

Effect of SIMASN Implementation and Employee Competence on Personnel Service Effectiveness: Evidence from the Regional Civil Service and Training Agency of Garut Regency

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Abstract

This study examines the effect of SIMASN implementation and employee competence on the effectiveness of personnel services at the Regional Civil Service and Training Agency of Garut Regency. The effectiveness of personnel services is a key indicator in the digital transformation of public administration at the local government level. This study employs a quantitative approach using a survey method involving 44 respondents selected through a census technique. The variables were operationalized based on system quality, information quality, service quality, and system utilization for SIMASN implementation, as well as strategic, service execution, and interpersonal competencies for employee competence. The research instrument was tested for validity and reliability, and all items were found to be valid and reliable. The study adopted a cross-sectional design. Data were analyzed using multiple linear regression to examine both partial and simultaneous effects. The results indicate that SIMASN implementation ($B = 0.441$; $p < 0.05$) and employee competence ($B = 0.501$; $p < 0.05$) have a positive and significant effect on service effectiveness. Simultaneously, both variables contribute 82.8% ($R^2 = 0.828$) in explaining the variation in personnel service effectiveness. These findings suggest that the effectiveness of digital-based personnel services is influenced by the combined influence of information system quality and employee competence. This study contributes to the literature by providing empirical evidence on the integration of information system implementation and human resource competence in improving public service effectiveness at the local government level.

KEYWORDS

SIMASN; employee competence; personnel service effectiveness.

Introduction

The effectiveness of public services is an important indicator in the implementation of government administration, including in the management of civil servant personnel services. In recent years, public sector organizations in various countries have undergone a digital transformation process that encourages the use of information technology in government service delivery (Dwivedi et al., 2017; Mergel et al., 2019; Vial, 2019). In addition, digital transformation in government is also closely related to platform-based governance and efficiency improvement (Janssen & Estevez, 2013). Furthermore, digital transformation in the public sector also emphasizes the creation of public value through the use of innovative technologies (Criado & Gil-Garcia, 2019). This transformation encourages local governments to adopt information systems in order to enhance service quality,

administrative efficiency, and transparency in data management (Cordella & Tempini, 2015; Klievink, 2017). In addition, the implementation of digital governance has been shown to improve public service efficiency and accelerate administrative processes (Anas, 2024; Janssen & van der Voort, 2020; Sadat, 2025). Moreover, the successful adoption of e-government systems is strongly influenced by user acceptance, system usability, and perceived benefits (Alalwan, 2017; Shareef, 2016). One form of this digital transformation is the implementation of the State Civil Apparatus Management Information System (SIMASN) in managing personnel services.

In the Regional Civil Service and Training Agency of Garut Regency, SIMASN has been utilized to support various types of personnel administrative services, such as promotion, retirement, study permits, and degree adjustments. Although the system has been implemented, service effectiveness has not been fully optimal. Administrative data in 2024 show that there is still a relatively high rate of document returns in several types of services. Details of submissions and returns of personnel services in 2024 are presented in Table 1.

The data in Table 1 show that study permit services have the highest return rate at 56.8%, followed by promotion services at 37.3% and retirement services at 33.6%. The high return rate indicates that there are still constraints in administrative completeness, accuracy of data input, and the utilization of information systems in the personnel service process.

However, the high return rate of personnel documents may not solely be attributed to system-related factors. It may also be influenced by applicant errors, the complexity of administrative requirements, and inter-agency verification processes. Therefore, this condition should be interpreted as a preliminary indication that requires further empirical examination, particularly in relation to system implementation quality and employee competence.

This condition suggests that the effectiveness of personnel services has not been fully achieved, even though the information system has been implemented.

Theoretically, the success of information system implementation in public organizations is influenced by system quality, information quality, and service quality (DeLone & McLean, 2003; Petter et al., 2013). However, the effectiveness of public services is not only determined by the existence of the system, but also by the competence of employees as service providers. Employee competence, which includes strategic capability, service execution, and interpersonal skills, plays an important role in supporting the performance of public sector organizations (OECD, 2021; Spencer & Spencer, 1993). From the perspective of Public Service Logic, the effectiveness of public services is achieved through the

Table 1. Recapitulation of Personnel Service Submissions and Returns in 2024

No	Type of Service	Number of Submissions	Number of Returns	Return Percentage (%)
1	Promotion	2,314	863	37.3%
2	Retirement	1,006	338	33.6%
3	Izin Belajar	366	208	56.8%
4	Karis/Karsu	289	104	36%
5	Degree Adjustment	175	8	4.6%
6	Official Examination	96	17	17.7%
7	Data Correction	7	1	14.3%

Source: Administrative Data of BKD Garut Regency (2024)

synergy between systems, actors, and service processes that are oriented toward public value creation (Osborne & Strokosch, 2021).

