

The Effect of the Implementation of Management Information System and Work Competence on Employee Performance

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ABSTRACT: Employee performance is one of the important factors in supporting the success of health service delivery in health centers. However, the implementation of the Puskesmas Management Information System that is not optimal and the Work Competence of employees that still need to be improved are suspected to affect the performance of employees at the Megamendung District Health Center. This study aims to determine the condition of the management information system, work competence, and employee performance, as well as analyze the influence of Management Information System and Work Competence on employee performance. This study uses a quantitative method with a verifiable approach. The research population is all employees who use the Health Center Management Information System at the Megamendung District Health Center. Samples were determined using purposive sampling techniques according to predetermined criteria. Data were collected through the deployment of questionnaires that had met the requirements for validity and reliability, then analyzed using multiple linear regression analysis. The results of the study show that the management information system has a positive and significant effect on employee performance. Work competence also has a positive and significant effect on employee performance. Simultaneously, the management information system and Work Competence have a positive and significant effect on employee performance. This study concludes that improving employee performance at the Megamendung District Health Center can be done through optimizing the implementation of Management Information System supported by continuous improvement of Work Competence. Therefore, efforts are needed to strengthen the quality of information systems and develop employee competencies so that the implementation of health services becomes more effective and efficient.

KEYWORDS: Management Information System, Work Competence, Employee Performance

I. INTRODUCTION

In supporting the improvement of the quality of health services, the Indonesian government has established various policies related to the use of information systems in first-level health service facilities. One of them is the Regulation of the Minister of Health Number 31 of 2019 concerning the Information System of Puskesmas which emphasizes that Puskesmas are obliged to organize an integrated information system to support the process of recording, reporting, and decision-making in health services. This regulation shows that the management information system is no longer optional, but is the main need in the operation of the Puskesmas. In addition, the government also encourages the acceleration of the digitalization of the health sector through the Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/MENKES/1559/2022 concerning the Implementation of an Electronic-Based Government System in the Health Sector and the Health Digital Transformation Strategy, which is part of the national health system transformation agenda. The policy emphasizes the importance of utilizing digital technology to improve the efficiency of health service delivery, the integration and quality of health data, and the overall governance of health services. In line with this policy, the implementation of the management information system is expected to support the improvement of employee performance in providing health services. An integrated information system allows work processes to be more effective and efficient, so that they can help employees in completing tasks faster, more precisely, and more accurately (Kruse et al., 2017).

A management information system is a system designed to collect, process, store, and distribute information needed in the decision-making and management control process. Management Information System combine information technology with business processes to support the organization's operational, tactical, and strategic activities (Putri & Mulyanti, 2023). Implementation A good management information system must pay attention to technical aspects, human resources, and organizational culture in order to run effectively (Mayasari et al., 2021). In health services, Management Information System can help in the management of patient data, work schedules, and employee performance reporting in an integrated manner (Daulah & Suwarno, 2025). In addition,

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technological developments such as artificial intelligence are beginning to be integrated in Management Information System to improve sustainable performance (Riswanto & Rachmadi, 2023).

Employee performance is an important aspect of human resource management which describes the work results achieved by an employee in carrying out his duties in accordance with the responsibilities given (Sholeh & Wahyudin, 2021). This performance is not only measured in terms of the quantity of work completed, but also quality, punctuality, effectiveness, and independence in work (Hutasuhut & Safina, 2022). Performance is the result of work both in quality and quantity achieved by employees. Proper performance appraisals can provide an objective picture of the employee's contribution to the achievement of organizational goals (Hsb & Khair, 2021). The relationship between employee performance and Management Information System is very close, because Management Information System function as tools in data and information management that support the managerial decision-making process. Implementation of a good management information system can increase transparency, accuracy, and speed in the delivery of information related to employee work, thereby positively affecting performance (Karim et al., 2022). The management information system also helps in organizing tasks and monitoring employee performance in real time, making it easier to evaluate and improve performance (Riswanto & Rachmadi, 2023).

In health services, competence is a priority because employees are required to be able to adapt to technological developments, understand the information systems used, and follow service procedures that continue to develop dynamically (Nisa' et al., 2025). Adequate competencies allow employees to work more efficiently, reduce the potential for errors in the service process, and increase the accuracy and speed in providing services to the community (Tari et al., 2025). The implementation of the management information system and Work Competence are two factors that both play a role in supporting the improvement of employee performance. The implementation of a well-running management information system is able to support the smooth work process through the provision of accurate, fast, and integrated information so that the implementation of tasks becomes more effective (Sulistiyani et al., 2023). On the other hand, employee Work Competence also have an important role in supporting the implementation of tasks in accordance with job demands and technological developments applied in the organizational environment (Hasan et al., 2024). Employees who have good competence will be better able to carry out tasks according to procedures, process data accurately, and utilize technology and information to support work completion and decision-making effectively (Ihsan & Nurhidayati, 2025).

