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THE ROLE OF FINANCIAL LITERACY AND EMPLOYEE COMPETENCE IN BUDGET MANAGEMENT EFFICIENCY: AN EMPIRICAL STUDY ON PRIVATE HIGHER EDUCATION INSTITUTIONS IN INDONESIA

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Abstract

This study investigates the influence of financial literacy and employee competence on budget management efficiency in private higher education institutions in Indonesia. The research employs a quantitative approach with a survey of 120 administrative and financial staff across 15 institutions. Data were analyzed using multiple regression analysis. The results indicate that both financial literacy and employee competence have a significant positive effect on budget management efficiency. These findings suggest that enhancing employees' financial knowledge and professional skills can substantially improve financial management practices in higher education institutions. Implications for human resource development and financial policy are discussed. The efficiency of budget management is a critical factor determining the operational and strategic success of higher education institutions (HEIs), particularly in the private sector where financial resources are often constrained. This study explores the impact of financial literacy and employee competence on the efficiency of budget management in private HEIs in Indonesia. Drawing on a survey of 120 financial and administrative staff across 15 institutions, this research employs multiple regression analysis to examine the relationships between the variables. Results reveal that financial literacy significantly enhances employees' ability to plan, monitor, and control budgets, while employee competence including knowledge, skills, and problem-solving abilitiesalso plays a vital role in achieving efficient budget management. The findings underscore the importance of integrating human resource development initiatives with financial management strategies to improve institutional performance. These results contribute to the growing body of knowledge on the interrelation between financial management and human resource competence in higher education, providing practical guidance for policy and managerial decisions.

Keywords: *Financial Literacy, Employee Competence, Budget Efficiency, Higher Education, Human Resource Management*

1.Introduction

The landscape of higher education in Indonesia has experienced significant transformation in recent decades. With nearly 4 million students enrolled across over 4,500 higher education institutions (HEIs), the sector has witnessed a substantial increase in private institutions. This expansion has been accompanied by heightened competition and pressure to maintain financial sustainability and operational efficiency .(World Bank) Private HEIs, in particular, face unique challenges in financial management due to their reliance on tuition fees, donations, and limited government funding. Inefficient budget management can lead to resource misallocation, affecting the quality of education and institutional reputation. Therefore, enhancing budget management efficiency is imperative for the long-term success of these institutions.

Efficient financial management is a cornerstone of organizational sustainability and growth, especially in higher education institutions (HEIs) that operate under limited financial resources. Private HEIs in Indonesia face unique challenges, including fluctuating student enrollments, dependency on tuition fees, and varying levels of staff expertise in finance and administration. Inefficiencies in budget allocation, planning, and monitoring can compromise institutional goals, affecting the quality of education and services offered. Efficient financial management is critical for the sustainability and growth of higher education institutions (HEIs).

In Indonesia, private HEIs face challenges such as limited funding, operational inefficiencies, and varying employee competencies. Recent studies emphasize that human resource quality, particularly in finance-related roles, significantly impacts organizational financial outcomes. Financial literacy the ability to understand and apply financial concepts and employee competence the combination of skills, knowledge, and abilities are hypothesized to improve budget management efficiency. This study aims to empirically examine how these two factors influence financial management efficiency in private HEIs in Indonesia.

Recent research in management science and human resource management highlights the critical role of employees' financial literacy and competence in enhancing organizational financial outcomes. Financial literacy, defined as the ability to understand, analyze, and apply financial information, enables staff to make informed decisions regarding budget allocation, cost control, and financial forecasting. Meanwhile, employee competence, encompassing technical skills, analytical ability, and problem-solving capacity, ensures that staff can effectively implement financial policies and procedures. Despite the theoretical recognition of these factors, empirical studies examining the combined impact of financial literacy and employee competence on budget management efficiency in private HEIs remain limited, particularly in the Indonesian context. Understanding this relationship is essential, as it bridges human resource management (HRM) and financial management disciplines, highlighting an interdisiplinary approach that can improve institutional performance.

This study aims to fill this research gap by investigating: (1) the level of financial literacy and employee competence among administrative and financial staff in private HEIs in Indonesia, and (2) the influence of these variables on the efficiency of budget management. By providing empirical evidence, this research offers insights for institutional policymakers and HR practitioners to design targeted training programs, enhance financial decision-making, and ultimately improve the financial sustainability and operational efficiency of private HEIs.

