

WOLKITE UNIVERSITY
SCHOOL OF GRADUATE STUDIES

**Determinants of Management Accounting Implementation: Evidence
From Selected Manufacturing Companies in Ethiopia**

BY: SHUMET MITKU

July/2021

Wolkite, Ethiopia



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**Determinants of Management Accounting Practices: Evidence
From Selected Manufacturing Companies in Ethiopia**

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A THESIS SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND
FINANCE, COLLEGE OF BUSINESS AND ECONOMICS, SCHOOL OF
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FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF SCIENCE IN ACCOUNTING AND FINANCE

July/2021

Wolkite, Ethiopia

STUDENT'S DECLARATION

I, undersigned here, declare that this thesis entitled as *“Determinants of Management Accounting Implementation: Evidence From Selected Manufacturing Companies in Ethiopia”* is my own original work which was prepared under guidance of Dr. Kenenisa Lemmi (PhD, Assistant Professor) and has not been submitted to/presented for award of any other degree or diploma to any university or other institute of higher education. And all the materials used as reference in this study have been duly acknowledged.

Students Name:- Shumet Mitiku

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Date -----

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This is to certify that the thesis entitled *“Determinants of Management Accounting Implementation: Evidence From Selected Manufacturing Companies in Ethiopia”* submitted in partial fulfillment of the requirements for the degree of Master of science in Accounting and Finance, the Graduate Program of the Department/School of Graduate studies, and has been carried out by Shumet Mitku, under our supervision. Therefore, we certify that the research is original and all the materials used as reference in this study have been duly acknowledged.

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We, the undersigned, members of the Board of Examiners of the final open defense by Shumet Mitiku have read and evaluated his/her thesis entitled “*Determinants of Management Accounting Implementation: Evidence From Selected Manufacturing Companies in Ethiopia*” and examined the candidate. This is, therefore, to certify that the thesis has been accepted in partial fulfillment of the requirements for the degree of Master of Science in Accounting and Finance and the thesis complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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ACRONYMS

MAP = Management Accounting Practice

BSC= Balanced Score Card

FDRE= Federal Democratic Republic of Ethiopia

MoI= Ministry of Industry

ABC = Activity Based Costing

ABB= Activity Based Budgeting

JIT= Just in Time

FP= Firm Performance

CS= Costing System

BS= Budgeting System

PE= Performance Evaluation

IFDM= Information for Decision Making

SA= Strategic Analysis

ROA= Return on Asset

ROE= Return on Equity

TMAT= Traditional Management Accounting Techniques

AMAT= Advanced Management Accounting Techniques

CIMA= Chartered Institute of Management Accountants

IMA= Institute of Management Accountants

IFAC= International Federation of Accountants

Abstract

In the era of globalization, the world has already been changed in to a small villege. Thus, being able to compete as per the demand of the existing business environment especially for business organizations is mandatory but not alternative choice. In other words, if large business organizations not able to be familiar with MAPs, they will lack power to be competent enough to assure survival. As a result, this research paper is conducte to investigate determinants of MAPs in selected large manufacturing companies in Ethiopia. To do so, the researcher used primary data that was collected from accountants and managers of selected large manufacturing companies in Ethiopia. Since implementation of MAPs increase as size of a company increase, the researcher purposively selected his sample elements from larger companies. Purposive samling was also applied to select directly related respondents out of all of the employees in a selected company. Amharic version of questionnaire was distributed to selected respondents like managers, dupty-managers, financial directors, chief accountants, senior management accountants or chief executives etc. The questionnaire was prepared using a five level likert- scale type and each of the variables in the study were measured using this 5-point Likert scale which is ranged from lowest(“Strongly Disagree”) to highest (“Strongly Agree”) scale. The study used descriptive statistic, multiple linear regression(OLS) and hypothesis testing to get proper output of the study. Size of a company, production technology, strategy of a company, qualification of accounting staffs and intensity of market competition were hypothesized factors to be investigated and all of these proposed determinants were expected to have positive and statistically significant effect on MAPs. It was identified from the analysis that, size of a company and qualification of accounting staff are the two important determinants to affect management accounting practices out of these proposed five determinants. However, production technology, strategy of a company and intensity of market competition were determinants identified not to have statistically significant effect on MAPs. Regression output of the analysis showed that 50.81% of the study is explained by the model and it showed that all of the variables collectively could play crucial role to contribute for MAPs in large companies. Depending on findings of the study, the researcher would like to recommend that all concerned bodies should give attention to improve limitations of MAPs in all leveled Companies as it is important to be familiar with concepts and principles of management accoounting to increase competitiveness of the companies in Ethiopia.

