

The Impact of Employee Satisfaction, Performance, and Resource Management on Financial Performance in Higher Education Institutions

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Abstract:

This study aims to analyze the influence of employee satisfaction, employee performance, and resource management on the financial performance of universities. This study uses a quantitative approach with the Structural Equation Modeling method based on Partial Least Squares (PLS-SEM), which allows the analysis of complex relationships between latent variables. Data was collected through a survey of 143 respondents consisting of employees (Educators and Education Personnel), then analyzed to test the direct influence of each variable on financial performance. The results showed that employee satisfaction ($p = 0.004$) and employee performance ($p = 0.003$) had a significant positive effect on financial performance. In contrast, resource management showed no significant direct influence ($p = 0.352$), although it made a substantial contribution in the structural model ($f^2 = 0.352$). These findings indicate that the human aspect is more dominant in influencing the financial performance of institutions. The implications of these results emphasize the importance of an integrated human resource management strategy, with a focus on improving employee satisfaction, performance, and empowerment to support operational efficiency and financial sustainability in the higher education environment.

Keywords: *Employee Satisfaction, Employee Performance, Resource Management, Financial Performance*

Abstrak:

Penelitian ini bertujuan untuk menganalisis pengaruh kepuasan pegawai, kinerja pegawai, dan pengelolaan sumber daya terhadap kinerja keuangan perguruan tinggi. Penelitian ini menggunakan pendekatan kuantitatif dengan metode Structural Equation Modeling berbasis Partial Least Squares (PLS-SEM), yang memungkinkan analisis hubungan kompleks antar variabel laten. Data dikumpulkan melalui survei kepada 143 responden yang terdiri atas pegawai (Tenaga Pendidik dan Kependidikan), kemudian dianalisis untuk menguji pengaruh langsung masing-masing variabel terhadap kinerja keuangan. Hasil menunjukkan bahwa kepuasan karyawan ($p = 0,004$) dan kinerja pegawai ($p = 0,003$) berpengaruh signifikan positif terhadap kinerja keuangan. Sebaliknya, pengelolaan sumber daya tidak menunjukkan pengaruh langsung yang signifikan ($p = 0,352$), meskipun memberikan kontribusi substansial dalam model struktural ($f^2 = 0,352$). Temuan ini mengindikasikan bahwa aspek manusia lebih dominan dalam memengaruhi performa finansial institusi. Implikasi dari hasil ini menekankan pentingnya strategi manajemen sumber daya manusia yang terintegrasi, dengan fokus pada peningkatan kepuasan, kinerja, dan pemberdayaan pegawai guna mendukung efisiensi operasional dan keberlanjutan keuangan di lingkungan pendidikan tinggi.

Kata Kunci: *Kepuasan Pegawai, Kinerja Pegawai, Pengelolaan Sumber Daya, Kinerja Keuangan*

INTRODUCTION

Higher education institutions require effective resource management to achieve long-term goals, especially financial ones. Poor management of employee performance and job satisfaction can hinder the achievement of these goals (Hasibuan et al., 2024; Latifah et al., 2024; Riyanto et al., 2021). In this study, the term employee refers to both teaching staff (educators) and education personnel (non-teaching staff), as both categories contribute significantly to the operational and financial sustainability of universities. Related research shows that good employee performance contributes to increased organisational productivity (Ángeles López-Cabarcos et al., 2022; Leitão et al., 2021; Niu et al., 2021), while employee satisfaction has a positive impact on service quality and operational efficiency (Al-Gasawneh et al., 2021; Papademetriou et al., 2023; Wu et al., 2024). In addition, inefficient management of human resources can lead to budgetary waste and a decline in the quality of education (Hartanti et al., 2022; Mukwevho et al., 2024; Phrophayak et al., 2024). However, although considerable research has been conducted on human resource management in various sectors, few studies have examined the role of human resource management in universities in relation to financial performance. This research's background is crucial for providing a clearer insight into the relationship between employee performance and university financial performance.

