

The Influence of Health Service Management and Leadership on Employee Performance: The Moderating Role of Digitalization at Public Health Centers in Serang regency

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Abstract

The research is motivated by suboptimal employee performance, persistent service inefficiencies, and uneven implementation of digitalization. Therefore, a model capable of explaining the relationship between variables is needed to improve the quality of health services. This study aims to analyze the influence of health service management and leadership on employee performance, with digitalization as a mediating variable, at public health centers in Serang Regency. The study employed a quantitative approach with explanatory research methods. The study population comprised civil servants at 15 inpatient public health centers (Puskesmas) in Serang Regency. The sample size was determined using proportionate random sampling, with 170 respondents. Data were collected through a Likert-scale questionnaire and analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) through outer model and inner model testing, as well as direct and indirect hypothesis testing. The results of the study indicate that all constructs have met the validity and reliability criteria. The coefficient of determination shows that digitalization can be explained by service management and leadership by 80.4%, while employee performance is explained by 76.3%. Hypothesis testing proves that service management has a positive and significant effect on employee performance and digitalization, leadership has a positive and significant effect on employee performance and digitalization, and digitalization has a positive and significant effect on employee performance. In addition, digitalization is proven to significantly mediate the influence of service management and leadership on employee performance. This study concludes that improving the performance of Community Health Center employees is not only determined by the quality-of-service management and leadership, but also by the effective implementation of digitalization. These findings offer practical implications for Community Health Center managers to strengthen digital transformation, improve the quality-of-service management, and develop adaptive leadership to achieve more effective, efficient, and community-oriented health services.

Kata Kunci: health service management, leadership, digitalization, employee performance, SEM-PLS.

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INTRODUCTION

Healthcare is a form of public service that demands high quality because it directly addresses the community's basic needs (Tiong et al., 2024). Community health centers, as

first-level healthcare facilities, are required to provide fast, accurate, responsive, and coordinated services (District & Figures, 2024). However, in practice, various service issues persist, such as long waiting times, suboptimal coordination between staff, and inefficient service flows, which negatively impact the quality of service provided to the community (District & Figures, 2024).

The current phenomenon, at the regional level, this challenge is also reflected in the implementation of health services at the Public health centers in Serang Regency. As an area with a fairly large population, the service burden at the Public health centers is relatively high, both in terms of the number of patient visits and the complexity of service needs. Based on data from the Serang Regency Health Office (2026), the number of Public health centers in Serang Regency is 31, consisting of 15 inpatient Public health centers and 16 specialized Public health centers for non-inpatient services (Profil Dinkes, 2026). And according to the Central Statistics Agency (2026), the population of Serang Regency spread across all sub-districts reached 1.76 million people. Meanwhile, the number of health workers in Serang Regency, especially those working at Community Health Centers, is still very limited.

Digital transformation is then reinforced through various national agendas, including the 2021–2024 Indonesia Digital Roadmap and the National Medium-Term Development Plan (RPJMN), which places digitalization of the government sector as one of the national development priorities. These policy directions demonstrate that the success of digital transformation is determined not only by the availability of technological infrastructure, but also by the ability of government organizations and officials to utilize technology to improve governance effectiveness, the quality of public services, and create innovation in government administration (Kucharska & Kucharski, 2026). Although various policies have encouraged the acceleration of digital transformation, its implementation in various government agencies still faces several challenges (Wahyuningtyas et al., 2026).

These findings indicate that the success of digital transformation cannot be interpreted solely as the success of providing applications, networks, or technological infrastructure. Digital transformation will only have an impact on improving service quality if government officials are able to adopt changes, utilize technology optimally, and integrate digital systems into daily work processes. Therefore, the quality of human resources is one of the strategic factors determining the success of digital transformation in the public sector (Arshad et al., 2026). The Central Statistics Agency (BPS) noted that the percentage of the Indonesian population aged five years and above who accessed the internet increased from 69.21% in 2023 to 72.78% in 2024. This increase of 3.57 percentage points indicates that people are increasingly accustomed to using digital technology in various activities, including obtaining information, communicating, transacting, and accessing public services (Sa et al., 2026). This condition also increases public expectations for the provision of public services that are faster, more accessible, transparent, and responsive. Therefore, government officials, including village officials, are no longer sufficient to only have administrative capabilities, but are also required to be able to utilize digital technology effectively and adapt to changing community needs (Cubillas-para et al., 2026).

The increased implementation of SPBE does not automatically reflect the development of innovation in civil servant work. The digitalization that has been implemented is still primarily oriented towards the use of applications, electronic administration, and the provision of digital services, while changes in mindset, the ability to generate new ideas, and the development of more innovative work methods do not necessarily develop in line with the application of technology. In other words, the success of digital transformation does not necessarily translate into success in creating innovation in civil servant work (Aversa et al., 2026).

In practice, technology utilization in government remains largely focused on digitizing administrative tasks, such as document management, data recording, and

information delivery (Tripp & Sambamurthy, 2026). This utilization has not yet been fully directed toward creating new, more effective ways of working, improving the quality of public services, or generating innovative solutions to various problems faced by the public. This situation indicates that digital transformation has not been fully accompanied by a transformation in the mindset and work behavior of civil servants (Wu et al., 2026).

Research on work innovation has experienced significant developments in the past two decades (Virnandes et al., 2024). In the early stages, work innovation was primarily explained through organizational factors, such as organizational culture, organizational climate, leadership style, job satisfaction, and work motivation (Burtscher & Piano, 2025). This approach positions the organization as the primary factor influencing an individual's ability to generate new ideas and improve work processes (Kucharska & Kucharski, 2026). As work environments become increasingly dynamic, researchers' attention has shifted to individual characteristics as a factor that contributes to the success of work innovation (Jahan et al., 2026).

