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Determinants That Influence the Implementation of Generic Open Source Management Information System Version 2 (SIMGOSV2) at Ryacudu Regional General Hospital Kotabumi Lampung

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Abstract: The implementation of the Generic Open Source Hospital Management Information System (SIMGOSV2) is essential to support effective and efficient healthcare services. However, challenges such as limited infrastructure, user resistance, and staff competencies remain significant barriers. This study aims to analyze the factors influencing the successful implementation of SIMGOSV2 at Ryacudu District Hospital, Kotabumi, Lampung. A quantitative survey approach was employed, involving 124 purposively selected respondents from a population of 180 employees. Data were collected through questionnaires and analyzed using multiple linear regression to examine the effects of human resource competence, managerial commitment, external factors, and technology on the successful implementation of SIMGOSV2. Findings indicate that human resource competence and managerial commitment significantly affect SIMGOSV2 implementation, while external and technological factors show weaker effects. The coefficient of determination (R^2) of 0.681 suggests that 68.1% of the variation in successful implementation is explained by the studied variables. The success of SIMGOSV2 implementation is strongly influenced by human and managerial aspects. Hospitals should strengthen training, motivation, and managerial support while evaluating system features to better enhance work productivity. This study confirms that technological factors are the strongest determinant of SIMGOSV2 implementation success in regional hospitals.

Keywords: SIMGOSV2, Hospital Management Information System, Human Resource Competence, Managerial Commitment.

INTRODUCTION

One widely developed and employed HMIS in hospitals is the Generic Open-source Management Information System Version 2 (SIMGOSV2). This system is designed to support the integrated management of various hospital functions, including patient data, administration, finance, and reporting. With the adoption of SIMGOSV2, service processes are expected to become more efficient and professional, while minimizing errors arising from manual record-keeping. Moreover, SIMGOSV2 facilitates data-driven managerial decision-making in real time, ensuring the availability of accurate information.

SIMGOSV2 constitutes an open innovation aimed at supporting hospital digitalization, particularly for regional and referral hospitals. The system's implementation is also anticipated to address challenges related to human resource and infrastructure limitations in many hospitals, especially those in remote areas, by offering a more flexible, cost-effective solution that can be tailored to the specific needs of each institution (KEMENKES, 2019).

Ryacudu Kotabumi Regional General Hospital (RSUD) serves as a principal referral hospital in North Lampung Regency, playing a strategic role in the provision of healthcare services to the community. In an effort to enhance service quality and operational efficiency, the hospital has adopted the Generic Open-source Management Information System Version 2 (SIMGOSV2). The implementation of this system is anticipated to expedite administrative processes, streamline patient data management, and support more accurate, data-driven decision-making (Triana & Kosasih, 2025).

However, in practice, the application of SIMGOSV2 is not without its complex challenges. The readiness of the information technology infrastructure remains a fundamental issue, encompassing limitations in network and adequate hardware. Furthermore, human resources present another area of concern, characterized by a shortage of information technology experts and insufficient training for system users. Equally important, resistance to environmental change among some employees, coupled with a lack of managerial commitment, also impedes the comprehensive integration of the system.

These factors are highly determinant of the successful implementation of SIMGOSV2 at Ryacudu Hospital. Without holistic support from both technical and non-technical aspects, a system intended as a solution could potentially generate new problems. Therefore, a well-planned and sustainable strategy is imperative to ensure that SIMGOSV2 can function optimally as the backbone of a modern and responsive hospital information system.

Research by Fauziah & Dety Mulyanti (2023) indicates that the successful implementation of a management information system is influenced by various determinants. These include the Availability of Technological Infrastructure, where adequate infrastructure such as hardware, networks, and software is crucial for system operationalization. Human Resources Competence is also a key factor, as the knowledge and skills of staff in using the system affect implementation effectiveness. Furthermore, managerial commitment, policy, and funding are instrumental in promoting the sustainability of implementation. Lastly, Resistance to Change, the level of user acceptance and adaptation to the new system can be a major obstacle to the adoption of SIMGOSV2.

