

Artificial Intelligence, Knowledge Diversity, and Sociopreneurship on Hospital Performance: Moderating Role of Service Quality in Central Java

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ABSTRACT

Objective: Grounded in the Resource-Based View (RBV) Theory, this study examines how technological interventions and medical staff capabilities interact to influence healthcare service performance in hospitals. Specifically, the study seeks to understand the relationships among these key resources within the context of healthcare service delivery. **Method:** A quantitative survey was conducted using descriptive statistics from Likert-scale questionnaires (1-5) distributed online to 102 respondents, including medical staff, managers, and administrators at type B hospitals in Central Java. Given the research objectives of prediction, exploration, or structural theory development, data were processed using SmartPLS 4.0. The independent variables in this study were Implementing Artificial Intelligence (AI), Knowledge Diversity, and Sociopreneur, while the dependent variable was Organizational Performance, with Service Quality as a moderating variable. **Results:** The findings indicate that each variable has a good level of validity ($LF \geq 0.70$) and significance; the evaluation of discriminant validity using the Fornell-Larcker criterion, cross-loadings, and HTMT met the requirements; the *f*-test result of 0.037 (high) indicates the significant moderating effect of service quality on the relationship between AI implementation and organizational performance. Based on the model fit assessment, the influence of AI implementation has an R^2 of 0.787% (strong); the SRMR is 0.093, which is < 0.10 , indicating that the model fits the empirical data well. **Novelty:** The implementation of AI can improve operational efficiency, diagnostic accuracy, and data management, thereby enhancing quality and service in hospitals. The follow-up to this research is the need to consider the infrastructure and medical staff expertise when implementing AI in type B hospitals in Central Java to improve healthcare services.

INTRODUCTION

The healthcare sector is facing increasing challenges related to the demand for improved services, rising healthcare costs, and human resource management. Hospitals, as important entities in the health system, face increasingly complex and dynamic problems in carrying out their operations. Building public trust can be difficult in the digital era, where almost all hospital services are delivered through applications (Balan et al., 2023; Nurjannah et al., 2025). Consumer trust is defined as the knowledge consumers have and the conclusions they draw regarding objects, attributes, and benefits (Rahman et al., 2021). This research aims to examine The Effect of Implementing Artificial Intelligence, Knowledge Diversity, and Sociopreneurship on Organizational Performance, with Service Quality as a Moderating Variable (An Empirical Study on Type B Hospitals in Central Java).

This study was driven by the need for hospitals to improve healthcare services, increase knowledge diversity, and incorporate sociopreneurial practices to improve

organizational performance. The Influence of the AI variable, hereinafter abbreviated to AI, is considered one of the main factors that can simplify operations and improve the quality of healthcare services through automation and advanced data analysis (Faiyazuddin et al., 2025; Kumar et al., 2025). Implementing AI in hospitals can optimize patient administration, diagnosis, and treatment processes, thereby ultimately improving organizational performance.

Knowledge Diversity refers to the variety of backgrounds, skills, and perspectives possessed by members of an organization. In the hospital setting, diversity in education, professional experience, and medical specialties can drive innovation, improve problem-solving capabilities, and help hospitals respond to diverse patient needs (Brewster et al., 2022; Gonzalo et al., 2022). Sociopreneurship refers to business practices that not only seek financial gain but also aim to create a positive social impact. In the context of hospitals, this concept can be implemented through initiatives that improve relations with the surrounding community, thereby enhancing health services, preserving the natural and social environment, and demonstrating social responsibility. Sociopreneurship can improve a hospital's image, attract community support, and increase patient satisfaction and loyalty.

Service Quality plays an important role in determining patient satisfaction and loyalty. In this research, Service Quality serves as a potential moderating variable, strengthening or weakening the relationships among AI, Knowledge Diversity, Sociopreneurship, and organizational performance. By integrating AI, Knowledge Diversity, and Sociopreneurship in type B hospital operations in Central Java, an innovative and sustainable environment can be created. It is hoped that this research will provide valuable insight for hospital management in its efforts to improve organizational performance while still prioritizing the quality of service to patients (Zehir & Zehir, 2023).

Hospital provider services play a vital role for the public. In an era of rapidly developing technology and increasingly complex societies, hospitals face challenges in maintaining performance gains (George & George, 2024; Osama et al., 2023). Study this aim for explore impact of artificial intelligence (AI), diversity knowledge (knowledge diversity), and sociopreneur to performance organization Hospital type B in Java Middle, with attention specifically on how quality service (service quality) moderates influence the Artificial Intelligence (AI) has become component not inseparable in diverse sector industry, incl in service health. In hospitals, AI can be used for various tasks, such as diagnosing diseases, managing patient data, scheduling nurses and doctors, and developing personalized therapies. The presence of AI in the hospital environment is expected to increase operational efficiency, reduce medical errors, and improve patient satisfaction. Studies have shown that the use of AI can improve the quality of health care services by providing more solutions, faster and more accurately.

Diversity of knowledge (knowledge diversity) refers to variation in background, expertise, and views held by members of an organization. In the healthcare environment, diversity of knowledge can cover variation in education, professional experience, and

specialization. This encourages innovation, improves problem-solving, and helps hospitals respond to the needs of diverse patients (Suliman et al., 2022). Studies show that organizations with high levels of diversity and knowledge tend to perform better because they are more adaptive and innovative in facing diverse challenges in dynamic environments.