Previous studies such as Mensah (2020) have emphasized the role of e-government systems in improving public service performance, while Boyatzis (2008) and Mulder (2014) highlighted the importance of employee competence in influencing organizational outcomes. However, these studies tend to examine these factors separately and do not specifically address their combined effect within a localized government system such as SIMASN. Moreover, limited research has been conducted in the context of regional personnel service systems in Indonesia. Therefore, this study offers a novel contribution by integrating both system implementation and employee competence in explaining the effectiveness of personnel services at the local government level.

Based on the above explanation, this study proposes the following research questions:

1. Does SIMASN implementation affect the effectiveness of personnel services?
2. Does employee competence affect the effectiveness of personnel services?
3. Do SIMASN implementation and employee competence simultaneously affect the effectiveness of personnel services?

This study aims to analyze the effect of SIMASN implementation and employee competence on the effectiveness of personnel services at the Regional Civil Service and Training Agency of Garut Regency. Theoretically, this study contributes to strengthening the understanding of the integration between information system quality and employee competence in explaining the effectiveness of digital-based personnel services at the local government level.

Public service effectiveness refers to the ability of an organization to achieve its service objectives accurately, responsively, and in accordance with user needs. It is also closely related to the organization's capacity to generate optimal service outcomes through effective management of public service programs (Widaningsih et al., 2021). In the public sector context, effectiveness is not solely measured by the achievement of administrative targets, but also by the value created for society and stakeholders. From the perspective of Public Service Logic, public service value is produced through interactions among systems, actors, and service processes that are oriented toward creating public value (Osborne & Strokosch, 2021).

In the context of personnel services, effectiveness can be observed through the accuracy of administrative processes, the timeliness of service delivery, the reliability of data, and the low rate of document returns caused by procedural errors. Therefore, personnel service

effectiveness can be understood as the outcome of the interaction between system quality and employee capacity in carrying out service processes.

SIMASN Implementation and Personnel Service Effectiveness

The use of information systems in public organizations is intended to enhance efficiency, ensure data accuracy, and improve the overall quality of public services (Ahmad, 2018; Heeks, 2018). Empirical evidence also shows that effective implementation of e-government systems contributes to better service performance and more optimal utilization of technology within government institutions (Mensah, 2020).

The Information System Success Model proposed by DeLone and McLean explains that system quality, information quality, and service quality play important roles in influencing system usage and generating organizational benefits. In this regard, the success of an information system is not merely determined by the availability of technology, but by its ability to deliver meaningful benefits and support organizational performance.

SIMASN, as an information system designed to manage civil servant data, plays a strategic role in supporting integrated and accurate personnel administration. Its implementation is expected to streamline administrative processes, minimize data entry errors, and improve transparency in service delivery. Conceptually, SIMASN implementation can be viewed as a structural factor that influences service effectiveness through system mechanisms and formal procedures.

Accordingly, the higher the quality of SIMASN implementation, the greater the potential to achieve effective personnel services.

H1: SIMASN implementation has a positive effect on personnel service effectiveness.

Employee Competence and Personnel Service Effectiveness

Employee competence is a critical factor in supporting the successful implementation of systems and public policies (Boyatzis, 2008; Mulyaningsih, 2018). It encompasses the knowledge, skills, and behavioral attributes that contribute to improved organizational performance. Spencer and Spencer (1993) define competence as underlying characteristics that are causally related to superior job performance.

In the public sector, competence is not limited to technical abilities but also includes strategic thinking, service execution capabilities, and interpersonal skills that support service quality. The OECD (2021) highlights that competence plays a key role in digital transformation, particularly in terms of adaptability, collaboration, and service orientation.