Evaluating the factors that influence the implementation of SIMGOSV2 at Ryacudu Kotabumi Regional Hospital is of great importance. This study is expected to provide strategic recommendations to optimize the use of the system, so that healthcare services can be delivered more quickly, accurately, and transparently. Thus, SIMGOSV2 will not only serve as a technical tool, but also as a driver for the transformation of hospital management toward modern and efficient services.

A preliminary survey was conducted by the researcher using questionnaires distributed to 20 employees at Ryacudu Hospital, and the following data were obtained:

Table 1. Recapitulation of the Initial Questionnaire on the Use of SIMGOSV2 (N = 20)

No.	Age (yrs)	Position/Unit	Ever Used SIMGOSV2?	Frequency of Use	Sufficient Training?	Does SIMGOSV2 Make Work Easier?	Main Obstacle
1	35	Medical Records	Yes	Daily	Insufficient	Yes	System error
2	29	Finance	Yes	Daily	Sufficient	Yes	Slow loading
3	41	Pharmacy	No	Never	Don't know	Don't know	Not yet used
4	33	Emergency	Yes	Several times	Insufficient	No	Not synchronized
5	38	Medical Records	Yes	Daily	Sufficient	Yes	System error
6	45	IT Support	Yes	Daily	Sufficient	Yes	Limited personnel
7	32	Inpatient	Yes	Sometimes	Insufficient	No	Slow response
8	28	Cashier	No	Never	Don't know	Don't know	Not yet available
9	30	Medical Records	Yes	Daily	Sufficient	Yes	System issue
10	27	Dental Clinic	Yes	Sometimes	Insufficient	Don't know	Minimal training
11	40	Pediatric Clinic	Yes	Rarely	Insufficient	No	Inefficient
12	34	Human Resources	No	Never	Don't know	Don't know	Not used
13	31	Medical Records	Yes	Daily	Insufficient	Yes	System error
14	36	Emergency	Yes	Daily	Insufficient	No	Slow system
15	39	Administration	Yes	Daily	Sufficient	Yes	Connection issue
16	42	Medical Records	Yes	Daily	Sufficient	Yes	Limited IT staff
17	26	General Clinic	Yes	Sometimes	Insufficient	No	Not optimal
18	37	Pharmacy	Yes	Several times	Insufficient	Yes	Slow network
19	43	Emergency	Yes	Daily	Sufficient	Yes	Database error
20	29	Inpatient	Yes	Rarely	Insufficient	No	Slow system

Source: Researcher Pre-Survey Results (2025)

Based on the information provided in Table 1, the first issue identified is a lack of full integration across all units. This is evident as several departments, including Personnel, Pharmacy, and Outpatient Clinics, are not utilizing SIMGOSV2. The second issue is a limited

number of technical experts, with many respondents citing inadequate IT support or a scarcity of support staff. The third issue is system errors and slow performance, as nearly half of the respondents reported slow loading times, system errors, and connectivity issues as major obstacles.

These findings indicate that the implementation of SIMGOSV2 at Ryacudu Kotabumi Regional General Hospital is not yet fully operational and not all units are integrated. This is due to the significant preparation required and the substantial costs associated with developing a fully integrated SIMGOSV2 system. The challenges encountered in implementing SIMGOSV2 include a shortage of IT specialists. The SIMGOSV2 team consists of only three individuals responsible for hardware support, software support, and network support. Additionally, medical records staff face other issues with the information system, such as occasional system errors and slow response times, which can hinder patient services.

