
Effect of Budgeting Practices on the Financial Performance of Medium Manufacturing Companies in Mwanza City, Tanzania

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Abstract

This study examined the effect of budgeting practices on the financial performance of medium manufacturing companies in Mwanza City, Tanzania. Guided by the Contingency Theory of Management Accounting, the study analyzed how participatory budgeting, rolling forecasting, and activity-based budgeting (ABB) influence profitability, liquidity, and operational efficiency. Quantitative data were collected from 128 respondents across 44 manufacturing firms using structured questionnaires. Descriptive statistics, correlation, and multiple regression analysis were conducted using SPSS version 26. Findings indicated that all three budgeting practices positively and significantly affect financial performance ($p < 0.05$). ABB exhibited the strongest influence, followed by participatory budgeting and rolling forecasts. The regression model accounted for 64.8% of the variance in financial performance. The study concludes that participatory budgeting enhances ownership, rolling forecasts improve adaptability, and ABB strengthens cost management. It recommends institutional adoption of modern budgeting tools and capacity-building initiatives for improved financial planning and performance.

Keywords: budgeting practices, financial performance, participatory budgeting, rolling forecasts, activity-based budgeting, manufacturing companies

1. Introduction

Manufacturing firms in developing economies face increasing pressures arising from globalization, technological shifts, and fluctuating market conditions. These pressures demand stronger management accounting systems capable of enhancing planning, cost control, resource allocation, and strategic execution. Budgeting, therefore, remains a core management tool that guides both short-term operational planning and long-term financial decision making. In Tanzania, medium manufacturing firms contribute substantially to job creation and industrial output, yet many continue to face inefficiencies caused by outdated budgeting processes, limited managerial capacity, and unpredictable operating environments.

This study expands existing knowledge by providing empirical evidence from Mwanza City, one of Tanzania's largest industrial hubs on the extent to which modern budgeting practices influence financial performance. Through its focus on participatory budgeting, rolling forecasting, and activity-based budgeting (ABB), the study bridges a significant gap between theoretical budgeting models and real-world organizational performance outcomes in emerging markets.

Furthermore, the integration of Contingency Theory provides a robust conceptual foundation, illustrating how budgeting effectiveness depends not only on techniques used but also on contextual factors such as environmental uncertainty, technological sophistication, decision-making structures, and organizational culture. This broader framing strengthens the relevance of the study beyond mere statistical relationships, offering insights into why certain budgeting practices perform better under specific circumstances. Budgeting remains a central component of financial management, providing organizations with a roadmap for resource allocation, cost control, and strategic planning. In dynamic environments, manufacturing firms rely on effective budgeting systems to sustain competitiveness and financial stability. In Tanzania, medium manufacturing firms face challenges related to inflation, supply chain disruptions, and volatile market conditions. These challenges highlight the need for advanced budgeting practices capable of enhancing responsiveness and accountability.

Prior research in Sub-Saharan Africa has emphasized the importance of effective budgeting in improving organizational performance; however, evidence from Tanzanian manufacturing firms, especially in Mwanza, remains limited. This study addresses this gap by examining the influence of participatory budgeting (PB), rolling forecasts (RF), and activity-based budgeting (ABB) on financial performance (FP). Guided by the Contingency Theory of Management Accounting, the study evaluates how budgeting effectiveness is shaped by organizational context.

1.1 Importance of the Problem

The manufacturing sector plays a vital role in Tanzania's industrialization agenda under the Third Five-Year Development Plan (FYDP III). Medium manufacturing firms in Mwanza contribute significantly to employment and value addition but continue to experience financial inefficiencies. Understanding budgeting practices is crucial to strengthening their operational and financial outcomes.

1.2 Relevant Scholarship

The study conducted by Akinleye and Akinola (2021) examined the effect of participatory budgeting on performance among 120 managers from 40 manufacturing firms in Lagos, Nigeria. Using structured questionnaires and regression analysis, they found a significant positive relationship between participatory budgeting and key performance elements, particularly internal cost control and employee motivation. However, their study did not consider how participatory budgeting interacts with other modern budgeting techniques such as rolling forecasts and ABB, nor did it account for contexts outside Lagos, an economically advanced urban setting. The

present study addresses these gaps by assessing the combined influence of participatory budgeting, rolling forecasts, and ABB within Mwanza City’s economic environment.