Puskesmas as primary health service facilities face increasingly complex service demands, especially in areas with large populations, wide geographical coverage, and diverse public health needs. Bogor Regency is an area with these characteristics, with a population of 2,974,061 people and a density of 1,899 people per square kilometer in 2024 (West Java Open Data, 2024). This condition is also reflected in Megamendung District which has rural to semi-urban areas, a wide distribution of population, and diverse health service needs. Primary health services in this area are carried out by Puskesmas which are located in one administrative area and are under the coordination of the Bogor Regency Health Office, with relatively similar service policies, performance targets, and work systems. These characteristics make the Puskesmas in Megamendung District relevant as a research location to examine the relationship between the management information system and Work Competence with the performance of employees in the implementation of primary health services.

The Megamendung Health Center and the Sukamanah Health Center were chosen as the research objects because they are both located in Megamendung District, have relatively similar service characteristics, have implemented the Health Center Management Information System, and have a number of employees who meet research needs. Based on data from the Bogor Regency Health Office (2024), each Puskesmas serves 6 villages with a large population, namely 74,560 people in the working area of the Megamendung Health Center and 68,540 people in the Sukamanah Health Center, with characteristics of rural to semi-urban areas. The scope of the service shows that the implementation of employee duties takes place in a work environment with a considerable service load, so that the support of the management information system and Work Competence is a relevant aspect to be studied in relation to employee performance.

The service performance of the Megamendung Health Center and the Sukamanah Health Center in 2024 shows several achievements that are still below the average of Bogor Regency. The level of community satisfaction is 70% and 67%, respectively, while the average for Bogor Regency reaches 78.2%. The average waiting time for patients is also relatively longer, namely 55 minutes at the Megamendung Health Center and 60 minutes at the Sukamanah Health Center, compared to the district average of 22 minutes. In terms of information management, the accuracy of the Management Information System data input is 72% and 70%, respectively, still lower than the district average of 85%. The number of patient complaints per 100 hours of service was also recorded higher, namely 20 and 23 complaints compared to the average of 8 complaints in Bogor Regency. This condition shows that there is a gap in service performance that needs attention, especially in the implementation of tasks related to services and information management.

The demands on service performance can also be seen from the health program targets in Megamendung District which are maintained and even increased in several programs. The target for screening productive age increases from 5,953 people in 2024 to

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6,015 people in 2025, while the target for hypertension and diabetes mellitus services remains at 1,699 and 553 people, respectively. On the other hand, the achievements of several programs have not shown consistent development. HB0 immunization achievement decreased from 795 to 749 infants and BCG from 752 to 746 infants, while Polio and Rotavirus only increased by 0.67% and 0.95%, respectively. The difference between the demands of program achievement and service achievement shows that employee performance still faces challenges in maintaining the effectiveness of service implementation, so factors related to employee performance, including management information system support and work competence, are relevant to be further studied.

Based on the results of initial interviews conducted with 12 employees from the Megamendung District Health Center, especially at the Megamendung Health Center and the Sukamanah Health Center, an overview of several problems related to employee performance was obtained. The most common problems conveyed were related to the management of the Puskesmas Management Information System, which was 33.3% or 4 respondents. The obstacles found include unstable network connections, slow system response times when searching and entering patient data, and understanding and implementing procedures for using Management Information System that are not optimal. This condition can hinder the smooth implementation of tasks, prolong the service process, increase the potential for data input errors, and hinder the preparation of timely service reports.

Another problem found was related to employee work competence, which was conveyed by 25.0% or 3 respondents. The results of the interviews show that there are still employees who have not mastered all the features of the Puskesmas management information system, have difficulties in entering and searching patient data, and in certain conditions still need the help of colleagues in operating the system. These conditions can affect the speed and accuracy of job completion, especially on tasks that require mastery of systems and technical skills.

As many as 25.0% or 3 respondents also conveyed problems with the effectiveness and responsiveness of the service process. These problems can be seen from the completion of tasks in several fields of work that are not optimal, coordination between employees that still needs to be improved, and delays in completing work when facing obstacles. In addition, 16.7% or 2 respondents conveyed other obstacles in the form of limited service support facilities and the high burden of patient visits at certain times. Although it is not the focus of the research, these conditions can also affect the smooth implementation of services at the Health Center.

The findings of the initial interview show that there are problems in the implementation of the Puskesmas Management Information System and the work competence of employees, along with still finding obstacles in the effectiveness of the implementation of duties. These two aspects are related to the implementation of employee work, especially in the use of systems, the accuracy of task completion, and the smooth operation of services. This condition is the basis for empirically testing the influence of the Management Information System and Work Competence on employee performance at the Megamendung District Health Center.

