The Effect of UTAUT Elements on the Risk Management Information System Adoption among Jordanian Hospitals: The Moderating Role of Top Management Support

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Abstract: - This research investigates the relationship between UTAUT elements with Risk Management Information System (RMIS) Adoption. In addition, Top management support will be addressed as a moderating influence to assess how the support of the top management could increase or decrease the adoption of RMIS among Jordanian hospitals. The study focuses on Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions as key factors influencing RMIS Adoption. A quantitative approach was employed, with 410 structured questionnaires distributed among hospitals in Jordan. The questionnaire used a five-point Likert scale to measure variables. The findings indicate a significant relationship between Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition and RMIS Adoption. In addition, the study found that there is a moderating effect of Top management support on the relationships between Performance Expectancy, Facilitating Condition, and RMIS Adoption, while it was found that there is no moderating effect of Top management support on the relationships between Effort Expectancy, Social Influence, and RMIS Adoption. The practical implications of this research findings offer valuable insights for organizations, particularly in the healthcare sector in Jordan, aiming to implement and enhance the adoption of Risk Management Information Systems (RMIS). These implications provide actionable guidance for decision-makers, administrators, and policymakers to optimize the effectiveness of their strategies.

Key-Words: - Risk Management Information Systems, Social Influence, Effort Expectancy, Performance Expectancy, Facilitating Conditions, Top Management Support, Jordan.

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1 Introduction

Risks are something that must be taken by every single business, regardless of how big they are, what sector they operate in, or who their customers are. Hence, risk management is considered as a management reaction to the dynamic environment. Historically, the process of risk management has been compartmentalized and carried out in distinct business units or divisions inside an organization, [1]. Information systems are associated with a lot of risks, like risks related to data availability, breach of data, lack of security, errors of reporting, and others, which make comprehending the risks in the field of Information systems important. In order to create the groundwork for a discussion on the role that information systems play in risk management, one must first describe the business demands that motivate financial organizations to adopt risk management activities, [2].

The term risk management should not be confused with risk assessment. The process of balancing policy choices, in conjunction with all parties concerned, taking into account risk assessment and other elements necessary for choosing suitable preventive and control options, such as monitoring methods, etc., is what we mean when we talk about risk management. There is a difference between risk management and risk assessment, according to [3]. The user may collect data on property claims, valuations, policies, and exposures using a system called a risk management information system, or RMIS for short. This kind of system is also referred to as a risk management information system in many contexts. In addition to monitoring tools, this system provides management

reporting capabilities. The user may monitor and control the whole risk management cost thanks to these features, [4]. You may also keep an eye on the total cost of risk management. The features of RMIS often enable the consolidation of all relevant insurance-related data into a single system. Information on data, exposure-related data, property assessments, and claims from various sources are all covered in this area. The data systems responsible for handling casualty claims and losses are referred to as "record management information systems" (RMIS) in a significant meaning. For instance, general liability, product liability, and workers' compensation coverages fall under this group. Additional coverages include physical damage and motor liability, [5].

Before the implementation and use of Risk Management Information Systems (RMIS) in Jordanian hospitals can be considered effective, however, a number of significant challenges must be solved. Healthcare institutions find it difficult to adopt risk management systems in a manner that is acceptable to them because of the challenges they face. The hospital staff's lack of knowledge of the RMIS' capabilities and rationale has been evident from the beginning of the issue. A significant number of workers lack knowledge of the fundamental components of risk management-related quality assurance systems, according to the results of the study [6]. They are also worried about how new technologies can enhance efficiency and patient care. This study looked at the quality controls that are implemented in Jordanian hospitals. Due to a lack of understanding, the RMIS is implemented incorrectly or inefficiently, which makes it difficult to identify risks and proactively address any threats to the organization's overall performance and the quality of life of its patients, [6].

A collection of factors that affect both the intended and actual use of information technology is referred to as "UTAUT" in the context of information technology. The seven unique components of the UTAUT model have a significant impact on either the intention to buy the product or the actual consumption of the brand, according to a study by [7]. Performance expectation (PE), effort expectation (EE), social influence (SI), and enabling circumstances are the four primary UTAUT factors that directly affect user acceptance and use behavior. However, a variety of other factors can affect whether or not buyers find a product acceptable. Here is a list of the seven different buildings that comprise UTAUT for your convenience. These criteria stress how user perceptions of a system's value in terms of enhancing productivity, which is one of its most crucial features. The claim in the previous phrase that anybody may simply learn how to run a system is supported by these factors. At addition, the roles that key individuals play at their places of employment have an impact on the behaviors that people exhibit in relation to the utilization of information technology. [8] found that perceptions about the resources and assistance that are available to utilize the system have an effect on whether or not the system is used, [7], [8].