Previous research has shown that job satisfaction has a significant influence on employee performance, which in turn affects the organisation's overall performance. Job satisfaction has been shown to contribute to increasing employee motivation and productivity, which ultimately improves overall organisational performance (Dorta-Afonso et al., 2021; Hoxha et al., 2024; Kosec et al., 2022). Additionally, job satisfaction enhances individual performance and fosters a stronger relationship between employees and the organization, leading to increased effectiveness and efficiency (Cooke et al., 2021; Knies et al., 2024; Lu et al., 2023). On the other hand, effective human resource management is closely related to improving financial performance, particularly in the public sector. Previous related research, used as a reference line, also highlighted the importance of leadership in HR management in driving better financial performance (Aftab et al., 2023; Gahan et al., 2021; Niazi et al., 2023). However, most of these studies focus more on the business and government sectors, while studies on human resource management in universities, especially in Indonesia, are still limited. Therefore, this study aims to fill this gap by examining the context of higher education in Indonesia.

Although many studies confirm the importance of employee performance and job satisfaction to organisational performance, few address this in the context of universities in Indonesia, particularly in terms of their influence on financial

performance. Data show that 60% of universities in Indonesia have not achieved their financial goals, despite various efforts to manage their human resources effectively (Hilton et al., 2023; Lu et al., 2023; Niu et al., 2021). Previous research has focused more on the business sector and government agencies, which have distinct characteristics compared to universities. This creates a significant gap in understanding how effective management of employees and resources can impact financial performance in the higher education sector. Therefore, this study aims to address the questions of how employee performance, employee satisfaction, and resource management impact the financial performance of universities, considering the unique factors specific to this sector.

This research offers novelty by focusing on higher education as an object of study, which remains underexplored in the existing literature. In addition, this study employs a more comprehensive methodological approach by utilizing Smart PLS-based Structural Equation Modeling (SEM) models to analyze the relationships between complex variables. This method enables the direct testing of the influence of employee performance, employee satisfaction, and resource management on financial performance. In contrast to previous studies that employed simpler regression, this approach offers a deeper understanding of the mechanisms underlying the relationships between variables. The research will also introduce a valid and reliable measurement model in the context of higher education, which is expected to make new contributions to human resource management in higher education and more efficient financial management.

This study aims to investigate the impact of employee performance, employee satisfaction, and resource management on the financial performance of universities, with a specific focus on Universitas Muhammadiyah Semarang. This study will investigate the causal relationship between these variables using a quantitative approach and SmartPLS-based Structural Equation Modeling (SEM) analysis techniques. Data will be collected through a questionnaire survey distributed to employees, which will be analyzed to determine the impact of each variable on financial performance. This study will test hypotheses on the direct influence of employee performance, job satisfaction, and resource management on university financial results. It is hoped that this research can provide valuable insights for human resource management policies and better financial management strategies in universities in Indonesia.

RESEARCH METHOD

This research was conducted at Universitas Muhammadiyah Semarang, focusing on the relationship between employee performance, employee satisfaction, resource management, and university financial performance. The university was chosen as the research location because it has a complex organisational structure and is highly relevant to research topics related to resource management and financial performance in higher education. This study employs a quantitative research approach with a survey design to collect large amounts of data from a representative sample of respondents (Cunha et al., 2021; Kuusio et al., 2021; Vis & Stolwijk, 2021). The survey method was chosen because

it effectively identified the relationships between the variables being studied and allowed for in-depth statistical analysis (Al-Tashi et al., 2023; Chomać-Pierzecka, 2023; Qatawneh, 2023).

This study collected data through a questionnaire distributed to employees at Universitas Muhammadiyah Semarang. The research sample was taken using the random sampling method, which ensures that the data collected is representative of the population randomly and free from bias (Baltes & Ralph, 2022; Nurhayati, 2020; Walters, 2021). The questionnaire used in this study consisted of four primary variables: employee performance, employee satisfaction, resource management, and financial performance, with indicators validated in previous studies. A five-point Likert scale was used to measure respondents' perceptions of each statement in the questionnaire, with a score of 1 for "strongly disagree" to 4 for "strongly agree". The data collected includes both numerical and categorical information, which enables researchers to conduct relevant statistical analyses and explore patterns of relationships between variables that impact the financial performance of colleges. This study involved 143 respondents, comprising employees of the Universitas Muhammadiyah Semarang.