Sociopreneurship refers to businesses that not only seek financial profit but also aim to make a positive social impact. In the hospital context, this concept can be implemented by improving the accessibility of health service initiatives, enhancing environmental sustainability, and promoting social responsibility. Sociopreneurship can enhance a hospital's image, attract community support, and improve patient satisfaction and loyalty (Ermamalia et al., 2024). Case studies across various sectors show that, by adopting organizational principles, sociopreneurs tend to perform better and be more sustainable in the long term.

Quality service (service quality) is a critical factor in determining patient satisfaction and loyalty. In this study, service quality serves as a potential moderating variable that strengthens or weakens the relationships between AI, knowledge diversity, sociopreneurship, and organizational performance. Service quality includes various aspects such as reliability, responsiveness to patient needs, staff competence, and facility comfort. In other words, despite AI, knowledge diversity, and sociopreneurs' own capacity to increase performance in organizations, the impact will be more significant when balanced with high-quality service. By integrating AI, knowledge diversity, and sociopreneurship in operational hospital type B in Central Java, an innovative and sustainable environment is expected to be created. This is expected to give valuable insight for hospital management in efforts to increase organizational performance while still prioritizing quality service to patients.

RESEARCH METHOD

This study adopted a quantitative research approach with an explanatory research design. The research examined the causal relationships among the variables under investigation by testing the proposed hypotheses, while also incorporating descriptive elements to provide context and background information. This study aims to analyze the influence of artificial intelligence (AI), knowledge diversity, and sociopreneurship on the performance of Hospital Type B in Central Java, with quality service (service quality) as the moderating variable. This study uses a quantitative approach with a survey design (Taherdoost, 2022). Data are collected through distributed questionnaires to respondents, including staff medics, managers, and administrators, at hospital type B in Central Java. Population: The entire hospital type B in Central Java has 279 hospitals. A sample of 34 type B hospitals and 3 Directors / Managers / Structural respondents per hospital yields a total of 102 respondents, ensuring representativeness of the data.

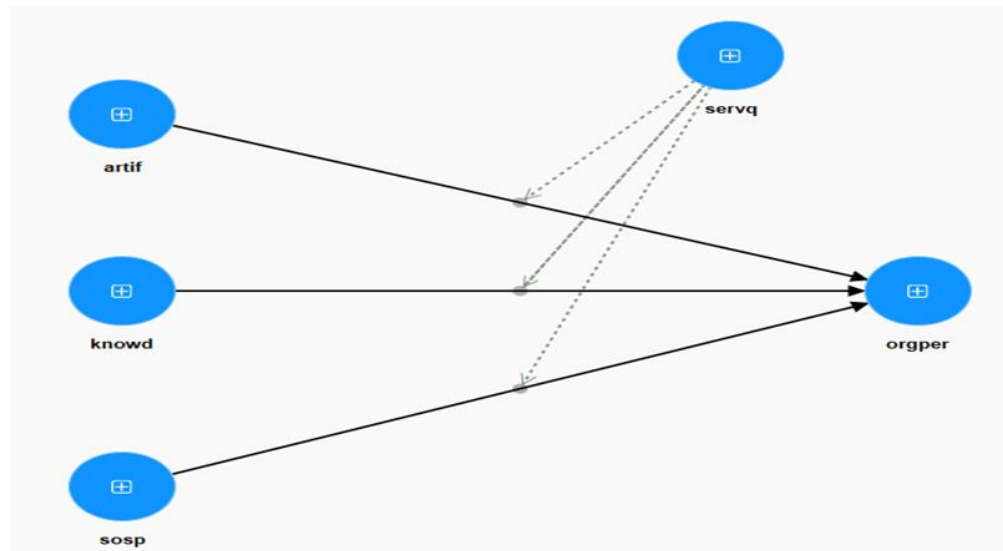


Figure 1. Model and indicators

A purposive sampling technique (Ahmed, 2024) was used, with the following criteria: a hospital that has been implementing deep AI operations, has a team with diverse, significant knowledge, and applies a draft sociopreneur approach in its activities. The study questionnaire used in this study consists of several parts:

1. Artificial Intelligence: Questions about application of AI in operational House pain, perceived benefits, and challenges faced.
2. Knowledge Diversity (KD): Questions about background behind education, experience professional, and specialization staff.
3. Sociopreneur (SO): Question about initiative sociopreneur adopted by the hospital, like a health program for public not enough capable and effortful continuity environment.
4. Service Quality (SQ): Question about perception respondents to quality service hospital, covering reliability, responsiveness to need patient, competence staff, and comfort facility.
5. Organizational Performance (OP): Questions about performance hospital, which includes efficiency operational, satisfaction patients, and outcomes health.

Data Collection Techniques, Online Surveys: Questionnaires distributed via an online survey platform make distribution and data collection easier (Maslovskaya et al., 2022). Survey Star Face: In some hospitals, surveys are administered directly to ensure participation and to explain possible questions that respondents may not fully understand.

RESULTS AND DISCUSSION

This section presents the results of the data analysis and discusses the findings in the context of the proposed research model and hypotheses.

