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Budgetary Challenges, Financial Innovations, and Budget Management Efficiency of Occidental Mindoro State College

Myra Gatmaitan Somintac*
Graduate School, Occidental Mindoro State College, San Jose, Occidental Mindoro, Philippines

***Abstract*: This study employed a descriptive correlational research design to examine the relationship among budgetary challenges, financial innovations, and budget management efficiency at Occidental Mindoro State College (OMSC). The descriptive component assessed stakeholders' perceptions of these variables, while the correlational component analyzed their interrelationships. Five key stakeholder groups, which include the budget staff, campus administrators, faculty, finance personnel, and students were purposively selected and proportionally represented through stratified sampling. Findings indicate that OMSC experience moderate budgetary challenges, mainly due to delayed government fund release, complex financial regulations, and limited planning capacity. Despite these constraints, the institution demonstrates high adoption of financial innovations, such as digital budgeting systems, performance-based budgeting, stakeholder engagement, and revenue diversification. Consequently, budget management efficiency is high, particularly in transparency, accountability, monitoring, and control. Correlation and regression analyses reveal that internal factors, especially financial planning capacity and stakeholder involvement, significantly enhance efficiency, whereas funding-related challenges have minimal effect. The study highlights that financial innovations and strong internal planning are key drivers of effective budget management at OMSC.**

***Keywords*: Budget efficiency, budget innovation, public budget challenges, higher education institutions.**

1. Introduction

Higher education institutions worldwide face mounting financial pressures from rising enrolments, inflation, and increasing expectations for research and development. In the Philippines, State Universities and Colleges (SUCs) like Occidental Mindoro State College (OMSC) depend primarily on the General Appropriations Act (GAA) for funding. Although appropriations for OMSC increased from Php. 552.1 million (FY 2023) to Php. 642.4 million (FY 2025), this growth remains insufficient to address key institutional needs in infrastructure, research capacity, and faculty development (DBM, 2025; Flores, Bayudan and Dacuycuy, 2025).

Bureaucratic processes inherent in procurement and fund disbursement further compound these challenges, creating delays that reduce operational efficiency. In response, institutions such as OMSC have adopted financial innovations digital budgeting systems, performance-based budgeting, stakeholder engagement, and revenue diversification to mitigate funding constraints and improve resource management (Rivera and Malinay, 2025; OECD, 2020). The success of these innovations depends on institutional capacity, staff training, and adaptability to evolving financial management practices.

This study aimed to determine the level of budgetary challenges faced by OMSC; identify the extent of financial innovations adopted; determine the level of budget management efficiency; assess significant relationships between the independent variables and budget management efficiency; and identify which dimensions significantly predict budget management efficiency.

2. Materials and Method

A. Research Design and Setting

A descriptive-correlational research design was employed, appropriate for examining relationships among variables without manipulation. The descriptive component characterized levels of budgetary challenges, financial innovations, and budget management efficiency, while the correlational component analyzed their interrelationships. The study was conducted across OMSC's six campuses in Occidental Mindoro: OMSC Main, OMSC San Jose, OMSC Murtha, OMSC Sablayan, OMSC Mamburao, and OMSC Lubang campuses.

B. Respondents and Instrument

Using stratified sampling using a Raosoft calculator, 72 respondents were selected from a population of 88, drawn from five stakeholder groups: budget staff, campus administrators, faculty, finance staff, and students. A researcher-designed structured survey questionnaire with four parts assessed budgetary challenges, financial innovations, and budget management efficiency using a 5-point Likert scale (1 = Strongly Disagree/Almost Never to 5 = Strongly Agree/Almost Always). The instrument was validated by institutional experts. Cronbach's alpha per section ranged from 0.901 to 0.987, with an overall $\alpha = 0.956$, indicating very high reliability.