However, most previous research has examined the influence of digital leadership, self-efficacy, and learning agility separately or placed them in different relationship models. Research integrating learning agility as a key factor shaping digital leadership and self-efficacy, which then impacts work innovation, remains relatively limited, particularly in the context of public sector organizations at the village government level. Yet, the characteristics of village governments facing accelerated digitalization and the demands of public services require an approach capable of explaining how individual capabilities develop to produce work innovation.

According to data from the Serang Regency Health Office in 2021, the number of medical personnel working at 31 public health centers (Puskesmas) remains very low, reaching only 5% of the national target (Dinkes, 2021). Furthermore, there is still a gap between the number of visitors and the number of civil servant health workers working at the Puskesmas.

The number of patient visits at 31 public health centers (Puskesmas) in Serang Regency has consistently decreased from 2,274,000 visits in 2024 to 2,053,000 in 2025, even though the number of health workers (ASN) remains relatively constant at 941 people. This decline indicates an imbalance between human resource capacity and the level of health service utilization by the community. From the perspective of Human Resource Management and Health Service Management, this condition reflects a potential decline in work productivity, because service output (number of visits) decreases without a corresponding change in labor input. Furthermore, this phenomenon also shows that a large number of employees does not automatically guarantee high service performance, thus indicating the presence of other influencing factors, such as work motivation, employee engagement, and the effectiveness of the service management system. Therefore, this decline in the number of visits can be understood as an early indication of problems in the performance of community health center employees that require further study, particularly regarding how reward and punishment factors and employee engagement play a role in influencing work productivity.

Ideally, health services require optimal employee performance, as with a large population, each employee must be able to effectively cover their duties (Arifai et al., 2022). Optimal performance will ensure good health services, leading to greater public loyalty in using health services at community health centers. However, many community health center patients still complain about slow service, long queues, and ineffectiveness. This indicates that the performance of community health center employees is still suboptimal (Khan et al., 2025).

Digitalization at the Serang Regency Community Health Center (Puskesmas) is still at a suboptimal stage. This is evident in the low use of information systems (66%), integration of digital services (64%), and utilization of technology (68%), indicating that service

processes are still largely manual and lack integration. Although human resource capacity in technology utilization is considered adequate (70%), limited training is a barrier to optimizing the use of digital systems. Overall, this situation indicates that digitalization has not been able to support optimal employee performance improvements.

Previous researchers examining the performance of Community Health Center employees have focused on internal organizational and individual factors such as work discipline, motivation, competence, work environment, and leadership. Research by Harahap et al. (2023) and Tuanane et al. (2024) shows that organizational and individual factors influence employee performance, but have not yet linked them to service management or digitalization. Meanwhile, Andayani et al. (2024) emphasizes the importance of leadership on performance, but has not integrated it with a digital-based service system. Research by Jalil (2024) only focuses on the direct relationship between service quality and performance without involving other, more complex variables. Research by Zulkarnaen et al. (2025) shows that digitalization can improve service efficiency, but digitalization is still positioned as an independent variable. Therefore, this study offers novelty by integrating service management, leadership, and digitalization in explaining the performance of Community Health Center employees, while positioning digitalization as a moderating variable.

various previous studies have examined the factors influencing the performance of Community Health Center employees, both from an individual and organizational perspective. However, these studies have tended to focus only on variables such as work discipline, motivation, competence, and leadership. Furthermore, studies on the integration of service management and digitalization in improving the performance of Community Health Center employees are still relatively limited. However, the development of digital transformation in healthcare requires public service organizations to manage services more effectively, adaptively, and integrated. Therefore, research is needed that not only examines organizational and leadership factors but also considers the role of digitalization in strengthening the relationship between these factors and employee performance.

Previous research has focused on individual and organizational factors separately, such as work discipline, motivation, and leadership, on employee performance. Furthermore, the integration of service management and digitalization in improving employee performance at public health centers (Puskesmas) remains understudied. Therefore, this study aims to address this gap by integrating service management, leadership, and digitalization variables into employee performance.

The novelty of this research lies in the integration of service management, leadership, and digitalization in analyzing the performance of Community Health Center employees, as well as placing digitalization as a moderating variable that has rarely been studied in previous research.

Based on the background and phenomena that have been discussed, the formulation of the problem in this research includes: (1) Does service management influence the performance of health center employees in Serang Regency. (2) Does leadership have a significant influence on the performance of health center employees in Serang Regency. (3) Does service management influence digitalization at public health centers in Serang Regency. (4) Does leadership influence digitalization in public health centers in Serang Regency. (5) Does digitalization affect the performance of health center employees in Serang Regency. (6) Does service management influence employee performance through digitalization at public health centers in Serang Regency. (7) Does leadership influence employee performance through the role of digitalization of public health centers in Serang Regency.

METHODOLOGY

Study Design

The type of research used in this study is quantitative research with a descriptive causality method which functions to describe or provide an overview of the object being studied through data or samples that have been collected as they are, without conducting analysis and making general conclusions.

Population & Sample

In this study the population is all Community Health Center employees in the Serang Regency area who provide inpatient care and 24-hour services, namely 15 public health centers totaling 440.

The sampling technique in this study uses probability sampling with the type simple random sampling, that is random sampling technique that gives each member of the population an equal opportunity to be selected as a sample. The number of samples in this study was 170 respondents.

Data Collection Technique

The data collection method used in this study is Library research, this study is conducted by studying various scientific literature such as books, journals, and previous research results that are related to the research variables. And field studies included questionnaires and interviews to supplement the questionnaire data. Questionnaire data were analyzed using a Likert scale ranging from 1 to 5.

