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BUSINESS SCHOOL

Research work and dissertation on:

**Applications of Management Accounting
in
Small and Medium Enterprises (SMEs)
of Developing Countries**

Submitted by:

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in fulfillment of the requirements for the degree of

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DECLARATION

I, Yogendra B. Chhetri, hereby declare and confirm that the research accomplished entitled as "*Applications of Management Accounting in Small and Medium Enterprises (SMEs) of Developing Countries*" submitted to "Selinus University Business School – Department of Business Administration". It has been completed in the form of fulfillments for the requirements for the degree of "*Doctor of Business Administration (DBA)*" under the supervision and guidance of Prof. Dr. Salvatore Fava, Selinus University.

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ACKNOWLEDGEMENT

This thesis entitled "*Applications of Management Accounting in Small and Medium Enterprises (SMEs) of Developing Countries*" has been prepared in the prescribed form as required by the Department of Business Administration - Selinus University Business School for the fulfillment of Degree of "*Doctor of Business Administration (DBA)*" with major in Financial Management.

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Yogendra B. Chhetri
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ABBREVIATIONS

AD	:	Anno Domini
A/C	:	Accounts
ABB	:	Activity Based Budgeting
ABC	:	Activity Based Costing
ARR	:	Average Rate of Return
CA	:	Chartered Accountant
CMA	:	Certified Management Accountant
CPA	:	Certified Public Accountant
CWA	:	Cost and Works Accountant
CFAT	:	Cashflow after tax
Co.	:	Company
CVPA	:	Cost Volume Profit Analysis
df	:	Degree of Freedom
DPB	:	Discounted Payback Period
e.g.	:	For Example
i.e.	:	That is
IRR	:	Internal Rate of Return
Ltd.	:	Limited
MA	:	Management Accounting
No.	:	Number
NPV	:	Net Present value
PBP	:	Payback Period
PI	:	Profitability Index
r c	:	Rows and Columns
SMEs	:	Small and Medium Enterprises
ZBB	:	Zero Based Budgeting
FC	:	Fixed Cost
UVC	:	Unit Variable Cost
LA	:	Level of activity
CoGS	:	Cost of Goods Sold
FMCG	:	Fast Moving Consumer Goods

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Management accounting or accountancy is the term used for describing the accounting methods or the systems and techniques, which are clubbed with special tasks and activity for providing the better picture for decision making for the betterment of the entity. It helps Senior Management Team for making better planning and take the right decision and monitor on the control environment. As a result, it maximizes the profit earning capability by minimizing the probability of risks and losses due to various factors. Due to the high rate of competition and risks involving in the enterprises at this situation, Small and Medium Enterprises are also in financial and organizational difficulties and becoming more complex environment³. The only reliable option is better management for the smooth operations of Small and Medium Enterprises (SMEs) that will help the organization to be secured in terms of unexpected ups and downs (turbulences) which may lead financial insolvency in the long run. The systematic and well-structured management is the secret of success for the organization like SMEs in term of generating financial surpluses by having more manufacturing and trading on the product and services that we are offering to the clients.

Management Accounting is the process of identifying, measuring, analyzing, interpreting and communicating the information for initiating and achieving the goals of the organisation that deals for generating profit or not for profit. This is the vital part of management process and the Management Accountants are important strategic and analytical partners in the Organisation's Senior Management Team (Hilton, 2010:16) – ICMA (www.cmaaustralia.edu.au)

It is also concerned and connected with for providing both financial and non-financial information which will help decision makers or the Senior Management Team for making right decision toward one step ahead. Hence, understanding the value of accounting requires an understanding of the decision-making process and an awareness of the users of accounting and financial transactions (Drury, 2011:18).

Management Accounting is the term used to describe the accounting methods, systems, tools and techniques, which are clubbed with special knowledge and ability, assisting the Senior Management for minimizing the losses and optimum use of input raw materials. It is mainly the applications of management principles and technical know-how to the profit making or not for profit making entity for the development, execution, and control of corporate plans (Batty, 2009: 2) on an effective manner.

Now a days, the business entity operates in a dynamic manner which involves a lot of difficulties and situation encountered from the viewpoint of management perspectives and it may lead towards the situation of uncertainty. Due to complex environment in the business world, an entity has to carry out its basic function for minimizing the cost and maximizing the earnings using the available resources and facilities around its catchment area or in the atmosphere of the situation of uncertainty. The traditional techniques of management by inspection may no longer be considered for a dependable and/or favourable situation whereas the modern styles of management will be a reliable tool and approach for decision and smooth operations of business. It may lead either high earnings or up to the level of breakeven point (bep) but will not be only the cause of deficit. Another opportunity may not be available in future regardless of our tough grind and it may lead towards the high risk in certain aspects. Hence, regular attempt for reducing the risk of making errors in decision- making by keeping the abreast of such quantitative information which would help for analyzing its administrative action in order to reach judicious decisions for the betterment of the business environment. Such that it could be a perfect message that an accounting is a very important mechanism for managing healthy business environment. The Management - therefore, constantly strives to reduce the risk of making mistakes and errors by taking corrective action and analyzing the relevant information by means which hopes to take judicious decision and provide guidance to its implementing mechanism or mid-level management through modern styles of management.

The whole idea of managerial accounting is to assist strategic managers to perform management functions more effectively by providing relevant economic information. Management is the process of planning, decision making and controlling. An organization is the common place, where different physical resources people and activities get managed by the system force. It is an integrative function directed towards achieving organizational goals. The management, which plans, decides, implements, and has a control over different activities of the organization (Bajracharya, Ojha, Goit & Sharma, 2009).

The role of Small and Medium Enterprises (SMEs) is now a days seems very high and making huge contribution to the economy of the nation on a significant manner. SMEs play a vital role for creating self-employment opportunities, mobilizing and using local resources, and raising the income of the middle-class people of Developing Countries.

The discussion held with Owners and their Senior Management Team of the sample population; there are more than 950,000 SMEs in Nepal and more than 600,000 SMEs in Cambodia. The size of the population obtained from the census of the country is 30.03 million (Year 2021) in Nepal and 16.59 million (Year 2021) in Cambodia. It seems that the proportion of established SMEs between Nepal and Cambodia is 63% and 37% respectively. Accordingly, while comparing with the population - it seems that each SME in Nepal serve 31.61 (rounded off as 32) people and in Cambodia 27.65 (rounded off as 28) people.

Within the limitation of the scope, it seems that the classification of SMEs are as follows:

Nepal

Classification	Employees	Fixed Assets	Remarks
Micro	Up to 9	Up to Rs 500k	Annual turnover Rs 500m Use of energy 20 KV
Cottage			Traditional skills Traditional Technology Use of energy 10 KV Local resources Labour Intensive Local technology
Small		Up to Rs. 100m	
Medium		Rs 100m – Rs 250m	
Large		More than Rs 250m	

Cambodia

Classification	Employees	Fixed Assets	Remarks
Micro	Up to 10	Up to USD 50k	
Small	11 - 50	USD 50k – USD 250k	
Medium	51 - 100	USD 250k – USD 500k	
Large	More than 100	More than USD 500k	

SMEs are involved in the following sectors and/or categories:

Nepal:

- Processing and manufacturing of foods items
- Consumers and household goods
- Textiles and related products
- Technical and occupational services

Cambodia:

- Production sector including agriculture, manufacturing and mining
- Service Sectors
- Trading sectors including wholesale and retails

The following challenges have been identified both in Nepal and Cambodia:

- Access to finance
- Retaining technical knowledge and skills
- Inadequate support and facilities
- Competition through regional and international market expansion
- Formalities and tedious Government procedures
- Natural Calamities
- Viral and communicable disease
- Political pressure and interferences

1.2 Statement of the problems

The Small and Medium Enterprises (SMEs) have been operating on a well manner from the very beginning of their establishment. The expansion of SMEs and their business coverages are increasing now a days which indicates the increasing number of entities in Developing Countries. As a result, the SMEs are competing for increasing the sales volume with the product from overseas as well. This is one of the major challenges in terms of achieving the perfect result through the existing clients and maximizing market coverages of the business transactions.

Well management and planning are the key tools to achieve the pre-determined goals of the business organization for which Management Accounting will provide the perfect assurances for making growth of production as well as sales volume. It will provide proper and required information and essential guidelines to the manager for planning and decision making. Hence, the business complexity could be changed into opportunity by using various tools and techniques of management accounting.

1.3 Objective of the Study

The major objective of the study is to examine the applications of Management Accounting in Small and Medium Enterprises (SMEs) of Developing Countries how they have been practicing various tools and techniques of management accounting under overall concept of Financial Management for meeting the purpose of their success indicators. Specially the following are the major objectives of the study:

1. To analyze the present practice of Management Accounting tools used in the SMEs.
2. To identify the areas where Management Accounting tools could be applied to strengthen the SMEs activities.
3. To identify the ways of overcoming difficulties in applying Management Accounting tools used in SMEs.

1.4 Research Questions

The research questions will help to study the scenarios of management accounting tools being used in SMEs:

1. Which Management Accounting tools are mostly practiced in SMEs?
2. What are the Management Accounting tools that can be applied to strengthen the SMEs activities?
3. What are the major difficulties in the application and implementation of Management Accounting tools?

1.5 Significance of the Study

The research work has been carried to study the application of Management Accounting in SMEs of developing countries specially focused on Nepal and Cambodia. This study will be significant achievement in the following outcomes:

1. It helps for analyzing the use of Management Accounting tools in the sector of SMEs in developing countries.
2. It helps in exploring the problems encountered by the SMEs.
3. It provides information on the application of the tools under different situations and encourages for using Management Accounting tools in planning and decision-making process.

4. It provides additional documentation for the researchers who would like to carry on further research activities.
5. This study provides required information to Governments, SMEs, Decision Makers, Managers, Investors, Researchers and other Stakeholders.

1.6 Limitations of the Study

The study was not free from some of the limitations and constraints. The main limitations are as follows:

1. This study focused on application of Management Accounting of sample sizes of 200 SMEs of Nepal and Cambodia, and it will not consider the other socio-economic aspects of SMEs.
2. The study focused on the business dealt with different domains SMEs. Thus, findings might not be applicable to other sectors.
3. The research is based on the primary data available to the Research Team.

1.7 Organization of the Study

The study report has been divided into the following chapters which would make the study report systematic and easier to understand.

The introduction chapter covered the background of the study, definition of management accounting, statement of the problems, objectives of the study, significance of the study and limitation of the study.

The second chapter focused on review of literature. It contained the conceptual framework and past research literature reviews which would show the previous research works that were done in the related field of Management Accounting. The third chapter described the research methodology adopted for the study consisting of research methodology covering research design, sources of data collection procedure, population and sample research variables and presentation procedure.

The fourth chapter dealt with presentation, analysis and interpretation of data. Analysis of questionnaires and analysis of open-end option and major findings of the research.

The last chapter covered summary, conclusion and recommendations. Accordingly, the bibliography and various appendixes were also included in the last part of this dissertation.

CHAPTER TWO

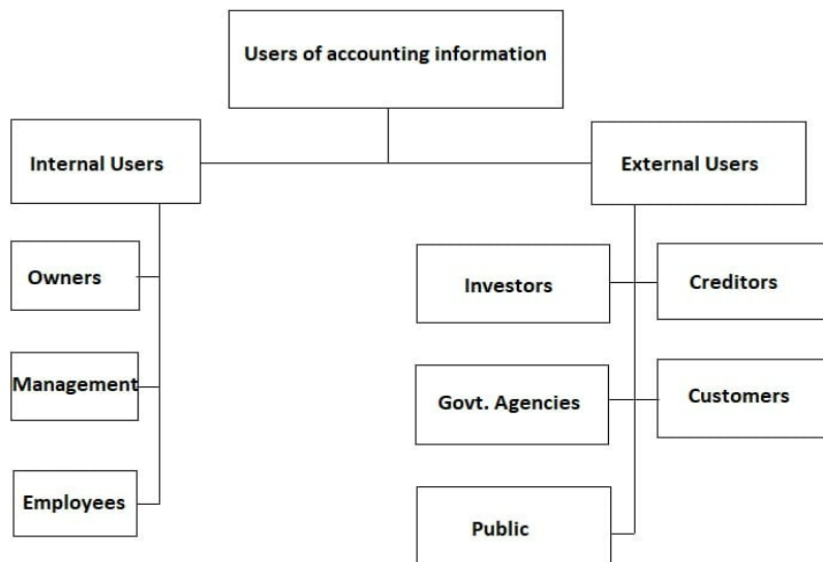
REVIEW OF LITERATURE

This chapter deals with theoretical aspect of application of Management Accounting. It attempts for incorporating those studies conducted for reviewing the relevant topics. This part of research is drawn from the books, previous research study, periodicals, journals, and articles related with this topic that have been studied and reviewed in the past.

2.1 Conceptual Framework

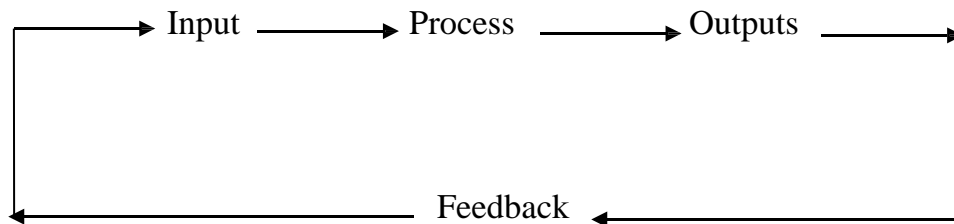
Accounting means the process of analyzing financial transactions and recording them in the book of account to show the financial results of operations. It is the eye of the business which shows a path to go ahead. It has rightly been termed as the language of the business. It communicates the result of business operations to the various parties having some stake on the business. The objective of accounting is to provide sufficient information to meet the need of various users at the lowest possible cost. As such, the accounts/accounting should aim to provide the right information to the right user/people in the right quality at the right time and at minimum cost. The user of accounting information can be grouped into following two categories.

Figure No. 2.1
Users of Accounting Information



The term system refers to "An assembly of methods; procedures of techniques that are united by regulated interaction to form an organized whole." In fact, system means a collection of things interacting and inter- dependent to form a complex whole.

Figure No. 2.2
Internal Environment



A system receives inputs as men, materials, money, machines and so on. Processes them and generates such outputs as finished products or services. The system model of an entity is drawn in the above figure. Management accounting system is a "resource of management that supplies financial information at all levels to be used in planning and administrating the business." Accounting system has expanded from its traditional confines of historical transaction data to the analysis of present situation and forecasting the prospects that may arise in future.

Management Accounting is the presentation of accounting information to formulate policies to be adopted by the management and assist its day-to-day activities of the entity. It helps the management to perform its regular functions including planning, organizing, staffing, directing and controlling. It will present management and accounting information in the form of processed data which would be gathered from financial accounting.

The role of managerial accounting now is very different from that of those days. In the past, it used to operate strictly with in-house capacity but now-a-days it is serving as internal source of business consultants or advisors. In many organizations, Management Accountants are taking the leadership in their teams and are sought out for the valuable information as required. Therefore, the goal of maintaining the management accounting is not to be a qualified accountant, rather it aims to produce confident and capable entrepreneurs.

Managerial Accounting is concerned with providing information to managers, which is to those who are inside of an organization and who are charged with directing and controlling its operations. Managerial Accounting can be contrasted with Financial Accounting, which is concerned with providing information to stakeholders, creditors, and others who are outside of an organization (Garrison, 2006:14).

Management accounting will perform broad functions from collecting the data and up to interpreting them to the Senior Management Team. The various information (Capacity available, utilization of current capacity, cost structure, past results, etc.) and external information (competitors financial position as well as net worth, socio-political movements/environment, market characteristics, globalization, etc.) are required for managing healthy business environment. Management accounting is a system which collects, stores, retrieves, modifies, analyzes, interprets and provides the concise information/data covering entire field of business for the management. Thus, management accounting helps management in planning, controlling and decision making.

2.2 Functions of Management Accounting

There are so many functions of management accounting which satisfy the various need and the curiosity of management for taking correct decisions considering the best interest of the organisation. The major functions of Management Accounting are as follows:

i. Collection of Data

Management Accounting Information System (MAIS) provides and stores data relating to the internal operation of a company and the external environment. Internal data includes the capacity available, current utilization of capacity, cost structure, past results of operation, etc. Data relating to external market are competitor's position, socio-political movement, market characteristics and globalization.

ii. Identification and Modification of the Relevant Data

Accounting data required for the decision-making and planning process will be supplied by managerial accounting through a process of identification, classification and modification of the relevant data, which enables us to retain only the necessary information.

iii. Analysis and Interpretation of Data

Managerial accounting is concerned more with recording past achievement, maintenance of values, fixation of responsibilities and basis for assessing future developments; it is more concerned with the analysis and interpretation of data, which will opened up new directions for its use by management.

iv. Providing Information for Planning and Decision-Making

Planning, which is a creative aspect of management job, is carried out by managerial accounting through the process of budgeting. Business decisions are based on relevant economic information provided by managerial accounting.

v. Facilitating Management Control

Management accounting enables all accounting efforts to be directed and controlled towards the destiny of an enterprise. This is made possible through budgetary and standard costing, which are integral parts of managerial accounting.

vi. Use of Qualitative Information

Management accounting does not restrict itself merely to financial data for helping management in decision-making process and frequently draws upon sources, other than accounting, for such information as it is not capable of being readily convertible into monetary terms.

vii. Satisfaction of Informational Needs

Managerial accounting has a system of processing data in a way that yields concise information converting the entire activities of business for the top management.

2.3 Objectives of Managerial Accounting

The main objectives of Management Accounting are to provide relevant information to top-level management to make strategic plans and decisions.

i. Providing Information for Planning and Decision Making

Virtually, all major plans and important decisions made by internal users (i.e., Managers, Accountants, Production Managers, etc.) are largely based on managerial accounting information. This information includes financial and non-financial data to help managers with strategic planning and decision-making.

ii. Budgeting

One means of achieving goals is through budgeting. The budget indicates the top management's desire to allocate resources and emphasize certain activities.

iii. Assisting in Daily Operation

Directing and controlling regularly on day-to-day operations require a variety of data about the process of providing goods and/or services. Therefore, management accounting helps in directing and controlling day-to-day operations by using management accounting tools and providing the necessary information.

iv. Controlling

The Senior Management Team needs data about the cost of goods sold (CoGS) or services in order to determine the prices of the products. Management compares the actual cost incurred with those specified in the budget (by analyzing and comparing actual performance with budget). When actual operations could not confirm the total cost or budget, managers will be questioned for explaining the reasons for the deviation. This creates both an incentive to conform to the budget and possibilities for negative consequences which may lead towards the deficit environment of the entity.

v. Motivating Managers and Employees

A key purpose of Management Accounting is to motivate managers and other employees for facilitating their efforts toward achieving the organization's mission, vision, goals and objectives. It motivates the managers to achieve the organization's goals by communicating the plans, providing a measurement of outcomes, how well the plan has been achieved and prompting for an explanation for deviation from the original plan. Another way to motivate employees to assist in achieving the organization's goals is through empowerment. Employees empowerment is the concept of encouraging and facilitating workers to take the initiative for improving operations, product quality and customers service and finally for minimizing the costs.

vi. Measuring the performance of Managers and sub-units within the Organization:

One way of motivating employees toward the organization's goals is to measure their performance in achieving the goals. In addition to measure the performance of the people, Management Accountants measures the performance of an organization's sub-units, such as divisions, product lines, geographical coverages, departments, etc. Such measurements help the top management for making the decision whether a particular sub-unit is a economically viable for investment or not. Normally, the entities are compensating their Executives and Senior Management position holder, in part, on the basis of the high level of production, sales turnover and earnings/profit achieved by them or their sub-units that they are managing.

vii. Assessing the Organization's competitive position

A crucial role of Management Accounting is for ensuring continuous assessment for the business entity which will be out of competition, with an eye toward continuous improvement.

viii. Monitoring

This allows the entity to evaluate its financial and internal performance, customer satisfaction as well.

2.4 Management Accounting tools

Management Accounting is such a technique, which help for discharging the functions like planning, organizing, staffing, directing and controlling; properly and efficiently (Paul, 2004:5).

2.4.1 Methods of Segregating Mixed Costs in Fixed cost and Variable cost

- i. High-low Point Methods (two-point method): As the name suggests, this method considers two levels of activities to segregate the cost. It considers the output at different level, i.e. high and low point is compared with the amount of expenses incurred at these different periods (Jain & Narang 2008:226).

$$\text{Variable Cost per Unit} = \frac{\text{High Cost} - \text{Low Cost}}{\text{High Unit} - \text{Low Unit}}$$

- ii. Least Square Method: Least square method follows regression equation to segregate mixed costs into fixed and variable (Khan and Jain, 2010: 157).