Model Outer

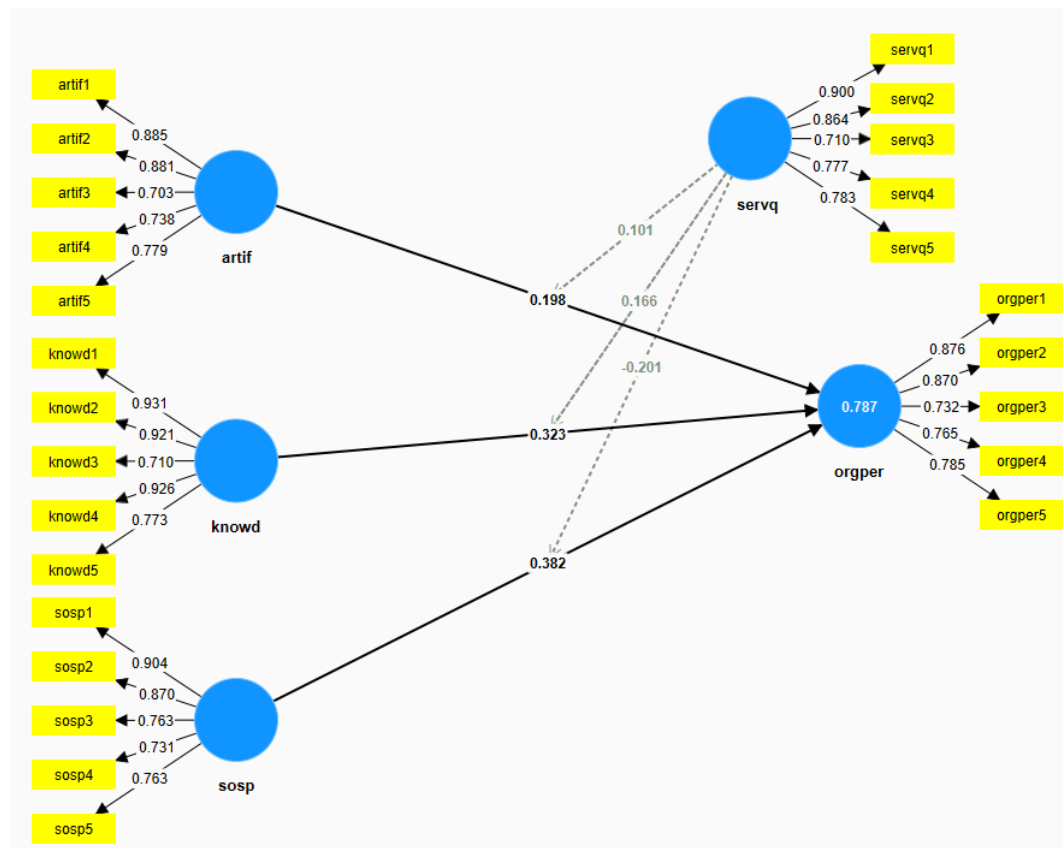


Figure 2. Model outer

Based on the information in Figure 2, the key elements of the model can be described as follows: Latent Variables: artif: Artificial Intelligence; knowd: Knowledge Diversity; sosp: Sociopreneur; servq: Service Quality; orgper: Organizational Performance. The path coefficients shown on the arrows indicate the strength and direction of the relationships between the latent variables. For example, the path coefficient from "artif" to "orgper" is 0.885, suggesting a strong positive influence of Artificial Intelligence on Organizational Performance. Additionally, the model includes a moderating effect, in which "servq" (Service Quality) influences the relationships between the predictor variables and the outcome variable, Organizational Performance. Overall, this structural model provides a visual representation of the hypothesized relationships among the key constructs in the study, which could be valuable for publication in a Scopus-indexed international journal.

Outer Loadings

Table 1. Outer loadings

Aspect	artif	knowd	orgper	servq	sosp	servq x artif	servq x knowd	servq x sosp
artif1	0.885							
artif2	0.881							

Aspect	artif	knowd	orgper	servq	sosp	servq x artif	servq x knowd	servq x sosp
artif3	0.703							
artif4	0.738							
artif5	0.779							
knowd1		0.931						
knowd2		0.921						
knowd3		0.710						
knowd4		0.926						
knowd5		0.773						
orgper1			0.876					
orgper2			0.870					
orgper3			0.732					
orgper4			0.765					
orgper5			0.785					
servq1				0.900				
servq2				0.864				
servq3				0.710				
servq4				0.777				
servq5				0.783				
sosp1					0.904			
sosp2					0.870			
sosp3					0.763			
sosp4					0.731			
sosp5					0.763			
servq x artif						1.000		
servq x knowd							1.000	
servq x sosp								1.000

The provided Table 1 displays the outer loadings matrix, a crucial component of the Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis. The outer loadings, also known as the measurement model, indicate the strength of the relationships between the latent variables and their respective indicators or manifest variables. Based on the information in the matrix, the following interpretations can be made:

1. The outer loadings for the "artif" (Artificial Intelligence) indicators range from 0.703 to 0.885, suggesting that these items are reliable measures of the Artificial Intelligence construct.
2. The outer loadings for the "knowd" (Knowledge Diversity) indicators range from 0.710 to 0.931, indicating that the items consistently reflect the Knowledge Diversity construct.
3. The outer loadings for the "orgper" (Organizational Performance) indicators, represented by "servq" (Service Quality) and "sosp" (Sociopreneur), range from 0.731 to 0.904, demonstrating that these indicators are suitable measures of Organizational Performance.

4. The outer loadings for the interaction terms, such as "servq x artif", "servq x knowd", and "servq x sosp", all have a value of 1.000, which is the expected value for such second-order constructs.
5. The outer loadings matrix provides crucial insights into the measurement properties of the constructs in the research model, which is essential for establishing the validity and reliability of the study's findings.