Data Analysis Technique

The data analysis techniques in this study are divided into two, namely descriptive data analysis and inferential analysis, namely statistical analysis using SmartPLS.

RESULTS AND DISCUSSION

The results of the inferential test using SEM PLS were first tested using the outer model analysis using the PLS Algorithm module to test the validity and reliability of each indicator item used to measure each variable. The validity test was conducted using three parameters, namely convergent validity, Average Variance Extracted(AVE) and discriminant validity. Meanwhile, the reliability test is measured using 2 parameters, namely composite reliability(CR) and Cronbach's Alpha. The results can be seen in Figure 1 and Table 1.

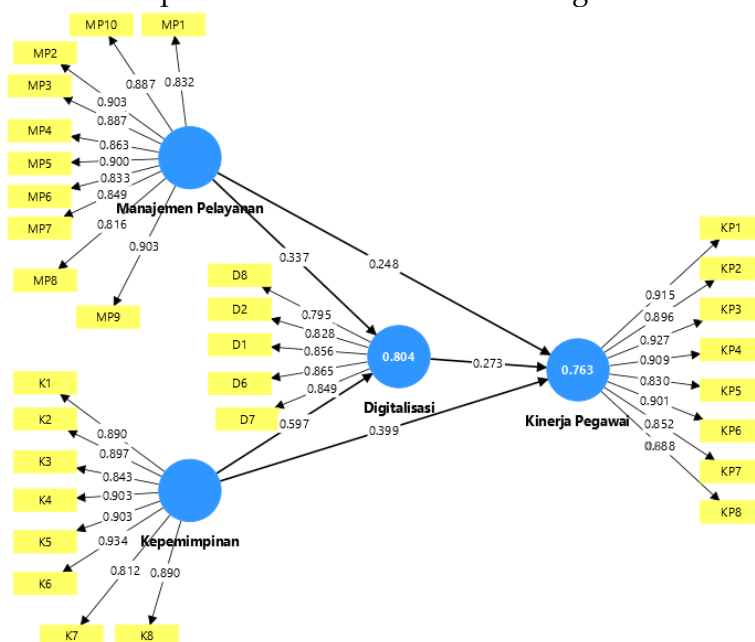


Figure 1 Outer Model Analysis Results (PLS Algorithm)

Table 1 Test Result Average Variance Extracted (AVE), composite reliability (CR) and Cronbach's Alpha

Variabel	Average variance extracted (AVE)	Composite reliability (rho_c)	Cronbach's alpha
Digitalization	0,704	0,922	0,895
leadership	0,782	0,966	0,960
Employee performance	0,753	0,960	0,952
Health Service management	0,753	0,968	0,963

Source: SEM PLS data processing results (2026)

Based on Figure 1 and Table 1 test results outer analysis from the four parameters that have been carried out, all of them are valid and reliable, so the SEM PLS test can be continued to inner analysis because all indicators are able to measure their respective Latin variables. Next, a hypothesis test is conducted to see the significance of the relationship between each variable, both directly and indirectly, and will be explained in Table 2.

Table 2 Results of Significance Test (Hypothesis Test) of Direct & Indirect Effects

	Original sample (O)	mean (M)	Standard deviation (STDEV)	T statistic (O/STDEV)	P values
H1: health service management -> employee performance	0,248	0,244	0,078	3,160	0,002
H2: leadership -> employee performance	0,399	0,399	0,087	4,589	0,000
H3: health service management -> Digitalization	0,337	0,332	0,081	4,184	0,000
H4: leadership -> Digitalization	0,597	0,597	0,073	8,171	0,000
H5: Digitalization-> employee performance	0,273	0,263	0,082	3,333	0,001
H6 : health service management -> Digitalization> employee performance	0,078	0,077	0,031	2,512	0,012
H7 : leadership -> Digitalization-> employee performance	0,138	0,140	0,052	2,653	0,008

Source: SEM PLS data processing results (2026)

The results of the significance test analysis (hypothesis) are shown in Table 2A model was obtained that empirically shows the seven influences between the estimated variables. Of the seven influences between the variables depicted in the full model analysis, the results show that all variables have a significant influence, so the hypothesis developed in this study can be accepted.

H1: There is a significant influence of service management on employee performance at public health centers in Serang Regency.

Based on the results of testing the first hypothesis (H1), it is known that service management has a positive and significant effect on employee performance at public health centers in Serang Regency. This is evidenced by the value *t-statistic* of 3.160 which is greater than 1.96 and the value *p-value* of 0.002, which is smaller than 0.05. Thus, the first hypothesis is accepted. These results indicate that the better service management is implemented within an organization, the better employee performance will be. This finding illustrates that employee success in carrying out tasks is not only determined by the abilities of each individual but also influenced by how the organization manages the service system so that each work process can run effectively and directed.

These findings are in line with George R. Terry's theory which explains that organizational success is influenced by the implementation of management functions which include planning (*planning*), organizing (*organizing*), implementation (*actuating*), and supervision (*controlling*). In the context of healthcare, these functions form the basis for managing the entire service process systematically. Good planning will help the organization determine the direction of services, while clear organization will facilitate the division of tasks according to each employee's responsibilities. Furthermore, coordinated implementation and ongoing monitoring will ensure that each service is provided according to operational standards. When all these functions run well, employees will find it easier to carry out their jobs, understand service priorities, and produce more optimal performance.

The results of this study are also supported by the conditions found at the Serang Regency Community Health Center (Puskesmas). Based on descriptive analysis, both service management and employee performance variables are in the very high category. These results indicate a alignment between the quality-of-service management and employee performance achievements. This condition is quite reasonable considering that the Puskesmas is a first-level health care facility with a very broad scope of duties. In addition to providing medical services to the community, the Puskesmas also organizes promotive, preventive, and rehabilitative programs, maternal and child health services, immunizations, disease control, and various national health programs. The large number of services requires a management system capable of integrating all activities so that each unit can work harmoniously. When the division of tasks, coordination, and service procedures are well-functioning, employees will more easily complete their work effectively, minimize errors, and provide quality services to the community. Conversely, if the service system is poorly organized, the potential for overlapping work and coordination obstacles will increase, which can affect employee performance.