The collected data were analysed using the Partial Least Squares-Structural Equation Modelling (PLS-SEM) technique, which was chosen for its ability to handle complex models with latent variables and relatively large sample sizes (Fauzi, 2022; Magno et al., 2024; Tama et al., 2023). This technique enables researchers to investigate the direct and indirect relationships between employee performance variables, employee satisfaction, resource management, and financial performance. The validity and reliability of the model were assessed using outer loading, Average Variance Extracted (AVE), and Composite Reliability (CR) to ensure that all constructs in the model exhibited good measurement quality. Multicollinearity analysis was performed by calculating the Variance Inflation Factor (VIF) to identify potential multicollinearity problems among variables.

RESULT AND DISCUSSION

Result

Measurement Model Description

The measurement model in this study was employed to assess the validity and reliability of the constructs used in the analysis of Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) approach. The constructs tested include employee performance, employee satisfaction, resource management, and college financial performance. The validity of the convergence is tested by looking at the loading factor value of each measured indicator, where the value must be greater than 0.7 for the construct to be considered valid. In addition, the Average Variance Extracted (AVE) value for each construct was also analysed, with values above 0.5 indicating adequate construct validity. The reliability of the construct is assessed using Composite Reliability (CR), where a CR value greater than 0.7 is required to ensure the construct's internal consistency. The validity and reliability test results demonstrated that all indicators used were

reliable for measuring the research constructs, thereby allowing this measurement model to be accepted and utilized for further analysis. The measurement model is presented in detail in Figure 1.

