework of digital transformation in human resource management activities in enterprises. More importantly, the article's findings can help improve managers' intention to propose using HRIS, thereby creating opportunities for suppliers to bring their products closer to SMEs and enhance human resource management efficiency in the digital age.

## **2. Theoretical Basis and Research Hypotheses**

### ***2.1. HRIS software***

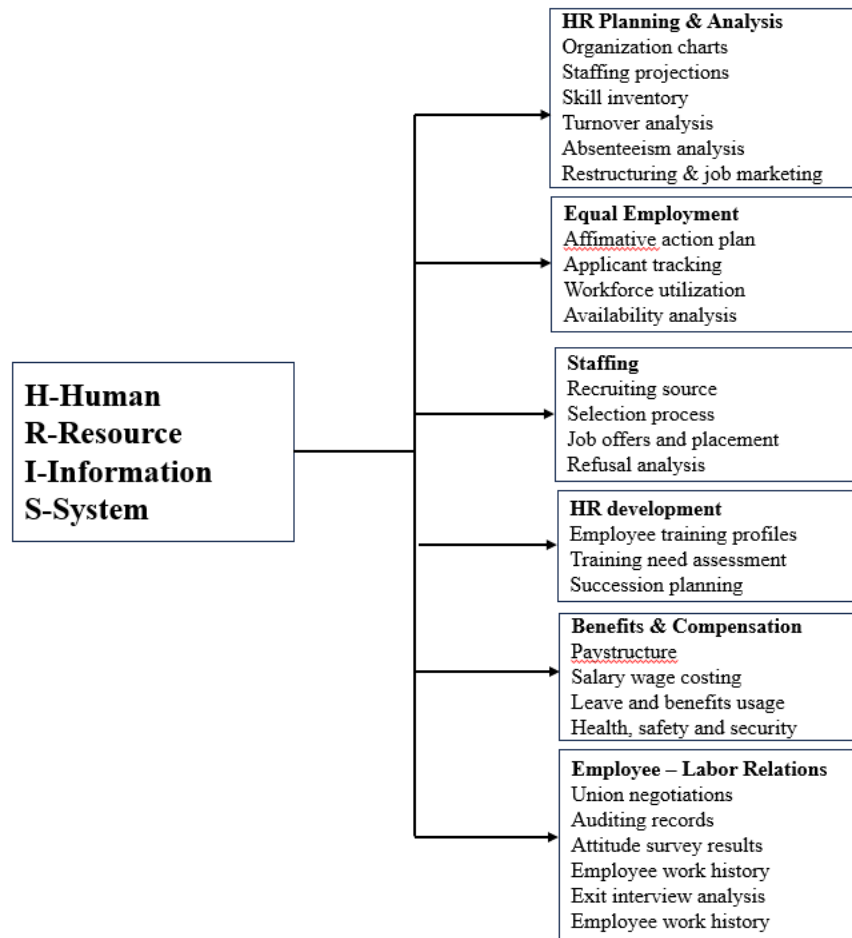
#### **2.1.1. Concept of HRIS Software**

HRIS is a technology-based software system that integrates and systematizes the essential functions of Human Resource Management. These functions include collecting information on employee records, contracts, salary and benefits policies, reward and discipline mechanisms, and work processes (Dery et al., 2009). This data is synthesized, analyzed (DeSanctis, 1986; Tannenbaum, 1990), and regularly monitored to serve as a basis for decision-making, proposing important strategies related to human resources, solving challenges related to employee tracking data and information data (Anupa, 2021), and creating a competitive advantage (Tansley & Watson, 2000).

### 2.1.2. Functions of HRIS

Organizations use HRIS for various functions such as workforce planning, recruitment, selection, training and development, compensation and benefits, employee relations, etc. Accordingly, HRIS becomes a part of the corporate culture, providing valuable information in managing one of the most valuable assets of an organization and, therefore, has been used as a competitive advantage. As shown in Figure 1, some standard functions of HRIS include Human Resource Planning and Analysis, Equal Employment, Staffing, HR development, Compensation and Benefits, and Employee-Labor Relations (Aggarwal & Kapoor, 2012)

Figure 1. Functions of HRIS



(Source: Aggarwal & Kapoor, 2012)

HRIS software can include many other functions, depending on the developer and the user's goals. Kavanagh and Johnson (2017) classified the most basic features that are most easily applied to businesses according to their primary functions and objectives (Kavanagh & Johnson, 2017); this enhances employee work efficiency as well as business operational efficiency (according to Table 1)

**Table 1.** Functions of HRIS software

Function	Major Goal and Focus
Transaction Processing System	<ul style="list-style-type: none"><li>- Improved transaction speed and accuracy</li><li>- Improved efficiency in the processing of daily business transactions</li><li>- Reduced transaction costs</li></ul>
Management Information System	<ul style="list-style-type: none"><li>- Provides key data to managers</li><li>- Supports regular and ongoing decisions</li><li>- Provides defined and ad-hoc reporting</li></ul>
Executive Information System	<ul style="list-style-type: none"><li>- Provides aggregate, high – level data</li><li>- Helps managers with long – range planning</li><li>- Supports strategic direction and decisions</li></ul>
Decision Support System	<ul style="list-style-type: none"><li>- Interactive and iterative managerial decision making</li><li>- Supports forecasting and “what – if” analysis</li><li>- Supports business simulations</li></ul>
Expert System	<ul style="list-style-type: none"><li>- Embed human knowledge into information systems</li><li>- Automate decisions with technology</li></ul>
Office Automation Systems	<ul style="list-style-type: none"><li>- Designing documents</li><li>- Scheduling shared resources</li><li>- Communication</li></ul>
Collaboration Technologies	<ul style="list-style-type: none"><li>- Supports electronic communication and collaboration between employees</li><li>- Supports virtual teams</li></ul>
Enterprise Resource Planning System	<ul style="list-style-type: none"><li>- Integration and centralization of corporate data</li><li>- Share data across functional boundaries</li><li>- Single data source and common technology architecture</li></ul>

(Source: Kavanagh & Johnson, 2017)

## ***2.2. Intention to use***

Intention to use (behavioral intention) is a psychological concept that refers to an individual's perceived ability or willingness to engage in a specific behavior. It was first introduced in the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1977) and later developed in the Theory of Planned Behavior (TPB) by Ajzen (1985).