Based on the overall research results, it can be concluded that service management is a crucial factor influencing employee performance at public health centers in Serang Regency. Efforts to improve performance are not limited to improving competency, discipline, or increasing work targets alone; they must also be accompanied by strengthening the service system that serves as a guideline for daily work. Planned, organized, and adaptable service management to meet healthcare needs will create a more effective work environment and support employees in optimally performing their duties. Therefore, strengthening service management is a strategic step that needs to be continuously implemented to maintain the quality of employee performance and ensure sustainable improvement of healthcare services to the community.

H2: There is a significant influence of leadership on employee performance at public health centers in Serang Regency.

Based on the results of testing the second hypothesis (H2), it is known that leadership has a positive and significant effect on employee performance at the Community Health Center in Serang Regency. This is evidenced by the value *t-statistic* of 4.589 which is greater than 1.96 and the value *p-value* of 0.000, which is smaller than 0.05, so the second hypothesis

is accepted. These results indicate that leadership quality plays a significant role in improving employee performance. The better a leader's ability to direct, guide, and make decisions, the better the employee's task execution will be. This condition indicates that employee performance is not only influenced by their technical abilities but also by how a leader is able to create a clear work direction, provide support, and build a conducive work atmosphere so that each employee can carry out their responsibilities optimally.

The findings of this study align with the leadership theory proposed by Robbins and Judge, which explains that leadership is a person's ability to influence, direct, and motivate individuals or groups to work together to achieve organizational goals. In public service organizations such as public health centers (Puskesmas), leadership is not only demonstrated through giving instructions, but also through the ability to build effective communication, set an example, and foster trust among employees. When a leader is able to convey clear directions, involve employees in problem-solving, and make appropriate decisions, employees will have a greater sense of responsibility for their work. This situation will encourage a more collaborative work environment, improve work discipline, and strengthen employee commitment to providing health services to the community.

The results of this study are also supported by the conditions at the Serang Regency Community Health Center (Puskesmas). As a primary healthcare facility, the Puskesmas's workforce involves a variety of professionals, including doctors, nurses, midwives, community health workers, laboratory personnel, pharmacists, and administrative staff. This diversity demands leadership capable of uniting all resources to work toward a common goal. In practice, Puskesmas leaders are not only responsible for managing daily services but also for ensuring effective coordination between units, resolving operational issues, and maintaining service quality amidst changing health policies and increasing community needs. Effective leadership increases employee confidence, providing clear direction, support when facing challenges, and opportunities to express opinions. This ultimately leads to increased morale, teamwork, and the quality of services provided to the community. Conversely, ineffective leadership can lead to weak coordination, reduced employee motivation, and hinder the achievement of organizational goals.

Based on the statistical test results, theoretical basis, and empirical conditions found in this study, it can be concluded that leadership is one of the factors that plays a significant role in improving employee performance at Public health centers in Serang Regency. Efforts to improve performance are not sufficient only through employee competency development, but also need to be balanced with strengthening leadership quality at every organizational level. Leaders who are able to communicate openly, provide motivation, build cooperation, and make appropriate decisions will create a more productive and adaptive work environment to various changes. Therefore, leadership capacity development needs to be a primary concern in Community Health Center management, because it not only influences employee performance improvement but also supports the realization of increasingly high-quality, effective, and community-oriented health services.

H3: There is a significant influence of service management on digitalization at Public health centers in Serang Regency.

Testing the third hypothesis shows that service management has a positive and significant influence on digitalization at public health centers in Serang Regency. This is evidenced by the value *t-statistic* of 4.184 which is greater than 1.96 and the value *p-value* of 0.000, which is below the 0.05 significance level. Thus, the third hypothesis is accepted. These results indicate that the better service management is implemented, the higher the success of digitalization in supporting healthcare delivery. Digitalization is not only about the use of technology, but also concerns the organization's readiness to manage change. When the

service system has clear procedures, a focused division of tasks, and a well-functioning coordination mechanism, the technology implementation process will be more effective and more easily accepted by all employees.

These findings reinforce George R. Terry's view that organizational success is greatly influenced by management's ability to carry out the functions of planning, organizing, implementing, and monitoring. These four functions are an inseparable foundation in the digital transformation process. Planning is necessary to determine the needs and direction of digital system development, while organizing ensures that each employee understands their role throughout the change process. Furthermore, implementation and monitoring are crucial steps to ensure that technology is truly utilized in accordance with organizational goals. Thus, digitalization is not simply a process of replacing manual work with application-based work, but rather a comprehensive change in the way an organization delivers services. If these changes are managed through good service management, the use of technology will be able to increase work effectiveness while supporting the quality of service to the public.

This situation is also evident in the service delivery at the Serang Regency Community Health Center (Puskesmas), which is currently adapting to digital transformation policies in the health sector. Various services have utilized technology, ranging from electronic medical records, integrated referral systems, health recording and reporting, to increasingly digitized service administration. However, the success of implementing these systems is not solely determined by the sophistication of the applications used. Far more crucial is the organization's readiness to integrate technology into daily work processes. If service flows are not well-organized or coordination between units is weak, digitalization has the potential to increase workloads as employees must adapt to new procedures without adequate system support. Conversely, when service management is able to direct changes in a planned manner, employees will more easily adapt, understand new procedures, and utilize technology as a tool to improve the speed, precision, and accuracy of services. This demonstrates that the success of digitalization ultimately depends not only on the technology itself but also on the quality-of-service management, which is the foundation of an organization's operations.