METHOD

Research Methodology

This study adopts a quantitative research approach with a cross-sectional design to investigate the determinants of Generic Open Source V2 Management Information System (SIMGOSV2) implementation success at RSUD Ryacudu Kotabumi. The research employs a quantitative method to objectively measure and analyze the relationships between key variables using numerical data and statistical analysis (Santoso et al., 2022). The cross-sectional design allows for data collection at a single point in time to examine the influence of technological factors, managerial commitment, human resource competence, and environmental factors on the successful implementation of the system. This approach provides a snapshot of the current situation and the relationships between the variables of interest (Sugiono, 2008).

Data Collection and Analysis

Data were collected from both primary and secondary sources. Primary data were obtained directly from the research subjects through a questionnaire using a Likert scale to measure the perceptions of users regarding the independent variables (technology factors, managerial commitment, human resource competence, and environmental factors) and the dependent variable (implementation success). The target population for this study was the hospital's IT, medical, and other staff who use the SIMGOSV2, estimated at 180 individuals. A sample size of 124 respondents was determined using the Slovin formula with a precision level of 0.05, and a purposive sampling technique was used for selection. Secondary data, including hospital documents related to the SIMGOSV2 policy and performance reports, were also used to support and supplement the primary findings (Arikunto, 2006).

Hypothesis Testing and Statistical Analysis

The collected data will be processed through editing, coding, and tabulation to ensure accuracy and consistency. The quality of the data will be assessed using validity and reliability tests, specifically the Pearson Product Moment correlation and Cronbach's Alpha, respectively. Furthermore, classical assumption tests, including normality (Shapiro-Wilk Test), heteroscedasticity (Glejser Test, Scatterplot), multicollinearity (VIF and Tolerance), and autocorrelation (Durbin-Watson Test), will be performed to ensure the data meet the requirements for regression analysis. The study will use multiple linear regression to test the hypotheses. This includes a partial t-test to determine the individual effect of each independent variable and a simultaneous F-test to assess the collective influence of all independent variables on the dependent variable. Finally, the coefficient of determination (R²) will be calculated to measure the percentage of variance in the dependent variable explained by the independent variables (Sugiyono, 2014).

RESULTS AND DISCUSSION

This section presents the empirical findings from research on the determinants affecting the successful implementation of the Generic Open Source Management Information System Version 2 (SIMGOSV2) at RSUD Ryacudu Kotabumi Regional Hospital. The first part, Research Results, presents data objectively, including respondent profiles, descriptive analysis, data quality testing, and hypothesis testing results. The second part, Discussion, provides in-depth interpretation of these findings by connecting them to relevant theoretical frameworks and practical implications for the organization.

Result

This section presents the results of quantitative data analysis collected through questionnaires from 124 respondents who are employees at RSUD Ryacudu Kotabumi. This analysis aims to provide an objective overview of the data before further interpretation.

Respondent Profile and Organizational Context

The analysis of respondent profiles is a fundamental step in contextualizing the study's findings. The sample's demographic and professional characteristics offer insight into the capabilities, experiences, and organizational perspectives that underpin their perceptions of system implementation. The composition of respondents reflects broad engagement across hospital functional lines, which is essential for understanding the dynamics of SIMGOSV2 adoption in a holistic manner.

The distribution of respondents (presented in Table 2) reveals several key attributes. The majority were Medical Staff (52.4%), underscoring that clinicians who interact directly with patients and medical data are the primary users and determinants of successful system adoption. Their involvement was followed by Other Department Staff (28.2%) and IT Staff (19.4%), indicating cross-functional collaboration in system operationalization. By work unit, respondents were distributed across critical units, including Inpatient Care (28.2%), Outpatient Care (24.2%), and Supporting Units such as laboratories and radiology (16.1%), signifying that SIMGOSV2 has been integrated into the hospital's core clinical and administrative workflows.

