American Journal of Humanities and Social Sciences Research (AJHSSR) e-ISSN : 2378-703X Volume-09, Issue-05, pp-313-327

www.ajhssr.com Research Paper

Open Access

CHALLENGES AND INNOVATIONS IN THE BUDGETARY PROCESS OF ONE STATE UNIVERSITY: BASIS FOR BUDGETARY FORMULATION

Imee Charisse Rivera - Malinay

CBAA/Laguna State Polytechnic University-Sta. Cruz Campus/Philippines

ABSTRACT: This study evaluated the financial strategies and budgetary innovations of one state university, focusing on challenges like limited government and external funding, complex financial regulations, and weak planning capacity. It also examined innovative responses such as support systems, resource allocation, and technology adoption. Using a quantitative-correlational design, data were gathered from 177 university personnel through a structured survey and analyzed with SPSS. Key findings revealed that support systems and resource allocation significantly contributed to financial sustainability, while technology adaptation had limited effectiveness. The study concluded that financial innovation in higher education is most effective when supported by institutional collaboration and human capacity, not just technology. It recommends strengthening support systems through training, stakeholder involvement, and decentralized planning to enhance resilience and responsiveness in future budgeting efforts.

KEYWORDS: Higher Education Budgeting, Financial Sustainability, Resource Allocation, Budgetary Challenges, University Financial Management

I. INTRODUCTION

This study explores the budgeting process of one state university, a public higher education institution in the Philippines that continues to face financial challenges despite consistent government support. Traditionally, budgets have played a vital role in organizational control and planning. However, recent critiques argue that budgeting practices either suffer from flawed application or require systemic re-evaluation. Within this context, the research examines both the challenges—such as limited government and external funding, complex regulations, and inadequate planning capacity—and the innovations, including the integration of technology, development of support systems, and improvements in resource allocation. These elements are analyzed to understand their impact on the university's financial sustainability and capacity to deliver quality education.

The study is anchored in three theoretical frameworks. First, Felt Accountability Theory emphasizes how individuals perceive and respond to accountability mechanisms, which in turn affect institutional behavior and performance. Second, Budget Theory, based on Hofstede's (1968) work, underscores the value of collaborative budgeting, suggesting that when employees are involved in budget preparation, outcomes are more realistic, accurate, and motivating. Third, Resource Dependence Theory by Pfeffer and Salancik (2003) highlights the importance of external resources and how organizations adjust their strategies and operations to secure them despite significant funding of one state university often experiences reduced budget approvals without institutional input, forcing it to cut departmental funds and rely on internal revenue to sustain operations. This creates a disconnect between institutional goals and actual financial allocations. The study addresses the gap in localized research on how state universities respond to financial constraints and adapt global innovations in budgeting to suit local conditions. By providing empirical data and analysis, the research aims to offer actionable insights for university leaders, administrators, and policymakers. These insights can guide the development of more effective, inclusive, and sustainable financial systems that support long-term educational quality and institutional resilience.

II. OBJECTIVES OF THE STUDY

This study explored the financial strategies used by higher education institutions to maintain quality education, focusing on budgetary challenges and innovations. It assessed respondents' views on challenges related to government and external funding, complex financial regulations, and planning capacity. It also evaluated innovations in technology adaptation, support systems, and resource allocation. Additionally, the study examined outcomes of these innovations in terms of budget accuracy, efficiency, stakeholder satisfaction, and financial sustainability. Finally, it investigated the relationship between budgetary challenges and innovations, and the impact of innovations on financial outcomes.

III. MATERIALS AND METHODS

This study employed a quantitative-correlational research design to examine the relationship between challenges and innovations in the university budgetary process. This approach allowed the researchers to assess variables as they naturally occur without manipulation, helping determine the strength and direction of their relationships. The respondents included 177 personnel from one state university, composed of Deans, Associate Deans, Directors, Unit Heads, and Regular Non-Teaching Staff. All participants were regular employees with at least one year of service. Total enumeration was used due to the manageable population size, ensuring comprehensive coverage of relevant stakeholders.

To select appropriate participants, the study applied a purposive sampling technique, targeting individuals with direct responsibilities related to university budgeting and financial processes. Data collection was carried out through a validated survey questionnaire, which was structured into four parts: socio-demographic profile, challenges in budgeting, innovations introduced, and the outcomes of those innovations. Responses were rated using a Likert scale, and the instrument was reviewed by experts for clarity and reliability.

Before administering the survey, the researchers sought permission from the University President and emphasized voluntary participation, confidentiality, and neutrality. Questionnaires were personally distributed and collected to encourage honest responses and address any queries. The data gathered were then tallied, organized, and analyzed using SPSS and Microsoft Excel. Descriptive statistics such as frequency, mean, and standard deviation were used, and Pearson's correlation was applied to assess the relationships between budgeting challenges, innovations, and their outcomes.

IV. RESULTS AND DISCUSSION

This study identified and analyzed various challenges faced by public higher education institutions (PHEIs) in their budgetary processes. The results are categorized into key thematic areas: government funding, external funding, complexity of financial regulations, financial planning capacity, and innovations in budgeting, with insights drawn from respondents' perceptions and supported by statistical data.

Challenges in the Budgetary Process

Public higher education institutions face several challenges that hinder the effective allocation, management, and disbursement of financial resources. These challenges include bureaucratic delays in government funding, limited guidance on external funding requirements, complexities in financial regulations, and inadequate training for financial staff. While innovations like digital budgeting systems and streamlined processes have been introduced, gaps in technology adaptation and stakeholder involvement persist. The findings, drawn from respondents' perceptions and statistical data, emphasize the need for capacity-building, improved inter-agency coordination, and enhanced transparency to strengthen public financial management.

Before administering the survey, the researchers sought permission from the University President and emphasized voluntary participation, confidentiality, and neutrality. Questionnaires were personally distributed and collected to encourage honest responses and address any queries. The data gathered were then tallied, organized, and analyzed using SPSS and Microsoft Excel. Descriptive statistics such as frequency, mean, and standard deviation were used, and Pearson's correlation was applied to assess the relationships between budgeting challenges, innovations, and their outcomes.

