EFFECTIVENESS OF MASTER BUDGET PRACTICES IN MANUFACTURING ORGANIZATIONS IN NEPAL

A Dissertation submitted to the Office of the Dean, Faculty of Management in Partial fulfillment of the requirements for the Master's Degree

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Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of the dissertation entitled "**Effectiveness of Master Budget Practices in Manufacturing Organizations in Nepal**". The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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Sunita Dhami

May, 2025

Report Research Committee

Miss Sunita Dhami has defended the research proposal entitled "**Effectiveness of Master Budget Practices in Manufacturing Organizations in Nepal**" successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per the suggestions and guidance of Supervisor Joginder Goet and submit the thesis for evaluation and viva voce examination.

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Approval Sheet

We, the undersigned, have examined the thesis entitled "**Effectiveness of Master Budget Practices in Manufacturing Organizations in Nepal**" submitted by **Miss Sunita Dhami**, a candidate for the degree of Master of Business Studies (MBS Semester), and conducted the viva voce examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

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Sincerely,
Sunita Dhami

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Abbreviations

CA	Correlation Analysis
DA	Descriptive Analysis
ERP	Enterprise Resource Planning
FT	Financial Transactions
IF	Independent Factors
IA	Inferential Analysis
ML	Machine Learning
MT	Modern Technology
PE	Perception of Employees
RBV	Resource-Based View
SC	Socioeconomic Conditions
SP	Streamline Process
TR	Technological Readiness
ZBB	Zero-Based Budgeting

Abstract

This study explores the effectiveness of master budgeting practices and their impact on the performance of manufacturing firms in Nepal. In the face of global economic uncertainties, competitive pressures, and technological advancements, effective financial planning has become increasingly critical for Nepalese manufacturers. The research investigates how factors such as technology integration, organizational support, financial resource availability, external economic conditions, and employee involvement influence budgeting outcomes. Using a mixed-method approach, both primary and secondary data were collected and analyzed through descriptive statistics, correlation analysis, and multiple regression models. The study finds that technology integration and employee involvement have a statistically significant positive effect on budgeting effectiveness. Firms that implemented ERP systems and participatory budgeting techniques were more likely to achieve their financial and strategic goals. Moreover, organizational support and financial resource availability were found to be essential enablers in aligning budget practices with firm objectives. The results also show that external economic factors, while sometimes disruptive, can be mitigated through flexible and adaptive budgeting strategies. Evidence from case studies indicates that firms using detailed and dynamic master budgets experienced improved cost control, timely financial adjustments, and enhanced decision making capabilities. Despite these findings, challenges such as limited financial expertise and reliance on outdated budgeting methods persist in small and medium-sized enterprises (SMEs). The study concludes that for Nepalese manufacturing firms to enhance budgeting effectiveness, they must embrace modern budgeting tools, provide staff training, and ensure active involvement across all organizational levels. Recommendations include the adoption of ERP systems, capacity-building initiatives, and policy-level support to promote efficient financial planning in the sector. The research contributes to the limited academic discourse on budgeting practices in Nepal and provides actionable insights for practitioners and policymakers seeking to improve the financial performance of manufacturing firms through structured and strategic budgeting approaches.

Key Words: *Master Budgeting, Manufacturing Firms, Budget Effectiveness, Financial Planning, Nepal*

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

In the modern business landscape, shaped by globalization, technological advancements, and market volatility, organizations are under immense pressure to refine their financial management strategies. To stay competitive, businesses must adopt flexible and responsive financial approaches. As noted by Banham (2000), adapting financial planning and budgeting to market shifts is essential for business survival. Budgeting plays a critical role in aligning financial resources with strategic objectives. It connects overarching corporate goals with daily financial decisions, fostering discipline and providing a structure for performance tracking. Effective budgeting ensures resource allocation supports both immediate operations and long-term growth, as highlighted by Covaleski (2003). businesses are shifting away from rigid traditional budgeting models in favor of flexible, technology-driven approaches that allow real-time adjustments. AI, ML, and other technologies enable more accurate forecasting, better resource allocation, and improved adaptability to market conditions. With growing emphasis on sustainability and CSR, financial planning and budgeting processes must account for ESG considerations. By adopting these modern practices, businesses are better equipped to navigate market complexities, stay competitive, and drive sustainable growth. To address these challenges, businesses are increasingly adopting participatory and technology-enhanced budgeting practices. By incorporating predictive analytics and AI-driven tools, organizations can refine their financial forecasting, leading to more informed and accurate decision-making. Moreover, involving employees at all levels in the budgeting process fosters transparency, accountability, and alignment with strategic objectives. According to Becker (2022), participatory budgeting improves decision-making and helps organizations achieve their long-term goals.

These innovations in budgeting not only support day-to-day operations but also promote long-term strategic alignment. AI-powered forecasting, predictive analytics, and participatory budgeting practices ensure financial stability, foster innovation, and generate long-term value for stakeholders. By embracing flexibility and technological tools, businesses can successfully meet the challenges of the 21st century and position themselves for success in an increasingly unpredictable global marketplace.

Technological advancements have revolutionized budgeting practices, with tools like Enterprise Resource Planning (ERP) systems offering real-time financial insights. These innovations improve decision-making, enhance accuracy, and enable organizations to swiftly adapt to market changes, according to Drury (2018). Technologies such as AI and Machine Learning (ML) further optimize financial forecasting, improving resource allocation and enhancing overall budgeting processes.

However, traditional budgeting models, particularly fixed annual budgets, are becoming less effective in today's fast-paced business environment. Their rigidity hinders the ability to respond quickly to unexpected disruptions. To address this, businesses are increasingly turning to dynamic budgeting methods, such as rolling budgets and scenario planning. Rolling budgets allow continuous adjustments, ensuring alignment with current conditions, while scenario planning prepares organizations for multiple potential futures. As noted by Hansen (2021), these methods enhance flexibility and responsiveness to market fluctuations.

Sustainability and corporate social responsibility (CSR) are also becoming key considerations in budgeting. With increasing pressure from regulators and consumers, businesses are integrating environmental, social, and governance (ESG) factors into their financial planning. According to Otley (2016), such initiatives not only enhance a company’s reputation but also drive long-term financial success through cost savings and improved stakeholder relationships. Traditional budgeting models, which often prioritize cost-cutting, can stifle investments in areas such as research and development (R&D) and marketing. Drury (2018) argues that an overemphasis on short-term control can hinder innovation, limiting the ability to respond to emerging trends. Additionally, the time-consuming nature of traditional budgeting practices detracts from more strategic, long-term initiatives.

To overcome these challenges, businesses are adopting more participatory and technology-driven budgeting practices. Incorporating predictive analytics and AI enhances forecasting accuracy, allowing companies to make more informed decisions. Furthermore, involving employees in the budgeting process promotes accountability and ensures alignment with organizational objectives, as highlighted by Becker (2022).

In conclusion, as businesses continue to navigate the challenges of globalization, technological advancements, and market volatility, adaptable and strategic budgeting practices are more crucial than ever. Traditional models are being replaced by flexible, technology-driven approaches that allow for real-time adjustments and inclusivity. By

adopting these advanced practices, companies can better navigate uncertainties, achieve strategic goals, and maintain a competitive edge in the marketplace. These innovations in budgeting, such as AI-powered forecasting and participatory methods, foster financial stability, drive innovation, and support long-term growth.

1.2 Problem Statement

In addition to the previously identified challenges, Nepalese manufacturing companies face several fundamental problems rooted in the rigidity and inefficiency of traditional budgeting systems. One major issue is the significant time, effort, and resources consumed in developing and maintaining static budgets. This often results in diverting critical attention away from more strategic and value-adding activities such as innovation, market expansion, and timely adaptation to evolving industry trends. The conventional budgeting process tends to be highly inflexible, making it difficult for firms to adjust quickly to the dynamic global business environment. In an era where markets are volatile and competition is intense, this lack of agility undermines firms' ability to remain competitive and respond effectively to sudden economic or regulatory changes.

Moreover, a lack of meaningful employee engagement in the budgeting process remains a critical drawback. Typically, budgets are created in a top-down manner by senior management without substantial input from operational-level employees who have direct knowledge of day-to-day business realities. This exclusion leads to a misalignment between budgetary plans and actual operational needs, often resulting in inefficient resource allocation, poor decision-making, and diminished employee motivation and ownership. Incorporating participatory budgeting methods, where staff at different levels contribute to budget planning, can enhance transparency, accountability, and a shared commitment to organizational goals, thereby improving overall budget effectiveness (Zhang & Liao, 2020).

Another pressing concern is the limited capacity and resources available to Nepalese firms for adopting modern financial management technologies such as ERP systems, budgeting software, and sophisticated data analytics. While companies acknowledge the benefits of these digital tools for enabling real-time monitoring and more accurate forecasting, high initial costs, lack of skilled personnel, and infrastructural constraints pose significant barriers to their implementation. Without these technological advancements, firms miss out on timely, data-driven insights critical for making agile

decisions and sustaining long-term growth in a highly competitive market (Becker et al., 2022).

Traditional budgeting approaches also tend to prioritize immediate cost-cutting measures over investments that support long-term strategic objectives, including research and development (R&D), marketing initiatives, and capacity building. Such a narrow focus can stifle innovation, limit responsiveness to shifting customer preferences, and reduce opportunities for business diversification and expansion. According to Hope and Fraser (2003), an overemphasis on short-term financial control can weaken efforts to improve brand equity, operational efficiency, and new product development—all essential elements for achieving sustainable competitive advantage.

Furthermore, many Nepalese manufacturing firms struggle to integrate environmental, social, and governance (ESG) factors into their budgeting frameworks. In today's globalized economy, sustainability considerations are becoming a critical component of corporate strategy. Companies that fail to embed ESG principles risk reputational damage and the loss of investor confidence, particularly as international markets increasingly demand transparency and responsible business conduct. Without proper mechanisms for measuring and reporting ESG performance, Nepalese firms may find themselves excluded from lucrative global supply chains and investment opportunities, limiting their growth potential and global competitiveness (Davidson & Schwab, 2021).

Adding to these issues, there is often a lack of continuous learning and skill development related to budgeting and financial management within many firms. Managers and staff frequently rely on outdated knowledge, without ongoing training to keep pace with evolving financial practices and technological advancements. This knowledge gap hampers the effective use of modern budgeting tools and limits firms' ability to implement innovative financial strategies that align with business objectives. Addressing this requires a systematic approach to capacity building, including workshops, professional development courses, and collaboration with academic institutions to keep financial personnel well-equipped and updated.

Taken together, these multifaceted challenges underscore the critical need for Nepalese manufacturing companies to transform their budgeting practices. By adopting more adaptive, technology-enabled, and inclusive budgeting models, firms can better synchronize financial planning with strategic priorities. This transformation will improve decision-making processes, foster innovation, enhance resource utilization, and ultimately

position companies for sustainable growth and resilience in an increasingly complex and competitive global marketplace.

1.3 Research Questions

i. What is the current practice of master budgeting in manufacturing companies of Nepal?
ii. Is there any relationship between Technology Integration, Organizational Support, Financial Resource Availability, External Economic Factors, Employee Involvement with effectiveness of master budget practices in manufacturing companies of Nepal?
iii. Do Technology Integration, Organizational Support, Financial Resource Availability, External Economic Factors, and Employee Involvement have an effect on the effectiveness of master budget practices in manufacturing companies of Nepal?

1.4 Objectives of the Study

i. To assess the current practice of master budgeting in manufacturing companies of Nepal.
ii. To examine the relationship between technology integration, organizational support, financial resource availability, external economic factors, employee involvement with the effectiveness of master budgeting practices in manufacturing companies of Nepal.
iii. To analyze the effect of technology integration, organizational support, financial resource availability, external economic factors, and employee involvement on the effectiveness of master budgeting practices in manufacturing companies of Nepal.

1.5 Hypotheses of the Study

H1: Technology integration has a significant effect on the effectiveness of master budgeting.

H2: Organizational support significantly influences the effectiveness of master budgeting.

H3: Financial resource availability has a significant impact on the effectiveness of master budgeting.

H4: External economic factors significantly affect the effectiveness of master budgeting.

H5: Employee involvement is positively associated with the effectiveness of master budgeting.

1.6 Rationale of the Study

The importance of strategic financial planning has become increasingly evident in Nepal's manufacturing sector due to the fast-paced and unpredictable nature of the current market. As businesses encounter shifting conditions, they must adopt more agile and responsive financial management strategies. Traditional, inflexible budgeting models are proving inadequate in this volatile environment. As Fraser and Hope (2003) argue, companies need to embrace adaptive budgeting techniques that can respond to evolving market trends and unexpected challenges something rigid, fixed budgets fail to achieve.

Hilton et al. (2000) stress that effective financial planning is fundamental for ensuring the long-term viability and growth of any business. This is particularly relevant in Nepal's manufacturing context, where firms face challenges such as fluctuating raw material prices, changing consumer preferences, and shifts in regulatory frameworks. Strategic financial planning equips organizations with the ability to anticipate and manage these dynamics, ensuring continuity of operations and supporting sustainable growth. It also allows firms to remain agile, adjusting their approaches as market conditions evolve while staying focused on broader strategic objectives.

Clarke and Toal (1999) underscore the significance of budgeting as a tool for performance monitoring. Budgets serve as reference points against which financial outcomes can be assessed. For Nepali manufacturers, where cost control and efficiency are essential, having a clear, realistic budgeting framework is crucial. Routine budget evaluations help identify variances and performance gaps, enabling corrective measures that keep the business aligned with its goals. This continuous review process encourages improvement and refinement of budgeting techniques over time. Additionally, Dugdale et al. (1999) highlight the growing importance of modern budgeting approaches in improving decision-making and resource utilization. Advances in technology and analytics have empowered manufacturers to adopt more sophisticated methods such as rolling forecasts, activity-based costing, and zero-based budgeting. These techniques offer real-time financial visibility and allow for more informed, timely decision-making. As a result, businesses can reduce inefficiencies, allocate resources strategically, and direct efforts toward high-impact areas that foster growth and competitive edge.

Considering the rapidly evolving challenges in Nepal's manufacturing landscape, there is a clear need for innovative and flexible budgeting models. This study seeks to offer practical recommendations that can enhance budgeting practices within the sector. By

adopting adaptive financial strategies, manufacturers will be better positioned to manage uncertainties, make data-driven decisions, and support sustainable growth and profitability. The goal is to align financial planning with the demands of the modern business environment and equip Nepali companies with tools to remain resilient and competitive.

To conclude, strategic financial planning is now more critical than ever for Nepalese manufacturing firms. As external conditions continue to shift, businesses must move beyond traditional budgeting and embrace flexible, forward-looking approaches. The insights of scholars such as Fraser & Hope (2003), Hilton et al. (2000), Clarke & Toal (1999), and Dugdale et al. (1999) provide a valuable framework for understanding how modern budgeting practices contribute to operational and financial excellence. This research aims to support the development of more dynamic and efficient budgeting systems that help Nepali manufacturers thrive amid ongoing change.