*Corresponding author: myrasomintac@gmail.com

C. Statistical Treatment

Descriptive statistics (mean and standard deviation) characterized respondents' perceptions. Pearson correlation tested relationships between variables, and multiple regression analysis determined predictive power. Mean scores were interpreted as: 1.00–1.49 (Very Low), 1.50–2.49 (Low), 2.50–3.49 (Moderate), 3.50–4.49 (High), and 4.50–5.00 (Very High).

3. Results

A. Budgetary Challenges

Table 1
Summary of budgetary challenges faced by OMSC

Indicator	Mean	SD	Interpretation
Government Allocation	2.95	1.06	Moderate
External Funding Allocation	2.94	1.14	Moderate
Complex Financial Regulations	2.79	0.994	Moderate
Financial Planning Capacity	2.89	0.938	Moderate
Grand Weighted Mean	**2.89**	**1.034**	**Moderate**

Scale: 1.00–1.49 Very Low; 1.50–2.49 Low; 2.50–3.49 Moderate; 3.50–4.49 High; 4.50–5.00 Very High

OMSC faces a moderate overall level of budgetary challenges (Grand Weighted Mean = 2.89, SD = 1.034). Table 1 summarizes performance across four dimensions. Government allocation emerged as the highest-rated challenge dimension (mean = 2.95), primarily driven by delays in the release of allocated funds (mean = 3.14) and frequent postponements in funding approvals (mean = 3.07). External funding allocation (mean = 2.94) was similarly strained by inconsistent stakeholder policies (mean = 3.28) and loose inter-agency coordination (mean = 3.13), which complicate the disbursement and management of externally sourced funds. Complex financial regulations (mean = 2.79) posed challenges through the absence of simplified financial procedures (mean = 3.18) and inadequate staff training (mean = 2.93), which slow budget approvals and reduce operational efficiency. Financial planning capacity (mean = 2.89) was most constrained by high staff turnover (mean = 3.17) and the absence of integrated financial management systems (mean = 3.15), both of which disrupt planning continuity. Across all four dimensions, challenges are systemic rather than acute, reflecting structural inefficiencies embedded in the institution's regulatory environment and internal capacity rather than episodic resource shortfalls.

B. Financial Innovations Adopted

Table 2
Summary of financial innovations adopted by OMSC

Indicator	Mean	SD	Interpretation
Digital Budgeting Systems	3.72	0.669	High
Performance-Based Budgeting	4.21	0.524	High
Stakeholder Involvement	4.18	0.658	High
Revenue Diversification	4.27	0.642	High
Grand Weighted Mean	**4.10**	**0.623**	**High**

Scale: 1.00–1.49 Very Low; 1.50–2.49 Low; 2.50–3.49 Moderate; 3.50–4.49 High; 4.50–5.00 Very High

OMSC demonstrates a high overall extent of financial innovation adoption (Grand Weighted Mean = 4.10, SD = 0.623), as summarized in Table 2. Revenue diversification achieved the highest rating (mean = 4.27), reflecting OMSC's proactive pursuit of income-generating projects (mean = 4.36) and external partnerships (M = 4.33) to reduce reliance on government appropriations. Performance-based budgeting (mean = 4.21) was notable for its role in improving accountability (mean = 4.31) and aligning budget allocations with measurable performance outcomes (mean = 4.29), demonstrating that OMSC has institutionalized results-oriented financial governance. Stakeholder involvement (mean = 4.18) underscores the institution's inclusive budgeting practices, with collaboration among administrators, faculty, and stakeholders identified as the top driver of quality budget decisions (mean = 4.26). Digital budgeting systems, while the lowest rated among the four dimensions (mean = 3.72), nonetheless reflect consistent institutional investment in real-time financial monitoring (mean = 3.85) and digital technology adoption (mean = 3.82). The relative gap in digital adoption compared to other dimensions suggests that while OMSC has embraced technological tools, full integration and staff proficiency remain areas for development.