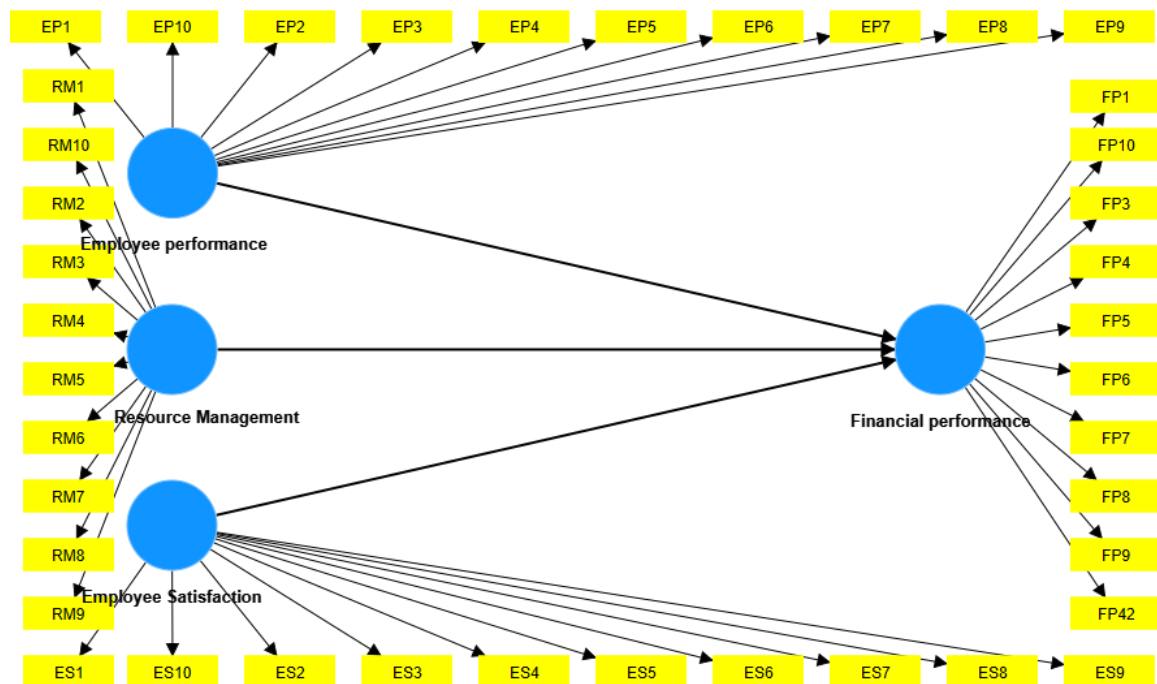


Figure 1. Measurement Model Description

Figure 1 illustrates a research measurement model that shows the relationship between four latent variables: Employee Performance, Resource Management, Employee Satisfaction, and Financial Performance. Each latent variable is measured using several indicators: Employee Performance (EP1 to EP10), Resource Management (RM1 to RM10), Employee Satisfaction (ES1 to ES10), and Financial Performance (FP1 to FP10). The arrow connecting the three independent variables to the dependent variable depicts the direction of influence or causal relationship hypothesised in this study. This model allows testing the extent to which employee performance, resource management, and employee satisfaction affect the college's financial performance. The use of diverse indicators ensures that each construct is comprehensively measured. At the same time, the direction of the arrow provides information about the direction of influence and the strength of the relationship between the variables to be tested using SEM-PLS analysis.

Evaluation of Measurement Models

The evaluation of the measurement model, also known as an outer loading test, aims to assess the validity and reliability of the construct in this study. In the PLS SEM analysis, the convergent validity is tested using a loading factor, which reflects the strong relationship between the indicator and its construct. Indicators with a loading factor value of more than 0.7 are considered valid, indicating they can represent their constructs well. In addition, the validity of the construct is also assessed through the Average Variance Extracted (AVE), where an AVE value of more than 0.5 indicates that the construct can explain more than 50% of the

variance of the measured indicator. The reliability of the construct was evaluated using Composite Reliability (CR), with a CR value above 0.7 indicating good internal consistency of the indicator in measuring the construct. The results of the measurement model test that meet these criteria ensure that the constructs used in this study are both valid and reliable, allowing further analysis to test the relationship between the variables studied. The results of these tests are presented in detail in Table 1.

Table 1. Outer Loading Test			
Variable	Measurement Items	Outer Loading	Criteria
Employee performance	EP1	0.741	Valid
	EP10	0.760	Valid
	EP2	0.784	Valid
	EP3	0.785	Valid
	EP4	0.679	Invalid
	EP5	0.776	Valid
	EP6	0.792	Valid
	EP7	0.795	Valid
	EP8	0.748	Valid
	EP9	0.701	Valid
Resource Management	RM1	0.926	Valid
	RM10	0.913	Valid
	RM2	0.933	Valid
	RM3	0.890	Valid
	RM4	0.913	Valid
	RM5	0.925	Valid
	RM6	0.948	Valid
	RM7	0.934	Valid
	RM8	0.938	Valid
	RM9	0.706	Valid
Employee Satisfaction	ES1	0.772	Valid
	ES10	0.737	Valid
	ES2	0.95	Valid
	ES3	0.915	Valid
	ES4	0.948	Valid
	ES5	0.947	Valid
	ES6	0.935	Valid
	ES7	0.922	Valid
	ES8	0.792	Valid
	ES9	0.858	Valid
Financial performance	FP1	0.782	Valid
	FP10	0.758	Valid
	FP2	0.673	Invalid
	FP3	0.809	Valid
	FP4	0.858	Valid
	FP5	0.84	Valid
	FP6	0.811	Valid
	FP7	0.844	Valid
	FP8	0.76	Valid
	FP9	0.845	Valid

Based on the results of the outer loading test listed in Table 1 of this study, the validity of the indicator on the latent variable showed varying results. For the Employee Performance variable, most indicators have valid outer loading values

above 0.7, except for the EP4 indicator, which has a value of 0.679, thus not meeting the validity criteria. The Resource Management variable shows all valid indicators with an outer loading value ranging from 0.706 to 0.948. Furthermore, all indicators are valid with an outer loading value above 0.7, ranging from 0.737 to 0.95. However, in the Financial Performance variable, there is one indicator, namely FP2, which is invalid due to an outer loading value of 0.673, while the other indicators are valid. Thus, two indicators, namely EP4 and FP2, need to be excluded from the analysis to improve the validity of the construct in this research model. After conducting the outer loading test, the invalid items are removed, as shown in Figure 2.

