

## The Influence of Service Quality, Human Resources, and Regulation on Financial Performance at Pusri Hospital

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| Article Information |                 | Abstract                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| Submission date     | 4 February 2026 | <p><b>Research aim :</b> This study aims to analyze the effect of service quality, human resources, and regulation on the financial performance of Pusri Hospital. Financial performance of a hospital is an important indicator in assessing the effectiveness of organizational management, which is influenced by the quality of services provided, the competence of human resources, and the implementation of applicable regulations</p> <p><b>Design/Method/Approach:</b> The study employs a quantitative approach using primary data collected through questionnaires distributed to 200 respondents consisting of officials within Pusri Hospital and patients. The sampling technique used was purposive sampling. Data analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) to examine the relationships among the research variables.</p> <p><b>Research Finding :</b> The results of the study indicate that service quality, human resources, and regulations do not have a significant direct effect on the financial performance of Pusri Hospital, either partially or simultaneously.</p> <p><b>Theoretical contribution/originally :</b> These findings support the argument that the relationship between service quality, human resources, and regulations on financial performance is indirect and requires intermediary mechanisms to have an impact on financial indicators.</p> <p><b>Pratctitionel/Policy implication :</b> These findings imply that hospital management should prioritize improving employee competencies and service quality to strengthen financial performance.</p> <p><b>Research limitation :</b> with this variable is still carried out in the hospital scope</p> <p><b>Keywords :</b> service quality, human resources, regulation, financial performance, hospital, SEM-PLS</p> |
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### 1. Introduction

Hospitals play a dual role as healthcare institutions and business organizations. They are required to provide high-quality medical services while maintaining stable financial performance to ensure long-term sustainability [1]; [2]. In Indonesia, hospitals are currently facing increasing pressure due to delayed reimbursement claims from BPJS, rising operational costs, and growing patient expectations. These conditions have made hospital financial performance a critical issue because it reflects the institution's ability to sustain operations and continuously deliver healthcare services [1] [3].

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Financial performance in hospitals is no longer assessed only through profitability and revenue growth, but also through cost efficiency, service quality, and operational sustainability. According to the Balanced Scorecard perspective, financial performance is the final outcome of all organizational activities, including internal processes, learning, and customer satisfaction [4]. Therefore, improving service quality and strengthening human resources are expected to positively influence hospital financial outcomes.

The case of Pusri Hospital reflects these challenges. Data from the Ministry of Health indicate that the average number of outpatient visits at Pusri Hospital decreased from 6,541 patients per month in 2023 to 6,386 patients in 2024 and further declined to 5,355 patients in 2025. This decline in patient visits was followed by a decrease in gross profit from IDR 17.97 billion in 2023 to IDR 16.85 billion in 2024. These conditions indicate that the financial performance of Pusri Hospital remains vulnerable and may be related to service quality, employee competence, and regulatory pressures (Kementerian Kesehatan Republik Indonesia, 2024; RS Pusri Palembang, 2025).

Service quality is considered one of the most important determinants of hospital performance because patients tend to revisit hospitals that provide responsive, reliable, and empathetic services. According to the SERVQUAL model, service quality consists of five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. These dimensions influence patient satisfaction and loyalty, which eventually contribute to hospital revenue and financial sustainability [5] [6]. Several previous studies have found that service quality significantly influences hospital financial performance. Hospitals that consistently provide better service quality are more likely to increase patient loyalty, improve reputation, and strengthen revenue generation [7] [8].

Human resources also represent a strategic factor in hospital performance. Competent employees, effective training, and high work discipline can improve productivity, reduce service errors, and increase operational efficiency. Hospitals with strong human resource management generally achieve better service quality and stronger financial performance [9] [10].

Human Capital Theory explains that employees are valuable organizational assets whose competence, education, and training directly contribute to organizational performance (Becker, 1964). In hospitals, competent employees are able to improve service quality, reduce operational errors, and strengthen financial sustainability through higher efficiency and productivity [11] [12].

In addition, hospitals must comply with various regulations concerning accreditation, patient safety, financial reporting, and BPJS administration. Regulations are intended to improve governance and accountability, but they may also increase administrative burdens and operational costs [13] [14]. Previous studies have shown inconsistent findings regarding the influence of regulation on hospital financial performance. Some researchers argue that regulation improves efficiency and accountability, while others suggest that it reduces managerial flexibility and increases operational costs. Consequently, the effect of regulation on financial performance remains debatable [15] [16]. Based on these issues, this study

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investigates the influence of service quality, human resources, and regulation on the financial performance of Pusri Hospital.