The level of top management support, also known as TMS, refers to the extent to which top management comprehends the significance of the information systems function and the content of which is concerned with activities. According to [9], top management support (behavior) is defined as "the explicit and active support of the top management towards the introduction and development of new information technology", [9]. Researchers concluded that TMS is essential in boosting the incorporation of technology into an organization, [10], [11], [12] since it makes it easier to continue using electronic health records (EHRs) in a number of different ways. Among the many complexities that are involved in the process, the adoption of electronic health records (EHRs) is the most difficult and tough aspect because of the nature of healthcare information systems and the crucial function that they play. There are a number of elements that fall under this category, including the presence of distinctive and sophisticated technical features, the difficulty of carrying out administrative responsibilities, and the need to address concerns over safety and security.

RMIS solutions are developed to provide fundamental policy and claim information to their insured businesses and their brokers via electronic access, and more recently, over the Internet. The management of individual claims, the identification of patterns, the marketing of an insurance program, loss forecasting, actuarial research, and internal communication of loss data inside a client organization are all vitally important functions that need this information. They may also give the monitoring and management reporting capabilities that are necessary to allow one to monitor and control the entire cost of risk in a way that is both efficient and cost-effective, [13]. Hence, the aim of the current study is to explore the factors that affect the adoption of RMIS among Jordanian hospitals.

1.1 Problem Statement

Risk Management Information System (RMIS) conducts a number of important roles, which make make a backbone for the Jordanian hospitals. This system is responsible for monitoring all of the facilities to avoid accidents, anticipate errors, and report issues to the administrator as another layer of defense. RMIS proves its value by assisting in the identification and assessment of potential risks to patient safety. It analyses loads of data from different facilities to achieve this, [14]. Moreover, RMIS provides a standardized framework for comprehensive risk assessment and management within the hospital infrastructure, medical procedures, and clinical operations, [15]. The Jordanian hospitals need to proceed in accordance with the rules and regulations for patient safety and risk management, RMIS can be helpful to meet these rules and regulations. This is explained by the fact that Jordanian hospitals function inside a controlled framework. The platform facilitates the monitoring of compliance with quality standards, permits the reporting of problems to regulatory organizations, and furnishes proof of compliance during audits or inspections. It provides a single site for tracking and recording compliance actions, which is an additional advantage, [16]. Both of these factors are contributing to the situation becoming worse. When there are no well-defined procedures and centralized control, it is difficult to implement proactive risk reduction practices, promote a culture of continuous improvement, and guarantee patient safety, [17].

There is a significant amount of significance resulting from the implementation of Risk Management Information Systems (RMIS) in Jordanian Hospitals. The level of employee satisfaction with the system and how well they utilize it are both significantly influenced by top management, which is made up of senior executives and leaders, [10]. To effectively implement and encourage the adoption of RMIS, top management and leadership support are essential. The significance of risk management and the value of RMIS are communicated to employees via your active support of the system, which in turn promotes active participation and system adoption. In order to ensure that employees have access to the tools, training, and support they need to effectively use RMIS, senior management has the authority to devote significant resources, including money, time, and people. The significance of RMIS inside the organization has expanded as a direct consequence of this commitment, [18].

This study's purpose is to address a broad range of challenges." There is a significant gap in the study that focuses on RMIS adoption in Jordan, despite the fact that studies on the adoption of technology across several industries are gaining popularity. This information is not included in the corpus of literature currently being published. Furthermore, the study aims to address the lack of an all-encompassing system that can keep an eye on the many dangers related to hospital administration. These dangers include a range of elements, such as infrastructure-related, patient, and technological factors. Consequently, the study will significantly add to the body of literature already available on technology adoption, with a focus on RMIS alone.

1.2 Research Objectives

This study examines the UTAUT elements of Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions, as well as the moderating effect of Top Management Support and RMIS adoption.

1.3 Importance of Study

The implementation of a Risk Management Information System (RMIS) in Jordanian hospitals is examined within the parameters of this study, with an emphasis on the moderating role of upper management assistance. The significance of this study is influenced by a variety of significant factors. The first and most crucial need for enhancing patient safety and healthcare quality is effective risk management. The use of RMIS in hospitals eventually improves patient outcomes and raises the standard of healthcare by facilitating more efficient risk detection and management.

2 Literature Review

2.1 Performance Expectancy

The link between Performance Expectancy and the adoption of RMIS is the topic of the first section of the present study regarding the relationship. The relationship between these two factors was the subject of discussion in a number of researches. We found that there was a substantial association between trust and the desire to adopt and use, as demonstrated by the findings. Similarly, the hypothesis indicated that there was a substantial association between transaction transparency and the relationship. In a similar vein, the study found that the variable's volatility and enabling condition also had a strong link with the desire to adopt, use,

and accept the product, [19]. According to [19], there is no significant correlation between performance expectations and decision-making about adoption and intention to use. Therefore, one could hypothesize the following:

H1: There is a relationship between Performance Expectancy and RMIS adoption.