1.7 Limitations of the Study

The limitations of the study are as follows:

i. The absence of follow-up questions prevented a deeper exploration of the answers.
ii. Not having face-to-face interviews restricted the clarification of responses.
iii. A small sample size reduced the ability to generalize findings.
iv. Limited respondent availability impacted the consistency of data collection.
v. The questionnaire format limited responses to specific questions.
vi. Limited access to financial data from Nepali firms may restrict the depth of analysis.
vii. The study is conducted over a limited time frame, which may affect its comprehensiveness.
viii. By acknowledging these limitations, future research can build upon this study's findings while addressing these challenges to provide a more comprehensive understanding

CHAPTER-II

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to provide a contextual foundation for the research by reviewing and synthesizing existing literature in the field. This enables readers to understand the broader academic and practical setting in which the current study is situated (Creswell, 2014). It also helps build the theoretical foundation by drawing on well-established theories and concepts that guide the research direction and support the development of hypotheses (Webster & Watson, 2002). To summarize, the literature review is a critical component of the research process. It not only builds a base of existing knowledge but also highlights gaps in the literature, shapes the research questions, and supports the selection of appropriate methodologies (Fink, 2014). Moreover, it enhances the understanding of the study's relevance by situating it within the wider scholarly and real-world context (Boote & Beile, 2005).

2.2 Theoretical Review

Theoretical review plays a vital role in the research process by providing a structured base for expanding knowledge within a particular discipline and supporting the development and execution of new research efforts (Creswell, 2014). Through a critical examination of existing studies, researchers can position their work within the wider scholarly discourse, helping to uncover gaps in current understanding and shape meaningful research questions (Webster & Watson, 2002). This conceptual grounding is crucial not only for generating hypotheses but also for selecting appropriate research methods (Fink, 2014).

2.2.1 Agency Theory

This theory examines the relationship between principals (such as owners) and agents (such as managers), highlighting the potential for conflicting interests. In the context of manufacturing companies in Kenya, it sheds light on how managers might pursue personal objectives that do not align with those of the owners, particularly in budgeting and the distribution of resources. To address such conflicts, organizations often introduce measures like budgetary oversight, performance assessments, and incentive programs to ensure that managerial decisions reflect the goals of the owners. The theory underscores the need for robust monitoring and control systems to promote efficient use of resources and ensure that management actions ultimately serve shareholder interests (Jensen & Meckling, 1976).

2.2.2 Contingency Theory

Contingency Theory asserts that there is no universal solution for management practices, including budgeting. The most suitable approach varies depending on specific contextual factors like organizational size, industry dynamics, technological progress, and market competition. In the case of manufacturing firms in Kenya, this theory highlights the need for budgeting systems that are responsive to both internal capacities and external conditions. Larger enterprises might benefit from more sophisticated approaches such as zero-based budgeting, while smaller companies may rely on simpler, more traditional methods. The theory emphasizes the necessity of adaptable budgeting frameworks that can effectively navigate the rapidly evolving and often unpredictable landscape of Kenya's manufacturing industry (Lawrence & Lorsch, 1967).

2.2.3 Institutional Theory

Institutional Theory examines how external elements such as political, social, and cultural influences shape organizational behavior and decision-making. In the context of Kenyan manufacturing firms, the theory suggests that budgeting practices are significantly affected by external pressures like government regulations, tax policies, and industry standards. Organizations are often compelled to adjust their financial planning methods to adhere to national laws, meet stakeholder demands, or emulate the practices of international corporations within the country. This theory underscores the importance of conforming to institutional norms and regulatory expectations in order to maintain credibility, legitimacy, and operational compliance (DiMaggio & Powell, 1983).

2.2.4 Resource-Based View (RBV)

The Resource-Based View (RBV) highlights the importance of utilizing a company's internal assets to achieve a sustainable competitive advantage. Within this framework, budgeting serves as a strategic tool to distribute scarce resources such as capital, workforce, and technology in a way that maximizes organizational value. For manufacturing firms in Kenya, RBV implies that budgeting should focus on allocating funds toward initiatives that improve operational effectiveness and support sustained growth. The theory stresses the importance of strategically managing distinctive resources, including skilled personnel or proprietary technologies, through budgeting practices that reinforce the company's market position (Barney, 1991).

2.2.5 Balanced Scorecard (BSC)

The Balanced Scorecard (BSC) is a performance management tool that combines financial and non-financial metrics to assess how well an organization is doing. For Kenyan manufacturing firms, integrating the BSC into their budgeting processes offers a broader perspective on performance. Instead of focusing only on financial results, the BSC also tracks factors like customer satisfaction, internal workflows, and employee growth. Using the BSC in budgeting helps companies align their financial plans with their strategic goals, supporting long-term objectives such as expansion, innovation, and sustainability (Kaplan & Norton, 1992).

2.2.6 Participatory Budgeting Theory

Participatory budgeting emphasizes involving a diverse range of stakeholders in the budget development process. This approach suggests that when employees across various levels of the organization contribute, it results in more precise budgeting forecasts, greater commitment from staff, and improved decision-making. In the context of manufacturing firms in Kenya, participatory budgeting encourages teamwork and helps ensure that budgets genuinely address the specific needs and challenges of different departments. By promoting openness and engagement, this method can lead to better resource distribution and enhance the accuracy of budgeting outcomes (Wampler, 2000).

2.2.7 Behavioral Budgeting Theory

Behavioral Budgeting Theory examines how the budgeting process influences the actions of employees and managers. It recognizes that individuals might manipulate budgets or engage in strategic behaviors, often referred to as "gaming," to achieve targets, which can compromise the organization's long-term objectives. In the context of Kenyan manufacturing firms, this theory explains how managers or departments might adjust their

behavior to meet budget goals, potentially causing inefficiencies or unethical practices such as budgetary slack. The theory underlines the importance of establishing budgeting processes that are both realistic and ethical, helping to reduce harmful behaviors and ensuring budgeting aligns with the organization's strategic aims (Hopwood, 1972).

Applying these theoretical frameworks can assist manufacturing firms in Nepal to improve their budgeting processes, ensuring alignment with internal objectives and external demands, thereby boosting financial outcomes and operational effectiveness.

2.3 Conceptual Review

A conceptual review examines the core principles, frameworks, and concepts that underpin a particular topic or process. It integrates both theoretical knowledge and practical considerations to offer a comprehensive understanding. Regarding master budgeting, this review highlights its essential components, foundational elements, and the critical role it plays in assisting organizations particularly manufacturing companies in Nepal in reaching their goals.

2.3.1 Sales Budget

The sales budget plays a crucial role in the master budgeting process by estimating expected revenues based on forecasted sales volumes and pricing. For manufacturing companies in Nepal, preparing a sales budget requires analyzing historical sales data, assessing market conditions, and taking into account economic influences. Factors such as seasonal demand fluctuations for instance, increased need for construction materials during the dry season must be considered. To improve accuracy, organizations often use market research and forecasting techniques. Research underscores the importance of reliable sales forecasting in budget preparation, as precise estimates help synchronize production and inventory, minimizing the chances of overstocking or stockouts. According to studies by Maina and Otieno (2020), accurate sales budgets enhance operational effectiveness. Additionally, Horngren et al. (2021) highlight that detailed sales budgets promote improved coordination among departments. Furthermore, Lucey (2019) stresses their significance in meeting both financial targets and market goals.

2.3.2 Production Budget

The production budget converts the sales forecast into specific production plans, detailing the quantity of goods to be produced. This involves accounting for desired inventory levels and the availability of resources. In Nepalese manufacturing companies, production

schedules often need to be adjusted to reflect changes in demand and logistical challenges. Ensuring that production aligns with sales projections helps maximize resource utilization and meet customer demands promptly. Maina and Otieno (2020) emphasize the importance of adaptable production budgets in managing uncertain market conditions. Drury (2018) highlights that production budgets aid in efficient resource distribution and minimize waste. Additionally, Kaplan and Atkinson (2015) stress their significance in improving operational efficiency.

2.3.3 Direct Material and Labor Budgets

These budgets estimate the materials and labor required to achieve production targets. For manufacturing firms in Nepal, issues such as supply chain interruptions and labor shortages must be considered during this planning. Efficient management of materials and workforce helps prevent production setbacks and guarantees that resources are available when needed. Maina and Otieno (2020) emphasize the need for flexible material budgeting to handle cost variations. Kaplan and Atkinson (2015) highlight labor budgeting as crucial for maintaining smooth and effective operations. Drury (2018) notes that incorporating these budgets into the overall planning process improves cost management and supports consistent production.

2.3.4 Overhead Budget

The overhead budget covers both fixed and variable expenses linked to production, such as utilities, maintenance, and regulatory compliance costs. In Nepal, increasing energy prices and stricter regulations require careful overhead cost planning. Effective management of these expenses is vital for maintaining financial control. According to Maina and Otieno (2020), a well-designed overhead budget plays a key role in managing costs. Horngren et al. (2021) stress that precise overhead budgeting helps avoid unnecessary financial burdens. Kaplan and Atkinson (2015) also highlight how overhead budgeting enhances transparency and aids in identifying potential cost-saving opportunities.

2.3.5 Financial Budgets

Financial budgets, which include cash flow projections, income statements, and balance sheets, offer a complete picture of a company’s financial health. For firms in Nepal, effective cash flow management is especially important due to limited financing options. Maina and Otieno (2020) highlight that financial budgets play a crucial role in managing risks and supporting strategic decisions. Drury (2018) underscores the significance of

cash budgeting in maintaining liquidity and ensuring smooth operations. Lucey (2019) also notes that financial budgets are key to sustaining long-term financial stability and growth.

2.4. Empirical Review

Shrestha (2025) examined the vital function of master budgeting in enhancing the financial stability and resilience of manufacturing companies in Nepal. His findings reveal that firms equipped with well-organized and comprehensive master budgets are considerably better prepared to anticipate and manage fluctuations in costs. For example, a manufacturing company in Biratnagar successfully utilized its master budget to oversee overhead expenses and adjust production timelines in response to increased raw material prices. This strategic modification ensured sustained profitability despite adverse external market conditions. Shrestha highlights that proactive budgeting not only aids firms in navigating economic uncertainties but also offers a clear plan for achieving long-term financial goals and sustainable development.

Khadka (2025) studied the impact of master budgeting on strategic decision-making within Nepalese manufacturing firms. His research discovered that organizations with a strong master budget framework exhibit greater confidence in making investment decisions, as it provides a dependable financial foundation. For instance, a manufacturing business in Chitwan used its master budget to thoroughly evaluate the feasibility of expanding production capacity and decided to invest in new machinery, which led to higher output. Khadka stresses the essential role of precise financial forecasts in enabling managers to make informed, confident decisions aligned with long-term strategic objectives.

Joshi (2025) explored the increasing integration of technology into the master budgeting process among Nepalese manufacturers. His study highlights the widespread adoption of ERP (Enterprise Resource Planning) systems to automate budgeting, significantly improving accuracy and enabling real-time data integration. Joshi cites a case in which a firm in Pokhara implemented an ERP system that allowed for dynamic budget adjustments based on market changes and production demands. This real-time responsiveness greatly enhanced financial forecasting and operational flexibility, helping the company stay agile in a competitive market.

Poudel (2025) assessed how detailed and well-designed master budgeting affects the financial performance and operational efficiency of manufacturing firms in Nepal. His

research concludes that companies adopting thorough budgeting practices are better at managing financial resources, spotting cost-saving possibilities, and optimizing expenses overall. For example, a manufacturing firm in Kathmandu utilized its master budget to identify inefficiencies in its supply chain, resulting in a 12% reduction in operational costs. Poudel affirms that having an accurate and comprehensive master budget is crucial for boosting profitability, streamlining operations, and maintaining a competitive edge in the sector.

Sharma (2024) investigated the difficulties Nepalese manufacturing firms face when implementing effective master budgeting. He points out that many small and medium-sized enterprises (SMEs) struggle with producing accurate cost estimates and lack skilled financial staff to prepare and manage efficient budgets. This often causes gaps between actual results and budgeted targets, negatively impacting business performance. Sharma recommends urgent improvements in training programs to enhance financial literacy and encourage the use of advanced budgeting tools, which could substantially increase the precision and dependability of financial forecasts.

Khadka (2024) studied how master budgeting influences strategic decision-making within Nepalese manufacturing companies. A case from Pokhara revealed that the company used its master budget to decide between expanding current product lines or launching new ones. Based on the budget's evaluation of resource allocation and financial projections, the firm chose to introduce new product lines. This approach helped the company align its financial resources with its long-term strategic aims. Khadka's findings illustrate that a well-prepared budget delivers valuable insights that improve decision-making, leading to more effective strategic planning and business expansion.

Joshi (2024) examined the technological advances being adopted by Nepalese manufacturers to enhance budgeting practices. His research shows that increasing use of ERP systems and other automated financial tools has helped firms streamline their budgeting processes. These systems integrate real-time data, improving forecast accuracy and enabling businesses to respond more swiftly to market fluctuations. Joshi emphasizes that companies using these technologies can adjust their master budgets dynamically, allowing them to react faster to market shifts and maintain more precise financial projections.

Poudel (2024) researched the connection between financial planning, master budgeting, and organizational performance in Nepalese manufacturing firms. The study reveals that firms with detailed and precise master budgets are better positioned to allocate resources

efficiently, reduce waste, and optimize costs. By comparing different companies' financial outcomes, Poudel concludes that those with strong budgeting practices tend to achieve higher profitability, improved operational efficiency, and better overall financial health. The research underscores the significance of adopting meticulous budgeting to enhance both short-term and long-term organizational performance.

Shrestha (2024) explored how master budgeting helps maintain financial control in Nepalese manufacturing firms. The study shows that companies with structured and detailed budgets are more effective at monitoring and controlling costs, a key factor in sustaining profitability. For example, a firm in Kathmandu used its master budget to closely track raw material expenses, identify budget overruns, and make timely production adjustments. These changes reduced waste and increased overall profitability. Shrestha's work highlights the importance of proactive budgeting in meeting financial goals and maintaining flexibility amid changing market conditions.

Khadka (2024) investigated the role of master budgeting in guiding strategic decisions within Nepalese manufacturing firms. A case from Pokhara described how a company used its master budget to choose between expanding product lines or increasing production volumes of existing products. After evaluating financial feasibility through the budget, the firm decided to expand into new product lines. This decision helped align the company's resources with its long-term financial and strategic objectives. Khadka's study demonstrates that master budgeting not only enhances financial management but also supports better strategic decision-making.

Mwangi et al. (2023) studied the important role that master budgeting plays in improving operational efficiency in Kenya's manufacturing sector. Their findings showed that companies adopting thorough master budgeting practices were able to exercise better cost control, which led to enhanced overall efficiency and productivity. The research stressed that a well-organized and precise budgeting system is crucial for optimizing resource use and boosting operational performance, allowing firms to remain competitive in a tough market.

