A STUDY ON CAPITAL BUDGETING WITH REFERENCE TO MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs) - LILONGWE CITY, MALAWI

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ABSTRACT

Capital budgeting involves planning and controlling long-term and short-term investments in fixed assets. It requires investing cash now with the expectation of recovering it over more than a year. Evaluating these decisions means assessing the investment and its future cash flows, which come from added revenues, cost savings, or cost reductions. Most numbers used in these analyses are estimates. Capital investment decisions are crucial for organizations' strategic goals. This study explores the capital budgeting practices of MSMEs in Malawi by surveying ten manufacturing companies. Results show that 70.3% of these MSMEs use capital budgeting for short- and medium-term investments, often employing forecasting analyses, and some use cost-benefit analysis and executive decision-making. Most MSMEs struggle with capital budgeting due to limited knowledge, time constraints, and data issues. While 50.9% understand the "Decision Rule" in capital budgeting, 40% cite lack of knowledge as their biggest challenge, followed by time, manpower, and data availability. Capital budgeting in Malawian MSMEs is developing as they adapt to globalization's opportunities and challenges. It is therefore suggested that the Malawian government, non-governmental organizations, and business development providers should offer training in capital budgeting and proper business record-keeping to Malawian Micro, Small, and Medium Enterprises.

Keywords: Capital Budgeting, Micro Enterprises, Small Enterprises, MSMEs, Financial Management, Business Finance.

INTRODUCTION

Background of the Study

Capital budgeting is crucial for businesses of all sizes, especially for Micro, Small, and Medium Enterprises (MSMEs) in emerging markets like Malawi. It involves evaluating and selecting long-term investments that align with strategic goals, essential for growth and competitiveness. Effective budgeting is central to successful business management. Aggarwal (1993) states



that budgetary planning and control are the most visible uses of accounting information in the management control process. By setting standards of performance and providing feedback through variance reports, accountants supply much of the fundamental information required for overall planning and control. The capital budget, which refers to investment activities, belongs to the area of financial management. Baker and English (2011) explain that a capital budget consists of all projects and investments planned for implementation in the upcoming period. Therefore, before spending money on projects that entail significant expenditure, capital budgeting acts as a filter to prevent excessive spending.

Capital budgeting is the process of planning and controlling strategic (long-term) and tactical (short-term)

expenditures for expanding or contracting investment in operating (fixed) assets (Stern & Chew, 1992). The main task in capital budgeting is to relate the benefits to the costs in a reasonable manner, consistent with the valuemaximizing objectives of the business. Capital budgeting decisions are crucial as they involve extended estimation and prediction of future conditions, requiring a high level of intellectual ability and economic analysis (Aggarwal, 1993). For investment appraisal purposes, cash flow refers to the incremental cash receipts minus the incremental cash expenditures solely attributable to the investment in question. Capital budgeting involves making long-term planning decisions for capital investments. Investment decisions are based on three main questions:

- How to invest?
- Where to invest?
- Whether to invest or not?

Capital budgeting decisions are long-term in nature and typically involve two factors, risk and the time value of money. There are generally three types of investment decisions:

- Expansion of Existing Business: This involves expanding existing operations rather than establishing completely new units. The new units are dependent on the existing brand name.
- Establishment of New Business: This involves starting a new business entirely, distinct from existing operations.
- *Replacement and Modernization:* This involves the renovation or renewal of buildings or machines.

Capital budgeting is key for long-term profitability. Managers assess investment options using Modern techniques (like Profitability Index, Internal Rate of Return, and Net Present Value) and Traditional methods (nondiscounted cash flows). On the other hand, the Traditional techniques include the Payback Period and the Accounting Rate of Return (Fox et al., 1990). A study integrating uncertainty into capital budgeting theory has significantly enriched the field. Capital budgeting involves a seven-step process for making investment decisions: • *Identifying the Investment Proposals:* The number and types of investment opportunities available should be identified.

- Screening the Proposals: This involves scrutinizing each proposal in conjunction with the available resources of the business.
- Evaluating the Proposals: This step involves using statistical techniques to calculate and ascertain the risk and return of the project proposals.
- Selection of Proposals: Choose the best proposal or combination of proposals based on risk and return.
- Implementing the Selected Proposal: This involves the implementation and execution of the proposal. Responsibilities must be assigned to ensure the project is completed within the allocated time to minimize costs.
- *Review:* This step involves providing feedback and reviewing the performance of the investment project.
- *Final Approval:* This involves making the final decision regarding the investment. Continue with the investment if it is profitable, or discontinue if it is not.

According to data, there are 758,118 MSME owners in Malawi, managing approximately 1 million (987,480) businesses and employing a total of 1.1 million people (excluding the business owners themselves). As such, the sector contributes significantly to job creation, with a total of 1.8 million people working in the sector. This contribution helps alleviate poverty, as survivalist businesses play a crucial role in preventing deeper poverty and thus reduce individual and household vulnerability. The turnover of the MSME sector in 2019 is estimated to be at least 326 billion Malawi Kwacha.

1. Literature Review

Gondwe (2015) describes the determinants of the flow of formal credit to Small and Medium Enterprises (SMEs). This thesis investigates how social capital and domestic savings affect SMEs' access to formal credit in developing countries, with a focus on Malawi. It examines how the domestic banking sector can mitigate information asymmetry and improve loan availability by considering non-traditional factors. Using probit models for cross-

sectional data and vector autoregressive models for time-series data, the research finds that social capital and domestic savings significantly influence credit access and economic growth. The study recommends incorporating social capital into credit assessments and improving information flow between lenders and borrowers to enhance credit availability and domestic savings.

Mission-Phiri (2017) investigates the limitations that rural characteristics impose on the operations of rural-based MSMEs in Malawi. This study examines how rural characteristics impact the operations of MSMEs in Malawi, focusing on infrastructure (such as roads, telecommunication, and electricity), financing, education standards, popular business types, cultural beliefs, and gender practices. Using a quantitative approach with a self-completed questionnaire, data were collected from MSMEs across seven districts. The research analyzes these rural factors to identify the challenges faced by MSMEs. Findings from both the literature and the field survey indicate that these constraints hinder MSME operations and growth. Unless rural conditions improve, MSMEs in Malawi will continue to face significant limitations.

Lanyo (2019) explains the factors influencing micro and small enterprises in the adoption and use of policy interventions in a study on SMEs in the Cape Coast municipality. Policy interventions are crucial for the growth of Ghana's SMEs, but effective, evidence-based evaluation is needed. This paper assesses the adoption and impact of various support institutions on SMEs in Cape Coast. It found that while SMEs are generally aware of and benefit from business development services, access to financial aid remains a significant barrier. The study, which involved 33 randomly selected SMEs, highlights the lack of a dedicated SME policy and suggests that the government should develop a comprehensive SME policy and improve access to credit for indigenous businesses.

2. Objectives of the Study

• To examine the present practices of capital

budgeting tools used and practiced by MSMEs in Malawi.