2.2 Effort Expectancy

The effectiveness of the link between Effort Expectancy and the adoption of RMIS is the subject of the second section of the contemporary research. A prior investigation was conducted to investigate this connection between these factors. [10] conducted a study with the objective of gaining an understanding of the factors that influence nurses' ongoing desire to use the electronic health records (EHR) system in Jordan. These factors include performance expectation, effort expectation, social influence, and facilitating conditions. Specifically, the research focused on the country's nursing workforce. The major users of the system are nurses since they are the suppliers of the most fundamental services in the healthcare industry. According to the data analysis results, there is a significant relationship between nurses' continuous intention to use and their expectations about their own levels of effort, performance, and the supporting environment, [10]. Additionally, the research carried out by [20] used the UTAUT2 model to integrate the Technological Pedagogical Knowledge (perceived self-efficacy) component in this study to examine the constructs-factors that influence instructors' intention to adoption mobile internet in the educational process (e.g, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Price Value, Technological Pedagogical Knowledge, Hedonic Motivation, Habit). According to the findings, there is no significant relationship between Effort Expectancy and teachers' intention to adopt and use mobile internet, [20]. Therefore, one could hypothesize the following:

H2: There is a relationship between Effort Expectancy and RMIS adoption.

2.3 Social Influence

The third segment of the current study is about the relationship between Social Influence and RMIS adoption. [6] carried out a study used the "unified theory of acceptance and use of technology" (UTAUT) to examine students' intentions to adopt, use and actual use of Moodle, an e-learning system, at Hashemite Institution, a public university in Jordan, one of the developing nations. Therefore, one could hypothesize the following:

H3: There is a relationship between Social Influence and RMIS adoption.

2.4 Facilitating Condition

The fourth part of this investigation focuses on the connection that exists between the Facilitating Condition and the implementation of RMIS policies and procedures. A number of additional researches have looked into this particular element. For example, [21] conducted a research in which they used the Unified Theory of Acceptance and Use of Technology (UTAUT) as a theoretical framework to examine the determinants associated with individuals' behavioral intention to use an AI Coach. They found a significant relationship between Facilitating Conditions and behavioral intention to use an AI Coach, [21]. Therefore, one could hypothesize the following:

H4: There is a relationship between Facilitating Condition and RMIS adoption.

2.5 The Moderating Influence of Top Management Support

The fifth segment of the current study is about the moderating effect of Top management support on the relationship between the IVs and RMIS adoption. Therefore, one could hypothesize the following:

H5: Top management support moderates the relationship between Performance Expectancy and RMIS adoption.

H6: Top management support moderates the relationship between Effort Expectancy and RMIS adoption.

H7: Top management support moderates the relationship between Social Influence and RMIS adoption.

H8: Top management support moderates the relationship between Facilitating Condition and RMIS adoption.

Refer to Figure 1 for the research framework.

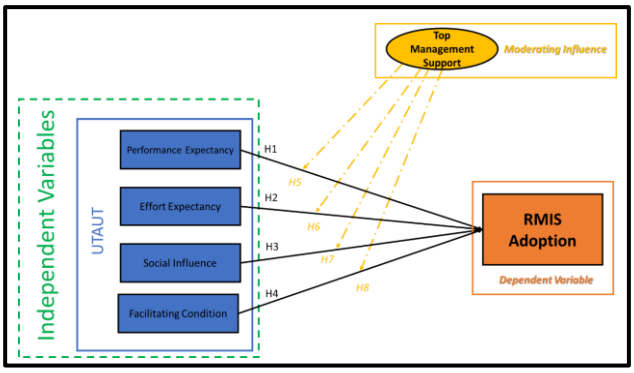

Fig. 1: Research Framework (Conceptual framework showing the relationships between independent variables and RMIS adoption, moderated by Top Management Support)

3 Research Methodology

Primary data was collected from employees working at three prominent hospitals in Jordan, namely: Jordan Hospital, Albashir Hospital, and Al-Issra Hospital. Therefore, simple random sampling was utilized, and 410 questionnaires were distributed to the employees on the basis of their willingness to participate in the study. Further, they were informed that the results of the survey would be available to them upon request.

In order to overcome any potential bias that may have been caused by non-respondents, a follow-up poll was conducted, and non-respondents were contacted. This was done in order to achieve the goal of providing an accurate representation of the population that was being sampled. Reverse coding and consistency checks were two of the strategies that were included in the design of the survey to reduce the likelihood of bias in the data that was self-reported. This was done in order to keep the survey as objective as possible.

These three hospitals were selected because of their strategic position in Jordan, which enables them to provide a diverse variety of healthcare services to their patients. The selection of these individuals was influenced by each of these factors. The purpose of this selection is to provide a thorough knowledge of RMIS adoption across a variety of healthcare contexts by concentrating on institutions that have different features spanning from general to specialized healthcare contexts.

4 Measurement of Variables

Within the context of this study, the creation of instruments was carried out with great attention in order to accurately reflect nature. In light of this, the questionnaire was developed to contain a total of 29 items and the variables were evaluated using a Likert scale with five points, where five represents "Strongly Agree" and one represents "Strongly Disagree", [22]. In addition, the validated instruments that are presented in Table 1 were taken from similar earlier research in order to measure the variables that were being investigated in this investigation.