According to Ajzen (1991), behavioral intention is considered to include motivational factors that influence the behavior of each individual, which indicate the level of readiness or effort that each individual will put forth to perform the behavior.

The Theory of Planned Behavior (TPB) explains and predicts human behavior from a psychological standpoint based on three factors: Attitude toward behavior, Subjective norm, and Perceived behavioral control. This theory suggests that behavioral intention is the central factor in determining behavior. Nowadays, many researchers have integrated multiple theories to assess the intention to use technology, typically comprehensively:

The TTF-TAM integrated model is a model that integrates TTF and TAM to explain how task-technology fit affects intention to use and technology acceptance behavior through perceived usefulness and perceived ease of use (Klopping & McKinney, 2004).

The TTF-UTAUT integrated model has explained that task-technology fit (TTF) affects technology acceptance and use (UTAUT). This means that when technology is seen as a good fit for the user's task and work goals, they are more likely to have a positive intention to use it and use it more actively (Aljarboa & Miah, 2022).

In conclusion, behavioral intention is essential in psychological and business research. It measures the willingness or effort of each individual to perform a specific behavior. The behavioral intention scale measures the consumer's intention to perform a particular action. It can help managers and researchers better understand customer intentions and adjust their business strategies to meet customer needs.

The integration of TRA, TPB, TTF-TAM, and TTF-UTAUT is a valuable tool for creating a more comprehensive behavioral prediction model that includes factors influencing the intention of business leaders to use HRIS, such as perceived usefulness, ease of use, social influence, and task-technology fit. By understanding the factors influencing the intention to use HRIS, leaders and organizations can increase the likelihood of successful HRIS implementation.

### ***2.3. Research hypotheses and proposed model***

Based on previous domestic and international research on factors influencing the intention to use HRIS software, the theoretical basis of behavioral intention, and the above theoretical models, behavioral intention is influenced by many factors. Therefore, it follows that the factors affecting the intention to use HRIS software are internal and external factors of the individual or organization.

Internal factors can stem from the individual's or organization's perception or attitude, such as the perception of behavioral control in the TPB model or the attitude towards that behavior. External factors include those in the surrounding environment that affect the behavioral intention of the individual or organization.

#### ***Factors influencing the intention to use HRIS software***

Many research studies have been conducted on the factors that influence the intention to use HRIS in businesses, and each study has researched and identified different factors. Most studies revolve around perceived usefulness, perceived ease of use, social influence, and facilitating conditions. The author group approaches the concepts of the factors influencing leaders' intention to use HRIS software according to Table 2 below.



**Table 2.** Factors influencing the intention to use HRIS software

Number	Factors influencing the intention to use HRIS software	Defining	Source
1	PU (Perceived usefulness)	PU is the degree to which an individual believes using a particular system would enhance job performance.	(Davis, 1989)
2	TTF (Task-Technology Fit)	TTF is a theory that describes the reciprocal relationship between two components: technology functionality and task requirements. A higher fit between technology and task requirements will improve performance, leading to more efficient task completion.	(Goodhue & Thompson, 1995)
3	PEU (Perceived ease of use)	PEU refers to the user's or people's assessment that the technologies they will implement will be easy to learn and use.	(Davis, 1989)
4	FC (Facilitating conditions)	FC refers to the extent to which an individual possesses the appropriate knowledge and resources to utilize a technological system.	(Venkatesh et al., 2003)
5	SI (Social influence)	SI refers to the extent to which an individual believes others believe they should use the new system. These others can include supervisors, peers, and subordinates.	(Venkatesh et al., 2003)

(Source: research results of the authors)

### 2.3.1. Task-Technology Fit (TTF)

Goodhue and Thompson (1995) proposed the Task-Technology Fit (TTF) model to investigate the relationship between task-technology fit and work performance. TTF is defined as the match between the features or functions of technology and the requirements of the user's task, where task characteristics (TAC) and technology characteristics (TEC) are the direct determinants of task-technology fit. The suitability between a task and a technology decreases when task requirements exceed the technology's capabilities or when the technology's features do not demonstrate usefulness for task accomplishment. Task-Technology Fit (TTF) was extended by Strong et al. (2006) by integrating it with the TAM model. The integration was proposed to improve the explanatory power of TTF because TTF alone does not adequately explain actual usage. Although TTF has been widely applied in previous studies (Fjærnestad & Hiltz, 1997; Maruping & Agarwal, 2004; Zigurs & Buckland, 1998), its explanatory power is weaker than that of other theoretical models, such as TAM. In the TTF-TAM model, the relationships between the constructs in the TAM and the TTF model remain unchanged. Additional linkages were introduced to illustrate the integration of TAM and TTF constructs. Specifically, the task-technology fit factor affects perceived usefulness and actual usage behavior. However, Strong et al. (2006) argued that TTF only affects actual usage because the original TTF model explained that this fit affects actual outcomes. Therefore, in this study, to examine the relationship between task-technology fit and behavioral intention and other relationships, the team proposes the following hypotheses:

*H1: Task–technology fit (TTF) directly affects perceived usefulness (PU),*

*H2: Task–technology fit (TTF) directly affects intention to use (IU),*

*H3: Task–technology fit (TTF) indirectly affects intention to use (IU) through perceived usefulness (PU).*