Form of linear regression equation:

$$Y = a + b X$$

Where:

Y = Predicted value of selected X value

a = Y-intercept

b = Slope of the line

X = independent variable

$$\text{Slope of the regression line (b)} = \frac{n(\sum XY) - (\sum X)(\sum Y)}{n(\sum X^2) - (\sum X)^2}$$

$$\text{Y-axis intercept, (a)} = \frac{\sum Y}{n} - b \frac{\sum X}{n}$$

- iii. **Analytical Method:** This method, also known as “degree of variability” technique because the genesis of this method lies in measuring the extent of variability of costs on careful analysis of each item to determine how far the cost varies with volume.

$$\text{Variable Overhead} = \text{Budgeted Mixed Overhead} \times \text{Degree of Variability}$$

2.4.2 Cost Allocation and Apportionment

There are three popular or commonly used methods of allocating the cost-of-service department. They are as follows:

i. Direct Allocation Method

The direct allocation method (Direct Method) is the most widely used method of allocating support department costs. The benefit of the direct method is its simplicity. There is no requirement for predicting the usage of support department services by other departments.

ii. Step-down Allocation Method

Some organizations are using the step-down allocation method which allows for partial recognition of the services rendered by the support departments to other support departments. This method requires the support departments to be ranked in the order then the step-down allocation is to be proceeded. Different sequences result in different allocation of support department that renders the highest percentage of its total services to other support departments.

iii. Reciprocal Allocation Method

The reciprocal allocation method allocates costs by explicitly including the mutual services provided among all support departments.

2.4.3 Product/Service Costing Method

Two popular methods for product costing are variable costing (direct/marginal costing) and absorption costing, they are not the system of costing like process, operation, batch, or job costing rather than they are the tools or techniques of product costing (Khan & Jain, 2010:345).

i. Variable or Direct Costing

Variable costing more accurately perceived as direct costing as it applies only the variable production cost to the product. Under this costing method, fixed manufacturing overhead is regarded as an unexpired cost to be held as inventory and charged against sales later as a part of cost of goods sold. (Horngreen, 2008: 539).

ii. Absorption Costing

Absorption costing is that method of inventory costing, in which all variable manufacturing costs and all fixed costs are included as inventorial costs. Absorption costing is also known as conventional method of costing or full-fledged costing. Contrast to variable costing, absorption costing assumes fixed along with variable cost constitutes to the product cost. It absorbs all cost necessary to production. It considers fixed manufacturing overhead as part of production cost (Horngreen, 2008:539).

2.4.4 Cost-Volume-Profit Analysis (CVP Analysis)

CVP analysis is a management accounting tool to show relationship between the ingredients of profit planning. Profit planning is the functions of the selling price of unit sold. The entire scope of profit planning is associated with CVP interrelationship. Breakeven analysis is concerned with the study of revenues and cost in relation to sales at which the Entity's revenues and total costs will be exactly equal (or net income is zero). Thus, the breakeven point may be defined as a point at which the entity's total revenues are exactly equal to total costs yielding zero incomes. Neither profit or nor loss point is considered as breakeven point or point at which losses cease and profit margin begin (Khan and Jain, 2010:994).

2.4.5 Budgeting for Planning and Controlling

A budget is a detailed plan expressed in a quantitative term that specifies how resources will be acquired and used during a specific period of time. The producers used to develop the budget constitute a budgeting system (Hilton, 2010:404).

Budgeting is concerned with the implementation of the long-term plan for the year ahead. Budgets are clear indications of what is expected to be achieved during the budget period whereas long-term plans represent the broad directions that top management intend to follow (Drury, 2011:549). Therefore, a budget is a numerical plan of action, which generally covers the area of revenues and expenditures. A budget may be formulated for an organization as a whole or for its sub-units. Budgets, basically, are the forecast of financial statements formal expressions of managerial plan. They target that encompass all phases of operations including sales, production, purchasing and manpower and financing.

2.4.5.1. Process of Budgeting

The main objective of a business firm is to make an excess of revenue over expenses so as to maximize the profit. But, it is not the matter of chance, it depends on overall management of the organization on a proper manner. One business organization can achieve its objectives of minimizing costs and maximizing profits only when budgeting is followed properly and planned accordingly. A systematic budgeting should follow the following procedures:

1. Evaluation of the business environment.
2. Settings objectives
3. Setting specific goals
4. Identify potential strategies:
 - i. Market penetration
 - ii. Market development
 - iii. Product development
5. Communicating the planning guidelines
6. Developing the long-term and short-term plans
7. Implementation of the budget
8. Periodic performance reporting and controlling

2.4.5.2. The Master Budget (A Network of Inter-Relationship)

A complete set of financial plans for a business entity is often called Master Budget. The Master Budget consists of many functional budgets including sales budget,

production budget, operating budget, capital expenditure budget, and cash budget. Once budget exercise complete, the master budget for the entity will be prepared. Once all those budgets are prepared, the budgeted profit and loss (Income Statement) and budgeted balance sheet provides the overall picture of the planned performance for the budgeted period. The type of budget or profit plans depends on the nature of the business entity. The master budget is consolidated version of many different budgets which are independent. It is normally covers the three areas: (i) operational budget, (ii) cash budget and (iii) financial statements.

2.4.5.3. Operating Budget

Operating budget relates to the physical activities or operations of a firm such as sales, production, purchase, debtors collection and creditors payment schedule. Particularly, an operating budget has the following components:

a. Sales Budget

A sales budget is a detailed schedule of expected sales for the periods in future. It is usually expressed both the expected number of unit of sales and expected amount of income from sales activity. The decision could be taken for making required number of production units with the support from sales budget.

The sales budget is the starting point for preparing the master budget. The sales budget is prepared by multiplying the expected sales in units by the sales price per unit.

b. Production Budget

After the sales budget has been prepared, the production requirements for the forthcoming period could be determined. Sufficient finished production be available to meet sales need and for the required number of inventories at the end of the fiscal year for the proposed period of estimation. A portion of these goods will exist in the form of beginning balance of inventory and the remainder have to be produced accordingly. Thus, production requirement could be determined by adding the budgeted sales units with the desired ending/closing balance of inventory by deducting the beginning balance of inventory. The production is an estimation of the quantity of goods to be manufactured during the forthcoming period. While

developing the production budget, the first step is to formulate policies relating to level of inventory. The next step is to determine total quantity of each product required that need to manufacture during the period. Third step is to schedule the production to during the period of estimation. Production budget is an initial step for budgeting the manufacturing need of operations.

Planned Production Units

$$= \text{Planned Sales Units} + \text{Desired Ending Inventory} - \text{Beginning Inventory of Finished Goods}$$

c. Direct Material Budget

After the identification of production needs, direct material budget to be prepared for showing the materials that may be required for the production process. Sufficient raw material to be available for meeting production need and to provide for the desired quantity of ending balances for the raw materials. However, some quantity of material requirement may already exist in the form of beginning balances of raw materials. The remainder will need to be purchased from a supplier/vendor. This budget specifies the planned quantities of each material on time, specific product and with responsible manner.

Planned Material Consumption

$$= \text{Planned Production Units} \times \text{Standard Raw Material Usage per Unit of Output}$$

d. Raw Material Purchase Budget

Direct materials are essential for production, and they must be purchased for each period in accordance with the requirement of sufficient quantities to meet production needs and to confirm to the entity's inventory policies that will be applied at the end of the fiscal year. The material budget specifies that the quantities and timing for each raw material required. Therefore, plan for the procurement of raw materials and the estimated cost for each quantity of raw material to be made along the required delivery dates.

Planned Purchase Units

$$= \text{Planned Material Consumption} + \text{Desired Ending Inventory of Raw Materials} - \text{Beginning Inventory of Raw Material}$$

e. Direct Labor Cost Budget

The direct labor budget is to be developed from the production budget. Direct labor requirement to be fixed whether sufficient laborers are available to meet production need. Then the entity could develop a plan to adjust the labor force as the situation may occurred. Direct labor requirement could be identified by multiplying the products to be produced in each period with the number of direct labor hours required to produce a single unit. Different types of labor forces may be expected for the entity. In such case, the computation should be made by identifying of requirement labor capacity. Then it will be computed by multiplying the direct labor cost by direct labor hours to obtain the budgeted total labor cost.

Budgeted Direct Labor Cost

$$= \text{Direct Labor Hours Required (DLH)} \times \text{Direct Labor Cost per DLH}$$

Where,

$$\text{DHL} = \text{Planned Production} \times \text{Standard Time required per unit of Output}$$

f. Manufacturing Overhead Budget

Manufacturing overhead is the portion of the total production cost, which is not directly identifiable with specific product or job. Manufacturing overheads includes a lot of expenditure which may not be relevant and dissimilar expenses as well. Therefore, it may cause the problems in allocating of these costs to products. There are two distinct types of responsibility centers in most of the manufacturing companies, production and services. Responsibilities for the operation of each department should be classified on an independent manner separately in the group of accounts to be handled by the Department of Cost Accounting. Finally, the expenses of each department should plan and control separately.

The manufacturing overhead budget provides a schedule of all costs of production other than direct material and direct labour. These costs should be segregated by cost

behavior as variable and fixed for budgeting purpose and a predetermined overhead rate to be applied. This rate to be applied for manufacturing overheads to the product(s) throughout the period.

g. Selling and Distribution Expenses Budget

The selling and distribution budget contains a list of anticipated expenses for the budget period that may be incurred in the areas other than manufacturing process. Selling and distribution expenses include all cost related to selling, distribution and delivery of products up to the consumers. These costs consist significant portion on the total expenses. A very careful planning on such expenses affects the potential profits of the Entity.

h. Administrative Expenses Budget

Administrative expenses budget includes those expenses other than manufacturing, selling and distribution. They are incurred in the responsibility centers that provide supervision and services to the overall tasks of the entity, rather than in the performance of any single task. Because large portion of administrative expenses are fixed rather than variable and the notion persist that it could be controlled as it has fixed volume of expenditures. Apart from that the remuneration of certain Senior Level Management and other administrative expenses are determined by the decision taken by the Management.

i. Cost of Goods Sold (CoGS) Budget

The cost of goods sold budget clearly distinguishes the total cost of goods for total production and cost of goods sold for the value of inventory. Indeed, it reveals that the portion cost to be carried forward to the next budget cycle which will facilitate for preparing income statement and the balance sheet.

j. Cash Budget

Every entity must maintain the reasonable level of cash or working capital fund. The entity may not be able operate the business smoothly without its availability. The entity should have enough cash/fund for payment of various obligations. A cash budget to be developed after the operational budgets and capital outlays have been accomplished. A cash budget shows the planned cash inflows, outflows and ending

position by interim periods for a specific time span. The entity has to be in the position about the need for developing both long-term and short-term cashflow estimates. The short-term cash budget is included in the annual profit plan. A cash budget basically includes two parts:

i) The planned cash receipts, and ii) the planned cash disbursement

Planning for cash inflows and outflows gives the planned beginning and ending cash position for the budget period. Planning for cash inflows and outflows will include:

a) The need for possible cash deficits

b) The need for investment planning for maintaining the excess cash required into possible expansion of the business.

The primary purposes of cash budget are as follows:

- i. Providing prior notification for the resources on their discretion and the expected for achieving the high level of targets.
- ii. Providing the targets for evaluating departmental performance.
- iii. Providing warning/prior notification about potential shortage of cashflow regularly.
- iv. Establishing the need for financing and the availability of idle cash or cash on isolation.

2.4.5.4. Budgeted Financial Statement

The final step in master budgeting is the development of budgeted or provisional financial statements for the specific periods. These statements will reflect the results to be achieved based on the estimates and assumptions considering the lessons from the historical experiences. Such statements will provide guidance to the Senior Management for determining anticipated or expected business targets for the period. In the case of reverse situation, the Senior Management may have the opportunity to for rethinking and readjusting the business strategy well ahead.

a. Budget Income Statement

Budgeted income statement is one of the key schedules in the Master Budget. It will tell whether the profitable operations are anticipated in the forthcoming period. It will serve as benchmark (or minimum standard) against the subsequent performance that

could be measured.

b. Budgeted Balance sheet

Budgeted balance sheet could be defined as collection of financial documents including notes to the accounts that will present the estimated value for the beginning balances of assets, liabilities and equity in the entity for the anticipated particular period for future. The predicted value could be estimated by considering the monetary inflation and the current context of financial trend.

Beginning with the current balance sheet and after making the adjustment or the data contained in the other budgets, budgeted balance sheet could be prepared. The balance sheet is the financial position of final documents/dossier in the master budget. Thus, it could be assumed that a loss of the remainder balances of all assets, liabilities and equities, will be explained in the balance sheet.

2.4.5.5. Zero Based Budgeting (ZBB)

Under zero-based budgetary (ZBB) process each and every budget is prepared in the form of perfect evidence that could be well justified. It needs to be started with basic assumptions or scratches that it should be considered as zero in next or forthcoming year and every expenditure, previous and upcoming, must be justified on the basis of its costs and benefits in accordance with real life scenarios. The discipline of zero-based budgeting takes a different approach in fact a reverse approach to this problem of justifying all the parameters that may be encountered. Zero based budgeting though is not a newly developed concept however, it may review the departmental and relevant associated costs. This kind of exercises could be undertaken annually or any kind of time intervals.

2.4.5.6. Activity Based Budgeting (ABB)

Activity-based budgeting focuses on the activities to produce and sell the products and services. It will separate the indirect costs into pools of homogeneous activity cost. Management uses the causes and effects criteria to identify the cost drivers for each of these indirect cost pools. To manage cost more effectively, organization that have implemented activity-based costing (ABC) has also adopted ABB. The aim of ABB is to authorize the supply of those resources that is required for performing the activities for meeting the budgeted production and sales volume.

The four key steps are followed in Activity-Based Budgeting are:

1. Determination of the budgeted costs of performing each unit of activity on the spot where it is required.
2. Determination of the demand for each individual activity based on the budgeted production
3. Computation of the costs of performing each activity
4. Describing that budget as the cost of the performing various activities.

2.4.6. Management Control Systems and Responsibility Accounting

2.4.6.1. Management Control Systems

Management consists of the basic function of planning, decision-making and control. Control is the function of the management that ensures the proper implementation of plans and policies to achieve the organizational objectives. Management control system focuses on motivating the Managers for enhancing total profitability of the organization. Control involves the process of establishing results and performing the targets, measuring the performance, and providing the rewards or punishment based on employees' capacity for achieving the target. A management control system is logical integration of techniques to gather and use of information for further planning and controlling the decisions, motivating the employees' and evaluating the performance. The main purposes of management control systems are as follows:

- i. To communicate clearly about the organization's goals and objectives
- ii. To ensure that Manager and Employees understand the specific action that required for achieving organizational goals
- iii. To communicate result of actions to the concerned stakeholders
- iv. To ensure that the management control system for adjusting the changes in the environment
- v. Segregation of duties
- vi. Ensure Internal Control Policy framework

2.4.6.2. Responsibility Accounting

Responsibilities accounting is a system of dividing an organization into smaller units which would to be assigned particular responsibilities. These units may be established

as division, segments, departments, branches, product lines or units etc. Each department comprises with individual staff members who are responsible for performing the particular tasks or managerial function. The Managers of the departments should ensure that the staff member working under his/her supervision whether they are performing task on satisfactory manner for achieving the mission, vision, goals and objectives of the organisation.

Responsibility accounting refers the performance of manpower and the departments in order to ensure the achievement of the goals set by the senior management.

Now a days the situation seems dynamic and complex, thus it is almost not possible for controlling the overall function centrally by the Chief Executive. Responsibility accounting is the process of decentralization under which the authority and the responsibility are delegated to the respective mid-level managers. It is the concept of scientific segregation of functions, tasks and processes of organization into small or medium units which would be accountable for the task assigned in accordance with professional divisions and competencies.

Responsibility accounting will collect and report the planned and actual information about the inputs and outputs of responsibility centers.

Process of Responsibility Accounting:

- i. Identifying the responsibility center
- iv. Delegation of authority and responsibility or decentralization
- v. Controlling the objects
- iv. Establishing the criteria for evaluation of performance

2.4.7. Standard Costing: Direct Material and Direct Labor Cost

A standard cost is predetermined cost, which is calculated from management's standards of efficient operation and the required expenditure. It may be used as a basis for fixing the price and controlling the cost through variable analysis. A standard cost is a measure of acceptable performance, established by management as a guide for making certain economic decisions. Standard cost the predetermined cost to complete the job as per specifications which need to be produced. Standard costing is a process

of cost accounting before initiating the production then it has to be compared with actual cost of production. The difference between predetermined or standard costs and the actual costs is called as “variance” in Management Accounting.

The process of Standard Costing

Standard costing is management control mechanism in the organisation. Controlling is the process of comparing actual results with the planned objectives and identifying the issues that required further improvement. The management control process encompasses the given steps.

1. Setting the standards
2. Measurement of actual performance
3. Variance analysis
4. Computing the variances for each process
5. Identify the reason of variances
6. Taking the corrective action

2.4.8. Flexible Budgeting and Overhead Cost Control

A flexible overhead budget is defined as a detailed plan for controlling the overhead costs that is valid in the firm’s relevant range of activity. (Hilton, 2010:526)

Since, cost elements remain constant in some cases while making production units and rests remain constant for certain period of time span. It could be prepared simply the cost statement by summarizing all the factory overhead costs in a general equation as below:

$$Y = FC + UVC \times LA$$

Where,

Y = Total factory overhead cost

FC = Fixed cost per period

UVC = Unit variable cost

LA = Level of activity

2.4.9. Decisions regarding alternatives in business operations

A common aim of human being is to make their life comfortable and happy. As a means of achieving the aim, the peoples are adopting different professions and lifestyles. A politician is motivated to work hard with the hope of getting more power and authority which makes his/her life exciting, challenging and pleasant. An investor lies up his/her cash as highly risk working capital or current assets with the hope of getting higher returns in future. The feeling of the investors (stakeholders) become more comfortable and encouraging in the case that financial position is stronger.

Decision-making is more of an art and less of science. This is not only a matter of instruction and dictatorship from Senior Management rather it could be considered as acceleration of business process in an efficient manner. Accounting information could improve, but may not be perfect, a management understanding of the consequences of decision for allocation of various resources. To the extent that accounting information could reduce the uncertainty in the business environment about the economic facts, outcomes, and the relationships involved in various courses of action, such information would be valuable for the purpose of decision making and necessary for healthy business environment. (Bajracharya, et.al 2009, 620)

2.4.9.1. Process of Decision Making

Decision making is the art of selecting the best alternative as available for solving the issues encountered by the entities. In the case of business, the best alternative would likely for providing highest level earnings and profits. They may involve a minimum cost without violating the social responsibilities. This process involves the following stages:

1. Define the problem
2. Identify the available alternatives
3. Collect the relevant information
4. Make differential revenues/cost analysis
5. Consider the opportunity costs
6. Quantitative factors
7. Management reports

2.4.9.2. Decision regarding the alternative choices

i. Drop or continue the product line

When a firm is divided into multiple sales outlets, product lines, divisions, or departments, it may need to evaluate their individual performances for deciding whether or not to continue the operations of segments or whether or not to continue operations of each of these segments or whether to add a new segment. The decision criterion would be the margin of segment. The margin of segment equals to the segment's contribution margin less fixed costs is directly traceable to that particular segment.

ii. Decision to accept a special order/offer

A special order is one that has been offered for a bulk volume at a reduced price. Opportunity to consider order for a quantity of its regular product at especial price, usually less than that charged to regular customers. Those situations may frequently arise for the Management in the event that idle capacity such an offer may be attractive. The basis of decision-making would be based on the overall profit of the entity. Essentially, if there is an idle capacity, the special order is advantageous. (Bajracharya, et.al: 2009, 633)

iii. Decision to Make or Buy

Buying or outsourcing is the process of obtaining goods or services from the suppliers instead of producing the same items or services within the organization. In this regards the decisions could be whether to produce components or provide the services within the organization or to acquire them from the suppliers. Many organizations used to buy the some of their activities such as purchase of special components. Outsourcing is considered only when it will give financial advantages or leverages in comparison to producing the items within the company with less or no inferior quality.

iv. Replacement of assets decision

One of the most important decisions relating to business is whether to replace the existing equipment by new and more sophisticated equipment.

Generally, the economic advantages offered by such an investment is the realization of operational cost savings, which are translated into increased profits. These cost saving would be beneficial for number of years in future, and this temporary dimension will add an additional completion to the capital expenditure decision.

A decision regarding the replacement of assets is considered as requirement of long-term capital investment that use of discounted cash flow techniques. This is a problem those of causes difficulty, but the correct approach is to apply relevant cost principles. As the principle of historic costs are irrelevant for the decision-making. The book value of outdated or absolute assets does not matter for making the decision for replacement of any equipment.

v. Decision on further process of joint products

A decision is to be made by the management whether to sell the joint output at the split off point or process them further. The decision criterion should be choosing the alternative among the best which will maximize total contribution of the joint products to the common processing costs. As the common processing cost before the split-off point are sunk costs that have already been incurred to create the joint products, they are irrelevant and will not be considered for the decision-making process. The only relevant cost is an additional charge incurred during the process of production. A related short-term decision involves selecting an alternative processing plan for joint products when the proposition of the output from the processing cost can be varied.

vi. Decision of leasing or buying

Leasing is a contract between an owner (Lessor) and a tenant (Lessee) for using the specific assets or properties on a certain condition with or without charges. In exchange of lease rentals, the lessee obtains possession and use of the assets while the lessor retains the legal ownership of the properties. The lessee has the right to exercise for using the properties over the period of the contract or legal document.