Table 1. Questionnaire Development

Variable	No. of items	Reference
Performance Expectancy	5	[8].
Facilitating Condition	5	[8].
Social Influence	5	[23].
Effort Expectancy	4	[24].
Top Management Support	5	[25].
RMIS Adoption	5	[26], [27].

5 Findings

The current study has assessed the proposed model in two steps consisting of the assessment of the measurement model (outer model) and the assessment of the structural model (inner model).

5.1 Measurement Model

With the help of Smart PLS 3.3, the research model for this study was put through its paces. In addition, an investigation was carried out with reference to the measurement model (validity and reliability of the measures) and the structural model (testing the hypothesized linkages within the framework). The end result was that three items, namely EE4, RMIS1, and TMS2, had low levels of factor loadings. These items received scores of -0.022, 0.067, and -0.130, respectively. According to the recommendations made by [28], these values are lower than the predetermined threshold for factor loadings. As a result, a form of modification was taken into consideration during the second run, and as a consequence, PP1 and RC2 were eliminated in order to attain levels of factor loadings that were adequate. According to the data shown in Table 2 (Appendix) and Figure 2, all of the variables have, in general, reached the threshold for the factor loadings, Cronbach Alpha, composite reliability, and average variance extracted (AVE) values.

In the second step of the process, the discriminant validity was investigated in order to judge the degree to which a certain concept is actually unique from other constructs. In terms of identifying validity, the correlations between

variables are an important factor to consider. According to [29], the model's estimate did not surpass 0.95. The validity of the model was evaluated based on measurements of the correlations between constructs and the square root of the average variance obtained for a construct, [30]. The model was found to be valid. Because of this, the results of the Fornell and Larcker Criterion are presented in Table 3, which reveals that there is no value that is higher than the suggested cutoff point of 0.95, [30].

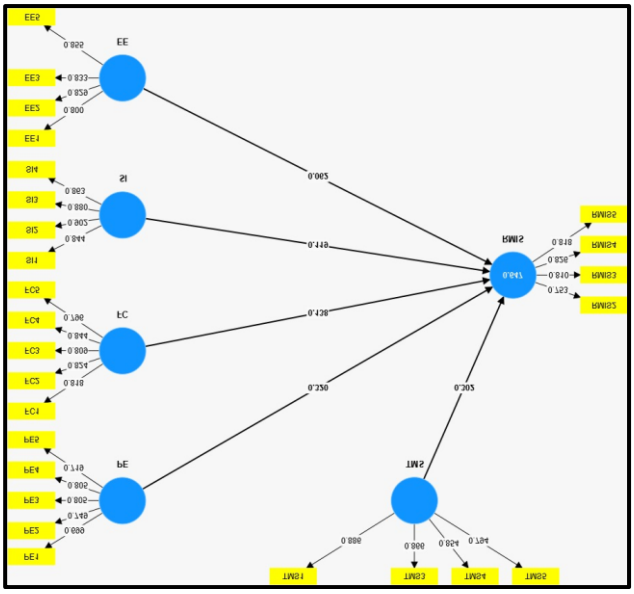

Fig. 2: Model of PLS algorithm results (Measurement model results with factor loadings, and validity of constructs in the research framework)

Table 3. Discriminant validity - Fornell and Larcker Criterion

	EE	FC	PE	RMIS	SI	TMS
EE	0.83					
FC	0.665	0.818				
PE	0.566	0.606	0.757			
RMIS	0.615	0.676	0.697	0.802		
SI	0.645	0.622	0.552	0.613	0.873	
TMS	0.676	0.76	0.64	0.729	0.635	0.851

5.2 Structural Model

The theoretical or conceptual component of the route model is represented by the structural model. The structural model, which is also known as the inner model in PLS-SEM, is comprised of the latent variables and the path connections between them, [28]. Following the examination of the measurement model, the next stage is to evaluate the structural model which is the following phase. According to [28], in order to evaluate the structural model, there are four steps that must be taken. These steps include the evaluation of collinearity (step one), the evaluation of the path coefficients (step two), the evaluation of the coefficient of determination (R^2 value) (step three), and the evaluation of the effect size f^2 (step four), [28].

The outcomes of the PLS bootstrapping procedure are presented in Table 4 (Appendix), which includes the Beta value, t-values, p-values, the findings of the hypothesis (whether it was supported or not), the confidence interval, the f^2 scores, and the VIF scores. In addition, the findings of the structural model and the PLS bootstrapping are summarized in Figure 3 (Appendix).

5.2.1 Assessment of the Structural Model for Collinearity Issues

The assessment of collinearity is a crucial assumption that must be met in order to make certain that multicollinearity does not occur. Collinearity diagnostics were carried out in order to examine and identify the multicollinearity concerns associated with the predictors. Investigating the Variance Inflation Factor is one way to accomplish this goal (VIF). [28] state that the VIF has a standard cut-off value that is either equal to or lower than 3.3, which is the value that [31] advocate using. Table 4 (Appendix) provides the results of the multicollinearity test values and shows no VIF value above 3.3, [31].