	Table 1. Challenges in the Budgetary Process in terms of Government Funding				
	Statements	Μ	SD	Interpretation	
1.	The release of allocated funds from the National	3.20	0.63	High	
	Government is consistently on time.				
2.	Coordination among government agencies ensures	3.30	0.59	Very High	
	timely fund release.				
3.	The timeline for releasing funds is highly predictable	3.15	0.61	High	
	and consistent.				
4.	Required documentations for fund release are	3.29	0.57	Very High	
	straightforward to the DBM and quick to process.				
5.	There are frequent delays in the approval of funding	3.08	0.69	High	
	requests.				
	Overall Mean	3.20		High	

C1 11

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

The highest-rated challenge in the budgetary process is the effectiveness of coordination among government agencies (M=3.30, SD=0.59), indicating strong inter-agency collaboration. This supports findings by Kim (2020) and Alazzeh (2020), which highlight that such coordination enhances fiscal accountability and operational efficiency. Conversely, the lowest-rated challenge is the occurrence of delays in funding approval (M=3.08, SD=0.69), which respondents acknowledge but do not view as critical. However, Daoud et al. (2023) link these delays to complex compliance procedures. Overall, with an average mean of 3.20 (interpreted as "High"), respondents see the government funding process as generally functional, though improvements are needed. Scholars like Gleibner et al. (2022) emphasize that addressing unpredictability and delays through better coordination and streamlined systems can enhance the effectiveness of public financial management.

Table 2	Challenges in	n the Budgets	ary Process in ter	rms of External Funding
I able 2.	Chanenges h	n me Duugeta	aly FIOCESS III LEI	This of External Funding

	Statements	Μ	SD	Interpretation
1.	Sufficient guidance is provided to effectively meet	3.28	0.59	Very High
	the stakeholders' specific reporting standards.			
2.	The capacity to meet the stakeholders' conditions	3.31	0.58	Very High
	ensures the smooth release of external funds.			
3.	Strong accountability mechanisms support effective	3.33	0.57	Very High
	management of external funds.			
4.	Excellent coordination among involved agencies	3.34	0.54	Very High
	facilitates efficient release of external funding.			
5.	Consistent stakeholder's policies simplify fund	3.34	0.53	Very High
	disbursement.			
	Overall Mean	3.32		Very High

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

Table 2 highlights strong coordination and consistent policies as key strengths in managing external funding, with the highest-rated statement scoring a mean of 3.34, verbally interpreted as "Very High." This reflects respondents' strong agreement that effective coordination and standardized policies enhance transparency and timely fund disbursement (Gautam, 2020; Kandel et al., 2025). The lowest-rated item, with a mean of 3.28 ("Very High"), relates to providing sufficient guidance and aligning with stakeholder conditions-indicating some challenges in meeting complex stakeholder requirements (Chakhovich & Virtanen, 2023; Balakrishnan, 2024). Overall, the high mean score of 3.32 suggests that external funding processes are generally well-managed, though improvements in stakeholder communication and regulatory alignment could further optimize fund utilization (Nkwinika & Akinola, 2023).

Table 3. Challenges in the Budgetary process in terms of Complexity of Financial Regulation

	Statements	Mean	SD	Interpretation
1.	The university's financial systems are streamlined, enabling staff to effectively manage and track financial activities.	3.33	0.59	Very High

An	nerican Journal of Humanities and Social Sciences	Research	(AJHSSR)	2025
2.	Using financial software and systems enhances clarity and efficiency in financial management.	3.28	0.65	Very High
3.	Simplified financial procedures ensure timely budget approval and implementation.	3.33	0.60	Very High
4.	Staff members receive adequate training to navigate and utilize the financial systems effectively.	3.14	0.69	High
5.	The financial systems at the university are adaptable to evolving budgetary needs and challenges.	3.26	0.63	Very High
	Overall Mean	3.27		Very High

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

The data shows a strong overall agreement (M = 3.27, "Very High") that the university's financial systems are well-organized and capable of handling complex regulations. The highest-rated indicators (M = 3.33) highlight the importance of structured financial systems and simplified procedures in ensuring timely budget approval and effective financial tracking (Attinasi et al., 2024; Zheng, 2022). However, the lowest-rated item (M = 3.14) points to insufficient staff training, suggesting that a lack of continuous financial education may hinder optimal system use (Choudhary & Jain, 2023). While the systems themselves are efficient, improving staff training programs could further strengthen financial management capacity (Abikoye et al., 2024).

Table 4. Challenges in the Budgetary process in terms of Financial Planning Capacity

	Statements	Mean	SD	Interpretation
1.	Financial resources are allocated efficiently due to effective planning.	3.29	0.66	Very High
2.	Personnel involved in financial planning possess adequate training and skills	3.33	0.63	Very High
3.	Integrated financial management systems simplify the planning process.	3.31	0.64	Very High
4.	The financial planning process is well – aligned with government regulations.	3.40	0.60	Very High
5.	Stable staff composition ensures continuity in financial planning processes.	3.34	0.65	Very High
	Overall Mean	3.33		Very High

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

The results show strong agreement (overall mean = 3.33, "Very High") that financial planning within the organization is effective and well-aligned with government regulations. The highest-rated statement (M = 3.40) emphasizes compliance with regulatory standards, supporting financial stability and accountability (Fiene, 2023; Yasin & Mokhtar, 2022). However, the lowest-rated item (M = 3.29) highlights room for improvement in the efficient distribution of resources, suggesting that planning processes may benefit from greater adaptability and continuous evaluation (Mittal, 2024; Guangyao et al., 2020). Overall, while financial planning capacity is strong, refining resource allocation could further enhance effectiveness (Aro, 2024).

Innovation in Budgetary Process

Innovation plays a critical role in improving transparency, efficiency, and responsiveness in public financial management. This section highlights key advancements such as digital platforms, participatory budgeting, streamlined documentation, and enhanced inter-agency coordination. These strategies aim to address long-standing challenges and create a more adaptive and effective budgetary system that aligns with the evolving needs of government operations and stakeholder expectations.

		Mean	SD	Interpretation
1.	The university employs advanced digital financial solutions for budgeting, oversight, and reporting activities	3.16	0.68	High
2.	Digital financial solutions have increased the precision and efficiency of financial dealings and record	3.21	0.65	High
3.	Digital tools enable real-time supervision and assessment of budget performance	3.25	0.66	High
4.	Staff members receive training to proficiently utilize digital financial solutions.	3.14	0.67	High
5.	The university consistently explores and implements new digital technologies to enhance financial	3.24	0.67	High
	Overall Mean	3.20		High

Table 5. Innovation in the budgetary process in terms of Technology Adaptation

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

The results indicate a positive perception of technology use in financial management, with the highest-rated aspect being the use of digital tools for real-time budget monitoring (mean = 3.25), emphasizing improved decision-making and oversight. However, the lowest-rated area is staff training in digital financial solutions (mean = 3.14), suggesting a gap in capacity building. With an overall mean of 3.20 ("High"), the findings reflect strong support for technology adaptation, though increased investment in training is needed to maximize its effectiveness.