### **2.3.2 Perceived ease of use (PEU)**

Perceived ease of use is defined as the degree to which an individual believes that using a new technology model will not require effort or be too much work (Davis, 1989). Perceived ease of use (PEU) is a crucial factor that directly influences intention to use and significantly determines users' willingness to adopt new technology (Hoque & Sorwar, 2017; Jasin, 2022; Khalilzadeh et al., 2017). Perceived ease of use has been shown to influence behavioral intention through two channels: (1) Direct influence on behavioral intention and (2) Indirect influence on behavioral intention through perceived usefulness. The direct impact shows that perceived ease of use acts as a catalyst for increasing users' intention to use. The indirect impact is explained by the fact that all other factors are equal; the easier a technology is to use, the more useful it is perceived to be (Davis, 1989). Previous research has shown that the direct impact is the most relevant, strongly affecting behavioral intention. Although the indirect impact through perceived usefulness is less critical, it is still included in research by many authors (Jasin, 2022; Khalilzadeh et al., 2017). PEU indirectly affects users' intentions through PU because PEU is a tool that supports technology that becomes useful. When users believe that a technology is easy to use, they will find it easier to learn and use, leading to higher perceived benefits and, ultimately, higher intention to use. Furthermore, PEU measures the user's assessment of the level of ease of use and ease of learning, which shows that the user's motivation comes from evaluating the factors of the technology's characteristics that affect the intention to use that technology, such as the interface or the steps to use a particular software (Putriani et al., 2023). This implies that PEU will affect the intention to use technology when the characteristics of the technology contribute to the actual outcome for which the technology is used:

*H4: Perceived ease of use (PEU) has a direct effect on perceived usefulness (PU),*

*H5: Perceived ease of use (PEU) has a direct effect on intention to use (IU),*

*H6: Perceived ease of use (PEU) has an indirect effect on intention to use (IU) through perceived usefulness (PU).*

### **2.3.3. Perceived usefulness (PU)**

According to Davis (1989), perceived usefulness is defined as the degree to which an individual believes that using a new technology model will help improve work efficiency. This means that the user perceives how useful this technology is in performing their task, reducing the time to perform more effective and accurate work. In the context of applying and using new technology at work, Venkatesh et al. (2003) provided evidence that the most critical factor determining the employees' intention to use a new technology is their perception of that technology's usefulness. In addition, Dohan and Tan (2013) in their meta-analysis study concluded that there is a close relationship between perceived usefulness and behavioral intention. This was also confirmed by Al-Shibly (2011) and Elkaseh et al. (2016) in their study on the impact of electronic applications on users through perceived usefulness. From the above, the group proposes the hypothesis that:

*H7: Perceived usefulness (PU) has a direct effect on the intention to use (IU).*

#### **2.3.4. Facilitating conditions (FC)**

According to Venkatesh et al. (2003), facilitating conditions are defined as the degree to which an individual believes that the existing technical and organizational infrastructure can support the use of the system. Another study by Agudo-Peregrina et al. (2016) added to the definition of Venkatesh et al. (2003) that facilitating conditions is the degree to which the person has the appropriate knowledge and resources to use the technology system (Agudo-Peregrina et al., 2016). Some studies have shown that facilitating conditions significantly impact behavioral intention. The impact of facilitating conditions on the behavioral intention of individuals using a new system has been considered in studies in different contexts, such as mobile learning (Thomas et al., 2013), electronic tickets (Mei-Ying et al., 2012), and social media (Harsono & Suryana, 2014). In the business context, previous studies also showed that facilitating conditions affect the intention to use HRIS. However, this notion has only been explored through theoretical analyses and has not been verified through empirical studies. In this study, it is possible that facilitating conditions may have influenced the intention to use HRIS in small and medium enterprises, from which the group proposes hypotheses to test the above relationship:

*H8: Facilitating condition (FC) has a direct effect on intention to use (IU).*

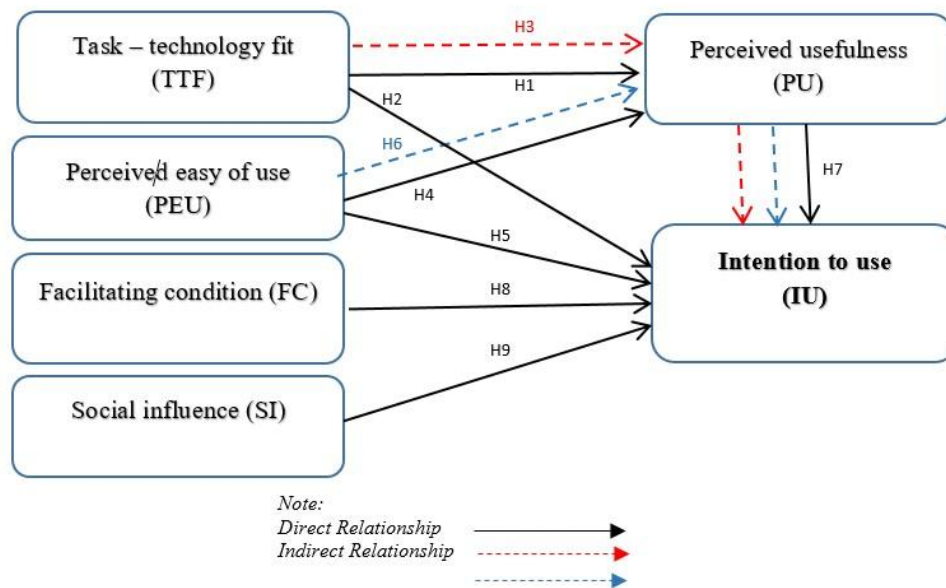
#### **2.3.5. Social influence (SI)**

Appearing in the UTAUT model (Venkatesh et al., 2003), social influence is defined as the degree to which an individual believes others think they should use the new system. Others may include bosses, colleagues, subordinates, etc. For example, if the manager thinks using this software system will help perform tasks quickly and achieve high efficiency, the employee will believe in its effectiveness and decide to use it. Social influence can affect employees through the influence of colleagues and senior managers, who encourage employees to use technology by explaining its benefits and importance before and during use. Social influence affects a user's decision to apply a technology if other users perceive the technology to be necessary. These decisions can be influenced by colleagues, who will positively and negatively impact technology use. However, in a study by Satispi et al. (2023), the authors mentioned the pressure of the organization when applying digitization in work. For developing countries, the promotion through government policies also influences the decision to use technology in enterprises. From there, the research group proposes the hypothesis that:

*H9: Social influence (SI) has a direct effect on intention to use (IU).*

Based on the issues identified in Sections 2.3.1, 2.3.2, 2.3.3, 2.3.4, and 2.3.5, the authors propose the following model (shown in Figure 2):

**Figure 2. Proposed research model**



(Source: research results of authors)

Note: This proposed model illustrates the direct and indirect factors influencing the intention to use HRIS software among leaders in small and medium-sized enterprises

Numerous studies have been conducted on HRIS, focusing on factors such as perceived usefulness, ease of use, social influence, and facilitating conditions. Models like TAM and UTAUT have been used to explain why users adopt technology. The TTF-UTAUT model, combining both UTAUT and TTF, demonstrates that the fit between technology and tasks influences usage intention. Factors such as perceived usefulness, ease of use, and performance expectancy are complementary. Based on previous research, we propose a model that includes factors such as technology-task fit, perceived usefulness, ease of use, social influence, and facilitating conditions to analyze HRIS adoption intention among small and medium-sized enterprise (SME) leaders. The proposed model encompasses multiple critical factors, providing a more comprehensive understanding of leaders' decisions regarding HRIS adoption. This research will contribute to a better understanding of the decision-making process of SME leaders when adopting new technologies.

### 3. Methodology

The article uses a quantitative research method with a scale inherited and adapted from previous related studies. Which "Task-Technology Fit (TTF)" is measured by four observations inherited from the study of Kang et al. (2022); Perceived Ease of Use (PEU) and Perceived Usefulness are both measured by four observations inherited from the studies of Davis (1989) and Al-Shibly (2011); Facilitating Conditions (FC) is measured by four observations inherited from the researches of Kang et al. (2022); Social Influence (SI) is measured by three observations inherited from the studies of Satispi et al. (2023); Intention to Use HRIS (IU) is measured by Putriani et al. (2023) (see Appendix: Measurement Scales)

The survey was conducted in 6 districts of Hanoi through business clubs. The authors' group distributed 100 questionnaires in each district to minimize sampling bias. A random sampling method was used to obtain objective results. After 20 days of surveying, the authors' group collected 479 questionnaires and eliminated invalid ones. As a result, 416 questionnaires met the requirements (ensuring the 10:1 principle, 23 observed variables requiring at least 230 observed samples; 416 questionnaires came from leaders who knew about HRIS but had not yet intended to use it) to perform the next verification steps.

Although the data were collected using Likert-type scales, each construct was measured with five or more response categories. Previous research has demonstrated that when Likert scales include at least five points, the resulting data can be treated as approximately continuous without introducing substantial bias in SEM estimation (Norman, 2010; Rhemtulla et al., 2012). Following the guidance of Hair et al. (2021) and Kline (2016), the use of covariance-based SEM with maximum likelihood estimation remains robust under these conditions, particularly with sample sizes greater than 200. Therefore, the decision to treat the ordinal data as continuous is consistent with established methodological standards in behavioral and management science research.

Before estimating the SEM model, multivariate normality was examined using Mardia's test. The results in Table 3 (skewness <5, kurtosis <70) indicated that the data met the approximate multivariate normality assumption. Consequently, the Maximum Likelihood (ML) estimation was applied. Additionally, bootstrapping (5.000 samples) was used to validate the robustness of the estimates.

**Table 3.** Assessment of normality

Variable	min	max	skew	c.r.	kurtosis	c.r.
IU4	1.000	5.000	-0.641	-5.341	0.159	0.662
IU3	1.000	5.000	-0.207	-1.720	-0.498	-2.075
IU2	1.000	5.000	-0.744	-6.195	0.424	1.766
IU1	1.000	5.000	-0.271	-2.253	-0.203	-0.845
SI2	1.000	5.000	0.198	1.646	-0.656	-2.730
SI1	1.000	5.000	-0.229	-1.911	-0.049	-0.203
SI3	1.000	5.000	-0.399	-3.325	0.242	1.007
TTF1	1.000	5.000	-0.327	-2.723	-0.690	-2.874
TTF3	1.000	5.000	-0.217	-1.805	-0.354	-1.473
TTF4	1.000	5.000	-0.382	-3.177	-0.782	-3.254
TTF2	1.000	5.000	-0.194	-1.613	-0.310	-1.292
PU1	1.000	5.000	-0.700	-5.831	-0.074	-0.309
PU4	1.000	5.000	-0.604	-5.032	-0.005	-0.022
PU3	1.000	5.000	-0.921	-7.670	0.349	1.453
PU2	1.000	5.000	-0.637	-5.303	-0.188	-0.782
PEU4	1.000	5.000	-0.915	-7.615	0.554	2.307
PEU3	1.000	5.000	-0.773	-6.435	0.084	0.348
PEU1	1.000	5.000	-0.953	-7.936	0.511	2.129
PEU2	1.000	5.000	-0.979	-8.151	0.561	2.335
FC3	1.000	5.000	-0.257	-2.138	-0.203	-0.844
FC1	1.000	5.000	0.480	3.993	-0.104	-0.434