C. Budget Management Efficiency

Table 3
Summary of budget management efficiency

Indicator	Mean	SD	Interpretation
Budget Formulation	4.39	0.613	High
Budget Execution	4.27	0.654	High
Monitoring and Control	4.53	0.508	Very High
Transparency and Accountability	4.56	0.529	Very High
Revenue Management	4.50	0.556	Very High
Grand Weighted Mean	**4.45**	**0.572**	**High**

Scale: 1.00–1.49 Very Low; 1.50–2.49 Low; 2.50–3.49 Moderate; 3.50–4.49 High; 4.50–5.00 Very High

OMSC consistently demonstrates high to very high budget management efficiency across all dimensions, with a Grand Weighted Mean of 4.45 (SD = 0.572), as detailed in Table 3. Transparency and accountability attained the highest rating (mean = 4.56, Very High), reflecting OMSC's exceptional compliance with audit and reporting standards (mean = 4.64) and its commitment to accessible budget documentation (mean = 4.58). Monitoring and control also achieved a very high rating (mean = 4.53), driven by regular budget monitoring (mean = 4.61), consistent financial reporting (mean = 4.61), and robust internal controls (mean = 4.51), confirming that OMSC's oversight mechanisms are proactive and systematic. Revenue management (mean = 4.50, Very High) demonstrated the institution's effectiveness in internally generated revenue collection (mean = 4.57) and allocation in alignment with institutional priorities (mean = 4.53). Budget formulation (mean = 4.39, High) was anchored by goal-based planning and the use of accurate financial data, with departmental participation and clear timeline communication as notable strengths. Budget execution registered the lowest score (mean = 4.27, High), reflecting minor inefficiencies in the timely release and utilization of funds (mean = 4.11), a pattern consistent with known systemic delays in Philippine government fund disbursement.

D. Relationship between Budgetary Challenges and Budget Management Efficiency

Table 4
Correlation between budgetary challenges and budget management efficiency

Independent Variable	r	p-value	Decision
Government Allocation	.072	.547	Not Significant
External Funding Allocation	.091	.448	Not Significant
Complex Financial Regulations	-.250*	.034	Significant
Financial Planning Capacity	-.353**	.002	Significant
Overall Budgetary Challenges	**.077**	**.522**	**Not Significant**

*Note. *p < .05; **p < .01. Dependent variable: Budget Management Efficiency*

Table 4 presents the Pearson correlation results between budgetary challenge dimensions and budget management efficiency. Government allocation (r = .072, p = .547) and external funding allocation (r = .091, p = .448) yielded weak, non-significant correlations, indicating that the level of funding received does not directly determine efficiency outcomes. This suggests that resource volume alone is insufficient to improve institutional performance—how funds are managed matters more than how much is received. In contrast, complex financial regulations showed a significant negative correlation (r = −.250, p = .034), confirming that increased regulatory complexity impedes the timely and effective execution of budgetary processes. Financial planning capacity exhibited the strongest negative association (r = −.353, p = .002), indicating that deficiencies in planning—particularly staff turnover and the absence of integrated systems—meaningfully reduce budget management effectiveness. These results collectively suggest that OMSC's efficiency is more responsive to internal systemic factors than to the adequacy of external funding.

E. Relationship between Financial Innovations and Budget Management Efficiency

Table 5
Correlation between financial innovations and budget management efficiency

Independent Variable	r	p-value	Decision
Digital Budgeting Systems	.408**	.000	Significant
Performance-Based Budgeting	.644**	.000	Significant
Stakeholder Involvement	.679**	.000	Significant
Revenue Diversification	.478**	.000	Significant
Overall Financial Innovation	**.663****	**.000**	**Significant**

*Note. **p < .01. Dependent variable: Budget Management Efficiency*

Table 5 shows that all financial innovation dimensions positively and significantly correlate with budget management efficiency. Stakeholder involvement demonstrated the strongest positive correlation with budget management efficiency (r = .679, p = .000), indicating that inclusive participatory governance is the most consistent driver of institutional financial performance. Performance-based budgeting followed closely (r = .644, p = .000), affirming that linking budget allocations to measurable outcomes significantly enhances efficiency. Overall financial innovation showed a strong aggregate association (r = .663, p = .000), confirming the broad utility of the institution's innovation portfolio. Revenue diversification (r = .478, p = .000) and digital budgeting systems (r = .408, p = .000) yielded moderate but significant correlations, suggesting that while these innovations individually contribute to efficiency gains, their impact is amplified through the coordinated application of all four dimensions.