 Table 8. Innovation in the budgetary process in terms of Support System

	Statements	Mean	SD	Interpretation
1.	Technical support for handling budgetary processes is readily available.	3.31	0.60	Very High
2.	Tools and software provided for budget management are modern and efficient.	3.19	0.66	High
3.	Sufficient administrative staff ensures smooth budgetary processes.	3.36	0.60	Very High
4.	Strong coordination among departments facilitates the budgetary process.	3.34	0.63	Very High
5.	The support system provides timely updates and feedback on budgetary issues.	3.28	0.65	Very High
	Overall Mean	3.29		Very High

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

The study highlights the critical role of a strong support system in budget management. Respondents highly value administrative personnel, as reflected in the highest mean score (3.36) and a "Very High" rating, reinforcing the findings of Ezeh and Ogara (2020) on the importance of well-structured administrative support.

However, budgeting tools and software scored the lowest mean (3.19), suggesting room for technological improvements. This aligns with Budiasih's (2024) assertion that advancements in financial management tools can enhance accuracy and decision-making. Overall, with a mean of 3.29 and a "Very High" rating, the university's budgetary support system is positively regarded, though optimizing digital resources could further strengthen financial efficiency.

	Statements	Mean		Interpretation
1.	The resource allocation process ensures fairness to different offices.	3.25	0.65	Very High
2.	Resource allocation decisions are based on clear performance indicators and data.	3.30	0.70	Very High
3.	The criteria for resource allocation are transparent and clearly communicated.	3.25	0.68	Very High
4.	Key sectors receive adequate funding to meet their needs.	3.25	0.63	Very High
5.	Stakeholders are actively involved in the decision- making process for allocation.	3.23	0.67	High
	Overall Mean	3.26		Very High

Table 6 Innovation in the Budgetary Process in terms of Resource Allocation

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

The study highlights the importance of structured resource distribution, with respondents valuing datadriven financial management, as reflected in the highest mean score (3.30). This supports the findings of Abayasekara & Arunatilake (2018), who emphasized the role of performance metrics in efficient resource allocation. However, stakeholder participation in decision-making received the lowest mean (3.23), suggesting an opportunity to improve inclusivity. This aligns with Ochieng's (2024) perspective that involving stakeholders enhances fairness and effectiveness. With an overall mean of 3.26, rated "Very High," the resource allocation framework is well-regarded, but strengthening stakeholder involvement could further improve transparency and equity.

Outcomes of Innovation in Budgetary Process

In this study, the level of assessment of the respondents in the Outcomes of innovation in budgetary process refers to the Budgetary Accuracy, Efficiency, Stakeholders Satisfaction, and Sustainability of Financial Practices.

	Table 7. Outcomes of Innovation in the budgetary process in terms of Budgetary Accuracy					
	Statements	Mean	SD	Interpretation		
1.	Technology application on the budgetary process has enhanced the accuracy of financial forecasts.	3.31	0.62	Very High		
2.	Advanced tools and techniques have minimized errors in budget projections.	3.27	0.62	Very High		
3.	Flexible budgeting systems help address unexpected financial changes more accurately.	3.34	0.60	Very High		
4.	Digital technology ensures accurate documentation and tracking of budgetary allocations.	3.32	0.60	Very High		
5.	Accuracy of the personnel in proper budget requirement is well executed.	3.35	0.58	Very High		
	Overall Mean	3.32		Very High		

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

The study highlights the role of innovation in budgetary precision, emphasizing the importance of personnel expertise. The highest mean score (3.35) reflects the effectiveness of skilled personnel in ensuring accurate budget implementation, aligning with Alhasnawi et al. (2023), who stressed the significance of human expertise in financial accuracy.

2025

On the other hand, technological advancements in budgeting received the lowest mean score (3.27), indicating that while beneficial, they still require improvements. This supports Bergmann et al. (2020), who argued that budgeting tools need continuous enhancement for optimal accuracy. With an overall mean of 3.32, rated "Very High," the findings suggest that both personnel and technological innovations contribute significantly to budgetary precision, reinforcing the literature on digital transformation in financial management (Ebhota et al., 2024).

	Table 8. Outcomes of Innovation in the budgetary process in terms of Efficiency				
	Statements	Mean	SD	Interpretation	
1.	The innovative budgeting process has reduced delays in the preparation of budgets.	3.30	0.64	Very High	
2.	Deadlines for budget completion are consistently met due to technology applications.	3.29	0.59	Very High	
3.	The new process has streamlined approvals, improving overall timeliness.	3.31	0.58	Very High	
4.	Errors in budgeting are detected and corrected more efficiently.	3.29	0.58	Very High	
5.	Cost-saving measures have been identified and implemented effectively.	3.30	0.60	Very High	
	Overall Mean	3.30		Very High	
17	View High 4.00 2.26 High 2.25 2.51 Madameter 2.50 1.76 Level 1.75 1.00				

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

The table highlights the impact of innovation on budgeting efficiency, with the highest mean score (3.31) indicating that streamlined approval processes enhance timeliness. This aligns with Haleem et al. (2022), who emphasize the role of digital innovation in improving decision-making speed.

However, technology's role in meeting deadlines and detecting errors received the lowest mean (3.29), suggesting ongoing challenges in system integration and human oversight. This supports Mustafa et al. (2024), who argue that technological implementation in budgeting requires continuous refinement. With an overall mean of 3.30, rated "Very High," the findings reinforce the importance of digital tools and structured workflows in optimizing financial management efficiency.

Table 9. Outcomes of Innovation in the budgetary process in terms of Stakeholders Satisfaction

	Statements	Mean		Interpretation
1.	Stakeholders are more engaged and consulted during the budgeting process due to the innovations implemented.	3.19	0.62	High
2.	The innovative budgeting process has improved the clarity of communication among stakeholders.	3.27	0.63	Very High
3.	The process has made the budgetary decision-making more transparent to all stakeholders.	3.25	0.62	High
4.	Stakeholders feel their concerns are better addressed due to the improvements in the budgetary process.	3.27	0.62	Very High
5.	The overall satisfaction of stakeholders with the budgeting process has increased since the introduction of innovations.	3.29	0.61	Very High
	Overall Mean	3.25		High

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75-1.00

The study highlights the impact of budgetary innovations on stakeholder satisfaction. The highest mean score (3.29) suggests that improvements in budgeting processes have enhanced stakeholder trust and engagement, aligning with Gaspar et al. (2022), who emphasized the role of transparency in financial practices.