Key Words: MAPs, Large companies; Determinants of management accounting practices

CHAPTER ONE

1. Introduction

1.1. Background of The study

As a result of globalization which turned the world into a village, business organizations from all over the world including local companies from developing countries have been facing the challenges of international competition and advanced technologies. In other words, globalization forced developing countries get opened to greater competition in which new technology is common (Kassim, Md-Mansur and Idris, 2003). Whether it is in developed or developing countries, business environment today is becoming more and more sophisticated in terms of market competition, technological advancements, business transactions so on. The transactions are demanding application of managerial concepts and management accounting practices (Yohannes, 2018; Oyewo, 2017). Hussein (2018) also emphasized that global competition, scarce resources, continuous change and complexity in the business environment and advanced technology have been intensifying the challenges for more objective and detailed management accounting information. As Hussein said, management accounting is the process that measures, analyses and reports financial and non-financial information which helps managers make decisions to fulfill the goals of an organization.

In competitive business environment, business organizations highly need to have dominated power over their competitors. The existing competition is an opportunity for organizations that foresee what global market will be in near future and become ready to compete though it is a threat to those organizations that are not able to face challenges of global competition and couldn't estimate what the future competitive environment will seem. Thus, being competent enough in such type of competitive environment could be achieved by making informed, timely, effective and efficient business decisions (Yohannes, 2018).

According to Chenhall & Langfield-Smith (1998a), economic reforms have been adopted by most of developing countries (e.g., privatization) as a strategic approach because increased governmental interference mitigates market competitiveness and thus, some fields needed to be privatized in order to boost competition. Highly motivated competition, in the era of

globalization, has led to the intensification of the challenges. Business organizations, therefore, could effectively be managed to remain competent enough in the market which could be caused by obtaining objective information concerning the performance of these organizations. For this reason, experts have cautioned against management accounting losing its relevance and the management's need to adapt to the changing needs.

Management Accounting Practice (MAP) is a framework, model, technique or process that enables management accountants improve performance, facilitate decision-making, support strategic objectives and add values(CIMA, 2013). In other words, it is a practice that includes cost practices, budgeting and information for decision making, strategic analysis and performance analysis using management accounting techniques (Horngren, Datar, Foster, Rajan, &Ittner, 2009). As it is indicated by different studies clearly, there are two types of MAPs as traditional and modern/Contemporary. Traditional management accounting practices (TMAPs) are those that were developed before the 1980s including standard costing, variance analysis, return on investment, budgeting, and cost benefit analysis (Johnson and Kaplan, 1987). TMAPs are internally short-term in focus, and financially oriented (Pavlatos and Paggios, 2009; Cadez and Guilding, 2008). But TMAPs are no longer seen as adequate and suitable for today's business environment (Ahmad &Leftesi, 2014). EventhoughOmar, Abd-Rahman, and Sulaiman (2004) stated that integration of traditional with new management accounting practices could result in more effective management accounting system, Oluyinka Isaiah Ogungbade,Tobias Olweny andO. Oluoch(2017), emphasized weaknesses of TMAPS citing from different studies as:

“...the traditional management accounting practices such as standard costing, marginal costing and absorption costing have been criticized of being too weak to cope with the dynamic environment of the 21st century business because they are subservient to financial accounting and hence produces information that is too late, too aggregated and too distorted to be relevant for managers' planning and control decisions (Johnson & Kaplan, 1987; Kaplan, 1984; Watts et al., 2014; Waweru, 2010).”