2.5 Review of the Previous Studies

Only few researches have been done in the area of application of management accounting or its practice or in similar topics in such context. However, many other

researchers have done the study on the topic of profit planning and control. As profit planning and control covers somehow similar aspects of management accounting/ Accordingly, some relevant researches, which have submitted on Management Accounting in the context of Nepal have been selected for the purpose of review. There are some similar kinds of researches that reviewed for finalisation of this research.

Mr. Sharma (2011) has conducted a research work on "Management Accounting Processes in listed companies of Nepal." He has focused his study to examine and study the practice of management accounting tools in the listed companies of Nepal. Mr. Sharma's research is based on primary data. Stratified random sampling with proportionate allocation of parentage was followed to draw the sample. In his study, he has pointed out various findings and recommendations, which are as follows:

- i. Different types of management accounting tools which were thought in the Universities were not applied by listed companies of Nepal.
- ii. Management accounting is for Manager's overall managerial activities by providing information and helping in planning, controlling and decision-making.
- iii. Nepalese listed companies are in infant stage in practicing of management accounting tools such as capital budgeting, annual budgeting, cashflow statement, ratio analysis, zero based budgeting; activity-based costing, target costing and value engineering.
- iv. As Nepal is proceeding towards globalization and has obtained the WTO membership, companies must be committed for applying the management accounting tools in order to be in compliances with global context.

Mr Karki (2012) has conducted the research entitled "Financial and practical accounting transactions in joint venture banks of Nepal". He has focused on examine and study the use of management accounting tools in joint venture banks of Nepal. Mr. Karki's research is based on the primary data and he has pointed various findings. He has made serval recommendations as well. Out of those some remarkable findings are as follows:

- i. Capital budgeting, cashflow statement, ratio analysis and annual budgets are widely practiced in Nepalese joint venture banks.
- ii. Profitability Index and Net Present Value are mostly practiced while making the procurement of fixed assets and taking the decision on long-term investment.
- iii. The main difficulties for not practicing Management Accounting sufficiently in Nepalese banks are lack of information, lack of cognizance about the tools and not having proper guidance from the Regulatory Authority.
- iv. To overcome those difficulties, he has recommended that, the Managers of banks and Professionally qualified Management Accountants (eg: CMA, CPA, CWA or CA) should jointly initiate the discussion and its implementation on a timely manner.

Mr. Acharya (2013) has conducted the research entitled "Management Accounting in Nepalese Public Enterprises". He has focused his study on examining the contemporary practices of management accounting in Nepalese Public Enterprises. Mr. Acharya's research is based on primary data collected on the basis of stratified sampling techniques. In his study thirty-eight Nepalese public enterprises, Industries, and financial institutions including RBB and NBL, are included.

Mr. Karki has cited the various findings and recommendations. Some remarkable findings are as follows:

- i. Traditional approaches of concerned authorities and regulator are becoming a main barrier for proper application of management accounting tools in Nepalese public enterprises.
- ii. Role of Government on pricing decision is significant.
- iii. Practicing Management Accounting tools in manufacturing and service enterprises seems a bit different and major decisions taken by the Senior Management are not depending in accordance with the tools and techniques applied.

Mr Baral (2014) has conducted the research entitled "Management Accounting Accountability in Nepalese Commercial Banks". He has focused to study and examine the contemporary practice of management accounting in Nepalese Commercial

Banks. Mr. Baral's research is based on primary data. He has identified various findings and the major recommendations are as follows:

- i. New management accounting techniques like Zero-based Budgeting and Activity Based Costing are recommended to use instead of traditional approaches.
- ii. It is recommended that banks should create an atmosphere of interaction between Professionals and the Banks. The Banks could be benefited from the wide range of Professionally qualified Accountants' knowledge about new tools and techniques of management accounting.
- iii. Management Accounting Information System (MAIS) need to be maintained properly for the better application of management accounting tools.

Mr. Gupta (2015) has submitted a thesis on the topic of "A Comparative Study on Profit Planning in manufacturing and non-manufacturing Public Enterprises of Nepal". He has focused to examine the practice of Management Accounting Tools in public enterprises in the context of manufacturing entities. He has identified some objectives and findings. Some remarkable objectives are listed below:

- i. To identify the base for making the decision on profit planning.
- ii. To evaluate the cash disbursement budget
- iii. To identify the participatory approach whether it is used for Profit Planning and Control.
- iv. To evaluate the major problems faced by the enterprises in developing and implementing the profit plans.

And the major findings are as follows:

- i. The Entities on the sample population were not able to take leverage of work efficiency. It seems that they are expecting political and administrative protections and the financial subsidies from the Government.
- ii. It seems that no adequate coordination among various units within the organizations.

- iii. Objectives of the firms seems controversial and paradoxical. Accordingly, it seems that the conflict with generating profit and obligation of corporate social responsibilities from the view point of stakeholders.

2.6 Research Gap

Most of the researches that were conducted in the past on accounting and profit planning and control covered only budgeting practices in different entities. Some of the previous researches by Mr. Sharma, Mr. Karki, Mr. Acharya, Mr. Gupta and Mr. Baral were related to Management Accounting tools and techniques. Out of them, Mr. Sharma's research is concerned with the practice of management accounting tools and techniques in listed companies only. Likewise, Mr. Acharya's research also deals with the practice of management accounting tools and techniques in Nepalese Public Enterprises. Here he has included two public commercial banks; Nepal Bank Limited and Rastriya Banijya Bank were included. Similarly, Mr. Baral's research dealt with the practice of management accounting tools and technique in Nepalese Commercial Banks.

Apart from this research, it is specifically related with the application of management accounting tools and techniques in Small and Medium Enterprises of Developing Countries. This is a bit identical in comparison to previous researches as this study further tries to explain, what is present context of management accounting in Small and Medium Enterprises (SMEs)? What is the effectiveness of management accounting in SMEs? Have they tried any further improvement in order to strengthen for the application of management accounting for SMEs? This is also based on the analysis of various types of management accounting variable from primary and secondary sources data. It is based on the appropriate analysis of management accounting and statistical tools as well as testing of hypothesis using “the Chi-Square test” of different management accounting variable for fulfillment of research objectives. It has also disclosed the reasons for not using management accounting tools and techniques by the some of the SMEs withing the sample population.

CHAPTER THREE

RESEARCH METHODOLOGY

Research methodology is a way to solve the problem systematically. In other words, research methodology refers the various sequential steps (along the rationale of each step) to be adopted by researcher in studying a problem with research projects are not meaningful, unless they are in sequential order, which will be determined by the particular problem in hand. This chapter deals with sampling techniques, data collection methods, data analysis tools, research instruments etc. The following methodologies have been used for achieving the objectives:

3.1 Research Design

A research design is specification of methods and procedures for acquiring the information required. It is overall operational pattern of framework for the project that stipulates the information are to be collected from the sources through the particular procedure. It ensures that information obtained is relevant to the research questions and that have been collected in accordance with the objectives and economically viable procedures. As per the nature of study, the survey of research design tasks have been followed with descriptive and analytical approach.

3.2 Source of data

Data were mainly collected from the primary sources. Primary data are collected through the questionnaire, interview, discussions, and formal and informal meetings on the spot with the concerned.

3.3 Population and Sampling

All the Small and Medium Enterprises (SMEs) of Nepal and Cambodia have been considered as the total population. Till this date there are more than 950,000 SMEs in Nepal and more than 600,000 SMEs in Cambodia are in existence. Such that it is

appeared as 63% in Nepal and 37% in Cambodia considering the registration records of the year 2021. To make the research more reliable, we have studied by taking the sample sizes of 200 SMEs in total of targeted population by using the ratio of 63% and 37% of SMEs for Nepal and Cambodia respectively. And out of that 10% (20 SMEs; 12 from Nepal and 8 from Cambodia) of sample size have been considered as selected sample population. They all are operating in a very healthy financial condition. The samples were selected on the basis of nature of their speciality, market coverage and product segmentation as well. They are Garment industries, Services provider, Restaurant and Food Services, Metal and Fabrication, Training Services, and others etc.

3.3.1 SMEs in Nepal and Cambodia on a sample:

200 SMEs (The detailed list attached as appendix – III) have been considered as sample population out of total population of SMEs in Nepal and Cambodia. However, the special consideration given to the 10% of total samples. And in accordance with ratio of SMEs of both Countries are 63% and 37% respectively. Hence, the 10% of total samples would be 20 SMEs. The 63% for Nepal would be 12.6 (rounded off as 12) SMEs and Cambodia would be 7.4 (rounded off as 8). Now the following are the list of 10% selected sample of SMEs of both Nepal and Cambodia.

Please turn next page for table of selected samples of SMEs.

S.No.	Name of SMEs	Address	Country	Business Type/Sector
1	Amatya Tar Jali Uddyog	Kathmandu	Nepal	Steel Fabrication
2	Chandra Metal Industries	Pokhara	Nepal	Steel Fabrication
3	Chitwan Marble Industries	Chitwan	Nepal	Marble Products
4	Jayan Technical Training Institute	Butwal	Nepal	Training/Services
5	Kathmandu Cleaning Services	Kathmandu	Nepal	Services
6	Kisan Machinery & Equipment Pvt. Ltd.	Bharatpur	Nepal	Agriculture - Tools
7	Machhapuchchhre Metal & Machinery Works	Pokhara	Nepal	Steel Fabrication
8	Panchakanya Training Institute	Pokhara	Nepal	Training/Services
9	Pokhara Noodles	Pokhara	Nepal	Foods
10	Ratna Furniture and Furnishing	Chitwan	Nepal	Furnishing
11	Thapa Engineering Industries	Butwal	Nepal	Micro Hydro/Fabrication
12	United Dental Clinic	Kathmandu	Nepal	Healthcare
13	ADM Animal Nutrition Ltd.	Phnom Penh	Cambodia	Agricultural
14	ASI Logistics Ltd.	Phnom Penh	Cambodia	Transport/Logistics
15	Dynamic Chemicals Co. Ltd.	Phnom Penh	Cambodia	Manufacturing
16	Flavour of India	Phnom Penh	Cambodia	Chain Restaurants
17	JT International Co. Ltd.	Phnom Penh	Cambodia	Consumer Goods
18	R&T Fashion House	Phnom Penh	Cambodia	Garments
19	Satguru Travel and Tours	Phnom Penh	Cambodia	Travel and Tours
20	Sher-E-Punjab	Phnom Penh	Cambodia	Chain Restaurants

Now a days; there are many SMEs have been established in Nepal and Cambodia. And some of them might have already closed their businesses. A brief summary of SMEs of those countries have been mentioned on the first chapter.

3.4 Data collection procedure

The study is mainly based on the primary sources of data, information collected by developing a structured questionnaire and distributed to the Managers and Finance Comptrollers/Chief Accountants of the SMEs. Altogether fifteen questions were included for study. Thirteen questions of them were “objective” whereas two were open-ended subjective questions. To get reliable information, discussions were also held with Managers and Finance Comptrollers/Chief Accountants.

3.5 Data processing procedure

The data have been collected from the questionnaires were in raw form. The data are tabulated into various tables according to the requirement of the study and research. In order to process the data that a simple arithmetic percentage tool used for analysis. Major findings are based on the analysis and the interpretation of data by the Research Team.

3.6 Data Analysis

Data analysis for studying the tabulated material in order to determine inherent facts of meaning. It involves breaking down the existing complex factor into simpler parts and putting them together in new arrangement for interpretation. Larger divisions of material should be broken down into smaller units and rearranged in new combinations for discovering the facts and relationship.

Data analyzing is to change it from an unprocessed form to an understandable presentation. Hence, the analysis of data consists of organizing, tabulating, performing the statistical analysis and drawing inferences. Hence data have been processed, organized, tabulated and presented in accordance with suitable form. Spread sheet application (MS-Excel) used for analyzing the raw data which was collected using questionnaires. Appropriate financial, accounting and statistical tools and techniques have been applied as required.

A percentage is the number of hundredth part of one number is against another. This is the simplest statistical tool used for the interpretation of context.

Arithmetic mean also called “the mean” or “average” or “arithmetic average” is the most popular and widely used tool for measurement of central tendency. Simple arithmetic mean is the ratio of the sum of all observations to the number of total observations.

Circle diagram is a diagram in the form of a circle whose area of 360° represents the total value of the sample population. The circle diagram dividing into different sectors by radial lines such that the area of each of the sector representing the component value of total value is considered as pie chart.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

The main objective of this study is to examine the applications of management accounting tools and techniques in “Small and Medium Enterprises (SMEs)” of Developing Countries including Nepal, Cambodia and other similar countries. The other objectives are to identify the future perspectives of management accounting tools application and to scrutinize the major difficulties in the application of management accounting tools in SMEs. To achieve the specific objective of the research study this chapter has been included for the presentation of data and its analysis.

4.2 Percentage Analysis of Management Accounting Tools

There are so many tools for making the analysis of management accounting tools. It shows that the percentage of management accounting tools practiced in SMEs.

4.2.1 Management Accounting tools used in SMEs

Researcher tried to analyze management accounting tools used by SMEs which are shown in the following table as below:

Table 4.1
Management Accounting tools used in SMEs

S.No.	Management Accounting Tools	No of Sample	No of practicing SMEs	Percentage (%)
1	CVP Analysis	20	5	25
2	Responsibility Accounting	20	6	30
3	Capital Budgeting	20	10	50
4	Ratio Analysis	20	15	75
5	Cash Flow Analysis	20	14	70
6	Standard Costing	20	1	5
7	Zero Base Budgeting	20	1	5
8	Flexible Budgeting	20	4	20

Figure 4.1
Management Accounting tools used in SMEs



The above Table 4.1 and figure 4.1 shows that management accounting tools used in Small and Medium Enterprises (SMEs) in Nepal, Cambodia, and the general trend in other developing countries as well. It is revealed that, 75% of SMEs are using ratio analysis for finding their financial status whether it is healthy. Cashflow analysis has been practiced by 70% of them and Capital Budgeting technique was practiced by 50%. Similarly; 30% of them used responsibility accounting and 25% used Cost-volume-profit (CVP) analysis. The SMEs are practicing flexible budgeting represented 20% and only 5% of them have used standard costing and zero-based budgeting.

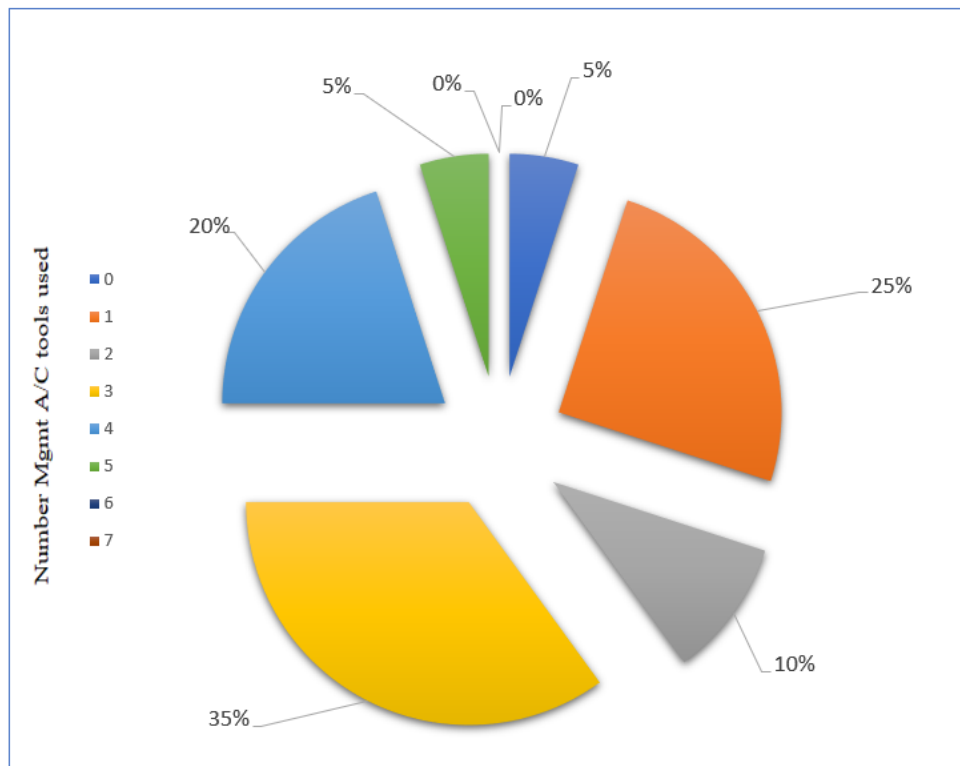
4.2.2 SMEs used One or more Management Accounting tools:

There are some SMEs practicing at least one or more of those management accounting tools. Their information is listed on the following table:

Table 4.2
SMEs using one or more Management Accounting tools

Number of Management Accounting Tools (x)	Practicing SMEs		fx
	Number (f)	%	
0	1	5%	0
1	5	25%	5
2	2	10%	4
3	7	35%	21
4	4	20%	16
5	1	5%	5
6	0	0	0
7	0	0	0
Total	n=20		$\sum fx=51$

Figure 4.2
Number of SMEs using Management Accounting tools



Therefore, the average number of Management Accounting tools used in the SMEs could be considered based on the following statistical presentation:

$$\bar{x} = \frac{\sum fx}{n}$$

Where:

\bar{x} = mean

f = frequency of number of SMEs

x = number tool(s) used by SMEs

n = total frequency

$\sum fx$ = sum of the product of values with their correspondence frequency

$$\bar{x} = \frac{51}{20} = 2.55 \text{ (Round off as 3)}$$

The above table 4.2 and figure 4.2 represent the number of SMEs practicing one or more management accounting tools. It revealed that an average of 2.55 (round off as 3) management accounting tools were used in a SME. It is also revealed that 40% of SMEs are using less than average number of management accounting tools. Altogether 3 tools were used by 35% SMEs and 25% used by the rest of SMEs on the sample for more than average number of management accounting tools. The main reason was given for not practicing these tools were that it contained, majority of respondents opinion was management accounting seems to be highly technical accounting tools which required highly skilled accounting professionals and it may be used by federation/association or larger entities rather than having professionally qualified accountant like CMA, CPA or CA by every SMEs. Some other respondents opinioned that these tools were not practiced in the SMEs due to lack of awareness and/or no information at all and lack of experienced human resources.

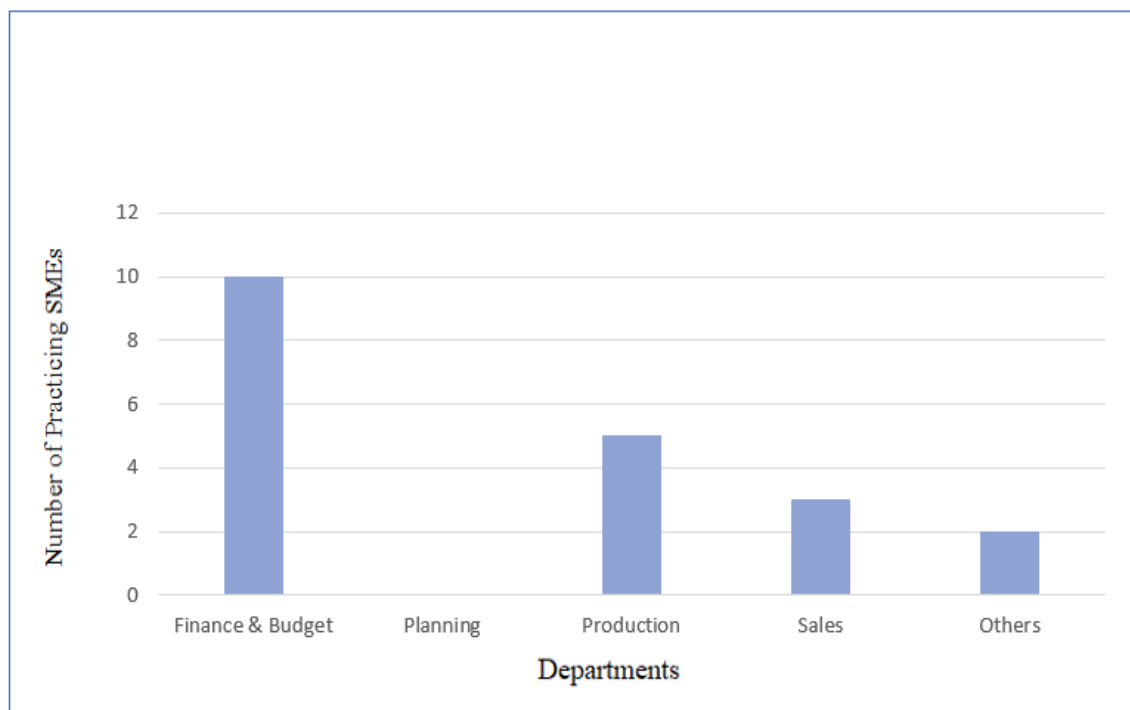
4.2.3 Departments for Budget preparation in SMEs:

SMEs are preparing their budget through process by involving their departments i.e., Finance, Planning, Budget, Production, Sales, Human Resources, General Administration, as well as outsourced consultants and other which are as follows:

Table 4.3
Departments for Budget preparation in SMEs

S.No.	Budget Preparing Department	No. of Sample	No. of practicing SMEs	Percentage (%)
1	Finance & Budget	20	10	50
2	Planning	20	-	-
3	Production	20	5	25
4	Sales	20	3	15
5	Others	20	2	10

Figure 4.3
Departments for Budget preparation in SMEs



The above table and figure shows the budget preparation practices in SMEs of developing countries specially focused in Nepal and Cambodia. It shows that 50% of SMEs are preparing their budget involving Finance and Budget Department, 25% preparing their budget by Production Department and 15% of SMEs are preparing their budget by Sales Department and only 10% of them are preparing

their budget jointly by Managing Director or General Manager in consultation with owner of the entity. It is also noticed in the table that none of the SMEs made the budget through their planning department however they are using outsourced consultants for preparing their budget.