However, stakeholder engagement in decision-making received the lowest mean score (3.19), indicating that while innovations have improved processes, there is still room for greater participation. This supports

2025

Groenewald et al. (2024), who advocate for continuous consultation. With an overall mean of 3.25, the findings reinforce the positive influence of budgetary innovations on stakeholder satisfaction, supporting literature on participatory budgeting and its role in organizational transparency and accountability (Kraai et al., 2023).

	Statements	Mean		Interpretation
1.	The innovative budgetary process has contributed to the long-term financial stability of the institution	3.34	0.59	Very High
2.	Innovations in the budgeting process have ensured that financial resources are allocated in a way that supports long-term sustainability.	3.36	0.59	Very High
3.	The innovative budgeting practices focus on maximizing the utility of available financial resources	3.36	0.58	Very High
4.	The new budgetary process encourages prudent financial management practices that will benefit future financial planning.	3.38	0.56	Very High
5.	The innovative budgeting process has increased awareness among stakeholders about the importance of financial sustainability.	3.34	0.57	Very High
	Overall Mean	3.36		Very High

Very High 4:00-3:26, High 3.25-2.51, Moderate 2.50-1.76, Low 1.75 -1.00

The study highlights the role of innovative budgeting in promoting financial sustainability. The highest mean score (3.38) underscores the importance of prudent financial management for future planning, aligning with Dalelo et al. (2025), who emphasize strategic financial planning for long-term stability.

Conversely, the lowest mean score (3.34) suggests that while financial sustainability is recognized, further efforts are needed to educate stakeholders and enhance resilience. This supports Alkhodary (2023), who advocates integrating sustainability into strategic planning. With an overall mean of 3.36, rated "Very High," the findings affirm that budgetary innovations positively impact financial sustainability, reinforcing literature on optimizing financial resources and institutional stability (Rotondo et al., 2023). Continuous improvements in budgeting accuracy and resource management remain essential for long-term success.

Relationship between Challenges and Innovations of the Budgetary Process

To test the significant relationship between the assessment of the respondents on the challenges in the budgetary process and the innovation in budgetary process in terms of Technology adaptation, Support system, and Resource allocation they were treated statistically using Real Statistics Data Analysis Tools using the Pearson product moment correlation coefficient.

 Table 11. Significant Relationship between the Assessment of the Respondents on the Challenges and the Innovation in Budgetary Process.

	Challenges	Innovation in budgetary process			
		Technology	Support	Resource	
		adaptation	system	allocation	
Government Allocation	Pearson Correlation Significance	0.5279	0.5533	0.5771	
	(2-Tailed)	0.9771	0.0106	0.1498	
	Ν	176	176	176	
	Analysis	Not Sig	Sig	Not Sig	
External Allocation	Pearson Correlation Significance	0.6953	0.6671	0.6481	
	(2-Tailed)	0.0006	0.4805	0.0836	
	Ν	176	176	176	
	Analysis	Sig	Not Sig	Not Sig	
Complexity of Financial	Pearson Correlation Significance	0.7467	0.7365	0.7336	
Regulation	(2-Tailed)	0.0392	0.3395	0.7462	
	Ν	176	176	176	
	Analysis	Sig	Not Sig	Not Sig	

AJHSSR Journal

American Journ	JHSSR)	2025		
Financial Planning	Pearson Correlation Significance (2-Tailed)	0.7463	0.7541	0.7546
Capacity		0.0000	0.1774	0.0117
	N	176	176	176
	Analysis	Sig	Not Sig	Sig

The study examines how innovations in public budgeting—such as technology adaptation, support systems, and resource allocation—help modernize financial systems, improve transparency, and enhance decision-making.

Findings indicate that government allocation does not significantly impact innovation, suggesting that centralized funding structures may limit institutional autonomy, as noted by Hernes (2021). However, external funding sources show a strong correlation with technology adaptation, supporting Santos et al. (2024), who argue that donor assistance and private partnerships encourage digital advancements.

Financial regulation complexity also influences technology adoption, with institutions leveraging digital solutions to ensure compliance, aligning with Thanasas et al. (2025). Additionally, financial planning capacity plays a crucial role in driving innovation, enabling institutions to efficiently allocate resources and adopt modern practices, as highlighted by Mittal (2024).

Overall, the study underscores the importance of institutional readiness in fostering budgetary innovation. While external support and regulatory complexity can drive change, strong financial planning remains the key factor in sustaining adaptive and efficient financial management. These insights can help policymakers design strategies that enhance planning capacity and promote innovation in public budgeting.

Effect in the assessment of the respondents in the innovations of the budgetary process for the outcomes of innovation

Table 12 presents the results of the regression analysis conducted to test the effect of innovations in the budgetary process—specifically technology adaptation, support systems, and resource allocation—on various outcomes of innovation such as budgetary performance, accuracy, efficiency, and stakeholder involvement. This analysis aims to determine the extent to which these innovation factors significantly influence the effectiveness and success of the budgetary process outcomes.

Innovation in the Budgetary	Outcomes of	Beta	T – value	P - value
Process	Innovation	Coefficient		
Technology Adaptation	Budgetary Accuracy	0.3031	4.5519	< 0.0001
Support System		0.3916	5.037	< 0.0001
Resource Allocation		0.1787	2.7633	0.0063
Technology Adaptation		0.0499	0.7825	0.4350
Support System	Efficiency	0.497	6.670	< 0.0001
Resource Allocation		0.3242	5.2282	< 0.0001
Technology Adaptation	Stakeholders	0.1107	1.5794	0.1161
Support System	Satisfaction	0.3545	4.3308	< 0.0001
Resource Allocation		0.4343	6.3763	< 0.0001
Technology Adaptation	Sustainability	0.086	1.1887	0.2362
Support System	Financial Resources	0.369	4.369	< 0.0001
Resource Allocation		0.3529	5.0215	< 0.0001

Table 12. Test of the Effect of Innovation in the Budgetary Process on the Outcomes of the Innovation

The regression analysis presented reveals how innovations in the budgetary process affect various organizational outcomes. Specifically, budgetary accuracy is significantly influenced by Technology Adaptation ($\beta = 0.3031$, p < 0.0001), Support System ($\beta = 0.3916$, p < 0.0001), and Resource Allocation ($\beta = 0.1787$, p = 0.0063), with Support System emerging as the strongest predictor. This finding supports the assertion of Ziorklui et al (2024), who emphasized that internal mechanisms are critical in enhancing accuracy and reducing errors in public financial planning.