5.2.2 Assessing the Significance of the Structural Model Relationships

As can be seen in Table 4 (Appendix), the bootstrapping method has been used in order to generate results for each path relationship in the model. This was done in order to test the hypotheses.

Bootstrapping is a nonparametric test that is used in PLS. It is comprised of repeated random sampling with replacement from the initial sample. The objective of this test is to produce a bootstrap sample and achieve standard errors for the purpose of hypothesis testing, [28]. [32] recommended carrying out bootstrapping with a total of one thousand samples. This was in reference to the number of resampling samples. This investigation has resulted in the formulation of nine hypotheses about the constructions. The bootstrapping tool in SmartPLS 3.3 was used to create t-statistics for each of the paths, which were then used to test the significance level. The bootstrapping procedure has been configured with a significance level of 0.05, a test with one tail, and a total of one thousand

subsamples. According to [33], the critical value for the one-tailed test is 1.645, [34]. This value is used to determine the significance level of five percent ($\alpha = 0.05$). Every single one of the t-value scores has been found to be in accordance with the accepted level that was suggested by [28].

5.2.3 The Coefficient of Determination (R^2)

The resulting value of the coefficient of determination (R^2) will be used to assess the predictive accuracy of the model in the next stage. A higher value indicates a better level of predictive accuracy, [28]. The value of R^2 is connected to the predictive power of the model and goes from zero to one. The value represents the predictive power of the model. A calculation of the value of R^2 has been made using the Smart PLS algorithm, and the results are shown in Table 4 (Appendix).

In addition, [28] provided an explanation of the three distinct degrees of R^2 scores. If the R^2 is greater than 75, the result will be seen as substantial; if it is greater than 50, the result will be regarded as moderate; if it is greater than 25, the result will be regarded as weak; nevertheless, if the R^2 is less than 25, the result will be regarded as unsatisfactory. As per Table 5, the scores of R^2 for RMIS is considered as in Moderate level as recommended by [28].

Table 5. Path Coefficient (R^2)

Construct	R^2
RMIS	0.647

5.2.4 Assessment of the Effect Size (f^2)

The effect sizes, denoted by the symbol f^2, have been assessed at this stage. When it comes to the relative influence of a predictor construct on endogenous constructs, the value of f^2 is tied to this relationship. According to [35], it is essential to provide not just the p-value but also the substantive significance (effect size) and statistical significance (p-value), [35]. This is in addition to the fact that the p-value should be stated. In addition, a guideline established by [36] has been adhered to in order to measure the effect size. [36] found that the values of 0.02, 0.15, and 0.35 reflect weak, medium, and substantial effects, respectively. These values are based on the findings of the research performed by [36]. Consequently, the f^2 values for H2 are more than 0.02, which indicates a weak effect. On the other hand, the f^2 values for H1, H3, and H4 are greater than 15, which indicates a medium size of effect.

5.2.5 Assessment of the Moderating Effect

After testing the direct effect, the moderation hypothesis is tested. According to [28] and [37], a moderator is anything that is considered to be a third construct that has the ability to influence or impact the relationship that exists between the independent variables and the dependent variables. For the purpose of this research, continuous forms of data were used as the moderation, and the Smart PLS 3.3 platform was utilized for the analysis, [28], [37]

[38] state that the Orthogonalizing Approach is the method that is used in the moderation assessment. It is necessary to create all product indicators of the interaction terms in order to implement this approach, which is a continuation of the indicators approach, [34].

Table 6. R square change

R^2 included moderator	R^2 excluded moderator
0.647	0.671

The first thing that has to be done is to establish the interaction effect that exists between the two indicators of RMIS Adoption (RMIS). According to the data shown in Table 7 (Appendix), the R^2 value for the main model (which does not include the interaction) is 0.671, while the R^2 value for the interaction effect model is 0.647, as shown in Table 6. R^2 changed by around 0.024, which is the added variance. The following formula is then used to determine the effect size:

f^2 = (R^2 included moderator – R^2 excluded xmoderator) / (1 - R^2 included moderator)
$f^2 = (0.671 - 0.647) / (1 - 0.671)$
$f^2 = 0.073$

According to [39], the standards for small, medium, and large effect sizes are 0.005, 0.01, and 0.025 correspondingly. These values are shown in the order of their respective values. As a result, it can be said that the effect size is large based on the value of 0.073, [39].

6 Discussion and Conclusion

In this study, a significant link between employees' Performance Expectancy and the adoption of Risk Management Information Systems (RMIS) was identified, indicating that employees who believe in the system's ability to improve job performance are more likely to adopt it. For organizations implementing RMIS in Jordanian hospitals, it is crucial to focus on communicating the system's

performance benefits to foster positive perceptions among users. Tailoring training programs to demonstrate how RMIS enhances daily tasks is essential for successful adoption. This finding underscores the importance of a user-centric approach, emphasizing practical benefits for tasks, decision-making, and overall work effectiveness. Strategic communication efforts should highlight tangible advantages, aligning with the literature review, [6], [19], [40], [41].