Previous research has shown the influence of Management Information System and Work Competence on employee performance in health care facilities. Rahmi and Rahmah (2022) found that the management information system and employee competency simultaneously had a positive effect on employee performance at Puskesmas in Aceh Besar Regency. Similar results were found by Asrsyadin et al (2025) at the Tanjung Ampalu Health Center, which shows that information technology and competence affect employee performance. However, there is a research gap in the characteristics of the research object. Previous research was conducted on Puskesmas in different areas and has not specifically studied Puskesmas located in one administrative area of Megamendung District with different characteristics of service load and implementation conditions of Management Information System. In addition, previous research has not specifically tested these two variables based on the empirical conditions found at the Megamendung Health Center and the Sukamanah Health Center.

The research gap looks even more relevant when it is associated with conditions at the Megamendung District Health Center. The results of the initial identification show that the use of the management information system still faces several obstacles and some employees still experience limitations in mastering the system and carrying out tasks. At the same time, several service performance indicators are still below the average of Bogor Regency. This condition shows that the findings of previous research do not necessarily fully describe the situation faced by the Puskesmas in Megamendung District. Therefore, this study examines the influence of Management Information System and Work Competence on employee performance at the Megamendung Health Center and the Sukamanah Health Center, so that it can be found out whether these two factors are indeed related to employee performance in the service conditions found in the area.

II. FORMULATION OF THE PROBLEM

1. How does the Management Information System and Work Competence affect the performance of employees at the Megamendung District Health Center simultaneously?
2. How does the Management Information System affect the performance of employees at the Megamendung District Health Center partially?

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3. How does work competence affect employee performance at the Megamendung District Health Center partially?

III. RESEARCH METHODS

A. Research Design

This study uses a quantitative approach with verifiable analysis to test the influence of Management Information System and Work Competence on employee performance. The verifiable analysis was carried out to test the hypothesis that had been formulated, namely testing the influence of the Management Information System on employee performance partially, the influence of work competence on employee performance partially, and the influence of the Management Information System and work competence on employee performance simultaneously. The test was carried out using multiple linear regression analysis with a t-test to determine the influence of each independent variable on the dependent variable and the F test to determine the influence of the two independent variables together on employee performance.

B. Population and Sample

The research population consisted of 71 employees working at the Megamendung Health Center and the Sukamanah Health Center, Megamendung District, which consisted of medical, nursing and midwifery personnel, other health workers, pharmaceutical personnel, administration, and support personnel. The sample was determined using a purposive sampling technique by considering the involvement of employees in the implementation of health services or the administration of the Puskesmas and its relationship with the use of the Puskesmas Management Information System. This technique was chosen so that the respondents involved had relevant experience to provide an assessment of the variables being studied.

The inclusion criteria include employees who are involved in health services and administration at the Megamendung Health Center and the Sukamanah Health Center, use or have a relationship with the use of the Management Information System in the implementation of their duties, and are willing to be respondents. Employees who are not directly involved in service or administration, do not use or are not related to the Management Information System, and are not willing to be respondents are excluded from the sample. Based on these criteria, as many as 7 employees consisting of support personnel such as cleaners, security, drivers, and other support personnel did not meet the research criteria, so the number of samples used was 64 respondents.

C. Technical Data Collection

The research data was collected using questionnaires as the primary data source. The questionnaire was structured to obtain data on Management Information System, Work Competence, and employee performance, with each statement measured using a five-level ordinal scale, namely 1 (Very Poor), 2 (Not Good), 3 (Sufficient), 4 (Good), and 5 (Very Good). The questionnaire was distributed online through Google Form to respondents who had met the research criteria. The use of this media was chosen because it facilitates access and filling out questionnaires without interfering with service activities, as well as facilitating the recapitulation and data processing process.

D. Validity and Reliability Tests

The validity test was performed using Pearson Product Moment correlation with the help of IBM SPSS Statistics version 29 to find out the relationship between the score of each statement item and the total score of the variable. The test was carried out on 64 respondents with a significance level of 5% and a degree of freedom, so that a table r value of 0.246 was obtained. Statement items are declared valid if the r value is calculated ≥ 0.246 , while the item with the r value is calculated < 0.246 is declared invalid. $(df) = n - 2 = 62$

The reliability test was carried out using Cronbach's Alpha coefficient to assess the internal consistency of the instrument in measuring each research variable. An instrument is declared reliable if Cronbach's Alpha value ≥ 0.70 , while a < 0.70 indicates that the instrument has not met the reliability criteria. All validity and reliability tests were performed with the help of IBM SPSS Statistics version 29.

E. Data Analysis Techniques

1) Classic Assumption Test

Classical assumption tests are carried out to ensure that the regression model meets the statistical requirements so that the results of the analysis can be interpreted appropriately. The tests in this study include normality tests, heteroscedasticity tests, and multicollinearity tests (Sholihah et al., 2023).

a) Normality Test

The normality test aims to find out whether the residual in the regression model has a normal distribution. The test was carried out through two approaches, namely graph analysis using the Normal Probability Plot (Normal P-P Plot) and statistical analysis using the Kolmogorov-Smirnov test. The residual is declared to be normally distributed when the points on the graph are spread around and following the direction of the diagonal line, and the significance value in the Kolmogorov-Smirnov test is greater than 0.05.