Variable	min	max	skew	c.r.	kurtosis	c.r.
FC4	1.000	5.000	-0.323	-2.689	-0.015	-0.064
FC2	1.000	5.000	0.453	3.769	-0.406	-1.691
Multivariate					20.351	6.120

(Source: research results of the authors)

## 4. Research results

### 4.1 HRIS awareness and non-adoption factors

**Table 4.** Descriptive statistical results of SME business leaders who are aware of but do not intend to use HRIS software

Elements		Frequency	%
Fields of business	Agriculture, Forestry	6	1.44%
	Industry-Construction	14	3.36%
	Trade-Services	396	95.2%
The average number of full-time employees	<50	351	84.4%
	50-100	49	11.8%
	>100	16	3.8%
The reasons for not applying HRIS software	Insufficient readiness to accept a new software solution like HRIS	53	12.7
	Small workforce size	261	62.7%
	High installation and purchase cost	90	21.6%
	Other reasons	12	2.9%
The level of readiness to invest in digital human resource management	Yes	293	70.4%
	No	123	29.6%

Note: This table summarizes descriptive statistics of surveyed SME leaders regarding HRIS awareness and adoption readiness. Categories include sectors (Agriculture–Forestry, Industry–Construction, and Trade–Services), average number of full-time employees, and primary reasons for non-adoption (e.g., small workforce size, cost). Percentages are based on a total of 416 respondents. Source: research results of the authors.

As shown in Table 4, out of the 416 leaders surveyed, 293 (equivalent to 70.4%) expressed willingness to adopt information technology in their HR management practices. In comparison, 123 leaders (equivalent to 29.6%) were not ready to embrace digital HR management. The primary reasons for not adopting the software were the small size of the workforce (62.7%) and the high initial cost of the software (21.6%). This indicates a high openness to adopting information technology or digital transformation platforms for HR management. HRIS software companies have a significant opportunity to encourage further business leaders' intentions and decisions to use their software in the future. However, tailored solutions are needed to promote software adoption in a way that is suitable for each business, especially companies in trade services.

## 4.2. Measurement model

### 4.2.1 Reliability test of the scale

Based on the research results, it can be seen that all factor groups have a Cronbach's Alpha coefficient of above 0.7. Specifically, Cronbach's Alpha for perceived usefulness (PU) is 0.856; perceived ease of use (PEU) is 0.868; facilitating conditions (FC) is 0.846; social influence (SI) is 0.804; task-technology fit (TTF) is 0.885, and intention to use (IU) is 0.853. Additionally, no observed variables have a total item correlation value below 0.3. Therefore, all scales are reliable and can be used for EFA analysis.

### 4.2.2 EFA analysis for independent variables

Based on the test results of 19 observed variables of the independent variables, the KMO (Kaiser-Meyer-Olkin) coefficient is 0.829 ( $>0.5$ ), indicating that the factor analysis is appropriate. In addition, the Bartlett test shows a correlation between 19 observed variables when  $\text{Sig.} = 0.000 < 0.05$ . As illustrated in Table 5, the exploratory factor analysis for the independent variable scale is reliable.

**Table 5.** Rotated component matrix

Number	Items	Components				
		1	2	3	4	5
1	TTF2	0.923				
2	TTF3	0.896				
3	TTF4	0.825				
4	TTF1	0.803				
5	PEU2		0.893			
6	PEU1		0.866			
7	PEU3		0.803			
8	PEU4		0.800			
9	PU2			0.817		
10	PU3			0.814		
11	PU4			0.811		
12	PU1			0.806		
13	FC2				0.850	
14	FC4				0.814	
15	FC1				0.812	

16	FC3				0.803	
17	SI3					0.823
18	SI1					0.822
19	SI2					0.803

(Source: research results of the authors)

The research results show the eigenvalues of 19 observed variables for five concepts. Table 6 shows that 5-factor groups are extracted, and the total extracted variance is 72.522%, meaning that the 19 observed variables explain 72.522% of the variation of the five research concepts.

**Table 6.** Total variance explained

Component	Initial Eigenvalues		
	Total	% Variance	Cumulative %
1	<b>4.946</b>	26.029	26.029
2	<b>2.857</b>	15.038	41.067
3	<b>2.549</b>	13.416	54.484
4	<b>2.048</b>	10.780	65.263
5	<b>1.379</b>	7.258	<b>72.522</b>
6	0.570	3.003	75.524

(Source: research results of the authors)

The research results also show five extracted factor groups with 19 observed variables. This study uses a sample size of 416, and the standard value of the factor loading is 0.3. Based on the results, all observed variables are  $\geq 0.3$  and meet the conditions for CFA analysis.

#### **4.2.3 EFA analysis for intention to use (IU) variable**

Similarly, Tables 7 and 8 show that the reliability test results for the Intention to Use (IU) variable all reached the level of reliability with a KMO coefficient of  $0.774 > 0.5$  and  $\text{Sig.} = 0.000 < 0.5$ . The results also showed a 1-factor group extracted from 4 observed variables of the Intention to Use (IU) variable with a total extracted variance of 71.247%. The loading coefficients of each observed variable belonging to the Intention to Use (IU) variable all reached the required value ( $>0.3$ ), which is sufficient for further testing.



**Table 7.** Component matrix

		<b>IU4</b>	<b>IU2</b>	<b>IU1</b>	<b>IU3</b>
Component	1	0.893	0.884	0.815	0.779

(Source: research results of the authors)

**Table 8.** Total variance explained by IU

Component	Initial Eigenvalues		
	Total	Variance %	Cumulative %
1	2.850	71.247	71.247
2	0.607	15.176	86.423

(Source: research results of the authors)

#### 4.2.4 Convergent and discriminant validity

Convergent validity: The table of results above shows that the scales' CR and AVE indices are all satisfactory, with  $CR \geq 0.7$  and  $AVE \geq 0.5$ . Therefore, the scales' convergent validity is ensured.