The findings of this study illustrate that digital transformation at the Serang Regency Community Health Center (Puskesmas) needs to be viewed as part of a comprehensive service system overhaul. While providing technological devices is crucial, it will not yield optimal results without consistent service management capable of managing change. Therefore, strengthening work procedures, inter-unit coordination, service evaluation, and improving organizational readiness are all aspects that require attention. When all these components work in harmony, digitalization is no longer merely a technological innovation but rather an instrument capable of increasing organizational effectiveness, accelerating service processes, and producing health services that are more responsive to community needs.

H4: There is a significant influence of Leadership on Digitalization at Public health centers in Serang Regency.

The results of the hypothesis test showed a t-statistic value of 8.171 with a p-value of 0.000, indicating that leadership has a very strong influence on digitalization at public health centers in Serang Regency. This value also confirms that the fourth hypothesis is accepted. Compared to the relationship between other variables in this study, the influence of leadership on digitalization is among the highest. This condition illustrates that the success of implementing a digital system at public health centers is not only determined by technological readiness, but also by how a leader is able to direct the organization to face

change. The better the leadership implemented, the greater the opportunity for digitalization to be optimally implemented in supporting the health service process.

This phenomenon aligns with Robbins and Judge's view that leadership is the ability to influence individuals and groups to achieve organizational goals. In the digital transformation process, this influence becomes increasingly important because the changes occur not only in the use of technology but also in the way employees work. The shift to digital systems often requires adjustments to habits, increased competencies, and even changes in communication patterns within the organization. In such situations, leaders act as both guides and drivers of change. A clear vision, communication skills, and consistent example will help employees understand that digitalization is not just a new policy, but part of an effort to improve service quality. Thus, leadership serves not only to oversee work implementation but also to build organizational readiness to embrace change.

This description is quite consistent with the conditions at the Serang Regency Community Health Center (Puskesmas). Currently, health services are utilizing various digital systems, such as electronic medical records, health reporting applications, service data integration, and electronic referral systems. The implementation of these innovations has undoubtedly brought changes to existing work patterns. Some employees adapt quickly, while others require time and guidance to optimally utilize the new system. In such situations, the presence of leadership is a crucial factor. Leaders who actively provide direction, open discussions when challenges arise, and encourage employees to continue learning will create a work environment that is more prepared to face change. Conversely, if leadership is less responsive to the adaptation process, digitalization has the potential to become merely a policy fulfillment process without significantly improving service quality. It is not surprising that the results of this study indicate that leadership plays a significant role in the success of digitalization at the Puskesmas.

Given these results, it's clear that digital transformation isn't simply a technology procurement project, but rather an organizational change process that requires strong leadership. Technology serves only as a tool, while its successful implementation is heavily influenced by the leader's ability to build commitment, create an adaptive work culture, and ensure all employees are moving toward the same goals. Therefore, enhancing leadership capacity is a strategic step that needs to be continuously implemented at the Serang Regency Community Health Center (Puskesmas) to ensure the digitalization process can run sustainably and truly impact the quality of healthcare services to the community.

H5: There is a significant influence of digitalization on employee performance at public health centers in Serang Regency.

Testing the fifth hypothesis shows that digitalization has a positive and significant impact on employee performance at public health centers in Serang Regency. This is evidenced by the value *t-statistic* of 3.333 which is greater than 1.96 and the value *p-value*. The value of 0.001 is below the 0.05 significance level. These results confirm that the fifth hypothesis is accepted. This means that the more optimal the implementation of digitalization in service activities, the better the employee performance. This condition illustrates that the use of technology has become a crucial part of supporting work implementation, particularly in accelerating service flows, simplifying data processing, and increasing the accuracy of information needed for decision-making.

This relationship is in line with *Technology Acceptance Model (TAM)* developed by Davis. This theory explains that someone will accept and utilize a technology if the technology is considered useful (*perceived usefulness*) and easy to use (*perceived ease of use*). In a community health center (Puskesmas), digital systems that simplify administrative tasks, accelerate patient data access, and streamline reporting processes will encourage employees to utilize

them sustainably. When technology truly helps complete tasks, employees can work more efficiently without having to spend a lot of time on repetitive administrative processes. Ultimately, this will result in increased productivity and the quality of services provided to the community.

This picture is beginning to be seen in the implementation of services at the Serang Regency Community Health Center, which has gradually implemented various digital-based systems, such as electronic medical records, health program reporting applications, referral systems, and health data integration. The presence of these systems has transformed work patterns previously dominated by manual recording into more structured and digitally documented processes. However, descriptive analysis results indicate that several digitalization indicators still fall within the moderate or even low categories. This indicates that digitalization implementation has not been fully equitable across all aspects of service. Differences in infrastructure readiness, employee ability to operate the system, and the process of adapting to technology are some factors that have prevented all employees from experiencing the benefits of digitalization equally. Nevertheless, statistical testing results demonstrate that when digital systems are utilized effectively, their impact on improving employee performance is significant.

These findings demonstrate that digitalization can no longer be viewed merely as a complement to healthcare delivery, but rather as part of a strategy to improve organizational performance. Therefore, efforts to develop digitalization need to be carried out sustainably, not only through the provision of technology, but also by improving employee digital competency, strengthening supporting infrastructure, and refining work processes to align with the implemented system. With these steps, digitalization will provide optimal benefits, both in increasing employee productivity and in realizing faster, more accurate, and more community-oriented healthcare services.

H6: There is a significant influence of service management on employee performance through digitalization at the Community Health Center in Serang Regency.