The study highlights a significant relationship between Effort Expectancy and RMIS adoption, emphasizing the pivotal role of perceived ease of use in influencing employees' decisions. When the RMIS is perceived as intuitive and requiring minimal effort, employees are more likely to adopt it in their daily work. For organizations implementing RMIS in Jordanian hospitals, addressing and enhancing system user-friendliness becomes crucial. Strategic training programs and support mechanisms should simplify onboarding and minimize perceived complexities. A user-friendly interface not only facilitates adoption but also reduces resistance, fostering a positive attitude toward the technology. This finding underscores the need for strategic planning and communication efforts to emphasize the system's ease of use, focusing on clear communication and ongoing support. Recognizing the significance of Effort Expectancy provides valuable insights for healthcare administrators and policymakers in Jordan, emphasizing the need for a functionally robust and user-friendly RMIS. Tailoring training programs and support mechanisms to enhance user-friendliness contribute to successful implementation, fostering a culture that embraces innovation in risk management. This finding is consistent with what has been found in the previous studies, [10], [20], [41], [42].

Moreover, the study highlights a significant relationship between Social Influence and RMIS adoption, emphasizing the impactful role of interpersonal influence in shaping employees' decisions. Social Influence, referring to the impact of peers and the broader social environment, suggests that organizational opinions and behaviors significantly influence individual attitudes toward RMIS adoption. Positive perceptions from colleagues and peer adoption behaviors increase the likelihood of RMIS adoption. For organizations implementing RMIS in Jordanian hospitals, recognizing the importance of Social Influence has strategic implications. Fostering a positive social environment, encouraging communication about RMIS benefits, and leveraging influential figures can positively impact adoption rates. The finding contributes to technology adoption theories, emphasizing the social dimensions in RMIS adoption and aligning with theories recognizing interpersonal relationships in shaping attitudes toward new technologies. This underscores the human element in technology implementation, suggesting that colleagues' attitudes significantly influence the adoption landscape. Recognizing and leveraging social influence can be a strategic approach for healthcare administrators and policymakers aiming to enhance RMIS adoption rates, agreeing with what has been found in the previous works, [6], [21], [40], [42].

Successful RMIS implementation case studies in various hospital departments provide practical examples of how Social Influence, Effort Expectancy, and Facilitating Conditions interact to increase adoption. The aforementioned examples show how peer recommendations in emergency rooms and user-friendly interfaces in outpatient clinics lead to increased adoption rates. These real-world situations are used as examples in the discussion to show how these factors interact in practical settings within the context of effective RMIS implementation.

In addition, the observed significant relationship between Facilitating Conditions and RMIS adoption is a critical finding, carrying substantial implications for effective implementation within organizational contexts. This relationship underscores the pivotal role of organizational and technical support structures in influencing employees' decisions to adopt RMIS. The significance of this relationship indicates that favorable facilitating conditions significantly enhance the likelihood of RMIS adoption. When employees perceive ready access to essential resources, comprehensive training, and robust technical support, it fosters an environment conducive to successful adoption. This aligns with established technology adoption theories, emphasizing the crucial role of organizational readiness and supportive mechanisms. The significance of the Facilitating Condition-RMIS adoption relationship underscores the importance for organizations, particularly in the context of hospitals in Jordan, to go beyond introducing the technology and prioritize comprehensive support structures. Establishing facilitating conditions positions organizations to overcome potential barriers and ensures a smoother adoption process. This commitment not only addresses the technical aspects of the system but also reflects dedication to the overall success of RMIS adoption. By investing in resources, structured training programs, and

continuous support, organizations can create a positive environment facilitating seamless and effective integration of RMIS into daily work processes, like what has been established recently as per many researchers, [19], [20], [21], [43].

There is a significant moderating impact of Top Management Support on the relationship between RMIS Adoption and Performance Expectancy, according to the study's findings on the effect of this aspect. This suggests that the level of support from senior management is dependent on how much workers think system performance has improved. The beneficial effect of Performance Expectancy on actual adoption is amplified in organizations where senior executives actively encourage the adoption of relational management information systems (RMIS). The fact that attempts to highlight the advantages of system performance are dependent on the backing of executive leadership underscores the strategic relevance of building support from top management throughout the RMIS implementation process. The likelihood of successful staff adoption is increased when high-level executives are involved in marketing the benefits of the system. This has a practical component. This provides useful guidance for Jordanian politicians and healthcare managers in addition to elucidating the significant impact senior management has on the dynamics of RMIS adoption within the context of the company.