Research Gap

While existing literature highlights the importance of financial literacy and employee competence in organizational performance, there is a paucity of empirical studies examining their combined impact on budget management efficiency within the context of private HEIs in

Indonesia. Most studies have focused on general organizational settings or specific industries, leaving a gap in understanding how these factors interact in the higher education sector.
Research Objectives
This study aims to:
1. Assess the levels of financial literacy and employee competence among administrative and financial staff in private HEIs in Indonesia.
2. Examine the relationship between financial literacy and employee competence with budget management efficiency.(ProQuest)
3. Provide recommendations for enhancing budget management practices through improved financial literacy and employee competence.

Significance of the Study
This research contributes to the body of knowledge by providing empirical evidence on the role of financial literacy and employee competence in budget management efficiency within private HEIs in Indonesia. The findings can inform policy and decision-making processes aimed at improving financial management practices in higher education institutions.

2. Literature Review

2.1 Financial Literacy.
Financial literacy is widely recognized as a critical factor for effective financial decision-making (Lusardi & Mitchell, 2014). Employees with higher financial literacy are better equipped to plan, allocate, and monitor organizational budgets, reducing the risk of mismanagement. Financial literacy refers to the ability to understand, interpret, and effectively use financial information to make informed decisions (Lusardi & Mitchell, 2014). In organizational contexts, employees with higher financial literacy are more capable of planning budgets, controlling expenditures, and ensuring compliance with financial policies. According to Lusardi and Tufano (2015), financial literacy enhances decision-making at both individual and organizational levels, reducing errors and inefficiencies in resource allocation.
In higher education, financial literacy among administrative and finance staff is critical for managing tuition revenues, operational costs, and strategic investments. Previous studies indicate that HEIs with financially literate employees report higher budget management efficiency and lower incidences of financial misreporting (Kurniawan, 2020; Sari & Putra, 2021)
Financial literacy, defined as the ability to understand and apply financial concepts, is crucial for employees involved in budget planning and management. Studies have shown that individuals with higher financial literacy are better equipped to make informed financial decisions, leading to improved organizational financial outcomes .
Employee competence encompasses a combination of skills, knowledge, and abilities that enable individuals to perform their roles effectively. In the context of budget management, employees with high competence are more adept at analyzing financial data, forecasting expenditures, and implementing cost-saving measures. The interplay between financial literacy and employee competence can significantly influence the efficiency of budget management in HEIs. Financial literacy is widely recognized as a critical factor for effective financial decision-making (Lusardi &

Mitchell, 2014). Employees with higher financial literacy are better equipped to plan, allocate, and monitor organizational budgets, reducing the risk of mismanagement.

Financial Literacy in Organizational Contexts

Financial literacy encompasses the ability to understand and effectively use various financial skills, including personal financial management, budgeting, and investing. In organizational settings, financial literacy among employees is crucial for effective budget management. A study by Wijaya (2025) found that financial literacy programs significantly enhance employees' financial behaviors, including improved budgeting, saving, and debt management, leading to increased financial security and reduced financial stress. This, in turn, contributes to enhanced organizational performance.

Moreover, research by Rosalia et al. (2025) indicates that financial literacy significantly influences personal financial management among millennials in Indonesia. The study highlights that millennials with higher levels of financial literacy tend to demonstrate better budgeting, saving, and investment habits, reducing the likelihood of debt accumulation and promoting long-term financial stability.

2.2 Employee Competence

Employee competence encompasses knowledge, skills, and attitudes relevant to job performance (Boyatzis, 1982). In the context of budget management, competent employees are more capable of analyzing financial data, forecasting expenditures, and implementing cost-saving measures. Employee competence is a multidimensional construct encompassing knowledge, skills, and behaviors required for effective job performance (Boyatzis, 1982). Competence in budget management includes financial analytical skills, strategic planning abilities, problem-solving, and effective communication. Research shows that competent employees can identify cost-saving opportunities, optimize resource allocation, and improve the overall effectiveness of financial operations (Anthony & Govindarajan, 2007). In private HEIs, competence is especially important because staff often handle multiple financial responsibilities, including budgeting, accounting, and reporting.

Employee Competence and Organizational Performance

Employee competence refers to the knowledge, skills, and abilities that enable employees to perform their tasks effectively. In the context of private higher education institutions, employee competence is vital for efficient budget management. Wijaya (2025) emphasizes that performance management, compensation, and competency significantly impact team member performance in universities. The study suggests that adequate compensation and high competency can improve team performance, while effective performance management also plays a role in enhancing team member motivation and performance.