Thus, new management accounting practices were proposed in the past two decades ranging from the traditional emphasis on financially-centered decision analysis and budgetary control to a more strategic approach that stresses on identifying, measuring and managing major

financial and operational drivers of shareholder value. They Stated also that current management accounting methods are a combined version of financial and non-financial information with explicit focus on strategies (Chenhall&Langfield-Smith, 1998a). New MAPs have emerged stressing not only on financial information but also on non-financial information to give a strategic focus to a company's decisions (Pavlatos&Kostakis, 2015).These MAPs are referred to as contemporary management accounting practices (CMAPs) and interchangeably referred to in the literatures as modern, recently developed, new, advanced or innovative management accounting practices (Scapens, 2006; Abdel-Kader and Luther, 2008; Abdel-Maksoud, Cheffi, and Ghoudi, 2016). CMAPs are considered as those practices that have the capacity to relate operations, processes and/or activities with strategic outcomes (Hyvönen, 2005). CMAPs focus on both historical and future events and have affected the whole process of management accounting. (Abdel-Kader & Luther, 2006).

According to Ahmad (2014), Larger business organizations are required to have sophisticated cost and management accounting systems in order to make decisions about pricing and costing of products which in turn make these business organizations be able to win their competitors. It is also indicated by other scholars that the role of management accounting is growing with increase in size and diversity of activities in organisations.Inorder that it could be possible to achieve the objective of accelerating managerial activities in an organization, the management accountingrole is inevitable, shown by different functional areas, in an organisation (Shank, 2007; Yazdifar and Tsamenyi, 2005; Bamber et al., 2008; Mishra, 2011).

However, experience of different business organizations especially in developing countries from review of previous studies show that implementation of MAPs did not reach the level where it should have been though it is not possible to get suffient amount of studies conducted especially for Ethiopian perspective to investigate factors that limit adaptation of MAPs in manufacturing companies. This research paper, therefore, will be an attempt to minimize the existing literature gap.

1.2.Statement of the problem

As it is a profession that involves partnering in management decision making, planning and performance management systems and providing professional expertise in financial reporting and control to assist managers in the formulation and implementation of an organization's strategic plan, management accounting practice today is becoming a key role player for sustainability of business organizations (Yohannes Fekadu, 2018; Bamber et al., 2008; Babajide Oyewo, 2017; Yazdifar and Tsamenyi, 2005). The role of management accounting practices (MAPs) is also emphasized by Sunarni (2013) to show the extent of its importance as the information provided to managers are relevant and useful in the sustainability of companies in today's competitive global market. Thus, MAPs are crucial to improve the organizations' performance and profitability.

Additionally, Yohannes (2018) indicated citing others work that modern management accounting practices (MAPs) have been incorporating financial and non-financial techniques to provide essential information at operational and organizational levels. As he says, the emergence of sophisticated MAPs such as balanced score card (BSC), activity based costing (ABC), target costing and strategic Management Accounting Practice was attributed to increased adaptation on modern managerial practices by today's organizations such as total quality management, supply chain management, Lean manufacturing and Just In time (JIT). To show the role of MAPs (modern one) to today's business environment, Mohamad Ahmad and Abdulghani Leftesi (2014) stated that "One of the most popular criticisms of management accounting in the last two decades has been that its traditional tools such as standard costing, variance analysis, budgeting, and cost volume profit analysis are no longer adequate to today's manufacturing companies."

In different economies, the demand for MAPs become more and more as the size of manufacturing companies grew. This is because managers need more detailed information to measure the performance of their companies with regards to the sales region and clients groups (Haldma, & Laats, 2002, cited in Sudhashini Nair & Yee Soon Nian, 2017).

When we see the trends about MAPs across countries and different level of companies/industries depending on existing literatures, it is possible to suggest that there are

different factors that affect implementation of MAPs though the gap may differ from country to country, time to time and industry to industry. Ahid and Augustine (2012) stated that “the roles of management accountants vary from one organisation to the next and these roles depend on the size of organisation, the type of organisation, culture, industry and other factors. On the other hand, these factors are different from time to time.” Thus, there are different identified contingent (internal and external) factors that have been investigated by different researchers as technology, company strategy, size, structure, environmental uncertainty, technology, market competition, resources, age, industry and culture, among others (Islam and Hu, 2012; Al-Mawali, 2015; Ajibolade and Oyewo, 2017). But it is rare to get research papers conducted by Ethiopians to identify these factors affecting MAPs though it is a common limitation not only for Africans but also developed world to get studies especially conducted to identify determinants of MAPs.