In the context of SIMASN implementation, employee competence determines the ability to operate the system effectively, verify data accurately, and provide responsive services. Therefore, competence can be positioned as a human resource factor that directly influences service effectiveness through work quality, accuracy, and performance outcomes (Mulder, 2014).

Thus, higher levels of employee competence are

associated with greater effectiveness in personnel service delivery.

H2: Employee competence has a positive effect on personnel service effectiveness.

Conceptual Model and Research Hypotheses

Previous studies have examined the impact of information systems on public sector performance as well as the role of employee competence in improving service quality. Research on information systems indicates that system quality and information quality contribute to enhanced efficiency and service performance. Meanwhile, studies on competence demonstrate that technical skills, adaptability, and service orientation significantly influence organizational performance in the public sector.

However, most existing studies have analyzed these factors separately, resulting in a fragmented understanding of organizational effectiveness. Empirical research that simultaneously examines the combined influence of information system implementation and employee competence on personnel service effectiveness, particularly in the context of SIMASN, remains limited.

Furthermore, the integration of the Information System Success Model, the OECD Core Competency Framework, and the Public Service Logic perspective into a unified quantitative framework has not been widely explored. This study addresses this gap by developing a model that combines system-related and human resource factors in explaining personnel service effectiveness.

In this model, SIMASN implementation (X_1) is positioned as a structural determinant influencing service effectiveness through system quality and procedural mechanisms. Employee competence (X_2) is treated as a human resource determinant influencing effectiveness through capability, behavior, and service orientation. Personnel service effectiveness (Y) is conceptualized as the result of the interaction between these two factors.

Based on this framework, the research hypotheses are formulated as follows:

H1: SIMASN implementation has a positive effect on personnel service effectiveness.

H2: Employee competence has a positive effect on personnel service effectiveness.

H3: SIMASN implementation and employee competence simultaneously have a positive effect on personnel service effectiveness.

Methods

Research Design

This study employs a quantitative approach with an explanatory survey design to examine the effect of SIMASN implementation and employee competence on the effectiveness of personnel services. The study is cross-sectional in nature, with data collected at a single point in time.

Location, Population, and Respondents

This study was conducted at the Regional Civil Service and Training Agency of Garut Regency. The population of this study consists of all employees involved in managing

SIMASN-based personnel services, totaling 44 individuals. Due to the relatively small population size, a census (total sampling) technique was employed, meaning that the entire population was used as research respondents.

The characteristics of respondents in this study are described based on their positions or functions within the organization.

Table 2. Respondent Characteristics

No	Position	Total (Persons)	Percentage (%)
1	Structural	3	7
2	Functional	25	57
3	Operational Staff	16	36
Total		44	100

Source: Processed Primary Data, 2025

The majority of respondents are functional officers and operational staff who are directly involved in managing personnel service administration. These characteristics indicate that respondents have direct involvement in the use of SIMASN as well as in personnel service processes.

Research Instrument

Research data were collected using a structured questionnaire developed based on theoretical references for each research variable.

All statement items were measured using a five-point Likert scale, namely:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

The research instrument consists of several statement items constructed based on indicators for each variable. The instrument was developed from the frameworks of the Information System Success Model (DeLone & McLean, 2003), the OECD Core Competency Framework (OECD, 2021), and the Public Service Logic perspective (Osborne & Strokosch, 2021).

Operationalization of Variables

This study involves two independent variables and one dependent variable, namely SIMASN implementation (X_1), employee competence (X_2), and personnel service effectiveness (Y).

The SIMASN implementation variable was measured by adapting the dimensions of the Information System Success Model (DeLone & McLean, 2003), which include system quality, information quality, service quality, system use, user satisfaction, and system utilization in personnel service processes. An example of a statement item is: "I can access SIMASN easily."

The employee competence variable was measured based on the OECD Core Competency Framework (OECD, 2021), which includes strategic competence, service execution competence, and interpersonal competence. An example of a statement item is: "I am able to operate SIMASN according to established procedures."

The personnel service effectiveness variable was measured based on the dimensions of public value creation, service ecosystem, user-based approach, and outcome orientation (Osborne & Strokosch, 2021). An example of a statement item is: "Personnel services through SIMASN are completed on time and meet the

needs of civil servants."