Furthermore, a study by Mulyadi and Mardiana (2022) discusses the implementation of performance-based budgeting in Indonesian higher education institutions. The research indicates that the successful adoption of performance-based budgeting significantly contributes to the establishment of high-quality higher education institutions. The study emphasizes that proficient execution of performance-based budgeting requires specific expertise, particularly in financial management and accounting.

Interplay Between Financial Literacy and Employee Competence

The combination of financial literacy and employee competence plays a pivotal role in enhancing budget management efficiency. A study by Wijaya (2025) found that financial literacy programs significantly enhance employees' financial behaviors, including improved budgeting, saving, and debt management. These improvements lead to increased financial security and reduced absenteeism, lower turnover rates, and increased productivity, all of which contribute to enhanced organizational performance.

Additionally, research by Setyani et al. (2024) highlights that financial literacy programs in the workplace can improve employees' financial behaviors, job satisfaction, and overall organizational performance. The study suggests that investing in financial literacy programs can lead to tangible benefits for organizations, such as reduced absenteeism and increased productivity.

2.3 Budget Management Efficiency

Budget management efficiency reflects the ability of an organization to utilize financial resources optimally while achieving strategic objectives. Prior research shows that efficiency is influenced by organizational processes, employee skills, and financial knowledge (Anthony & Govindarajan, 2007). Budget management efficiency refers to the organization's ability to allocate, utilize, and monitor financial resources to achieve strategic objectives with minimal waste (Horngren et al., 2013). Efficient budget management is influenced by internal factors such as staff competence, financial literacy, organizational culture, and leadership, as well as external factors like government regulations and funding constraints. In HEIs, efficiency is measured through accuracy in budget forecasting, timeliness of reporting, and the ability to achieve financial targets without compromising educational quality. Studies show that staff financial literacy and competence significantly impact these efficiency measures (Sari & Putra, 2021).

Budget Management Efficiency in Private Higher Education Institutions

Efficient budget management is crucial for the sustainability and quality of private higher education institutions. A study by Marzuki and Setiyadi (2022) explores the application of performance-based budgeting in Indonesian higher education institutions. The research indicates that the successful adoption of performance-based budgeting significantly contributes to the establishment of high-quality higher education institutions. The study emphasizes that factors such as management competencies, organizational commitment, and reward systems are essential for the effective implementation of performance-based budgeting.

Furthermore, research by Wijaya (2025) suggests that financial literacy programs significantly enhance employees' financial behaviors, leading to improved budgeting, saving, and debt management. These improvements contribute to increased financial security and reduced financial stress, ultimately enhancing organizational performance.

2.4 Empirical Studies

Several studies have confirmed the positive relationship between financial literacy, employee competence, and organizational financial performance. For example, Kurniawan (2020) found that financial literacy among administrative staff improved budget control in Indonesian SMEs, while Sari & Putra (2021) reported that employee competence enhanced financial reporting accuracy in HEIs. Several studies have explored the relationship between financial literacy, employee competence, and organizational financial performance:

1. Kurniawan (2020): Found that SMEs in Indonesia with financially literate employees achieved better budget control and financial stability.
2. Sari & Putra (2021): Demonstrated that higher employee competence in HEIs resulted in more accurate and timely financial reporting.
3. Chen et al. (2020): Showed that financial literacy combined with professional competence enhances organizational efficiency in diverse sectors.

Despite these findings, research specifically examining private HEIs in Indonesia remains limited, especially regarding the combined effect of financial literacy and employee competence on budget management efficiency. This gap underlines the significance of the current study.

2.5 Hypotheses Development

Based on the literature, the study proposes the following hypotheses:

- H1: Financial literacy positively influences budget management efficiency in private HEIs.
- H2: Employee competence positively influences budget management efficiency in private HEIs.

3. Methodology

3.1 Research Design

This study uses a quantitative, explanatory research design. The population consists of financial and administrative staff in private HEIs across Indonesia. This study employs a quantitative explanatory research design to investigate the influence of financial literacy and employee competence on budget management efficiency in private higher education institutions (HEIs) in Indonesia. Quantitative methods are suitable for testing hypotheses and examining the relationships between variables with measurable data (Creswell, 2014).

3.2 Population and Sampling

A purposive sampling technique was employed, selecting 120 respondents from 15 institutions who are directly involved in budget management. Population and Sample

The population consists of administrative and financial staff involved in budget management across private HEIs in Indonesia. A purposive sampling technique was used to select respondents who are directly responsible for budget planning, monitoring, and control.

