Budget Reduction Strategies and Firm Profitability: Evidence from Private Sugar Manufacturing Firms in Western Kenya

JANET BARASA[1], ABRAHAM MALENYA ANJETSA[2], VINCENT MARANI[3]
[1, 2]*Department of Economics, Finance and Accounting, Kibabii University*
[3]*Department of Mathematics, Kibabii University*

Abstract- ***This study investigates the impact of budget reduction strategies on firm profitability in private sugar manufacturing firms in Western Kenya. Using a descriptive survey design, data was collected from 62 respondents across five private sugar manufacturing firms. The study examined three budget reduction strategies: remote working, negotiation skills, and robot-based operations. Results revealed that budget reduction strategies significantly influence firm profitability ($R = 0.623$, $R^2 = 0.388$, $p < 0.001$), explaining 38.8% of variance in profitability. Negotiation skills emerged as the most effective strategy ($M = 4.05$), followed by robot-based operations ($M = 3.66$), while remote working showed the least effectiveness ($M = 3.56$). The regression equation $Y = 1.265 + 0.647X$ demonstrates that a one-unit improvement in budget reduction strategies increases profitability by 0.647 units. These findings support Porter's Cost Leadership Strategy and highlight the importance of strategic cost management in enhancing manufacturing firm performance.***

Indexed Terms- ***Budget Reduction Strategies, Firm Profitability, Sugar Manufacturing, Cost Management***

I. INTRODUCTION

Manufacturing firms face unprecedented pressure to optimize operational efficiency while maintaining profitability in today's competitive global marketplace (Kumar & Singh, 2021). Budget reduction strategies have emerged as critical tools for achieving cost leadership, particularly in capital-intensive industries such as sugar manufacturing (Bashir & Khalid, 2021). The sugar manufacturing industry in Kenya's Western region faces unique challenges including high production costs, intense competition from imports, and fluctuating commodity prices (Makina & Oundo, 2020).

Budget reduction strategies encompass various approaches that firms employ to minimize operational costs while maintaining productivity levels. These strategies have evolved with technological advancement, incorporating modern approaches such as remote working, strategic negotiation practices, and automation through robot-based operations (Waizenegger et al., 2020).

The Kenyan sugar industry contributes significantly to the national economy through employment creation and industrial development. However, private sugar manufacturing firms in Western Kenya have struggled with profitability challenges attributed to inadequate cost management practices and limited adoption of modern cost reduction technologies (Ochieng & Oduor, 2022). The Kenya Sugar Board (2016) reported a concerning 8.3% decrease in industry production capacity between 2013 and 2015.

Despite the importance of budget reduction strategies in manufacturing contexts, limited empirical research has examined their impact on profitability within Kenya's private sugar manufacturing sector. This study addresses this gap by investigating how three specific budget reduction strategies influence firm profitability in private sugar manufacturing firms in Western Kenya.

The objective of this study is to investigate the impact of budget reduction strategies on the profitability of private sugar manufacturing firms in Western Kenya. The research provides sugar manufacturing firms with evidence-based insights for strategic decision-making and contributes to academic literature on cost

management in developing country manufacturing contexts.

II. LITERATURE REVIEW

2.1 Theoretical Framework

This study is anchored on Porter's Cost Leadership Strategy theory, which posits that firms can achieve competitive advantage by producing goods or services at the lowest possible cost while maintaining acceptable quality levels (Porter, 1980; Bashir & Khalid, 2021). The theory suggests that effective cost management through systematic budget reduction enables firms to offer competitive prices, capture larger market shares, and achieve superior profitability.

The Cost Leadership Strategy encompasses three key mechanisms: operational efficiency improvement, resource optimization, and competitive positioning enhancement. Firms implementing effective budget reduction strategies typically experience reduced per-unit production costs, improved profit margins, and enhanced financial flexibility (Chen et al., 2019).

2.2 Budget Reduction Strategies and Firm Performance

Recent empirical studies demonstrate the positive relationship between budget reduction strategies and firm performance across manufacturing contexts. Kamundi et al. (2023) found that manufacturing firms in Kenya implementing comprehensive budget reduction strategies achieved significantly higher profitability compared to firms with limited cost management practices. Ongeri and Nyangau (2019) found that companies adopting systematic cost reduction approaches outperformed competitors in terms of profitability and market share.

2.3 Remote Working and Cost Management

Remote working arrangements have gained attention as budget reduction strategies, particularly following COVID-19. Waizenegger et al. (2020) found that organizations successfully implementing remote work achieved substantial cost savings through reduced overhead expenses. However, Bloom et al. (2015) noted that effectiveness depends on the nature of work activities and organizational infrastructure. Kniffin et al. (2021) observed that remote working's profitability benefits are context-dependent and more suited to knowledge-based sectors rather than manufacturing.

2.4 Negotiation Skills in Cost Reduction

Strategic negotiation capabilities are critical determinants of budget reduction effectiveness, particularly in procurement contexts. Lewicki et al. (2016) emphasized that effective negotiation directly boosts profitability through improved supplier terms and reduced input costs. Carter et al. (2017) found that manufacturing firms with well-developed negotiation capabilities achieved superior cost control compared to firms with limited negotiation expertise. Zheng et al. (2006) established a strong link between negotiation capabilities and organizational success.