Although multiple dimensions were included in each variable, they were combined into composite variables to represent broader constructs of SIMASN implementation and employee competence. This approach is considered appropriate given the limited sample size, as it helps to simplify the analytical model while maintaining the conceptual representation of each variable.

Validity and Reliability Test

Prior to data collection, the research instrument was reviewed through expert judgment to ensure content validity. The validity test was conducted using item-total correlation, with the criterion that an item is considered valid if the calculated r-value is greater than the r-table value at a 5% significance level.

The reliability test was conducted using Cronbach's Alpha coefficient, with the criterion that an alpha value greater than 0.70 indicates that the research instrument is reliable.

Data Analysis Technique

The research data were analyzed using multiple linear regression analysis to examine the effect of SIMASN implementation and employee competence on the effectiveness of personnel services, both partially and simultaneously. The analysis was conducted using statistical software.

Before performing regression analysis, classical assumption tests were conducted to ensure that the regression model meets the basic assumptions of analysis. The classical assumption tests used include:

Normality Test, to determine whether the residual data are normally distributed.

Multicollinearity Test, to determine whether there is a high correlation among independent variables, with the criterion that the Variance Inflation Factor (VIF) value is less than 10.

Heteroscedasticity Test, to determine whether there is inequality of residual variance in the regression model.

The regression model used in this study is formulated as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where:

Y = Personnel Service Effectiveness

X_1 = SIMASN Implementation

X_2 = Employee Competence

β_0 = Constant

β_1, β_2 = Regression coefficients

ε = Error

Hypothesis testing was conducted through several stages, namely:

1. t-test, to determine the partial effect of SIMASN implementation and employee competence on personnel service effectiveness.
2. F-test, to determine the simultaneous effect of independent variables on the dependent variable.
3. Coefficient of Determination (R^2), to determine the contribution of independent variables in explaining the variation in personnel service effectiveness.

The results of regression analysis were then used to determine whether the research hypotheses are accepted or rejected.

Result and Discussion

Respondent Characteristics

This study involved 44 respondents who are employees at the Regional Civil Service and Training Agency of Garut Regency who are involved in managing SIMASN-based personnel services. The characteristics of respondents in this study are described based on their positions or functions within the organization. (See [table 2](#)).

The majority of respondents are employees who are directly involved in the personnel service administration process, indicating that they have adequate understanding of SIMASN implementation and personnel service execution.

Descriptive Statistics of Variables

Descriptive analysis was conducted to determine the tendency of respondents' answers toward the research variables.

Table 3. Descriptive Statistics of Variables

Variable	Mean	Std. Deviation
SIMASN Implementation (X_1)	3,05	0.90
Employee Competence (X_2)	3,01	0.91
Personnel Service Effectiveness (Y)	3,03	0.88

Source: Processed Primary Data, 2025

The descriptive statistics results show the [Table 3](#) that the mean value of SIMASN implementation is 3.05, employee competence is 3.01, and personnel service effectiveness is 3.03. These values indicate that, in general, respondents perceive all variables to be at a moderate level.

Validity Test

The validity test was conducted to determine the extent to which questionnaire items are able to measure research variables. The test was conducted using item-total correlation by comparing the calculated r-value with the r-table value at a 5% significance level. Based on 44 respondents, the r-table value is 0.297. An item is considered valid if the calculated r-value is greater than the r-table value (See [table 4](#)).

The test results show that all questionnaire items have r-count values greater than r-table (0.297), indicating that all items are valid and can be used in this study.

Reliability Test

The reliability test was conducted to determine the consistency of the research instrument in measuring variables. The test used Cronbach's Alpha coefficient with a criterion value greater than 0.70 indicating reliability. (See [table 5](#)).

The high Cronbach's Alpha values indicate strong internal consistency among the measurement items. However, such high values may also suggest potential item redundancy due to the similarity of indicators within each construct. This condition has been carefully considered, and the items were designed to represent closely related but conceptually distinct aspects of each variable.

Classical Assumption Tests

Before conducting regression analysis, classical assumption tests were carried out to ensure that the

regression model meets the basic assumptions of analysis. The classical assumption tests used in this study include normality test, multicollinearity test, and heteroscedasticity test.

Normality Test

The normality test was conducted to determine whether the residual data are normally distributed.