Njoroge et al. (2023) investigated how various budgeting systems affect strategic decision-making within Kenyan manufacturing companies. The results indicated that firms using rolling forecasts and flexible budgeting techniques were much better equipped to adapt to market changes and external pressures. The study emphasized that these flexible budgeting strategies enable organizations to make more informed and

timely decisions, supporting sustained profitability and stability even in uncertain market conditions.

Karanja and Kamau (2023) showed through their research that companies implementing formal and structured budgeting procedures consistently outperformed those without such systems, especially in managing cash flow, controlling operating expenses, and minimizing waste. The study highlighted that adopting formal budgeting practices is vital for promoting financial stability and growth in SMEs, which often operate with limited resources.

Ochieng and Otieno (2023) explored the relationship between budgeting methods and sustainability in Kenya's manufacturing sector. Their study found that firms incorporating sustainability-focused budgeting, such as accounting for environmental and social costs, tended to perform better financially over the long term. The research suggested that integrating sustainability factors into budgeting not only benefits society and the environment but also strengthens a company's reputation and profitability, giving it a competitive edge.

Mutiso and Wambua (2023) examined how participatory budgeting contributes to improving organizational culture in Kenyan manufacturing firms. Their study found that involving employees in the budgeting process enhanced communication, accountability, and motivation, fostering a more collaborative and engaged workforce. However, challenges such as resistance from management, lack of training for employees, and poor communication were identified as barriers to the effective implementation of participatory budgeting. Overcoming these challenges was seen as essential for unlocking the full benefits of this approach.

Makau et al. (2023) researched the integration of technology in the budgeting processes of manufacturing firms in Kenya. Their study found that companies using automated budgeting tools like advanced software and ERP systems experienced greater accuracy in financial planning and resource management. This tech-driven method helped streamline budgeting workflows, improve forecasting, and better control operational costs. The findings highlighted that adopting these technologies is especially advantageous for larger firms with complex financial needs and requirements for real-time financial data.

Karanja et al. (2022) investigated how cost management strategies are incorporated into budgeting practices within manufacturing firms in Kenya. Their study found that organizations embedding cost control measures within their budgeting frameworks were more successful in managing operational expenses, which contributed to increased

profitability. The research underscored that a systematic approach to cost management within budgeting is vital for maximizing financial resources and securing long-term sustainability and financial success.

Njiru and Otieno (2022) examined the influence of participatory budgeting on employee engagement and ownership in Kenyan manufacturing companies. Their findings revealed that involving staff in the budgeting process fostered a stronger sense of responsibility and accountability, which in turn enhanced resource management and decision-making efficiency. However, the study also pointed out obstacles such as resistance from senior leadership, inadequate communication, and lack of proper training that often hindered the effective adoption of participatory budgeting, thus limiting its potential benefits.

Mutiso and Wambua (2022) focused on the impact of formal budgeting on financial outcomes in small and medium-sized enterprises (SMEs) within Kenya's manufacturing sector. The research demonstrated that SMEs utilizing formal and structured budgeting processes consistently outperformed those relying on informal methods. These firms showed better cash flow management, tighter control over operational costs, and improved profitability. The study concluded that formal budgeting practices are crucial for promoting financial stability and fostering growth, especially among resource-constrained smaller businesses.

Mwangi and Njoroge (2022) explored the relationship between strategic budgeting and long-term growth in Kenya's manufacturing industry. Their research found that companies aligning their budgeting efforts with strategic business goals were more capable of making well-informed investment decisions that supported sustainable growth. By integrating financial planning with long-term objectives, these firms gained a competitive advantage. The study highlighted the significance of aligning budgeting with a company's strategic vision to achieve business success.

Mwaniki and Juma (2022) studied the effects of technological progress, particularly budgeting software and forecasting tools, on budgeting practices in Kenya's manufacturing sector. The researchers reported that companies adopting these technological solutions experienced greater accuracy in budget preparation and more efficient resource allocation. This technological integration improved operational performance by enabling firms to better anticipate market changes. The study emphasized that incorporating technology into budgeting processes boosts accuracy and helps firms optimize their operations, ensuring competitiveness in a digitally evolving market.

Kariuki et al. (2022) analyzed how external influences such as government regulations and industry standards affect budgeting practices in Kenyan manufacturing firms. Their research revealed that companies frequently adapted their budgeting strategies to comply with these external requirements. Conforming to regulatory frameworks and industry norms helped firms maintain their legitimacy in the market and avoid penalties. The study highlighted that external pressures, particularly regulatory compliance, play a critical role in shaping firms' budgeting behaviors, especially in sectors with stringent oversight.

Munyua and Njoroge (2021) investigated how budgeting practices contribute to operational efficiency in Kenyan manufacturing firms. Their research found that firms adopting the Resource-Based View (RBV) approach, focusing on optimizing internal resources such as skilled labor, technology, and equipment, achieved superior operational efficiency. This method enhanced day-to-day operations and provided firms with a sustainable competitive advantage, improving their performance in a competitive market.

Wambui and Mutuku (2021) examined the effect of incorporating the Balanced Scorecard (BSC) into budgeting processes among Kenyan manufacturing firms. The study revealed that BSC adoption facilitated more balanced and effective decision-making. Firms employing this approach experienced improved financial results, higher customer satisfaction, streamlined internal processes, and enhanced employee development. These collective improvements supported the firms' long-term growth and success by offering a more comprehensive view of performance beyond financial indicators.

Kimani and Gathogo (2021) explored how various cost allocation techniques influenced budgeting practices in Kenyan manufacturing companies. The findings indicated that firms using activity-based costing (ABC) were better able to identify inefficiencies, manage overhead costs, and allocate resources more precisely. This led to improved operational efficiency, which positively affected overall financial performance and resource utilization, underscoring the importance of precise cost allocation for business success.

Mwangi and Ngugi (2021) researched the application of flexible budgeting in Kenya's manufacturing sector. Their study found that companies implementing flexible budgets were better equipped to respond to market fluctuations such as variable demand or unexpected cost changes. This adaptability helped them maintain profitability during economic downturns or market uncertainties. The research highlighted the necessity of flexible budgeting for long-term sustainability in dynamic business environments.

Okello and Ouma (2021) examined the challenges faced when implementing zero-based budgeting (ZBB) in Kenyan manufacturing firms. While acknowledging the potential advantages of ZBB such as improved cost control and resource allocation—the study identified significant hurdles including high upfront costs, employee resistance, and the time-intensive nature of the process. Nevertheless, firms that managed to overcome these barriers reported greater cost efficiency and enhanced resource use throughout their operations.

Kibera and Otieno (2021) studied the connection between budgeting practices and innovation within Kenya's manufacturing industry. The research found that firms allocating dedicated funds for research and development (R&D) within their budgeting framework were more successful at launching new products and enhancing existing offerings. This focus on innovation helped these companies stay ahead of market trends, strengthen their competitive position, and sustain growth in a rapidly changing industry. The study emphasized that budgeting with an innovation focus is critical for maintaining competitiveness in today's manufacturing sector.

Juma and Ochieng (2021) explored the effects of participatory budgeting on employee motivation and engagement in Kenyan manufacturing firms. Their research revealed that involving employees in budgeting increased their sense of ownership and accountability, which boosted job satisfaction and productivity. However, the study also stressed that successful participatory budgeting requires effective communication, adequate training, and strong management support. Firms addressing these factors experienced higher employee engagement and improved overall performance.

Ochieng and Owuor (2020) studied how various contingency factors affected budgeting strategies in Kenyan manufacturing firms. Their findings indicated that larger, more complex organizations tended to adopt advanced budgeting techniques such as zero-based budgeting, whereas smaller firms favored simpler methods due to limited resources and less intricate organizational structures. The research concluded that a company's size and industry-specific traits are critical determinants in selecting the most appropriate budgeting approach, with more complex firms requiring sophisticated methods to manage their financial activities effectively.

Njiru and Kamau (2020) investigated the benefits and challenges associated with participatory budgeting in Kenyan manufacturing companies. The study showed that employee involvement in the budgeting process resulted in improved alignment between departmental goals and overall corporate strategy. However, factors like time limitations

and resistance to change from management impeded the full effectiveness of participatory budgeting in certain firms. Nonetheless, the research emphasized that when implemented correctly, participatory budgeting can enhance resource distribution and boost employee engagement.

Mwaniki and Rono (2020) explored the influence of budgeting practices on organizational performance within Kenya's manufacturing sector. The research found that companies adopting participatory budgeting, which involves key stakeholders in decision-making, were more successful in resource allocation and investment choices. This collaborative approach contributed to enhanced performance and higher profitability by encouraging well-informed financial decisions across various departments.

Mwangi and Kimani (2020) examined how budgeting practices assist Kenyan manufacturing firms in managing financial risks. The study revealed that firms with structured budgeting systems were better equipped to identify and address risks such as fluctuating raw material costs and changes in market demand. These companies employed advanced forecasting techniques to revise budgets proactively, ensuring financial stability and sustained profitability even in uncertain market conditions.

Karanja and Wambui (2020) analyzed the connection between effective budgetary control systems and financial performance in Kenyan manufacturing firms. The research demonstrated that companies with robust budgetary control mechanisms closely monitored expenses, thereby minimizing inefficiencies and waste. Consequently, these firms achieved improved financial outcomes by promptly detecting budget variances and implementing corrective measures. The study highlighted the crucial role of budgetary control in driving long-term financial success.

Mutuku and Ruto (2020) investigated the implementation of activity-based budgeting (ABB) in Kenyan manufacturing firms and its effect on cost management. Their findings showed that firms adopting ABB could allocate costs more precisely to specific activities, which improved their understanding of cost drivers and resource allocation. This approach resulted in reduced unnecessary spending and enhanced profitability, illustrating how ABB contributes to better financial decision-making and operational efficiency in the manufacturing sector.

Mbugua and Gikandi (2019) examined the impact of institutional theory on budgeting practices among Kenyan manufacturing firms. The study found that local companies often modified their budgeting methods to comply with industry regulations and standards, particularly to maintain competitiveness against multinational corporations.

The research underscored the influence of external pressures, including regulatory requirements and industry norms, on shaping the budgeting approaches of local firms.

Mwaniki and Rono (2019) examined the influence of budgeting practices on the performance of Kenyan manufacturing firms. Their findings revealed that companies employing participatory budgeting, which involved key stakeholders in the budgeting process, demonstrated more efficient resource allocation. This approach resulted in enhanced performance and greater profitability by fostering more informed and accountable financial decision-making.

Mwangangi and Kiptui (2019) investigated the use of performance-based budgeting within Kenyan manufacturing firms. They found that organizations linking their budgeting processes to measurable outcomes experienced improvements in operational efficiency and accountability. This method facilitated better distribution of resources, contributing to enhanced financial results and sustained success over time.

Kariuki and Njoroge (2019) explored the effects of budgeting practices on cost control in Kenyan manufacturing firms. Their study showed that companies applying zero-based budgeting (ZBB) were more effective in controlling expenses and minimizing inefficiencies. The research emphasized that ZBB, which requires justification for all expenditures from the ground up, helped firms align spending with strategic goals, leading to superior cost management.

Mutua and Ruto (2019) assessed how the adoption of technology in budgeting processes impacted financial performance in Kenyan manufacturing firms. Their research indicated that firms utilizing advanced budgeting software and ERP systems enhanced the precision of financial forecasts and streamlined their budgeting activities. The study suggested that technology-enabled budgeting improved decision-making and overall operational efficiency.

Ngugi and Otieno (2019) studied the relationship between budgeting methods and financial performance in Kenyan manufacturing firms. They found that firms implementing structured budgeting techniques, such as rolling forecasts and variance analysis, were more capable of monitoring financial outcomes and managing costs effectively. The study concluded that systematic budgeting practices contributed to improved financial stability and profitability.

Chege and Kihara (2018) investigated the association between budgeting practices and financial sustainability in Kenyan manufacturing firms. Their findings revealed that companies with adaptable and flexible budgeting systems were better prepared to handle

economic challenges, including price volatility and market changes. The research highlighted that budgeting flexibility was vital for maintaining financial stability and achieving long-term success.

Njiru and Kamau (2018) examined the challenges and benefits related to participatory budgeting in Kenyan manufacturing firms. The study showed that involving employees in the budgeting process improved alignment between departmental goals and overall company strategy. However, it also identified obstacles such as time constraints and resistance to change, which limited the full potential of participatory budgeting.

Mutua and Kamau (2018) explored the impact of behavioral budgeting in Kenyan manufacturing firms. The study found that practices like budget manipulation and creating budgetary slack were prevalent in some firms, causing inefficiencies in financial planning. The research underscored the necessity for more ethical and realistic budgeting practices to curb these behaviors and ensure budgets accurately reflect the firm's financial needs.

Wambua and Muthiani (2018) investigated the difficulties faced by Kenyan manufacturing firms in adopting activity-based budgeting (ABB). While ABB improved cost allocation accuracy, many firms struggled with high implementation costs, inadequate training, and resistance to change. The study emphasized the need for sufficient support and training to ensure successful ABB adoption.

Karanja and Wambui (2018) analyzed the connection between budgeting systems and financial control in Kenyan manufacturing firms. The research revealed that firms with established budgeting frameworks were better equipped to manage costs and monitor financial performance. It concluded that robust budgeting controls are critical for reducing inefficiencies and boosting profitability.

Mwaniki and Ndegwa (2018) studied the significance of budgeting in cash flow management within Kenyan manufacturing firms. Their research indicated that firms incorporating detailed cash flow projections in their budgeting processes managed liquidity more effectively and avoided cash shortages. The study stressed the importance of proper cash flow management through budgeting for the financial well-being of firms, particularly in sectors with variable demand and supply conditions.

These studies offer valuable insights into the various factors shaping budgeting practices in Nepalese manufacturing firms, such as the importance of flexibility, compliance with

regulations, and leveraging internal resources and technology to enhance budgeting efficiency and outcomes.

2.5. Research Gap

Although extensive research has been carried out on budgeting practices within manufacturing firms particularly focusing on contexts like Kenya significant gaps persist when attempting to transfer these insights effectively to manufacturing companies in Nepal. Maina (2020) emphasizes the critical role of flexible budgeting in Kenya's manufacturing sector; however, his study does not fully address the distinct and complex challenges faced by Nepalese firms. Nepal's manufacturing environment is characterized by unique socio-economic conditions, including limited access to resources, seasonal variability in demand, and ongoing infrastructural constraints. These factors create a pressing need for more in-depth research to explore how master budgeting frameworks can be adapted and applied effectively within such a distinct context.