Analysis of the sixth hypothesis shows that digitalization can mediate the influence of service management on employee performance at public health centers in Serang Regency. This is evidenced by the results of the test. *Indirect effect* with value *t-statistic* of 2.512 which is greater than 1.96 and *p-value* of 0.012, which is smaller than 0.05. Thus, the sixth hypothesis is accepted. These results indicate that the influence of service management on employee performance occurs not only directly but also through digitalization. This means that good service management will have a greater impact on improving performance when supported by the use of digital technology in the service process.

These findings can be explained through *Technology-Organization-Environment (TOE) Framework* proposed by Tornatzky and Fleischer. This theory explains that the success of technology implementation is influenced not only by the technology used, but also by the organization's readiness to manage change. In this study, service management reflects this readiness through planning, task allocation, coordination, and clear work procedures. When the service system is running well, the technology adoption process becomes easier, allowing digitalization to be optimally utilized to support work implementation. Thus, digitalization serves as a link that strengthens the influence of service management on improving employee performance.

This situation aligns with the implementation of services at the Serang Regency Community Health Center (Puskesmas), which has begun utilizing various digital systems, such as electronic medical records, application-based recording and reporting, and health service data integration. However, the success of these systems implementation depends not only on the availability of technology but also on the readiness of service management to integrate changes into work processes. Puskesmas with clear service procedures, good

coordination, and a structured division of tasks tend to be more easily able to implement digitalization than organizations with suboptimal governance. Conversely, if the service system is not well-organized, digitalization will only change the work environment without significantly impacting employee productivity.

Based on these results, it is clear that digitalization plays a strategic role in strengthening the relationship between service management and employee performance. Therefore, improving performance cannot be achieved solely through strengthening service management or providing technology, but requires an integration of both. By building a structured service system while optimizing the use of digital technology, Public health centers (Puskemas) in Serang Regency will be better able to improve work effectiveness, employee productivity, and the quality of healthcare services to the community.

H7: There is a significant influence of leadership on employee performance through digitalization at the Community Health Center in Serang Regency.

The seventh hypothesis test shows that digitalization is able to mediate the influence of leadership on employee performance at Public health centers in Serang Regency. *Indirect effect* show value *t-statistic* of 2.653 which is greater than 1.96 with *p-value* of 0.008, which is smaller than 0.05, thus the seventh hypothesis is accepted. These results indicate that effective leadership not only directly influences employee performance but also improves performance through the successful implementation of digitalization. In other words, the role of leaders becomes increasingly important as organizations adapt to digital-based work systems.

These findings can be explained through the theory *Technology-Organization-Environment (TOE) Framework* which states that the success of technology utilization is influenced by an organization's readiness to manage change. In the context of this research, leadership is one of the organizational factors determining the success of digitalization. Leaders who are able to convey a vision for change, build good communication, and provide support to employees will create conditions more conducive to technology implementation. When employees feel they receive direction and support during the adaptation process, they will more easily accept digital systems as part of their daily work. This situation ultimately impacts work effectiveness and the quality of employee performance.

This situation aligns with the implementation of services at the Serang Regency Community Health Center, which continues to adapt to digital transformation policies in the healthcare sector. The implementation of electronic medical records, health information systems, and digital-based reporting requires every employee to adapt to new ways of working. However, employees' ability to utilize technology varies. Differences in age, work experience, and digital literacy levels present challenges that must be managed effectively. In situations like this, leadership plays a crucial role in encouraging the adaptation process, providing motivation, and ensuring that digitalization truly helps complete work. Therefore, the success of digital transformation is determined not only by the availability of technology, but also by the leadership's ability to guide change so that technology can be optimally utilized by all employees.

Based on the results of this study, it is clear that digitalization serves as a bridge that strengthens the relationship between leadership and employee performance. Adaptive leadership will more easily drive successful digitalization, while well-implemented digitalization will support increased employee work effectiveness. Therefore, leadership development and digital transformation need to be implemented simultaneously to complement each other. Thus, Public health centers in Serang Regency will not only be able to improve employee performance but also build a more modern, efficient, and responsive healthcare system to meet community needs.

CONCLUSION

Based on the results of descriptive and inferential analysis using SEM-PLS, it can be concluded that Service management and leadership have a positive and significant influence on employee performance and digitalization at Public Health Centres in Serang Regency., with the influence of leadership on digitalization being the strongest ($\beta = 0.597$; $p < 0.001$), while the influence of leadership on employee performance is also greater ($\beta = 0.399$; $p < 0.001$) compared to service management ($\beta = 0.248$; $p = 0.002$). In addition, digitalization has a positive and significant impact on employee performance ($\beta = 0.273$; $p = 0.001$), and it is proven mediating the influence of service management on employee performance ($\beta = 0.078$; $p = 0.012$) and the influence of leadership on employee performance ($\beta = 0.138$; $p = 0.008$). This finding indicates that improving employee performance is not only directly influenced by the quality-of-service management and leadership, but can also be strengthened through the effective implementation of digitalization as a connecting mechanism to improve the effectiveness, efficiency, and quality of healthcare services.

This study concludes that improving the performance of Community Health Center employees is not only determined by the quality-of-service management and leadership, but also by the effective implementation of digitalization. These findings offer practical implications for Community Health Center managers to strengthen digital transformation, improve the quality-of-service management, and develop adaptive leadership to achieve more effective, efficient, and community-oriented health services.