- Evaluate the interacting effect of uncertainty between capital budgeting practices and performance.
- To explore the prevailing difficulties in applying capital budgeting tools in Malawian MSME companies.
- To offer suggestions to the challenges MSMEs encounter when using capital budgeting in investment decisions.

3. Problem Statement

Despite the fact that many finance officials favor Discounted Cash Flow (DCF) techniques when evaluating an investment or project, the capital budgeting techniques of Net Present Value (NPV) and Internal Rate of Return (IRR), which fall under DCF, have gained very little traction among SMEs in Malawi (Graham & Harvey, 2002). This research seeks to understand why DCF is not commonly used. The paper targets SMEs to observe how they are applying various methods of capital budgeting in their investment decisions. Thus, it highlights the need to articulate the dimensions of applying capital budgeting techniques when evaluating project investments.

4. Research Questions

To study the research problem, a major research question has been formulated to guide this paper towards solving the issue mentioned above:

- How do SMEs apply methods in their capital budgeting decisions?
- Are SMEs in Malawi practicing capital budgeting tools?
- How do SME managers implement capital budgeting in project appraisal?
- How do SME managers apply methods in their capital budgeting decisions? What is the applicability of DCF and non-DCF methods in capital budgeting?

5. Methodology

The study will employ both quantitative and qualitative approaches to data analysis. Specifically, the data will be

analyzed using summative content analysis and the Statistical Package for the Social Sciences (SPSS). The analysis will be more quantitative than qualitative.

5.1 Research Approach

This study aimed to expand knowledge through data collection using a descriptive research methodology. Descriptive research captures the current behavior of a sample population without controlling variables. Best and Kahn (2003) noted that it relates to an attempt to determine, describe, or identify what is. Descriptive research is "aimed at casting light on current issues or problems through a process of data collection that enables researchers to describe the situation more completely than was possible without employing this method." In essence, descriptive studies describe the characteristics and/or behavior of the sample population. The purpose of descriptive research is to determine and report the way things are, as well as to help establish the current status of the study population (Mugenda & Mugenda, 2003). Evans et al. (2014) discuss descriptive research as a method for accurately portraying the characteristics of individuals, situations, or groups. It helps uncover new insights, describe current states, measure frequencies, and categorize information. In a nutshell, the three primary purposes of descriptive studies are describing, explaining, and validating the findings (Lancaster, 2005).

5.2 Research Design

This descriptive study will use an online survey to gather data. A standardized questionnaire will be sent to a specific group to collect consistent and unbiased information on various topics. This method is more natural and less time-consuming than traditional one-to-one interactions and is also less expensive (Evans et al., 2014). The data will be collected and stored in a database and later evaluated.

5.3 Population of the Study

The individuals of interest for this study are Malawian SMEs, entrepreneurs, workers, and managers of SME companies. It should be noted that the group will consist entirely of SMEs based in Lilongwe City, Malawi. The population of Lilongwe City is 989,318 (NSO population census 2018), with a population projection of 1,162,544 by 2023. According to the SMEDI MSMEs database, Lilongwe City has over 1,000 MSMEs operating in various sectors.

5.4 Sample Size

A sample is a proportion or subset of a larger group called a population. A total of 100 MSME respondents were selected from the MSME population. It should also be noted that this group consisted entirely of respondents with a deep understanding of business in Malawi. This group provided valuable information for assessing the phenomena.

Cochran's formula was used to estimate the sample size (Barrow, 2006).

$$n = \frac{z^2(1-p)p}{e^2}$$

Where;

n = sample size

p = estimate of percentage

e = desired level of sampling error

z = the desired degree of confidence

The study desired a 95 per cent level and a 10 per cent precision level. P was set to be 0.5 because variation in the population of the study area was not known at the time of the survey. A variance of 0.5 was conservative, leading to the largest possible variance for proportion. The sample size was given as follows

From the calculation, it was shown that the required sample size is 96 MSMEs. Considering non-response error, the sample was increased by 10% hence the sample size was inflated to 106 respondents.

5.5 Sample Technique

The recruitment process will be tailored to ensure that all participants in the population have an equal chance of being selected. Sampling is a method used to select members of the population to be included in the study. It is generally agreed that "because many populations of interest are too large to work with directly, techniques of

statistical sampling have been devised to obtain samples from larger populations" (Proctor, 2006). Because the target population is large, researchers study a sample to draw conclusions. They used a simple random sampling method to select respondents. This standard method has a distinct advantage: it ensures that every unit in the population has an equal chance of being selected (Lee, 1985).

5.6 Data Collection Method

Data collection is crucial in research and often relies on available resources. With technology advancements, online self-complete questionnaires are commonly used. They help focus respondents on key items and ensure uniformity in recording responses. Evans et al. (2014) argue that not all respondents may have an email address or be on the internet, and some may be wary of divulging information online. However, online questionnaires are cost-effective, can be selfadministered, and have a very low probability of data errors. They further point out that data collection and analysis are structured and easy to manage, which results in a higher survey response rate compared to other research methods.

5.7 Data Source

Information collected, analyzed, and presented in this study came from two sources. *100 respondents from SME* organizations (primary data): Primary data consists of firsthand information that is updated, precise, and reliable when the appropriate methods of data collection are applied (Cooper & Schindler, 2003; Evans et al., 2014). For this study, online self-completed questionnaires will be used. The questionnaires will consist of both closedended and open-ended questions. For the closedended questions, options will be provided for respondents to select their opinions on issues of interest. The questionnaires will cover relevant topics, including respondent bio-data and issues related to youth employment in the context of e-commerce.

Desk-based research on the application of capital budgeting techniques among SMEs (secondary data): Secondary data is derived from published reviews and expert opinions (Cooper & Schindler, 2003). This data, obtained from desk-based research on capital budgeting, includes information from published literature, expert opinions, books, journals, periodicals, and the Internet. Additionally, electronic records from government websites provided valuable information for this study.

5.8 Data Analysis and Interpretation

Data gathered are reported using descriptive statistics. This method has the potential to evaluate the differences in data for statistical significance and to examine the values provided by the study. The analysis included descriptive statistics, frequencies, percentages, bar charts, and pie charts. The human mind cannot extract the full import of a large mass of raw data; therefore, descriptive statistics are crucial in reducing the data to a manageable form (Best & Kahn, 2003). Using Microsoft Excel 2019 and SPSS, the data were coded, reviewed, and tabulated.

5.9 Ethical Consideration

Before administering the online questionnaires, informed consent was obtained, and the study was approved by the school department. It is for academic purposes only, with no financial benefit. Participants were given full information about the study, had time to ask questions, and their participation was voluntary. Confidentiality was ensured, with no personal identifiers recorded.

6. Significance of the Study

The survival and vitality of a company are determined by its ability to regenerate itself through the allocation of capital into productive use (Arnold & Hatzopoulos, 2000). Allocating resources among investment projects is vital for top management, impacting long-term performance. Effective capital budgeting is essential for managing strategic change and ensuring corporate success by deciding the timing, amount, and direction of investments. Nonetheless, current investment markets are evolving within an increasingly volatile and intertwined global network, making investments strongly exposed to uncertainties (Clark et al., 1984). These uncertainties could lead to the failure of a good investment decision.