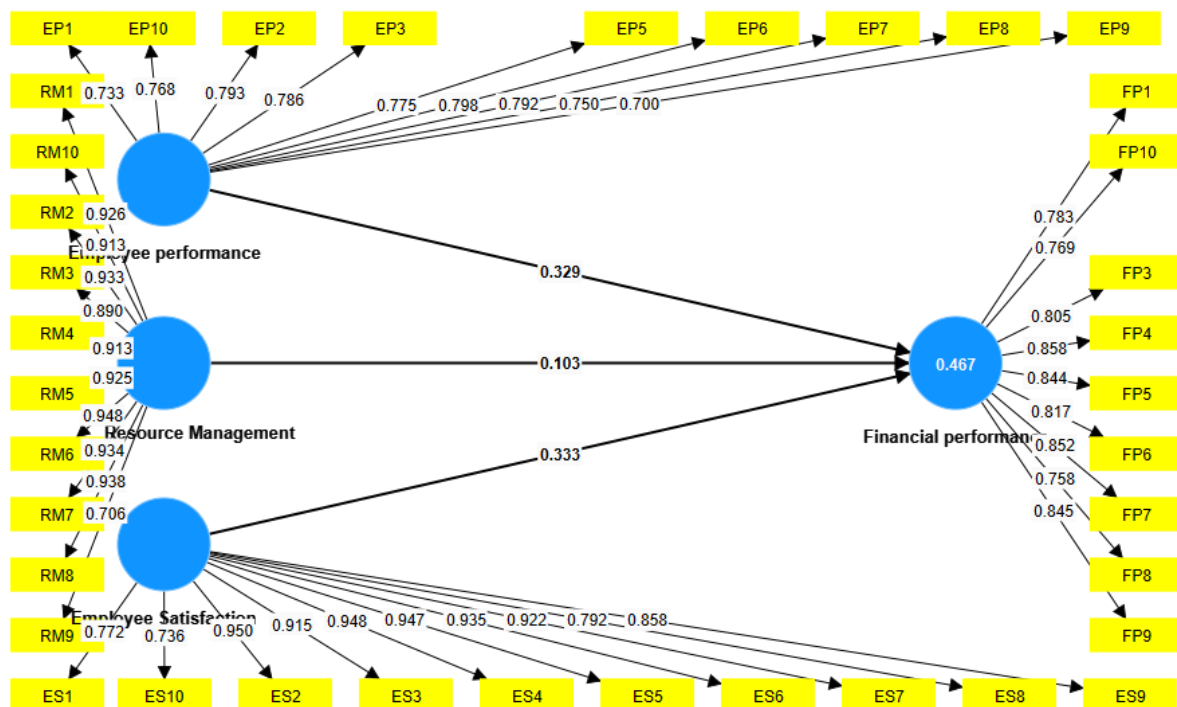


Figure 2. Research Measurement Model

Figure 2 illustrates the revised measurement model after removing the invalid items, specifically EP4 and FP2. This model emphasises indicators that meet the validity criteria with an outer loading value of ≥ 0.7 . Removal of invalid indicators is carried out to ensure the accuracy of measurements and prevent distortions in the analysis results. Furthermore, the construct validity of this measurement model was evaluated using the Average Variance Extracted (AVE), where all constructs had an AVE value above 0.5, indicating that the latent constructs could explain more than 50% of the variance in their indicators. In addition, the reliability of the construct was assessed using Composite Reliability (CR) and Cronbach's Alpha, both of which exceeded the threshold value of 0.7, indicating adequate internal consistency. The results of this test show that the revised measurement model has strong validity and reliability, as presented in Table 2.

Table 2. Evaluation of Measurement Models

Construct	Cronbach's Alpha	Composite Reliability	AVE
Employee performance	0.912	0.916	0.928
Financial performance	0.937	0.938	0.947
Employee Satisfaction	0.967	0.974	0.972
Resource Management	0.975	0.975	0.978

Table 2 shows the results of evaluating the measurement model using Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) tests for each construct in the research model. The test results showed that the entire construct had a Cronbach's Alpha value above 0.9, indicating an excellent level of internal consistency. The Composite Reliability (CR) also exceeds the 0.7 threshold, confirming that each construct has strong reliability. In addition, an AVE value of more than 0.5 for all constructs indicates adequate convergent validity, where a latent variable can explain more than 50% of the variance of the indicator. These findings indicate that the measurement model possesses strong qualities in terms of validity and reliability, making it suitable for use in further structural analysis. After this stage, the discriminant validity test is performed using the Fornell-Larcker Criterion to ensure that each construct correlates more with its indicators than with the other constructs, as shown in Table 3.