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b) Heteroscedasticity

The heteroscedasticity test aims to find out whether or not there is an unevenness of residual variance between observations in the regression model. The test was carried out using a scatterplot and a Glejser test. The regression model was declared free of heteroscedasticity symptoms if the dots on the scatterplot were randomly spread and did not form a specific pattern, and the significance value in the Glejser test was greater than 0.05.

c) Multicollinearity Test

The multicollinearity test aims to find out whether or not there is a high correlation between independent variables in the regression model. The test was carried out by looking at the value of Tolerance and Variance Inflation Factor (VIF). The regression model is declared free of multicollinearity symptoms if the Tolerance value is greater than 0.10 and the VIF value is less than 10.

2) Hypothesis Testing

Hypothesis tests were carried out to determine the influence of Management Information System and Work Competence on employee performance at the Megamendung District Health Center. Hypothesis testing was carried out through simultaneous tests (F test) and partial tests (t tests) with a significance level of 5% ($\alpha = 0.05$).

a) Simultaneous Test (F Test)

The simultaneous test (F test) was used to find out whether the Management Information System and Work Competence together had an effect on the performance of employees at the Megamendung District Health Center. Decision-making is based on the significance value (Sig.), that is, if the Sig. value is ≤ 0.05 , then the Management Information System and Work Competence simultaneously have a significant effect on employee performance. On the other hand, if the Sig. value > 0.05 , the two independent variables simultaneously do not have a significant effect on employee performance.

b) Partial Test (t-test)

The partial test (t-test) was used to determine the influence of each independent variable, namely the Management Information System and Work Competence, on the performance of employees at the Megamendung District Health Center. Decision-making is based on the significance value (Sig.), that is, if the Sig. value ≤ 0.05 , then the independent variable partially has a significant effect on employee performance, while if the Sig. value > 0.05 , the independent variable partially does not have a significant effect on employee performance.

IV. RESULT AND DISCUSSIONS

A. Validity and Reliability Tests

Table 1. Validity Test Results

Research Variables	Number of Items	Number of Valid Items	r Table	Description
Management Information System (X1)	10	10	0.246	All items are valid
Work Competence (X2)	10	10	0.246	All items are valid
Employee Performance (Y)	10	10	0.246	All items are valid

Source: Primary data processed, 2026

The results of the validity test in Table 1 show that all statement items in the three research variables are declared valid. The variables of Management Information System (X1), work competence (X2), and employee performance (Y) each consist of 10 statement items, and all items have a calculated r value that meets the criteria with a table r of 0.246. Thus, as many as 30 statement items used in the research instrument were declared valid and can be used for the next stage of analysis.

Table 2. Reliability Test Results

Research Variables	Cronbach's Alpha	Alpha Coefficient	Description
Management Information System (X1)	0.869	0.70	Reliable
Work Competence (X2)	0.840	0.70	Reliable
Employee Performance (Y)	0.945	0.70	Reliable

Source: Primary data processed, 2026

Based on the results of the reliability test in Table 2, all research variables had a Cronbach's Alpha value above the alpha coefficient of 0.70. The Management Information System variable (X1) obtained a Cronbach's Alpha score of 0.869, work competence (X2) of 0.840, and employee performance (Y) of 0.945. Thus, all research instruments are declared reliable and can be used to measure each variable in the research.

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B. Classic Assumption Test

1) Residual Normality Test

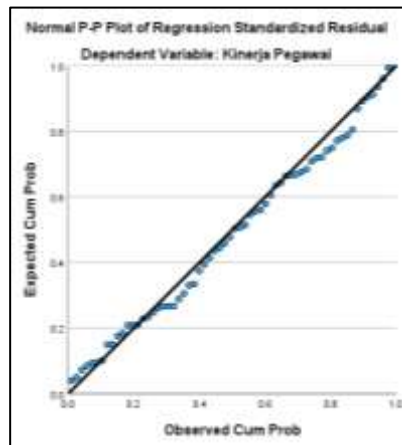


Figure 1. Residual Normality Test Results P-P Plot

Based on Figure 1, the results of the normality test through the Normal Probability Plot (P-P Plot) graph show that the residual points are spread around the diagonal line and follow the direction of the line. The pattern shows that the residual in the regression model is normally distributed, so the normality assumption has been met. To strengthen the test results graphically, residual normality was also statistically tested using Kolmogorov-Smirnov, with the test results presented in Table 3 below.

Table 3. Kolmogorov-Smirnov Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		64
Normal Parameters ^{a,b}	Red	.0000000
	Std. Deviation	.41903567
Most Extreme Differences	Absolute	.068
	Positive	.068
	Negative	-.038
Test Statistic		.068
Asymp. Sig. (2-tailed) ^c		.200d

Source: Primary data processed, 2026

Based on Table 3, the results of the normality test using the Kolmogorov-Smirnov method obtained an Asymp value. Sig. (2-tailed) is 0.200. The value is greater than 0.05, so it can be concluded that the data in this study is normally distributed. Thus, the regression model has met the assumption of normality and is suitable for use for further analysis.