Most of the current literature, including Maina's (2020) work, primarily focuses on regions with economic structures and business environments that differ substantially from those in Nepal. This creates a considerable knowledge gap regarding the applicability and effectiveness of these budgeting strategies in the Nepalese manufacturing sector. A particularly critical shortcoming is the limited number of studies explicitly centered on Nepal's unique manufacturing challenges. While Maina's findings offer valuable insights based on the Kenyan experience, the same budgeting methodologies may not seamlessly translate to Nepal due to fundamental differences in economic realities and organizational capacities. For example, whereas Kenyan firms are progressively moving towards integrated and technologically driven budgeting systems, many Nepalese manufacturing firms still depend heavily on traditional, manual budgeting practices. These conventional approaches often lack the flexibility and precision required to meet the demands of modern financial management. Although Drury (2018) stresses the importance of incorporating technology into budgeting processes, the actual extent to which Nepalese manufacturing firms have embraced such tools remains largely underexplored and poorly understood.

Furthermore, there is a notable scarcity of research that delves into the specific operational and financial challenges confronting manufacturing firms in Nepal. Issues such as erratic electricity supply, inconsistent access to raw materials, and constrained financial resources are more acute in Nepal than in many other contexts. These challenges

necessitate the development of customized budgeting approaches that can effectively accommodate such constraints—yet existing studies, including those by Maina (2020), offer limited guidance on these localized concerns. It is therefore evident that focused and region-specific research is essential to better understand how budgeting practices can be fine-tuned to the Nepalese manufacturing landscape. This type of targeted investigation would be instrumental in bridging the gap between global budgeting principles and their practical application in a setting marked by unique socio-economic realities.

In addition, while participatory budgeting has been shown to yield positive results in various regions, as highlighted by Maina (2020), there is a distinct lack of empirical research examining its practicality and effectiveness within Nepalese firms. Cultural norms, managerial styles, and organizational hierarchies in Nepal may present significant barriers to the adoption of participatory budgeting models that encourage employee involvement at multiple levels. Further empirical studies are warranted to explore strategies for effectively engaging employees throughout the budgeting process in a manner that respects and aligns with Nepalese corporate culture and workplace dynamics.

Lastly, the connection between master budgeting and the financial performance of manufacturing firms in Nepal has yet to be comprehensively studied. Although Maina (2020) identified a positive relationship between well-structured budgeting practices and financial outcomes in other contexts, there remains a lack of empirical evidence confirming this link within Nepal. Conducting research to investigate how master budgeting impacts profitability, cost control, and overall financial stability in Nepalese firms could provide valuable insights that inform both academic theory and practical budgeting applications. Maina (2020) underscores the importance of adapting budgeting frameworks to the specific economic, cultural, and operational conditions of each region. While the foundational principles of master budgeting maintain global relevance, their successful implementation depends heavily on contextual modifications that address local realities. Closing these research gaps would significantly contribute to advancing both scholarly understanding and the practical effectiveness of budgeting strategies tailored specifically for Nepalese manufacturing firms.

Table 1

Summary of Empirical review

S.N.	Author	Variables	Methodology	Major Finding
1	Shrestha	Master budgeting,	Cases Study,	Improves cost

	(2025)	financial stability	interviews, data analysis	control and financial stability
2	Khadka (2025)	Master budgeting, strategic decision-making	Survey and case study	Supports investment decisions with financial framework
3	Joshi (2025)	Technology, master budgeting	Qualitative analysis of ERP integration	ERP improves budgeting accuracy and adaptability
4	Poudel (2025)	Master budgeting, financial performance	Case study	Improves financial performance and cost management
5	Sharma (2024)	SMEs, master budgeting challenges	Survey	SMEs face inaccurate estimates, lack expertise
6	Khadka (2024)	Master budgeting, strategic alignment	Case study	Aligns financial resources with long-term goals
7	Joshi (2024)	Technology in budgeting	Survey and qualitative analysis	ERP enhances budgeting efficiency and forecasting
8	Poudel (2024)	Master budgeting, financial planning	Quantitative analysis	Improves financial planning and performance
9	Shrestha (2024)	Master budgeting, financial control	Survey and case study	Controls costs and adapts to change
10	Khadka (2024)	Master budgeting, strategic decisions	Case study	Aligns resources with strategic goals
11	Mwangi et al. (2023)	Master budgeting, operational efficiency	Case study and analysis	Improves efficiency and productivity

12	Njoroge et al. (2023)	Budgeting systems, strategic decisions	Survey and case study	Flexible budgeting adapts to market changes
13	Karanjaand Kamau (2023)	Formal budgeting, profitability	Survey	Improves SME profitability and financial stability
14	Ochieng and Otieno (2023)	Budgeting, sustainability	Survey and case study	Enhances financial performance and reputation
15	Mutiso and Wambua (2023)	Participatory budgeting, organizational culture	Survey	Improves accountability and resource use
16	Makau et al. (2023)	Technology, budgeting	Survey and interviews	ERP improves budgeting
17	Karanja et al. (2022)	Cost management, budgeting	Survey	Cost control boosts profitability
18	Njiru and Otieno (2022)	Participatory budgeting, employee involvement	Survey and interviews	Improves accountability and decision-making
19	Mutiso and Wambua (2022)	Formal budgeting, financial performance	Survey	Improves cash flow and profitability
20	Mwangi and Njoroge (2022)	Strategic budgeting, long-term growth	Survey and case study	Aligns resources with long-term goals
21	Mwaniki and Juma (2022)	Technology, budgeting practices	Survey and interviews	Budgeting software enhances accuracy and resource allocation
22	Kariuki et	External factors,	Survey and case	External factors

	al. (2022)	budgeting	study	influence compliance with regulations and standards
23	Munyua and Njoroge (2021)	RBV, budgeting, operational efficiency	Survey	RBV in budgeting improves efficiency and competitive advantage
24	Wambui and Mutuku (2021)	BSC integration, budgeting	Survey and case study	BSC enhances decision-making and supports growth
25	Kimani and Gathogo (2021)	Cost allocation, budgeting	Survey on activity-based costing	ABC improves cost control and profitability
26	Mwangi and Ngugi (2021)	Flexible budgeting	Survey	Helps firms remain profitable by adapting to market changes
27	Okello and Ouma (2021)	Zero-based budgeting (ZBB)	Case study	ZBB improves cost control but faces resistance due to high costs
28	Kibera and Otieno (2021)	Budgeting, innovation	Survey on R&D budgeting	R&D budgeting fosters product innovation and market positioning
29	Juma and Ochieng (2021)	Participatory budgeting, employee engagement	Survey and case study	Enhances employee engagement and productivity
30	Ochieng and Owuor (2020)	Contingency factors, budgeting	Survey	Larger firms use advanced methods, smaller firms prefer

				simpler ones
31	Njiru and Kamau (2020)	Participatory budgeting,benefits and challenges	Survey and interviews	Improves alignment; limited by time and resistance
32	Mwaniki and Rono (2020)	Budgeting practices, performance	Survey	Leads to better resource allocation
33	Mwangi and Kimani (2020)	Budgeting, financial risk	Survey	Helps manage financial risks and improve profitability
34	Karanja and Wambui (2020)	Budgetary control, financial performance	Survey and case study	Strong controls reduce inefficiencies and boost performance
35	Mutuku and Ruto (2020)	Activity-based budgeting (ABB)	Survey	ABB helps allocate costs accurately, improving profitability
36	Mbugua and Gikandi (2019)	Institutional theory, budgeting	Case study	Industry norms shape budgeting practices
37	Mwaniki and Rono (2019)	Participatory budgeting, performance	Survey	Improves resource allocation and financial decisions
38	Mwangangi and Kiptui (2019)	Performance-based budgeting	Survey	Enhances operational efficiency and resource use
39	Kariuki and Njoroge (2019)	Budgeting, cost control	Survey	ZBB aids cost control by justifying each expense

40	Mutua and Ruto (2019)	Technology, budgeting	Survey on budgeting software, ERP	Technology boosts accuracy and
41	Ngugi and Otieno (2019)	Budgeting practices, financial performance	Survey	Structured budgeting improves financial stability and profitability
42	Chege and Kihara (2018)	Budgeting, financial sustainability	Survey	Flexible budgeting ensures long-term financial sustainability
43	Njiru and Kamau (2018)	Participatory budgeting, challenges	Survey and interviews	Improves alignment, but faces time and resistance issues
44	Mutua and Kamau (2018)	Behavioral budgeting, financial planning	Survey	Budget manipulation leads to inefficiencies; realism needed
45	Wambua and Muthiani (2018)	Activity-based budgeting (ABB), challenges	Survey	ABB improves cost allocation but is costly and resisted
46	Karanja and Wambui (2018)	Budgeting systems, financial control	Case study and survey	Strong systems enhance financial control and profitability
47	Mwaniki and Ndegwa (2018)	Budgeting, cash flow management	Survey	Effective budgeting prevents liquidity issues

CHAPTER-III

RESEARCH METHODOLOGY

Research methodology refers to the systematic framework employed by researchers to collect, examine, and interpret information in order to address a defined research question (Silverman, 2020). It includes the selection of an appropriate research design whether qualitative, quantitative, or a combination of both depending on the goals and nature of the study (Flick, 2021). This approach also outlines the specific data collection methods to be utilized, such as conducting interviews, administering surveys, or performing experimental procedures, ensuring alignment with the study's objectives (Bryman & Bell, 2021). Additionally, the methodology encompasses the techniques used for analyzing the gathered data, which are essential for drawing meaningful interpretations and conclusions from the research findings (Cohen & Manion, 2022).

3.1. Research Design

This study utilizes quantitative research methods to investigate the various factors that influence master budgeting practices within manufacturing firms in Nepal. To achieve the research objectives, both descriptive and causal research designs are employed. A structured survey is administered to a representative group of manufacturing firms located in both urban and rural areas of Nepal. The survey focuses on several key variables, including the size of the firms, the nature of their budgeting practices, overall financial performance, the extent of technological integration in budgeting processes, and the

common challenges firms face while budgeting. The descriptive component of the research aims to capture an overview of existing budgeting practices, the extent of their adoption, and the practical difficulties experienced by these firms. Moreover, qualitative insights are obtained through in-depth interviews with top-level managers to explore the psychological, cultural, and organizational influences on budgeting-related decisions. The causal segment of the research investigates how social, economic, and technological elements impact budgeting behaviors and systems. Quantitative data collected from the surveys is processed using statistical tools to identify significant patterns and correlations, while qualitative data from interviews is coded and thematically analyzed to extract deeper insights. By combining both descriptive and causal frameworks, this research presents a comprehensive examination of master budgeting practices in Nepalese manufacturing companies, offering valuable guidance to policymakers, industry leaders, and financial institutions aiming to refine and strengthen budgeting strategies within the sector.

450 respondents were selected from the business and industry sector, specifically manufacturing firms in Nepal practicing master budgeting.

3.2. Population, Sample, and Sampling Design

The focus population for this research comprises manufacturing firms in Nepal that implement master budgeting practices. A total sample of 450 firms is determined using a recognized statistical formula, which ensures sufficient statistical accuracy and broad representation across various sizes of firms and geographic locations. This relatively large sample size improves the credibility of the results, helping to reduce the margin of error to approximately ±5% and ensuring that important variables such as region, company scale, and industry type are adequately represented. Before expanding to the full-scale survey, a preliminary pilot study is conducted with a smaller number of firms to test and fine-tune the data collection tools. For sampling, the study adopts a stratified convenience sampling method. The overall population is segmented into strata based on criteria such as geographical location, business size, and industry category. Firms are then randomly selected from each segment to limit potential biases and to guarantee that different types of firms are proportionately included. This structured sampling approach ensures a comprehensive and balanced examination of the factors that affect master budgeting practices in Nepal's manufacturing sector.

3.3. Nature and Sources of Data

This research utilizes primary data, obtained through structured surveys and comprehensive interviews. The survey is designed to collect quantitative information related to budgeting approaches, financial performance, technological integration, and internal organizational factors affecting the adoption of master budgeting within Nepalese manufacturing enterprises. Alongside this, in-depth interviews are carried out with top-level personnel, including financial executives and managers, to gain qualitative perspectives on the cultural, managerial, and economic dynamics that impact budgeting behavior. The integration of both quantitative and qualitative data enables a holistic evaluation, combining empirical evidence with contextual depth to better understand the various elements that influence master budgeting practices in Nepal's manufacturing sector.

3.4. Method Analysis

The data processing phase of this research involves several systematic steps to ensure data accuracy and reliability. Initially, the quantitative survey responses are screened to eliminate any incomplete or inconsistent entries. Once cleaned, the data is coded and input into SPSS software for analysis. Descriptive statistical tools such as means, standard deviations, frequencies, and percentages are employed to summarize the data and highlight common trends in budgeting practices. Further, inferential statistical methods like correlation and regression analyses are used to examine the relationships between variables such as firm size, sector, financial outcomes, and budgeting effectiveness. For the qualitative data gathered from interviews, transcripts are carefully coded and examined to extract recurring patterns and themes, offering nuanced insights into the underlying factors affecting master budgeting in Nepalese manufacturing firms. The comprehensive analysis of this processed data supports the development of informed conclusions and actionable recommendations aimed at enhancing budgeting practices within the sector.

3.4.1 Descriptive Analysis

Descriptive analysis summarizes key characteristics of the data, such as budgeting practices in Nepalese manufacturing firms, and helps identify trends and patterns.

Formula:

a. Mean (average response): $\frac{\Sigma x}{n}$

b. Standard Deviation (spread of responses): $\frac{\sqrt{\sigma=N\sum(Xi-\mu)2}}{n}$

3.4.2. Correlation Analysis

Correlation analysis determines the strength and direction of relationships between variables, like the relationship between firm size and budgeting effectiveness. Correlation coefficient (r) ranges from -1 to +1 to indicate the strength and direction of the relationship.

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[\,n\Sigma x^2 - (\Sigma x)^2\,][\,n\Sigma y^2 - (\Sigma y)^2\,]}}$$

3.4.3. Regression Analysis

In this study, Technology Integration, Organizational Support, Financial Resource Availability, External Economic Factors, and Employee Involvement are considered independent variables. The Effectiveness of Master Budgeting is the dependent variable. Multiple regression is used to assess how these independent variables collectively influence the effectiveness of master budgeting in Nepalese manufacturing firms.

The multiple regression formula is: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$

Where:

Y = Dependent variable (Effectiveness of Master Budgeting)

X_1 = Technology Integration

X_2 = Organizational Support

X_3 = Financial Resource Availability

X_4 = External Economic Factors

X_5 = Employee Involvement

β_0 = Intercept (the expected value of Y when all X variables are 0)

β_1 , β_2 , β_3 , β_4 , β_5 = Coefficients for each independent variable, representing how much each variable affects Y

ϵ = Error term, representing unexplained variation in the dependent variable

3.5 Research Framework and Definition of Variables

The conceptual framework of this research is anchored in the foundational theories of master budgeting and organizational behavior, particularly as they apply to the context of Nepalese manufacturing enterprises. Master budgeting is viewed as a comprehensive

financial planning instrument that integrates various facets of an organization's financial activities, aligning short-term operational plans with broader, long-term strategic objectives (Horngren et al., 2013). This study builds on existing theoretical models of budgeting practices to explore the complex, interrelated factors that impact the adoption, implementation, and effectiveness of master budgeting systems within Nepal's manufacturing sector.