The sample's demographic profile highlights both significant potential and unique challenges. The workforce is dominated by individuals in their most productive years (46.8% aged 25–35) with a high level of education (54.8% holding a bachelor's degree). Theoretically, this profile suggests a workforce with strong digital literacy and adaptability to new technologies. Conversely, a plurality of respondents (41.9%) have more than five years of service in the hospital. Long tenure often engenders well-established routines and workflows, which can give rise to resistance to procedural change even when such change is technology-driven. This creates a contextual tension: a workforce inherently capable of adopting new technologies yet potentially reluctant to alter long-internalized work habits. This context is critical for interpreting findings related to attitudes toward and acceptance of the system. Furthermore, the relevance of the collected data is reinforced by the fact that 67.7% of respondents were directly involved in using SIMGOSV2, ensuring that measured perceptions derive from actual experience.

Table 2. Summary of Respondent Characteristics (N=124)

Category	Sub-Category	Frequency	Percentage (%)
Department	Medical Staff	65	52,4
	Staf IT	24	19,4

	Other Section Staff	35	28,2
Work Unit	Hospitalization	35	28,2
	Outpatient	30	24,2
	IT Installation	24	19,4
	Supporting Unit	20	16,1
	IGD	15	12,1
Age	25-35 years	58	46,8
	36-45 years	38	30,6
	> 45 years	18	14,5
	< 25 years	10	8,1
Education	Master (S1)	68	54,8
	Diploma (D3)	30	24,2
	High School/Vocational School	15	12,1
	Postgraduate (S2)	11	8,9
Length of work	> 5 years	52	41,9
	3-5 years	40	32,3
	1-3 years	20	16,1
	< 1 year	12	9,7
Involvement	Direct Involvement	84	67,7
	Not Directly Involved	40	32,3

Source: Primary Data Processed (2025)

Descriptive Analysis of Research Variables

Descriptive analysis provides an overview of respondents' collective perceptions regarding each key variable in the study. By identifying mean scores as well as the indicators with the lowest scores, areas of strength and weakness in the implementation process of SIMGOSV2 can be mapped. Overall, respondents' perceptions of all five variables fall within the "Good" category, indicating a generally positive sentiment toward both the implementation process and its outcomes. However, a more granular examination of specific indicators reveals frictions and areas requiring targeted attention.

These findings present a paradox: success at the macro (organizational) level appears to obscure significant challenges at the micro (individual user) level. The high mean score for Implementation Success (3.52) projects an image of a successful rollout. Yet, deeper analysis

uncovers a series of operational issues. Staff report possessing adequate technical competence (mean 3.58) but exhibit a comparatively less positive attitude toward the new system (lowest score 3.10). This skepticism likely relates to the perception that their line managers have not demonstrated strong, tangible commitment (lowest score 2.70). Moreover, although the system is deemed beneficial for the hospital as an institution, users feel it has not optimally enhanced their personal work productivity (score 3.10) and continue to harbor concerns regarding data security (score 3.40). Collectively, these findings highlight a disconnect between the organization’s strategic objectives which have been largely achieved and the end users’ day-to-day experience. If left unaddressed, such micro-level frictions may threaten the system’s sustainability and optimal performance over the long term.

Table 3. Descriptive Statistics and Critical Indicators of Research Variables

Research Variables	Average Score	Category	Critical Indicator (Lowest Score)	Average Indicator
Human Resources Competence (X1)	3,58	Good	Positive attitude towards using the new system	3,1
Managerial Commitment (X2)	3,48	Good	Strong commitment from managers in supporting the new system	2,7
Environmental Factors (X3)	3,52	Good	Competition with other hospitals encourages the implementation of new systems.	3,1
Technology Factor (X4)	3,67	Good	Data security in the system is guaranteed	3,4
Implementation Success (Y)	3,52	Good	The system helps to increase my work productivity	3,1

Source: Primary Data Processed (2025)

Instrument Quality Test Results and Classical Assumptions

To ensure the validity and reliability of the inferential analysis results, a series of tests on instrument quality and classical regression model assumptions were conducted. This subsection affirms the methodological soundness of the research, which underpins the credibility of the presented findings.