Therefore, having reviewed different existing literatures and previous studies (conducted by Ethiopians and scholars), this research paper was conducted as an attempt to identify determinants of MAPs in selected manufacturing companies in Ethiopia assuming that size of a company, Advanced production technology, strategies of a company, qualification of accounting staffs and intensity of market competition are the factors that could determine MAPs in manufacturing companies. However, related previous studies in Ethiopia were limited only to identify the use of management accounting practices for managerial decisions in selected real estate companies in Addis Ababa (Yohannes M., 2018) and assessment of management accounting practice & its effect on firms performance in Ethiopian cement factories (Yohannes F., 2018).

Research Questions

- Could size of a company affect adoption of management accounting practices?
- Does production technology of a company matter with adopting MAPs?
- Could strategy of a company determine adopting MAPs?
- Does quality of accountants matter with adopting MAPs?
- Could challenge of market competition faced by a company affect adoption of MAPs?

1.3.Objective of the Study

1.3.1. General Objective

General objective of the study was to identify determinants of MAPs of selected manufacturing companies in Ethiopia.

1.3.2. Specific Objectives

- i. To identify effect of size of a company on adoption of management accounting practices,
- ii. To examine effect of production technology of a company on adoption of management accounting practices,
- iii. To investigate influence of strategy of a company on adoption of management accounting practices,
- iv. To identify effect of quality of accountants staff of a company on adoption of management accounting practices,
- v. To identify influence of market competition on adoption of management accounting practices in a company,

1.4.Scope of the Study

The study was focus on determinants of MAPs like company size, market competition, quality of accountants, production technology and company strategy taking some randomly selected manufacturing companies in Ethiopia.

1.5.Significance of The Study

Since it is a research paper that was conducted using a topic about which previous studies were conducted rarely, the paper could be used as benchmark for further studies. Furthermore, the study also will have the chance to minimize existing literature gap in Ethiopia around the topic. The researcher also will get additional knowledge from the research paper.

1.6.Limitations of the study

Objective of the study was investigating determinants of management accounting implementation collecting primary data from selected large companies. The findings would have been more attractive if more Companies were included in the study. But due to existence of time and financial constraints in addition to challenges faced because of Covid-19, the thesis

was limited to cover only twenty large Companies assuming that these selected Companies could represent other large Companies in Ethiopia. Because it was too difficult to convince Company managers and accountants so that they could provide response for distributed questionnaires as covid-19 created risky environment not have contact with each other.

1.7.Organization of the paper

The thesis consisted five different chapters in addition to the preliminary pages. The first chapter dealt with introductory parts such as background of the study, statement of the problem, research objectives, research questions, significant of the study, scope of the study, limitations of the study and organization of the paper. The second chapter provides information about review of related literatures specifically definition of management accounting, empirical reviews about dependent and independent variables, proxies of variables and conceptual frame work. The third chapter consisted information about methods and techniques used to conduct the study. Findings and discussion of the paper are included in the fourth chapter. The last chapter describes something about conclusions and recommendations of the paper and finally references and appendixes added as parts of the thesis.

CHAPTER TWO

2. Review of related literatures

This chapter presents definition of management accounting and its concepts, the history & development of management accounting and various management accounting practices.

2.1. Definition of Management Accounting

According to Yohannes(2018),the evolution of management accounting could be explored in terms of the changing definitions from three major accounting bodies: The Institute of Accountants (IMA); the CharteredInstitute of Management Accounting (CIMA); and the International Federation of Accountants (IFAC). The Institute of Management Accountants (IMA) has provided the initial definition of management accounting by IMA (IMA, 1981, cited in Yohannes,2018), defined management accounting as “...the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information used by management to plan, evaluate, and control an organization and to assure appropriate use of and accountability for its resources. Recent definition (IMA, 2008) could taken as “a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization’s strategy”.