### **1.1. Statement of Problem**

Several important phenomena support this study:

1. Hospitals in Indonesia continue to experience financial pressure due to delayed reimbursement claims and the imbalance between service costs and BPJS tariffs.
2. Increasing patient expectations require hospitals to improve service quality continuously.
3. Many hospitals still face limitations in employee competence, workload imbalance, and shortages of qualified personnel.
4. The implementation of new regulations and accreditation standards often increases the administrative and operational burden of hospitals.
5. Pusri Hospital has attempted to improve service quality and employee competence, but its financial performance still needs to be strengthened.

These phenomena indicate that hospital financial performance is influenced not only by external conditions but also by the quality of internal management.

### **1.2. Research Objectives**

Previous studies have generally examined the relationship between service quality and hospital performance or between human resources and organizational performance separately. Few studies simultaneously analyze service quality, human resources, and regulation in relation to hospital financial performance. Moreover, previous findings regarding the effect of regulation are still inconsistent. Some studies suggest that regulation improves hospital accountability and performance, while others indicate that regulation increases operational costs and reduces financial flexibility.

Based on the background and research gap, the research questions are:

1. Does service quality significantly influence financial performance at Pusri Hospital?
2. Do human resources significantly influence financial performance at Pusri Hospital?
3. Does regulation significantly influence financial performance at Pusri Hospital?

## **2. Method**

This study employed a quantitative approach. The research was conducted at Pusri Hospital, a private hospital located in Palembang, Indonesia. The population consisted of hospital employees and managers involved in healthcare services, financial management, and hospital administration. A purposive sampling technique was used to select respondents who understood hospital operations and financial performance.

The study involved 100 respondents, consisting of managers, financial staff, administrative personnel, and healthcare workers. Data were collected through a structured questionnaire using a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. The questionnaire measured four variables: service quality, human resources, regulation, and financial performance.

Service quality was measured through indicators such as reliability, responsiveness, speed of service, and patient satisfaction. Human resources were measured using employee competence, discipline, professionalism, training, and productivity. Regulation was measured through compliance with healthcare standards, clarity of rules, and the administrative burden of regulation. Financial performance was measured using revenue growth, cost efficiency, liquidity, and financial sustainability [14].

The collected data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) through SmartPLS software. The analysis included outer model evaluation, reliability and validity testing, inner model evaluation, and hypothesis testing using path coefficients, t-statistics, and p-values [3].

### 3. Results and Discussion

#### 3.1. Result

Pusri Hospital Palembang is a healthcare facility that plays a role in providing medical services to the residents of Palembang City and its surrounding areas. The hospital delivers comprehensive healthcare services, including outpatient care, inpatient care, emergency services, and medical and non-medical support services, all in accordance with patient care and safety standards.

The descriptive statistical analysis conducted in this study includes a frequency distribution analysis to describe the characteristics of respondents based on gender and patients/patient families for the patient questionnaire. For the employee questionnaire, the analysis covers position and work unit.

Table 1. presents the gender distribution of the respondents. Of the total 100 respondents, 60 respondents (60%) were women, while 40 respondents (40%) were men. These results indicate that female respondents represented the majority of the sample.

**Table 1. Characteristics of Patient Respondents Based on Gender**

| Gender       | Frekuensi (F) | Persentase (%) |
|--------------|---------------|----------------|
| Man          | 40            | 40%            |
| Women        | 60            | 60%            |
| <b>Total</b> | <b>180</b>    | <b>100%</b>    |

**Source:** Data processed by the researcher, 2026

**Table 2. Characteristics of Respondents Based on Status**

| Status           | Frekuensi (F) | Persentase (%) |
|------------------|---------------|----------------|
| Patient          | 70            | 70%            |
| Patient's Family | 30            | 30%            |
| <b>Total</b>     | <b>180</b>    | <b>100%</b>    |

**Source:** Data processed by the researcher, 2026

Table 2 shows the respondent status distribution in this study. Out of 100 respondents, 70 respondents (70%) were patients, while 30 respondents (30%) were patients' family members. This indicates that most of the respondents were patients, suggesting that the study findings mainly reflect the direct experiences and perceptions of hospital service users.