2025

In terms of efficiency, both Support System ($\beta = 0.497$, p < 0.0001) and Resource Allocation ($\beta = 0.3242$, p < 0.0001) have significant and positive effects, while Technology Adaptation does not present a statistically significant result ($\beta = 0.0499$, p = 0.4350). This aligns with the work of Bueno et al. (2024), who argue that effective institutional support structures and the strategic allocation of financial resources are more impactful in optimizing operational efficiency than mere technological improvements, especially in resource-constrained public sectors.

Stakeholders' satisfaction is also significantly influenced by Support System ($\beta = 0.3545$, p < 0.0001) and Resource Allocation ($\beta = 0.4343$, p < 0.0001), while Technology Adaptation again shows no significant effect ($\beta = 0.1107$, p = 0.1161). This reinforces the findings of Häberlein and Hövel, (2023) who highlight the role of inclusive governance and responsive budgeting practices in building trust and meeting the expectations of both internal and external stakeholders. Stakeholder satisfaction tends to increase when there is transparency in resource distribution and when support systems ensure that voices are heard in the budgeting process.

In terms of financial sustainability, the analysis shows that Support System ($\beta = 0.369$, p < 0.0001) and Resource Allocation ($\beta = 0.3529$, p < 0.0001) are again the most influential. This supports the view of Duchek (2020), who suggest that building organizational resilience and long-term financial viability is more about strengthening human systems than relying solely on technical upgrades.

Overall, the analysis highlights a key insight: while technology serves as a useful tool in the budgeting process, it is the human-centered strategies that most significantly drive positive outcomes in public higher education institutions. As supported by Hong et al. (2022), true innovation in the public sector lies in people, processes, and policies—not just in implementing new technologies.

V. CONCLUSION

The study examined challenges and innovations in the budgetary process of one state university, revealing a significant relationship between financial difficulties and the adoption of innovative practices. Institutions facing challenges tend to implement creative solutions to improve financial management, leading to the rejection of the null hypothesis.

Findings indicate that improvements in budgeting systems and resource distribution significantly impact budget outcomes, reinforcing the importance of structured financial strategies for sustainability

VI. ACKNOWLEDGEMENT

Without the assistance and direction of numerous individuals and organizations, this project would not have been feasible, and the researcher is incredibly grateful for that. Above all, **ALMIGHTY GOD**, for providing her with the wisdom, resilience, and determination necessary to complete my study.

LAGUNA STATE POLYTECHNIC UNIVERSITY, for its support and inspiration throughout this study. Her heartfelt appreciation is extended to HON. DR. MARIO R. BRIONES, Laguna State Polytechnic University President, Vice-Chairman of the LSPU Board of Regents (BOR), and Panel Chairman, for his invaluable assistance. She also expresses her gratitude to the officials and Campus Directors of Laguna State Polytechnic University: Atty. RUSHID JAY S. SANCON, Engr. BELTRAN P. PEDREGAL, Engr. MANUEL R. ALVAREZ and Prof. JOEL M. BAWICA for their unwavering encouragement and continued support. MARY JANE D. FUENTES, DPA, Dean of the College of Business Administration and Accountancy, contributed her knowledge, tireless efforts, encouragement, and support. CHESTER ALEXIS C. BUAMA, **PhD**, her thesis adviser, for his invaluable advice, support, and expertise, which helped shape this research and ensure its academic integrity. His guidance and dedication were vital to its success. BAYANI A. GUIA. MBA. subject specialist, for his knowledge, direction, and priceless insights, significantly enhances the study's precision and depth. REGINA E. GLORIA, EdD, for her knowledge and careful editing which ensured the paper met high the highest academic and technical standards. MARIE ANN S. GONZALES, PhD, internal statistician, and BENJAMIN O. ARJONA, EdD, external statistician, for giving their knowledge and expertise in data statistical analysis. Prof. NIMFA D. DIMACULANGAN, PhD, deserves appreciation for her thorough language editing, which enhances the paper's coherence, clarity, and scholarly tone. Her patience, meticulous attention to detail, and constructive criticism greatly benefited this work. IMEE PRESCILLA P. SANCHEZ, **PhD**, for giving her valuable time, expertise, and insightful feedback, which greatly improved the quality and integrity of this study. She would also like to extends heartfelt thanks to Ms. GLAIZA CALUBIRAN for her constant support, which is always just a phone call away, and to Mrs. MARIBEL P. LAT, her mentor, boss, and

2025

friend for her steadfast guidance and support. She has greatly benefited from their kindness and assistance along this journey. Finally, she expresses her gratitude to everyone who helped make this study a success in any manner. The author will always be thankful for everybody's priceless support.