F. Regression Analysis: Budgetary Challenges as Predictors of Budget Management Efficiency

Table 6
Regression analysis of budgetary challenges predicting budget management efficiency

Predictor Variable	β	p-value	Decision
Government Allocation	.045	.783	Not Significant
External Funding Allocation	.484	.003	Significant
Complex Financial Regulations	.351	.125	Not Significant
Financial Planning Capacity	.345	.044	Significant

Note. $R = .501$; $R^2 = .251$; Adjusted $R^2 = .207$; $F = 5.625$; $p = .001$

Multiple regression revealed a statistically significant model (F = 5.625, p = .001, R^2 = .251), with budgetary challenge variables collectively explaining 25.1% of the variance in budget management efficiency (Table 6). External funding allocation (β = .484, p = .003) emerged as the strongest predictor of budget management efficiency among the budgetary challenge dimensions. This counterintuitive positive relationship suggests that in a multivariate context, institutions that are more exposed to external funding pressures tend to develop more rigorous management systems in response—turning external accountability demands into efficiency drivers. Financial planning capacity (β = .345, p = .044) was the second significant predictor, confirming that stronger planning practices, even when moderately challenged, improve overall financial outcomes. Government allocation (β = .045, p = .783) and complex financial regulations (β = .351, p = .125) were not statistically significant predictors when controlling for other variables, implying that their individual contribution to efficiency variance is subsumed by the joint predictive strength of external funding and planning capacity.

G. Regression Analysis: Financial Innovations as Predictors of Budget Management Efficiency

Table 7
Regression Analysis of financial innovations predicting budget management efficiency

Predictor Variable	β	p-value	Decision
Digital Budgeting Systems	.098	.331	Not Significant
Performance-Based Budgeting	.272	.058	Not Significant
Stakeholder Involvement	.486	.003	Significant
Revenue Diversification	.084	.510	Not Significant

Note. $R = .711$; $R^2 = .505$; Adjusted $R^2 = .476$; $F = 17.096$; $p = .000$

The financial innovation regression model was highly significant (F = 17.096, p < .000, R^2 = .505), explaining 50.5% of the variance in budget management efficiency—nearly double the explanatory power of the budgetary challenges model (Table 7). Among all financial innovation dimensions, only stakeholder involvement (β = .486, p = .003) emerged as a statistically significant predictor in the multivariate model. This finding is particularly significant given that stakeholder involvement recorded a high correlation individually (r = .679), and that significance is retained even when controlling for other dimensions—demonstrating that participatory governance has an independent, robust effect on efficiency. Performance-based

budgeting approached but did not reach significance (β = .272, p = .058), suggesting it may play a meaningful supporting role that is partially mediated by stakeholder involvement. Digital budgeting systems (β = .098, p = .331) and revenue diversification (β = .084, p = .510) were not significant predictors in the joint model, implying that their efficiency contributions operate indirectly through or in conjunction with stakeholder processes rather than independently. The model's R^2 of .505 underscores that financial innovations collectively explain a substantial portion of efficiency variance, with stakeholder involvement serving as the central mechanism.