In a related study, Mwaipopo and Kihampa (2023) assessed the application of participatory budgeting among manufacturing SMEs in Mwanza using a mixed-methods approach involving questionnaires from 85 SMEs and interviews with financial managers. Their findings showed that although firms reported using participatory budgeting, the process remained largely centralized, with limited employee involvement. While offering useful contextual insights, the study lacked statistical analysis directly linking participatory budgeting to financial performance.

1.3 Conceptual framework and Hypotheses

The conceptual framework for this study illustrates the relationship between budgeting practices and financial performance of manufacturing companies in Mwanza City. The study tests the following hypotheses:

H1: Participatory budgeting positively influences financial performance.

H2: Rolling forecasts positively influence financial performance.

H3: Activity-based budgeting positively influences financial performance.

Independent Variables

Dependent Variable

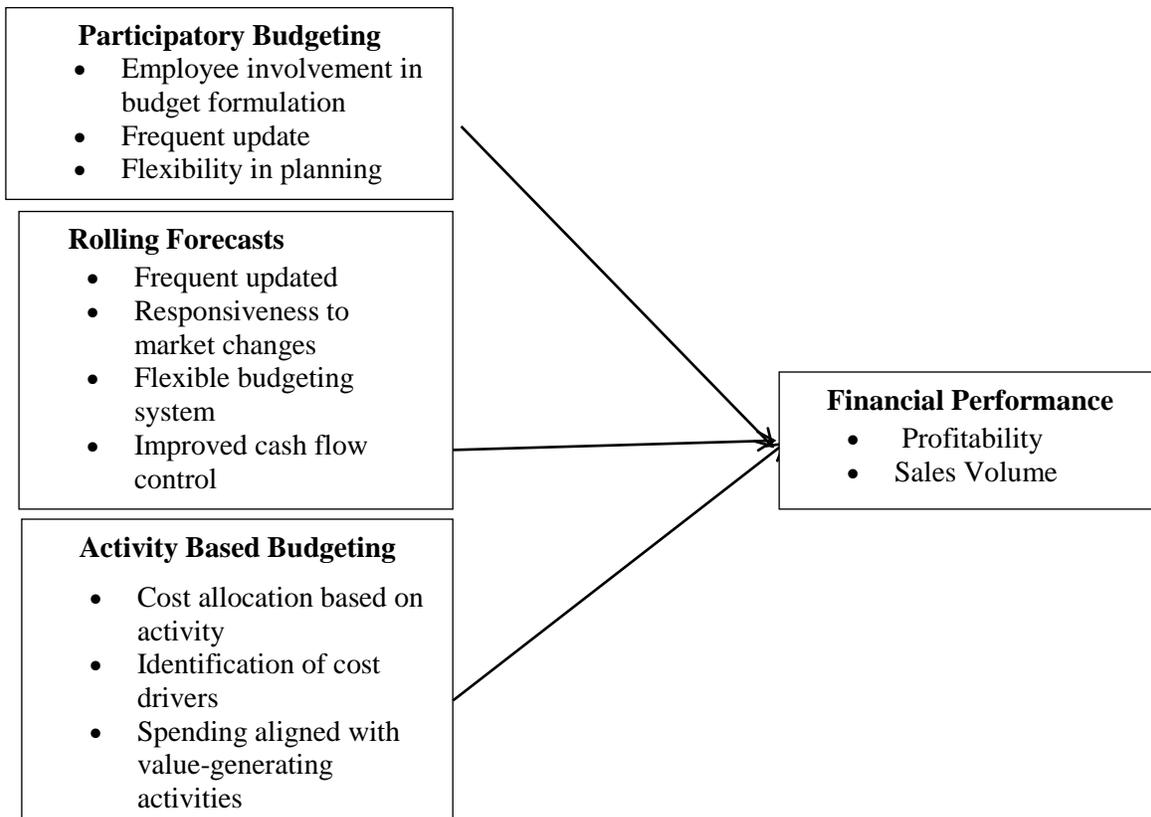


Figure 1.1 Conceptual Framework

2. Method

This study adopted a quantitative research strategy because it provides objectivity, replicability, and predictive power suitable for analyzing relationships between budgeting practices and financial performance. A cross-sectional design was employed to obtain data at a single point in time while allowing generalization across medium manufacturing firms.