2) Heteroscedasticity Test

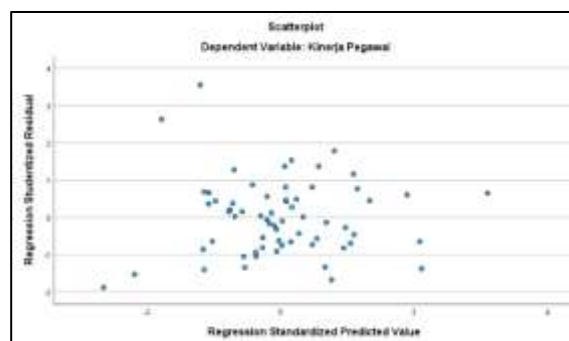


Figure 2. Heteroscedasticity Test Results

Based on Figure 2, it can be seen that the data points are randomly spread above and below the zero line without forming a specific pattern, whether constricted, widened, or corrugated patterns. This irregular spread suggests that residual variance tends to

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be constant over the entire range of predictive values, so it can be concluded that in the regression model there are no symptoms of heteroscedasticity. To confirm the results of the visual analysis, the test was also carried out statistically using the Glejser test, with the results presented in Table 4.

Table 4. Results of the Glejser heteroscedasticity test

Coefficient						
Models		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.693	.222		3.122	.003
	Management Information System	-.061	.050	-.153	-1.207	.232
	Work Competence	-.055	.054	-.128	-1.017	.313
a. Dependent Variable: ABS_RES						

Source: Primary data processed, 2026

Based on Table 4, it is known that the significance value for the management information system variable (X1) is 0.232 and the Work Competence variable (X2) is 0.313. Both significance values are greater than 0.05, so it can be concluded that there is no significant influence between independent variables on the residual absolute value. This shows that the regression model in this study does not experience symptoms of heteroscedasticity. Thus, the assumption of homocedasticity has been fulfilled and the regression model is feasible to use for further analysis.

3) Multicollinearity Test

Table 5. Multicollinearity Test Results

Coefficient			
Models		Collinearity Statistics	
		Tolerance	VIVID
1	Management Information System	.980	1.021
	Work Competence	.980	1.021
a. Dependent Variable: Employee Performance			

Source: Primary data processed, 2026

Based on Table 5, it is known that the variables of management information system (X1) and Work Competence (X2) have a tolerance value of 0.980 (> 0.10) and a VIF value of 1.021 (< 10), respectively. These results show that there is no strong linear relationship between independent variables in the regression model. A VIF value close to 1 also indicates that the two independent variables relatively do not affect each other or that there is no redundancy of information in the model. Thus, it can be concluded that the regression model in this study is free from the symptoms of multicollinearity and that each independent variable is able to explain the dependent variable independently.

C. Multiple Linear Regression Analysis Results

Multiple linear regression analysis was carried out to determine the influence of Management Information System and Work Competence on Employee Performance. The results of the multiple linear regression analysis are presented in Table 6.

Table 6. Multiple Linear Regression Analysis Results

Coefficient						
Models		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.266	.363		.733	.466
	Management Information System	.726	.082	.644	8.810	$<.001$
	Work Competence	.523	.089	.431	5.894	$<.001$
a. Dependent Variable: Employee Performance						

Source: Primary data processed, 2026

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Based on Table 6, the multiple linear regression equation is obtained as follows:

$$Y = 0.266 + 0.726X_1 + 0.523X_2$$

The equation shows that the constant value of 0.266 is the basic value of employee performance when the Management Information System and Work Competence are considered constant. The regression coefficient of the Management Information System of 0.726 shows that every one unit increase in the Management Information System will increase employee performance by 0.726 units, assuming fixed Work Competence. Meanwhile, the Work Competence regression coefficient of 0.523 shows that every one unit increase in work competence will increase employee performance by 0.523 units, assuming a fixed Management Information System.

Based on the standardized beta coefficient value, the Management Information System has a value of 0.644, higher than work competence with a value of 0.431. These results show that the Management Information System is a variable that has a relatively more dominant influence on employee performance at the Megamendung District Health Center than work competence.

D. Hypothesis Test

1) The Influence of Management Information System and Work Competence on Employee Performance

To find out whether the Management Information System and Work Competence together have an influence on employee performance, hypothesis testing was carried out through a simultaneous test (F test). This test is used to see the presence of the influence of the two independent variables simultaneously on the dependent variables. In addition, the model's ability to explain variations in employee performance is known through the value of the determination coefficient shown by the Adjusted R Square.