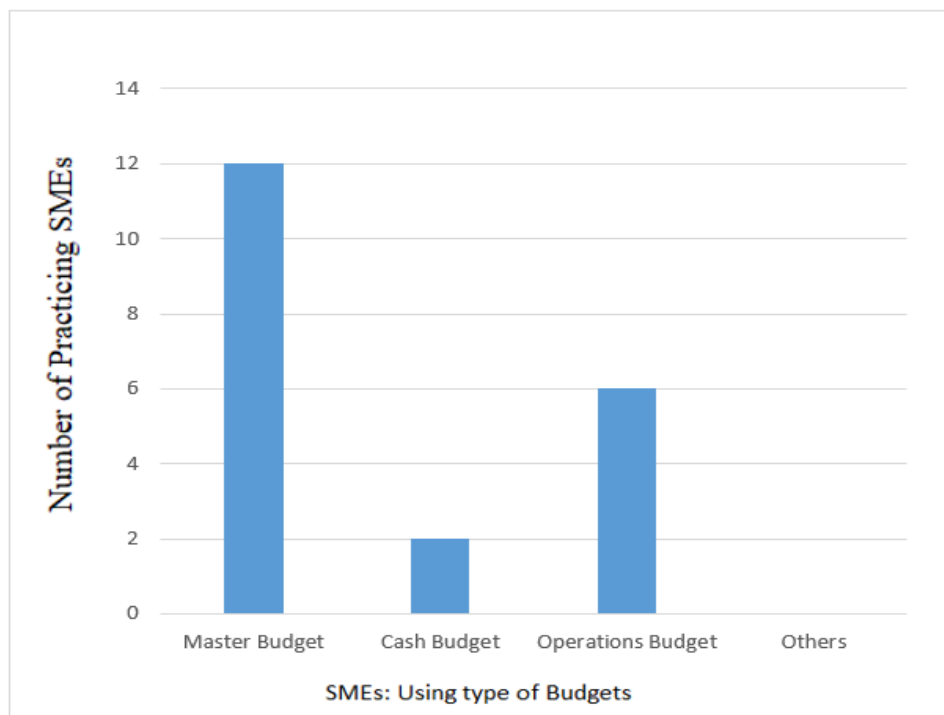
4.2.4 Type of Budgets practiced in SMEs:

In the context of Small and Medium Enterprises (SMEs) mainly they are practicing three types of budgets which are Master Budget, Cash Budget and Operational Budget. They are shown in the table as below:

Table 4.4
Type of Budgets practiced in SMEs

S. N.	Type of Budgets	No. of Sample	No of practicing SMEs	Percentage (%)
1	Master Budget	20	12	60
2	Cash Budget	20	2	10
3	Operational Budget	20	6	30
4	Others	20	0	0

Figure 4.4
Type of Budgets practiced in SMEs



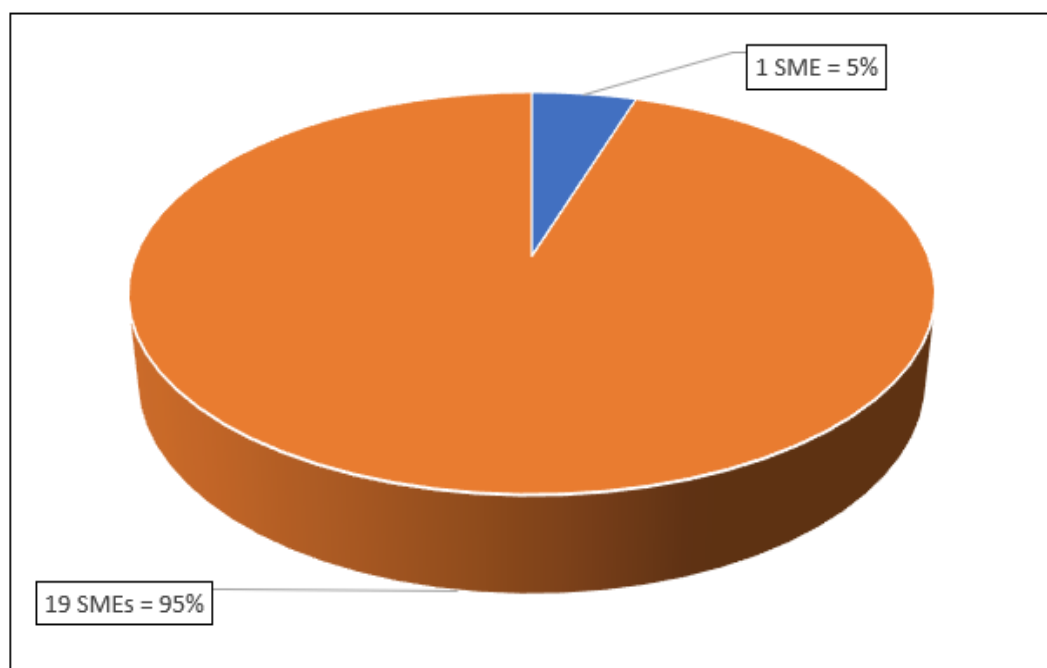
The above table shows the type of budgets practiced by the SMEs. It is observed that 60% of SMEs practiced Master Budgets, 30% of them practiced Operational Budget and only 10% of them practiced Cash Budget. Apart from that nothing observed for other model of budget exercises.

4.2.5 Number of SMEs prepared One or More type of Budgets

Table 4.5
Number of SMEs prepared One or More Type of Budgets

Number of Budget Prepared Method (x)	SMEs		fx
	Number (f)	%	
0	1	5	0
1	19	95	19
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
Total	n=20		$\sum fx=19$

Figure 4.5
Number of SMEs prepared One or More type of Budgets



Average number of budgets prepared by per SME:

$$\bar{x} = \frac{\sum fx}{n}$$

Where:

\bar{x} = mean/

f = frequency of number of SMEs

x = number tool(s) used by SMEs

n = total frequency

$\sum fx$ = sum of the product of values with their correspondence frequency

$$\bar{x} = \frac{19}{20} = 0.95 \text{ (Round off as 1)}$$

The table and pie chart shows that on an average at least 1 budget (the statistics shows the figure as 0.95 unit of budget per SME) has been prepared by 95% of SMEs whereas 5% of SMEs have not prepared or participated in the budget planning exercises.

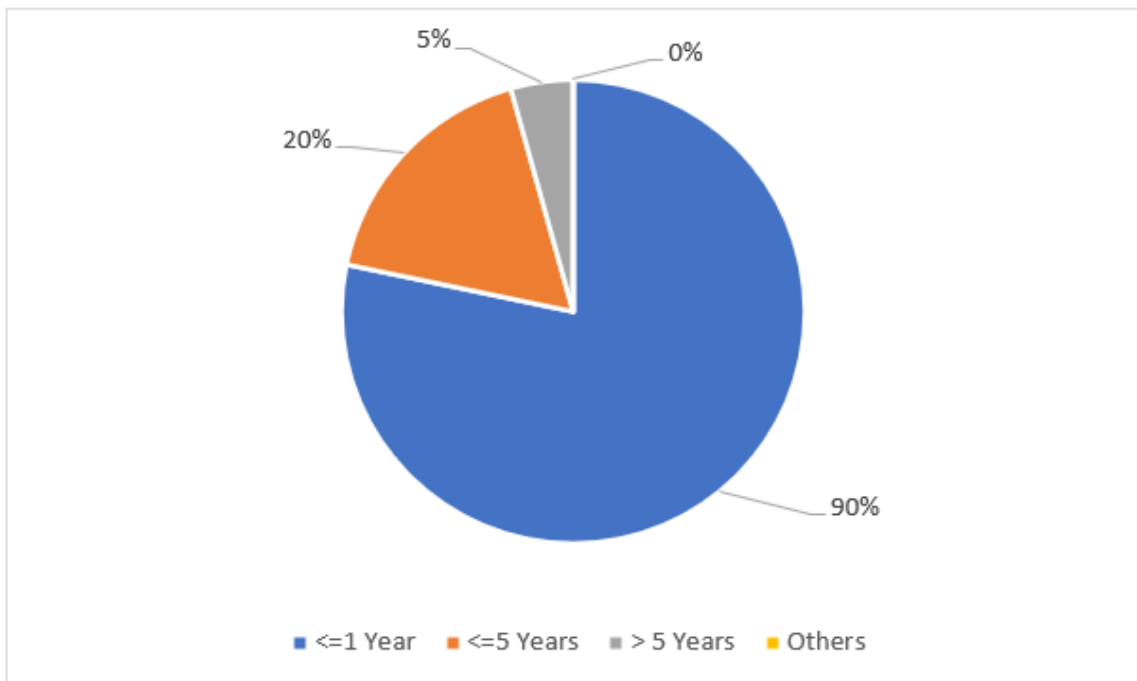
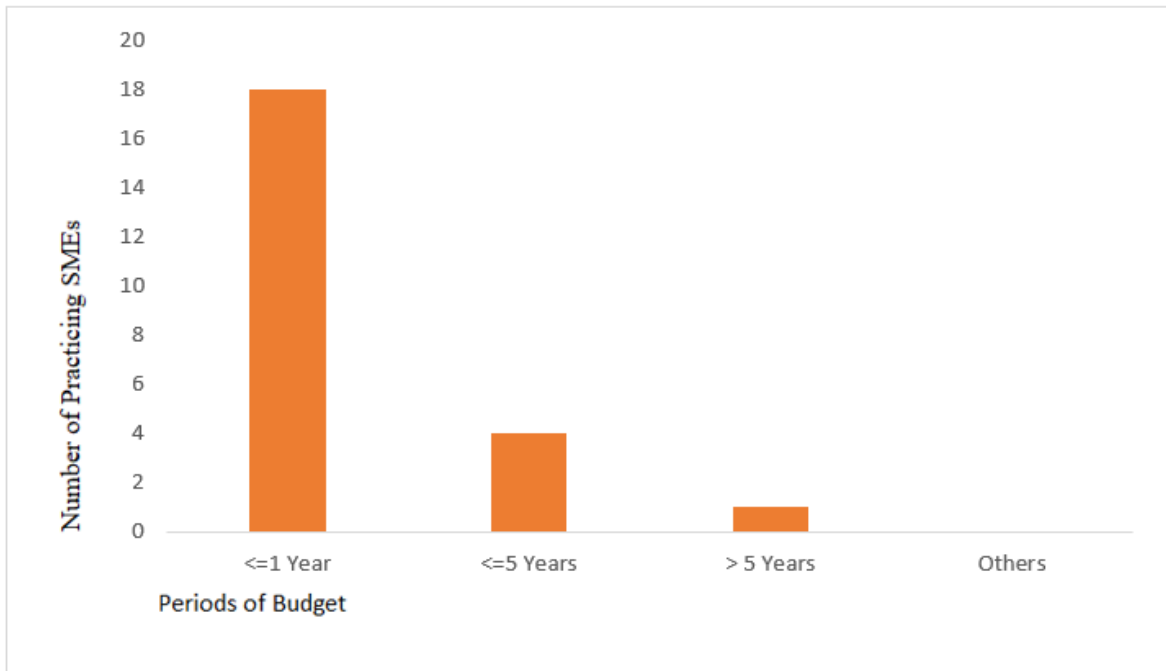
4.2.6 Time Period covered by Budget in SMEs

Table 4.6

Time Period covered by Budget in SMEs

S.No.	Period of Budget	No. of Sample	No. of practicing SMEs	Percentage (%)
1	One Year or Less	20	18	90
2	Less than 5 Years	20	4	20
3	More than 5 Years	20	1	5
4	Others	20	0	0

Figure 4.6
Time Period covered by Budget in SMEs



The above table and graphs shows that 90% of total SMEs prepared short period budget for covering period of one year or less whereas 20% of them prepared mid-term budget covering the period of less than five years. Accordingly, 5% percent of them prepared the long-term budget of more than five years period.

4.2.7 Bases taken by SMEs while preparing the Budget

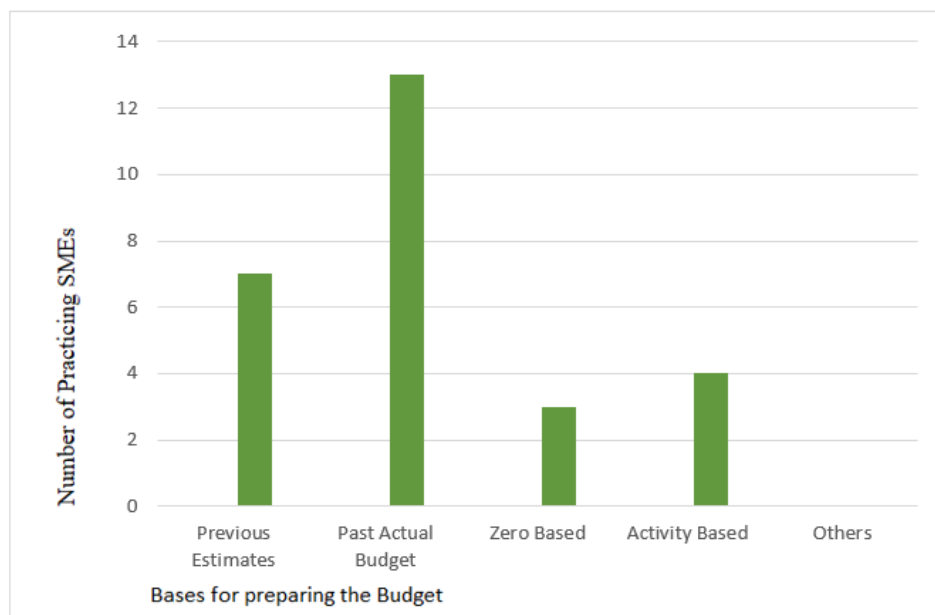
Table 4.7

Bases taken by SMEs while preparing the Budget

S.No.	Bases for preparing Budget	No. of Samples	No. of practicing SMEs	Percentage (%)
1	Based on Previous Budget Estimate	20	7	35
2	Based on the Past Actual Budget	20	13	65
3	Zero Based	20	3	15
4	Activity Based	20	4	20
5	Others	20	0	0

Figure 4.7

Bases taken by SMEs while preparing the Budget



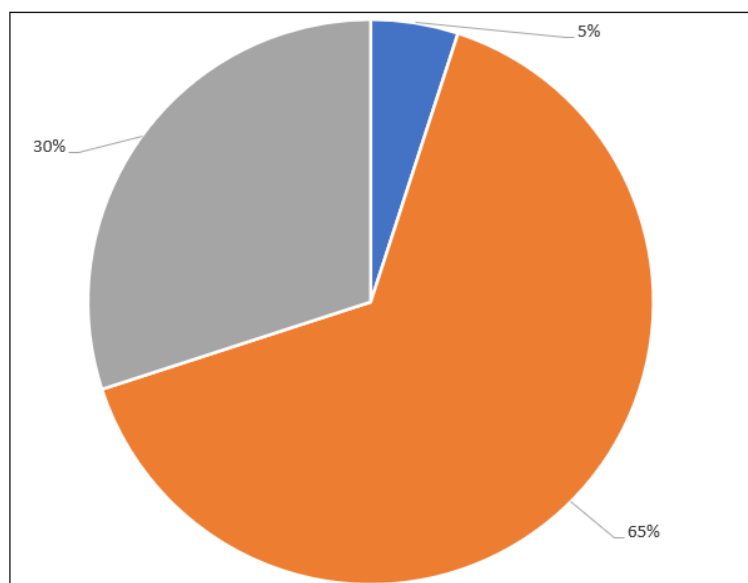
The above table and figure reflect that the budget estimation technique practiced by SMEs in the context of developing countries. It is seen in the table and the graph that nearly 65% of Small and Medium Enterprises (SMEs) prepared their budget on the basis of past Actual Budget (PAB) method which is also called historic cost method. Similarly; 35%, 20% and 15% of them prepared their budget on the basis of the Previous Budget Estimate (PBE), Activity Based and Zero-Based Budgeting techniques respectively.

4.2.8 Number of SMEs taking one or more bases while preparing the Budget
Table 4.8

No. of SMEs taking one or more bases while preparing the Budget

No. of bases used for Budget (x)	SMEs		fx
	Number (f)	%	
0	1	5	0
1	13	65	13
2	6	30	12
3	0	0	0
4	0	0	0
5	0	0	0
Total	n=20		$\sum fx=25$

Figure 4.8
Number of SMEs taking one or more bases while preparing the Budget



Therefore, average number of bases for budget preparation per SMEs would be as follows by using statistical formula of measurement of central tendency:

$$\bar{x} = \frac{\sum fx}{n}$$

Where:

\bar{x} = mean/

f = frequency of number of SMEs

x = number tool(s) used by SMEs

n = total frequency

$\sum fx$ = sum of the product of values with their correspondence frequency

$$\bar{x} = \frac{25}{20} = 1.25 \text{ (Round off as 1)}$$

The above table and figure show that normally SMEs used to take decision on the basis by using particularly one base for preparing their budget. Out of 20 selected samples of SMEs 13 representing 65% used one base for preparing their budget, 6 SMEs representing 30% used two bases while preparing their budgets and one SME representing 5% is preparing their budgets without taking references of any bases.

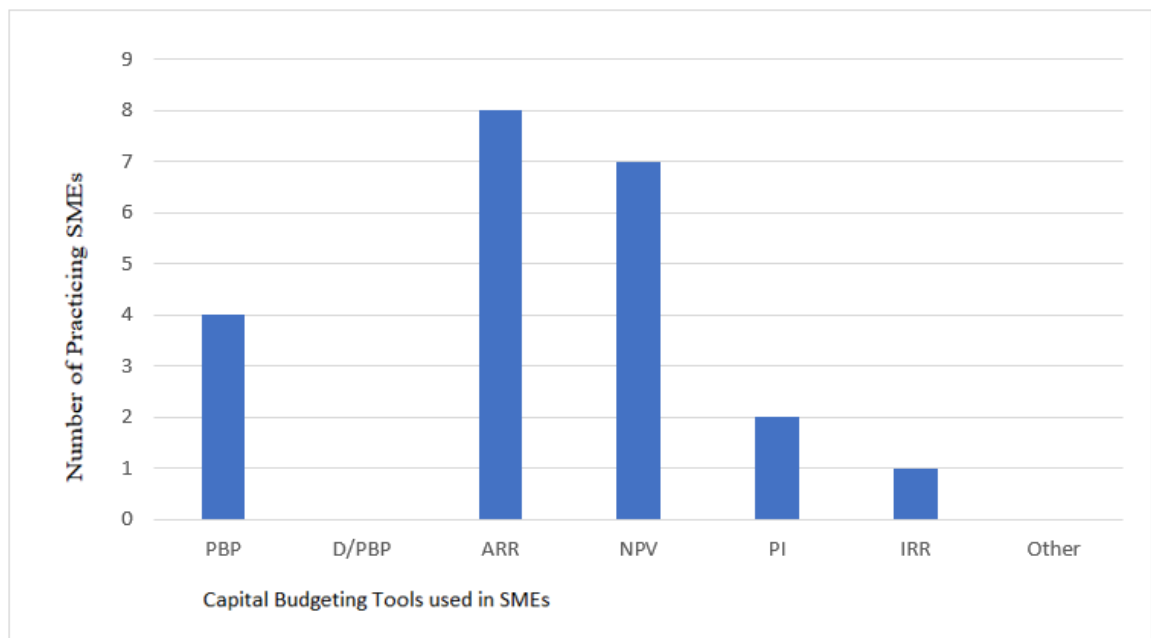
4.2.9 Capital Budgeting tools practiced in SMEs

Capital Budgeting generally refers for acquiring inputs for long run returns. These are different tools practiced in SMEs which shows entities' competencies for maximizing the long-term profitability.

Table 4.9
Capital Budgeting tools practiced in SMEs

S.No.	Capital Budgeting	No. of Sample	No of practicing SMEs	Percentage (%)
1	Payback Period (PBP)	20	4	20
2	Discounted Payback Period (DPB)	20	-	-
3	Average Rate of Return (ARR)	20	8	40
4	Net Present Value (NPV)	20	7	35
5	Profitability Index (PI)	20	2	10
6	Internal Rate of Return (IRR)	20	1	5
7	Others	20	-	-

Figure 4.9
Capital Budgeting tools practiced in SMEs



The above table represents the capital investment or budgeting techniques practiced by SMEs. It is revealed in the table and figures that nearly 40% of SMEs are practicing average rate of return (ARR) for the purpose of capital budgeting analysis, 35% of them practicing net present value (NPV) technique. Similarly; 20% and 10% of them practicing payback period (PBP) and profitability index (PI) techniques respectively. Accordingly, 5% of them practicing internal rate of return (IRR) for capital budgeting analysis.