To strengthen methodological reliability, the study incorporated pre-testing of questionnaires, expert reviews, and statistical validation of instrument reliability using Cronbach's alpha. Ethical considerations including confidentiality, informed consent, voluntary participation, and secure data handling were rigorously observed throughout the research process.

The methodological approach also integrates justification for the selected analytical tools. Descriptive statistics enabled summarization of respondent views; correlation analysis helped determine the direction and strength of associations; and multiple regression analysis revealed the magnitude of the predictive power of each budgeting practice. Together, these techniques ensured robust evaluation of the study hypotheses.

2.1 Participants

The study targeted 44 medium manufacturing firms registered with the Mwanza City Council and TCCIA. Three respondents per firm were selected purposively, finance managers, chief accountants, and operations managers, resulting in 132 targeted participants. A total of 128 questionnaires were returned (97% response rate).

2.2 Sampling Procedures

A census sampling technique was used due to the small population size. Inclusion criteria required participants to be involved in budgeting and financial reporting activities. The study adhered to ethical standards, including voluntary participation, informed consent, and data confidentiality.

2.3 Measures and Variables

Budgeting practices (PB, RF, ABB) were measured using Likert-scale items adapted from validated instruments. Financial performance was assessed using profitability, cost efficiency, liquidity, and ROI indicators.

2.4 Research Design

A quantitative, explanatory research design was adopted to evaluate causal relationships. The regression model used was $FP = \beta_0 + \beta_1PB + \beta_2RF + \beta_3ABB + \varepsilon$

2.5 Data Collection Procedures

Structured questionnaires were distributed manually following appointments with firms. Data were screened, coded, and entered into SPSS for analysis.

2.6 Data Analysis

Descriptive statistics were computed to summarize responses. Pearson correlation tested bivariate relationships, while multiple regression assessed the predictive effects of the three budgeting practices. Diagnostic tests verified linearity, normality, multicollinearity, and homoscedasticity.

3. Results

This section presents detailed statistical findings, supplemented with explanatory narratives to improve readability and interpretability. The results are organized into descriptive statistics, correlation analysis, diagnostic tests and regression findings.

Overall, the results demonstrate consistent patterns of positive associations between budgeting practices and financial performance. The descriptive statistics reveal moderate to high adoption of modern budgeting tools, while regression analysis confirms that all three practices significantly predict financial performance.

3.1 Descriptive Statistics.

Table 1. Descriptive Statistics for Participatory Budgeting (N=128)

Statement	Min	Max	Mean	Std. Deviation
Employees are actively involved in setting departmental budgets.	2	5	4.21	0.67
Management encourages staff suggestions during budgeting.	2	5	4.03	0.72
Departmental heads contribute to budget reviews.	3	5	4.32	0.69
Budget participation improves communication across departments.	3	5	4.25	0.64
Employee involvement enhances commitment to budget targets.	3	5	4.18	0.70

Source: Field Data, (2025)

The findings indicate that respondents generally agreed with all statements on participatory budgeting (mean scores between 4.03 and 4.32). The overall mean score of 4.20 suggests a high level of participatory budgeting practices among medium manufacturing companies in Mwanza. The standard deviations were below 1.0, indicating minimal variation in responses, which reflects a shared understanding among participants.

Table 2 Descriptive Statics for Financial performance (N=128)

Statement	Min	Max	Mean	Std. Deviation
The company’s profitability has improved over the past three years.	2	5	4.08	0.73
The company maintains adequate liquidity levels.	3	5	4.16	0.70
Budgeting practices have enhanced operational efficiency.	3	5	4.22	0.68
The company achieves consistent revenue growth.	3	5	4.10	0.71
Overall financial performance has improved significantly.	3	5	4.18	0.72

Source: Field Data, (2025).

The overall mean of 4.15 suggests that the financial performance of the sampled companies has improved considerably. The findings indicate that sound budgeting practices contribute to higher profitability and efficiency. This observation resonates with Anthony and Govindarajan (2020), who emphasized that effective budgeting enhances resource utilization and improves firm performance.