Table 7. Test F Results (Simultaneous)

NEW ERA						
Models		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.532	2	11.766	64.881	<.001b
	Residual	11.062	61	.181		
	Total	34.594	63			
a. Dependent Variable: Employee Performance						
b. Predictors: (Constant), Work Competence, Management Information System						

Source: Primary data processed, 2026

Based on the results of the simultaneous test, an F value of 64,881 was obtained with a significance value of < 0.001. The value shows that the F calculation is greater than the F of the table of 3.15 (64,881 > 3.15), and the significance value is smaller than 0.05. The results of the test showed that the Management Information System and Work Competence together had a significant effect on the performance of employees at the Megamendung District Health Center. This means that changes in the two variables are simultaneously related to changes in the performance of the employees being studied.

Table 8. Simultaneous Determination Coefficient

Model Summary				
Models	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.825a	.680	.670	.42585
a. Predictors: (Constant), Work Competence, Management Information System				

Source: Primary data processed, 2026

Based on Table 8, an Adjusted R Square value of 0.670 was obtained indicating the ability of the Management Information System and Work Competence in explaining the variation in employee performance in the research model. This value means that the two independent variables were able to explain 67.0% of the variation in employee performance at the Megamendung District Health Center. Meanwhile, 33.0% of other employee performance variations were related to factors outside the variables analyzed in this study.

2) The Influence of Management Information System on Employee Performance

To determine the influence of the Management Information System on employee performance, a partial test was carried out using the t-test. This test aims to see whether the Management Information System individually exerts a significant influence on employee performance when Work Competence variables are controlled in a regression model.

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Table 9. Results of the t-test (Management Information System)

Variable	B	Beta	t count	<i>r</i> (Zero Order)	Sig.	Remarks
Management Information System (X1)	0.726	0.644	8.810	0.706	< 0.001	Significant (p < 0.05)

Source: Primary data processed, 2026

Based on Table 9, the Management Information System has a regression coefficient value (B) of 0.726. This value shows that every one unit increase in the Management Information System will be followed by an increase in employee performance by 0.726 units, assuming fixed Work Competence. The standardized beta coefficient value of 0.644 indicates the relative influence of the Management Information System on employee performance in the regression model. Furthermore, a calculated t-value of 8.810 with a significance of < 0.001 indicates that the significance value is smaller than 0.05. These results show that the Management Information System partially has a positive and significant effect on the performance of employees at the Megamendung District Health Center. A zero-order correlation value of 0.706 indicates a positive relationship between the Management Information System and employee performance, which is then used in the calculation of effective contribution to determine the contribution of the Management Information System to employee performance.

The amount of the partial contribution of the Management Information System to employee performance was calculated by multiplying the beta coefficient value of 0.644 with a zero-order correlation of 0.706, then multiplied by 100%. Based on this calculation, an effective contribution of 45.46% was obtained. This means that the Management Information System contributed 45.46% to the variation in employee performance in the research model, while the other part was related to Work Competence variables and other factors that were not analyzed in this partial test.

3) The Influence of Work Competence on Employee Performance

To determine the influence of work competence on employee performance, a partial test was carried out using the t-test. This test is used to find out whether individual Work Competence affect employee performance after considering the Management Information System in the regression model.

Table 10. Results of the t-test (Work Competence)

Variable	B	Beta	t count	<i>r</i> (Zero Order)	Sig.	Remarks
Work Competence (X2)	0.523	0.431	5.894	0.523	< 0.001	Significant (p < 0.05)

Source: Primary data processed, 2026

Based on Table 10, Work Competence has a regression coefficient value (B) of 0.523. This value shows that every one unit increase in Work Competence will be followed by an increase in employee performance by 0.523 units, assuming a fixed Management Information System. The standardized beta coefficient value of 0.431 indicates the relative influence of work competence on employee performance in the regression model. Furthermore, a calculated t-value of 5.894 with a significance of <0.001 indicates that the significance value is smaller than 0.05. These results show that partial work competence has a positive and significant effect on the performance of employees at the Megamendung District Health Center. A zero-order correlation value of 0.523 indicates a positive relationship between work competence and employee performance, which is further used in the calculation of effective contributions.

The partial contribution of work competence to employee performance was calculated by multiplying the beta coefficient value of 0.431 with a zero-order correlation of 0.523, then multiplied by 100%. Based on this calculation, an effective contribution of 22.54% was obtained. These results show that work competence contributes 22.54% to the variation in employee performance in the research model, while the other part is related to the Management Information System and other factors outside the variables analyzed.

E. Discussion

1) The Influence of Management Information System and Work Competence on Employee Performance

Based on the results of the verifiable analysis, the Management Information System and Work Competence simultaneously had a positive and significant effect on the performance of employees at the Megamendung District Health Center. The results of multiple linear regression showed that the Management Information System had a regression coefficient of 0.726 with a beta value

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of 0.644 and a significance of < 0.001 , while Work Competence had a regression coefficient of 0.523 with a beta value of 0.431 and a significance of < 0.001 . Both variables have a significance value of < 0.05 . The Adjusted R Square value of 0.670 indicates that the Management Information System and Work Competence together are able to explain 67% of the variation in employee performance, while the other 33% are related to other factors outside the research model. The beta value also shows that the Management Information System has a relatively greater influence than Work Competence, so that in this research model, the Management Information System is a more dominant variable in explaining employee performance.