**Table 3. Characteristics of Respondents Based on Position**

| Position                          | Frekuensi (F) | Persentase (%) |
|-----------------------------------|---------------|----------------|
| Director                          | 5             | 5%             |
| Head of Division/Section          | 15            | 15%            |
| Head of Subsection/Supervisor     | 10            | 10%            |
| Head of Affairs/Junior Supervisor | 15            | 15%            |
| Committee Chair                   | 5             | 5%             |
| Staff                             | 50            | 50%            |
| <b>Total</b>                      | <b>100</b>    | <b>100%</b>    |

**Source:** Data processed by the researcher, 2026

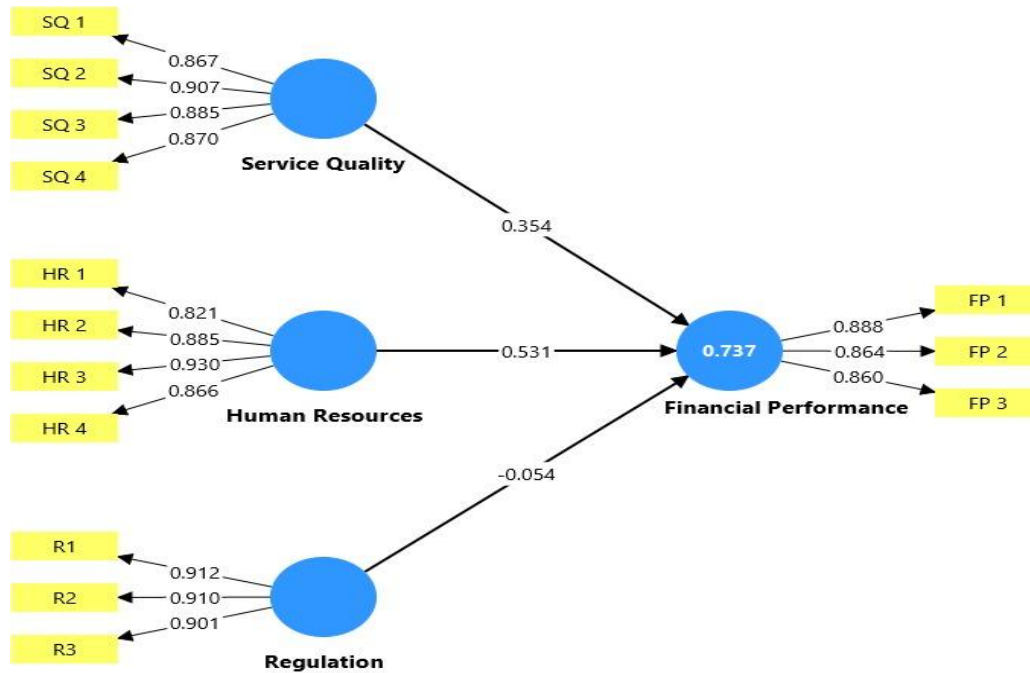
Table 3 presents the position distribution of the respondents. Of the 100 respondents, 50 respondents (50%) were staff members, representing the largest group in the study. This was followed by 15 respondents (15%) who served as Head of Division/Section and another 15 respondents (15%) as Head of Affairs/Junior Supervisor. In addition, 10 respondents (10%) held the position of Head of Subsection/Supervisor, while 5 respondents (5%) were Directors and 5 respondents (5%) were Committee Chairs. These results indicate that the majority of respondents were operational staff, while managerial and leadership positions were also represented in the sample.

### Statistical Data Analysis Results

The measurement test (outer model) aims to assess the validity and reliability of the research model. In this study, the outer model uses reflective indicators. The evaluation of the outer model is conducted through tests of convergent validity, discriminant validity, and reliability, which is measured using composite reliability and Cronbach's alpha.

## Outer Loading Test (Measurement Model)

Figure 1. Outer Model



Source: Processed data from SmartPLS 4, 2026

Figure 1 illustrates the structural model results of the SEM-PLS analysis. The model shows that Service Quality has a positive and significant effect on Financial Performance, with a path coefficient of 0.354. This indicates that improvements in service quality contribute to better financial performance of the hospital.

Human Resources has the strongest positive effect on Financial Performance, with a path coefficient of 0.531. This result suggests that employee competence, professionalism, and work performance are the most influential factors in improving the hospital's financial performance.

Meanwhile, Regulation has a negative and insignificant effect on Financial Performance, with a path coefficient of -0.054. This finding indicates that regulatory factors do not directly contribute to improving financial performance and may instead create additional administrative burdens.

The coefficient of determination ( $R^2$ ) for Financial Performance is 0.737, which means that 73.7% of the variation in Financial Performance can be explained by Service Quality, Human Resources, and Regulation, while the remaining 26.3% is explained by other variables outside the model.