3.2 Correlation Analysis

Table 3. Correlation Matrix

Variables	1	2	3	4
1. Participatory Budgeting	1			
2. Rolling Forecasting	0.643**	1		
3. Activity-Based Budgeting	0.672**	0.711**	1	
4. Financial Performance	0.694**	0.658**	0.707**	1

The correlation results indicate positive and statistically significant relationships between all budgeting practices and financial performance. Activity-Based Budgeting exhibited the strongest association with financial performance ($r = 0.707, p < 0.01$), followed by Participatory Budgeting ($r = 0.694, p < 0.01$) and Rolling Forecasting ($r = 0.658, p < 0.01$). These findings suggest that improvements in budgeting practice adoption are directly linked to enhanced financial outcomes. They support the argument of Horngren et al. (2018) that modern budgeting systems foster transparency, cost control, and operational efficiency, ultimately strengthening financial results

3.3 Diagnostic Tests

All assumptions of multiple regression were met. There was no multicollinearity ($VIF < 2$), residuals were normally distributed, and scatterplots indicated linearity and homoscedasticity

3.4 Regression Results

Table 4. Regression Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
1	0.805	0.648	0.637	0.325

Table 5. ANOVA Output

Source	Sum of Squares	Df	Mean Square	F	Sig.
Regression	15.462	3	5.154	48.74	0.000
Residual	8.404	96	0.087		
Total	23.866	99			

Source: Field Data, (2025).

Table 6. Regression Coefficients

Variable	Unstandardized B	Std. Error	Beta	t	Sig.
Constant	0.842	0.221		3.81	0.000
Participatory Budgeting	0.328	0.081	0.342	4.05	0.000
Rolling Forecasting	0.241	0.076	0.263	3.17	0.002
Activity-Based Budgeting	0.376	0.088	0.398	4.28	0.000

Source: Field Data, (2025).

The regression model was statistically significant ($p < 0.001$) and explained 64.8% of the variance in financial performance. Coefficients were: - PB: $\beta = 0.328$, $p < 0.05$ - RF: $\beta = 0.241$, $p < 0.05$ - ABB: $\beta = 0.376$, $p < 0.05$

4. Discussion

The results of this study reinforce the relevance of modern budgeting practices as critical drivers of financial performance within medium manufacturing firms. Participatory budgeting fosters collaboration and increases managers’ sense of ownership, which in turn enhances commitment to financial targets. This aligns with earlier findings in Kenya and Nigeria, where employee involvement in budgeting processes contributed to improved decision-making and organizational transparency.

Rolling forecasts emerged as a vital tool for enhancing adaptability. In contexts characterized by uncertainty such as fluctuating raw material prices and exchange rate volatility rolling forecasts allow firms to adjust projections based on real time data. This dynamic approach supports better

working-capital management, more accurate cash-flow planning, and enhanced strategic responsiveness.

Activity-based budgeting showed the strongest influence on financial performance. Given that ABB enables firms to allocate costs more precisely by linking expenditures to specific activities and cost drivers. In manufacturing environments where overhead costs form a significant proportion of total expenses, ABB provides deeper insights that support cost minimization and process improvement.

By demonstrating that budgeting practices do not operate uniformly across organizations, the study supports Contingency Theory's central argument that organizational effectiveness depends on the alignment between management practices and contextual variables. This finding urges firms to adopt budgeting systems that reflect their operational realities, technological capacities, and competitive environments.

Practical implications include the need for capacity building programs, investment in budgeting technologies, and periodic review of existing budgeting frameworks. Managers should consider integrating participatory approaches with dynamic forecasting tools and cost driver based budgeting to maximize financial performance. The findings support all three hypotheses. Participatory budgeting enhances financial performance by promoting transparency, accountability, and employee involvement. Rolling forecasts improve adaptability, enabling firms to respond to market fluctuations. ABB provides a more accurate allocation of costs based on activities, thus improving cost control and operational efficiency.

These results align with previous studies conducted in Nigeria, Kenya, and South Africa, but also highlight unique contextual insights specific to Tanzanian firms, particularly those operating in resource-constrained environments.

The study contributes to contingency theory by demonstrating that budgeting effectiveness depends on organizational context, technological capacity, and managerial culture.

4.1 Limitations

The study relied on self-reported data, which may introduce bias. It was also limited to medium firms in one geographical region.

4.2 Implications and Future Research

Managers should institutionalize participatory budgeting, integrate rolling forecasts, and train staff to apply ABB effectively. Policymakers should invest in capacity-building programs for financial managers. Future studies may expand to other regions or include longitudinal designs.

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