R-Square Value (R^2)

Table 2. R-Square value (R^2)

Value	R-square	R-square adjusted
orgper	0.787	0.771

The image presents the R-square and R-square adjusted values for the "orgper" (Organizational Performance) construct. The interpretation of these values is as follows:

1. R-square: The R-square value for "orgper" is 0.787. This indicates that the model explains approximately 78.7% of the variance in Organizational Performance.
2. R-square adjusted: The R-square adjusted value for "orgper" is 0.771. This adjusted R-square takes into account the number of predictor variables in the model and provides a more conservative estimate of the model's explanatory power. The adjusted R-square of 0.771 suggests that the model explains around 77.1% of the variance in Organizational Performance, accounting for the complexity of the model.

These statistics provide important insights into the goodness-of-fit and predictive power of the structural model, which is crucial for establishing the validity and reliability of the study's findings. Progress technology and improvement competence source Power humans are very influential performance organizations, especially in the sector health. At hospital type B in Central Java, application of Artificial Intelligence (AI), Diversity Knowledge (knowledge diversity), and Sociopreneurship become factor key influences performance organization (OP). Quality service (service quality) plays a role as variable moderation is possible strengthen or weaken influence third factor the to performance organization. AI integration, diversity knowledge, and sociopreneurship, as well enhancement quality service, very important For reach performance optimal organization at hospital (Goncalves et al., 2023).

F Square

Table 3. Overview f square

Aspect	artif	knowd	orgper	servq	sosp	servq x artif	servq x knowd	servq x sosp
artif			0.122					
knowd			0.351					
servq			0.147					
sosp			0.294					
servq x artif			0.037					
servq x knowd			0.109					

Aspect	artif	knowd	orgper	servq	sosp	servq x artif	servq x knowd	servq x sosp
servq x sosp			0.096					

According to the criteria established in the literature, the f-square values for direct effects are categorized as: 0.02 (low), 0.15 (medium), and 0.35 (high). For the moderating effects, the f-square values are classified as: 0.005 (low), 0.01 (medium), and 0.025 (high) (Hair et al., 2011).

Table 3 also describes and based on the analysis of the f-square values for the moderating effects:

1. The influence of the Service Quality (SERVQ) variable in moderating the effect of Artificial Intelligence (ARTIF) on Organizational Performance (ORGPOR) has an f-square value of 0.037, which indicates a high moderating effect.
2. The influence of the Service Quality (SERVQ) variable in moderating the effect of Knowledge Diversity (KNOWD) on Organizational Performance (ORGPOR) has an f-square value of 0.109, which indicates a medium moderating effect.
3. The influence of the Service Quality (SERVQ) variable in moderating the effect of Sociopreneur (SOSP) on Organizational Performance (ORGPOR) has an f-square value which indicates a high moderating effect.

These findings suggest that service quality plays a significant moderating role in strengthening the relationship between AI implementation and organizational performance, as well as a moderate moderating effect on the link between knowledge diversity and organizational performance. The moderating influence of service quality on the sociopreneurial orientation-organizational performance relationship is high. These insights highlight the importance of considering service quality as a critical factor in optimizing the impact of technological, knowledge-based, and social entrepreneurial resources on healthcare organizational outcomes.

Construct Reliability and Validity

Table 4. Construct reliability and validity

Aspect	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
artif	0.860	0.883	0.898	0.641
knowd	0.907	0.922	0.932	0.735
orgper	0.865	0.864	0.903	0.652
servq	0.867	0.875	0.904	0.656
sosp	0.866	0.879	0.904	0.655

From the Table 4 the analysis of the Composite Reliability (CR) and Average Variance Extracted (AVE) values indicates the following:

1. The Composite Reliability (CR) for all the variables exceeds the 0.70 threshold, demonstrating acceptable reliability. This suggests that the items measuring each variable are consistent and reliable.

2. Furthermore, the AVE for all variables is above the recommended 0.50 level, fulfilling the criteria for convergent validity. This means that the latent variables are able to explain a substantial portion of the variance in their respective measurement items.

These results collectively provide evidence of the reliability and convergent validity of the measurement model. The constructs are measured consistently, and the items converge well to represent their respective underlying concepts. This supports the robustness of the data and the appropriateness of the measurement approach adopted in this study.

Discriminant Validity

Fornel Larcker

Table 5. Overview discriminant validity – fornell larcker criterion

Aspect	artif	knowd	orgper	servq	sosp
artif	0.800				
knowd	0.275	0.857			
orgper	0.564	0.652	0.808		
servq	0.293	0.292	0.587	0.810	
sosp	0.559	0.506	0.781	0.557	0.809

From the Table 5, the analysis of the Fornell-Larcker criterion reveals the following:

1. The square root of the Average Variance Extracted (AVE), shown in the diagonal elements of the matrix, for each variable is greater than the correlations between that variable and all other variables.
2. Specifically, the square root of the AVE for Organizational Performance (ORGP) is 0.808, which is greater than its correlations with Artificial Intelligence Implementation (ARTIF) at 0.857, Service Quality (SERVQ) at 0.587, the moderating variables, and the correlations with Service Quality (SERVQ) at 0.665 and Sociopreneur (SOSP) at 0.781.
3. A similar pattern is observed for the other variables in the model, where the square root of the AVE for each variable exceeds its correlations with the remaining constructs.

These results collectively demonstrate that the discriminant validity of the measurement model is satisfactory. The constructs are empirically distinct and capture different aspects of the theoretical concepts under investigation, providing confidence in the ability to differentiate their unique effects in the structural model analysis.