Table 3. Discriminatory Validity Results (Fornell-Larcker Criterion)

Construct	Employee Satisfaction	Employee performance	Financial performance	Resource Management
Employee Satisfaction	0.865			
Employee performance	0.562	0.793		
Financial performance	0.637	0.701	0.787	
Resource Management	0.575	0.674	0.77	0.815

Table 3 presents the results of the discriminant validity test, which utilizes the Fornell-Larcker criterion to verify that each construct in the research model has a stronger ability to explain its indicators compared to other constructs. The table's diagonal value (bold) represents the square root of the Average Variance Extracted (AVE) for each construct. In contrast, the value outside the diagonal shows the correlation between the constructs. Based on the analysis results, the diagonal values of each construct are higher than the correlations between constructs, such as Employee Satisfaction (0.865), Employee Performance (0.793), Financial Performance (0.787), and Resource Management (0.815). This indicates that each construct has sufficient discriminant validity, meaning it can represent a uniquely measured concept without any overlap with other constructs. These results reinforce the quality of the measurement models used in the study, indicating that the analyzed constructs possess good conceptual clarity and independence.

Structural Model Evaluation

Before proceeding with hypothesis testing, the first step is to assess statistical collinearity using the Variance Inflation Factor (VIF) measurement to ensure that there is no significant multicollinearity between variables in the research model. This test is important because a high level of multicollinearity can affect parameter estimation, leading to bias that can compromise the accuracy of interpreting regression results. Based on existing criteria, a VIF value above 10

indicates a high multicollinearity, while a VIF value below five can still be considered safe. If a variable with a high VIF is identified, mitigation steps can be taken, including removing excessive variables or reconfiguring the model to mitigate the issue. The results of this collinearity test indicate that the independent variables in the study do not exhibit excessive correlation with each other, thereby allowing for more effective and accurate hypothesis analysis. Further evaluation of the Structural Model (Inner VIF) is presented in Table 4.

Table 4. Evaluation of Structural Models (Inner VIF)

Construct	Employee Satisfaction	Employee performance	Financial performance	Resource Management
Resource Management	-	-	3.044	-
Employee performance	-	-	2.405	-
Employee Satisfaction	-	-	2.154	-
Financial performance	-	-	-	-

Table 4 presents the results of structural model evaluation using the Variance Inflation Factor (VIF) analysis to identify potential multicollinearity among constructs in the research model. The VIF values displayed indicate that Resource Management has a VIF of 3,044, Employee Performance has a VIF of 2,405, and Employee Satisfaction has a VIF of 2,154. All VIF values were below the critical threshold of 5, indicating that there were no serious multicollinearity problems between constructs in the research model. Thus, the independent variables in this model have a non-excessive relationship with each other, so the structural model analysis continued with a higher degree of accuracy. This result ensures that the parameter estimation in the next stage will not be biased due to the high correlation between the constructs. Furthermore, hypothesis testing can be carried out to measure the influence of each variable on Financial Performance, as shown in Figure 3.