REFERENCES

- [1] Alazzeh, D. A. (2020). Three essays on Self-Government Accounting Practices under Settler Colonialism: A Case study from Palestine (Doctoral dissertation, University of Essex).
- [2] Acido, J., & Kilongkilong, D. (2022). Resource Management Practices Towards Sustainable Support System During Pandemic. International Journal of Educational Management and Development Studies, 3, 19-42. <u>https://doi.org/10.53378/352930</u>
- [3] Abikoye, B. E., Umeorah, S. C., Adelaja, A. O., Ayodele, O., & Ogunsuji, Y. M. (2024). Regulatory compliance and efficiency in financial technologies: Challenges and innovations. World Journal of Advanced Research and Reviews, 23(1), 1830-1844.
- [4] Adebayo, Y., Ikevuje, A. H., Kwakye, J., & Esiri, A. (2024). Balancing Stakeholder Interests in Sustainable Project Management: A Circular Economy Approach. GSC Advanced Research and Reviews, 20, 286-297. <u>https://doi.org/10.30574/gscarr.2024.20.3.0354</u>
- [5] Alhasnawi, M. Y., Said, R. M., Daud, Z. M., & Muhammad, H. (2023). Enhancing managerial performance through budget participation: Insights from a two-stage A PLS-SEM and artificial neural network approach (ANN). Journal of Open Innovation: Technology, Market, and Complexity, 9(4), 100161.
- [6] Alkhyyoon, H., Abbaszadeh, M. R., & Zadeh, F. N. (2023). Organizational Risk Management and Performance from the Perspective of Fraud: A Comparative Study in Iraq, Iran, and Saudi Arabia. Journal of Risk and Financial Management, 16(3), 205.
- [7] Alkhodary, D. (2023). Integrating sustainability into strategic management: a path towards long-term business success. International Journal of Professional Business Review, 8(4), 39.
- [8] Aro, O. E. (2024). Predictive Analytics in Financial Management: Enhancing Decision-Making and Risk Management. International Journal of Research Publication and Reviews, 5(10), 2181-2194.
- [9] Arulsamy, A. S., Singh, I., Kumar, M. S., Panchal, J. J., & Bajaj, K. K. (2023). Employee training and development enhancing employee performance–A study. Samdarshi, 16(3), 1-11.
- [10] Attinasi, M. G., et al. (2024). Navigating a fragmenting global trading system: insights for central banks.
- [11] Augustin, L., & Martin, T. (2022). Financial literacy and the level of financial planning individuals use. Financial Services Review, 30, 205-222. <u>https://doi.org/10.61190/fsr.v30i3.3486</u>
- [12] Bai, H. (2021). Role of digital technology in transforming organizational competencies influencing green economy: moderating role of product knowledge hiding. Frontiers in Psychology, 12, 792550.
- [13] Balakrishnan, A. (2024). Leveraging artificial intelligence for enhancing regulatory compliance in the financial sector. International Journal of Computer Trends and Technology.
- [14] Bergmann, M., Brück, C., Knauer, T., & Schwering, A. (2020). Digitization of the budgeting process: determinants of the use of business analytics and its effect on satisfaction with the budgeting process. Journal of Management Control, 31(1), 25-54.
- [15] Bhattacharjee, S., Jain, V., & Dutt, P. (2020). Technological Innovations and Budgeting Practices: A Review. International Journal of Business and Management Studies, 12(2), 143–154.
- [16] Bayer, M., & Winkelmann, A. (2019). Zero-Based Budgeting as an Approach to Budgetary Reforms in the Public Sector. International Journal of Public Administration, 42(4), 354-366.
- [17] Bonini, C., Hausman, W., & Bierman, H. (1997). Quantitative analysis for management. New York, NY: McGraw-Hill.
- [18] Brankovic, J. (2018). The status games they play: Unpacking the dynamics of organisational status competition in higher education. Higher Education, 75(4), 695–709. <u>https://doi.org/10.1007/s10734-017-0169-2</u>
- [19] Budiasih, Y. (2024). The influence of digital technology on financial management. Accounting Studies and Tax Journal (COUNT), 1(1), 92-100.
- [20] Bueno, L. A., et al. (2024). Impacts of digitization on operational efficiency in the banking sector. Thematic analysis and research agenda proposal. International Journal of Information Management I Insights, 4(1), 100230.
- [21] Butt, J. (2020). A conceptual framework to support digital transformation in manufacturing using an integrated business process management approach. Designs, 4(3), 17.
- [22] Cardoş, V. (2014). Budget Evolution Background, Traditional and Alternative Methods. Annals of the University of Petrosani, Economics, 14(2), 49-56.

- [23] Carol, M., Fabrao, C., & Pacadaljen, L.M. (2024). Research Article A reflection of financial stewardship in schools through fiscalizing behaviors of school heads in Samar, Philippines. Environment and Social Psychology. <u>http://dx.doi.org/10.59429/esp.v9i10.3165</u>
- [24] Carpenter, Daniel, and George A. Krause. 2015. "Transactional Authority and Bureaucratic Politics." Journal of Public Administration Research and Theory 25 (1): 5–25. https://doi.org/10.1093/jopart/muu012.
- [25] Chakhovich, T., & Virtanen, T. (2023). Accountability for sustainability–An institutional entrepreneur as the representative of future stakeholders. Critical Perspectives on Accounting, 91, 102399.
- [26] Chen, Y., Zhang, Y., Chen, H., & Liu, Y. (2021). Traditional Budgeting, Enterprise Information Technology Investment and Financial Performance. Journal of Physics: Conference Series, 1950(1), 012042.
- [27] Choudhary, H., & Jain, H. (2023). Addressing financial exclusion through financial literacy training programs: a systematic literature review. Empirical Research in Vocational Education and Training, 15(1), 8.
- [28] Choudhury, S., Kulkarni, U., & Kaur, H. (2019). Cloud-Based Budgeting Platforms: A Review. International Journal of Management, 10(2), 184–191.
- [29] Coleman, James Samuel. 1990. Foundations of Social Theory. Cambridge, Mass.: Harvard University Press.
- [30] Commission on Higher Education (CHED). (2022). State Universities and Colleges (SUCs) Budget Reports. Commission on Higher Education, Philippines.
- [31] Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mix methods approaches (5th ed.). SAGE Publications. https://doi.org/10.4135/9781506386706
- [32] Dalelo, D., Amare, M., & Chinasho, G. (2025). Strategic plan formulation process in the secondary schools of sodo town administration, Wolaita Zone, Ethiopia. Social Sciences & Humanities Open, 11, 101315.
- [33] Daoud, A. O., El Hefnawy, M., & Wefki, H. (2023). Investigation of critical factors affecting cost overruns and delays in Egyptian mega 326-334.
- [34] Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. Business research, 13(1), 215-246.
- [35] Ebhota, O. S., Hongxing, Y., & Sampene, A. K. (2024). Investigating the influence of digital transformation, budgeting and budgetary control on the financial performance of SMEs. Scientific African, 26, e02429.
- [36] Espela, D. F., Digo, G. S., Dayson, C. J. P., Borabo, J. G., & Arevalo, C. M. E. (2025). Financial Management Practices of School Heads in Non-Fiscally Autonomous Secondary Schools in Sorsogon, Philippines. Indonesian Journal of Education Research (IJoER), 6(1), 68-76.
- [37] Ezeh, C. R., & Ogara, P. I. (2020). Impact of financial management on effective school administration in Enugu education zone. British International g b Journal of Education And Social Sciences, 7(6), 1-15
- [38] Fiene, R. (2023). The Importance of the Theory of Regulatory Compliance. Available at SSRN 4597469.
- [39] Fink, A. (2017). How to conduct surveys: A step-by-step guide (6th ed.). SAGE Publications. https://doi.org/10.4135/9781483398091
- [40] Frolich, N., Stensaker, B., Huisman, J., & Enders, J. (2017). Understanding strategy practices in universities. In B. Ivar & B. Lepori (Eds.), Managing universities: Policy and organizational change from a Western European comparative perspective (pp. 167–188). Springer International Publishing. <u>https://doi.org/10.1007/978-3-319-53865-5_7</u>
- [41] Gaspar, M. R., Gabriel, J. P., Manuel, M. B., Ladrillo, D. S., Gabriel, E. R., & Gabriel, A. G. (2022). Transparency and accountability of managing school financial resources. Journal of Public Administration and Governance, 12(2), 102.
- [42] Gautam, A. (2020). Role of coordination in effective public service delivery system. Journ Public Administration and Governance, 10(3), 158- 201.
- [43] Gleibner, W., Gunther, T. & Walkshausl, C. (2022). Financial sustainability: measurement and empirical evidence. J Bus Econ 92, 467–516.https://doi.org/10.1007/s11573-022-01081-0
- [44] Groenewald, E. S., Rabillas, A. R., Uy, F. T., Kilag, O. K. T., Bugtai, G. S., & Batilaran, J. A. (2024).
 Enhancing Financial Management Practices in in Southeast Asia.