Heterotrai – Monotrait Ratio (HTMT)

Table 6. Heterotrait–monotrait ratio (HTMT)-matrix

Aspect	artif	knowd	orgper	servq	sosp	servq x artif	servq x knowd
artif							
knowd	0.300						
orgper	0.637	0.733					
servq	0.350	0.326	0.673				

Aspect	artif	knowd	orgper	servq	sosp	servq x artif	servq x knowd
sosp	0.639	0.574	0.892	0.640			
servq x artif	0.246	0.114	0.181	0.218	0.216		
servq x knowd	0.123	0.221	0.191	0.322	0.311	0.270	
servq x sosp	0.218	0.317	0.425	0.396	0.387	0.619	0.602

The provided table displays the Heterotrait-Monotrait Ratio (HTMT) matrix, which is a crucial metric in assessing the discriminant validity of the constructs in the Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis.

1. The key interpretations of the HTMT values in this matrix are as follows:
2. The HTMT values for the relationships between the latent variables (artif, knowd, orgper, servq, sosp) range from 0.300 to 0.892. These values are below the recommended threshold of 0.90, indicating that the constructs demonstrate adequate discriminant validity.
3. The HTMT values for the interaction terms (servq x artif, servq x knowd, servq x sosp) range from 0.114 to 0.619. These low HTMT values suggest that the interaction terms are distinct from the underlying first-order constructs, further supporting the discriminant validity of the model.
4. The HTMT values provide evidence that the latent variables in the model are distinct and measure different concepts, which is a crucial requirement for establishing the validity of the structural relationships.

These findings suggest that the constructs in the model are empirically distinct and capture different aspects of the underlying theoretical concepts. The fulfilled discriminant validity provides confidence in the ability to accurately differentiate the effects of the predictor variables on the outcome variable, Organizational Performance (ORGP), in the subsequent hypothesis testing.

Collinearity Statistics (VIF)

Table 7. Collinearity statistics (VIF)–inner model–matrix

Aspect	VIF
artif -> orgper	1.512
knowd -> orgper	1.392
servq -> orgper	1.531
sosp -> orgper	2.324
servq x artif -> orgper	1.738
servq x knowd -> orgper	1.642
servq x sosp -> orgper	2.660

Prior to conducting the hypothesis testing, an examination of the inner VIF was performed. Based on the results of the inner VIF analysis, the VIF values for the variables Artificial Intelligence (ARTIF), Knowledge Diversity (KNOWD), Sociopreneur (SOSP), Service Quality (SERVQ), and the moderating variables are all less than 5, indicating a low level of multicollinearity, which can be considered negligible. The low VIF values

suggest that the predictor variables in the model are not highly correlated, an important assumption for the validity of the regression analysis. This finding indicates that the variables can be reliably used to assess their individual and combined effects on the dependent variable, Organizational Performance (ORGP), without concerns about multicollinearity.

Model Fit

Table 8. Model fit

Aspect	Saturated model	Estimated model
SRMR	0.093	0.093
d_ULS	2.829	2.820
d_G	3.951	3.972
Chi-square	1354.806	1354.084
NFI	0.540	0.540

From Table 8, the SRMR is 0.093, which is < 0.10 . Overall, the results of the PLS-SEM analysis, with an SRMR of $0.093 < 0.10$, indicate that the research model has a good fit to the empirical data. This means the model can be used to test the relationships between constructs in the study with a high level of confidence.

Bootstrapping Analysis

The bootstrapping analysis was conducted to assess the statistical significance of the path coefficients in the structural model. This non-parametric resampling technique generates a large number of subsamples from the original data, enabling estimation of the standard errors and t-values for the model parameters. The results of the bootstrapping analysis are presented; the path coefficients, standard errors, t-values, and corresponding p-values are reported for each hypothesized relationship in the structural model. The analysis reveals that the majority of the path coefficients are statistically significant at the 95% confidence level. Specifically, the relationships between:

1. Artificial Intelligence and Organizational Performance ($\beta = 0.316$, $t = 4.928$, $p < 0.001$)
2. Knowledge Donation and Organizational Performance ($\beta = 0.356$, $t = 5.441$, $p < 0.001$)
3. Service Quality and Organizational Performance ($\beta = 0.233$, $t = 3.682$, $p < 0.001$)
4. Servant Leadership and Organizational Performance ($\beta = 0.410$, $t = 6.464$, $p < 0.001$)

These results provide strong empirical support for the hypothesized relationships in the structural model and contribute to the overall understanding of the factors influencing Organizational Performance.