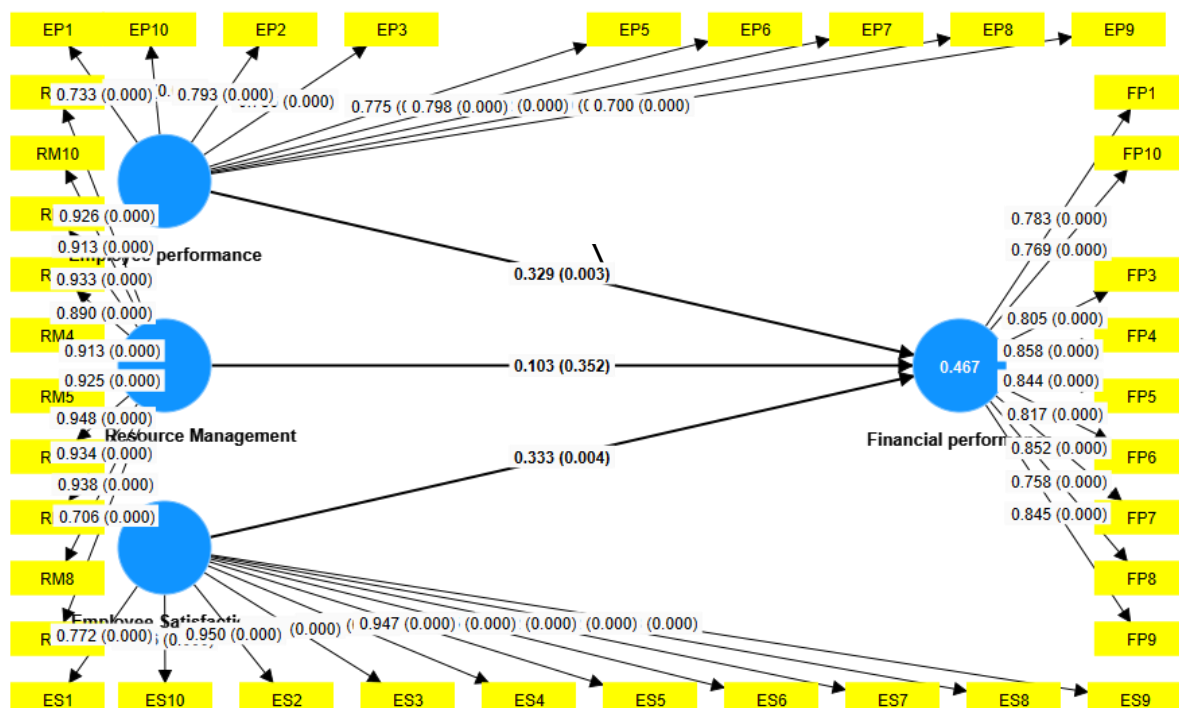


Figure 3. Hypothesis Testing Bootstrapping Results

Based on the results of the pathway test in Figure 3, the structural model shows different relationships between the latent variables in this study. Employee Performance (EP) has a significant influence on Financial Performance (FP), with a p-value of 0.003, indicating that improving employee performance has a positive contribution to financial performance. Employee Satisfaction (ES) also significantly influenced Financial Performance (FP), with a p-value = 0.004, confirming that employee satisfaction is closely related to better financial performance. However, Resource Management (RM) did not significantly influence Financial Performance (FP), as indicated by the value $p = 0.352$. This suggests that although resource management is important, its influence on financial performance is indirect and weaker than that of employee factors. The R^2 value for Financial Performance (FP) of 0.467 indicates that the model has good predictive power, despite the presence of insignificant variables. Meanwhile, the hypothesis test results can be presented to determine the confidence interval and F-squared, as shown in Table 5.

Table 5. Hypothesis Testing (Direct-Effect)

Hipotesis		Path Coefficient	P-Value	95% Path Coefficient Confidence Interval		F-Square
				Upper Limit	Lower Limit	
H1	Employee Satisfaction -> Financial performance	0.333	0.004	0.083	0.540	0.097
H2	Employee performance -> Financial performance	0.329	0.003	0.082	0.521	0.084
H3	Resource Management -> Financial performance	0.103	0.352	-0.120	0.321	0.352

Based on the results of the hypothesis testing in Table 5, it was found that the first hypothesis test revealed a significant effect of Employee Performance on the Financial Performance of Higher Education, with a path coefficient of 0.333 and a p-value of 0.004. A p-value smaller than 0.05 indicates that this relationship is significant at a 95% confidence level. The 95% confidence interval for the path coefficient ranges from 0.083 to 0.540, confirming that Employee Performance has a positive and trustworthy influence on College Financial Performance. An f-square value of 0.097 indicates that this effect of influence is small, but still significant in structural models. These findings confirm that enhancing employee performance can have a positive impact on universities' financial performance. Therefore, universities must improve employee performance through fair training, incentives, and evaluations to encourage greater contributions to efficient financial management.