Thus, integrating uncertainty with capital budgeting techniques is both overarching and often complex (Ghahremani et al., 2012). Over the last two decades, corporate practices regarding capital budgeting have not been static and have diverged from theoretical models (Arnold & Hatzopoulos, 2000; Cobb et al., 1995). Empirical evidence reveals that sophisticated capital budgeting relies on diverse tools like Monte Carlo simulations and real options reasoning. This complexity often makes theoretical models less applicable in global business contexts, highlighting a gap between theory and practice. Additionally, capital budgeting practices differ widely across countries and companies. This scenario highlights seminal studies indicating that capital budgeting practices are influenced by a 'country effect' (e.g., Graham & Harvey, 2002; Hermes et al., 2007).

7. Limitations of the Study

Every research study is subject to limitations, as it is impossible to control all variables. These research limitations impose restrictions on the assumptions and application of a research endeavor (Best & Kahn, 2003). The collection of primary data was achieved through administering well-structured online questionnaires. This data collection technique was time-consuming due to the nature of the respondents; the time required for collecting, validating, and analyzing the large amounts of data might not have been adequate (Seitz & Ellison, 2005). The study examines capital budgeting practices, omitting economic aspects and implementation details. Data from finance executives in manufacturing companies reveal gaps between actual and perceived practices. However, with good planning, managing these gaps remains feasible.

8. Malawi Country Profile

Malawi is a low-income country with relatively moderate levels of development, ranking 166 out of 184 countries in 2019 with a population of about 19 million, a small improvement from its 2016 position of 170 out of 188 (UNDP Human Development Index) (National Statistical Office, 2018). Covering an area of 118,500 square kilometers, it is one of the most densely populated countries in the region, with a density of 186 people per square kilometer in 2018, compared to a sub-Saharan average of 44.31. The country has a population of approximately 18 million people, of whom 50.7 percent live below the poverty line and 70.9 percent survive on less than USD 1.90 a day. It has a relatively high Gini coefficient, which increased from 39.9 in 2004 to 46.12 in 2018, indicating significant levels of inequality. Malawi is bordered to the north and northeast by the Republic of Tanzania, to the east, south, and southwest by the People's Republic of Mozambique; and to the west by the Republic of Zambia.

To spur economic growth, reduce poverty, and create decent jobs, the Government of Malawi sees the private sector as crucial. This is reflected in key policies like Malawi Vision 2063 and the National Industrial Policy. However, challenges such as limited access to finance, infrastructure issues, regulatory hurdles, and capacity constraints hinder the sector's progress. The recently launched Financial Sector Development Strategy II (2017-2022) recognizes that inclusive finance is crucial for increasing agricultural productivity and production, starting or expanding micro and small enterprises, creating employment, raising household income, and ensuring smooth consumption. The National Strategy for Financial Inclusion (2016-2020) emphasizes targeted finance for MSMEs and farmers among its priority areas.

8.1 MSMEs Landscape

8.1.1 MSMEs Malawi Definition

MSMEs, defined by a combination of employment and turnover as outlined in the Malawi Micro, Small and Medium Enterprises Policy (2019), are shown in Table 1. The Directorate responsible for MSMEs uses only the employment criteria when defining MSMEs, as turnover figures are rendered meaningless due to inflation changes during the period.

8.1.2 Business Size

Businesses within the MSME sector are classified using the criteria outlined in the Malawi Micro, Small and Medium Enterprises Policy (2019). Most micro-enterprises fall under the informal sector, while small enterprises are primarily

Туре	Employment	Annual Turnover (MK)
Micro	1 – 4	Up to 120 000
Small	5 - 20	120 001 to 4 million
Medium	21 – 100	Above 4 million to 10 million
Large	Above 100	Above 10 million

Source: MSME policy, 2015

Table 1. MSME Definition (Malawi)

formalized activities engaging 5 to 20 people or with a capital investment of K20 million and a turnover of up to K50 million. Medium enterprises employ 21 to 100 staff or have a capital investment of K250 million and a turnover of up to K500 million. This report classifies businesses based on employee numbers and annual turnover, following the Malawi MSME Policy (2019), which excludes asset value to avoid valuation bias. Three categories were created for micro-enterprises. The first category includes micro-enterprises employing 0 to 5 workers or with a turnover of less than MK5 million. The second category, small enterprises, consists of businesses employing 5 to 20 workers or with a turnover of up to K50 million. The third category, medium enterprises, includes those employing 21 to 100 workers or with a turnover of up to K500 million.

More than two-thirds of Malawian MSMEs are microenterprises, 23 percent are small enterprises, and only 3 percent are medium enterprises. Overall, micro and small enterprises account for 97 percent of the MSME sector. Analysis of the findings indicates that as a business grows in size, the participation of women in those businesses declines. For instance, female business owners make up the majority of micro-enterprise owners (84 percent, compared to 64 percent male). However, only 15 percent of females own small enterprises, compared to 30 percent of males, and only 1 percent of medium-sized enterprises are owned by females, compared to 6 percent of males. The same pattern is observed in the business life cycle, a higher proportion of females operate in the start-up phase (61 percent), which drops to 49 percent in the growth phase and 41 percent in the established phase. Fewer female-owned enterprises are recorded in the mature phase, with only 35 percent. The fact that most MSMEs are either micro or small enterprises implies limited employment potential for the

sector in Malawi. Analysis of business size by owner education shows that the size of an MSME correlates with the education level of its owner.

8.1.3 MSME Sector Contribution to GDP

MSMEs are vital for economic growth and industrial development. They boost employment, drive investment, enhance local skills and technology, encourage entrepreneurship, increase exports, and build industrial bases. A competitive and innovative MSME sector holds tremendous promise, particularly for developing countries like Malawi, in terms of:

- Optimal employment of domestic resources.
- Higher income growth.
- More effective integration through regional trade and investment.
- Greater equity in access, distribution, and development.

It is strongly contended that the sector contributes significantly to the Malawian GDP. According to the 2019 Annual Economic Report by the MFEPD, the estimated GDP for that year was about USD 8.2 billion (as of June 2019). To highlight the contribution of the sector, the survey estimated the total turnover generated by MSMEs at USD 15.8 billion. The total expenses for the sector are calculated at USD 8.9 billion, resulting in a profit of USD 6.8 billion. This can be loosely interpreted as the value added to the economy by the MSME sector. It is important to note that of the USD 6.8 billion profit, about USD 3.6 billion (53 percent) is likely already included in the total GDP figure of USD 8.2 billion. This is because 11 percent of MSMEs are formal enterprises (only 125,000 businesses), and it can be assumed that their contribution is already captured in the total GDP figure. Therefore, the unseen, or grey sector (informal), contributes USD 3.2 billion (47 percent of the MSME sector). This is generated by 89 percent of MSMEs (1 million enterprises). This estimate underscores the need to understand informal enterprises to accurately capture their contribution to national output.