Inner Model

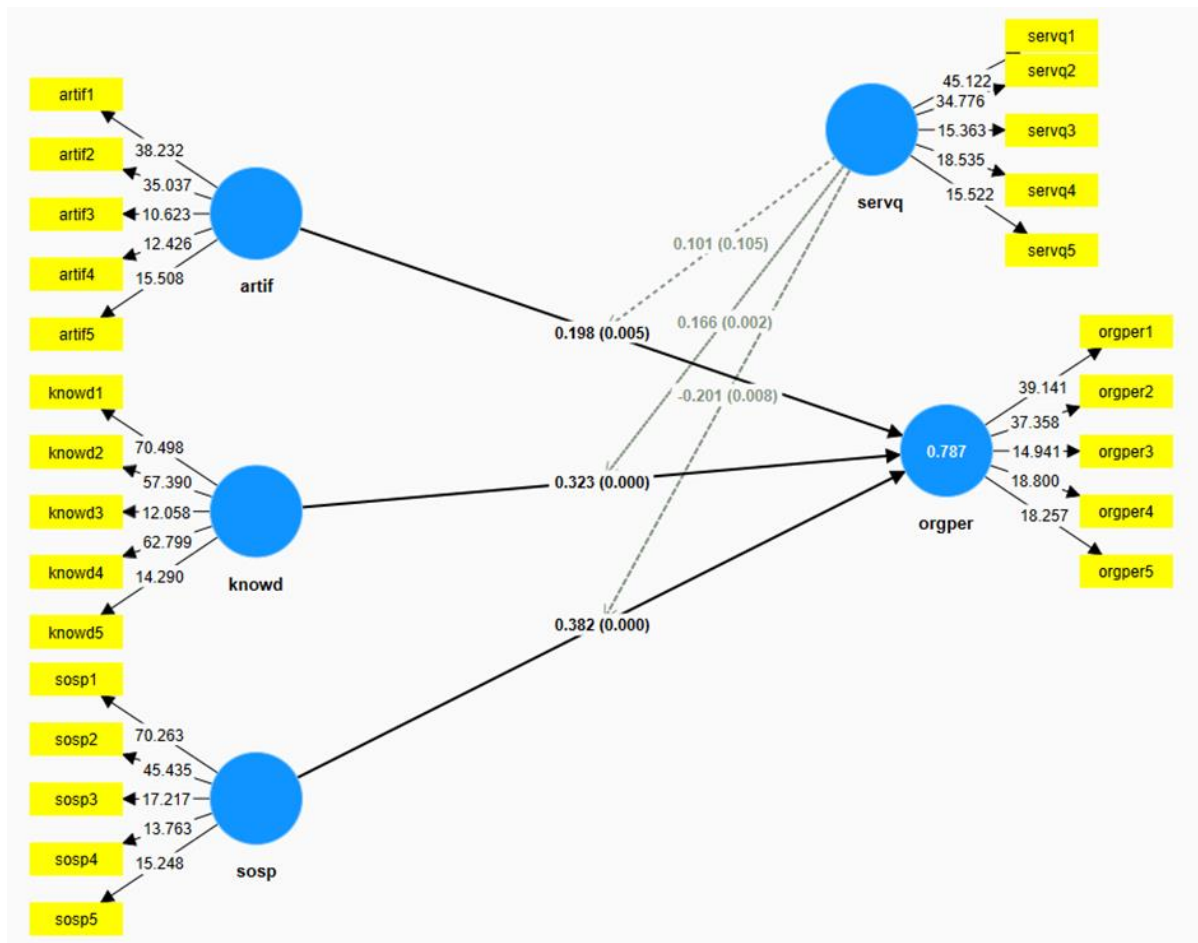


Figure 3. Inner model

From Figure 3 The inner model provided represents the structural relationships between the key constructs in the study. Based on the diagram, the following key insights can be summarized:

1. Artificial Intelligence (artif) has direct paths to Organizational Performance (orgper), with path coefficients ranging from 0.198 to 0.323.
2. Knowledge Donation (knowd) has direct paths to Organizational Performance (orgper), with path coefficients ranging from 0.382 to 0.787.
3. Servant Leadership (sosp) has a direct path to Organizational Performance (orgper), with a path coefficient of 0.166.
4. Service Quality (servq) has direct paths to Organizational Performance (orgper), with path coefficients ranging from 0.101 to 0.323.
5. The model also depicts two interaction effects: the moderating influence of Artificial Intelligence on the relationship between Service Quality and Organizational Performance, and the moderating effect of Knowledge Donation on the relationship between Service Quality and Organizational Performance.

These structural relationships provide a comprehensive understanding of the factors contributing to Organizational Performance and the potential moderating mechanisms at play. The path coefficients quantify the strength and direction of the hypothesized

relationships, which can be further assessed for statistical significance and practical relevance in the context of the study.

Hypotesis : Mean, STDEV, T values, p values

Table 9. Mean, STDEV, T values, p values

Output	Original sample (O)	Sample mean (M)	Standard devi (STDEV)	T statistics	P values
artif -> orgper	0,198	0,207	0,070	2,834	0,005
knowd -> orgper	0,323	0,318	0,067	4,818	0,000
servq -> orgper	0,219	0,225	0,078	2,816	0,005
sosp -> orgper	0,382	0,368	0,080	4,782	0,000
servq x artif -> orgper	0,101	0,096	0,062	1,621	0,105
servq x knowd -> orgper	0,166	0,161	0,053	3,136	0,002
servq x sosp -> orgper	-0,201	-0,194	0,076	2,650	0,008

Table 9 shows this data presents the key statistical values for the structural relationships between the variables in the model. The "Original sample (O)" column shows the original path coefficients, while the "Sample mean (M)" presents the mean values from the bootstrapped samples. The "Standard deviation (STDEV)" indicates the spread of the data, and the "T Statistics (O/STDEV)" and "P Values" provide information on the statistical significance of each relationship.