In addition, all indicator loading values are above 0.70, indicating that the indicators used to measure each construct are valid and reliable. For Service Quality, the loading values range from 0.867 to 0.907. For Human Resources, the loading values range from 0.821 to 0.930. For

Regulation, the loading values range from 0.901 to 0.912. Finally, the Financial Performance indicators have loading values between 0.860 and 0.888, demonstrating good convergent validity of the measurement model.

### Convergent Validity Results

**Table 4 Construct Reliability And Validity**

|                                  | <b>Cronbach's<br/>alpha</b> | <b>Composite<br/>reliability<br/>(rho_a)</b> | <b>Composite<br/>reliability<br/>(rho_c)</b> | <b>Average<br/>variance<br/>extracted<br/>(AVE)</b> |
|----------------------------------|-----------------------------|----------------------------------------------|----------------------------------------------|-----------------------------------------------------|
| <b>Financial<br/>Performance</b> | 0.841                       | 0.841                                        | 0.904                                        | 0.758                                               |
| <b>Human<br/>Resources</b>       | 0.899                       | 0.909                                        | 0.930                                        | 0.768                                               |
| <b>Regulation</b>                | 0.895                       | 0.916                                        | 0.934                                        | 0.824                                               |
| <b>Service Quality</b>           | 0.905                       | 0.910                                        | 0.934                                        | 0.779                                               |

**Source:** Data processed by the researcher, 2026

Table 4 presents the results of the construct reliability and validity test for all research variables. The results indicate that all constructs meet the recommended criteria for reliability and convergent validity in SEM-PLS analysis. The Cronbach's Alpha values for Financial Performance (0.841), Human Resources (0.899), Regulation (0.895), and Service Quality (0.905) are all above the minimum threshold of 0.70. This indicates that the indicators used in each construct are internally consistent and reliable

Furthermore, the Average Variance Extracted (AVE) values for all variables are above 0.50, namely Financial Performance (0.758), Human Resources (0.768), Regulation (0.824), and Service Quality (0.779). These results demonstrate that each construct explains more than 50% of the variance of its indicators, indicating good convergent validity.

Among the variables, Regulation has the highest AVE value (0.824), which means that its indicators provide the strongest representation of the construct. Overall, these findings confirm that the measurement model used in this study on "The Influence of Service Quality, Human Resources, and Regulation on Financial Performance at Pusri Hospital" is valid and reliable, so it is appropriate to proceed with the structural model and hypothesis testing.

**Table 5: Discriminant Validity- Fornell Lacker Criterion**

|                       | Financial Performance | Human Resources | Regulation | Service Quality |
|-----------------------|-----------------------|-----------------|------------|-----------------|
| Financial Performance | 0.871                 |                 |            |                 |
| Human Resources       | 0.830                 | 0.876           |            |                 |
| Regulation            | 0.759                 | 0.732           | 0.908      |                 |
| Service Quality       | 0.796                 | 0.809           | -0.231     | 0.882           |

**Source:** Data processed by the researcher, 2026

The results show that all constructs satisfy this requirement, indicating good discriminant validity. Overall, the Fornell–Larcker results confirm that all constructs in this study have satisfactory discriminant validity. Thus, the variables of Service Quality, Human Resources, Regulation, and Financial Performance are sufficiently different from one another and can be used reliably in the structural model analysis for the study entitled “The Influence of Service Quality, Human Resources, and Regulation on Financial Performance at Pusri Hospital.”

### R-Square Test Results

The structural model R-square ( $R^2$ ) in SEM-PLS analysis is the coefficient of determination for endogenous constructs, used to assess the structural model’s ability to explain the dependent variable. The R-square value indicates the extent to which exogenous latent variables explain the endogenous latent variable, and can be used to evaluate the predictive strength of the model (Hair et al., 2014).

**Table 6 R-Square Test**

|                       | R-square | R-square adjusted |
|-----------------------|----------|-------------------|
| Financial Performance | 0.737    | 0.728             |

Source:Processed data from SmartPLS 4, 2026

Table 6 presents the coefficient of determination (R-square) for the dependent variable, namely Financial Performance. The R-square value is 0.737, while the adjusted R-square value is 0.728. This means that Service Quality, Human Resources, and Regulation jointly explain 73.7% of the variance in Financial Performance, whereas the remaining 26.3% is influenced by other variables not included in this study.