The normality test was conducted using the Kolmogorov-Smirnov test. The results show a significance value of 0.200, which is greater than 0.05. This indicates that the residual data are normally distributed, and therefore the regression model meets the normality assumption. (See [table 6](#)).

Multicollinearity Test

The multicollinearity test was conducted to determine whether there is a high correlation among independent variables in the regression model. The results of the multicollinearity test are presented in [Table 7](#).

The test results show that all tolerance values are greater than 0.10 and all VIF values are less than 10. This indicates that there is no multicollinearity problem in the regression model used in this study.

Heteroscedasticity Test

The heteroscedasticity test was conducted to determine whether there is inequality in residual variance in the regression model. The test was performed using a scatterplot between standardized residual values and standardized predicted values. (See [Figure 1](#)).

Based on the scatterplot graph, it can be observed that the data points are randomly distributed around the zero axis and do not form a specific pattern. This indicates that the regression model does not exhibit heteroscedasticity.

Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted to determine the effect of SIMASN implementation and employee competence on the effectiveness of personnel services. (See [Table 8](#)).

Based on the regression analysis results, the following equation is obtained:

$$Y = -4.989 + 0.441X_1 + 0.501X_2$$

The results of the analysis indicate that SIMASN implementation and employee competence have a positive and significant effect on the effectiveness of personnel services. The significance values of both variables are less than 0.05, indicating that the research hypotheses are accepted.

The constant has limited substantive interpretation due to the use of Likert-scale measurements. Therefore, the analysis focuses on the direction and significance of the regression coefficients.

F-Test

The F-test was conducted to determine the simultaneous effect of SIMASN implementation and employee competence on the effectiveness of personnel services. This test aims to examine whether the independent variables collectively have a significant effect on the dependent variable in the regression model. The results of the F-test are presented in [Table 9](#).

Based on the test results, the calculated F value is 98.684 with a significance level of 0.000. This significance value is less than 0.05, indicating that SIMASN implementation and employee competence simultaneously have a significant effect on the effectiveness of personnel services. Thus, the regression model used in this study is considered appropriate for explaining the relationship.

Table 4. Validity Test Results

Variable	Item	r-count	r-tabel	Description
SIMASN Implementation (X_1)	X1.1	0.987	0.2973	Valid
	X1.2	0.982	0.2973	Valid
	X1.3	0.981	0.2973	Valid
	X1.4	0.992	0.2973	Valid
	X1.5	0.980	0.2973	Valid
	X1.6	0.981	0.2973	Valid
	X1.7	0.981	0.2973	Valid
	X1.8	0.979	0.2973	Valid
	X1.9	0.993	0.2973	Valid
	X1.10	0.993	0.2973	Valid
	X1.11	0.980	0.2973	Valid
	X1.12	0.985	0.2973	Valid
	X1.13	0.981	0.2973	Valid
	X1.14	0.992	0.2973	Valid
	X1.15	0.962	0.2973	Valid
Employee Competence (X_2)	X2.1	0.971	0.2973	Valid
	X2.2	0.980	0.2973	Valid
	X2.3	0.985	0.2973	Valid
	X2.4	0.986	0.2973	Valid
	X2.5	0.993	0.2973	Valid
	X2.6	0.993	0.2973	Valid
	X2.7	0.986	0.2973	Valid
	X2.8	0.986	0.2973	Valid
	X2.9	0.993	0.2973	Valid
	X2.10	0.990	0.2973	Valid
Personnel Service Effectiveness (Y)	Y.1	0.997	0.2973	Valid
	Y.2	0.975	0.2973	Valid
	Y.3	0.989	0.2973	Valid
	Y.4	0.992	0.2973	Valid
	Y.5	0.992	0.2973	Valid
	Y.6	0.977	0.2973	Valid
	Y.7	0.997	0.2973	Valid
	Y.8	0.986	0.2973	Valid
	Y.9	0.997	0.2973	Valid
	Y.10	0.997	0.2973	Valid

Source: Processed Primary Data, 2025

Table 5. Reliability Test Results

Variable	Cronbach Alpha	Description
SIMASN Implementation	0.998	Reliable
Employee Competence	0.997	Reliable
Personnel Service Effectiveness	0.998	Reliable