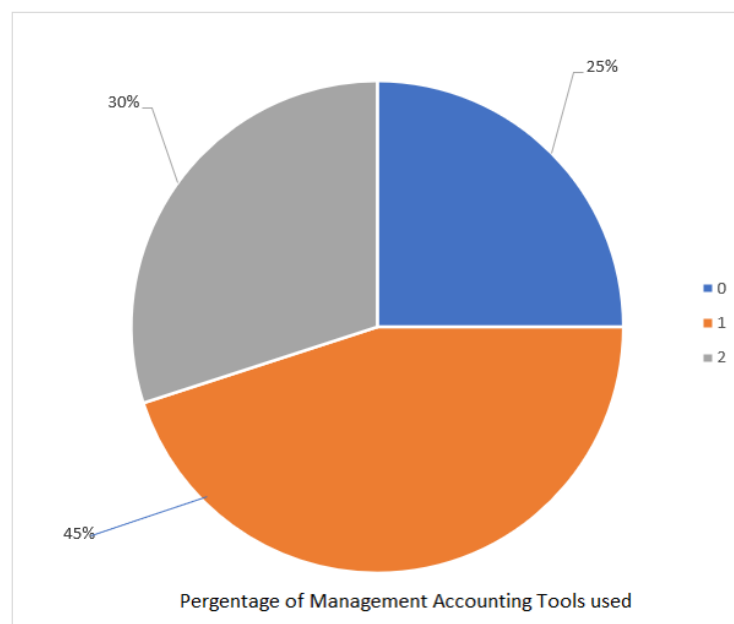
4.2.10 Number of Capital Budgeting techniques practiced by SMEs

Table 4.10
Number of Capital Budgeting techniques practiced by SMEs

Number of Capital Budgeting Technique (x)	SMEs		fx
	Number (f)	%	
0	5	25	0
1	9	45	9
2	6	30	12
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
Total	n=20		$\sum fx=21$

Figure 4.10

Number of Capital Budgeting techniques practiced in SMEs



Therefore, the average number of capital budgeting techniques practice by per SME could be considered as follows:

$$\bar{x} = \frac{\sum fx}{n}$$

Where:

\bar{x} = mean/

f = frequency of number of SMEs

x = number tool(s) used by SMEs

n = total frequency

$\sum fx$ = sum of the product of values with their correspondence frequency

$$\bar{x} = \frac{21}{20} = 1.05 \text{ (Round off as 1)}$$

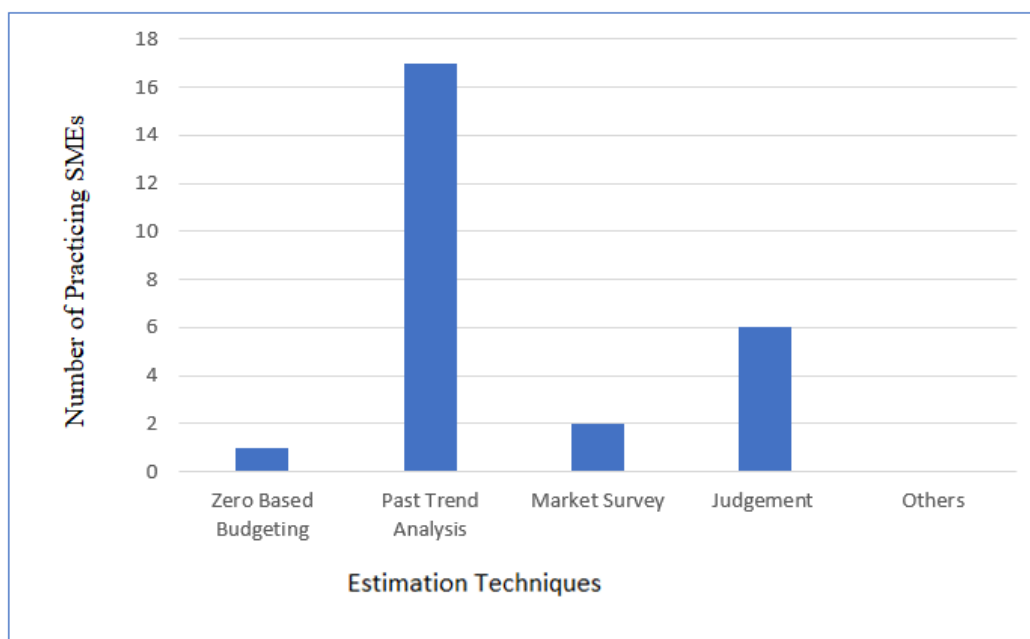
The table and figure shows that at least one capital budgeting technique is practiced by SME of developing countries. The percentages of SMEs not practicing the capital budgeting technique is 25% whereas 45% of SMEs used average number of capital budgeting techniques and 25% of them practiced more than average number of capital budgeting techniques.

4.2.11 Techniques adopted for Estimating Cost and Revenues by SMEs

Table 4.11
Techniques adopted for Estimating Cost and Revenues by SMEs

S. No.	Cost and Revenue Estimation Techniques	No. of Sample	No of Practicing SMEs	Percentage (%)
1	Zero Based Budgeting	20	1	5
2	Past Trend Analysis	20	17	85
3	Market Survey	20	2	10
4	Judgment	20	6	30
5	Others	20	-	-

Figure 4.11
Techniques adopted for Estimating Cost and Revenues by SMEs



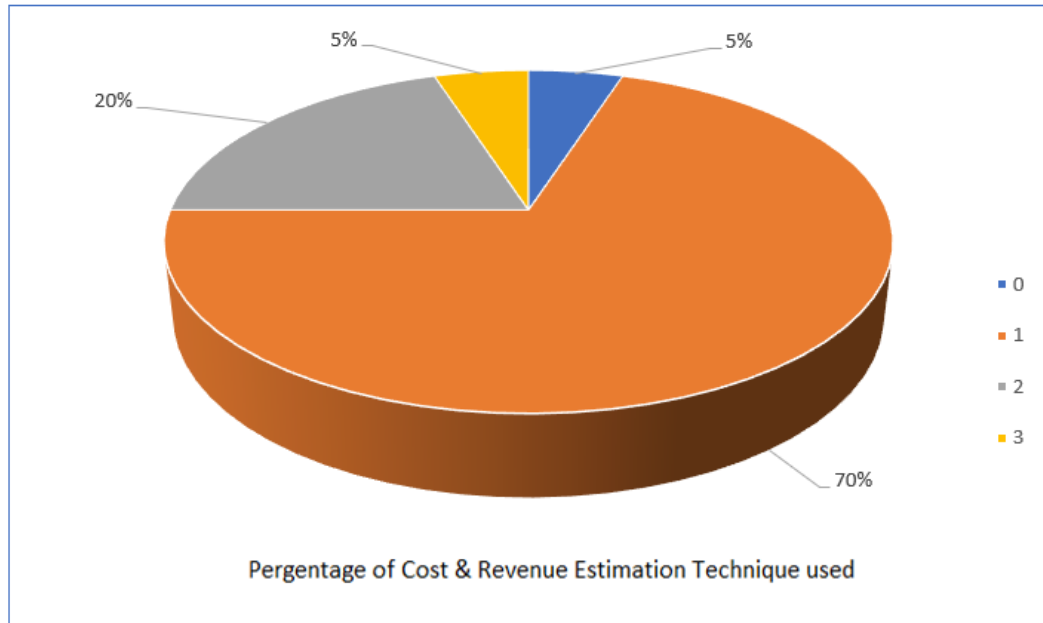
The above table and figure reflect the cost and revenue estimation technique practiced by SMEs. It is observed in the table that 85% of SMEs practiced past trend analysis for their cost and revenues estimation. Similarly, 30% and 10% of them practiced judgment technique and market survey technique respectively for estimating the cost and revenues of the entity. Only 5% of them practiced zero-based technique to estimate their cost and revenues

4.2.12 Number of Cost & Revenues Estimation techniques practiced in SMEs

Table 4.12
No. of Cost & Revenues Estimation techniques practiced in SMEs

Number of cost and Revenue Technique Tools (x)	SMEs		fx
	Number (f)	%	
0	1	5	0
1	14	70	14
2	4	20	8
3	1	5	3
4	0	0	0
5	0	0	0
Total	n=20		$\sum fx=25$

Figure 4.12
No. of Cost & Revenues Estimation techniques practiced in SMEs



Average number of cost and revenues technique used in each SME is as follows:

$$\bar{x} = \frac{\sum fx}{n}$$

Where:

\bar{x} = mean

f = frequency of number of SMEs

x = number tool(s) used by SMEs

n = total frequency

$\sum fx$ = sum of the product of values with their correspondence frequency

$$\bar{x} = \frac{25}{20} = 1.25 \text{ (Round off as 1)}$$

The above table and figure shows that on an average 1 technique of cost and revenues estimation were applied by the SMEs. Out of 20 SMEs, 70% SMEs practiced one technique of cost and revenues estimation whereas 20% of SMEs practiced more than the average number of techniques for estimating their cost and revenues and the rest 5% of them did not practice any type of cost and revenues estimation techniques.

4.2.13 Risk adjustment criteria adopted by SMEs while evaluating Capital Investment

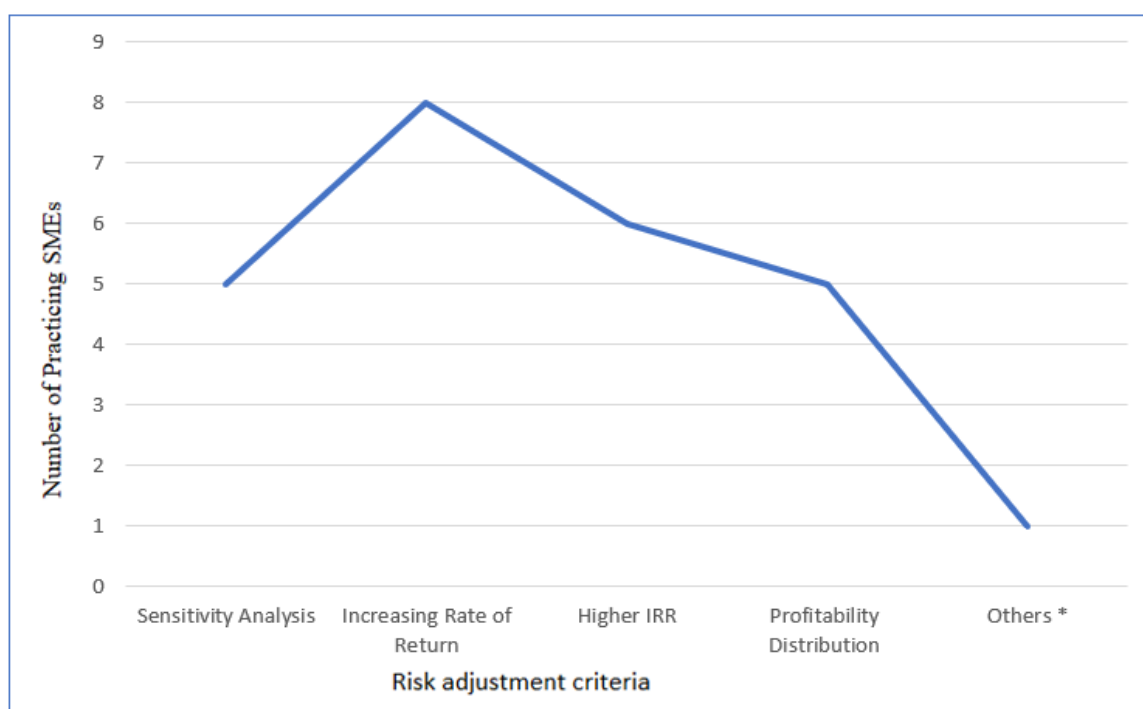
Table 4.13
Risk adjustment criteria adopted by SMEs while evaluating Capital Investment

S. No.	Risk Adjustment Criteria	No. of Sample	No. of Practicing SMEs	Percentage (%)
1	Sensitivity Analysis	20	5	25
2	Increasing Rate of Return	20	8	40
3	Higher IRR	20	6	30
4	Profitability Distribution for Future	20	5	25
5	Others *	20	1	5

* Others includes the Regulatory Authority of the Country

Figure 4.13

Risk adjustment criteria adopted by SMEs while Evaluating Capital Investment



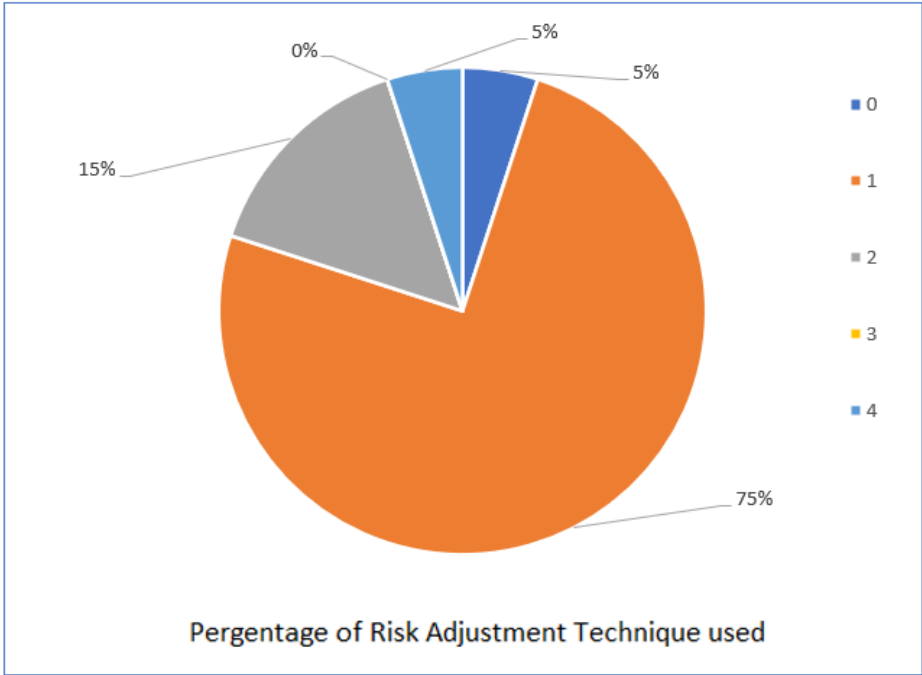
Above table and figure represent the risk adjustment techniques practiced by SMEs. While evaluating capital investment, it is revealed by the table and figure that 40% used increasing rate of return technique and 30% of them used higher IRR technique. Similarly, 25% of them used the profitability distribution for future cash flow technique and sensitivity analysis technique respectively. While the rest 5% of them are adjusting the risk on the basis of guideline provided by the Regulatory Authority

4.2.14 Number of risk adjustment techniques practiced by SMEs

Table 4.14
Number of risk adjustment techniques practiced by SMEs

Number of Risk Adjustment Criteria (x)	SMEs		fx
	Number (f)	%	
0	1	5	0
1	15	75	15
2	3	15	6
3	0	0	0
4	1	5	4
5	0	0	0
Total	n=20		∑fx=25

Figure 4.14
Number of risk adjustment techniques practiced by SMEs



The average number of risk adjustment technique practiced by each SME:

$$\bar{x} = \frac{\sum fx}{n}$$

Where:

\bar{x} = mean/

f = frequency of number of SMEs

x = number tool(s) used by SMEs

n = total frequency

$\sum fx$ = sum of the product of values with their correspondence frequency

$$\bar{x} = \frac{25}{20} = 1.25 \text{ (Round off as 1)}$$

The table and figure shows that SMEs practiced one risk adjustment technique on an average. SMEs using average number (1.25 SMEs) of risk adjustment technique is 75% and 2 risk adjustment techniques used 15%. Similarly; 5% of them used 4 techniques for evaluating their capital investment alternatives whereas 5% them used none of the risk adjustment technique while evaluating capital investment.

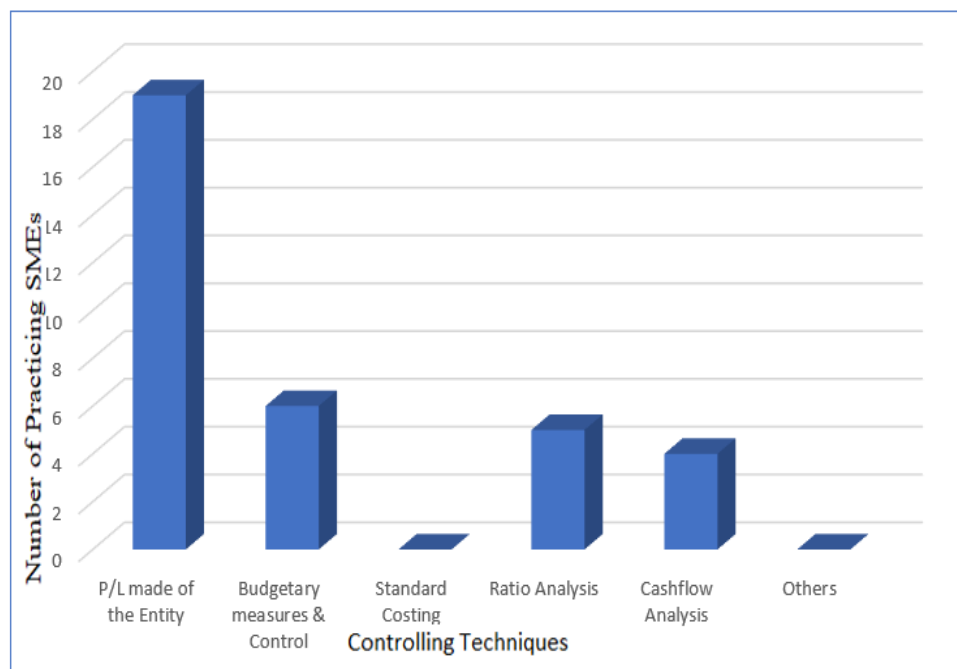
4.2.15 Techniques of measuring and controlling overall performance of the Entities at the end of the accounting period in SMEs

Researcher tried to analyze that SMEs of developing countries used for measuring and controlling techniques for overall performance of the companies at the end of the accounting period which is shown as below in the table:

Table 4.15
Techniques of measuring and controlling overall performance of the
Entities at the end of the accounting period in SMEs

S. No.	Controlling Technique	No. of Sample	No of practicing SMEs	Percentage (%)
1	Profit and Loss made of the Entity	20	19	95
2	Budgetary measures and control	20	6	30
3	Standard Costing	20	-	-
4	Ratio Analysis	20	5	25
5	Cashflow Analysis	20	4	20
6	Others	20	-	-

Figure 4.15
Techniques of measuring and controlling overall performance of the
Entities at the end of the accounting period in SMEs



The above table and figure show that measuring and controlling techniques practiced by SMEs. It is observed that 95% SMEs used to adopt to measure and control overall performance of their Entity at the end of the fiscal year on the basis of profit and loss made by the Entity. Similarly, 30%, 25% and 20% of them

practiced budgetary measures and control, Ratio analysis, and Cashflow analysis techniques respectively for measuring and controlling the overall performance of their company at the end of the year. It is also seen in the table that none of the SMEs are using standard costing to measure and control the overall performance of the Entity.