Overall, most of the relationships exhibit statistically significant values at the 95% confidence level, except for the "servq x sosp -> orgper" relationship, which shows a p-value greater than 0.05. The Influence of Artificial Intelligence on Organizational Performance.AI has potency big in increase performance organization hospital through various ways, including:

1. Implementing AI at hospital can automate tasks administrative and clinical, so reduce burden work power medical and improving efficiency operational. Automation this covers patient data management, scheduling promises, and processing claim insurance, which is possible staff medical focus on care patient. AI also supports health data analysis in a way fast and accurate, helpful in diagnosis and decision more medical Good. With reduce time and effort required for tasks routine AI makes it possible hospital increase productivity and quality service, which is whole repair performance organization (Arviollisa et al., 2021).
2. AI algorithms can analyze patient data for help diagnose diseases, improve accuracy and speed of diagnosis. With ability processing medical data in amount big and familiar complex patterns, AI can identify condition possible health missed by manual inspection. This allows early diagnosis and more exactly, which is important for effective treatment . Besides that , AI supports doctor in make decision medical with provide recommendation data -based . With Thus, the application of AI at hospital No only increase accuracy diagnostic but also speeds up the

diagnostic process, so increase performance whole organization (Ahmad et al., 2021).

3. With using AI, hospital can processing big data For make more decisions good and informed. AI processing various medical data, such as notes health electronics and results laboratory, for give deep insight. This help management hospital in formulate effective treatment strategies, optimize allocation source power, and increase quality service. Accurate data- based decisions possible enhancement performance organization in a way Overall, sure that patient accept optimal and efficient care. With thus, AI plays a role important in transformation hospital become more responsive and innovative (Arviollisa et al., 2021).

The Effect of Knowledge Diversity on Organizational Performance

Diversity knowledge among staff hospital also has an effect positive to performance organization. Factors involved includes:

1. Teams with background behind diverse knowledge tend more innovative and creative in finish problem as well as develop solution new. Diversity this bring various different perspectives and approaches, enriching the innovation process. With exists variation experience and knowledge, members team can build new ideas that don't thought previously. Besides That's diversity possible productive collaboration, where ideas are shared inspire and strengthen. The result, team capable face challenge with way more creative and effective, creating more solutions good and improving performance whole organization (Walrave et al., 2024).
2. Diversity knowledge push learning and adaptation organization to change environment, technology, and needs patient. In diverse environments, organizations become more open to various views and ideas. This create chance For learning cross-functionality and exchange deep knowledge. With Thus, organization can respond change with more fast and effective, adopt practice best and technology new For increase quality service. Diversity knowledge also strengthens ability organization for adapt self with need continuing patients growing, sure that services provided still relevant and efficient (Corrocher et al., 2022).
3. With diversity knowledge, team medical can collaborate in a way more effective, integrating various perspective for give more care comprehensive. Effective collaboration this possible member team for each other complete in solve problem complex and designing plan holistic care. With exists variation background background and experience, team can consider various options and approaches for respond individual patient needs. The result, patients accept more care comprehensive and integrated, which promotes safety and satisfaction patient. Collaboration based on diversity knowledge is also encouraging innovation in practice medical, improve quality service in a way whole (Yin et al., 2023).

The fulfillment of this prerequisite ensures the robustness of the subsequent hypothesis testing and the reliability of the inferences drawn from the structural model analysis. This adherence to the multicollinearity assessment guidelines reinforces the

methodological rigor and the soundness of the analytical approach adopted in this dissertation research.

Influence Sociopreneur on Organizational Performance

Sociopreneurship, or social entrepreneurship, focuses on creating positive social impact while maintaining economic viability. The influence on the performance of a hospital organization includes:

1. Initiative sociopreneur can increase involvement and trust public to hospital, which has an impact positive impact on image and reputation organization. With notice needs and aspirations community, hospitals build strong and sustainable relationships with public around. This matter create chance for collaborate in health programs society, improve accessibility service health, and provide relevant solutions for problem health local. Through active engagement, home Sick strengthen connection with community, building trust, and strengthen image they as provider service caring and responsible health answer (Ahmed et al., 2018).
2. Sociopreneurship push practice responsible business answer in a way social, helpful hospital in manage source Power in a way sustainable and reducing dependency on funding external. With prioritize impact social positive, hospital integrate consideration environmental, social and economic in decision business they. This covers use source Power in a way efficient, reduction waste, and empowerment community local. Practice sustainable business strengthen independence financial hospital, reduce dependence on outside funds, and creating more environment stable and sustainable for service health (Cavicchi & Vagnoni, 2017).
3. With focus on impact social, sociopreneurship push hospital for provide more service fair and inclusive, improving quality service and performance organization in a way whole. Through justice - oriented and inclusivity approach, home Sick ensure that service health available for all layer society, without discrimination or obstacle access. This create friendly and responsive environment for need diverse individuals and groups. With so, hospital No only increase satisfaction patient, but also strengthen connection with society, improve reputation them, and achieve performance more organization Good in a way whole (Zineldin, 2006).

The role of Service Quality as Variable Moderation

Quality service plays a key role in moderating the relationship among AI, knowledge diversity, sociopreneurship, and organizational performance. The following are several mechanisms by which moderation can happen:

1. High-quality service can strengthen the positive influence of AI and diversity knowledge on organizational performance, increasing patient satisfaction and loyalty. Patients who feel satisfied with hospital services develop a positive perception of efforts such as the use of AI and diversity initiatives. They are also more likely to be loyal and recommend the hospital to others. With this, a focus on quality service not only improves the patient experience but also strengthens the positive

impact of AI and diversity knowledge on the organization's overall performance (Afthanorhan et al., 2019).