Source: Processed Primary Data, 2025

Table 6. Normality Test Results

Variable	K-S Statistic	Sig.
Residual	0.101	0.200

Source: Processed Primary Data, 2025

Table 7. Multicollinearity Test Results

Variable	Tolerance	VIF
SIMASN Implementation	0.985	1.015
Employee Competence	0.985	1.015

Source: Processed Primary Data, 2025

Table 8. Multiple Linear Regression Results

Variable	B	Beta	t	Sig
Constant	-4.989		-1.931	0.060
SIMASN Implementation (X ₁)	0.441	0.684	10.481	0.000
Employee Competence (X ₂)	0.501	0.523	8.022	0.000

Source: Processed Primary Data, 2025

Table 9. F-Test Results

F Value	Sig
98.684	0.000

Source: Processed Primary Data, 2025

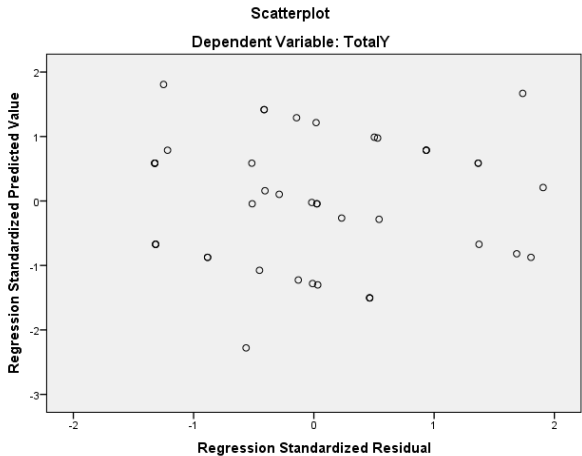


Figure 1. Heteroscedasticity Test Results

between the independent variables and the dependent variable.

Coefficient of Determination

The coefficient of determination is used to determine how much the independent variables are able to explain the variation in the dependent variable within the regression model. The results are presented in [Table 10](#). [Table 10. Coefficient of Determination](#)

R	R Square	Adjusted R Square
0.910	0.828	0.820

Source: Processed Primary Data, 2025

Based on the analysis results, the R Square value is 0.828, which indicates that the variables of SIMASN implementation and employee competence are able to explain 82.8% of the variation in the effectiveness of personnel services. Meanwhile, the remaining 17.2% is influenced by other factors outside the research model that were not examined in this study.

The Adjusted R Square value of 0.820 indicates that the regression model used in this study has a strong ability to explain the relationship between the independent variables and the dependent variable.

The Effect of SIMASN Implementation on Personnel Service Effectiveness

The findings of this study demonstrate that SIMASN implementation has a positive and significant influence on personnel service effectiveness. This is reflected in the regression coefficient of 0.441 with a significance value below 0.05, indicating that improvements in system implementation are associated with higher levels of service effectiveness.

This finding is particularly relevant to the conditions observed in the Regional Civil Service and Training Agency of Garut Regency, where several types of personnel services still show relatively high document return rates. The implementation of SIMASN contributes to reducing administrative errors by improving data integration, standardizing procedures, and facilitating more accurate verification processes. However, the persistence of high return rates in certain services indicates that system implementation alone is not sufficient and must be supported by accurate data input and adherence to administrative procedures.

These results suggest that the application of information systems in personnel administration contributes to enhancing both efficiency and accuracy in service processes. The digitalization of public services has been widely recognized as a key driver in improving organizational performance and administrative effectiveness ([Gil-Garcia, 2018](#); [Lobont, 2025](#); [Verhoef & others, 2021](#)). Through SIMASN, personnel data can be managed in a more integrated and structured manner, enabling faster processing and reducing the likelihood of procedural errors.

This finding aligns with the Information System Success Model, which emphasizes that system quality and information quality play a crucial role in generating organizational benefits ([DeLone & McLean, 2003](#)). Systems that are user-friendly, capable of producing accurate information, and effectively utilized by users are more likely to enhance service performance.

In the context of the Regional Civil Service and Training Agency of Garut Regency, the implementation of SIMASN supports more organized and well-documented personnel administration processes. This indicates that digital transformation in personnel management can significantly improve service effectiveness when supported by optimal

system utilization.