Given these estimates, the potential of the informal MSME economy is about 40 percent of the current GDP output. Understanding the drivers and barriers to formalization,

particularly of informal businesses, is identified as an important consideration for policymakers. Due to their high number and fragmented nature, informal enterprises are likely to be micro (78 percent), rural (82 percent), or in their start-up and growth phases (61 percent). Targeted interventions are needed to formalize these enterprises, considering the low business survival rate associated with them.

8.1.4 Opportunities for Malawi's MSME Sector

Trade liberalization has brought chain stores into Malawi, increasing demand for local supplies like eggs, chicken, vegetables, meats, and fruits. However, local MSMEs struggle with quality and reliability, leading stores to import from South Africa. Improving quality and organization could help Malawian MSMEs seize these opportunities. MSMEs in Malawi operate in a more supportive environment now than they did 20 years ago (Modigliani & Miller, 1958). The improvement comes from policies and innovations supporting MSMEs. The Ministry of Industry and Trade, alongside other stakeholders, is refining strategies to boost the sector. The Small and Medium Enterprises Development Institute (SMEDI) provides training and support similar to India's EDI. NGOs also aid with training and credit. Recently, TEVETA, under the Ministry of Labour, has begun training artisans and established Community Technical Colleges for skills development in trades like tailoring and plumbing.

8.1.5 Challenges Facing Malawi's MSMEs

Globally, there is increasing recognition of the important role played by Micro, Small, and Medium Enterprises (MSMEs) in a country's economic development. While various opportunities are presented to people within the MSME sector, numerous challenges have been identified as obstacles to progress and inhibitors of small business development. The following highlights some of the challenges facing small business owners:

- Failure to use capital budgeting techniques.
- Lack of skills in export marketing and export procedures.
- Lack of credit facilities in general and export credit in particular; most credit requires collateral, which limits,

if not prevents, access to finance.

- Lack of information on export markets.
- Lack of appropriate technology to produce quality goods and achieve high productivity.
- Very small size of individual MSMEs, which limits their ability to meet export orders and demands.
- Lack of information on export markets as it relates to consumer requirements.

The most notable challenge currently facing MSMEs is their inability to effectively network. Networking is a form of social capital that facilitates the flow of information among network members. Networking activities are classified into global, localized, innovative, and solidarity networks (Barrow, 2006). Innovative networks enable members to acquire market and technical information, and with synergy, they may be able to increase productivity and meet market requirements (Barrow, 2006; Smith, 2005).

MSMEs in South Asia, especially India, drive economic growth, contributing significantly to GDP and employment. However, they struggle with limited access to various types of capital, hindering their growth and survival in a competitive market. They heavily depend on financial institutions such as banks, credit corporations, and development banks for the supply of finance to meet their daily financial needs (Venkateswarlu & Ravindra, 2012). Solidarity networks enable members, particularly small enterprises, to share information that reduces business uncertainty (Barrow, 2006; Collis & Hussey, 2003). MSME associations that provide media opportunities for networking are lacking in Malawi. They are often dependent on financial donations to remain active; without these donations, they become dormant (Onuorah, 2019).

9. The Nature of Capital Budgeting

'Capital' refers to any financial resources or assets owned by a business that are useful for furthering development and generating income. However, in different contexts, the term can have a variety of other meanings.

• Capital can refer to funds raised to support a particular business or project.

- Capital can also represent the accumulated wealth of a business, as represented by its assets less liabilities.
- Capital can also mean stock or ownership in a company.
- Capital expenditures and revenue expenditures are very important terms used in capital budgeting. While capital expenditure refers to any expenditure that benefits a future period, revenue expenditure is intended to benefit the current period.

9.1 Concept of Capital Budgeting

Capital budgeting is the process of making planning decisions and analyzing opportunities for long-term investments in assets to produce benefits for more than one year (Peterson & Fabozzi, 2002). The decisions made during the development and evaluation of capital budgeting determine the future growth and productivity of the company and help to achieve the greatest profitability. Capital budgeting is a crucial tool for financial managers. They need to evaluate investments based on cash flows and rates of return to determine their worth and make informed choices between options. To do this, a sound procedure to evaluate, compare, and select projects is needed. This procedure is called capital budgeting (Freeman & Hobbes, 1991). Capital budgeting involves evaluating significant expenses or investments, like building a new plant or funding a longterm project.

9.1.1 Long Term Investment

Purchasing inventories is not considered a capital budgeting decision because the life cycle of inventories, accounts receivable, and cash is less than a year. In contrast, decisions to start a new production line or purchase new machinery are capital budgeting decisions because their life cycles extend beyond a year.

9.1.2 Bulk Amount of Investment

Purchasing a calculator does not come under capital budgeting decision because the amount is not so material even if the life cycle is of more than a year (Armitage, 2005). Capital budgeting is crucial because it affects a firm's operations for years. Poor decisions can significantly impact future performance, while timing is key. Projects often take years to implement, so poor timing can be costly if competitors gain an advantage or if investments are made too early, leading to unnecessary expenses.

9.2 Capital Budgeting Process

Capital budgeting do have a process which need to be followed when making project investment decisions. Figure 1 shows the Capital Budgeting Process.

9.3 Theory of Capital Budgeting

9.3.1 Financial Management Theory

Financial management theory is related to maximizing the market value of a firm for its owners, specifically, the maximization of shareholders' wealth (Cooper et al., 2002; Dayananda et al., 2002; Peterson & Fabozzi, 2002).





Financial management primarily concerns investment, financing, and dividend decisions, as well as the interactions between them. Thus, firms face three major decisions: what to invest in (the investment or capital budgeting decisions), how to finance these assets (the financing decision), and how to reward shareholders (the dividend decision) (Freeman & Hobbes, 1991).

These decisions are directly related to the primary objective of a firm: maximizing the wealth of its owners (Pandey, 1994; Hermes et al., 2007). Financial management is therefore about managing the finances of a firm to achieve financial objectives that enable the firm to survive financially. The management of a firm's finances includes both the generation and better utilization of finance. The relationship between a firm's overall goals and the types of decisions made can be shown in Figure 2.

The primary objective of financial management is to maximize the value of the firm. Decision-makers need to learn how to identify investments and financing arrangements that positively impact the firm's value. Among the types of decisions that must be made, longterm investment decision-making is of vital importance and critical to the survival and long-term success of firms. A good investment decision can yield a major return on investment for the firm and is essential for running a business and competing in the market. This process is known as capital budgeting. Capital investment decisions, also known as capital budgeting, are crucial for a firm's long-term success and growth. They involve choosing the best investment opportunities, primarily in fixed assets like land, plant, and equipment. These decisions are vital as they influence a firm's survival and future prosperity, with companies investing billions annually in such projects.