Discriminant validity: Based on the table of results above, we see that the  $MSV < AVE$  and the square root of AVE (the bold values) are both more significant than the correlation values between the constructs (the non-bold values) in the Fornell and Larcker table. Therefore, the discriminant validity of the scales is ensured (see Table 9).

**Table 9.** Results of testing the convergent and discriminant validity of the scale

Elements	FC	PEU	PU	TTF	SI	IU	CR	AVE	MSV
<b>FC</b>	<b>0.838</b>						0.902	0.702	0.125
<b>PEU</b>	0.183	<b>0.805</b>					0.879	0.648	0.311
<b>PU</b>	0.273	0.223	<b>0.774</b>				0.856	0.598	0.444
<b>TTF</b>	0.082	0.112	0.306	<b>0.764</b>			0.848	0.583	0.094
<b>SI</b>	0.354	0.370	0.404	0.038	<b>0.767</b>		0.810	0.588	0.442
<b>IU</b>	0.315	0.558	0.666	0.303	0.665	<b>0.789</b>	0.867	0.623	0.444

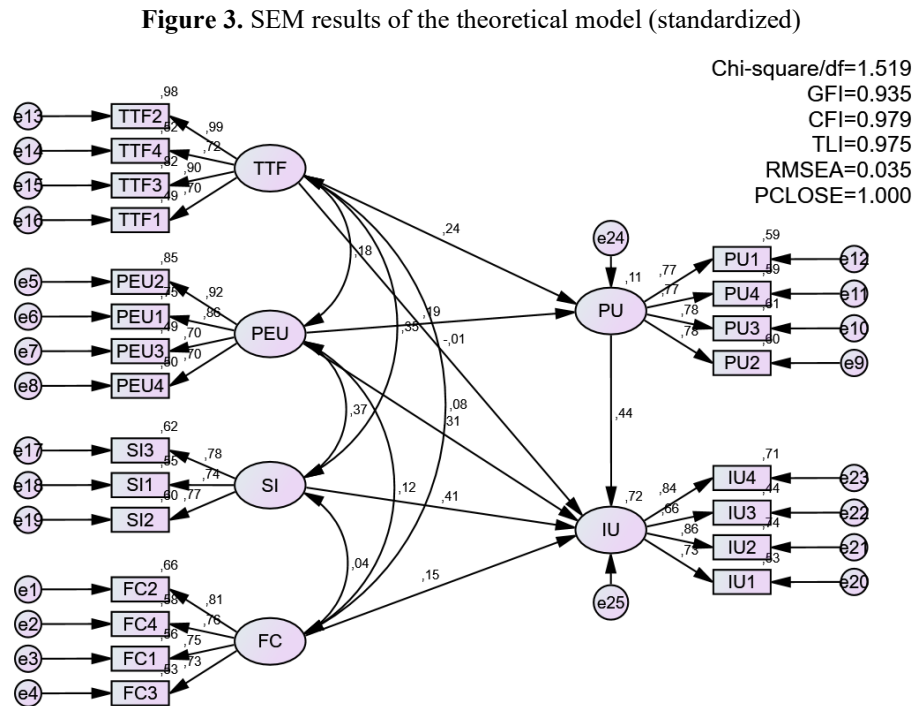
Note: CR = Composite Reliability; AVE = Average Variance Extracted; MSV = Maximum Shared Variance. The bold diagonal values represent the square roots of AVE for each construct, confirming discriminant validity when higher than the inter-construct correlations. All  $CR \geq 0.7$  and  $AVE \geq 0.5$  indicate satisfactory reliability and convergent validity. Source: research results of the authors

#### 4.2.5 Analysis of factors affecting leaders' intention to use HRIS

Analysis of the SEM model to assess the impact of factors affecting leaders' intention to use HRIS. The results showed that:

The theoretical model consists of 6 concepts, of which 5 are independent (4 concepts are independent competitively, including task-technology fit, perceived ease of use, facilitating conditions, and social influence), 1 concept has both an independent and a dependent role (Perceived Usefulness), and 1 concept has a dependent role (Intention to Use).

Figure 3 shows that the results of the analysis of the model fit indices showed that the CFI, at 0.979, was of excellent quality, while the CMIN/df, at 1.519, TLI, at 0.975, RMSEA, at 0.035, PCLOSE, at 1.000, and GFI, at 0.935, were of good quality. Therefore, the theoretical model is entirely consistent with the input data.



(Source: research results of the authors)

Note: Goodness-of-fit indices: CFI (Comparative Fit Index) = 0.979, TLI (Tucker–Lewis Index) = 0.975, RMSEA (Root Mean Square Error of Approximation) = 0.035, PCLOSE = 1.000, GFI (Goodness-of-Fit Index) = 0.935, CMIN/df = 1.519. These values indicate an excellent model fit according to Hair et al. (2021).

The estimated (standardized) results of the parameters are presented in Table 10. The results show that 8/9 hypotheses were accepted, indicating a statistically significant relationship between the variables ( $p < 0.05$ ). Only hypothesis H2 was rejected due to  $p = 0.840 > 0.05$ . Interestingly, the rejection of H2 (the direct effect of TTF on intention to use) reflects that, in the Vietnamese SME context, Task–Technology

Fit plays an indirect rather than a direct motivational role. Leaders' adoption decisions are more cognitively influenced by perceived usefulness (PU) and social influence (SI) than by technical fit itself. This aligns with the extended TTF–TAM and TTF–UTAUT frameworks (Klopping & McKinney, 2004; Strong et al., 2006), where TTF enhances behavioral intention primarily through its effect on perceived usefulness. Moreover, SME leaders in Vietnam typically make strategic decisions rather than operational ones; they often rely on staff evaluations or social recommendations rather than a firsthand assessment of the system's technical adequacy. Therefore, while a high TTF increases the perceived utility of HRIS, it may not directly translate into adoption intention without mediating cognitive and social factors.