### Hypothesis

Table 7 presents the results of the path coefficient analysis for the influence of Service Quality, Human Resources, and Regulation on Financial Performance at Pusri Hospital. The significance of each relationship is determined based on the t-statistic value greater than 1.96 and the p-value less than 0.05.

The effect of Human Resources on Financial Performance has an original sample coefficient of 0.531, a t-statistic of 5.617, and a p-value of 0.000. Since the t-statistic is greater than 1.96 and the p-value is below 0.05, Human Resources has a positive and significant effect on Financial Performance. This result indicates that better employee competence, professionalism, discipline, and training contribute significantly to improving the hospital's financial performance. In addition, Human Resources is the strongest variable in the model because it has the highest path coefficient.

**Tabel 7: Path Coefficient**

|                                          | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics ( O/STDEV ) | P values |
|------------------------------------------|---------------------|-----------------|----------------------------|--------------------------|----------|
| Human Resources -> Financial Performance | 0.531               | 0.539           | 0.095                      | 5.617                    | 0.000    |
| Regulation -> Financial Performance      | -0.054              | -0.057          | 0.039                      | 1.376                    | 0.169    |
| Service Quality -> Financial Performance | 0.354               | 0.350           | 0.100                      | 3.549                    | 0.000    |

**Source:** Processed data from SmartPLS 4, 2026

## Discussion

### 1. The Effect of Human Resources on the Financial Performance of Pusri Hospital.

The first hypothesis states that Human Resources have a positive effect on Financial Performance at Pusri Hospital [17] [18]. The results of the SEM-PLS analysis show that the path coefficient between Human Resources and Financial Performance is 0.531, with a t-statistic of 5.617 and a p-value of 0.000 [3]. Since the t-statistic is greater than 1.96 and the p-value is less than 0.05, the first hypothesis is accepted [8]. This indicates that Human Resources have a positive and significant effect on Financial Performance [19] [20]

The positive coefficient of 0.531 indicates that an improvement in the quality of human resources, such as employee competence, discipline, professionalism, productivity, and training, will significantly improve the financial performance of Pusri Hospital [5].

Human Resources also become the strongest variable influencing Financial Performance because they have the highest path coefficient compared to the other independent variables [7]. This finding can be explained by Human Capital Theory, which states that employees are valuable organizational assets whose competence and skills contribute directly to organizational performance (Becker, 1964). In hospitals, competent and professional employees are able to improve service quality, reduce operational errors, increase productivity, and improve cost efficiency [12]. As a result, the hospital can strengthen its financial performance through higher revenue and lower operational costs [16]

The result of this study is consistent with previous research showing that effective human resource management contributes significantly to hospital financial performance [13]. Well-

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trained employees improve work efficiency, reduce medical and administrative errors, and support better service quality, which eventually increases patient satisfaction and hospital revenue [8]

## **2. The Effect of Regulation on the Financial Performance of Pusri Hospital.**

The third hypothesis states that Regulation has an effect on Financial Performance at Pusri Hospital. However, the SEM-PLS analysis shows that the path coefficient between Regulation and Financial Performance is -0.054, with a t-statistic of 1.376 and a p-value of 0.169. Because the t-statistic is lower than 1.96 and the p-value is greater than 0.05, the hypothesis is rejected. This indicates that Regulation does not have a significant effect on Financial Performance.

The negative coefficient (-0.054) suggests that stricter or more complex regulations tend to reduce financial performance, although the effect is very weak and statistically insignificant. This means that compliance with regulations related to accreditation, patient safety, BPJS administration, and financial reporting does not directly increase the financial performance of Pusri Hospital.

This finding may occur because regulatory compliance often creates additional administrative burdens, increases operational costs, and reduces managerial flexibility. Hospitals are required to allocate more resources to documentation, reporting, accreditation, and compliance activities, which may not immediately contribute to revenue generation or cost efficiency. Consequently, although regulations are necessary to ensure accountability and service quality, they do not always provide direct financial benefits. From the perspective of Institutional Theory, organizations comply with regulations primarily to gain legitimacy and maintain public trust rather than to improve financial outcomes. Therefore, hospitals may follow regulations to avoid sanctions and maintain accreditation, even if such compliance does not significantly improve financial performance.

This result is also consistent with several previous studies showing that regulation does not always have a significant influence on financial performance. Some studies found that regulation may improve accountability and governance, but at the same time it can increase administrative complexity and operational expenses, which offset its potential benefits.