The findings show that improving employee performance at the Megamendung District Health Center needs to be accompanied by improving the information system and strengthening employees' ability to carry out their duties. This condition is relevant to the initial findings of the study which show that there are still obstacles in the use of the Puskesmas Management Information System, such as an unstable network, slow system response time, and an uneven understanding of system usage procedures. Improvements can be directed at improving network stability, optimizing system speed in the process of data input and search, and socializing the procedures for using the Management Information System periodically. At the same time, employee competencies need to be strengthened through training in the use of the Puskesmas Management Information System features, technical assistance, and improving skills in data management. These efforts can help reduce delays in job completion, reduce data input errors, and support the process of recording and reporting services more effectively.

The results of this study are in line with the applied theory used in this study, which is related to the Management Information System theory proposed by Prasetyo et al. (2024), which states that the Management Information System is a system that functions to collect, process, store, and present information to support organizational operational processes effectively and efficiently through the integration of hardware components, software, databases, networks, and procedures. In this study, the Management Information System was proven to have a positive and significant effect on employee performance, even becoming the most dominant variable. According to the researcher, this condition occurs because almost all service activities at the Megamendung District Health Center have depended on the Puskesmas Management Information System, starting from the patient registration process, searching and data input, recording services, to preparing administrative reports. Therefore, if one of the system components, especially the network and usage procedures, has not run optimally, then the effectiveness of the implementation of employee work will also decrease. On the other hand, if all components of the Management Information System can function in an integrated manner as described in the theory of Prasetyo et al. (2024), then the employee work process will become faster, more accurate, and more efficient, thus having an impact on improving employee performance.

The results of this study are also supported by several previous studies that show that Management Information System and Work Competence have an influence on employee performance in the health service sector. Research by Ariyanto and Rahmi (2021) shows that the simultaneous implementation of employee management and competency information systems has a positive effect on employee performance at the Aceh Besar Regency Health Center. The study explained that the better the implementation of information systems and employee competencies, the more employee performance will also improve. In addition, the research of Mardhiko et al. (2025) also shows that employee competence and the implementation of the Hospital Management Information System together have a positive and significant effect on the performance of hospital employees. These results show that system and competency factors have a great contribution in increasing the work effectiveness of health service employees. The findings of this study are also in line with the research of Utomo et al. (2024) which states that the use of the Hospital Management Information System affects employee performance through the quality of the system and the quality of the information produced.

2) The Influence of Management Information System on Employee Performance

Based on the results of the verifiable analysis, the Management Information System variable was proven to have a positive and significant effect on employee performance at the Megamendung District Health Center. The results of the t-test showed a calculated t-value of 8,810 with a significance level of < 0.001 (< 0.05). These results show that the management information system has a significant influence on employee performance. In addition, the regression coefficient value of 0.726 indicates that every improvement in the quality of the management information system will be followed by an increase in employee performance by 0.726 units. A beta coefficient value of 0.644 indicates that the Management Information System has a strong influence on the research model, while a zero-order correlation value of 0.706 indicates a strong relationship between the Management Information System and employee performance. The results of the partial determination coefficient show the contribution of the Management Information System to employee performance of 45.46%. This indicates that most of the variation in employee performance can be explained by the quality of the management information system applied at the Megamendung District Health Center.

The results of this study imply that the improvement of employee performance at the Megamendung District Health Center cannot be separated from the optimization of the management information system used. Considering that the Management Information System has proven to be the most dominant factor affecting employee performance, organizations need to prioritize improvements in the technical and operational aspects of the system. Strategic steps that can be taken include improving the stability of the internet network so that access to the Puskesmas Management Information System runs more smoothly, optimizing the speed

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of system response to the process of searching and inputting patient data, conducting regular hardware and software updates, and improving the procedure for using the system so that it is clearer, standardized, and easier to understand by all employees. These efforts are expected to be able to reduce delays in the completion of work, minimize data input errors, speed up the process of preparing service reports, and increase the effectiveness of health services at the Megamendung District Health Center.

The results of this study are in line with the applied theory used in this study, which is related to the theory of Work Competence proposed by Kontila et al. (2019), which states that the work competence of health workers in the digital era consists of five main dimensions, namely digital technology knowledge, digital skills, communication skills, ethical competence, and willingness to adapt. These five dimensions show that work competence is not only determined by technical ability in using technology, but also by the ability to communicate, understand professional ethics, and individual readiness to face changes in the digital-based work system. In this study, Work Competence was proven to have a positive and significant effect on employee performance. According to researchers, this condition occurs because employees who have knowledge, digital skills, communication skills, ethical competence, and good adaptability will be better able to operate the Management Information System appropriately, complete work more effectively, and minimize errors in the health service process.