The coefficient  $R^2 = 0.716$  shows that the factors in the model explain 71.6% of the variance in the intention to use HRIS, while the remaining 28.4% is influenced by other factors not included in the model.

**Table 10.** The relationship between the concepts in the research model

Hypothesis	Relationship	$\beta$ (standardized)	S.E.	C.R.	p	Hypothesis test result	$R^2$
H1	PU $\leftarrow$ TTF	0.240	0.046	4.545	***	Significant	71.6%
H4	PU $\leftarrow$ PEU	0.190	0.053	3.475	***	Significant	
H5	IU $\leftarrow$ PEU	0.314	0.038	7.058	***	Significant	
H2	IU $\leftarrow$ TTF	-0.008	0.030	-.201	0.840	Not Significant	
H7	IU $\leftarrow$ PU	0.441	0.042	9.115	***	Significant	
H8	IU $\leftarrow$ FC	0.148	0.030	3.769	***	Significant	
H9	IU $\leftarrow$ SI	0.410	0.050	7.856	***	Significant	
H3	IU $\leftarrow$ PU $\leftarrow$ TTF	0.106			0.002	Significant	
H6	IU $\leftarrow$ PU $\leftarrow$ PEU	0.084			0.002	Significant	

Note:  $\beta$  represents standardized regression coefficients; S.E. = Standard Error; C.R. = Critical Ratio; p indicates the significance level (\*\*\*  $p < 0.001$ ). H1–H9 correspond to the hypotheses proposed in the conceptual model.  $R^2$  denotes the proportion of variance in the Intention to Use (IU) explained by independent variables. Source: research results of the authors

**Table 11.** The test result of the mediating relationship

Relationship	Direct		Indirect	
	$\beta$ (standardized)	Sig.	$\beta$ (standardized)	Sig.
IU $\leftarrow$ PU $\leftarrow$ TTF	-0.008	0.840	0.106	0.002
IU $\leftarrow$ PU $\leftarrow$ PEU	0.314	***	0.084	0.002

Note: \*\*\*:  $p < 0.001$ .

(Source: research results of the authors)

In addition, Table 11 shows that the two hypotheses about the mediating relationship were also accepted, indicating that TTF and PEU indirectly affect IU through PU.

## 5. Conclusions

The research showed that 8/9 hypotheses were accepted, proving that five factors affect the intention to use: Perceived Usefulness, Perceived Ease of Use, Social Influence, Facilitating Conditions, and Task-Technology Fit. Of these, four factors have a direct impact: Perceived Usefulness (The estimated result is 0.441), Perceived Ease of Use (The estimated result is 0.084), Social Influence (The estimated result is 0.410), and Facilitating Conditions (The estimated result is 0.148). This result is similar to the findings of Tamrakar and Shrestha (2022), Fitrianie et al. (2021), and Rai and Selnes (2019). However, in contrast to the findings of Kang et al. (2022), the factor of Task-Technology Fit (The estimated result is  $0.084 > 0.05$ ) does not have a direct impact on the intention to use. This difference may be due to factors such as the environment, demographic characteristics, and others not considered in this model.

According to the research results, the perceived usefulness (PU) factor has the most substantial and most positive impact on the intention to use HRIS of leaders in SMEs with  $\beta=0.441$  and  $p<0.001$ . This result is similar to the findings of Davis (1989), Venkatesh et al. (2003), and Kloppe and McKinney (2004). This proves that the perceived usefulness of the software for the user's work or purpose will strongly influence their intention to use it. Even if employees are familiar with traditional methods in today's businesses, if they perceive that a software solution can help them perform their tasks more efficiently and quickly, they will have a more favorable perception of that software solution. Hence, their intention to use it will also be high.

The combination of multiple theories, including TPB, TRA, TTF-TAM, and TTF-UTAUT, provides theoretical value in explaining the relationship between the factors influencing business leaders' intention to use HRIS software, thereby enhancing the competitive capacity of businesses in the future.

In terms of practical implications, based on this research, suppliers can apply solutions to promote leaders' intention to recommend using HRIS in enterprises, thereby creating opportunities for suppliers to bring their products closer to SMEs. Moreover, the research also serves as a foundation for state management agencies to formulate appropriate policies and strategies to create a favorable environment conducive to further growth of software suppliers while raising awareness of businesses and society about information technology and digital transformation.

Overall, the perceived usefulness of the software remains the most critical factor influencing leaders' intentions to use HRIS in businesses.

**Firstly**, to help users increase their perceived usefulness of HRIS, the supplier must first demonstrate the efficacy of the software they provide. Therefore, suppliers need to focus on the following solutions to improve the effectiveness of the software:

- There is a need to research and develop high-quality products that are truly useful for addressing challenges in human resource management, such as performing functions efficiently, quickly, and with high productivity.
- Understanding the customer's business is necessary to design suitable features that meet the human resource management process.

To achieve these goals, suppliers first need to gain insight into the business and its HR management functions to meet the complex requirements of this field. This will give them a comprehensive understanding of their potential customers' business needs and provide specific solutions for each function of the HR department.

Although the leaders of SMEs do not yet need to use all the functions of comprehensive HRIS software like large enterprises with diverse requirements, suppliers need to provide specific solutions to HR managers/leadership of the business in particular and to all different levels of the workforce in general. Further customization based on the distinctive characteristics of each business and its management can then be developed.