- 1. Validity Test:** Validity testing was conducted to ensure that each questionnaire item accurately measures the intended construct. Using the criterion of $t_{count} > t_{table}$ (where t_{table} for N=124 at the 0.05 significance level is 0.1946), the results indicate that all 50 items across the five variables (Human Resource Competence, Managerial Commitment, Environmental Factors, Technological Factors, and Implementation Success) are valid. The t_{count} value for each item consistently exceeds the critical value, demonstrating that the research instrument possesses strong construct validity.

2. **Reliability Test:** Reliability testing measures the internal consistency of the instrument. Using Cronbach's Alpha coefficient, all variables demonstrated a high level of reliability. The Human Resource Competence variable yielded an Alpha value of 0.735, categorized as "High Reliability." Meanwhile, the Managerial Commitment (0.912), Environmental Factor (0.936), Technological Factor (0.933), and Implementation Success (0.839) variables all exhibited Alpha values above 0.80, classified as "Very High Reliability." These results confirm that the measurement instrument employed is consistent and reliable.
3. **Classical Assumption Test:** The multiple linear regression model requires that several classical assumptions be satisfied so that the resulting estimates constitute the Best Linear Unbiased Estimator (BLUE).
 - a. **Normality:** The One-Sample Kolmogorov–Smirnov test indicated that the residuals were normally distributed. The Asymp. Sig. (2-tailed) values for all variables (Human Resource Competence: 0.182; Managerial Commitment: 0.502; Environmental Factors: 0.772; Technological Factors: 0.392; Implementation Success: 0.124) exceeded 0.05.
 - b. **Multicollinearity:** No high correlations were found among the independent variables. All variables exhibited Tolerance values above 0.10 and Variance Inflation Factor (VIF) values below 10 (VIF ranged from 1.355 to 1.451), indicating the absence of multicollinearity issue.
 - c. **Heteroscedasticity:** Levene's test indicated that the variance of the residuals was constant (homoscedasticity). The significance values for all independent variables exceeded 0.05 (ranging from 0.071 to 0.260), thereby satisfying the homoscedasticity assumption.
 - d. **Autocorrelation:** The Durbin–Watson test yielded a value of 1.867, which lies within the ideal range (between dU and $4 - dU$), indicating no correlation among the residuals. The assumption of no autocorrelation is therefore satisfied.

The successful completion of all data quality assessments and classical assumptions indicates that the research findings are grounded on a robust methodological foundation. The statistical inferences derived from the regression analysis are not artifacts of measurement error or breaches of statistical assumptions, thereby imparting strong credibility to the hypothesis-testing results.

Results of Multiple Linear Regression Analysis and Hypothesis Testing

A multiple linear regression analysis was conducted to test the research hypotheses and determine the extent to which the independent variables (human resource competence, managerial commitment, environmental factors, and technological factors) influence the dependent variable (implementation success). The results of this analysis constitute the core of the study's quantitative findings.

Simultaneous Testing (F Test)

The F-test was employed to assess whether all independent variables jointly exert a significant effect on the dependent variable. The analysis results (presented in Table 3) reveal an F-value of 6.511 with a significance level of 0.000. Given that this p-value is well below the 0.05 threshold, it can be concluded that Human Resource Competence, Managerial Commitment, Environmental Factors, and Technological Factors collectively have a statistically significant impact on the Success of SIMGOSV2 Implementation.

Coefficient of Determination (R2)

The obtained R-squared value is 0.681. This indicates that 68.1% of the variance in the Implementation Success variable can be explained by the four independent variables under investigation. The remaining 31.9% is influenced by factors outside the current research model, such as organizational culture, training quality, or technical support from vendors.