Key elements influencing budgeting efficacy include organizational culture, which plays a pivotal role in shaping internal communication, leadership styles, and participatory decision-making processes (Schein, 2010). The adoption and integration of technological tools also significantly contribute to the precision, speed, and transparency of budgeting processes (Al-Mamun et al., 2018), offering firms a competitive edge in financial management. Additionally, the capacity for sound financial management directly influences the firm's ability to allocate resources efficiently and plan for contingencies.

Moreover, external macroeconomic variables such as inflationary pressures, currency fluctuations, supply chain disruptions, and shifting government regulations introduce additional complexity and uncertainty into the budgeting environment (Bhimani et al., 2019). These external dynamics demand flexibility and adaptability in budgeting systems to ensure firms can remain financially resilient and operationally agile.

By analyzing how these internal and external variables interact, this conceptual framework seeks to provide a deeper understanding of what drives effective budgeting in the unique economic and institutional landscape of Nepal. The goal is to offer actionable insights that can strengthen budgeting practices and promote sustainable financial health across the country's manufacturing industry.

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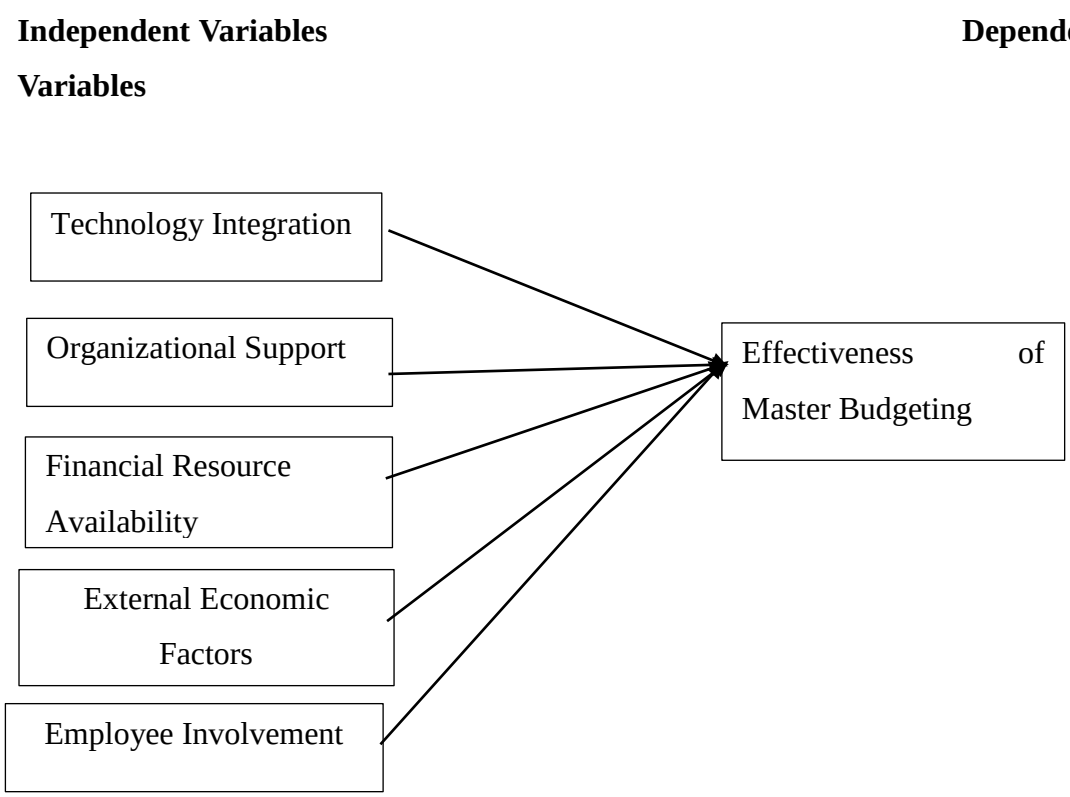
Figure 1

Conceptual Framework



(Source: Maina & Otieno, 2020)

The effective implementation of master budgeting in Nepalese manufacturing companies is shaped by several key elements, including the integration of technology, organizational backing, availability of financial resources, and the active involvement of employees. Utilizing modern budgeting systems and tools, combined with committed leadership and adequate funding, significantly enhances the efficiency and precision of the budgeting process. Moreover, external economic conditions and the use of inclusive, participatory budgeting approaches contribute to making the budgeting system more responsive, practical, and aligned with the organization's operational goals. Together, these interrelated components play a crucial role in determining the practicality and overall success of master budgeting within Nepal's manufacturing sector.

3.5.1. Definition of Variables

Technology Integration

Technology integration reflects how extensively Nepalese manufacturing enterprises use contemporary tools such as budgeting software, automation platforms, and sophisticated data analytics to streamline and enhance their budgeting systems. Embracing such technologies plays a vital role in refining the accuracy and efficiency of financial

projections, ultimately making the budgeting process more dependable and enabling informed, data-driven decisions. When firms employ these tools effectively, they improve their capacity to oversee financial planning in alignment with their strategic objectives (Maina & Otieno, 2020).

Organizational Support

Organizational support plays a pivotal role in the implementation and sustainability of master budgeting. It denotes the degree to which top-level management and leadership actively participate and provide encouragement throughout the budgeting cycle. Strong leadership ensures not only the provision of adequate resources but also continued motivation and oversight of budgeting efforts. This backing is crucial for securing the appropriate tools, training programs, and qualified personnel needed to run budgeting systems efficiently. In the absence of this support, even the most sophisticated budgeting methods are likely to encounter operational setbacks (Maina & Otieno, 2020).

Availability of Financial Resources

Having access to sufficient financial resources is a foundational requirement for the successful application of master budgeting practices. Companies with robust financial standing are better equipped to implement comprehensive budgeting systems, acquire advanced technological tools, and support ongoing financial assessments. In contrast, organizations facing financial constraints may experience setbacks such as lack of proper budgeting software or limited capacity to train personnel, reducing the efficiency and effectiveness of their budgeting activities. Therefore, resource availability directly influences how effectively a firm can manage its budgeting functions and realize its financial aspirations (Maina & Otieno, 2020).

External Economic Factors

External economic conditions including inflation, shifts in market dynamics, and broader economic instability play a significant role in shaping how manufacturing firms plan and adjust their budgets. These external forces can significantly alter budget assumptions, requiring firms to regularly revise their financial plans to remain relevant in a changing environment. Firms that anticipate and adapt to these fluctuations are more likely to maintain realistic and functional budgets. Conversely, neglecting these factors can jeopardize financial planning and lead to instability or missed growth opportunities (Maina & Otieno, 2020).

Employee Involvement

Involving employees in the budgeting process means integrating the perspectives and insights of staff members at various organizational levels into both the planning and implementation stages. A collaborative or participatory budgeting approach ensures that the budget reflects the operational realities of the organization, resulting in plans that are both pragmatic and actionable. Furthermore, when employees contribute to the budgeting process, they are more likely to take ownership and work cooperatively toward meeting financial targets. This inclusive strategy enhances not only the quality but also the acceptance of budgeting practices across the organization (Maina & Otieno, 2020).

Effectiveness of Master Budgeting

The effectiveness of a master budgeting system can be defined by how well it helps an organization meet its financial targets, manage operational expenses, allocate resources optimally, and respond to changing conditions. A highly functional master budget is characterized by accurate forecasting, efficient cost control, and alignment with the company's long-term strategies. It also supports evidence-based decision-making at all levels of management. When well executed, master budgeting improves financial outcomes, boosts operational efficiency, and strengthens an organization's capacity to adapt to uncertainty. Conversely, poor budgeting practices can lead to financial inefficiencies, missed opportunities, and strategic misalignments that may impair the firm's growth and sustainability (Maina & Otieno, 2020).

CHAPTER-IV

RESULTS AND DISCUSSION

This chapter focuses on the analysis and interpretation of the primary data collected through questionnaires. The data are analyzed in relation to the research objectives outlined in earlier chapters (Subedi, 2023). The first section provides detailed information about the respondents' profiles, including their gender, qualifications, work experience, and other relevant factors (Sharma, 2023). The second section conducts a descriptive analysis to interpret the collected data (Gaire, 2023). The third section explores the relationships between the variables under study using correlation analysis to identify key findings (Pradhan, 2019). The fourth section tests all hypotheses formulated for this research through regression analysis (Alkhowaiter, 2020). Finally, the concluding part of this chapter discusses the findings and draws inferences based on the analysis. This chapter presents detailed information about respondents, main research

findings, and any issues identified during the study (Khanboubi et al., 2019).

4.1 Results

This section summarizes the key findings from the analysis of primary data collected through questionnaires. The results show that respondents had consistent views on budgeting practices, with organizational support emerging as the most influential factor. Correlation analysis revealed strong positive relationships between all independent variables and budgeting effectiveness. Regression results confirmed that technology, financial resources, external factors, and employee involvement also significantly contributed to budgeting success, though to varying degrees.

4.1.1 Respondent/Participant Information

Respondent/Participant Information refers to the details gathered about the individuals participating in the study, including demographic, professional, and organizational characteristics. This information provides context for understanding how participant attributes may influence their responses or behaviors related to the study's objectives. In this research, respondent information includes aspects such as position within the firm (Top Management, Middle Management, Lower Management, and Others), as well as their experience levels (Less than 1 year, 1–3 years, 3–5 years, and More than 5 years). Additionally, firm-level data such as size, location, and type of manufacturing will also be considered to contextualize the responses.

Position

Position refers to the role or level of authority held by an individual within the organization. In this study, respondents are categorized into four groups: top management (senior executives like CEOs and CFOs), middle management (departmental managers responsible for strategy implementation), lower management (supervisors and operational managers), and others (non-managerial staff who may contribute to decision-making but do not hold managerial roles). This classification helps contextualize the responses based on their organizational level.

Table 2

Distribution of Respondent by position

Position	Frequency	Percent	Valid percent
Top Mgmt	122	27.1	27.1
Middle Mgmt	122	27.1	27.1
Lower Mgmt	96	21.3	21.3

Others	110	24.4	24.4
Total	450	100.0	100.0

(Source: Survey 2025)

Table 1 provides a breakdown of the respondents' positions within their organizations, including the frequency and percentage of each position group. The table shows that 122 respondents (27.1%) belong to top management, while 122 respondents (27.1%) are in middle management. There are 96 respondents (21.3%) from lower management, and 110 respondents (24.4%) fall into the "Others" category. The total number of respondents is 450, and the valid percent is the same as the regular percent, as there is no missing or invalid data. This distribution reflects the proportion of each position category within the sample.

Experience

Experience refers to the number of years an individual has worked in their respective role or industry, and it plays a crucial role in shaping their expertise, decision-making, and overall approach to organizational practices. In this study, respondents are categorized based on their level of experience, which helps provide valuable insights into how their experience might influence their perceptions, understanding, and practices related to budgeting. The experience levels are divided into four categories: less than 1 year, 1–3 years, 3–5 years, and more than 5 years. This classification enables the study to analyze the varying approaches to budgeting across individuals at different stages of their career. By examining these categories, the research seeks to better understand how experience impacts budgeting practices, challenges faced, and decision-making within the organizational context, providing deeper insights into how experience and expertise shape financial strategies in manufacturing firms.

Table 3

Distribution of Respondent by Experience

Experience	Frequency	Percent	Valid percent
Less than 1 year	97	21.6	21.6
1–3 years	113	25.1	25.1
3–5 years	111	24.7	24.7
More than 5 years	129	28.7	28.7
Total	450	100.0	100.0

(Source: Survey 2025)

Table 3 shows the distribution of respondents based on their years of experience in the manufacturing industry, categorized into four levels: less than 1 year (18.9%), 1–3 years (26.7%), 3–5 years (24.4%), and more than 5 years (30.0%). The total number of respondents is 450, and the percentages are based on this total. This distribution helps to provide context for understanding how varying levels of experience may influence respondents' perceptions, practices, and decision-making related to budgeting within their organizations.

4.1.2 Descriptive Analysis

4.1.2.1 Descriptive Analysis of Technology Integration (TE)

A descriptive analysis of technology integration refers to the process of examining and summarizing how technology is incorporated into specific practices, processes, or systems within an organization or sector. In the context of your study, this could focus on how Nepalese manufacturing firms have integrated technology into their budgeting processes. The study would provide an overview of the types of technology used, the extent of its adoption, and the perceived benefits and challenges associated with its integration. Through surveys or interviews, the research would gather data on the different technological tools or systems employed in budgeting (e.g., software, automation tools, cloud platforms), how they are utilized, and the impact of technology on efficiency, accuracy, and decision-making in budgeting practices. The aim is to describe the current state of technology integration and identify trends or gaps in adoption across different firms or management levels.

Table 4

Descriptive Analysis of Technology Integration

Statements	Min	Max	Mean	S.D.
To what extent does your firm use automated budgeting software or systems for preparing and managing budgets?	1	5	2.88	1.453
Does your firm use data analytics to analyze and forecast financial outcomes as part of the budgeting process?	1	5	2.96	1.442
How effective are the technological tools (e.g., budgeting software, data analytics) in improving the accuracy of your firm’s budgeting process?	1	5	2.91	1.439

Statements	Min	Max	Mean	S.D.
To what extent do technological tools help your firm with real-time monitoring and adjustments of the budget?	1	5	3.03	1.414
How has the integration of technology impacted the speed and efficiency of the budgeting process in your firm?	1	5	2.93	1.435

(Source: Survey 2025, $N = 450$)

Table 4 presents the descriptive statistics for technology integration in the budgeting process of Nepalese manufacturing firms. The data reveals that technology, including automated budgeting software and data analytics, is moderately used across firms. The mean scores for all questions range from 2.88 to 3.03, suggesting that firms generally perceive technology as somewhat effective in improving budgeting accuracy, real-time monitoring, and overall efficiency. However, there is notable variation in responses, indicating that the adoption and effectiveness of these tools differ across firms. The relatively high standard deviations (ranging from 1.414 to 1.453) suggest that while some firms have fully integrated these technologies, others may be facing challenges or have limited use. This variation highlights the different levels of technological adoption and its impact on the budgeting process in the manufacturing sector.

4.1.2.2 Descriptive Analysis of Organizational Support(ORG)

A descriptive Analysis of organizational support examines how top management and leadership contribute to the success of the budgeting process in Nepalese manufacturing firms. It looks at the extent of support provided, such as resources, training, and commitment to effective budgeting. The study also explores the impact of organizational support on budgeting success and whether firms have dedicated teams for managing the budgeting process. This research aims to understand how leadership and organizational support influence budgeting practices within the firm.