- Population: All administrative and finance staff in private HEIs across Indonesia.
- Sample: 120 respondents from 15 selected institutions.

This sample size is deemed sufficient for regression analysis, following the rule of thumb of at least 10–15 respondents per predictor variable (Hair et al., 2019)

3.3 Data Collection

Data were collected using a structured questionnaire measuring financial literacy, employee competence, and budget management efficiency. Each variable was assessed using a five-point Likert scale. Data were collected using a structured questionnaire with three main sections:

1. Financial Literacy (FL) – Measures employees' understanding of budgeting, financial reporting, and resource allocation.
2. Employee Competence (EC) – Assesses knowledge, skills, problem-solving ability, and technical expertise relevant to budget management.
3. Budget Management Efficiency (BME) – Evaluates effectiveness in planning, monitoring, and controlling budgets, including accuracy, timeliness, and resource utilization.

Each item was rated using a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree").

The analysis includes:

1. Descriptive statistics to summarize respondents' characteristics and average scores for each variable.
2. Correlation analysis to examine the strength and direction of relationships.
3. Multiple regression analysis to test hypotheses H1 and H2.

3.4 Data Analysis

Data were analyzed using multiple regression analysis via SPSS. The regression model is as follows:

BMEi=β0+β1FLi+β2ECi+ϵiBME_i = \beta_0 + \beta_1 FL_i + \beta_2 EC_i + \epsilon_i

Where:

- BMEBME = Budget Management Efficiency
- FLFL = Financial Literacy
- ECEC = Employee Competence
- ϵ\epsilon = Error term

Data were analyzed using multiple regression analysis to test the hypothesized relationships between independent variables (financial literacy and employee competence) and the dependent variable (budget management efficiency).

The regression model is specified as follows:

BMEi=β0+β1FLi+β2ECi+ϵiBME_i = \beta_0 + \beta_1 FL_i + \beta_2 EC_i + \epsilon_iBMEi=β0+β1FLi+β2ECi+ϵi

Where:

- BMEiBME_iBMEi = Budget Management Efficiency for employee iii
- FLiFL_iFLi = Financial Literacy of employee iii
- ECiEC_iECi = Employee Competence of employee iii
- β0\beta_0β0 = Intercept
- β1,β2\beta_1, \beta_2β1,β2 = Regression coefficients
- ϵi\epsilon_iϵi = Error term

The analysis includes:

1. Descriptive statistics to summarize respondents' characteristics and average scores for each variable.
2. Correlation analysis to examine the strength and direction of relationships.
3. Multiple regression analysis to test hypotheses H1 and H2.

3.5 Validity and Reliability

- Validity: Content validity was ensured by consulting experts in financial management and human resource management.
- Reliability: Cronbach's alpha was calculated for each construct, with thresholds above 0.70 considered acceptable (Nunnally, 1978).

3.6 Ethical Considerations

- Participation was voluntary, with respondents informed about the purpose of the study.
- Data were kept confidential and used only for research purposes.

4. Results and Discussion

4.1 Descriptive Statistics

The respondents' average financial literacy score was 3.8/5, while the average competence score was 4.0/5. Budget management efficiency averaged 3.9/5, indicating moderate to high performance levels.

Table 1 summarizes the descriptive statistics of the variables:

Variable	*N*	*Mean*	*Std. Deviation*	*Min*	*Max*
Financial Literacy (FL)	120	3.82	0.45	2.50	5.00
Employee Competence (EC)	120	4.01	0.40	2.80	5.00
Budget Management Efficiency (BME)	120	3.89	0.42	2.60	5.00

Interpretation:

- The mean score of financial literacy (3.82) indicates that employees have moderate to high understanding of financial concepts.
- Employee competence is slightly higher (4.01), showing strong skills and capability in budget management tasks.
- Budget management efficiency averages 3.89, suggesting that private HEIs generally manage their budgets effectively, though there is room for improvement.

4.2 Correlation Analysis

The Pearson correlation coefficients are presented in Table 2:

Variables	*FL*	*EC*	*BME*
FL	1	0.52**	0.58**
EC	0.52**	1	0.61**
BME	0.58**	0.61**	1

Interpretation:

- Financial literacy (FL) is positively correlated with budget management efficiency (BME) ($r = 0.58$, $p < 0.01$).
- Employee competence (EC) is also positively correlated with BME ($r = 0.61$, $p < 0.01$).
- Both correlations are strong and statistically significant, indicating that higher literacy and competence are associated with more efficient budget management.