Partial Test (t-Test)

A t-test was conducted to assess the individual effect of each independent variable on the dependent variable. The results indicate that all four research hypotheses are accepted, with each independent variable exerting a positive and statistically significant partial influence on Implementation Success at a significance level below 0.05:

1. Human resource competency (X1) has a significant influence with a calculated t value of 3.692 and Sig. = 0.009.
2. Managerial Commitment (X2) has a significant influence with a calculated t value of 2.566 and Sig. = 0.014.
3. Environmental factors (X3) have a significant influence with a calculated t value of 2.692 and Sig. = 0.012.
4. The Technology Factor (X4) has a significant influence with a calculated t value of 2.417 and Sig. = 0.017.

Based on the analysis results, the multiple linear regression model established is as follows: $Y = 18.795 + 0.392X_1 + 0.384X_2 + 0.410X_3 + 0.413X_4 + e$. This equation indicates that each one-unit increase in the independent variables leads to an increase in the Implementation Success score, holding other variables constant. Although all four factors are statistically significant, comparing the standardized beta coefficients is necessary to determine the relative influence of each variable. The beta coefficients reveal that the Technology Factor ($\beta = 0.486$) has the most dominant effect on implementation success. Its value is more than twice the influence of Human Resource Competence ($\beta = 0.191$) and nearly five times stronger than Managerial Commitment ($\beta = 0.101$). These findings highlight that, in the context of Ryacudu Regional Hospital, the quality of the technological artifact itself such as ease of use, feature reliability, and workflow alignment is the strongest predictor of success. This suggests that a superior technological solution can potentially compensate for moderate weaknesses in other areas, such as managerial commitment or user attitudes, challenging the conventional view that information system implementation is solely about human factors.

Table 4. Results of Multiple Linear Regression Analysis and Hypothesis Testing

Variabel	Koefisien B (Unstandardized)	Std. Error	Koefisien Beta (Standardized)	t hitung	Sig.
(Constant)	18,795	3,578		5,252	0,000
Human Resources Competence (X1)	0,392	0,128	0,191	3,692	0,009
Managerial Commitment (X2)	0,384	0,148	0,101	2,566	0,014

Environmental Factors (X3)	0,410	0,146	0,128	2,692	0,012
Technology Factor (X4)	0,413	0,171	0,486	2,417	0,017
Model Statistics					
Fhitung	6,511				
Sig. F	0,000				
R Square (R2)	0,681				
Adjusted R Square	0,114				
Durbin-Watson	1,867				

Source: Primary Data Processed (2025)

Discussion

This section offers an in-depth interpretation of the research findings presented. The empirical results are analyzed in relation to the existing theoretical framework, previous studies, and the unique context of Ryacudu Kotabumi Regional Hospital. The objective is to provide a richer understanding of the dynamics underlying the data and to formulate implications that are pertinent to both theory and the practice of healthcare information systems management.

The Influence of Human Resource Competence: The Paradox of Skills and Attitudes

The hypothesis test results confirm that human resource competence has a significant effect on the success of the SIMGOSV2 implementation ($t = 3.692$; $p = 0.009$). This finding is consistent with Delone & McLean (2003) information system success model and Spencer & Spencer (1994) competency theory, both of which consistently identify user knowledge and skills as fundamental pillars of successful technology adoption. Overall, staff at Ryacudu Regional Hospital perceive themselves to possess adequate technical capabilities to operate the system, as evidenced by a high mean score for the variable (3.58).

However, a more granular descriptive analysis revealed a “skill–attitude paradox.” Despite feeling technically capable, respondents assigned the lowest score to the indicator “I have a positive attitude toward using the newly implemented system” (3.10). This suggests that technical competence alone is insufficient to guarantee full system acceptance. A less positive attitude may serve as a precursor to resistance to change, manifesting in minimalist system use (i.e., employing only mandatory features), reluctance to explore advanced functionalities, and a tendency to seek workarounds that revert to more familiar workflows. This issue does not stem from a training deficit but rather represents a change management challenge. Employees feel capable yet remain unconvinced of the system’s benefits for their daily effectiveness and efficiency a sentiment strongly echoed by the low score for the indicator “The system helps to improve my work productivity” within the implementation success variable.