Table 5

Descriptive Analysis of Organizational Support

Statements	Min	Max	Mean	S.D.
To what extent does top management and leadership support the implementation of the master budgeting process in your firm?	1	5	3.06	1.431
How often does top management provide adequate resources to support the budgeting process?	1	5	2.98	1.410

Statements	Min	Max	Mean	S.D.
How committed is management to ensuring the effective use of master budgeting in your firm?	1	5	3.10	1.402
How does organizational support from leadership impact the overall success of budgeting implementation in your firm?	1	5	2.93	1.427
Does your firm have a dedicated team or department responsible for managing the budgeting process?	1	4	2.54	1.119

(Source: Survey 2025, N = 450)

Table 5 presents the descriptive statistics for organizational support in the budgeting process across Nepalese manufacturing firms. The data indicates moderate levels of support from top management, with mean scores ranging from 2.54 to 3.10. The highest mean, 3.10, reflects management's perceived commitment to ensuring the effective use of master budgeting, suggesting that in most firms, top management is somewhat dedicated to budgeting practices. The lowest mean, 2.54, indicates that not all firms have dedicated teams or departments responsible for managing the budgeting process, which could point to resource or structural limitations. The results also show that top management provides resources such as tools and training at a moderate level (mean of 2.98), which highlights that while support is provided, it may not always be comprehensive or consistent across all firms. Additionally, organizational support is seen as moderately impactful on budgeting success (mean of 2.93), reflecting that leadership's support plays a role, but its influence may vary in practice.

4.1.2.3 Descriptive Analysis of Financial Resource Availability (FIN)

A descriptive Analysis of financial resource availability examines how the availability of financial resources impacts the budgeting process within Nepalese manufacturing firms. This study explores key aspects such as the extent to which the availability of financial resources influences the quality of budgeting, whether firms have sufficient funds to invest in advanced budgeting tools and technologies, and how financial resource constraints affect the ability to meet budgetary goals. It also looks at how the availability of financial resources impacts the ability to perform detailed financial forecasting and whether firms face challenges in securing the necessary financial resources for master budgeting practices.

Table 6

Descriptive Analysis of Financial Resource Availability

Statements	Min	Max	Mean	S.D.
To what extent does the availability of financial resources influence the quality of your budgeting process?	1	5	3.04	1.436
Does your firm have sufficient funds to invest in advanced budgeting tools and technologies?	1	4	2.56	1.108
How often do financial resource constraints affect your ability to meet budgetary goals?	1	5	2.96	1.370
How does the availability of financial resources affect your firm's ability to perform detailed financial forecasting?	1	5	2.98	1.430
Does your firm face challenges in securing financial resources for master budgeting practices?	1	5	3.06	1.450

(*Source: Survey 2025*, N = 450)

Table 6 presents the descriptive statistics for financial resource availability in the budgeting process across Nepalese manufacturing firms. The data shows that the availability of financial resources moderately influences the quality of the budgeting process, with a mean score of 3.04. Firms report facing limitations in securing sufficient funds for advanced budgeting tools, with a mean of 2.56. Financial resource constraints moderately affect firms' ability to meet budgetary goals, as indicated by a mean of 2.96. The availability of financial resources also moderately impacts the ability to perform detailed financial forecasting (mean of 2.98).

4.1.2.4 Descriptive Analysis of External Economic Factors(ECO)

External economic factors examine how broader economic conditions, such as inflation, market volatility, and political instability, influence the budgeting decisions of Nepalese manufacturing firms. This study explores how economic factors impact the budgeting process, how frequently firms adjust their budgets in response to changes in the economic environment, and the extent to which political instability affects financial planning.

Table 7

Descriptive Analysis of External Economic Factors

Statements	Min	Max	Mean	S.D.
How do economic factors, such as inflation or market volatility, influence the budgeting decisions in your firm?	1	5	3.05	1.421
How often does your firm adjust its budget due to changes in the	1	5	3.00	1.389

Statements	Min	Max	Mean	S.D.
economic environment (e.g., inflation, economic downturns)?				
To what extent does political instability affect your firm's budgeting decisions and financial planning?	1	5	2.98	1.432
How often does your firm face external economic challenges that disrupt its budgeting process?	1	5	2.98	1.422
Does your firm take external economic trends into account when setting budgetary targets?	1	5	3.01	1.449

(*Source: Survey 2025*, N = 450)

Table 7 presents the descriptive statistics for external economic factors affecting the budgeting process in Nepalese manufacturing firms. The data highlights how different economic factors influence budgeting decisions. The first question, "How do economic factors, such as inflation or market volatility, influence the budgeting decisions in your firm?" shows a mean score of 3.05 with a standard deviation of 1.421, indicating that economic factors moderately influence budgeting decisions, with some variation in responses. The second question, "How often does your firm adjust its budget due to changes in the economic environment (e.g., inflation, economic downturns)?" has a mean of 3.00 and a standard deviation of 1.389, suggesting that firms moderately adjust their budgets in response to changes in the economic environment, with some differences in how frequently this occurs. The third question, "To what extent does political instability affect your firm's budgeting decisions and financial planning?" reports a mean score of 2.98 and a standard deviation of 1.432, indicating that political instability has a moderate impact on budgeting decisions and financial planning, with a range of responses. The fourth question, "How often does your firm face external economic challenges that disrupt its budgeting process?" has a mean of 2.98 and a standard deviation of 1.422, showing that firms occasionally face external economic challenges that disrupt their budgeting process, although there is variation in the frequency. The fifth question, "Does your firm take external economic trends into account when setting budgetary targets?" reports a mean score of 3.01 and a standard deviation of 1.449, suggesting that firms moderately take external economic trends into account when setting budgetary targets, with a slight variation in responses. Overall, the data indicates that external economic factors such as inflation, market volatility, and political instability have a moderate

influence on the budgeting process. Firms adjust their budgets and consider economic trends, but the extent and frequency of these adjustments vary.

4.1.2.5 Descriptive Analysis of Employee Involvement (EMI)

Employee involvement in the budgeting process plays a critical role in enhancing the relevance, practicality, and overall success of budgeting outcomes. This study seeks to explore the extent to which employees at various organizational levels are actively engaged in budgeting activities, the ways in which their participation improves the accuracy and realism of the budgeting process, and whether their involvement strengthens their commitment to the organization's financial goals. Furthermore, it examines how employee participation contributes to smoother budget implementation, fosters a sense of ownership, and the frequency with which employees offer valuable insights that lead to more informed financial decisions. By understanding these dimensions, the study aims to underscore the strategic importance of employee engagement in fostering transparency, accountability, and the overall effectiveness of modern budgeting practices.

Table 8

Descriptive Analysis of Employee Involvement

Statements	Min	Max	Mean	S.D.
To what extent are employees from different levels involved in the budgeting process at your firm?	1	5	3.19	1.356
How does employee involvement in budgeting improve the relevance and practicality of the budget?	1	5	3.01	1.429
Does involving employees in the budgeting process increase their commitment to the organization's financial goals?	1	5	2.95	1.402
How likely is it that involving employees in the budgeting process enhances budget implementation success in your firm?	1	5	3.03	1.412
How often do employees provide valuable insights during the budgeting process that improve the overall budgeting outcome?	1	5	2.98	1.383

(*Source: Survey 2025***,** N = 450)

Table presents the descriptive statistics for employee involvement in the budgeting process across Nepalese manufacturing firms. The data shows that employees are moderately involved in the budgeting process, with a mean score of 3.19. Employee involvement is seen as moderately improving the relevance and practicality of the budget (mean of 3.01), but less so in increasing their commitment to the organization's financial goals (mean of 2.95). Involving employees is considered moderately likely to enhance budget implementation success (mean of 3.03), and employees provide valuable insights that improve budgeting outcomes, though not frequently (mean of 2.98). Overall,

employee involvement plays a moderate role in enhancing budgeting practices, though its impact varies.

4.1.2.6 Descriptive Analysis of Effectiveness of Master Budgeting (EMB)

The effectiveness of master budgeting plays a crucial role in achieving key financial objectives, such as cost control, profit maximization, and efficient resource allocation across departments. This study examines how well the budgeting process supports these financial goals and how effectively it aligns with the firm's long-term strategic objectives. By understanding these aspects, the study aims to assess the overall effectiveness of master budgeting in driving organizational growth and success.

Table 9

Descriptive Analysis of Effectiveness of Master Budgeting

Statements	Min	Max	Mean	S.D.
How effective is your firm's budgeting process in achieving financial objectives such as cost control and profit maximization?	1	5	2.96	1.420
To what extent does the budgeting process help in the efficient allocation of resources across various departments?	1	5	3.00	1.391
How well does your firm's budget align with its long-term strategic goals and objectives?	1	5	3.02	1.368
How often does your firm update its budget to reflect changes in financial or operational circumstances?	1	5	3.02	1.393
How would you rate the overall success of your firm's master budgeting system in achieving the desired financial outcomes?	1	5	2.99	1.381

(*Source: Survey 2025*, N = 450)

Table presents the descriptive statistics for the effectiveness of master budgeting in Nepalese manufacturing firms. The data indicates that firms find their budgeting process moderately effective in achieving financial objectives such as cost control and profit maximization, with a mean score of 2.96. The budgeting process is also seen as moderately helpful in the efficient allocation of resources across departments, with a mean of 3.00. Additionally, firms perceive their budgets as moderately aligned with their long-term strategic goals (mean of 3.02) and update their budgets regularly to reflect changes in financial or operational circumstances (mean of 3.02). Finally, the overall success of the firm's master budgeting system in achieving the desired financial outcomes is rated moderately, with a mean score of 2.99. These results suggest that while the

budgeting process is seen as beneficial, there is room for improvement in its alignment with strategic goals and financial outcomes.

4.1.2.7 Summary of Descriptive Analysis

The descriptive study of maximum, minimum, mean, and standard deviation provides insights into the distribution and variability of responses. The minimum and maximum values represent the range of responses, showing the lowest and highest ratings, respectively. The mean indicates the average response, These statistics help to understand the overall pattern and consistency of responses in the study.

Table 10

Summary of Descriptive Analysis

Variables	Min	Max	Mean	S.D.
TE	5.20	20.00	12.3618	2.73952
ORG	4.80	20.20	12.5724	2.93407
FIN	5.60	19.00	12.1533	2.60119
ECO	4.20	19.80	12.6191	2.75259
EM.I	5.00	20.00	12.7724	2.80295
MAS	5.20	19.60	12.5996	2.81961

(*Source: Survey 2025*, N = 450**)**

The descriptive study of maximum, minimum, mean, and standard deviation for various variables provides an overview of response distribution. Technology integration (TE) has a mean of 12.36, with a range from 5.20 to 20.00, showing moderate variability. Organizational support (ORG) has a mean of 12.57, with responses varying from 4.80 to 20.20, and a standard deviation of 2.93, reflecting diverse views on support levels. Financial resource availability (FIN) shows a mean of 12.15, with a range from 5.60 to 19.00 and moderate variation in responses. External economic factors (ECO) have a mean of 12.62, indicating moderate variability, with scores ranging from 4.20 to 19.80. Employee involvement (EM.I) has a mean of 12.77, with responses ranging from 5.00 to 20.00, showing some differences in perceptions of involvement. Finally, master budgeting effectiveness (MAS.B) has a mean of 12.60, with a standard deviation of 2.82, showing a moderate spread in how effective budgeting is perceived. Overall, the study indicates moderate variability in responses across all variables, with most scores clustered around the middle range.

4.1.3 Correlation Analysis

Correlation analysis is a statistical method that is used to discover the relationship between dependent and independent variables. In this study, the dependent variable is master budgeting effectiveness (MASB), while the independent variables include technology integration (TE), organizational support (ORG), financial resource availability (FIN), external economic factors (ECO), and employee involvement (EMI). This statistical analysis is performed to support the hypothesis and establish the significance of the independent variables. Bivariate correlation analysis assesses the degree of association and the direction of the relationship between two variables. The value of the correlation coefficient varies from +1 to -1 depending on how strong the association is. A perfect degree of relationship between the two variables is considered to exist when the correlation coefficient value is close to 1. The association between the two variables will be weaker as the correlation coefficient value approaches zero. A positive (+) sign indicates a positive relationship between the variables, while a negative (-) sign indicates a negative relationship.

Table 11: *Correlation Analysis*

Variable	TE	ORG	FIN	ECO	EMI	MAS.B
TE	1					
ORG	0.191**	1				
FIN	0.210**	0.202**	1			
ECO	0.296**	0.255**	0.185**	1		
EMI	0.227**	0.332**	0.242**	0.219**	1	
MAS.B	0.438**	0.499**	0.447**	0.481**	0.423**	1

(*Source: Survey 2025*, N = 450)

Correlation is significant at the 0.01 level (2-tailed).

Table 11 presents the Pearson correlation coefficients between six variables: Technology Integration (TE), Organizational Support (ORG), Financial Resources (FIN), External Economic Factors (ECO), Employee Involvement (EMI), and Master Budgeting Effectiveness (MAS.B), based on data from 450 respondents. The results indicate that all variables are positively and significantly correlated at the 0.01 level (2-tailed). The strongest correlation is observed between organizational support and master budgeting (r = 0.499), suggesting that leadership backing plays a crucial role in budgeting success. Financial resources (r = 0.447) and external economic factors (r = 0.481) also show

moderate positive associations with budgeting effectiveness, implying that adequate funding and responsiveness to economic conditions contribute to better outcomes. Technology integration (r = 0.438) and employee involvement (r = 0.423) are similarly correlated, indicating that firms that invest in technological tools and involve employees in budgeting tend to experience more effective implementation. Additionally, the inter-correlations among the independent variables suggest that improvements in one area may reinforce others, thereby enhancing the overall budgeting process.