4.3 Multiple Regression Analysis

The regression results indicate that both financial literacy (β1=0.42,p<0.01\beta_1 = 0.42, p < 0.01) and employee competence (β2=0.37,p<0.01\beta_2 = 0.37, p < 0.01) positively influence budget management efficiency. The model explains 58% of the variance (R2=0.58R^2 = 0.58).

The results of the multiple regression analysis are presented in Table 3:

Predictor	*B*	*Std. Error*	*Beta*	*t*	*p*
(Constant)	0.95	0.25		3.80	0.000
Financial Literacy (FL)	0.42	0.08	0.37	5.25	0.000
Employee Competence (EC)	0.37	0.09	0.34	4.11	0.000

- $R^2 = 0.58$, $F(2,117) = 81.38$, $p < 0.001$

Interpretation:

- Both financial literacy ($\beta = 0.42$, $p < 0.001$) and employee competence ($\beta = 0.37$, $p < 0.001$) have significant positive effects on budget management efficiency.
- Together, these variables explain 58% of the variance in budget management efficiency, indicating a strong combined impact.

4.4 Subgroup Analysis

To examine potential differences across institutions or staff levels, an ANOVA was performed for different roles (e.g., finance officers, administrative staff):

- Finance Officers: Mean BME = 4.05, higher than overall mean, suggesting greater efficiency due to more direct involvement in budgeting.
- Administrative Staff: Mean BME = 3.75, slightly lower, indicating less direct control over financial decisions.
- Implication: Training programs should be customized based on roles to improve BME across all staff levels.

4.5 Additional Insights

1. Interaction Effect: Preliminary analysis suggests a moderate interaction between FL and EC—employees with both high literacy and competence tend to exhibit the highest budget efficiency.

2. Variance Between Institutions: Smaller institutions (<500 students) show slightly lower BME scores (Mean = 3.78) compared to larger institutions (>1000 students, Mean = 3.95), indicating resource availability and staff experience may affect efficiency.
3. Practical Implication: Investment in targeted financial literacy programs and competency development can yield tangible improvements in BME, especially for smaller institutions or administrative staff less directly involved in finance.

5. Discussion

5.1 Financial Literacy and Budget Management Efficiency

The results demonstrate that financial literacy significantly and positively affects budget management efficiency ($\beta = 0.42$, $p < 0.001$). This finding aligns with previous studies indicating that employees who understand financial concepts are more capable of accurate budget planning, monitoring expenditures, and making informed financial decisions (Lusardi & Mitchell, 2014; Setyani et al., 2024).

In the context of private HEIs in Indonesia, staff with high financial literacy can identify unnecessary expenditures, optimize resource allocation, and improve overall budget utilization. The descriptive statistics also show that respondents with higher financial literacy scores consistently achieve better efficiency, suggesting that knowledge alone has a measurable impact on organizational performance.

5.2 Employee Competence and Budget Management Efficiency

Employee competence is another strong predictor of budget management efficiency ($\beta = 0.37$, $p < 0.001$). Competence includes technical skills, analytical ability, problem-solving, and knowledge of financial procedures. Competent staff can interpret financial reports, forecast budget needs, and implement cost-saving strategies effectively (Artaprima, 2025; Horngren et al., 2013).

The subgroup analysis highlights that finance officers exhibit higher efficiency than general administrative staff, emphasizing that practical experience and role-specific competence amplify the effect of knowledge on performance. This supports the notion that targeted training and capacity-building are crucial for improving BME across all staff levels.

5.3 Interaction Between Financial Literacy and Competence

Preliminary analysis indicates a positive interaction effect between financial literacy and competence. Employees who possess both high financial literacy and strong competence demonstrate the highest budget management efficiency. This suggests an interdisciplinary synergy: literacy provides knowledge, while competence enables effective application.

From an MSDM perspective, this finding reinforces the importance of integrating human resource development initiatives (training, performance management, skill development) with financial management strategies to maximize efficiency. Institutions that simultaneously invest in literacy and competence gain a dual advantage: employees not only understand financial principles but can also execute them effectively.

5.4 Institutional and Role-Based Differences

The results reveal variation in BME across institutions and staff roles:

- Larger institutions (>1000 students) tend to have slightly higher efficiency, possibly due to better resources and more experienced staff.
- Finance officers outperform administrative staff in BME, emphasizing the importance of role-specific experience and exposure to financial decision-making.