4.2.16 Number of techniques for measuring and controlling overall performance of the Entity at the end of fiscal year adopted by SMEs

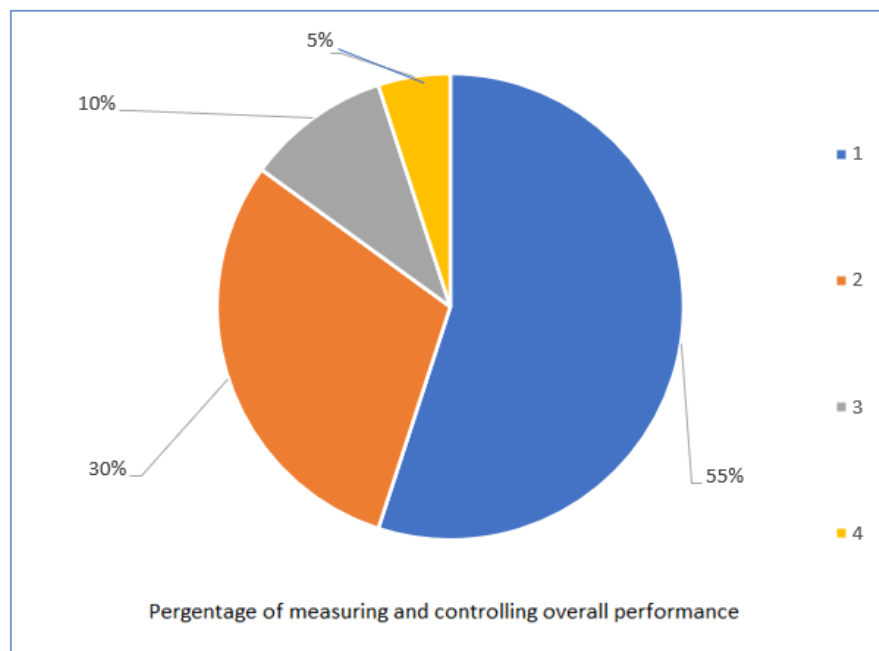
Table 4.16

Number of techniques for measuring and controlling overall performance of Entity at the end of fiscal year adopted by SMEs

Number of measuring & controlling overall performance(x)	SMEs		fx
	Number (f)	%	
1	11	55	11
2	6	30	12
3	2	10	6
4	1	5	4
5	0	0	0
6	0	0	0
Total	n=20		$\sum fx=33$

Figure 4.16

Number of techniques for measuring and controlling overall performance of Entity at the end of fiscal year adopted by SMEs



Therefore, the average number of year ending overall performance measuring and controlling technique practiced by each SME:

$$\bar{x} = \frac{\sum fx}{n}$$

Where:

\bar{x} = mean/

f = frequency of number of SMEs

x = number tool(s) used by SMEs

n = total frequency

$\sum fx$ = sum of the product of values with their correspondence frequency

$$\bar{x} = \frac{33}{20} = 1.65 \text{ (Round off as 2)}$$

It is found that on an average of 2 techniques were practiced for measuring and controlling overall performance of SMEs at the end of fiscal year. The table revealed that 55% SMEs used below the average fiscal year ending overall performance measuring and controlling technique. While 30% of them uses exactly average number of year ending overall performance measuring and controlling technique. And the 10% and 5% of them used more than average number of overall performance and controlling techniques.

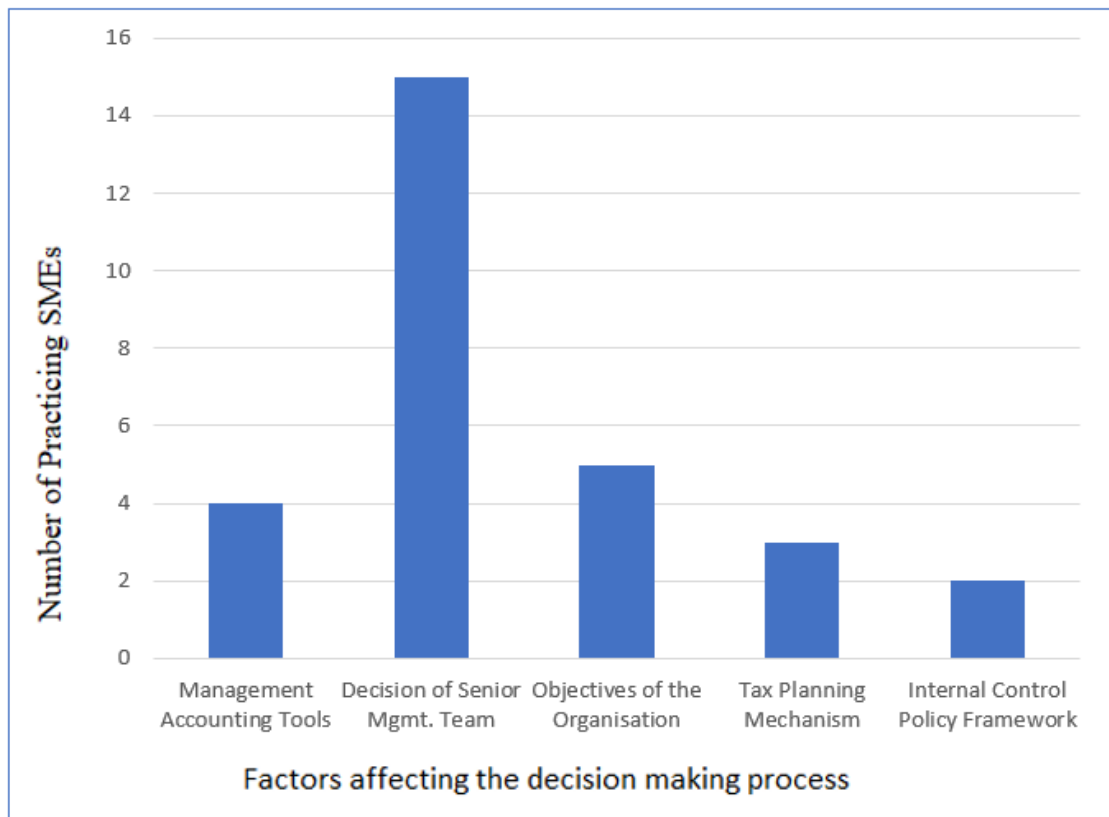
4.2.17 Factors affecting decision making process in SMEs

The decision making is very important for the Entity in order to position the goals and achieve the targets. Now a days; because of several internal and external factors; the Entities have to face a lot of difficulties which will affect the decision-making processes which may lead toward the deficit trend for the organisation. In the context of SMEs, there are some factors which affect their decision-making processes, and they are as follows:

Table 4.17
Factors affecting decision making process in SMEs

S. No.	Affecting Factor	No. of Sample	No of Practicing SMEs	Percentage (%)
1	Management Accounting Tools	20	4	20
2	Decision of Top Level Management	20	15	75
3	Objectives of the Organization	20	5	25
4	Tax Planning	20	3	15
5	Internal Control Policy framework	20	2	10

Figure 4.17
Factors affecting decision making process in SMEs



The above table and figure shows that factors affecting the decision-making process in SMEs of developing countries, but it is observed globally. It is revealed that about 20% of SMEs are taking their decision on the basis of information generated by management accounting tools. Likewise, 75% of the Entities are taking their decision on the basis of guidance and instructions given by their Senior Management Team, this is also commonly known as traditional process of management decisions. And the rest 25%, 15% and 10% of SMEs were affected their decisions by other factors like objective of the organization, Government Tax, Tax Planning policy and Internal Control Policy Framework respectively.

4.2.18 Mixed Cost segregation techniques practiced by SMEs

Table 4.18

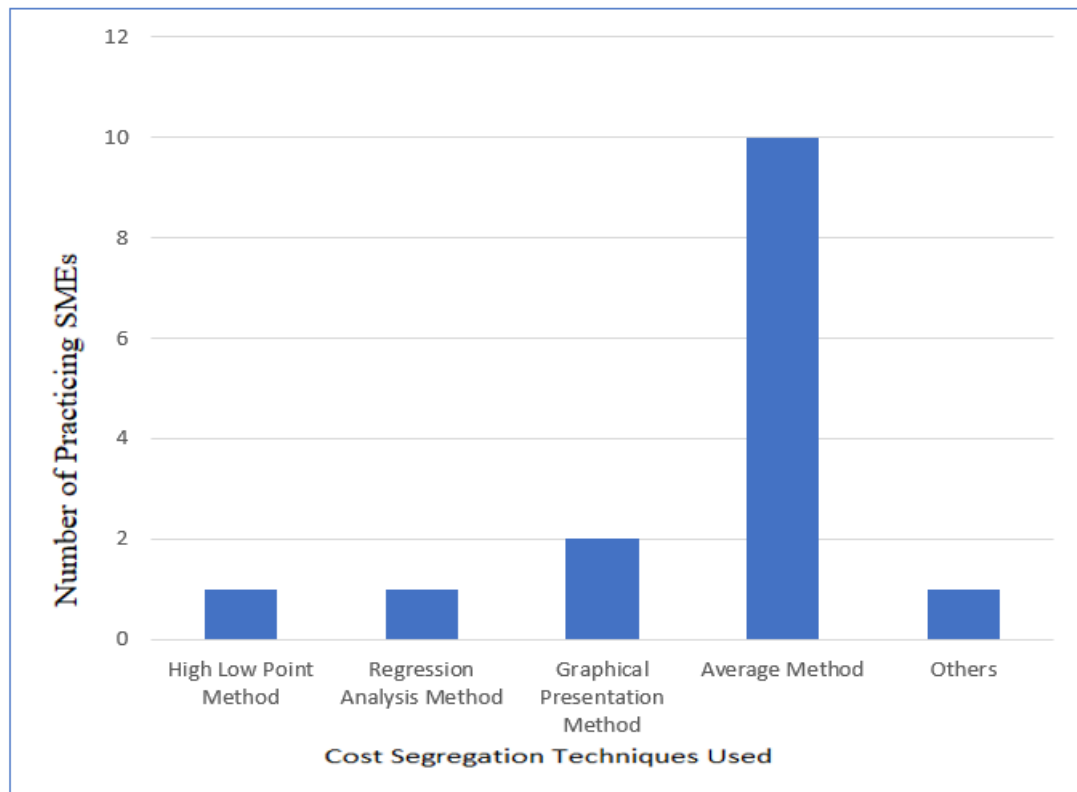
Mixed Cost segregation techniques practiced by SMEs

S. N.	Cost Segregation Techniques	No. of Sample	No of Practicing SMEs	Percentage (%)
1	High Low Point Method	20	1	5
2	Regression Analysis Method	20	1	5
3	Graphical Presentation Method	20	1	5
4	Average Method	20	10	50
5	Others *	20	1	5

*Guidelines issued by Regulatory Authority

Figure 4.18

Mixed Cost segregation techniques practiced by SMEs



The above table and figure shows that methods practiced for segregating mixed cost into fixed and variable cost by SMEs. It is seen in the table and figure that 50% of SMEs used average method for segregating the mixed cost into fixed and variable whereas 5% of them used High-Low point method, regression analysis method and graphical presentation methods. And accordingly, 5% of them followed the mixed cost segregation guideline provided by the Regulatory Authority on a periodic basis.

4.3 Analysis of Hypothesis Test

In order to confirm the result of hypothesis, we need to test them using “the Chi square test” method. Generally, the Chi square test to be processed using the following method:

- Compare the observed results with expected results
- Examine the difference between categorical variables from a random sample
- Estimate how closely observed distribution matches and expected distribution
- Estimate whether two random variables are an independent

Hypothesis 1:

Null hypothesis (H₀): There is no significant relationship between the use of Net Present Value (NPV) and Internal Rate of Return (IRR) techniques as Management Accounting tools. (i.e. practicing of Net Present Value technique and Internal Rate of Return techniques are an independent).

Alternative hypothesis (H₁): There is significant relationship between the use of Net Present Value (NPV) and Internal Rate of Return (IRR) techniques as Management Accounting tools. (i.e., practicing of Net present value technique and Internal Rate of Return techniques are dependent to each other).

Test statistics: Under Null Hypothesis (H₀)

For 2×2 contingency table,
$$\chi^2 = \frac{N(ad - bc)^2}{(a + b)(c + d)(a + c)(b + d)}$$

Where, N = Total number of observations

2×2 Contingency table of Practitioner SMEs & Management Accounting Tools

Management Accounting Tools	Practitioner SMEs		Row Total
	Yes	No	
NPV	a = 7	c = 13	20
IRR	b = 1	d = 19	20
Column Total	8	32	40

Since frequencies of cell “b” is less than 5, hence; correction of formula for calculating χ^2 should be applied. For this purpose, 0.5 must be added to the cell frequency b (i.e., 1) and accordingly remaining frequencies should be adjusted by fixing row total and column total. Thus, the adjusted 2 × 2 contingency table will be as follows:

2×2 Contingency table of practitioner SMEs & Management Accounting Tools

Management Accounting Tools	Practitioner SMEs		Row Total
	Yes	No	
NPV	$a = 7 - 0.5 = 6.5$	$c = 13 + 0.5 = 13.5$	20
IRR	$b = 1 + 0.5 = 1.5$	$d = 19 - 0.5 = 18.5$	20
Column Total	8	32	40

By applying the formula in order to confirm the null hypothesis on the first test:

$$\chi^2 = \frac{N(ad - bc)^2}{(a + b)(c + d)(a + c)(b + d)}$$

$$\begin{aligned} \chi^2 &= \frac{40(6.5 \times 18.5 - 1.5 \times 13.5)^2}{(6.5 + 1.5)(13.5 + 18.5)(6.5 + 13.5)(1.5 + 18.5)} \\ &= \frac{4(120.25 - 20.25)^2}{8 \times 32 \times 20 \times 20} \\ &= 3.9063 \end{aligned}$$

Degree of Freedom (df) = (r-1) (c-1) = (2 - 1) (2 - 1) = 1
Where r = row and c = column

Tabulated Value χ^2 at 5% level of significance for 1 df is 3.8868

Decision: Since the calculated value of χ^2 is 3.9063 is greater than that of tabulated calculation (3.8868). Hence, the null hypothesis (H_0) is rejected. This concludes that practicing of Net present value (NPV) technique and Internal Rate of Return (IRR) techniques are dependent to each other.

Hypothesis 2:

Null hypothesis (H₀): There is no significant relationship between the use of Cost-volume profit (CVP) analysis and Flexible Budgeting technique as Management Accounting tools. (i.e. practicing of CVP analysis technique and Flexible Budgeting technique are independent).

Alternative hypothesis (H₁): There is significant relationship between the use of Cost-volume profit (CVP) analysis and Flexible Budgeting techniques as Management Accounting tools. (i.e. practicing of CVP analysis technique and Flexible Budgeting technique are dependent).

Test statistics: Under Null Hypothesis (H₀)

For 2×2 contingency table,

Where, N = Total number of observations

2×2 Contingency Table of practitioner SMEs & Management Accounting tools

Management Accounting Tools	Practitioner SMEs		Row Total
	Yes	No	
CVPA	a = 5	c = 15	20
Flexible Budgeting	b = 4	d = 16	20
Column Total	9	31	40

Since frequencies of cell “b” is less than 5, hence, correction formulae for calculating χ^2 should be applied. For this purpose, 0.5 must be added to the cell frequency b (i.e. 4) and remaining frequencies should be adjusted accordingly for fixing the summation of row and summation of column. Thus, the adjusted 2 x 2 contingencies table would be as follows:

2×2 Contingency Table of practitioner SMEs & Management Accounting tools

Management Accounting Tools	Practitioner SMEs		Row Total
	Yes	No	
CVPA	$a = 5 - 0.5 = 4.5$	$c = 15 + 0.5 = 15.5$	20
Flexible Budgeting	$b = 4 + 0.5 = 4.5$	$d = 16 - 0.5 = 15.5$	20
Column Total	9	31	40

By applying the formula in order to confirm the null hypothesis on the second test:

$$\chi^2 = \frac{N(ad - bc)^2}{(a + b)(c + d)(a + c)(b + d)}$$

$$\chi^2 = \frac{40(4.5 \times 15.5 - 4.5 \times 15.5)^2}{(4.5 + 4.5)(15.5 + 15.5)(4.5 + 15.5)(4.5 + 15.5)}$$

$$= \frac{40(69.75 - 69.75)^2}{9 \times 31 \times 20 \times 20} = 0$$

$$\text{Degree of freedom (df)} = (r - 1)(c - 1) = (2 - 1)(2 - 1) = 1$$

Where r = rows and c = columns

Tabulated Value of χ^2 at 5% level of significance for 1 df is 3.8868

Decision: Since the value of χ^2 is less than that of tabulated calculation is (0), hence, the null hypothesis (H_0) is accepted. This concludes that practicing of CVPA analysis technique and Flexible Budgeting technique are independent as management accounting tools.

4.4 Major Findings

Based on above comprehensive analysis of data and information, the following findings have been identified:

- i. While analyzing the application of management accounting tools practiced by the Small and Medium Enterprises (SMEs) of Developing Countries for planning, controlling and decision making was found that Ratio Analysis, Cashflow statement and Capital Budgeting are widely practiced representing 75%, 70% and 50% respectively out of total 20 SMEs of selected sample population. Similarly, Responsibility Accounting, Cost-volume Profit Analysis and Flexible budgeting tools were also practiced representing 30%, 25%, and 20%, respectively. But other management accounting tools including standard costing and Zero-Based budgeting were least in practice, representing only 5% each. (*Reference: Table 4.1*)
- ii. On an average, four management accounting tools were practiced in SMEs. Out of total sample number of SMEs 40% did not meet the average number of tools used, while 35% met exactly the average number of management accounting tools and remaining 25% companies were practiced more than average number of management accounting tools. (*Reference: Table 4.2*)
- iii. While analyzing the budget preparing system of SMEs, it was found that Finance and Budget Department prepared the budget in 50% of the SMEs. Accordingly, 25% by Production Department, 15% by Sales Department and 10% by others which includes the Senior Management Team. (*Reference: Table 4.3*)
- iv. On an average, at least one system have bene applied to prepare the budget in each SME out of total SMEs. 95% used one system for the preparation of budget. And 5% of SMEs have not applied any system for preparing its budget. (*Reference: Table 4.5*)

- v. With regard to the functional budget, 60% SMEs prepared overall Master Budget, 30% SMEs prepared operational budget. And only 10% of them prepared the cash budget. Hence, it is observed that majority of the SMEs practicing the overall master budget. (*Reference: Table 4.4*)
- vi. With regard period of budget, 90% of total SMEs prepared short term budget covering time period of one year or less, 20% of them prepared midterm budget covering the time period of less than five years and the only 5% of them prepared the long-term budget of more than five years period. (*Reference: Table 4.6*)
- vii. Actual expenses of the previous year and past budget were widely taken as basis in the SMEs to prepare the budget, representing 65%. The previous budget estimate, Activity Based Budgeting and zero-based budgeting were also taken as a basis for preparing budget representing 35%, 20% and 15% respectively. (*Reference: Table 4.7*)
- viii. On an average normally, a SME used only one bases for preparing its budget. Out of selected sample population 20 SMEs 13 (i.e. 65%) considered exactly equal to the average number of bases for preparing their budget whereas 6 (i.e.30%) considered two bases while preparing their budget and reaming 1 (5%) of SMEs have not used any bases while preparing their budget. (*Reference: Table 4.8*)
- ix. With regards to Capital Budgeting techniques practiced by SMEs, it is observed that nearly 40% percent of them used average rate of return (ARR) method for the purpose of capital budgeting analysis, 35% of them practiced net present value (NPV) technique. Similarly, 20% and 10% of them practiced payback period (PBP) and profitability index (PI) techniques respectively for analyzing capital budget. Only 5% of

the SMEs practiced internal rate of returns (IRR) as capital budgeting analysis technique. It shows that the capital budgeting techniques were not widely practiced in SMEs of developing countries. (*Reference: Table 4.9*)

- x. On an average only one technique was practiced in SMEs of developing countries for making capital budgeting decision. Out of total sample number of SMEs, 25% Entity did not apply capital budgeting techniques. Whereas 45% of Entity applied exactly the average number of capital budgeting techniques, and 30% of them applied more than average number of capital budgeting techniques while purchasing fixed assets or making long- term investment decision. (*Reference: Table 4.10*)

- xi. While analyzing cost and revenue estimation techniques practiced by SMEs, it was found that past trend analysis techniques was widely practiced representing 85% of SMEs for estimating cost and revenues. Similarly, 30% and 10% of them practiced judgment analysis and market survey techniques respectively to estimate the cost and revenues. Only 5% of them practiced zero-based based budgeting to estimate their cost and the cost of the company. (*Reference: Table 4.11*)

- xii. On an average, one technique was practiced for cost and revenue estimation in SMEs of Developing Countries. Out of 20 sample sizes of SMEs, 70% of them exactly adopted the average number of tools, 5% of them did not practice any type of cost and revenue techniques and 20% Entities practiced more than average number of cost and revenue estimation techniques. (*Reference: Table 4.12*)

- xiii. To adjust the risk while evaluating capital investment 40% of SMEs used for increasing the rate of return technique and 30% of them used higher IRR technique. Similarly, 25% of each of them used Estimation of profitability distribution of future cashflow and sensitivity analysis techniques respectively. While rest 5% of them adjusted the risk for capital investment on the basis of guideline provided by the Regulatory Authority. (*Reference: Table 4.13*)
- xiv. On an average, at least one risk adjustment technique was practiced by SMEs. 75% of them are using average number of risk adjustment technique. Similarly, 15% and 5% of them used two and four techniques to evaluate capital investment alternative respectively. Whereas 5% them did not use risk adjustment technique while evaluating capital investment. (*Reference: Table 4.14*)
- xv. For measuring and controlling the overall performance of the Entity at the end of the fiscal year, 95% of them used profit or loss made by the Entities. Similarly, 30%, 25% and 20% of them practiced budgetary measures and control, Ratio analysis and cashflow analysis technique respectively to measure and control the overall performance of their Entity at the end of the fiscal year. It is also observed in the table that no SMEs used standard costing to measure and control the overall performance of the Entity. (*Reference: Table 4.15*)
- xvi. In general, two techniques were practiced by SMEs for measuring and controlling overall performance of SMEs at the end of the fiscal year. It seems that 55% SMEs used below the average number of year ending overall performance measuring and controlling techniques. While 30% of them used exactly the average number of year ending overall performance measuring and controlling techniques. And rests 15% of them used more than average number of the year ending overall performance and controlling techniques. (*Reference: Table 4.16*)

- xvii. Regarding the factors affecting the decision-making process in SMEs, it is found that, about 20% of the SMEs are making decision on the basis of the information provided by the management accounting tools. Likewise, 75% of the Entities made their business decision on the basis of guideline provided by their Senior Management Team. And the rest 25%, 15% and 10% percent of the SMEs decision making process was affected by other factors like Internal Control Mechanism, Government Revenue policy, company's policy and Labour union's interference respectively. (*Reference: Table 4.17*)
- xviii. With regard to cost segregation, most of the respondents did not use the applicability of segregation of cost into fixed and variable. Even though some SMEs have practiced segregating cost into variable and fixed. 50% of SMEs used average method for segregating mixed cost into fixed and variable. And 5% of them used High-low point method, regression analysis method and graphical presentation method. And 5% of them followed the mixed cost segregation guideline provided by Regulatory Authority. (*Reference: Table 4.18*)
- xix. Regarding the service pricing techniques practiced in the SMEs, it is found that the companies are not allowed to determine the service price by themselves; hence they have to follow the direction and guidelines issued by the Regulatory Authority.
- xx. While analyzing open-end question, it was found that majority of Financial Managers and Chief Accountants have agreed on the fact that management accounting tools to be applied in every SMEs for accurate and timely decision making, effective management information system, cost control, higher profitability, better and consistent financial information and so on.