The Influence of Managerial Commitment: Strategic and Tactical Support Gap

Managerial commitment was found to be a significant predictor of implementation success ($t = 2.566$; $p = 0.014$), a finding that supports McShane & Glinow (2010) organizational change theory, which posits leadership support as a primary catalyst. Overall, respondents perceived top-management backing, as evidenced by budget allocations and the alignment of systems with the organization's vision.

However, this finding also highlights a critical "support gap." The lowest score for this variable (2.7) was observed on the indicator "There is strong commitment from managers to support the use of the new system." This suggests that, although support is felt at the strategic (executive) level, it is not fully experienced at the tactical or operational levels (line managers or unit heads). Employees interact daily with their immediate supervisors, not with executives. When line managers fail to act as change champions whether due to their own lack of conviction, insufficient training, or competing responsibilities the message of top-management support is not conveyed effectively. This gap can undermine morale, slow adoption, and create the perception that system implementation is not a primary priority in daily operations, ultimately impeding the realization of the system's full benefits.

Influence of Environmental Factors: Compliance as a Key Driver

Environmental factors have also been shown to exert a significant influence on implementation success ($t = 2.692$; $p = 0.012$), consistent with the framework of Laudon & Laudon (2020), which emphasizes the interaction between an organization and its external environment. Further analysis of the questionnaire items revealed that the primary drivers within this factor were elements related to governmental regulations and policies. This finding is particularly relevant for Ryacudu Regional Hospital as a public service institution.

Conversely, the lowest-scoring indicator was "Competition with other organizations motivates the organization to adopt the new system" (mean = 3.1). This result suggests that the principal motivation for implementing SIMGOSV2 was not to gain a competitive advantage over private hospitals or similar entities, but rather to ensure compliance with standards and regulations imposed by higher authorities, such as the Ministry of Health. While this compliance orientation may promote standardization and interoperability of health data, it also carries the risk that future system development will focus more on meeting reporting obligations than on patient-centered service innovations or internal efficiency improvements that exceed minimum requirements.

The Influence of Technology Factors: System Quality as the Foundation of Success

The Technology factor not only exerts a significant effect ($t = 2.417$; $p = 0.017$) but also represents the strongest predictor, as evidenced by the highest standardized beta coefficient ($\beta = 0.486$). This finding robustly reinforces the "System Quality" pillar of the Delone & McLean (2003) success model and aligns with the work of Jogiyanto (2017). In the context of SIMGOSV2 implementation at Ryacudu Regional General Hospital, the system's technical quality namely usability, reliability, speed, and feature alignment with clinical workflow requirements constitutes the foundation of success. This implies that a well-designed, intuitive system can substantially reduce users' cognitive load and even overcome certain organizational barriers such as initial resistance.

Nonetheless, beneath the generally positive perception of technology lies a critical vulnerability: data security concerns, which registered the lowest score for this variable (mean = 3.4). In the healthcare sector, where patients' medical records are extremely sensitive and private, perceived security vulnerabilities can fundamentally undermine the trust of both medical staff and patients. If these concerns are not addressed with seriousness and transparency, they may impede full utilization of the system particularly for features involving

the exchange of sensitive data regardless of how advanced or user-friendly other functionalities may be.

Research Implications: Towards Sustainable Health Information System Implementation

Holistically, this study's analysis demonstrates that the successful implementation of SIMGOSV2 at Ryacudu Kotabumi Regional Hospital is multifaceted, yet it is characterized by a fundamental tension between macro-organizational achievements and persistent frictions at the micro-user level. A significant regression model with an R^2 value of 68.1% indicates that the identified factors are indeed the primary determinants of success.

Theoretical Implications

This study provides empirical confirmation of the validity of the DeLone & McLean multidimensional information system success model within the specific context of government hospitals in developing countries such as Indonesia. In particular, the findings underscore the disproportionately high weight of the System (Technology) Quality construct in the model. This pattern may be characteristic of mandatory or regulation-driven system implementations, where the intrinsic quality of the technology serves as the principal differentiator in determining adoption levels and user satisfaction among compelled users.