## **3. The Effect of Service Quality on the Financial Performance of Pusri Hospital.**

The second hypothesis states that Service Quality has a positive effect on Financial Performance at Pusri Hospital. The SEM-PLS analysis results show that the path coefficient between Service Quality and Financial Performance is 0.354, with a t-statistic of 3.549 and a p-value of 0.000. Since the t-statistic is greater than 1.96 and the p-value is less than 0.05, the hypothesis is accepted. This indicates that Service Quality has a positive and significant effect on Financial Performance.

The positive coefficient of 0.354 indicates that improvements in service quality, such as reliability, responsiveness, assurance, empathy, and tangibles, significantly contribute to

improving the financial performance of Pusri Hospital. Better service quality increases patient satisfaction and loyalty, which in turn encourages repeat visits, enhances the hospital's reputation, and ultimately increases revenue.

This finding is consistent with the SERVQUAL theory developed by Parasuraman, Zeithaml, and Berry, which explains that service quality is determined by the extent to which healthcare services meet or exceed patient expectations. Hospitals that provide high-quality services tend to achieve better financial outcomes because satisfied patients are more likely to return and recommend the hospital to others. From the perspective of Resource-Based View (RBV), service quality is also considered a strategic intangible resource that creates competitive advantage. Hospitals that consistently provide better service quality are able to improve operational efficiency, strengthen patient trust, and maintain financial sustainability. In addition, better service quality may reduce patient complaints, shorten waiting time, and minimize operational inefficiencies. Consequently, hospitals can reduce unnecessary costs while simultaneously increasing patient volume and financial performance.

The result of this study is supported by several previous studies showing that service quality significantly influences hospital financial performance. Previous research found that hospitals with higher service quality achieve stronger patient loyalty, higher revenue, and more stable financial conditions.

#### 4. Conclusion and Recommendations

##### Conclusions

In conclusion, this study demonstrates that Service Quality and Human Resources have positive and significant effects on the Financial Performance of Pusri Hospital, while Regulation does not have a significant effect. Human Resources emerged as the most dominant factor influencing Financial Performance, indicating that employee competence, professionalism, discipline, and training are crucial in improving hospital productivity, operational efficiency, and financial sustainability.

Furthermore, Service Quality also contributes significantly to Financial Performance. Improvements in reliability, responsiveness, assurance, empathy, and tangible environmental satisfaction and loyalty, which in turn increase hospital revenue and strengthen financial stability.

On the other hand, Regulation was found to have a negative but insignificant effect on Financial Performance. This finding suggests that although regulations are necessary to ensure accountability, accreditation, and patient safety, they do not directly improve the hospital's financial condition and may instead add additional administrative burdens.

Overall, the findings indicate that internal factors are more important than external factors in determining hospital financial performance. Therefore, Pusri Hospital should prioritize improving the quality of its human resources and healthcare services in order to strengthen its financial performance and maintain long-term sustainability.

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## **Recommendations**

### **Theoretical Implications**

From a theoretical perspective, this study strengthens the application of Human Capital Theory, SERVQUAL Theory, and Institutional Theory in explaining hospital financial performance. The findings confirm that Human Resources and Service Quality are strategic internal factors that significantly influence Financial Performance. Human Resources were found to be the most dominant variable, supporting Human Capital Theory, which states that employee competence, discipline, professionalism, and training are important organizational assets that contribute directly to performance.

In addition, the significant effect of Service Quality supports the SERVQUAL concept developed by Parasuraman, Zeithaml, and Berry, which emphasizes that reliability, responsiveness, assurance, empathy, and tangibles are important dimensions in improving patient satisfaction and hospital financial sustainability.

However, the insignificant effect of Regulation indicates that Institutional Theory may not fully explain hospital financial performance in this context. Regulations appear to function more as a mechanism for legitimacy and compliance rather than as a direct determinant of financial outcomes. Therefore, future studies should consider integrating other theories, such as Resource-Based View (RBV) or Contingency Theory, to better explain how internal and external factors jointly influence hospital financial performance.

### **Academic Recommendations**

Academically, future researchers are encouraged to expand this study by including additional variables that may influence Financial Performance, such as patient satisfaction, organizational culture, technology adoption, leadership style, operational efficiency, innovation, and hospital size. These additional variables may provide a more comprehensive explanation of the factors affecting hospital financial sustainability.

**Finally**, future studies should consider using mixed methods by combining quantitative and qualitative approaches. Interviews with hospital managers, employees, and patients may provide richer insights into why Human Resources and Service Quality have a stronger effect on Financial Performance than Regulation.

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