- xxi. Although there are so many benefits, there are many constraints in the application of management accounting tools in the SMEs. Some of them were identified lack of expertise, lack of information about tools, high cost and lack of commitments from Senior Management Team.

- xxii. While testing the hypothesis using “The Chi Square Test method” relating to the practice of Net present value (NPV) and Internal rate of return (IRR) in SMEs, it is found that there was a significant relationship between the practice of NPV and IRR as management accounting tools in SMEs businesses in Developing Countries, i.e. the practice of net present value and internal rate of return techniques are dependent to each other.

- xxiii. While testing hypothesis relating to practice of Cost-volume Profit (CVP) analysis and Internal Flexible budgeting tools in SMEs, it is found that there is no significant relationship between the practice of CVP analysis and Flexible budgeting as management accounting tools in SMEs i.e. the practice of CVP analysis and flexible budgeting technique are independent.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Although traditionally, it is considered that “the Management is what management does” but now a days the concept of Management could be defined on a scientific manner as Management is an art of getting things done through the people by using the means of planning, organizing, staffing, directing and controlling for achieving organizational goals effectively and efficiently in a dynamic and competitive environment. Management has to concentrate on its activities on the mobilization of available resources in effective and efficient manner. Managerial skills and competencies are the keys for organization. It is equally important for the organization no matter how it is commercial or non-commercial and public or private.

Small and Medium Enterprises (SMEs) are one of the sectors for economic activities as they safeguard against the risk that exists in business as well as it impacts daily life and wellbeing of human activities. Every SMEs has limited resources which should be mobilized in such a way that it can get its best. For better utilization of resources, different tools and techniques have been developed. Among them, management accounting tools have proved that beneficial in different aspects of managerial activities.

Management accounting is one of the important disciplines of accounting and finances. It is the branch of accounting whose main objective is to help Managers and Senior Management Team members for overall managerial activities by providing various information and helping in planning, controlling and decision making. Management accounting acts as a strategic business partner in support of managerial role in decision making on a rational manner.

Cost segregation, Cost-volume-profit analysis, Responsibility Accounting, Cashflow statement, Standard costing, Zero-based Budgeting are the major components of Management Accounting. In order to ensure whether the SMEs are getting benefits by using those tools and identifying the actual facts, this research being conducted.

The study was done with an objective to examine the application and present practices of Management Accounting tools in the Small and Medium Enterprises (SMEs) of Developing Countries, and to identify the area that could be applied for strengthening the financial position of SMEs. With respect to the objective, this research has explored the real position of applicability of management accounting tools in SMEs.

As per the nature and demand of the study, survey type research design was adopted with descriptive and analytical approach. The research is mostly based on primary sources of information. Secondary sources of data were also used in order to validate the some of the information. The data was collected from the respective Entities considered as SMEs by distributing structured questionnaires. The raw data was applied for analyzing and interpreting the findings. The statistical tool “The Chi-square test (χ^2) has been used for testing the assumptions and hypothesis.

5.2 Conclusion

Management accounting is a new discipline and still in the developing stage in the context of modern business organization. Different types of Management Accounting tools and techniques are evolving as a new dimension to facilitate for performing better and obtaining the high level of achievement. These various types of management accounting tools and techniques are taught in the Universities and Professional Institutes. However, it is noticed that those are not fully practiced in the SMEs. It is the real facts that the gap between the theory and practice.

On the basis of data analysis, it could be concluded that Management Accounting tools like Capital Budgeting, Ratio Analysis, and Cashflow statements were widely practiced in the SMEs of developing countries. Similarly, Cost-volume-profit Analysis, Responsibility Accounting, Activity Based budgeting were moderately being practiced. The other Management Accounting tools like Standard Costing and Zero-based budgeting were in practiced by few of them. It could also be concluded that the main reason for not practicing standard costing in SMEs is determination of pricing by them mostly imposed by their Senior Management and Regulatory Authority. In the context, SMEs are not an independent for determining the price by themselves. Accordingly, the main reason for not practicing zero-based budgeting was lack of proper knowledge about the tool.

Finally, it could be concluded that the SMEs of Developing Countries are in infant stage with respect to the application of modern management accounting tools. Yet, they are trying to adopt such tools and techniques to cope with the future expected opportunities and challenges to be faced due to the accession to the globalization.

5.3 Recommendation

Use of Management Accounting tools and techniques in the organization are not an optional but also the compulsion for its better performance. Management Accounting plays a significant role in the organization. It provides the key idea, guidelines and business strategies to the Senior Management for performing the better managerial functions.

Management Accounting practices are systems that enable firms to generate information for budgeting, reporting and controlling, measuring the performance, and costing the products and services that assists in managerial decision-making processes.

Economic liberalization, globalization, changing the nature of human behavior and technological advancements are the key factors for making a complex environment in organization. It is obvious facts that the organisation has to practice the Management Accounting tools and techniques for meeting the expected challenges and grabbing the opportunities. Advanced version of Management Accounting technique has proved that it is already been a great supporting mechanism for better utilization of resources and achieving the goals in a dynamic and competitive world.

The analysis and interpretation of application of Management Accounting tools helped to draw some findings. Concerning these findings, it may be appropriate to make some suggestions and recommendations. It would be helpful to the concerned stakeholders of an organization to bring some improvements in Small and Medium Enterprises (SMEs) through application of Management Accounting tools. Thus, the following recommendations have been made on the basis of findings:

- i. The use of Management Accounting tools and techniques are recommended to practice for strengthening the competitiveness of SMEs and carry out managerial tasks effectively and efficiently. For planning activities, tools like cost estimation, classification and allocation, profit measurement and recognition, cost volume-profit analysis, could be applied. It has to be noted that it is suggested for analyzing cost and benefits while implementing Management Accounting tools for the specific tasks.
- ii. SMEs of developing countries are recommended for not using only traditional tools and methods of accounting like past (historic) budget, past trend analysis etc. Rather, they move towards the application of new, advance and modern Management Accounting tools such as target cost, activity-based costing, zero-based budgeting, etc. for the smooth and effective operations of SMEs.

- iii. While preparing budget, only past actual expenses and past budget estimate should not be taken as bases. Along with these, zero based budgeting and environmental analysis also to be taken into consideration. It has to be noted that happened in the past may not occur in the future.
- iv. There should be proper coordination among Planning Department, Finance Department and the Governing Boards of the SMEs while preparing the budget at beginning of planning process. It would be better to have a professional expert like CMA or CWA for preparation of plans and budgets if possible, at the beginning.
- v. It was found that most of the SMEs have considered profit and loss was made by the Entity as bases to measure and control overall performance of the company. Thus, it is recommended that SMEs should considered other control mechanism like budgetary control and measure, ratio analysis and cashflow etc. The Entity could examine the real position of the company considering overall aspects, consequently they will be able to take proper decision for future.
- vi. SMEs should prepare mid-term and long-term budget with specific mission, vision, goals and objectives.
- vii. Cost segregation approach is not found in most of the SMEs on a selected sample population. It is recommended for applying this tool by the SMEs.
- viii. It is recommended that SMEs for applying Discounted Payback Period, Net Present Value, Internal Rate of Return, Profitability Index and Modified Internal Rate of Return considering the requirement for making long-term investment.
- ix. Cost estimation, segregation and allocation must be used by every SMEs. It helps management for effective managerial functions covering all the aspect of the managerial function. Thus, it is recommended.

- x. It was found that most of the SMEs practiced only past trend analysis to forecast the cost and revenues for the future. In order to measure the past trend and guiding path for future, it is recommended for the estimation/forecast of production cost and estimated quantity of sales of SMEs, other techniques like Zero-base budgeting, Market survey, Judgment analysis are recommended.
- xi. Professionals having better knowledge about the Management Accounting tools and techniques, should put an effort for developing environmental friendly tools and techniques into practice. Thus, existing gap between theory and practice may be addressed to some extent. And the SMEs would be benefited.
- xii. A certain portion of the profit to be allocated for research and development programme so that new tools and techniques could be developed and will be adapted for the better guidance in future.
- xiii. It would be better to establish a separate department for effective implementation of Management Accounting tools and techniques. The staff to be given an opportunity for short-term on the job training and fellowship programme. It will save a lot of funds for the entity. Otherwise, we may need to outsource the external consultants/professionals by paying high cost of remunerations and fees for their services.
- xiv. Internal and external information are required for proper application of Management Accounting tools and techniques. Therefore, it is recommended for developing a Management Accounting Information Systems (MAIS). It will help for getting the feedback regularly and immediately.
- xv. Interaction between professionals and business organization is very important. Therefore, it is recommended that SMEs could create an atmosphere of interaction between the professionals and the SMEs. Such that everyone will be benefited from interaction of the knowledge about new

tools and techniques of Management Accounting which is very important.

- xvi. Professionals should make their best effort for bringing advanced and modern tools and techniques of Management Accounting. For this they may conduct the various programme like seminars, workshop, talk programme and face to face interaction etc on a regular basis. Short-term on-the-job training packages on Management Accounting could be introduced for Managers and Accountants of the SMEs for acquainting them with the appropriate techniques of Management Accounting and update the knowledge and skills.

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APPENDIX - I

RESEARCH QUESTIONNAIRE

Name of the Entity/Company.....

Name of the respondent (optional).....

Designation of the respondent.....

Dear Sir/Madam,

Please kindly tick (√) on the given alternative of each question concerning management accounting tools used in your Entity. I would like to make you that the information filled by you will be kept confidential and will not be published without your prior consent.

1. Please mention the Management Accounting tools practiced in your Entity for planning, controlling and decision making.

- a) Break-even Analysis (BEP)
- b) Responsibility Accounting
- c) Capital Budgeting
- d) Ratio Analysis
- e) Cashflow Analysis
- f) Standard Costing
- g) Zero-Based Budgeting
- h) Flexible Budgeting

2. If your Entity has not practiced any of the above-mentioned tools, what might be the reason?

- a) No information
- b) High cost / quite expensive
- c) Lack of expertise
- d) Other, if any.....

- 3. Who is responsible to prepare the budget in your Entity?**
- a) Finance Department
 - b) Planning Department
 - c) Budget Committee
 - d) Outside Experts
 - e) Other, if any.....
- 4. What type of the budget does your company practice (based on nature)?**
- a) Overall master budget
 - b) Cash budget only
 - c) Operational budget only
 - d) Other, If any.....
- 5. What type of the budget does your Entity practice (based on time period)?**
- a) Short-term budget (1year or less)
 - b) Medium-term (Less than 5 years)
 - c) Long-term budget (more than 5 years)
 - d) Others, if any.....
- 6. On what basis, does your company prepare the budget?**
- a) Based on the previous budget estimate
 - b) Based on the past actual budget
 - c) Zero based
 - d) Activity based
 - E) Other, if any.....
- 7. Which of the following capital budgeting tools is being practiced in your company while making decision of long-term investment or purchase of fixed assets?**
- a) Payback period (PBP)
 - b) Discounted payback period (DPB)

- c) Average rate of return (ARR) []
- d) Net present value (NPV) []
- e) Profitability index (PI) []
- f) Internal rate of return (IRR) []
- g) Other, if any.....

8. Which pricing technique practiced by your Entity?

- a) Full cost-based pricing []
- b) Variable cost-based pricing []
- c) Target return on investment pricing []
- d) Activity based cost pricing []
- e) Other, if any.....

9. Which of the tool does your Entity practice to segregate mixed cost into fixed and variable?

- a) High-low point method []
- b) Regression analysis method []
- c) Graphical presentation method []
- d) Average method []
- e) Other, if any.....

10. Which technique does your Entity practicing for cost and revenue estimation?

- a) Zero base budgeting []
- b) Past-trend analysis []
- c) Market survey []
- d) Judgment analysis []
- e) Other, if any

11. How does your company evaluate the risk while making capital investment decision?

- a) Sensitivity analysis []
- b) Increase the rate of return []

- c) Higher IRR []
- d) Estimation of profitability distribution of future cash flow []
- e) Other, if any.....

12. How does your Entity measure and control the overall performance at the end of the accounting year?

- a) Profit/loss made by the company []
- b) Budgetary measures and control []
- c) Standard costing []
- d) Ratio analysis []
- e) Cash flow analysis []
- f) Other, if any.....

13. What are the major factors which affect decision making procedure in your organization?

- a) Management accounting tools []
- b) Decision of top level management []
- c) Objective of the organization []
- d) Other, if any.....

14. If you feel any problem regarding the application of the management accounting in SMEs or in your Entity, what would be the possible reasons? Please provide your honest opinion:

- a)
- b)
- c)
- d)

15. If you think that the management accounting tools are to be practiced essentially in SMEs, what would be the potential benefits?

- a)
- b)
- c)
- d)

Thanking You for your kind co-operation by responding this questionnaire

APPENDIX - II

Research Proposal

(attached)



SELINUS UNIVERSITY
BUSINESS SCHOOL

**Applications of Management Accounting
in
Small and Medium Enterprises (SMEs)
of Developing Countries**

Research proposal submitted by
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for fulfilling the requirements of the degree of
**Doctor of Business Administration
(DBA)**

Presented to the Department of Business Administration
Selinus University Business School

1 Background of the study:

The application of Management accounting is the term for describing the accounting tools, techniques, methods and standards which are clubbed with special knowledge and ability. It helps the Management for making better planning and taking the right decision and ensure control functions. As a result, it maximizes the profit earning capability by minimizing the probability of risks and losses. Due to the high rate of competition and risks involving in the businesses at present, specially in the context of Small and Medium Enterprises (SMEs) are becoming more complex and suffered a lot in term of financial turnover. The reliable option would be a healthy management leadership for the smooth operation of SMEs sectors that would help the organization for protecting from the unexpected turbulences which may occur in future because of financial difficulties in Economic cloud. Systematic and well management is the secret for the success of every business organization in terms of generating reasonable earnings by providing high quality goods and services to the target community.

Accounting system may provide required financial information for the better utilization of the available resources and it may lead to obtain competitive advantages that could be achieved by using various tools and techniques of Financial and Management Accounting tools. It will provide actual cost information to the production manager and sales information to the sales manager so that the managers can make the proper decision and alternative for the future betterment of the business. Similarly, the money lenders, investor, shareholders and customer could have the required information with the help of management accounting tools and techniques. Therefore, it can be concluded that the Management Accounting is an useful, essential and beneficial for all the aspects of the management activities such as planning, decision making, production and selling. To achieve the ultimate goal of every Entity would be generating high level of earnings with lower cost of goods sold in order to get the more contribution margin. Hence, systematic and proper accounting system shows the accurate financial position of the organization in every aspect and produces necessary information to the relevant stakeholders.

2. **Definition of Management Accounting**

Management accounting is the process of identifying, measuring, analyzing, interpreting, and communicating the information for searching the goals of the entity for obtaining high level of achievement. Managerial accounting is an integral part of the management process and the Management Accountants are important strategic and dynamic partners of the Senior Management Team of the Entity (ref: Hilton, 2002:5-6 and ICMA Australia)

Management accounting is concerned with providing both financial and non-financial as well as Management information which will help decision makers for making strategic decisions. An understanding of accounting therefore requires an understanding of the decision-making process and an awareness of the users of accounting. (*Drury, 2010:15*)

Management Accounting is the term used to describe the accounting methods, systems and techniques, which coupled with special knowledge and ability, assist management in minimizing losses. It is essentially the application of management principles and technical know-how to the planer, development, execution and control of corporate plans. (*Batty, 2005:1-2*)

Now a days business enterprises operates in a dynamic environment which would encounter several management problems and difficulties due to the complex environment in the entity. We may need to carry out its basic functions for minimizing the cost and maximization of earnings in an atmosphere of situation of uncertainty. The traditional techniques of management by inspecting physically may no longer be considered as dependable in a situation whereas the modern management style has realized that has a lot of error which may lead either losing a lot of opportunities or have to face an unhealthy competition. The situation may not occur another opportunities in future even try for as many frequencies and it may have to face a very high risk in the long run. Therefore, constantly strives to reduce the risk of errors in decision-making by keeping abreast of such quantitative information, which would help analyzing its effective action in order to reach exact decisions. Hence, here that the accounting is very important for the entity that they are operating in the competitive business environment. The Senior Management,

therefore, constantly strives to reduce the risk of making errors by looking and analyzing relevant information by means which it hopes to take appropriate decision and direct the administration in a better manner. (Shrestha, 2006:1)

The whole idea of managerial accounting is to assist strategic managers to perform management functions more effectively by providing relevant economic information. Management is the process of planning, decision making and controlling. An organization is the common place, where different physical resources and activities will be managed by the process of activities. It is an integrated function directed towards achieving the mission, vision, goals and objectives of the organisation which which will plan, make decision, implement, and impose the control function over the different processes and activities of the organization. (Bajracharya, Ojha, Goit & Sharma, 2005:4).

3. Statement of the Problem

The SMEs are operating on a regular basis from starting phase of their establishment once they are on the live production. Now a days, the SMEs are increasing which indicates the highr number of entities in Developing Countries like Nepal and Cambodia. As a result the SMEs are competing for making more transactions on their business on international export activities as well. It has created major challenges for SMEs companies in terms of sending their products and services to their clients and maximizing their market coverage.

The management and planning are the key cycle for achieving the goals as determined by the entity for which, we believe that Management Accounting provides the techniques for making value added parameters for the upliftment of business entity. It will provide the proper and required information and guidelines to the Management for effective planning and decision making for the growth of business. Hence, the business complexity can be changed into opportunity by using various tools and techniques of Management Accounting.

4. Objective of the Study

The major objective of the study is to explore the possibilities for applying management accounting in SMEs of Nepal, Cambodia and

other developing countries as well as LDCs; such that it will produce the outcome that how the SMEs have been practicing various Management Accounting tools for different purpose. Mainly, the following are the objectives of the study:

- 4.1 To analyze the present context of Management Accounting tools used in the Small and Medium Enterprises (SMEs) in Developing Countries.
- 4.2 To identify the areas where Management Accounting tools could be applied for strengthening product like goods and/or services offered by SMEs.
- 4.3 To identify the ways of overcoming difficulties in applying Management Accounting tools used in SMEs.

5. Research Questions

The research questions will help to study the scenarios of management accounting tools being used in SMEs of Developing Countries:

- 5.1 Which Management Accounting tools are mostly used in SMEs of Developing Countries?
- 5.2 What are the Management Accounting tools that could be applied for strengthening product of goods and/or services of SMEs?
- 5.3 What are the major difficulties in application and implementation of commonly used Management Accounting tools in SMEs?

6. Significance and/or Hypothesis of the research

The research work will be carried out for studying the applications of Management Accounting tools used in SMEs of Developing Countries. And the study will have the following significance and/or hypothesis:

- 6.1 It will help for analyzing the use of Management Accounting tools in SMEs.
- 6.2 It will explore the problems and potentials of expanding the business of SMEs; such that it would be useful to the relevant stakeholders i.e. Investors, Lenders, Managements, Employees and target beneficiaries etc.

- 6.3 It will provide information regarding the application of the tools under different situations/circumstances and encourages Entrepreneurs for using Management Accounting tools in planning and decision making.
- 6.4 It will provide as a literature to the researcher, accounting practitioners and relevant stakeholders; those would like to carry out further research and implement these tools on their Enterprises

7. **Research Methodology**

Research methodology is a way of systematically solving the problems. In other words Research methodology refers to the various sequential steps with rationale of each processes to be adopted by Researcher for obtaining the overall knowledge on the problems. The research tools will be based on the study of textbooks, documents, relevant research papers. It will be determined by the particular problem in hand. This chapter deals with sampling techniques, data collection methods, data analysis tools using full-fledged research instruments. The techniques will be used and classified as follows:

- Satisfaction of Customers
- Standard Cost
- Variance Analysis
- Budget planning and control
- Flexible Budget
- Activity Based costing
- Cash Budget
- Production and sales Budget
- Break-even Analysis
- Variable and Constant Cost classification
- Analysis of Investment Budget
- Financial Ratio Analysis
- Capital Budgeting
- Cash Flow Analysis
- Balance Scorecard
- Return on Investment
- Benchmarking
- Best practices and success stories to be disseminated
- Economic Value Added
- Tax Planning
- Z Score Analysis

8. **Research Design**

A research design is a particular of methods and procedures for acquiring the information as required. This is considered as overall

operational pattern of framework for the project that stipulates which information are to be collected from the various sources. It ensures that information obtained is relevant to the research questions and it will be collected by objective and economical procedures. As per the nature of study; the survey research design will follow the descriptive and analytical approach.