The second hypothesis suggests that employee satisfaction has a significant impact on the Financial Performance of higher education, with a path coefficient of 0.329 and a p-value of 0.003. A p-value of less than 0.05 indicates a significant relationship between the two variables. The 95% confidence interval for the path coefficient ranges from 0.082 to 0.521, indicating that Employee Satisfaction has a positive and strong influence on Financial Performance. The f-square value of 0.084 indicates that its effect on the measurement model is small but still has an important impact. These results suggest that higher levels of employee satisfaction

are associated with improved financial performance. Therefore, colleges must prioritise policies that improve employee satisfaction, such as proper recognition, fair compensation, and a supportive work environment.

The results of the third hypothesis test indicate that Resource Management has no significant effect on the Financial Performance of higher education, with a path coefficient of 0.103 and a p-value of 0.352. A P-value greater than 0.05 indicates that this relationship is insignificant at a 95% confidence level. The 95% confidence interval ranges from -0.120 to 0.321, which includes a value of zero, confirming that resource management has no significant influence on financial performance. However, a sizable F-squared value of 0.352 suggests that although the influence is insignificant, resource management makes a significant contribution to the overall model. This suggests that resource management is still important in a broader context. However, factors such as performance and employee satisfaction have a more dominant role in influencing the financial performance of universities.

Discussion

This study aims to investigate the impact of employee performance, employee satisfaction, and resource management on the financial performance of universities, with a specific focus on Universitas Muhammadiyah Semarang. The context of this research is motivated by the importance of financial performance as an indicator of success in managing higher education institutions. Several previous studies have demonstrated that internal factors, such as employee performance and satisfaction, have a significant impact on financial performance (Cooke et al., 2021; Hoxha et al., 2024; Knies et al., 2024). However, the contribution of resource management to financial performance has not been widely explored in higher education, so this study seeks to make a new contribution.

This study found that employee performance and satisfaction have a positive and significant influence on the financial performance of universities. These results support previous findings that suggest that human factors, such as motivation and job satisfaction, can improve overall organisational performance (Gahan et al., 2021; Kosec et al., 2022; Lu et al., 2023). In contrast, resource management did not significantly influence financial performance, although it contributed significantly to the overall model. These findings indicate that while resource management is important, factors directly related to employees are more dominant in influencing the college's financial performance.

The results of the tests show that resource management has no significant influence on financial performance, contradicting the initial hypothesis of this study. This may be due to factors that could not be measured in this study, such as resource efficiency or variations in management levels between departments within the college. Nonetheless, these results are not entirely disappointing, as they demonstrate that human factors, such as employee performance and satisfaction, play a greater role in financial performance than previously thought. These results are from a study by Riyanto et al. (2021), which suggests that employee satisfaction is closely related to improved financial performance outcomes.

These findings provide some important insights. Theoretically, this research supports the theory of human resources, which posits that employee performance and job satisfaction significantly impact organisational performance outcomes (Hilton et al., 2023; Lee et al., 2022; Riyanto et al., 2021). In the context of college, employee satisfaction and performance are key drivers of operational efficiency and effectiveness, which in turn can improve the financial performance of institutions. From a practical perspective, these findings suggest that universities focus on performance development and employee satisfaction to drive improved financial performance. This can be done through training, incentives, and policies that support employee well-being.

This research contributes to understanding the interaction between employee performance, employee satisfaction, resource management, and college financial performance. Although the findings suggest that resource management has no significant influence on financial performance, these results reinforce the argument that employee performance and satisfaction have a greater role in influencing financial outcomes. This suggests that universities should prioritize performance quality and employee satisfaction factors to enhance their financial performance. Therefore, these findings suggest the importance of designing a more integrated human resource (HR) policy and focusing on employee empowerment to achieve more optimal results in financial performance. Thus, this research provides valuable insights for strategic decision-making in HR management in higher education.

CONCLUSION

This study examines the impact of employee performance, employee satisfaction, and resource management on the financial performance of universities, particularly at Universitas Muhammadiyah Semarang. The analysis reveals that employee performance and satisfaction have a significant influence on financial performance, whereas resource management exhibits no direct effect. These findings emphasise the importance of employee-related factors in improving financial outcomes in college. Colleges should focus on enhancing employee performance through targeted training programs and fostering a supportive work environment to boost employee satisfaction and engagement. Further research can delve deeper into the indirect influences of resource management and explore additional variables, such as leadership or institutional culture, that can contribute to financial performance. These findings provide valuable insights for policy development in higher education management.

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