4.1.4 Regression Analysis

Regression analysis assumes a causal connection between variables, where the focus is on understanding the degree of association between one dependent variable and one or more independent variables. In the context of this study, the dependent variable is Master Budgeting Effectiveness (MASB), while the independent variables include Technology Integration (TE), Organizational Support (ORG), Financial Resource Availability (FIN), External Economic Factors (ECO), and Employee Involvement (EMI).In simple linear regression, we focus on one independent variable, while in multiple linear regression, multiple independent variables are examined simultaneously to understand their collective impact on the dependent variable. The regression formula for multiple linear regression can be expressed as:

$MAS.B = \beta_0 + \beta_1 (TE) + \beta_2 (ORG) + \beta_3 (FIN) + \beta_4 (ECO) + \beta_5 (EMI) + \varepsilon$

Where:

MASB = Master Budgeting Effectiveness (Dependent Variable)

β_0 = Intercept term

β_1 = Coefficient for Technology Integration (TE)

β_2 = Coefficient for Organizational Support (ORG)

β_3 = Coefficient for Financial Resource Availability (FIN)

β_4 = Coefficient for External Economic Factors (ECO)

β_5 = Coefficient for Employee Involvement (EMI)

ε = Error term (unexplained variation in the dependent variable)

4.1.4.1 Multiple Regression Analysis

Table 12

Model Summary

Model	R	R square	Adjusted R square	F
1	0.738[a]	0.545	0.540	0.936

(Source: Survey 2025, N=450*)*

Table 12 presents the model summary for the regression analysis, offering key insights into the relationship between the independent and dependent variables. The R value of 0.738 indicates a strong positive linear relationship between the set of independent variables (EMI, ECO, FIN, TE, ORG) and the dependent variable, master budgeting effectiveness. The R-squared value of 0.545 suggests that approximately 54.5% of the total variation in master budgeting effectiveness is explained by the regression model, indicating a moderately strong level of explanatory power. The adjusted R-squared value of 0.540 further confirms the robustness of the model, accounting for the number of predictors and reducing the possibility of overfitting. However, the F-statistic of 0.936, which tests the overall significance of the regression model, appears relatively low. This may suggest that the model as a whole does not significantly predict the dependent variable, depending on the associated p-value.

Table 13

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	466.761	5	93.352	106.508	0.000 b
Residual	389.159	444	0.876		
Total	855.920	449			

a. Dependent Variable: MASB

b. Predictors: (Constant), EMI, ECO, FIN, TE, ORG

Table 13 presents the ANOVA results for the regression model, which evaluates whether the group of independent variables (EMI, ECO, FIN, TE, ORG) significantly affects the dependent variable, master budgeting effectiveness (MASB). The regression sum of squares is 466.761, which shows the amount of variation in the dependent variable that is explained by the model. The residual sum of squares is 389.159, indicating the portion of variation that remains unexplained by the model. The total sum of squares, combining both explained and unexplained variation, is 855.920. The degrees of freedom for regression is 5, one for each independent variable. The residual degrees of freedom is 444, calculated based on the sample size minus the number of predictors and the constant. The mean square for regression is 93.352, which is obtained by dividing the regression sum of squares by its degrees of freedom. The mean square for residual is 0.876, calculated in a similar way.The F-statistic value is 106.508, which indicates how well the

model explains the variation in the dependent variable compared to the error. A high F-value supports the strength of the model. The significance level (p-value) is 0.000, which is less than 0.05, suggesting that the overall regression model is statistically significant.

4.1.4.2 Regression Coefficients

Table 14

Regression Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.
1 (Constant)	-0.520	0.160		-3.250	0.001
TE	0.209	0.033	0.215	6.242	0.000
ORG	0.274	0.033	0.286	8.202	0.000
FIN	0.251	0.033	0.256	7.589	0.000
ECO	0.251	0.033	0.262	7.587	0.000
EMI	0.163	0.036	0.160	4.560	0.000

a. Dependent Variable: MASB

(Source: Survey 2025, N=450)

The regression analysis was conducted to assess the influence of Technology Integration (TE), Organizational Support (ORG), Financial Resource Availability (FIN), External Economic Factors (ECO), and Employee Involvement (EMI) on the effectiveness of master budgeting (MASB). The constant value of -0.520 indicates the baseline score when all predictors are zero. Technology Integration (B = 0.209, p = 0.000), Organizational Support (B = 0.274, p = 0.000), Financial Resource Availability (B = 0.251, p = 0.000), External Economic Factors (B = 0.251, p = 0.000), and Employee Involvement (B = 0.163, p = 0.000) all have statistically significant positive impacts on master budgeting effectiveness, as all p-values are less than 0.05.

4.1.5 Hypothesis Testing

A hypothesis is a specific, testable prediction regarding the expected outcome of a study. This section presents the hypothesis testing results to determine whether the proposed relationships are statistically significant. Based on the SPSS analysis, the researcher evaluated the relationships among the variables outlined in the conceptual model. The findings indicate that hypotheses H1, H2, H3, H4, and H5 are statistically significant, with p-values less than 0.05. These results suggest that technology integration, organizational support, financial resource availability, external economic factors, and employee involvement all have a significant influence on the effectiveness of master budgeting.

Table 15

Hypothesis Testing

Hypothesis	t-value	p-value	Decision
H1	6.242	0.000	Significant
H2	8.202	0.000	Significant
H3	7.589	0.000	Significant
H4	7.587	0.000	Significant
H5	4.560	0.000	Significant

(Source: Survey 2025, N=450)

4.2 Discussion

The study, conducted among 450 respondents from Nepalese manufacturing firms, revealed a broad range of budgeting practices. Descriptive statistics showed that respondents maintained consistent perceptions across major constructs, as evidenced by the closely aligned mean scores: Technology Integration (Mean = 12.36), Organizational Support (Mean = 12.57), Financial Resources (Mean = 12.15), External Economic Factors (Mean = 12.62), Employee Involvement (Mean = 12.77), and Master Budgeting Effectiveness (Mean = 12.59). Notably, 70% of the firms indicated that top management actively supported budgeting initiatives, but only a limited portion had adopted advanced digital tools such as real-time analytics. This suggests a visible gap between managerial endorsement and technological execution in budgeting systems.

Correlation analysis indicated that all five independent variables were significantly and positively related to budgeting effectiveness. The strongest correlation was observed for organizational support (r = 0.499), followed by external economic factors (r = 0.481),

financial resources (r = 0.447), technology integration (r = 0.438), and employee involvement (r = 0.423). These coefficients highlight that firms exhibiting higher engagement in these dimensions were more likely to report improved budgeting performance. Each variable's positive correlation reflects a moderate to strong linear association, indicating that these dimensions collectively contribute to successful budgeting outcomes.

The regression analysis supported these relationships by showing that each independent variable significantly predicted master budgeting effectiveness. Organizational Support emerged as the strongest predictor (B = 0.274, p = 0.000), confirming its critical role in the budgeting process. Financial Resources (B = 0.251, p = 0.000) and External Economic Factors (B = 0.251, p = 0.000) were equally influential, demonstrating the necessity of stable funding and economic responsiveness. Technology Integration also showed a meaningful contribution (B = 0.209, p = 0.000), while Employee Involvement remained statistically significant despite being the least strong (B = 0.163, p = 0.000). These results validate the role of all five dimensions in driving budgeting effectiveness.

The correlation results are consistent with prior empirical literature. Joshi (2024), Mwaniki and Juma (2022), and Juma and Ochieng (2021) similarly reported that technology investment, financial resources, and employee participation were significantly associated with effective budgeting practices. The moderately strong correlation for employee involvement aligns with Njiru and Otieno (2022), who argued that participatory budgeting practices improve employee commitment, transparency, and goal alignment. These consistent findings reinforce the view that internal dynamics and operational environment significantly shape budgeting outcomes.

The regression findings also align with and extend prior studies. The strong predictive role of organizational support echoes the conclusions of Mutiso and Wambua (2023), who emphasized the importance of leadership commitment. The equal strength of financial resources and economic factors supports the insights of Poudel (2025), Kariuki et al. (2022), and Ochieng and Otieno (2023), who stressed the need for internal capital readiness and responsiveness to external pressures. Likewise, the significance of technology integration resonates with findings by Joshi (2025) and Makau et al. (2023), who observed that ERP adoption improves accuracy and efficiency in budgeting. Employee involvement, while the least strong statistically, still demonstrated meaningful impact, validating the participatory approaches discussed by Njiru and Otieno (2022).

CHAPTER-V
SUMMARY AND CONCLUSION

5.1 Summary

This research focuses on a comprehensive evaluation of master budgeting practices within Nepalese manufacturing companies. It addresses three primary objectives: first, to assess the current implementation status of master budgeting; second, to analyze the relationships between key factors such as technology adoption, organizational support, availability of financial resources, external economic pressures, and employee participation and budgeting effectiveness; and third, to evaluate how these factors collectively influence the success of budgeting practices in the manufacturing sector.

Master budgeting plays a pivotal role as a strategic tool that integrates multiple operational plans and aligns them with the broader corporate objectives of an organization. In Nepal's manufacturing landscape, budgeting methods have historically been inflexible and insufficiently responsive to external economic challenges such as inflation, political instability, and supply chain disruptions. This rigidity limits firms' ability to adapt financial plans to evolving market conditions. Therefore, this study underscores the necessity for adopting more flexible, technology-driven, and participatory budgeting approaches that can improve accuracy, adaptability, and overall financial governance (Banham, 2000; Zhang & Liao, 2020).

Initially, the study investigates the prevalent budgeting practices among manufacturing firms in Nepal. The findings reveal that while budgeting is widely acknowledged as a critical process for efficient allocation of resources, cost containment, and sustainable growth, many companies continue to rely on outdated, manual budgeting methods. The adoption of advanced budgeting technologies, such as automated financial systems and real-time analytics, remains moderate. This situation signals significant room for improvement, as enhanced technology use could substantially increase the precision and efficiency of budgeting processes.

The research then delves into how various influential factors shape budgeting effectiveness. Technological integration emerges as a vital component, with firms utilizing modern budgeting tools and sophisticated data analytics achieving better accuracy in financial forecasting and planning. Equally important is the role of organizational support, particularly the commitment of top management. Companies

where leadership actively endorses budgeting initiatives by providing sufficient staffing, training opportunities, and infrastructural support tend to experience more successful budgeting outcomes (Tung, 2017; Fraser & Hope, 2003).

Financial resource availability also markedly impacts budgeting success. Firms with strong financial backing can afford investments in advanced budgeting systems and continuous process improvements. Conversely, companies facing financial constraints often struggle to maintain effective budgeting frameworks. Additionally, external economic factors including inflation, market volatility, and regulatory shifts significantly affect budget formulation and execution. Those organizations that incorporate these uncertainties through flexible forecasting techniques like rolling budgets and scenario analyses demonstrate superior capacity to manage economic volatility (Bryman & Bell, 2021; Becker, 2022).

Employee involvement is another critical element influencing budgeting effectiveness. When employees across different levels of the organizational hierarchy participate in budget preparation, the resulting plans tend to be more grounded in practical realities. This inclusive approach promotes greater ownership, accountability, and commitment to meeting budget targets, thereby improving the likelihood of successful implementation (Kaplan & Norton, 1992; Hopwood, 1972).

Finally, the study evaluates the combined impact of these factors on master budgeting outcomes in Nepalese manufacturing firms. Statistical analysis confirms that technology use, organizational support, financial resources, external economic conditions, and employee participation collectively explain a significant proportion of the variability in budgeting effectiveness. Addressing weaknesses in these areas offers substantial potential to improve financial planning accuracy, optimize resource allocation, and enhance operational efficiency, which in turn supports firms' long-term sustainability and competitiveness (Jensen & Meckling, 1976).

In summary, this research provides important insights into how Nepalese manufacturing companies can enhance master budgeting practices by embracing advanced technologies, fostering strong leadership support, ensuring adequate financial resources, adapting to external economic pressures, and promoting participatory budgeting. Implementing these strategies is crucial for developing resilient budgeting systems that are better aligned with dynamic market conditions and strategic organizational goals.

5.2 Conclusion

This research provides a detailed investigation into the crucial factors that affect the effectiveness of budgeting within manufacturing companies in Nepal. Budgeting is a vital component of financial management, essential for guiding how resources are allocated, strategies are planned, and operations are controlled. The findings highlight that multiple interconnected factors play significant roles in the success of master budgeting. These include the use of modern technology, strong organizational backing, availability of financial resources, employee participation, and the influence of external economic conditions.

Organizational support was found to be the most impactful factor, emphasizing the importance of leadership and management dedication in ensuring successful budgeting. When leaders prioritize budgeting and provide adequate resources, the budgeting process aligns better with the company's strategic goals and achieves improved results. In the absence of such support, budgeting efforts risk becoming ineffective and disconnected from overall business objectives.

Access to sufficient financial resources also emerged as a key enabler, allowing firms to implement budgeting systems and tools effectively. Additionally, external economic factors such as inflation, currency volatility, and disruptions in supply chains exert considerable pressure on budgeting accuracy and reliability. These challenges require companies to adopt flexible budgeting approaches that can adjust quickly to fluctuating economic environments, thereby maintaining financial stability.

Although the adoption of technology contributes positively to budgeting outcomes, the extent of technological integration is still limited among Nepalese manufacturing firms. While many companies have started using automated budgeting tools, advanced solutions like real-time analytics and AI-driven forecasting remain largely untapped. This underutilization points to an opportunity for firms to leverage digital advancements more fully to improve the precision and responsiveness of their budgeting processes.

Employee involvement in budgeting, while significant, showed a relatively smaller effect on budgeting success compared to other factors. This suggests a need to enhance participatory budgeting practices. Increasing employee engagement would foster greater accountability and ownership, aligning individual efforts with the organization's financial objectives. Moreover, involving a broader base of employees can contribute valuable insights that improve the realism and quality of budgets.

The research also highlights a gap between management's recognition of budgeting importance and the practical implementation of formal budgeting structures. Many firms lack specialized budgeting teams or clearly defined processes, which may limit their ability to monitor and refine budgeting activities effectively.

External economic conditions were found to play a major role in influencing budgeting outcomes. Firms operating in economically volatile settings must integrate these external risks into their budgeting models to build resilience. Dynamic and adaptable budgeting frameworks are essential for maintaining financial control despite external uncertainties.

In conclusion, the study suggests that enhancing budgeting effectiveness within Nepalese manufacturing firms is both practical and measurable. It stresses the need for these companies to modernize their budgeting approaches by adopting flexible, technology-enabled systems supported by strong internal coordination and inclusive participation. Closing current gaps will improve financial agility, forecasting accuracy, and strategic oversight.

Ultimately, continuous advancements in budgeting depend on ongoing innovation, sustained organizational commitment, and an ability to respond to external economic changes. Future research should examine additional behavioral and contextual influences that may impact budgeting success, especially in developing country contexts like Nepal, where specific challenges require tailored financial management strategies.

5.3 Implications for Policymakers

This study offers several important implications for policymakers, particularly on how they can support improvements in budgeting practices within Nepalese manufacturing firms. Policymakers hold a critical role in shaping the financial management approaches of these businesses by fostering an environment that encourages enhanced budgeting methods, technological advancement, and overall organizational development. The following sections elaborate on these implications.

Encouraging Technology Adoption in Budgeting

The research indicates that many Nepalese manufacturing firms still predominantly use traditional manual budgeting techniques, showing only a moderate embrace of technological advancements. This gap underscores the critical need for policies that actively encourage the integration of modern financial technologies in budgeting practices. Tools like automated budgeting software, data analytics platforms, and real-time budget tracking systems can significantly improve accuracy, efficiency, and

responsiveness. To facilitate this shift, policymakers should consider offering financial incentives such as tax breaks, grants, or low-interest loans to reduce the investment burden for firms adopting digital solutions. Additionally, creating partnerships between government agencies and private technology providers can make such tools more accessible, especially to smaller firms that face resource and expertise constraints. Furthermore, training and capacity-building programs focused on digital financial management would help firms leverage these technologies effectively, maximizing their potential benefits. Embracing technology in budgeting is essential for enhancing financial agility, allowing firms to respond quickly to market changes and competitive pressures, ultimately supporting sustainable growth and improved resource allocation (Becker, 2022).