**Secondly**, after deploying and developing the software, suppliers need to take measures to help businesses recognize the usefulness of HRIS software through promotion and marketing activities. In other words, suppliers need to invest in developing product features and marketing efforts. This should begin with market research to gain an in-depth understanding of potential clients. Based on collected data, they can build communication and advertising campaigns that reach the leadership and employees of SMEs so that they can recognize the usefulness of the software.

**Furthermore**, according to the limitations mentioned by the research group above, 62.7% of the surveyed leaders, as shown in [Table 4](#) above, stated that they do not find HRIS software useful because their businesses have few employees, and traditional management solutions are still effective. Additionally, 21.6% of leaders believe that the usefulness of HRIS software is not worth the investment. To address this issue, HRIS software can be customized so that leaders of SMEs can select only the functions relevant to their needs and technological tasks without having to set up other unnecessary features. This can both solve the problem of suitability with the scale of personnel and help leaders of SMEs have a cost-saving view of software installation, thereby optimizing the budget. HRIS vendors can benefit from developing marketing campaigns focused on businesses with an average full-time workforce of fewer than 50 employees to promote understanding of the software among the management of this particular group.

Here are some specific communication activities about the usefulness that the research group proposes:

Firstly, for SME leaders to initially recognize the usefulness of HRIS, they must accurately identify the limitations that still exist in the HR management process of their own business, thereby outlining a solution that can help them overcome these difficulties. To do this, suppliers should implement market research activities through surveys and possibly through field trips to businesses to find out what these issues are so that they have a basis for introducing the product and its valuable features to the target customers.

Based on the problems that businesses face, suppliers need to plan specific promotional activities to raise awareness of the usefulness of HRIS software to SME leaders. Examples include organizing online or in-person seminars aimed at solving problems for SME leaders, incorporating images and videos to illustrate the usefulness of HRIS software solutions, and increasing business leaders' intention to use them.

In addition, suppliers can invite well-known human resource management experts to share HRIS software functions. These experts can support suppliers by advising business leaders on HRIS-based management practices and sharing their experience and evaluations of the software's usefulness on various media channels.

In addition, suppliers can strengthen their communication and marketing efforts by running advertisements on various social media platforms such as Zalo, Facebook, YouTube, etc. These advertisements should showcase images and videos that illustrate the specific functions of HRIS in human resource management. Suppliers can establish more touchpoints with SME leaders, fostering a more precise and intuitive understanding of HRIS's usefulness in daily operations.

***In conclusion***, the proposed solutions will help suppliers increase the perceived usefulness (PU) of HRIS software among SME leaders while addressing some of the limitations mentioned above. If these business leaders find an HRIS solution genuinely helpful, they will be willing to consider investing resources in its installation and implementation. Therefore, even if there are issues with suitability, cost, or budget, if suppliers can provide a high-quality software product and have an effective communication strategy, they can develop business leaders' intention to use it, thereby directing the company to use this software in the future.

## **6. Limitations and future research directions**

Through this study, the authors have identified and ranked five factors in order of their most substantial impact on the intention to use HRIS software: perceived usefulness, social influence, perceived ease of use, facilitating conditions, and task–technology fit. Among these factors, task-technology fit has an indirect, rather than direct, influence on the intention to use HRIS.

However, the proposed model by the authors only explains 71.6% of the variance in the intention to use HRIS software based on the five factors mentioned above. The remaining 28.4% is unexplained due to the influence of other factors. Therefore, the research results and the comments and evaluations of the authors are far from comprehensive and objective.

Therefore, in future studies, the authors hope to develop the research by adding more factors to the model and simultaneously expanding the research scope nationwide to create the most comprehensive and realistic view. In addition, the findings of this paper can serve as a foundation for future work on HRIS in particular and information technology in general, which can potentially lead to the proposal of more practical solutions to boost business leaders' intention to apply HRIS in human resource management and adopt information technology innovations in business management.

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## Appendix: Measurement Scales

Construct	Acronym	No. of Items	Source	Specific Measurement Items
Perceived Usefulness	PU	4	The scale was adapted from the study by Davis (1989); Al-Shibly (2011)	1. Using HRIS enables me to accomplish job tasks more effectively. 2. Using HRIS enables me to perform work requirements more quickly. 3. Using HRIS improves my job performance. 4. Using HRIS increases my productivity.
Perceived Ease of Use	PEU	4	The scale was adapted from the study by Davis (1989); Al-Shibly (2011)	1. Learning to operate the HRIS is easy for me. 2. I find it easy to get the HRIS to do what I want it to do. 3. It is easy for me to become skillful at using the HRIS. 4. I find the HRIS easy to use.
Task-Technology Fit	TTF	4	The scale was adapted from the study by Kang et al. (2022)	1. The functions of the HRIS are sufficient (enough) for my HR management tasks. 2. The functions of the HRIS are appropriate for my HR management tasks. 3. The functions of the HRIS fully meet my HR management requirements. 4. The quality of the HRIS can fully meet my HR management requirements.
Facilitating Conditions	FC	4	The scale was adapted from the study by Kang et al. (2022)	1. I have the necessary resources (system, tools, circumstances) to use the HRIS. 2. I have the necessary knowledge to use the HRIS. 3. If I have difficulty using the HRIS, there will be support from the system to help me. 4. The HRIS is compatible with other technologies or systems I use.
Social Influence	SI	3	The scale was adapted from the study by Satispi et al. (2023)	1. If government bodies consider HRIS necessary, our organisation will adopt it. 2. Our organisation will benefit more if HRIS use is mandatory. 3. Public organizations that are using HRIS have more prestige than those that are not.
Intention to Use HRIS	IU	4	The scale was adapted from the study by Putriani et al. (2023)	1. I intend to use HRIS services in the future. 2. I predict I will use HRIS services. 3. I plan to use HRIS services. 4. I want to use HRIS services as much as possible.

*Note:* All items were measured using a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), consistent with the methodology described in the original study.