- 2025
- [45] Guangyao, B., Chanphong, S., & Jirrojpinyo, N. (2024). Optimization Efficiency Resources Organization in New Era of Universities in Jilin Province. Journal of Roi Kaensarn Academi, 9(9), 1279-1292.
- [46] Häberlein, L., & Hövel, P. (2023). Importance and necessity of stakeholder engagement. In Ethics and responsible research and innovation in practice: The ethna system project (pp. 38-53). Cham: Springer Nature Switzerland.
- [47] Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. Sustainable operations and computers, 3, 275-285.
- [48] Hall, A. T., and Gerald R. F. 2010. "Accountability and Extra Role Behavior." Employee Responsibilities and Rights Journal 23 (2): 131–44. https://doi.org/10.1007/s10672-010-9148-9.
- [49] Harris Sr, C. E. (2023). Public Private Partnerships in Infrastructure: A Study on Performance and Equity Improvement (Doctoral dissertation, Northcentral University).
- [50] Hernes, V. (2021). The case for increased centralization in integration governance: the neglected perspective. Comparative Migration Studies, 9(1), 32.
- [51] Hofstede, G (1968). The game of budget control. London: Tavistock Publications Limited.
- [52] Hong, Le. (2023). Research on financial autonomy and financial management in public higher education. International journal of business, economics & management. 6. 112-122. 10.21744/ijbem.v6n2.2126
- [53] Hong, S., Kim, S. H., & Kwon, M. (2022). Determinants of digital innovation in the public sector. Government Information Quarterly, 39(4), 101723.
- [54] Hua, W. (2024). University Financial Management Optimization Based On Financial Shared Services Theory-A Case Study of Hechi College (Doctoral Dissertation, Siam University).
- [55] Islam, R., Patamsetti, V., Gadhi, A., Gondu, R. M., Bandaru, C. M., Kesani, S. C., & Abiona, O. (2023). The future of cloud computing: benefits and challenges. International Journal of Communications, Network and System Sciences, 16(4), 53-65.
- [56] Jilke, S., Asmus L. O., William R., and Saba S. (2019). "Microbrook, Mesobrook, Macrobrook." Perspectives on Public Management and Governance 2 (4): 245–53.
- [57] Kandel, M., Joshi, R. D., & Pokhrel, M. (2025). Enhancing Financial Accountability in NGOs through Effective Accounting Systems and Transparency: A Case Study from Gorkha, Nepal. NPRC Journal of Multidisciplinary Research, 2(1), 127-141.
- [58] Kelvine, E. C., & Ogala, E. (2024). East African Scholars Journal of Engineering and Computer Sciences. http://dx.doi.org/10.36349/easjecs.2024.v02i05.00X.
- [59] Kenno, Staci & Lau, Michelle & Sainty, Barbara & Boles, Bryan. (2020). Budgeting, strategic planning and institutional diversity in higher education. Studies in Higher Education. 46. 1-15. 10.1080/03075079.2019.1711045.
- [60] Kim, C. J. (2020). Toward Better Fiscal Governance in Asia and the Pacific.
- [61] Kraai, S., Ndevu, Z., & Matsiliza, N. (2023). Participatory budgeting to foster inclusivity, transparency, and accountability in local government: A case study of the City of Ekurhuleni metropolitan municipality of South Africa. African Journal of Public Affairs, 14(1), 63-88.
- [62] Kunwar, M., 2019. Artificial intelligence in finance: Understanding how automation and machine learning is transforming the financial industry.
- [63] Langfield Smith, K., & Smith, A. (2020). Zero Based Budgeting: A Modern Approach to Budgeting. Journal of Management Accounting Research, 32(1), 57-68.
- [64] LaRiviere, K. E. (2024). The Certainty of Navigating the Uncertain: Resource Allocation Decisions of Business School Deans at Public and Private Research Universities (Doctoral dissertation, University of Maryland, College Park).
- [65] Li, Y., Gao, Y., & Wang, S. (2022). The Impact of Cloud Based Budgeting Platforms on Or izational Performance. Journal of Management Information Systems, 39(1), 187-213.
- [66] Manasan, R.G., & Revilla, M.L. (2015). Assessment of Sources and Utilization of Funding of State Universities and Colleges.
- [67] Manasan, R. and D. Parel. 2015. Review and Assessment of Programs Offered by State Universities and Colleges. Philippine Institute for Development Studies.
- [68] Mittal, S. (2024). Innovative costing methodology for strategic financial planning and resource allocation: Navigating budgetary constraints to drive sustainable growth and business leadership. In Proceedings of The International Conference on Applied Research in Management, Economics and Accounting (Vol. 1, pp. 1-11).
- [69] Musselin, C. (2018). New forms of competition in Higher Education. Socio- Economic Review, 16(3), 657–683. <u>https://doi.org/10.1093/ser/mwy033</u>