2.5 Robot-based Operations and Efficiency

Automation represents an emerging frontier in manufacturing budget reduction strategies. Bughin et al. (2018) reported that robotics, when effectively integrated, enhances productivity and profitability through reduced labor costs and improved quality consistency. However, Frey and Osborne (2017) cautioned that automation adoption might be hindered by concerns over worker displacement and high initial investment costs. Susskind and Susskind (2015) noted that successful implementation requires strategic alignment and workforce reskilling.

2.6 Research Gap

Limited research has specifically examined budget reduction strategies in private sugar manufacturing firms in developing countries. This study addresses this gap by providing sector-specific empirical evidence on the impact of three distinct budget reduction strategies on firm profitability in Kenya's sugar manufacturing context.

III. RESEARCH METHODOLOGY

3.1 Research Design and Population

The study employed a descriptive survey research design to investigate the relationship between budget reduction strategies and firm profitability. The target population comprised five private sugar manufacturing firms in Western Kenya: West Kenya Sugar Company, Olepito Sugar Factory, Butali Sugar Company, Naitiri Sugar Company, and Busia Sugar Company.

3.2 Sampling and Data Collection

The study targeted 70 respondents including directors, general managers, finance managers, accountants, and internal auditors. A census sampling approach was employed, resulting in 62 completed questionnaires (88.6% response rate). Primary data was collected using structured questionnaires with five-point Likert scales (1=Strongly Disagree to 5=Strongly Agree).

3.3 Variables and Measurement

Budget reduction strategies were measured using three components: remote working (3 items), negotiation skills (3 items), and robot-based operations (3 items). Firm profitability was measured using established financial performance indicators including gross profit ratio, net profit ratio, and return on capital employed.

3.4 Data Analysis

Data analysis involved descriptive statistics (frequencies, percentages, means, standard deviations) and inferential statistics (correlation and simple linear regression) using SPSS version 26.0. Diagnostic tests were conducted to ensure data met parametric test assumptions.

IV. RESULTS

4.1 Descriptive Analysis

The descriptive analysis revealed varying effectiveness levels among budget reduction strategies. Negotiation skills emerged as the most positively perceived strategy with a mean score of 4.05 (SD = 0.794). Specifically, 83.9% of respondents agreed that effective negotiation skills positively influence firm profitability, with supplier negotiations receiving the highest score (M = 4.08).

Robot-based operations received moderate ratings (M = 3.66, SD = 0.984), with 69.3% of respondents acknowledging their profitability impact. The relatively high standard deviation indicated mixed perceptions regarding automation effectiveness.

Remote working strategies received the lowest ratings (M = 3.56, SD = 1.013) with considerable variability. The direct profitability impact of remote working received the lowest score (M = 3.44), reflecting skepticism about remote work's financial benefits in manufacturing contexts.

Table 1: Descriptive Statistics for Budget Reduction Strategies

Strategy Component	Mean	Std. Deviation	Agreement Level
Negotiation Skills	4.05	0.794	High
Robot-based Operations	3.66	0.984	Moderate
Remote Working	3.56	1.013	Moderate
Overall Budget Reduction	3.76	0.930	Moderate-High

4.2 Regression Analysis

Simple linear regression analysis examined the relationship between budget reduction strategies and firm profitability. The results revealed a significant positive relationship ($R = 0.623$, $p < 0.001$). The coefficient of determination ($R^2 = 0.388$) indicates that budget reduction strategies explain 38.8% of variance in firm profitability. The F-statistic (38.611, $p < 0.001$) confirms model significance.

Table 2: Regression Analysis Results

Model Summary					
R				0.623	
R Square				0.388	
Adjusted R Square				0.378	
F-statistic				38.611***	
Coefficients	B	Std. Error	Beta	t	Sig.
Constant	1.265	0.394	-	3.211	0.002**
Budget Reduction Strategies	0.647	0.104	0.623	6.214	0.000***

***p < 0.001, **p < 0.01

The regression equation is: Firm Profitability = 1.265 + 0.647 × Budget Reduction Strategies

This demonstrates that a one-unit increase in budget reduction strategies implementation increases firm profitability by 0.647 units.

4.3 Discussion

The findings provide strong empirical support for the positive impact of budget reduction strategies on firm

profitability, aligning with Porter's Cost Leadership Strategy. The superiority of negotiation skills reflects the importance of supply chain optimization in sugar manufacturing. The moderate effectiveness of robot-based operations suggests automation potential, though implementation challenges remain. The limited effectiveness of remote working aligns with manufacturing industry characteristics where physical presence is essential.

CONCLUSION

This study provides empirical evidence that budget reduction strategies significantly influence firm profitability in private sugar manufacturing firms in Western Kenya (R = 0.623, explaining 38.8% of profitability variance). Negotiation skills emerge as the most effective approach, followed by robot-based operations, while remote working offers limited benefits in manufacturing contexts.

The findings support Porter's Cost Leadership Strategy theory, confirming that systematic cost reduction enhances competitive positioning and financial performance. The results highlight the importance of context-specific strategy selection, as effectiveness varies significantly among different approaches.

RECOMMENDATION

1. Prioritize negotiation skills development through structured training programs
2. Support manufacturing sector development through training programs enhancing cost management skills
3. Examine long-term sustainability of budget reduction strategies

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