9.3.2 Real Option Theory (ROT)

Real options research began as a critique of traditional investment and budgeting methods. It highlights the flexibility companies have in making investment decisions, such as choosing to invest, delay, expand, or reduce their projects. Real Options Theory (ROT) evaluates investments by factoring in uncertainty and management's flexibility to adapt. It includes operational flexibility (like revising decisions or expanding projects) and strategic option value (related to future investments and phased implementations). Many researchers argue that real options analysis offers advantages over Net Present Value (NPV) since NPV does not capture the value of managerial flexibility (e.g., Stern & Chew, 1992; Pandey, 1994). For example, management could choose to



Figure 2. The Relationship between a Firm's Overall Goals and Types of Decision in Finance Theory

delay, expand, abandon, temporarily close, or alter operations during the project's life.

Lalli (2005) argued that most capital investment projects include options (e.g., the option to expand, modify, or abandon) that have intrinsic value. Although this method has not been widely applied in practice, it is mostly applicable in specific industries or situations (Hermes et al., 2007).

Discounted Cash Flow (DCF) techniques are used concurrently with real options to determine the true NPV. Many scholars have found that only a few firms have employed real options (Bierman & Smidt, 2007; Drury, 2012; Graham & Harvey, 2002). It is evident that sophisticated capital budgeting has seen widespread use over the last two decades. While early studies focused on capital budgeting decision rules, recent research has shifted to examining the use of advanced capital budgeting practices (e.g., Modigliani & Miller, 1958). The application of sophisticated capital budgeting is more complex and requires firms to invest cost, time, and effort (Modigliani & Miller, 1958). It's crucial to align capital budgeting practices with their net benefits and costs. Theoretically, sophisticated methods justify their cost when there is uncertainty, as the potential gains from successful investments often outweigh the costs. Although this method has not been widely applied in

practice, it is primarily relevant in specific industries or situations (Hermes et al., 2007).

DCF techniques are used concurrently with real options to determine the true NPV. Many research scholars have found that only a few firms have employed real options (Bierman & Smidt, 2007; Drury, 2012; Graham & Harvey, 2002). It is clear that sophisticated capital budgeting has not been widely adopted over the last two decades. Early studies focused on capital budgeting decision rules, while more recent research has examined the use of sophisticated capital budgeting practices (e.g., Modigliani & Miller, 1958). The application of sophisticated capital budgeting is more complex and requires firms to invest cost, time, and effort (Modigliani & Miller, 1958). Therefore, it is important to evaluate the appropriate level of sophisticated capital budgeting practices relative to the net benefits versus costs. Theory suggests that if uncertainty exists, the use of sophisticated capital budgeting practices is valuable, as the costs are likely to be offset by the gains from successful investments.

9.4 Capital Budgeting Techniques and Tools

Numerous methods for measuring the economic value of an investment are available. These methods for appraising capital expenditure proposals can be classified into two broad categories. Figure 3 shows the capital budgeting techniques and tools.



Figure 3. Capital Budgeting Techniques and Tools

9.4.1 Discounting Cash Flows (DCF)

Under discounting technique, following methods are used in capital budgeting.

9.4.1.1 Net Present Value

Net Present Value (NPV) calculates the difference between the present value of inflows and outflows. A positive NPV means the project meets the required return and is acceptable, while a negative NPV suggests rejection. Among mutually exclusive projects with positive NPVs, the one with the highest NPV is preferred. NPV is valued for accounting for the time value of money and being relatively simple to calculate.

NPV uses DCF which takes time factor into consideration and DCF is calculated using this formula; $1 / (1 + r) ^n$: where r is rate of return and n is time period.

The net present value method requires that all cash flows associated with new investment proposals be discounted at a predetermined weighted average cost of capital. NPV is calculated as,

NPV = PV of Cash inflows - PV of cash outflows

9.4.1.2 Decision Rule

Decision rule for a project under NPV is to accept the project if the NPV is positive and reject it if the NPV is negative. If two or more mutually exclusive projects all have positive NPVs, then the project with the highest NPV should be selected.

9.4.1.3 Internal Rate of Return

IRR is the discount rate commonly used in capital budgeting that makes the net present value of all cash flows from a particular project equal to zero. Generally speaking, the higher a project's internal rate of return, the more desirable it is to undertake the project. Therefore, IRR can be used to rank several prospective projects a firm is considering. Assuming all other factors are equal among the various projects, the project with the highest IRR is likely to be considered the best and undertaken first.

The Internal Rate of Return (IRR) is typically the rate of return that a project earns. It is defined as the discount rate that equates the aggregate present value of the net cash inflows (CFAT) with the aggregate present value of the outflows of the project. In other words, it is the rate that makes the NPV (Net Present Value) of the project zero (Buckley, 1996). The project will be accepted only if the IRR exceeds the cost of capital (k). Symbolically, IRR is determined according to the following equation:

 $IRR = Lesser Rate + (Positive NPV \times Difference in rates) \div$ $(PV of inflow - PV of Inflow (at lesser rate \rightarrow at higher rate)$

Steps in Calculating IRR

To calculate IRR we should have a positive and negative $\ensuremath{\mathsf{NPV}}$

- Take a discount rate and calculate NPV.
- If NPV is positive, then take a higher discount rate and vice versa.
- Use the formula below to calculate IRR.

 $\label{eq:RR} $$ Rate + (Positive NPV \times Difference in rates) \div (PV of inflow – PV of Inflow (at lesser rate — at higher rate) $$$

9.4.1.4 Decision Rule

The IRR decision rule states that a project will be accepted only if the IRR exceeds the cost of capital (k). All other investment opportunities should be rejected. Thus, to be acceptable, a project must generate a return at least equal to the return available elsewhere in the capital market (Buckley, 1996).

9.4.1.5 Profitability Index

The Profitability Index (PI) is a time-adjusted capital budgeting technique similar to the Net Present Value (NPV) approach. The PI measures the present value of returns per rupee invested, while the NPV approach is based on the difference between the present value of future cash inflows and the present value of cash outlays.

The Profitability Index can be defined as a ratio obtained by dividing the present value of future cash inflows by the present value of cash outlays. It is an index designed to identify the relationship between the costs and benefits of a proposed project, calculated as follows:

PI = PV of cash inflows \div PV of cash outflows

9.4.1.6 Decision Rule

If the PI value exceeds one, the proposal is worth accepting. When profitability indeed equals one, the firm is indifferent to the projects. When the profitability

index is greater, equal to, or less than one, the net present value is greater, equal or less than zero respectively. In other words, NPV will be positive when the profitability index is greater than one, and will be negative when the profitability index is less than one. Thus, the NPV and profitability index approaches give the same results regarding the investments proposals (Armitage, 2005).

9.4.2 Non-Discounting Cash Flow Techniques or Traditional Methods

Under non discounting technique, following methods are used in capital budgeting;

9.4.2.1 Payback Period (PBP)

The payback period is a traditional method of capital budgeting. It is the simplest and perhaps the most widely employed quantitative method for appraising capital expenditure decisions. This method answers the question: How many years will it take for the cash benefits to recover the original cost of an investment? The payback period is calculated as follows:

When the cash inflows are equal;

 Payback Period = Investment ÷ Cash inflows per annum

When the cash inflows are not equal;

 Payback Period = Investment – 1st year Cash inflows, then the balance divides by the cash inflow in the concerned year. Therefore, PB = (Balance amount × 12) ÷ Cash inflow in concerned year

The Advantages of the Payback Period

- Decision-makers understand information presented to them.
- Calculations are straightforward and likely to be errorfree.
- Since data is in itself unreliable (estimates of future cash flows) sophisticated analysis may not be justified.