The Top Management Support moderating impact on the relationship between Effort Expectancy and RMIS adoption is demonstrated to be insignificant, which is one of the fascinating aspects of the RMIS adoption process uncovered by the study. The rejection of Hypothesis 6, the original hypothesis, follows from this. As seen by the lack of significance in the moderating effects of top management support, executive endorsement claims that the effect of perceived ease of use on adoption is continuous. Because the aforementioned impact is dependent on executive permission, this is the case. Even if adoption is directly and considerably influenced by Effort Expectancy, this finding remains valid. This shows, from a practical standpoint, that top management assistance has little influence on end users' perceptions of the system's efficacy and ease of use. Initiatives to raise Effort Expectancy via training courses and user-friendly design often have an influence on the adoption of RMIS. These initiatives are dependent on a bigger organization's sponsorship. This subtle perspective propels RMIS implementation by emphasizing how user experience improvements directly impact adoption in Jordanian hospitals. The need for a holistic approach that takes into account both administrative and technological factors is highlighted in the context of Jordanian hospitals. This understanding guides the implementation of RMIS by emphasizing that user experience efforts have a direct effect on adoption, despite the fact that top management support is crucial for overall success.

Among the many surprising factors in the study is the non-significant moderating impact of Top Management Support on the relationship between Social Impact and RMIS adoption. These and other factors ultimately lead to the rejection of Hypothesis 6. The lack of significance in the moderating effects of top management support indicates that when executive support is weak, adoption decisions are consistently influenced by peers and the broader social context. This is a result of the top management support system's lack of significant weight. Even if adoption is directly and heavily influenced by social influence, this is nevertheless the case. This implies that the backing of senior management has little effect on the influence of peers and the larger social environment on workers' decisions about the adoption of RMIS technology. The study highlights how RMIS adoption is often and directly impacted by social effects. It also illustrates the necessity for organizations to consider and include targeted social strategies in addition to more general management efforts in order to effectively adopt RMIS in the particular context of healthcare in Jordan. This is due to the distinctive healthcare system in the country of Jordan. Using this new information, organizations may speed up the development of social influence strategies inside the company. These strategies must emphasize the significance of peer support and collaborative dynamics in order to encourage RMIS adoption among the employees working in Jordanian hospitals.

By demonstrating that Top Management Support has a significant moderating influence on the relationship between Facilitating Conditions and RMIS adoption, the study's results support Hypothesis 8. This crucial facet of organizational dynamics is shown in the study. The level of top management support and advocacy seems to be dependent on how strong this relationship is, as seen by the significant moderating effect. This is true even if the Facilitating Condition has a significant and directly influencing effect on the adoption of RMIS. Thus, it is possible to draw the conclusion that the adoption of RMIS is significantly impacted when the company establishes favorable circumstances and has strong support from top management. It is possible to enhance the beneficial

impacts of organizational preparation on actual adoption by combining favorable circumstances with top management support. The study's findings highlight the significance of top management for maximizing the impact of favorable circumstances. This highlights that although it is crucial to create an atmosphere that is favorable to success, top executives' active support and endorsement act as a catalyst, enhancing the efficacy of these conditions. The finding emphasizes the integrative nature of successful technology adoption efforts, highlighting the need for a comprehensive approach that addresses both organizational infrastructure and leadership advocacy for fostering a positive environment encouraging successful RMIS adoption in Jordanian hospitals. All of these findings were consistent with what was found by other researchers, [10], [12], [44], [45].

The fact that Top Management Support has a significant moderating influence on the relationship between Social Influence and RMIS adoption indicates that peer dynamics play an independent role in influencing workers' decisions later on. Unofficial networks and personal relationships are often the source of social influence, and they may have more impact than orders from higher up. Peer actions and endorsements may be seen by employees as more relevant and urgent, which would reduce the impact of leadership support on these social dynamics.

This result implies that although top management is important for planning and distributing resources, its function in enhancing Social Influence may be limited unless it is linked to grassroots dynamics. In order to create a unified approach that increases RMIS adoption via both top-down and peer-driven activities, organizations need to assess the potential for integrating leadership efforts with strategies that capitalize on prominent peers or early adopters.

7 Research Limitations and Future Recommendations

It is crucial to plan a course for future research initiatives, especially in light of the fact that this study has illuminated a number of facets of RMIS adoption within the healthcare sector. The objective of this part is to provide brief but targeted recommendations in order to fulfill our objective of enhancing and expanding our understanding of the factors that affect RMIS adoption. The suggestions that follow examine the intricate relationship between user perspectives and leadership, take into account the many contextual factors and use a variety of analytical techniques. Scholars have the chance to provide significant insights into the evolving landscape of technology adoption in healthcare organizations by addressing these prospective areas for future research.

An all-encompassing approach to understanding contextual factors may provide a more comprehensive understanding of the adoption environment.

Given the significant moderating effects of Top Management Support, future research should explore the specific mechanisms through which top management influences perceptions and conditions related to RMIS adoption. Understanding the leadership behaviors and communication strategies that contribute to these effects would provide actionable insights for organizational interventions.

To expand the generalizability of findings, future research could compare the adoption patterns of RMIS with other healthcare technologies or technologies in different industries. This comparative approach would help identify unique challenges and facilitators specific to RMIS adoption and contribute to a broader understanding of technology adoption dynamics.

Future studies might consider exploring cases where RMIS adoption was unsuccessful or faced challenges. Understanding the reasons behind unsuccessful adoptions can provide valuable lessons and insights for organizations seeking to implement RMIS or similar technologies. This could involve in-depth qualitative analyses of failed adoption attempts.