Strengthening Organizational Support Systems

Effective budgeting requires strong organizational structures and processes, yet the study finds that many Nepalese manufacturing firms lack formal teams or systematic procedures dedicated to budgeting. This deficiency hinders effective financial planning and resource management. Policymakers can play a vital role by promoting the establishment of dedicated budgeting units or committees within firms, particularly in smaller enterprises that may not currently have specialized teams. Implementing regulatory guidelines or best-practice recommendations can motivate firms to formalize their budgeting processes. Moreover, financial incentives or subsidies could encourage organizations to invest in building robust internal frameworks for budgeting, helping ensure better oversight and more disciplined resource allocation. Clear organizational support systems foster accountability and enable systematic monitoring of financial performance against budgetary goals. They also contribute to building a culture of strategic financial planning within firms, which is crucial for long-term sustainability and competitiveness in a rapidly evolving market environment (Sharma & Rathi, 2019).

Promoting Employee Participation in Budgeting

While employee involvement in budgeting exists in some form, the study identifies a need for deeper and broader participation to enhance accountability and ownership of budgetary outcomes. Engaging employees at different levels of the organization in budgeting processes helps align financial plans with operational realities, making budgets more practical and achievable. Policymakers can encourage participatory budgeting practices by introducing initiatives that promote employee engagement and by offering incentives to firms demonstrating improved financial performance as a result of inclusive

budgeting. Training programs designed to equip employees with skills in collaborative financial planning can further facilitate meaningful involvement. This participative approach builds transparency and trust within organizations, as employees feel more responsible for meeting financial targets. Enhanced employee participation also improves communication between management and staff, fosters innovation in budget management, and supports the development of a more motivated and accountable workforce (Wampler, 2000).

Mitigating External Economic Challenges

Budgeting decisions in Nepalese manufacturing firms are significantly influenced by external economic factors such as inflation, political instability, and market volatility. These challenges introduce uncertainty, complicating effective financial planning. Policymakers can assist firms by promoting flexible budgeting methods, including rolling forecasts and adaptive budgeting techniques, which allow businesses to adjust their financial plans in response to changing economic conditions. Additionally, macroeconomic policies aimed at stabilizing the overall environment—such as controlling inflation, ensuring political stability, and providing targeted financial support during downturns would create a more predictable landscape for firms to operate within. By reducing economic uncertainties, such policies enable firms to maintain consistent and realistic budgeting practices, helping them focus on innovation and growth rather than solely on risk management. This financial stability supports sustainable development and competitiveness within the manufacturing sector (Tung, 2017).

Enhancing Financial Literacy and Training

The research suggests that limited financial knowledge and unfamiliarity with advanced budgeting techniques among business owners and managers impede the adoption of modern budgeting practices. Policymakers should address this gap by investing in financial literacy programs tailored specifically for the manufacturing sector. Subsidized training sessions, workshops, and certification courses on budgeting and financial management would empower firms to implement more sophisticated financial planning systems. Improving financial literacy enhances decision-making, allowing managers to better analyze budget data, forecast financial outcomes, and optimize resource allocation. These educational initiatives would help build a knowledgeable workforce capable of navigating complex budgeting challenges, improving organizational efficiency, and fostering resilience against financial risks. Overall, promoting financial literacy is a

foundational step toward modernizing budgeting practices and enabling firms to achieve stronger financial performance (Drury, 2018).

Supporting Research and Innovation in Budgeting

Budgeting within Nepalese manufacturing firms faces unique challenges due to local economic and organizational conditions. Therefore, ongoing research into innovative budgeting methods and tailored financial management strategies is essential. Policymakers can foster this by funding academic research, supporting think tanks, and collaborating with universities to study effective budgeting frameworks suited to Nepal's manufacturing environment. Such research could identify new tools, processes, or policies that improve budgeting accuracy and efficiency. Encouraging innovation in financial management also means promoting experimentation with adaptive budgeting techniques or digital solutions customized for local contexts. Policymaker support for knowledge-sharing platforms and conferences can further disseminate these findings across the industry. By investing in research and innovation, policymakers contribute to the continuous improvement of budgeting practices, ensuring they remain relevant and effective in a changing economic landscape (Maina & Otieno, 2020).

Incentivizing Sustainable Financial Practices

Sustainability and corporate social responsibility (CSR) are increasingly important considerations in business financial planning. The study highlights the opportunity for policymakers to encourage manufacturing firms to incorporate environmental, social, and governance (ESG) factors into their budgeting processes. Offering incentives such as tax breaks, public recognition, or preferential financing to firms adopting sustainable budgeting practices can drive this integration. Embedding ESG considerations aligns budgeting with long-term value creation rather than short-term gains, promoting responsible resource use and social accountability. Such practices help firms meet regulatory expectations, enhance their reputation, and respond to growing stakeholder demand for sustainability. Policymakers' role in promoting sustainable financial management supports broader national and global sustainability goals while ensuring that manufacturing firms contribute positively to social and environmental well-being (Otley, 2016).

Improving Access to Financial Resources

Effective budgeting requires sufficient financial resources, but many Nepalese manufacturing firms struggle to secure funds for advanced budgeting tools and systems. Policymakers can address this by improving access to finance through measures like

creating favorable lending conditions, offering low-interest or subsidized loans, and supporting microfinance initiatives tailored to the manufacturing sector. Facilitating easier access to capital enables firms to invest in technology upgrades and capacity building in financial management. Additionally, government-backed financial literacy and training programs can help firms maximize the utility of available resources, leading to better budgeting outcomes. Strengthening financial inclusion and resource availability is critical to overcoming barriers that limit firms' ability to modernize budgeting and enhance overall financial performance (Hossain et al., 2021).

Developing a Comprehensive Financial Management Framework

The study notes a widespread lack of formal budgeting processes across Nepalese manufacturing firms, signaling a need for a national-level framework. Policymakers can establish standardized financial management policies that set clear expectations and provide practical guidelines for budgeting and forecasting. Such a framework could include templates, best-practice recommendations, and sector-specific guidelines to promote consistency and efficiency. By creating a unified approach, firms benefit from clearer direction and easier benchmarking against peers. This structure encourages firms to adopt systematic budgeting practices that improve financial discipline and strategic planning. A comprehensive framework also facilitates regulatory oversight and supports broader efforts to professionalize financial management in the manufacturing sector (Fraser & Hope, 2003).

Facilitating Collaboration Between Industry and Government

Improving budgeting practices in the manufacturing sector requires strong cooperation between government bodies and private industry. Policymakers can foster collaboration by organizing forums, workshops, and dialogue sessions that bring together business leaders, financial experts, and government officials. These platforms allow stakeholders to share insights, identify challenges, and co-create practical solutions tailored to industry needs. Collaborative policymaking ensures that regulations and initiatives are grounded in real business conditions, increasing their effectiveness. Ongoing engagement also builds trust and facilitates knowledge exchange, helping firms stay informed about policy changes and available support. Through such partnerships, budgeting challenges can be addressed collectively, promoting a more vibrant and financially resilient manufacturing sector (Davidson & Schwab, 2021).

5.4 Implications for Educational Institutions

The findings of this study offer valuable implications for educational institutions, particularly in how they can contribute to enhancing budgeting practices in Nepalese manufacturing firms. By equipping future professionals with the right knowledge and tools, educational institutions can help address the challenges faced by these firms in adopting modern budgeting techniques. The following points discuss the key implications for academic institutions.

Revamping Curriculum to Include Modern Budgeting Practices

The study reveals that many Nepalese firms still rely on outdated budgeting methods that fail to meet the demands of today's dynamic business environment. Educational institutions can address this gap by revising their curricula to include modern budgeting techniques such as real-time data analytics, rolling forecasts, and scenario-based planning. Integrating these advanced financial management concepts into business and management programs ensures that graduates are ready to implement flexible budgeting methods that can respond to external economic pressures like inflation or political instability (Tung, 2017).

Incorporating Financial Technology into Education

One of the key findings of the study is the moderate integration of technology in Nepalese manufacturing firms' budgeting processes. Educational institutions can play a crucial role in bridging this gap by introducing more financial technology (FinTech) into their financial management programs. By offering courses on budgeting software, enterprise resource planning (ERP) systems, and advanced data analytics, educational institutions can prepare students for the practical application of these tools in real business settings. Partnering with software providers to offer hands-on experiences would also help students gain the skills necessary to implement modern financial technologies (Drury, 2018).

Promoting Employee Involvement in Budgeting

Although the study finds moderate employee involvement in budgeting within Nepalese firms, it suggests that such participation often lacks the depth needed to foster full accountability. Educational institutions can address this issue by incorporating participatory budgeting practices into their curriculum. Teaching students the value of involving employees from various departments in the budgeting process can help them understand the benefits of improving accountability and ownership. By offering case

studies and real-world examples of successful participatory budgeting, academic institutions can equip students with the skills to implement such practices in businesses (Becker, 2022).

Encouraging Research on Local Budgeting Issues

The study points out that Nepalese firms face unique challenges in budgeting due to external factors such as market volatility and inflation. Educational institutions can contribute significantly by fostering research focused on the specific financial challenges faced by Nepalese manufacturing firms. Students and faculty can be encouraged to explore issues like the impact of economic fluctuations on budgeting or the barriers to technology adoption in small businesses. Research focused on local financial challenges will help develop solutions that are tailored to the specific needs of Nepalese firms (Maina & Otieno, 2020).

Offering Professional Development for Current Practitioners

In addition to academic programs, educational institutions should offer continuous professional development opportunities to business leaders and financial managers in Nepalese firms. Providing training courses in advanced budgeting methods and financial technologies would enable professionals to stay updated with the latest practices. By collaborating with industry leaders to create programs that address the real-time needs of businesses, educational institutions can ensure that practicing professionals improve their budgeting skills, leading to more effective financial management (Hossain et al., 2021).

Strengthening Collaboration Between Academia and Industry

Educational institutions should work closely with industry partners to ensure that their curricula remain aligned with the evolving needs of the business world. Through partnerships with manufacturing firms, academic institutions can gather real-world insights into the challenges faced by businesses in budgeting and financial management. Additionally, offering internships, case studies, and research collaborations with industry players will help students gain practical experience, making their transition into the workforce smoother and more relevant to industry demands (Davidson & Schwab, 2021).

Educational institutions have a crucial role to play in improving budgeting practices within Nepalese manufacturing firms. By updating curricula to include modern financial management practices, integrating financial technology, and promoting employee involvement in budgeting, academic institutions can equip students with the knowledge and skills required to tackle the challenges firms face. Additionally, encouraging research on local budgeting challenges and offering continuous professional development will

ensure that businesses stay competitive and financially resilient. Ultimately, by fostering closer ties with industry and focusing on the practical needs of businesses, educational institutions can significantly contribute to the improvement of budgeting practices in Nepalese manufacturing firms.

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QUESTIONNER

Dear Participant,

I am Sunita Dhami, a student of MBS at Tribhuvan University. I kindly request your participation in this academic survey, which consists of a series of questions designed to understand various aspects of master budgeting practices and their impact on the performance of manufacturing firms in Nepal. This study is being conducted as part of my research project for the completion of my MBS degree. Your responses provide essential insights into the effectiveness of master budget practices in manufacturing organizations in Nepal. Please be assured that all information you provide remains strictly confidential and is used solely for academic purposes. Data is analyzed and reported in summarized form, ensuring that no individual respondent is identifiable. Your valuable time and thoughtful responses contribute significantly to the success of this research. I sincerely appreciate your cooperation and support. The research title is Effectiveness of Master Budget Practices in Manufacturing Organizations in Nepal, and I am conducting this study as the researcher. Thank you very much for your participation.

Warm regards,

Sunita Dhami

MBS Student

Section A: Respondent Information

Please provide your demographic information to assist us in understanding the context of your responses.

1. Full Name:
2. What is your position in the organization?

   ☐ Top Management (e.g., CEO, CFO)

   ☐ Middle Management

   ☐ Operational/Lower Management

   ☐ Other: _____
3. How long has your firm been using master budgeting?

   ☐ Less than 1 year

   ☐ 1–3 years

   ☐ 3–5 years

☐ More than 5 years

Section: B

In a 5-point scale, indicate your level of agreement with the following statements:

Very Likely (V.L) = 1

Highly Likely (H.L) = 2

Moderate (M) = 3

Slightly Likely (S.L) = 4

Nothing (N) = 5

Variable	**Statement**	**1 (V.L)**	**2 (H.L)**	**3 (M)**	**4 (S.L)**	**5 (N)**
Technology Integration	Q1. Our firm uses automated budgeting software for preparing and managing budgets.					
	Q2. Our firm uses data analytics to forecast financial outcomes during budgeting.					
	Q3. Technological tools improve the accuracy of our budgeting process.					
	Q4. Technological tools help with real-time monitoring and budget adjustments.					
	Q5. Technology integration has increased the speed and efficiency of budgeting.					
Organizational Support	Q1. Top management supports the implementation of master budgeting.					
	Q2. Top management provides adequate resources for budgeting activities.					
	Q3. Management is committed to effective use of the budgeting process.					

	Q4. Leadership support impacts the success of budgeting implementation.					
	Q5. A dedicated budgeting team is present in our organization.					
Financial Resource Availability	Q1. Availability of financial resources improves budgeting quality.					
	Q2. Sufficient funds are available for investing in advanced budgeting tools.					
	Q3. Financial constraints affect achievement of budgetary goals.					
	Q4. Financial resources enhance detailed financial forecasting ability.					
	Q5. We face challenges in securing financial resources for budgeting.					
External Economic Factors	Q1. Economic factors influence budgeting decisions.					
	Q2. Budgets are adjusted due to economic environment changes.					
	Q3. Political instability affects budgeting decisions.					
	Q4. External economic challenges disrupt the budgeting process.					
	Q5. External trends are considered when setting budget targets.					
Employee Involvement	Q1. Employees from various levels are involved in budgeting.					
	Q2. Employee involvement improves the practicality of budgets.					

	Q3. Employee participation increases commitment to financial goals.					
	Q4. Employee involvement enhances budget implementation success.					
	Q5. Employees provide valuable insights during budgeting.					
Effectiveness of Master Budgeting	Q1. Budgeting helps achieve financial objectives like cost control and profit maximization.					
	Q2. Budgeting helps in efficient allocation of resources across departments.					
	Q3. Budgets align well with long-term strategic goals.					
	Q4. Budgets are frequently updated to reflect changing circumstances.					
	Q5. The master budgeting system successfully achieves financial outcomes.					

PAPER NAME

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AUTHOR

Sunita Dhami

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