Practical Implications and Managerial Recommendations

The findings of this study present several strategic recommendations for the management of Ryacudu Kotabumi Regional General Hospital to implement in order to ensure the sustainability and optimization of SIMGOSV2:

1. **Addressing the Productivity Paradox:** Management must shift its focus from mere technical implementation to the optimization of workflows. It is advisable to establish a post-implementation evaluation team comprising end-users from diverse units. This team's purpose is to pinpoint specific system barriers that are perceived to impede individual productivity, and to devise tailored solutions through both system refinements and business process enhancements.
2. **Bridging the Managerial Gap:** To address support disparities, leadership development programs must specifically target front-line managers (unit heads and department heads). These managers should be equipped with change management competencies that enable them to translate the board's strategic vision into concrete operational support, to motivate their teams effectively, and to serve as the primary point of reference for resolving system-related issue.
3. **Building Digital Trust:** Data security issues must be addressed proactively and transparently. Management should clearly communicate the security protocols that have been implemented, conduct regular security audits, and provide continuous training to all staff on cybersecurity best practices to safeguard patient and institutional data.
4. **Shifting the Focus from Skills to Attitudes:** Human resource development initiatives must evolve beyond mere technical training ("how to click") to encompass change advocacy and management ("why this system matters to you and patient safety"). Leverage internal case studies that demonstrate the system's positive impact, and empower super-users to serve as change ambassadors within their respective units to organically cultivate a positive mindset.

Limitations and Directions for Future Research

This study has several limitations that warrant acknowledgment. The use of a cross-sectional design provides only a snapshot of user perceptions and is incapable of capturing the evolution of attitudes over time. Moreover, data derived from a single institution (Ryacudu

Kotabumi Regional General Hospital) constrain the generalizability of the findings to other hospitals with different organizational cultures or resource profiles.

For future research, a longitudinal study is recommended to track how perceptions of competency, managerial support, and implementation success evolve as system usage matures. Additionally, qualitative investigations such as in-depth interviews or focus group discussions could yield richer, more nuanced insights into the underlying causes of the “productivity paradox” and “managerial gap” identified in this study. Finally, given that 31.9% of the variance in implementation success remains unexplained by the factors examined, subsequent research might explore additional variables, such as organizational culture, the quality of vendor support, and employees’ baseline digital literacy.

CONCLUSION

The study’s findings indicate that the implementation of SIMGOSV2 at Ryacudu Kotabumi Regional Hospital is significantly influenced by human resource competence, managerial commitment, the external environment, and technology. Overall, human resource competence was rated as fairly good (mean = 3.50), although attitudes toward the new system require improvement (3.10). Managerial commitment was also relatively positive (3.48), despite low levels of tangible support (2.70). The external environment supported implementation (3.52), but competitive pressure remained insufficient (3.10). Technological factors facilitated system effectiveness (3.52), yet productivity features were not fully optimized (3.10). Collectively, these four factors exert a simultaneous influence on the successful implementation of SIMGOSV2 at Ryacudu Kotabumi Regional Hospital.

In light of these findings, the hospital should formulate a systemic policy that integrates human resource competence, managerial commitment, environmental adaptation, and technological enhancement to ensure consistent and synergistic implementation. It is essential to implement staff capacity-building programs through technical training and digital literacy workshops, accompanied by intensive mentoring to bolster users’ confidence in operating SIMGOSV2. Hospital leadership is advised to engage actively in policy oversight and budget allocation to strengthen user motivation. Furthermore, adapting to external dynamics via partnerships with vendors and stakeholders is necessary to sustain environmental support. Finally, technological infrastructure must be reinforced, and the SIMGOSV2 feature set should undergo regular evaluation to guarantee genuine improvements in productivity and work efficiency.

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