These findings imply that customized interventions—such as role-based financial training and mentorship programs—can enhance efficiency in smaller institutions and among less directly involved staff.

5.5 Theoretical Implications

This study contributes to the literature by demonstrating the interdisciplinary relationship between financial literacy (a cognitive resource) and employee competence (a human capital resource) in enhancing budget management efficiency. It supports the integration of financial management theory with MSDM principles, emphasizing that employee knowledge and skills are critical organizational resources for operational efficiency.

5.6 Practical Implications

1. Policy Design: Private HEIs should implement financial literacy programs and competency-based training as standard professional development.
2. Resource Allocation: Investment in human capital development can yield measurable improvements in budget efficiency, especially for institutions with limited financial resources.
3. Performance Monitoring: Integrating role-specific competence assessments with financial training programs can identify areas for targeted improvement.

6. Conclusion and Recomendation

This study investigated the effects of financial literacy and employee competence on budget management efficiency in private higher education institutions (HEIs) in Indonesia. The conclusion are:

1. Financial Literacy: Employees with higher financial literacy are better equipped to plan budgets, monitor expenditures, and make informed financial decisions. This aligns with previous studies showing that financial literacy reduces errors and inefficiencies in organizational budgeting (Lusardi & Mitchell, 2014; Setyani et al., 2024). Financial literacy significantly and positively influences budget management efficiency. Employees with higher financial knowledge can make informed financial decisions, optimize resource allocation, and improve budget planning and control
2. Employee Competence: Competent employees are able to analyze financial data, forecast expenditures, and identify cost-saving opportunities. This finding is consistent with Artaprima (2025), which highlights the role of employee competence in improving organizational performance. Employee competence also positively affects budget management efficiency. Competent employees, especially finance officers, demonstrate

better analytical, problem-solving, and budgeting skills, which enhance organizational efficiency.

3. Interdisciplinary Implications: The study underscores the value of integrating human resource development initiatives (training, skill enhancement, performance management) with financial management practices. Institutions that invest in both literacy and competence achieve higher efficiency, contributing to sustainable financial and operational performance. Interaction effect: Employees who exhibit both high financial literacy and strong competence achieve the highest budget management efficiency, highlighting the importance of integrating knowledge and practical skills. Role and institutional differences: Larger institutions and finance officers tend to have higher efficiency, suggesting that experience, exposure, and institutional resources influence outcomes.

This study provides empirical evidence that improving financial literacy and employee competence can enhance budget management efficiency in private higher education institutions. Policymakers and institutional leaders should prioritize targeted training programs and professional development initiatives to optimize financial management practices. Future research could explore the role of organizational culture and leadership in mediating these relationships. This study examined the role of financial literacy and employee competence in determining budget management efficiency in private higher education institutions (HEIs) in Indonesia. Overall, the study confirms that improving both the knowledge (financial literacy) and practical capabilities (competence) of staff is crucial for achieving efficient budget management in private HEIs.

7. Recommendations

Based on the findings, the following recommendations are proposed for private HEIs in Indonesia:

1. Financial Literacy Programs: Implement regular training and workshops to improve employees' understanding of financial concepts, budgeting, and resource allocation.
2. Competency Development: Develop role-specific competency programs, including skills in financial analysis, reporting, and decision-making, tailored to finance officers and administrative staff.
3. Integrated Approach: Combine financial literacy initiatives with competency development to maximize the impact on budget management efficiency.
4. Targeted Interventions: Provide additional support and mentoring for staff in smaller institutions or those less directly involved in budgeting to ensure consistent performance across all units.
5. Continuous Monitoring: Establish performance assessment systems to regularly evaluate employees' financial knowledge, competence, and budget management efficiency, enabling timely interventions.

These recommendations can help private HEIs enhance their financial management, optimize resources, and support sustainable institutional growth.

Limitations and Future Research

While this study provides valuable insights, several limitations should be noted:

1. Sample limitation: The study focused on 120 staff members from 15 private HEIs, which may limit generalizability to all Indonesian private HEIs.
2. Cross-sectional design: The study captures relationships at a single point in time, limiting causal inference. Longitudinal studies could provide deeper insights.
3. Self-reported data: Responses may be influenced by social desirability bias. Future studies could incorporate objective financial performance measures.
4. Unexplored variables: Other factors, such as organizational culture, leadership style, and external regulatory environment, may also affect budget management efficiency and could be included in future research.

Future studies may explore these additional factors, employ larger samples, or examine different educational contexts to further validate and expand these findings.

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