The Disadvantages of the Payback Period

- Does not take into account the time value of money
- Cash flows outside the payback period are ignored.

9.4.2.2 Decision Rule

The shorter the payback period, the more attractive the investment is. The reasons are as follows: The earlier the investment is recovered, the sooner the cash funds can be used for other purposes. Additionally, the risk of loss from obsolescence and changing economic conditions is lower with a shorter payback period.

9.4.2.3 Accounting Rate of Return (ARR)

Accounting rate of return represents the ratio between average annual profits after taxes to the average investment of the project. The accounting rate of return method of evaluating a proposed capital expenditure is also known as average rate of return method. It is based upon accounting information rather than on cash flow. ARR is calculated as;

ARR = Average Return ÷ Average Investment Where: Average Return = Total Return ÷ Number of Years (Project Life) and Average Investment = Investment ÷ 2

9.4.2.4 Decision Rule

According to the ARR, as part of the accept-reject criteria, the actual ARR will be compared with a predetermined minimum required rate of return or cutoff rate. A project will qualify for acceptance if the actual ARR is higher than the minimum desired ARR.

10. Data Analysis

10.1 Demographic Characteristics of Respondents

Around 120 questionnaires were distributed in the entire survey spread over 10 days, from 1st May to 12th May 2024, out of which in all 110 were returned representing a response rate of 91.67%. The results are presented in the table below:

10.1.1 Respondents of Demographics Information

As shown in Table 2, the main demographic information of respondents from MSMEs is summarized below:

- The study was balanced gender wise with 50.9% male and 49.1% female.
- The majority of the respondents (45.5%) surveyed were above 36 years old.
- Of the respondents surveyed, 50% were postgraduates with 45.4% undergraduates.

Group	Frequency	Valid Percentage
GENDER		
Male	56	50.9
Female	54	49.1
AGE		
18 – 23	12	10.9
24 – 29	22	20.0
30 – 35	26	23.6
36 and above	50	45.5
LEVEL OF EDUCATION		
Junior Certificate of Education	1	0.9
Malawi School Certificate of Education	4	3.6
Undergraduate	50	45.4
Postgraduate	55	50.0
No formal Education	0	0

Table 2. Respondents Demographic Information

10.2 Malawian MSMEs Applying and Using Capital Budgeting Techniques

The first objective of the study was to examine the present practices of capital budgeting tools used and practiced by MSMEs in Malawi. To this end, the following questions were put forth to the respondents.

10.2.1 Company Establishment

As shown in Figure 4, 35.5% of the respondents reported that they have been in existence for 5 years or more. 33.6% have been in existence for more than 1 year, 20.9% for less than 1 year, and 10% for exactly 1 year. Figure 5 shows whether the company is classified as a Micro, Small, or Medium enterprise according to the MSMEs Malawi definition.

10.2.2 People Employed

Akin to current viewpoints, Figure 5 shows that 57.8% of the respondents are under the Micro category. 27.5% under the Small category and 10.1% and 4.6% under the



Figure 4. Timeline Showing the Establishment Year of the Company

How many people have you employed



Figure 5. Total Number of Employed Individuals

medium and large categories respectively. This is according to the Malawi MSMEs definition as provided by Ministry of Industry and Trade.

10.2.3 Capital Budgeting Practices

This question tried to know if the MSMEs do apply and use capital budgeting techniques and tools. Figure 6 shows that 70.3% of the respondents said they do use capital budgeting techniques in their investment decisions while 29.7% said no.

10.2.4 Capital Budgeting Tools and Techniques

This question was very much important in that, it wanted to unearth the tools and techniques of capital budgeting that Malawian MSMEs frequently use. Majority of the respondents (31.4%) said they use any of the above tools of capital budgeting. Be it NPV and IRR or PI and PBP for example. However, 29.1% said they use NPV in making their investment decision, followed by 15.1% for payback period, 11.6% Profitability Index, 7% Internal Rate of Return and 5.8% Accounting Rate of







Return respectively. Figure 7 shows that tools and techniques used for capital budgeting.

10.2.5 Capital Budgeting Decision Making

Figure 8 shows that 34.5% of the respondents said capital budgeting decisions are done by the Finance Manager with the least being 11.8% saying they are made by the Chief Finance Officer.

10.2.6 Budgeting System

System of budgeting practices plays an important role in questioning, visualizing, analyzing, and measuring implemented strategies. It also helps to manager in overall managerial activities by providing information and helping in planning, controlling, and decision making. Figure 9 shows that 52.3% Traditional budgeting, 20.7% Project budgeting and 10.8% Zero Based Budgeting.

10.2.7 Size of Capital Budgeting

Figure 10 shows that 49.1% of respondents said their capital budgeting size is less than 5 million Malawi Kwacha, while 30.9% said it is between 5 and 10 million



Figure 7. Tools and Techniques Used for Capital Budgeting





Malawi Kwacha. However, only 10.9% and 9.1% responded that their capital budgeting is around 10 – 20 million Malawi Kwacha and more than 20 million Malawi Kwacha.

10.2.8 Source of Investment Funding

Figure 11 shows that 54.9% of the respondents uses their own savings as source of funding, with 24.8% the combination of bank loan and own savings. 8% from issue of shares, 2.7% from family and friends and 8.8% from bank loan.

10.2.9 Capital Budgeting Purposes

There are typically three types of investment decisions,

- Expansion of existing business, here we don't establish completely new units rather the units are dependent on existing brand name
- Establishment of new business, this is establishment of new business altogether
- Replacement and Modernization, it involves renovation or renewal of buildings or machines.



Figure 9. System of Budgeting



Figure 10. Size of Capital Budgeting



Figure 11. Sources of Funding

Figure 12 shows that 61.3% of the respondents said they do investment decision to expand existing business with replacement and modernisation the least at 6.3%. However, 11.7% responded that they do capital budgeting to establish new business.

10.3 Evaluate the Interacting Effect of Uncertainty Between Capital Budgeting Practices and Performance

Capital budgeting decisions are based on future cash flow benefits, which rely on various assumptions and forecasts. Actual returns often differ from estimates, introducing risk. Firms adjust their required rate of return based on the project's risk, adding for above-average risk and subtracting for below-average risk. Properly assessing risk is crucial to avoid incorrect investment decisions.

10.3.1 Knowledge about Risk and Uncertainty

Figure 13 shows that 93.6% of the respondents have knowledge about the subject matter as opposed to 6.4% who said they don't.

10.3.2 Risk Adjustment Methods While Evaluating Capital Budgeting

Figure 14 shows the risk adjustment tools while practicing capital budgeting. 23.3% said they don't know, 17.5%



Figure 12. Capital Budgeting Purposes

Knowledge about risk and uncertainity

Figure 13. Knowledge about Risk and Uncertainty

said they use both sensitivity analysis and Expected Net present value, 15.8% said they use all the above methods, 7.5% said they use both risk adjusted, Standard deviation and Decision Tree Analysis. While 2.5% said Certainty equivalent method and finally 0.8% said any two of the methods.