9. Sources of data:

Data will be mainly collected from the primary sources. Primary data are collected through the questionnaire, interview and discussion. Secondary data will be obtained from Newspapers, Journals and Periodicals and it will be further verified and validated by the Researcher on a sampling basis and as required.

10. Population and Sample:

The Small and Medium Enterprises (SMEs) of Developing Countries specially Nepal and Cambodia have been considered as total population, however, considering the duration and timebound process, there will be about 200 SMEs for the study. As of now, there are existence of several SMEs in Nepal and Cambodia, however; in order to make research task more reliable, 15 active SMEs have been considered as sample population. Those are Manufacturing Industries, Garment and Fashion producer, Fabrication and Machine tool equipment, Food Products, Training and Human Resources Development Centers and Service oriented Enterprises etc.

11. Data Collection Procedure:

The study is mainly based on the primary sources of data which will be collected by developing a structured questionnaire and distributing it to the Entrepreneurs/Owners, Managers and Financial Comptrollers of SMEs. The structured of the questionnaire would be both subjective and objectives as well as few open ended or comprehensive method may be used for the proposed study. For obtaining reliable information we need to hold a meeting or informal session or discussion with the population as indicated above.

12. Data Processing Procedure:

The collected information through questionnaires in raw form will be tabulated into various tables according to the requirement of the

research objectives. The data processing for analyzing, we may need to use mathematical/statistical tools and word processing and spread sheet application of modern office automation. The outcomes will be based on the analysis and the interpretation of data collected from the primary sources after due validation by the Researcher and his team.

13. Data Analysis:

Analysing the data for changing them from the primary/unprocessed to the format which will be on easily understandable form of presentation; such that the targeted population will understand easily. Based on the data analysis; it consists the organizing, tabulating, performing statistical exercise and drawing the necessary graphs and table for making easy presentation. Hence, the data will be processed using modern mathematical and statistical tools and applications of office automation of Information Technology. Appropriate financial and accounting tools and techniques will also be used to confirm the results or outcomes.

The various form of graphic diagram will be used to produce the table and visual presentations for the research that will be carried out.

14. Limitations of the Study:

The study will not be free from some of the limitations and constraints. The main limitations are as follows:

14.1 This study focused on application of Management Accounting concept and tools, and it will not consider the economic and/or social aspects of the SMEs.

14.2 The study will be focused on the Sales and Production of SMEs of the population. Thus, the findings may not be applicable to all.

14.3 The study concentrated on the application of Management Accounting tools only.

14.4 The research will be based on the primary as well as secondary data and further verification and validation by the Researcher within the limitation.

15. Organization of the Study/Research

The outcomes of the Research will be divided into the following chapters which would make the study report more systematic and easier for understanding:

- The introduction chapter covered the background of the study, role of management accounting, statement of the problem, objectives, significance of the study and the limitation of the study.
- The second chapter focused on review of literature. It contained the conceptual framework and past research literature reviews which would show the previous research works that were done in the related field of Management Accounting.
- The third chapter described the research methodology adopted for the study consisting of research methodology covering research design, sources of data collection procedure, population and sample research variables, research hypothesis and presentation procedure.
- The fourth chapter dealt with presentation, analysis and interpretation of data. Analysis of questionnaires and analysis of open-end option and major findings of the research.
- The last chapter will be covering the summary, conclusion and recommendations.

APPENDIX - III

**List of SMEs of
Nepal and Cambodia**

(Sample Population - attached)

Appendix - III

Sample Population

S.No.	Name of SMEs	Address	Country	Business Type/Sector
1	A Big International Trading Pvt. Ltd.	Jhapa	Nepal	Furnishing
2	Alpha Adventure Treks and Expeditions	Kathmandu	Nepal	Tourism
3	Amatya Tar Jali Uddyog	Kathmandu	Nepal	Steel Fabrication
4	Amtade Pvt. Ltd.	Kathmandu	Nepal	General
5	Anurag Import Export House	Kathmandu	Nepal	Import/Export
6	Anuttara Designers & Construction Pvt. Ltd.	Kathmandu	Nepal	Designer and Builder
7	ASN House Painting Service	Kathmandu	Nepal	Paint and Chemicals
8	Bageshwari Coal Industries	Dang	Nepal	Energy
9	Balaju Tyre House	Kathmandu	Nepal	Tyres
10	Bhaktapur Craft Painter	Bhaktapur	Nepal	Handicraft
11	Bimal Trade Concern	Kathmandu	Nepal	General Marchant
12	Bionic Energy Pvt. Ltd.	Kathmandu	Nepal	Energy
13	BRB Management Services Pvt. Ltd.	Kathmandu	Nepal	Services
14	Butwal Automobiles	Butwal	Nepal	Automotive
15	Caravan Readymade	Bhaktapur	Nepal	Garments
16	Cera Nepal Udyog	Bhaktapur	Nepal	Handicraft
17	Chandra Metal Industries	Pokhara	Nepal	Steel Fabrication
18	Changunarayan Brick Factory	Bhaktapur	Nepal	Brick production
19	Chitwan Marble Industries	Chitwan	Nepal	Marble Products
20	Complete Engineering Solution Pvt. Ltd	Bharatpur	Nepal	Consultancy
21	Danfe Craft and Boutique	Kathmandu	Nepal	Handicraft
22	Durga Rubber Trade Center	Jhapa	Nepal	Tyres
23	Everest Mice	Kathmandu	Nepal	Entertainment
24	Everest Multiple Marketing Pvt. Ltd.	Kathmandu	Nepal	Import/Export
25	Expert Chemical Nepal Pvt. Ltd.	Dhanusa	Nepal	Chemical
26	Festoon Hotel Pvt. Ltd.	Kathmandu	Nepal	Tourism
27	Furniture Nepal	Kathmandu	Nepal	Furniture
28	G4S Security Services	Kathmandu	Nepal	Security Services
29	Ganapati International	Kathmandu	Nepal	General Marchant
30	Gandaki Village Trekking & Travel Pvt. Ltd.	Kathmandu	Nepal	Tourism
31	Greenlink International Pvt. Ltd.	Kathmandu	Nepal	Import/Export
32	Gurans Export and Import	Kathmandu	Nepal	Import/Export
33	Guraya Food Products Pvt. Ltd.	Lalitpur	Nepal	Foods
34	HDPE Pipe Manufacturer	Birgunj	Nepal	Manufacturing
35	Himal Trade Link	Lalitpur	Nepal	Digital and IT

S.No.	Name of SMEs	Address	Country	Business Type/Sector
36	Himalayan Essence	Kathmandu	Nepal	Manufacturing
37	Himalayan Trade Point	Kathmandu	Nepal	Import/Export
38	Himalayan Wool Co. Pvt. Ltd.	Kathmandu	Nepal	Garments
39	Hobb Creation Industries	Kathmandu	Nepal	Handicraft
40	Holy Nepal Enterprises	Kathmandu	Nepal	Import/Export
41	IBase Technologies	Kathmandu	Nepal	IT and Electronics
42	Jajodia Brothers	Kathmandu	Nepal	General Marchant
43	Jalpa Devi Trading Concern	Kathmandu	Nepal	Import/Export
44	Jay Banshakti Trading Pvt. Ltd.	Kathmandu	Nepal	Herbal/NTFP
45	Jayan Technical Training Institute	Butwal	Nepal	Training/Services
46	Jayanti Traders	Biratnagar	Nepal	General Marchant
47	JK Chicken Suppliers	Bhaktapur	Nepal	Foods
48	Kalika Printing and Packaging	Bharatpur	Nepal	Printing
49	Karnali Organic Processing Industry	Mugu	Nepal	Organic Foods
50	Kathmandu Cleaning Services	Kathmandu	Nepal	Services
51	Kathmandu Marketing & Trading House P. Ltd.	Kathmandu	Nepal	Durable Goods wholesale
52	Khatri Traders Pvt. Ltd.	Kathmandu	Nepal	Import/Export
53	Kisan Machinery & Equipment Pvt. Ltd.	Bharatpur	Nepal	Agriculture - Tools
54	Krishna Grill and Engineering Pvt. Ltd.	Biratnagar	Nepal	Steel Fabrication
55	Machhapuchchhre Metal & Machinery Works	Pokhara	Nepal	Steel Fabrication
56	Mahakali Ceramic Udyog	Bhaktapur	Nepal	Handicraft
57	Megha Furniture	Lalitpur	Nepal	Furniture
58	Micro Network Pvt. Ltd.	Kathmandu	Nepal	IT and Electronics
59	Monalisa Exclusive Textiles	Kathmandu	Nepal	Textiles
60	Mt. Everest Honey Concern	Kathmandu	Nepal	Foods
61	Namaste Suppliers	Pokhara	Nepal	General Marchant
62	Nava Durga Dairy	Kathmandu	Nepal	Dairy
63	NEMAX Nepal	Bharatpur	Nepal	Supplier - Machinery
64	Nepal Vehicle Rental Services	Kathmandu	Nepal	Services
65	New Hygine Meat Mart	Kathmandu	Nepal	Foods
66	Om Shiva Shakti Trade Concern	Kathmandu	Nepal	Garments
67	Om Shree Balaji Kikkarala Enterprises	Kathmandu	Nepal	Import/Export
68	Orient Kathmandu International	Kathmandu	Nepal	Import/Export
69	Panchakanya Training Institute	Pokhara	Nepal	Training/Services
70	Pashupati Traders	Biratnagar	Nepal	General
71	Peacock Window Handicraft Centre	Bhaktapur	Nepal	Handicraft
72	Peregrine Treks and Tours	Kathmandu	Nepal	Tourism
73	Pinnacle Trading Concern	Bharatpur	Nepal	Import/Export

S.No.	Name of SMEs	Address	Country	Business Type/Sector
74	Pokhara Agro Farm	Pokhara	Nepal	Agriculture
75	Pokhara Institute of Bakery and Pastry Arts	Pokhara	Nepal	Foods
76	Pokhara Noodles	Pokhara	Nepal	Foods
77	Pokhara Rental	Pokhara	Nepal	Rental Services
78	Prabisha Trading Pvt. Ltd.	Kathmandu	Nepal	Vehicle Business
79	Prajapati Ceramic Center	Bhaktapur	Nepal	Handicraft
80	Quality Wood and Fuel Center	Hetauda	Nepal	Energy
81	R.K. International	Kathmandu	Nepal	Import/Export
82	Racket Bar and Events	Kathmandu	Nepal	Entertainment
83	Rajdhani Agriculture & Research Center	Biratnagar	Nepal	Agriculture
84	Ratna Furniture and Furnishing	Chitwan	Nepal	Furnishing
85	Renu Enterprises	Kathmandu	Nepal	Garments
86	Royal Rental & Catering Service	Bhaktapur	Nepal	Rental Services
87	Sagun Cooperative Pvt. Ltd.	Dolakha	Nepal	Cooperative
88	Sagun Readymade Udhog	Biratnagar	Nepal	Garments
89	Sangita International Traders	Kathmandu	Nepal	Import/Export
90	Sawal Universal Trade Inc.	Kathmandu	Nepal	Import/Export
91	Shah Handicraft	Kathmandu	Nepal	Handicraft
92	Shikhar Products	Kathmandu	Nepal	Manufacturing
93	Shivaji Block Reling Udhog	Syangja	Nepal	Concrete products
94	Shree Ganesh Suppliers	Kathmandu	Nepal	Suppliers
95	Shree Rani Sati Trading Concern	Kathmandu	Nepal	General
96	Shree Sukunda Store	Kathmandu	Nepal	General Marchant
97	Shrestha International Trading Concern	Kathmandu	Nepal	Import/Export
98	Shubharambha Trade International	Kathmandu	Nepal	Import Sanitary Supplies
99	Siddanath Operate Machinery and Suppliers	Kathmandu	Nepal	Spareparts
100	Sidewalker's Traders (P) Ltd.	Kathmandu	Nepal	General
101	Silkroad Investment & Trading Pvt. Ltd.	Kathmandu	Nepal	Trade and Services
102	Simbin International Impex	Kathmandu	Nepal	Import/Export
103	Simren International Nepal	Kathmandu	Nepal	Import/Export
104	Smart IT Trading	Kathmandu	Nepal	IT and Electronics
105	Smart Palace Banquet and Events	Kathmandu	Nepal	Party Palace
106	SR Foodline Suppliers	Baglung	Nepal	Foods
107	ST Energy Group Pvt. Ltd.	Lalitpur	Nepal	Energy
108	Subha Shree Traders	Kathmandu	Nepal	General Order Supplier
109	Sunshine Foods Pvt. Ltd.	Rupandehi	Nepal	Foods
110	Surya Binayak Traders	Kathmandu	Nepal	Spareparts
111	Swastika Marketing	Kathmandu	Nepal	General

S.No.	Name of SMEs	Address	Country	Business Type/Sector
112	Swayambhu Star Banquet	Kathmandu	Nepal	Party Palace
113	Swopna Events Pvt. Ltd.	Kathmandu	Nepal	Event Management
114	Thangua Thanka Udyog	Chitwan	Nepal	Handicraft
115	Thapa Engineering Industries	Butwal	Nepal	Micro Hydro/Fabrication
116	The Best Mad Honey	Lamjung	Nepal	Foods
117	Trishakti Agro Krishi Farm	Birgunj	Nepal	Agriculture
118	Unicorn Lubricants Pvt. Ltd.	Birgunj	Nepal	Fuel Products
119	United Dental Clinic	Kathmandu	Nepal	Healthcare
120	Unnati Silks Prints Pvt. Ltd.	Kathmandu	Nepal	Garments/Printing
121	Vibhana Enterprises	Kathmandu	Nepal	General
122	Vijay Trading Concern	Kathmandu	Nepal	Import/Export
123	Vishal Enterprises	Biratnagar	Nepal	General
124	Vivid Interiors	Lalitpur	Nepal	Interior Services
125	Zodiac Marketing Pvt. Ltd.	Kathmandu	Nepal	Household goods
126	365 Moving Co. Ltd.	Phnom Penh	Cambodia	Manufacturing
127	Acteus Cambodia Co. Ltd.	Phnom Penh	Cambodia	Manufacturing
128	ADA Asia	Phnom Penh	Cambodia	Digital and IT
129	ADM Animal Nutrition Ltd.	Phnom Penh	Cambodia	Agricultural
130	Advance European Medical Center	Phnom Penh	Cambodia	Healthcare
131	Advanced Technical Supplies	Phnom Penh	Cambodia	Manufacturing
132	Agri House Ltd.	Phnom Penh	Cambodia	Agricultural
133	Anticimex Pest Management Co. Ltd.	Phnom Penh	Cambodia	Trade and Services
134	Aplus Consulting Co. Ltd.	Phnom Penh	Cambodia	Human Resources
135	Aprati Foods Ltd.	Phnom Penh	Cambodia	Manufacturing
136	Aquation Hospitality Ltd.	Phnom Penh	Cambodia	Real Estate
137	ASI Logistics Ltd.	Phnom Penh	Cambodia	Transport/Logistics
138	Bauer Special Foundations Pvt. Ltd.	Phnom Penh	Cambodia	Real Estate
139	BECIS Co. Ltd.	Phnom Penh	Cambodia	Environmental Services
140	Beetle Environmental Solution	Phnom Penh	Cambodia	Garments
141	Bureau Veritas Ltd.	Phnom Penh	Cambodia	Trade and Services
142	C&A Sourcing International Ltd.	Phnom Penh	Cambodia	Garments
143	Cambodia Country Club Ltd.	Phnom Penh	Cambodia	Entertainment
144	Cambodian Fairwind Enterprises	Phnom Penh	Cambodia	Education and Training
145	Cambrew Ltd.	Phnom Penh	Cambodia	Manufacturing
146	CAMCONA Trading Co. Ltd.	Phnom Penh	Cambodia	Trade and Services
147	Delivery Hero Co. Ltd.	Phnom Penh	Cambodia	Trade and Services
148	Dewhirst Co. Ltd.	Phnom Penh	Cambodia	Consumer Goods
149	Diethelm Travel Cambodia	Phnom Penh	Cambodia	Travel and Tours

S.No.	Name of SMEs	Address	Country	Business Type/Sector
150	DKSH Ltd.	Phnom Penh	Cambodia	Real Estate/Construction
151	DSV Air and Sea Co. Ltd.	Phnom Penh	Cambodia	Transport/Logistics
152	Dynamic Argon Co. Ltd.	Phnom Penh	Cambodia	Healthcare
153	Dynamic Chemicals Co. Ltd.	Phnom Penh	Cambodia	Manufacturing
154	Ecobatt Energy Investment International Co. Ltd.	Phnom Penh	Cambodia	Energy and Mines
155	Ecole Saek Thmey Cambodge	Phnom Penh	Cambodia	Education and Training
156	Edge Advertising Co. Ltd.	Phnom Penh	Cambodia	Marketing
157	EGE Cambodia Energy Solutions	Phnom Penh	Cambodia	Energy and Mines
158	EGPI Engineering	Phnom Penh	Cambodia	Architecture/Engineering
159	Emerging Markets Consulting Co. Ltd.	Phnom Penh	Cambodia	Consultancy
160	Endorphine Concept	Phnom Penh	Cambodia	Marketing
161	Energy Lab Cambodia	Phnom Penh	Cambodia	Energy and Mines
162	ENSEAS Cambodia	Phnom Penh	Cambodia	Manufacturing
163	Flavour of India	Phnom Penh	Cambodia	Chain Restaurants
164	FUCHS Co. Ltd.	Phnom Penh	Cambodia	Agricultural
165	GK Smart	Phnom Penh	Cambodia	Environmental Services
166	Glue Up	Phnom Penh	Cambodia	Digital and IT
167	Golden Tree Co. Ltd.	Phnom Penh	Cambodia	Real Estate and Construction
168	Green Yellow Ltd.	Phnom Penh	Cambodia	Energy and Mines
169	GS Asia Travel	Phnom Penh	Cambodia	Travel/Tourism/Hospitality
170	H&M Group	Phnom Penh	Cambodia	Manufacturing
171	HERBA Co. Ltd.	Phnom Penh	Cambodia	Consumer Goods
172	HR Inc Co. Ltd.	Phnom Penh	Cambodia	Consultancy
173	IDP Education	Phnom Penh	Cambodia	Education and Training
174	IFB International Ltd.	Phnom Penh	Cambodia	Transport/Logistics
175	Il Forno Phnom Penh	Phnom Penh	Cambodia	Entertainment
176	Indoguna Co. Ltd.	Phnom Penh	Cambodia	Tourism/Hospitality
177	IQPS Trading Ltd.	Phnom Penh	Cambodia	Alcohol Trading
178	J. Eli Trading Co. Ltd.	Phnom Penh	Cambodia	Garments
179	JT International Co. Ltd.	Phnom Penh	Cambodia	Consumer Goods
180	June Kruoch Trading Co. Ltd.	Phnom Penh	Cambodia	Agricultural
181	Kaizen Institute SAIN	Phnom Penh	Cambodia	Consultancy
182	Kambio Nature	Phnom Penh	Cambodia	Retailer
183	Kamworks Ltd.	Phnom Penh	Cambodia	Consumer Goods
184	K-Box Solutions Co. Ltd.	Phnom Penh	Cambodia	Energy and Mines
185	Malis Dental Clinic	Phnom Penh	Cambodia	Healthcare
186	Nandi Eco Farming	Phnom Penh	Cambodia	Agricultural
187	Narita Vespa	Phnom Penh	Cambodia	Automotive

S.No.	Name of SMEs	Address	Country	Business Type/Sector
188	NBD Asia-Pacific Ltd.	Phnom Penh	Cambodia	Digital and IT
189	Old Durbar Restaurant	Phnom Penh	Cambodia	Restaurant
190	Pactics Group	Phnom Penh	Cambodia	Manufacturing
191	Pernod Richard Co. Ltd.	Phnom Penh	Cambodia	Alcohol Trading
192	Phare Performing Social Enterprise	Phnom Penh	Cambodia	Handicraft
193	R&T Fashion House	Phnom Penh	Cambodia	Garments
194	Satguru Travel and Tours	Phnom Penh	Cambodia	Travel and Tours
195	SGS Garments Ltd.	Phnom Penh	Cambodia	Garments
196	Sher-E-Punjab	Phnom Penh	Cambodia	Chain Restaurants
197	Startec Dynamic Co. Ltd.	Phnom Penh	Cambodia	Automotive
198	The Ascott Ltd.	Phnom Penh	Cambodia	Tourism/Hospitality
199	Wuerth Ltd.	Phnom Penh	Cambodia	Consumer Goods
200	Zuellig Pharma Ltd.	Phnom Penh	Cambodia	Healthcare

10% Selected Population from the Sample