The Effect of Employee Competence on Personnel Service Effectiveness

The results also reveal that employee competence has a positive and significant effect on personnel service effectiveness, as indicated by a regression coefficient of 0.501 and a significance level below 0.05. This finding implies that higher levels of competence among employees lead to better service outcomes.

This finding is closely related to the role of civil servants in managing personnel administration processes. In the context of the Regional Civil Service and Training Agency of Garut Regency, employee competence is reflected in the ability to accurately process data, comply with administrative procedures, and effectively utilize the SIMASN system. Higher levels of competence enable employees to minimize errors in document processing, improve service accuracy, and reduce the likelihood of document returns. Therefore, employee competence plays a crucial role in ensuring that the benefits of digital system implementation can be fully realized.

Employee competence plays a central role in public service delivery, as employees are directly involved in administrative processes and service interactions. Individuals who possess adequate technical skills, a strong understanding of procedures, and effective communication abilities are better equipped to deliver services efficiently and accurately.

These findings are consistent with the OECD Core Competency Framework, which highlights competence as a key factor in improving the performance of public sector organizations (OECD, 2021). Competent employees are more capable of adapting to technological changes, utilizing information systems effectively, and providing responsive services to users.

In this study, employee competence is particularly important in supporting the use of SIMASN. Employees who are able to operate the system properly and understand personnel administration procedures can ensure that service processes are carried out more efficiently and with greater accuracy.

The Effect of SIMASN Implementation and Employee Competence on Personnel Service Effectiveness

The findings further indicate that SIMASN implementation and employee competence simultaneously have a significant effect on personnel service effectiveness. This is supported by the F-test results, which show a significance value below 0.05, and an R^2 value of 0.828, indicating that both variables jointly explain a substantial proportion of the variance in service effectiveness.

This result suggests that effective personnel services are not solely determined by the presence of an information system but also depend on the competence of the employees who operate it. A well-designed system will not yield optimal outcomes if it is not supported by capable human resources.

These findings are in line with the Public Service Logic perspective, which emphasizes that public service effectiveness emerges from the interaction between systems, actors, and service processes oriented toward creating public value (Meijer, 2015; Rana & Dwivedi, 2015). In this context, SIMASN provides the technological infrastructure, while employee competence ensures that the system is utilized effectively in delivering services.

The implications of this study highlight the importance of a balanced approach between technological development and human resource capacity building.

Efforts to improve personnel service effectiveness should focus not only on enhancing information systems but also on strengthening employee competencies through training and continuous development programs. Therefore, the integration of information technology utilization and employee competence development becomes a key strategy in improving the quality of personnel services in local government institutions (Osborne & Strokosch, 2021; Tambouris et al., 2019).

Conclusion

This study aims to analyze the effect of SIMASN implementation and employee competence on the effectiveness of personnel services at the Regional Civil Service and Training Agency of Garut Regency. The results show that both SIMASN implementation and employee competence have a positive and significant effect on personnel service effectiveness.

Partially, SIMASN implementation shows a stronger influence on personnel service effectiveness compared to employee competence, as indicated by its higher standardized coefficient (Beta = 0.684), while employee competence has a standardized coefficient of 0.523. However, both variables remain important in supporting personnel service effectiveness.

Simultaneously, both variables are able to explain 82.8% of the variation in personnel service effectiveness ($R^2 = 0.828$), indicating that personnel service effectiveness is strongly influenced by the combined influence of information system quality and employee competence.

This study has limitations due to the relatively small number of respondents and the focus on a single local government institution, which may limit the generalizability of the findings. In addition, this study adopts a cross-sectional design, which limits the ability to capture changes over time. The use of self-reported data may also introduce response bias, and the measurement of all variables from the same respondents may lead to potential common method bias. Therefore, future research is recommended to expand the research scope to multiple institutions or apply mixed-method approaches to obtain a more comprehensive understanding of factors influencing digital-based personnel service effectiveness.

Author contributions

The author is the sole contributor to this study. The author is responsible for problem formulation, conceptual framework development, instrument design, data collection and analysis, interpretation of results, as well as writing and revising the manuscript until the final stage of completion.

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Conflict of interest

The author declares that there are no conflicts of interest, either financial or non-financial, that could influence the objectivity and independence of this research on SIMASN implementation and employee competence on personnel service effectiveness.

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