10.3.3 Methods of Investment Plan Analysis

Investment plan helps to get maximum return from perspective investment for the Malawian MSMEs. Systematic plan is necessary for capital fund management of the organisation. On the basis of management perception different method of investment planning can be used. Figure 15 shows that 46.4% uses cost benefit analysis, followed by 31.3% of forecasting analysis, 14.3% Executive decisions and 7.1% said they don't know.

10.3.4 Basis for Budgeting

Expected Net Present

Management accounting in manufacturing firms supports strategic planning, decision-making, and financial control. It involves using various tools to aid





Don't Know



Figure 15. Methods of Investment Analysis

planning, controlling, and decision processes across different business units and industries.

Figure 16 exhibits the practice of management accounting tools from the respondents. 27.7% percent of respondents used cash flow analysis. Similarly, 19.6% cost benefit analysis, 12.5% any two of the management tools, 9.8% Master budget, 6.3% flexible budgeting. All these combinations were practiced by 20 percent of the manufacturing companies. The least being 0.9% ratio analysis.

10.4 To Explore the Prevailing Difficulties in Applying Capital Budgeting Tools in Malawian MSMEs Companies

Capital budgeting is investment decision-making as to whether a project is worth undertaking. Capital budgeting is basically concerned with the justification of capital expenditures. Although, capital budgeting is an important decision making tool for investment project,



Figure 16. Basis for Budgeting

some companies were not practicing it till now. The questions under this section unearthed some of the difficulties Malawian MSMEs come across when practicing capital budgeting.

10.4.1 Challenges in Capital Budgeting

Figure 17 shows that 68.2% of the respondents said they do face challenges in capital budgeting against 31.8% who said no.

10.4.2 Challenges Faced with Capital Budgeting

Table 3 shows that 75 of 110 respondents indicated that they do encounter challenges with capital budgeting representing a 68.2%. Table 3 shows that 40% of respondents indicated they lack knowledge in capital budgeting, 26.7% reported facing all four challenges listed, and 8% cited a lack of manpower. However, the least was 4% on both data not available and others respectively.

10.4.3 Understanding Decision Rules of Capital Budgeting Techniques

Decision rule is the important in capital budgeting as the right decisions made will be ideal for the company in as far as investment decisions are concerned. Decision rule for a project under NPV is to accept the project if the NPV is positive and reject if it is negative. In the event, if two or more mutually exclusive projects all have positive net present values, then the project with the highest NPV is selected. Similarly, with payback period, the shorter the payback period, the more attractive is the investment.

The reasons are that the earlier the investment is recovered, the sooner the cash can be used for other Facing challenges when applying capital budgeting



Figure 17. Challenges in Capital Budgeting

Reason	Frequency	Valid Percentage
Lack of Knowledge	30	40.0
All the above	20	26.7
Time consuming	13	17.3
Lack of Manpower	6	8.0
Data not available	3	4.0
Other	3	4.0
Total	75	100

Table 3. Capital Budgeting Difficulties

purposes. The risk of loss from obsolescence and changed economic conditions are less in a shorter payback period. Figure 18 shows that 50.9% understand the decision rule and 49.1% has no knowledge about it.

11. Findings

The majority of Malawian MSMEs (49.1% with less than one million Kwacha and 30.9% with between 5 – 10 million Kwacha) have been practicing cash budgeting for shortand medium-term investment projects. They also practice traditional and program budgeting. Based on the above analysis, examinations, and information, the following key findings have been drawn:

- 57.8% of the respondents are Micro enterprises, and 27.5% are Small enterprises.
- 70.3% of the respondents said that they practice capital budgeting in their organizations, while 29.7% said they do not.
- 46.4% use cost-benefit analysis for investment planning. Similarly, 31.3% prepare budgets based on forecasting.
- 23.3% are unsure, 17.5% use both sensitivity analysis and expected net present value, 15.8% use all of the Capital budgeting decision Rule



Figure 18. Decision Rule of Capital Budgeting

mentioned methods, 7.5% use a combination of riskadjusted analysis, standard deviation, and decision tree analysis, 2.5% use the certainty equivalent method, and 0.8% use any two of the methods.

- 34.5% of the respondents said capital budgeting decisions are made by Finance Managers in their company.
- 54.9% of MSMEs use their own savings to fund their investments, while 24.7% use a combination of bank loans and own savings (Capital Structure). None of the companies use debentures as a source of funding.
- 61.3% of MSMEs do capital budgeting when expanding their existing business, 11.7% for establishing new business, and 6.3% for replacement and modernization.
- The majority of the respondents (31.4%) practice at least two capital budgeting techniques, 29.1% use net present value, and 15.1% use the payback period.
- Most MSMEs (40%) lack knowledge in capital budgeting. Additionally, 26.7% face all the listed challenges (lack of knowledge, time consumption, lack of manpower, and unavailability of data), 17.3% cite time consumption as the challenge, 8% cite lack of manpower, and 4% cite data unavailability.
- 50.9% understand the decision rule, while 49.1% do not.
- Most MSMEs practice more than one management accounting tool, such as master budgets, cash flow analysis, ratio analysis, and break-even analysis.
- For some MSMEs, risk consideration is always vital when deciding on an investment opportunity.

12. Discussion

The main purpose of this study was to determine the various practices of capital budgeting within Malawian MSMEs. This study investigated the different factors that can influence capital budgeting practices in MSMEs. The industrial sector plays an important role in the economic development of the country, with MSMEs being a vital component of this sector. MSMEs contribute

approximately 40% to the GDP. The output value, value added, and fixed capital investments are all increasing in MSMEs. Capital budgeting decisions involve using cash now and expecting to recover the investment over a period longer than a year. Evaluating such decisions requires determining the investment and its resulting cash flows. The company's circumstances, including available funds and investment opportunities, should be considered before selecting a capital budgeting technique for general use. Capital investments must earn returns on both working capital and plant investments. Investments that reduce inventories are especially desirable due to their high payoff. Capital budgeting decisions involve many estimates, so managers perform sensitivity analysis to identify areas where they might face problems.

Capital budgeting involves assessing investment options using techniques that account for the time value of money, with Net Present Value (NPV) and Internal Rate of Return (IRR) being the most common methods. Traditional methods like the payback period and accounting rate of return are less effective because they don't factor in time value. While these methods can serve as initial screening tools, they don't consider financing sources. Decisionmaking involves handling uncertainty and risk, with probability and statistics aiding in these scenarios. Certainty involves only one possible outcome, while uncertainty and risk involve multiple potential outcomes with varying probabilities. The study explored the use of major capital budgeting tools, PBP, NPV, PI, IRR, and ARR among Malawian MSMEs to see if they benefit from them. Using surveys with over 100 MSMEs, the research aimed to identify current practices and potential cost-saving applications in manufacturing. Data collected via questionnaires were analyzed with SPSS to test and support the research hypotheses.