- [70] Mustafa, F., Nguyen, H. T. M., & Gao, X. A. (2024). The challenges and solutions of technology integration in rural schools: A systematic literature review. International Journal of Educational Research, 126, 102380.
- [71] Niederman, F., 2021. Project management: openings for disruption from AI and advanced analytics. Information Technology & People, 34(6), pp.1570-1599.
- [72] Nkwinika, E., & Akinola, S. (2023). The importance of financial management in small and medium-sized enterprises (SMEs): an analysis of challenges and best practices. Technology audit and production reserves, 5(4 (73)), 12-20.
- [73] Nguyen, T. T. T. (2024). Toward Financial Optimization: Assessing the Influence of Budget Process on Effective Accounting Management. Management Dynamics in the Knowledge Economy, 12(2), 116-132. DOI 10.2478/mdke-2024-0008.
- [74] Nyimbili, F. & Nyimbili, L. (2024). Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies. British Journal of Multidisciplinary and Advanced Studies. 5. 90-99. 10.37745/bjmas.2022.0419.
- [75] Ochieng, M. (2024). Enhancing Digital Transformation Success in Education through Effective Stakeholder Engagement Strategies (Doctoral dissertation, Walden University).
- [76] Pavlovic, M., Gligoric, C., Zdravkovic, F., & Pavlovic, D. (2024). Revolutionizing management accounting: the role of artificial intelligence in predictive analytics, automated reporting, and decision-making. Business & Management Compass, 68(4), 23-42.
- [77] Peng, Y., Ahmad, S.F., Ahmad, A.Y.B., Al Shaikh, M.S., Daoud, M.K. and Alhamdi, F.M.H., 2023. Riding the waves of artificial intelligence in advancing accounting and its implications for sustainable development goals. Sustainability, 15(19), p.14165.
- [78] Perkins, J. (2022). The Kernel-Up Polycentric Model: A Modular, Community-Based Urban Development Framework. University of Washington.
- [79] Petrie, M., & Petrie, M. (2021). The evolution of green budgeting. Environmental Governance and Greening Fiscal Policy: Government Accountability for Environmental Stewardship, 61-108.
- [80] Pfeffer, J., & Salancik, G. R. 2003. The external control of organizations: A resource dependence perspective: Stanford, CA: Stanford University Press
- [81] Ramos, Rudina May & Lumapenet, Husna. (2023). Fiscal Management Practices and Program Performance of State Universities and Colleges in the Philippines. Migration Letters. 20. 1741-8992.
- [82] Rana, Juwel & Luna Gutierrez, Patricia & Oldroyd, John. (2021). Quantitative Methods. 10.1007/978-3-319-31816-5_460-1.
- [83] Renfors, P. (2018). Budgeting: Traditional Better and Beyond Characteristics and Functions. Journal of Modern Accounting and Auditing, 14(3), 103-117.
- [84] Rosário, A. T. (2024). How Artificial Intelligence Can Help Accounting in Information Management. In Artificial Intelligence Approaches to Sustainable Accounting (pp. 65-92). IGI Global.
- [85] Rotondo, F., Giovanelli, L., & Ezza, A. (2023). Implementing sustainable innovation in state universities: Process and tools. Journal of Cleaner Production, 391, 136163.
- [86] Rubin, I. (1988). New directions in budget theory. New York, NY: State University of New York Press.
- [87] Saliterer, I. (2018). The Development of Budgeting: From Traditional to Modern Techniques. European Research Studies Journal, 21(2), 524-544.
- [88] Santos, A. M., Cincera, M., & Cerulli, G. (2024). Sources of financing: Which ones are more effective in innovation–growth linkage? Economic systems, 48(2), 101177.
- [89] Sarkar, Shakhawat. (2013). Challenges of Quality Higher Education in Bangladesh: A Study on Public Universities. 4. 151-160.
- [90] Sarkar, Shakhawat Hossain; Hossain, Syed Zabid. (2016). Budgetary Challenges of Higher Education: Evidence from Bangladesh. Journal of Education and Practice. Vol.7, No.12 ISSN 2222-1735 (Paper) ISSN 2222-288X
- [91] Schillemans, Thomas. 2016. "Calibrating Public Sector Accountability: Translating Experimental Findings to Public Sector Accountability." Public Management Review 18 (9): 1400–1420. https://doi.org/10.1080/14719037.2015.1112423.
- [92] Segun-Falade, O. D., Osundare, O. S., Kedi, W. E., Okeleke, P. A., Ijomah, T. I., & Abdul-Azeez, O. Y. (2024). Assessing the transformative impact of cloud computing on software deployment and management. Computer Science & IT Research Journal, 5(8).
- [93] Shawe, R. (2023) Budget and Organization Management. Open Journal of Business and Management, 11, 910-919. doi: 10.4236/ojbm.2023.113049.
- [94] Smith, J., Johnson, L., & Davis, K. (2020). The Use of Traditional Budgeting in Contemporary Organizations. Journal of Modern Accounting and Auditing, 16(8), 1277-1286.

- [95] Smith, R. L. (2024). Financial Management of Historical Black Colleges and Universities: A Modified Delphi Study (Doctoral dissertation, University of Phoenix).
- [96] Stachowiak Kudla, M., & Kudla, J. (2017). Financial regulations and the diversification of funding sources in higher education institutions: Selected European experiences. Studies in Higher Education (Dorchester-On-Thames), 42(9), 1718–1735. Online https://doi.org/10.1080/03075079.2015.1119109.
- [97] Sonjaya, Y. (2024). Exploring the Evolution of Budgeting Practices from Traditiona¹ to Technology. Advances in Management & Financial Reporting, 2(1), 36-45. https://doi.org/10.60079/amfr.v2i1.265
- [98] Taiwo, I. B., Idowu, K. A., & Adeneye, Y. B. (2021). Exploring the financial accountability and transparency of the treasury single account policy-a qualitative study. International Journal of Sustainable Strategic Management, 9(2), 139-160.
- [99] Thanasas, G. L., Kampiotis, G., & Karkantzou, A. (2025). Enhancing Transparency and Efficiency in Auditing and Regulatory Compliance with Disruptive Technologies. Theoretical Economics Letters, 15(1), 214-233.
- [100] Tsyhaniuk, Dmytro & Akenten, Wiafe. (2021). Examining Budgeting and Fund Allocation in Higher Education. Financial Markets, Institutions and Risks. 5. 10.21272/fmir.5(4).128-138.2021.
- [101] Uña, G., & Pimenta, C. (2016). "Chapter 7. Integrated Financial Management Information Systems in Latin America: Strategic Aspects and Challenges". In *Public Financial Management in Latin America*. USA: Inter-American Development Bank. Retrieved Jan 24, 2025, from https://doi.org/10.5089/9781597822268.071.ch007
- [102] World Bank. (2019). World Development Report: The Changing Nature of Work. World Bank Publications.
- [103] Xuan T.H. Impacts of Financial Management on Innovation and Efficiency of Higher Education in Vietnam-- Palarch's Journal of Archaeology of Egypt/Egyptology 19(1), 1697-1718. ISSN 1567-214x.
- [104] Yasin, H., & Mokhtar, M. (2022). Accountability and Transparency in Financial Management among Secondary School Principals. Sciences, 12(10), 2260-2269.
- [105] Young, M., Sorensen, M., Bloch, C., & Degn, L. (2017). Systemic rejection: Political pressures seen from the science system. Higher Education [00181560],74(3), 491–505. https://doi.org/10.1007/s10734-016-0059-z
- [106] Zheng, Y. (2022). Research on Speeding up Local Budget Execution Performance Audit-A Case Study of City S. Academic Journal of Business & Management, 4(11), 1-6.
- [107] Ziorklui, J. E. K., Ampofo, F. O., Nyonyoh, N., & Antwi, B. O. (2024). Effectiveness of internal controls mechanisms in preventing and detecting fraud. Finance & Accounting Research Journal, 6(7), 1259-1274.