The results of this study are in line with the research conducted by Rahmi and Rahmah (2022) which stated that the management information system has a positive and significant effect on employee performance at the Aceh Besar Regency Health Center. The research shows that the better the implementation of the management information system, the employee performance will also improve. The findings of this study are also supported by the research of Sitorus (2021) which concluded that Management Information System have a significant influence on employee performance with a greater t-table value than t-table. In addition, Wibowo's (2022) research regarding the implementation of hospital Management Information System also shows that the quality of information systems has a major contribution to improving the performance of hospital employees. The similarity of the results of the study strengthens that the management information system is an important factor in increasing the effectiveness and productivity of employees in health service organizations.

3) The Influence of Work Competence on Employee Performance

Based on the results of the verifiable analysis, the Work Competence variable was proven to have a positive and significant effect on employee performance at the Megamendung District Health Center. The results of the t-test showed a calculated t-value of 5.894 and had a significance level of < 0.001 (< 0.05). These results show that work competence has a significant influence on employee performance. In addition, the regression coefficient value of 0.523 indicates that every increase in work competence will be followed by an increase in employee performance of 0.523 units. A beta coefficient value of 0.431 indicates that work competence has a positive influence on employee performance, while a zero-order correlation value of 0.523 indicates that the relationship between work competence and employee performance is in the medium category. The results of the partial determination coefficient show that work competence contributes 22.54% to employee performance. This shows that although work competence has a significant effect, its contribution to improving employee performance is smaller than the management information system variables.

The results of this study imply that improving work competence remains an important part of efforts to improve employee performance at the Megamendung District Health Center. Given that the digital skills aspect is the dimension with the lowest value, organizations need to prioritize strengthening employees' ability to operate and utilize all features of the Management Information System used in health services. Efforts that can be made include training on the use of Management Information System features on a regular basis, technical assistance for employees who are still experiencing difficulties in the process of entering and searching patient data, and the implementation of digital literacy improvement programs tailored to job needs. In addition, periodic competency evaluations also need to be carried out to ensure that employees' abilities continue to develop along with the development of health service technology. These efforts are expected to be able to reduce employees' dependence on the assistance of colleagues in operating the system, increase the accuracy and speed of work completion, and support the improvement of the quality of health services at the Megamendung District Health Center.

The results of this study are in line with the applied theory used in this study, which is related to the theory of Employee Performance put forward by Krijgsheld et al. (2022), which states that employee performance is the result of individual work in carrying out tasks and responsibilities in accordance with organizational standards. In this study, employee performance measurement is focused on two dimensions, namely task performance and contextual performance. Task performance is related to the ability of employees to carry out their main tasks according to service procedures and standards, while contextual performance is related to work behaviors that support organizational effectiveness, such as cooperation, communication, concern for work, and initiatives in supporting the achievement of organizational goals. The results of the study show that the performance of employees at the Megamendung District Health Center is in the sufficient category, which indicates that employees have been able to carry out their main tasks and support the implementation of services, but are not fully optimal. According to the researcher, this condition occurs because the implementation of task performance is still influenced by obstacles in the implementation of the Management Information System and employee Work Competence, such as system access that is not smooth, mastery of the Puskesmas

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Management Information System features that are not optimal, and delays in completing work when facing obstacles. On the other hand, contextual performance shows relatively better conditions because employees are still able to maintain cooperation, coordination, and communication between colleagues in supporting services to the community.

The results of this study are also in line with the research conducted by Konttila et al. (2019) which states that the digital competence of health workers has an influence on the effectiveness of health service implementation and the ability to adapt to the use of information technology. The research shows that work competence, especially in the digital aspect, is an important factor in supporting the quality of the implementation of health workers' duties. The results of this study are in line with the research conducted by Rusvitawati et al. (2019) which stated that competence affects the performance of hospital employees. The research shows that the better the competencies that employees have, the better the ability of employees to carry out their duties and provide health services effectively. In addition, the results of this study are also supported by research by Oktaviani and Hermana (2025) which shows that competence has a positive and significant influence on employee performance in the medical service unit of Dewi Sri Karawang Hospital, both partially and simultaneously. The study explained that employees who have good Work Competence tend to be able to work more effectively, responsively, and professionally in providing health services.

CONCLUSIONS

- 1) Management Information System and Work Competence simultaneously have a positive and significant effect on the performance of employees at the Megamendung District Health Center. This shows that the improvement of the Management Information System supported by employee Work Competence can contribute to improving employee performance.
- 2) The Management Information System partially has a positive and significant effect on the performance of employees at the Megamendung District Health Center. The results of the study also show that the Management Information System has a more dominant influence on employee performance than work competence.
- 3) Partial work competence has a positive and significant effect on employee performance at the Megamendung District Health Center. This shows that the better the work competence that employees have, the better the performance of employees in carrying out their duties and providing health services.

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