4. Discussion

A. Budgetary Challenges and Their Systemic Nature

OMSC's moderate budgetary challenges reflect systemic inefficiencies embedded in the regulatory environment rather than isolated institutional failures. Delayed fund releases and bureaucratic approval processes—the most prominent government allocation concerns—align with OECD (2017) findings that public financial management constraints arise primarily from structural rigidities rather than deliberate policy failures. Rivera-Malinay (2025) and Flores, Bayudan and Dacuycuy (2025) documented similar funding predictability challenges across Philippine SUCs, affirming that OMSC's experience is symptomatic of sector-wide patterns.

Complex financial regulations and weak financial planning capacity proved the most consequential dimensions, as they were the only two significantly correlated with and predictive of budget management efficiency. This finding underscores that internal process quality, not resource volume, is the primary determinant of budget management outcomes. As Pollitt and Bouckaert (2017) argued, efficiency improvements in the public sector require comprehensive multi-dimensional reform rather than mere resource increases. Howlett et al. (2020) similarly confirmed that institutions with stronger analytical planning capabilities demonstrate greater resilience in aligning resources with strategic priorities.

B. Financial Innovations and the Primacy of Participatory Governance

OMSC's high adoption of financial innovations reflects a proactive institutional response to fiscal constraints. Revenue diversification and performance-based budgeting, as the leading innovation dimensions, are consistent with policy directions from OECD (2020) and CHED (2020) that encourage Philippine HEIs to reduce government funding dependence and link resources to institutional performance. The digital budgeting systems' relatively lower adoption rate though still rated high points to implementation gaps in staff training and system integration that merit continued institutional investment.

The emergence of stakeholder involvement as the sole significant predictor of budget management efficiency in the regression model is perhaps this study's most consequential finding. When administrators, faculty, and external partners actively participate in budget planning and monitoring, decisions become more contextually responsive, accountability is distributed, and implementation improves. Cheng and Sturtevant (2024) and Islam (2025) similarly identified participatory processes as central to quality budget management. This implies that technological and procedural innovations achieve their full potential only when embedded within inclusive governance frameworks—where stakeholder voice is institutionalized, not merely invited.

C. Budget Management Efficiency as an Institutional Strength

OMSC's high to very high efficiency ratings across all dimensions indicate robust institutional capacity relative to its funding environment. Transparency and accountability as the highest-rated dimension is consistent with Rodríguez Bolívar et al. (2015), who linked budget transparency to increased public trust and governance legitimacy. The strong monitoring and control scores affirm Allen et al.'s (2014) finding that proactive internal controls are foundational to public sector efficiency. Budget execution's comparatively lower rating (M = 4.27), however, points to persistent structural delays in fund release—a challenge unlikely to be resolved through institutional reforms alone, requiring coordinated policy action between OMSC and oversight agencies.

5. Conclusions

This study provides a comprehensive analysis of budgetary challenges, financial innovations, and budget management efficiency at OMSC. The following conclusions are drawn:

First, OMSC experiences moderate budgetary challenges across all four dimensions, with systemic, rather than acute, constraints most evident in financial planning capacity and regulatory complexity. Second, OMSC demonstrates high financial innovation adoption, led by revenue diversification and performance-based budgeting, though digital systems present opportunities for deeper integration. Third, budget management efficiency is high to very high, with transparency, accountability, and monitoring as institutional strengths, while execution efficiency reflects persistent structural disbursement delays. Fourth, internal process quality, specifically, regulatory complexity and planning capacity, significantly determines efficiency outcomes, while funding volume does not. Fifth, all financial innovation dimensions positively correlate with efficiency, and stakeholder involvement is the strongest individual and multivariate predictor.

To improve budget management efficiency, OMSC is recommended to, simplify internal financial procedures and reduce regulatory compliance burdens; sustain digital budgeting system investment and expand staff training; strengthen planning through analytical tools and staff retention initiatives; pursue additional external funding partnerships; and, most critically, institutionalize participatory budgeting processes that actively engage all stakeholder groups. Future research should explore leadership effectiveness, organizational culture, and multi-institutional comparisons across Philippine SUCs to enable broader policy generalization.

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