References :

- Arifai, M., Haris, A., Yasir, Y., & Kurra, S. D. (2022). *Influence Leadership , Competence and Motivation To Performance Employee Service Health Regency Bay Bintuni West Papua Province*. 9(2), 305–310.
- Arshad, R., Duraipandi, O., & Ullah, M. (2026). *Agile project management for economic sustainability : A time-lagged mediation model of strategic agility and agile leadership among software professionals*. 11(July 2025).
- Aversa, P., Cozzolino, A., & Basil, A. (2026). Business model innovation pathways : Digital transformation after disruption at The New York Times and The Washington Post. *Research Policy*, 55(8), 105536. <https://doi.org/10.1016/j.respol.2026.105536>
- Burtscher, M., & Piano, S. (n.d.). *Developing skills for digital government : A review of good practices across OECD governments*. 303.
- Cubillas-para, C., Cegarra-navarro, J. G., & Tomaseti-solano, E. (2026). *International Journal of Hospitality Management Building agile hotels in the digital era : The role of digital transformation and renewal capabilities*. 139(April).
- District, C., & Figures, I. N. (2024). *Kecamatan ciomas dalam angka*. 16.
- Jahan, S., Albishri, N., Galgotia, A., & Papa, A. (2026). Technovation 3D printing technologies and innovation performance . An agile manufacturing theory perspective. *Technovation*, 149(April 2025), 103347. <https://doi.org/10.1016/j.technovation.2025.103347>
- Khan, A. N., Wang, Y., Khan, N. A., & Ahmad, A. (2025). *Digital Leadership Enhances Employee Empowerment , Techno-work Engagement , and Sustainability : SEM Analysis in Public Healthcare*. <https://doi.org/10.1177/00469580251317653>
- Kucharska, W., & Kucharski, M. (2026). *International Journal of Information Agile culture , collective human intelligence and AI adoption : Gender and sectoral perspectives on augmented intelligence in Europe*. 6(April).
- Pengantar, K. (n.d.). *No Title*.
- Sa, U., Laili, U., Rochimah, S., Bagus, M., & Rasyid, A. (2026). Bridging the skills gap through Agile methodologies in Vocational Software Development Education. *Array*, 29(April 2025), 100614. <https://doi.org/10.1016/j.array.2025.100614>

- Tiong, P., Sumaryo, P., Aisyah, S., & Simamora, P. (2024). *The Influence of Digital Competency , Employee Engagement , and Leadership Style on SME Employee Performance in Indonesia : Innovation Capability as A Mediator and Organizational Culture as A Moderator in the Society 5 . 0 Era*. 9(2), 43–55. <https://doi.org/10.14203/STIPM.2024.405>
- Tripp, J., & Sambamurthy, V. (2026). Information & Management Can only managers enact formal control? The role of team-managed formal control in agile project success. *Information & Management*, 63(6), 104386. <https://doi.org/10.1016/j.im.2026.104386>
- Virnandes, S. R., Shen, J., Vlahu-gjorgievska, E., Virnandes, R., Shen, J., & Vlahu-gjorgievska, E. (2024). ScienceDirect ScienceDirect Building public trust through digital government transformation: A Building public trust through digital government transformation: qualitative study of Indonesian civil service agency qualitative study of Indonesian civil service agency. *Procedia Computer Science*, 234, 1183–1191. <https://doi.org/10.1016/j.procs.2024.03.114>
- Wahyuningtyas, R., Candra, A., Suyanto, S., & Rismayani, R. (2026). Asia Pacific Management Review Agile machine learning-based workload analysis in a telecommunication company. *Asia Pacific Management Review*, 31(2), 100430. <https://doi.org/10.1016/j.apmr.2026.100430>
- Wu, Z., Si, G., Ai, Y., Gu, R., & Yang, D. (2026). Confucian culture and corporate digital leadership. *International Review of Economics and Finance*, 106(November 2025), 104822. <https://doi.org/10.1016/j.iref.2025.104822>
- Arifai, M., Haris, A., Yasir, Y., & Kurra, S. D. (2022). *Influence Leadership , Competence and Motivation To Performance Employee Service Health Regency Bay Bintuni West Papua Province*. 9(2), 305–310.
- Arshad, R., Duraipandi, O., & Ullah, M. (2026). *Agile project management for economic sustainability: A time-lagged mediation model of strategic agility and agile leadership among software professionals*. 11(July 2025).
- Aversa, P., Cozzolino, A., & Basil, A. (2026). Business model innovation pathways : Digital transformation after disruption at The New York Times and The Washington Post. *Research Policy*, 55(8), 105536. <https://doi.org/10.1016/j.respol.2026.105536>
- Burtscher, M., & Piano, S. (n.d.). *Developing skills for digital government: A review of good practices across OECD governments*. 303.
- Cubillas-para, C., Cegarra-navarro, J. G., & Tomaseti-solano, E. (2026). *International Journal of Hospitality Management Building agile hotels in the digital era: The role of digital transformation and renewal capabilities*. 139(April).
- District, C., & Figures, I. N. (2024). *Kecamatan ciomas dalam angka*. 16.
- Jahan, S., Albishri, N., Galgotia, A., & Papa, A. (2026). Technovation 3D printing technologies and innovation performance . An agile manufacturing theory perspective. *Technovation*, 149(April 2025), 103347. <https://doi.org/10.1016/j.technovation.2025.103347>
- Khan, A. N., Wang, Y., Khan, N. A., & Ahmad, A. (2025). *Digital Leadership Enhances Employee Empowerment , Techno-work Engagement , and Sustainability: SEM Analysis in Public Healthcare*. <https://doi.org/10.1177/00469580251317653>
- Kucharska, W., & Kucharski, M. (2026). *International Journal of Information Agile culture , collective human intelligence and AI adoption : Gender and sectoral perspectives on augmented intelligence in Europe*. 6(April).
- Pengantar, K. (n.d.). *No Title*.
- Sa, U., Laili, U., Rochimah, S., Bagus, M., & Rasyid, A. (2026). Bridging the skills gap through Agile methodologies in Vocational Software Development Education. *Array*, 29(April 2025), 100614. <https://doi.org/10.1016/j.array.2025.100614>
- Tiong, P., Sumaryo, P., Aisyah, S., & Simamora, P. (2024). *The Influence of Digital Competency , Employee Engagement , and Leadership Style on SME Employee Performance in Indonesia : Innovation Capability as A Mediator and Organizational Culture as A Moderator in the Society*