Conclusion

Based on the major findings of the study, some conclusions have been drawn about the capital budgeting tools practiced by MSMEs. Most of the MSMEs use tools like PBP (Payback Period) and NPV (Net Present Value). The tools that are not well practiced are ARR (Accounting Rate of Return) and IRR (Internal Rate of Return). It can also be concluded that the major difficulties in applying capital budgeting are time consumption, unavailability of data, and lack of knowledge. Although universities and the government have put greater effort into promoting capital budgeting practices for investment projects, some companies still lack these practices. One respondent argues that in private limited companies, most major decisions are taken by the executive body, meaning that theoretical concepts of capital budgeting are not fully implemented in practice.

This might reflect the actual situation of capital budgeting practices. Capital budgeting in MSMEs is still evolving and will continue to do so in the future. So far, they are trying to adopt tools and techniques to address future opportunities and challenges arising from globalization.

Suggestions

The following are the recommendations;

- Key stakeholders in MSME development should support and train these enterprises in simplified capital budgeting techniques, as the majority indicated that a lack of capital budgeting knowledge and time constraints are significant challenges in capital budgeting.
- SMEDI and TEVET should also enhance their MSME training curriculums to incorporate capital budgeting.
- There is a need for the government to develop policies that create a conducive environment for MSMEs to operate and use capital budgeting techniques with ease.

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Appendix 1: Questionnaire

Instruction: Please answer the following questions with a tick mark in the given space as required by the questions SECTION I: RESPONDENT PROFILE

- 1. Gender
- a. Male
- b. Female
- c. Prefer not to say
- 2. Age
- a. 18–23
- b. 24-29
- c. 30-35
- d. 36 and above
- 3. Level of Education
- a. Junior Certificate of Education (JCE)
- b. Malawi School Certificate of Education (MSCE)
- c. Undergraduate
- d. Postgraduate

SECTION II: TO EXAMINE THE PRESENT PRACTICES OF CAPITAL BUDGETING TOOLS USED AND PRACTICED BY MSMES IN MALAWI

- 4. When was your company established?
- a. Less than 1 year
- b. 1 year
- c. More than 1 year
- d. 5 years and more
- 5. Is your company registered with Office of The Registrar General?
- a. Yes
- b. No
- 6. Ownership of the Company

- a. Sole Trader
- b. Partnership
- c. Limited Company
- d. Unlimited Company
- 7. How many people have you employed in your company?
- a. 1-4
- b. 5-20
- c. 21-100
- d. Above 100
- 8. Do you practice Capital Budgeting at your company?
- a. Yes
- b. No
- 9. If Yes, what tools and techniques do practice in capital budgeting?
- a. Net Present Value (NPV)
- b. Internal Rate of Return (IRR)
- c. Payback Period
- d. Profitability Index (PI)
- e. Accounting Rate of Return (ARR)
- f. Any two of the above
- 10. Who does the capital budgeting calculations in your company?
- a. Chief Finance Officer
- b. Finance Manager
- c. Private Finance Consultant
- d. Nobody
- 11. What system of budgeting do you practice in your company?
- a. Traditional Budgeting
- b. Program or project budgeting
- c. Comprehensive budgeting
- d. Zero based budgeting
- e. Other....
- 12. What is your company's planning horizon for capital budgets?
- a. 1 year ahead
- b. 2 years ahead
- c. 3 years ahead
- d. 4 years ahead
- e. 5 years ahead and more

- 13. Size of capital budget in Malawi Kwacha
- a. Less than 5 million Kwacha
- b. 5-10 million kwacha
- c. 10-20 million kwacha
- d. More than 20 million kwacha
- 14. Specify the purpose of your company's capital budgeting
- a. Expansion of existing business
- b. Establishment of new business
- c. Replacement and Modernization
- d. All the above
- 15. What is the sources of fund in your company?
- a. Own savings
- b. Share issue
- c. Issuing debentures
- d. BankLoan
- e. Friends and Family

SECTION III: EVALUATE THE INTERACTING EFFECT OF UNCERTAINTY BETWEEN CAPITAL BUDGETING PRACTICES AND PERFORMANCE

- 16. Do you have an idea of risk and uncertainty?
- a. Yes
- b. No
- 17. Which methods your company follows risk adjustment while evaluating capital investment?
- a. Sensitivity Analysis
- b. Standard Deviation
- c. Expected Net Present Value
- d. Risk adjusted discount rate
- e. Certainty Equivalent value
- f. Decision Tree Analysis
- 18. How do you plan your investment in your company?
- a. Forecasting analysis
- b. Cost Benefit analysis
- c. Financial analysis
- d. Executive Decisions
- e. Others....
- 19. What is the basis for budgeting in your company?
- a. Based on past budget estimates

- b. Based on past actual expenses (Historical)
- c. Zero based Budgeting
- d. Activity Based Budgeting
- 20. Which of the following management accounting tools do you practice in your company?
- a. Master Budget
- b. Cost Benefit Analysis
- c. Cash Flow Analysis
- d. Zero based budgeting
- e. Flexible budgeting
- f. Standard costing
- g. Ratio analysis
- h. Activity based budgeting

SECTION IV: TO EXPLORE THE PREVAILING DIFFICULTIES IN APPLYING CAPITAL BUDGETING TOOLS IN MALAWIAN MSME COMPANIES.

- 21. Do you have any challenges in applying capital budgeting techniques in your company?
- a. Yes
- b. No
- 22. If Yes, which of the following difficulties your company face in implementing capital budgeting?
- a. Lack of Knowledge
- b. Lack of manpower
- c. Data not available
- d. Time consuming
- e. Others.....
- 23. Do you fully understand the decision rule of various capital budgeting tools?
- a. Yes
- b. No

SECTION VI: GENERAL

Instruction: Please tick the following factors in order of importance while making decisions regarding capital budgeting.

(Strongly agree = 5, Agree = 4, Unsure = 3, Disagree = 2, Strongly disagree = 1)

Investment decisions is very important for Success.	5	4	3	2	1
When deciding on an investment opportunity, risk consideration is always vital.					
Rationality and adequate discount rate helps in handling the risk.					
Non-discounting techniques (Payback period and ARR) are as useful as the discounting techniques of capital budgeting.					
NPV method is the best criterion of making investment decisions.					
Entrepreneurship has a great influence in capital budgeting decision in the context of Malawi.					

Any Suggestions or comments?

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ABOUT THE AUTHORS

Rodney works as a Business Training Specialist with the Small and Medium Enterprises Development Institute (SMEDI) in Lilongwe, Malawi. He is a Business Development Practitioner with over a decade of experience in delivering business development solutions that enhance income opportunities and stimulate economic growth. He trains micro, small, and medium enterprises in business plan development, marketing, branding, and labeling. He holds a Bachelor's Degree in Business Administration from Blantyre International University, Malawi, and a Master of Commerce with First Class Distinction from Andhra University, India. He is also pursuing an online Master's degree in Economics from Andhra University.



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