To mitigate potential common method bias, future research could incorporate statistical controls or additional measures to address shared method variance. Employing objective measures alongside self-reported data or using statistical techniques to control for bias would enhance the rigor and validity of the research.

Given the significant impact of Effort Expectancy on RMIS adoption, future research could focus on the user experience and interface design aspects. Exploring specific design features that contribute to perceived ease of use and conducting usability testing could provide practical insights for optimizing the user interface of RMIS.

Investigating the impact of organizational change management strategies on RMIS adoption could be a fruitful avenue for future research. Examining how change initiatives, communication strategies, and training programs influence the adoption process would contribute to a better

understanding of the organizational dynamics involved in RMIS implementation.

Declaration of Generative AI and AI-assisted Technologies in the Writing Process

During the preparation of this work the authors used Grammarly in order to improve the writing of the paragraphs. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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Conflict of Interest

The authors have no conflicts of interest to declare.

APPENDIX

Table 2. Convergent Validity

Variables	Items	Factor Loadings	Cronbach's Alpha	Composite Reliability	AVE
Performance Expectancy	PE1	0.699	0.813	0.870	0.573
	PE2	0.749			
	PE3	0.805			
	PE4	0.805			
	PE5	0.719			
Effort Expectancy	EE1	0.800	0.849	0.898	0.688
	EE2	0.829			
	EE3	0.833			
	EE5	0.855			
Social Influence	SI1	0.844	0.895	0.927	0.761
	SI2	0.902			
	SI3	0.880			
	SI4	0.863			
Facilitating Condition	FC1	0.818	0.877	0.910	0.670
	FC2	0.824			
	FC3	0.809			
	FC4	0.844			
	FC5	0.796			
Top Management Support	TMS1	0.886	0.872	0.913	0.723
	TMS3	0.866			
	TMS4	0.854			
	TMS5	0.794			
RMIS Adoption	RMIS2	0.753	0.815	0.878	0.644
	RMIS3	0.810			
	RMIS4	0.826			
	RMIS5	0.818			

Table 4. PLS Bootstrapping Results

Hypothesis		Std. Beta	Std. Error	T values	P values	Decision	Confidence Intervals		f^2	Effect size	VIF	R^2
							Lower	Upper				
H1	PE -> RMIS	0.306	0.043	7.13	0.000	Supported	0.235	0.38	0.153	Medium	1.894	0.647
H2	EE -> RMIS	0.094	0.054	1.724	0.043	Supported	0.012	0.19	0.005	Weak	2.310	
H3	SI -> RMIS	0.1	0.043	2.342	0.010	Supported	0.034	0.173	0.019	Medium	2.068	
H4	FC -> RMIS	0.178	0.06	2.941	0.002	Supported	0.082	0.288	0.019	Medium	2.783	

Table 7. Moderation Model Assessment

Hypothesis		Std. Beta	Std. Error	T values	f^2 (For the moderation)	VIF	P values	Decision
H5	TMS x PE -> RMIS	0.198	0.041	4.828	0.061	2.747	0.000	Supported
H6	TMS x EE -> RMIS	0.076	0.051	1.491	0.01	2.219	0.068	Supported
H7	TMS x SI -> RMIS	0.015	0.059	0.247	0.000	2.823	0.402	Rejected
H8	TMS x FC -> RMIS	0.092	0.045	2.038	0.011	2.608	0.021	Supported

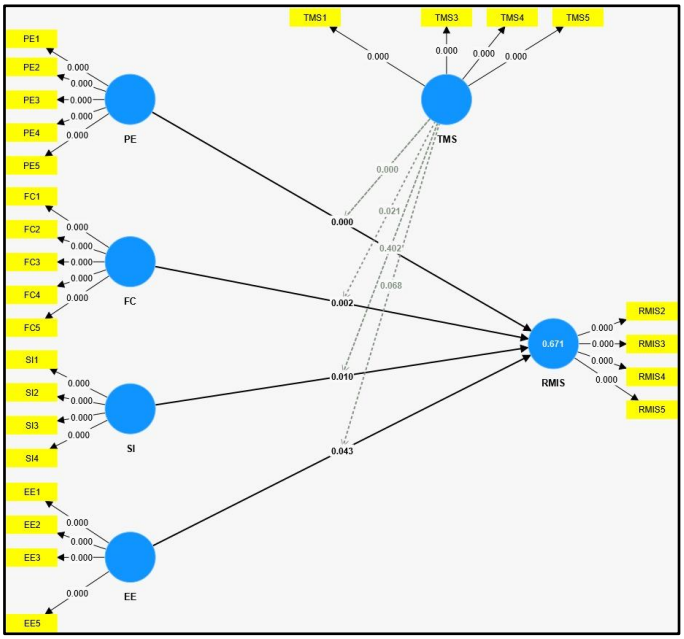

Fig. 3: Structural Model- PLS Bootstrapping Results (Structural model results with path coefficients, significance levels based on PLS bootstrapping analysis)