5. 0 Era. 9(2), 43–55. <https://doi.org/10.14203/STIPM.2024.405>
- Tripp, J., & Sambamurthy, V. (2026). Information & Management Can only managers enact formal control? The role of team-managed formal control in agile project success. *Information & Management*, 63(6), 104386. <https://doi.org/10.1016/j.im.2026.104386>
- Virnandes, S. R., Shen, J., Vlahu-gjorgievska, E., Virnandes, R., Shen, J., & Vlahu-gjorgievska, E. (2024). ScienceDirect ScienceDirect Building public trust through digital government transformation: A Building public trust through digital government transformation: qualitative study of Indonesian civil service agency qualitative study of Indonesian civil service agency. *Procedia Computer Science*, 234, 1183–1191. <https://doi.org/10.1016/j.procs.2024.03.114>
- Wahyuningtyas, R., Candra, A., Suyanto, S., & Rismayani, R. (2026). Asia Pacific Management Review Agile machine learning-based workload analysis in a telecommunication company. *Asia Pacific Management Review*, 31(2), 100430. <https://doi.org/10.1016/j.apmr.2026.100430>
- Wu, Z., Si, G., Ai, Y., Gu, R., & Yang, D. (2026). Confucian culture and corporate digital leadership. *International Review of Economics and Finance*, 106(November 2025), 104822. <https://doi.org/10.1016/j.iref.2025.104822>
- Arifai, M., Haris, A., Yasir, Y., & Kurra, S. D. (2022). *Influence Leadership , Competence and Motivation To Performance Employee Service Health Regency Bay Bintuni West Papua Province*. 9(2), 305–310.
- Arshad, R., Duraipandi, O., & Ullah, M. (2026). *Agile project management for economic sustainability: A time-lagged mediation model of strategic agility and agile leadership among software professionals*. 11(July 2025).
- Aversa, P., Cozzolino, A., & Basil, A. (2026). Business model innovation pathways : Digital transformation after disruption at The New York Times and The Washington Post. *Research Policy*, 55(8), 105536. <https://doi.org/10.1016/j.respol.2026.105536>
- Burtscher, M., & Piano, S. (n.d.). *Developing skills for digital government: A review of good practices across OECD governments*. 303.
- Cubillas-para, C., Cegarra-navarro, J. G., & Tomaseti-solano, E. (2026). *International Journal of Hospitality Management Building agile hotels in the digital era: The role of digital transformation and renewal capabilities*. 139(April).
- District, C., & Figures, I. N. (2024). *Kecamatan ciomas dalam angka*. 16.
- Jahan, S., Albishri, N., Galgotia, A., & Papa, A. (2026). Technovation 3D printing technologies and innovation performance . An agile manufacturing theory perspective. *Technovation*, 149(April 2025), 103347. <https://doi.org/10.1016/j.technovation.2025.103347>
- Khan, A. N., Wang, Y., Khan, N. A., & Ahmad, A. (2025). *Digital Leadership Enhances Employee Empowerment , Techno-work Engagement , and Sustainability: SEM Analysis in Public Healthcare*. <https://doi.org/10.1177/00469580251317653>
- Kucharska, W., & Kucharski, M. (2026). *International Journal of Information Agile culture , collective human intelligence and AI adoption : Gender and sectoral perspectives on augmented intelligence in Europe*. 6(April).
- Pengantar, K. (n.d.). No Title.
- Sa, U., Laili, U., Rochimah, S., Bagus, M., & Rasyid, A. (2026). Bridging the skills gap through Agile methodologies in Vocational Software Development Education. *Array*, 29(April 2025), 100614. <https://doi.org/10.1016/j.array.2025.100614>
- Tiong, P., Sumaryo, P., Aisyah, S., & Simamora, P. (2024). *The Influence of Digital Competency , Employee Engagement , and Leadership Style on SME Employee Performance in Indonesia : Innovation Capability as A Mediator and Organizational Culture as A Moderator in the Society* 5. 0 Era. 9(2), 43–55. <https://doi.org/10.14203/STIPM.2024.405>
- Tripp, J., & Sambamurthy, V. (2026). Information & Management Can only managers enact formal control? The role of team-managed formal control in agile project success.

- Information & Management*, 63(6), 104386. <https://doi.org/10.1016/j.im.2026.104386>
- Virnandes, S. R., Shen, J., Vlahu-gjorgievska, E., Virnandes, R., Shen, J., & Vlahu-gjorgievska, E. (2024). ScienceDirect ScienceDirect Building public trust through digital government transformation: A Building public trust through digital government transformation: qualitative study of Indonesian civil service agency qualitative study of Indonesian civil service agency. *Procedia Computer Science*, 234, 1183–1191. <https://doi.org/10.1016/j.procs.2024.03.114>
- Wahyuningtyas, R., Candra, A., Suyanto, S., & Rismayani, R. (2026). Asia Pacific Management Review Agile machine learning-based workload analysis in a telecommunication company. *Asia Pacific Management Review*, 31(2), 100430. <https://doi.org/10.1016/j.apmr.2026.100430>
- Wu, Z., Si, G., Ai, Y., Gu, R., & Yang, D. (2026). Confucian culture and corporate digital leadership. *International Review of Economics and Finance*, 106(November 2025), 104822. <https://doi.org/10.1016/j.iref.2025.104822>