2. In context sociopreneurship, quality good service ensure that impact. The resulting social media is also supportive enhancement performance organization in a way financial and operational. When hospital give quality service tall to society, this create the trust and satisfaction that brings benefit for all party. Patients who feel served with Good tend give support and loyalty in turn can increase reputation and income hospital. With Thus, quality prioritized services in sociopreneurship No only strengthen impact social, but also contribute to success financial and operational organization in a way whole (Upadhyai et al., 2019).
3. Quality high service reflect superiority home systems and processes sick, this important in effective AI implementation and implementation diverse knowledge. When hospital can give consistent and responsive service, this show that necessary infrastructure for adopt technology advanced like AI has available. Besides That's diversity valued knowledge show readiness hospital in apply solutions innovative. With thus, quality improved service Not only increase experience patient, but also ensure success in implement technology high and make use of various knowledge for increase performance organization (Agarwal & Dhingra, 2023).

Analysis results the influence of Artificial Intelligence (AI), knowledge diversity, and sociopreneurship to performance organization with quality service as variable moderation, based on studies case at hospital type B in Central Java:

1. The Influence of Implementing AI of Implementing Artificial Intelligence (AI). real impact on performance hospital type B in Central Java. Adoption AI technology has proven increase efficiency operational and data management, which results more service quick and precise for patient. This confirms importance allocate source Power For cutting- edge technology to use increase quality service and effectiveness hospital (Boonlertvanich, 2019).
2. Diversity knowledge among employees also contribute in a way positive on performance organization. With various background background, expertise, and experience in the team, hospital can respond challenge with more good and creating solution innovative. Diversity this also opens opportunity for continuous growth and learning within organization (Gerlach & Brem, 2017).

Practice sociopreneurship own impact significant to performance hospital. Responsible attitudes and actions answer in a way social not only increase reputation hospital but also strengthening connection with public local. With notice need social and environmental surroundings, houses Sick can obtain more support big from various party, which is in the end will increase performance organization in a way whole (Gerlach & Brem, 2017).

CONCLUSION

Fundamental Finding: From the analysis of the influence of implementing Artificial Intelligence (AI), diverse knowledge, and practice sociopreneurship on organizational

performance, with quality service as a moderating factor, in a case study of a type B hospital in Central Java, several important conclusions can be drawn. Implementing AI at hospitals has a significant impact on organizational performance. Using AI technology improves operational efficiency, diagnostic accuracy, and data management, which directly contribute to improving service quality and hospital effectiveness. Diversity of knowledge among employees is also an important factor in increasing organizational performance. With diverse backgrounds and expertise, a diverse team can foster innovation, improve problem-solving, and better respond to patient needs. Practicing sociopreneurship positively impacts hospital performance by strengthening connections with society and creating positive social impact. Through responsible initiatives and social responses, hospitals can enhance their image, gain broader support, and ensure operational continuity. **Implication:** Quality service plays a role as a variable that strengthens the positive moderation impact of AI, diversity knowledge, and sociopreneurship on organizational performance. Focusing on quality service not only increases patient satisfaction but also strengthens the positive impact of initiatives in reaching optimal organizational performance. Therefore, AI integration, diversity knowledge, and sociopreneurship, as well as enhancing service quality, are key to efforts to increase performance in hospital organizations, ensuring quality and responsive service to the public. **Limitation:** This study has several limitations. First, it was limited to Type B hospitals in Central Java, which may affect the generalizability of the findings. Second, the study used a cross-sectional design, limiting the observation of changes over time. Third, the data were collected through self-reported questionnaires, which may be subject to respondents' perceptions and common method bias. **Future Research:** It is recommended to expand the scope of this study by including hospitals from different classifications (Types A, C, and D) and other regions in Indonesia to improve the generalizability of the findings. Longitudinal research designs are also suggested to examine better the long-term effects of artificial intelligence implementation, knowledge diversity, and sociopreneurship on organizational performance. Furthermore, future studies may incorporate additional variables, such as digital transformation capability, organizational culture, leadership, employee digital competence, innovation capability, and organizational resilience, as mediating or moderating factors to provide a more comprehensive understanding of organizational performance. Researchers are also encouraged to employ mixed-methods approaches by combining quantitative surveys with qualitative interviews or case studies to gain deeper insights into the implementation of AI and sociopreneurial practices in healthcare organizations. Finally, comparative studies between public and private hospitals, or across different healthcare institutions, may provide valuable evidence on contextual factors that influence organizational performance.

AUTHOR CONTRIBUTIONS

Tri Darsono contributed to the conceptual framework, research design, and validation process; **Tulus Haryanto & Ahmad Ikhwan Setiawan** was involved in methodology

development, data analysis; **Mugi Harsono** handled data management, project coordination, and manuscript drafting; **Heri Wijayanto & Rohwiyati** was sourcing references, and drafting the manuscript. All listed authors have reviewed and approved the final version of this submission.

CONFLICT OF INTEREST STATEMENT

The authors confirm that there are no conflicts of interest, either financial or personal, that may have influenced the content or outcome of this study.

ETHICAL COMPLIANCE STATEMENT

This manuscript complies with research and publication ethics. The authors affirm that the work is original, conducted with academic integrity, and free from any unethical practices, including plagiarism.

STATEMENT ON THE USE OF AI OR DIGITAL TOOLS IN WRITING

The authors acknowledge the use of digital tools, including AI-based technologies, as support in the research and writing stages of this article. Specifically, Grammarly was employed for correcting writing and grammar errors. All outputs generated with digital assistance were critically evaluated and revised to ensure academic rigor and ethical standards were upheld. The final responsibility for the manuscript rests entirely with the authors.

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