The Chartered Institute of Management Accounting (CIMA) (2005) define as “...management accounting is an integral part of management, which requires the identification, generation, presentation, interpretation and use of relevant information to inform strategic decisions and formulate business strategy, Plan long, medium and short term operations, Determine capital structure and fund that structure, Design reward strategies for executives and shareholders, Inform operational decisions, Control operations and ensure the efficient use of resources, Measure and report financial and non-financial performance to management and otherstakeholders, Safeguard tangible and intangible assets, Implement corporate governance procedures, risk management and internal controls.”This definition ofCIMA showed that

management accounting has been moving closer to senior management concerns with a focus on efficient utilization of resources, strategic planning and value creation process.

According to IFAC (1998), definition of management accounting could be taken as an activity that is interwoven in the management processes of all organizations. It is part of the management process which is focused on adding value to organizations by attaining the effective use of resources by people, in dynamic and competitive contexts. According to Horngren, et al., (2009), Companies use management accounting techniques to assess their operations like budgeting, variance analysis and breakeven analysis. These methods help organizations to plan, direct and control operating costs and to achieve profitability. As a result, it is recognized that MAPs are important to the success of the organization

2.2. Management Accounting Practice

According to Parker (2002), MAPs helps an organization to survive in the competitive, everchanging world; as it provides an important competitive advantage for an organization that guides managerial action, motivates behaviors, supports and creates the cultural values necessary to achieve an organization's strategic objectives. Management accounting is concerned primarily with the internal needs of management. It is oriented towards evaluation of performance and development of estimates of the future as opposed to traditional financial accounting which emphasizes historical data related to such legal financial matters as ownership, investment, credit granting, taxation, regulation, and the building of foundations for consistent and conservative external reporting, "in accordance with generally accepted accounting principles." Flexibility is an essential characteristic of management accounting since it presupposes that careful attention has been given to determine the important needs of management, many of which cannot be precisely identified in advance

Furthermore, Hyvnen (2005) stated providing empirical evidence on management accounting practices in Finnish manufacturing companies. The study recorded the extent of adoption of the management accounting practices, the perceived benefits from their use and ascertained intentions for future developments in these practices. The results indicated that financial measures like product profitability analysis and budgeting for controlling costs will continue to be important in the future, but noted that greater emphasis will be placed on newer non-

financial practices like customer satisfaction surveys and employee attitude surveys in the future. Wijewardena & De Zoysa (1999) In their study on management accounting practices in large manufacturing firms in Australia and Japan. The results of the survey found a number of important differences between the two countries. The most striking difference was that while management accounting practices in Australian companies placed an emphasis on cost control tools such as budgeting, standard costing and variance analysis at the manufacturing stage, those of Japanese companies devoted much greater attention to cost planning and cost reduction tools based on target costing at the product planning and design stage. Further, the Japanese companies seem to have introduced more frequent changes to management accounting practices than their Australian counterparts.

2.3. Review of Empirical studies

Objective of this research paper will be investigating determinants of MAPs in selected manufacturing companies in Ethiopia. It was not possible to get directly related literatures/studies from Ethiopian perspective though there are some studies that had been conducted by scholars about determinants of MAPs taking most of proposed factors that could affect implementation of MAPs. In this paper, the researcher will try to cover some of most commonly investigated factors by other researchers like size of a company, production technology, strategies of a company, qualification of accounting staffs and intensity of market competition and these determinants were selected reviewing different previous studies as Nair & Nian (2017), Haldma and Lääts (2002), Ogungbade, Olweny & Oluoch (2017) so on.

i. Size of a company

Organization size is defined as number of employees in the organization, however organization size can also be measured by the paid up capital of the organization (Tuanmat, & Smith, 2011). The demand for MAPs become more and more as the size of manufacturing companies grew. This is because managers required more details to measure the performance of their companies with regards to the sales region and clients groups (Haldma, & Laats, 2002, cited in Sudhashini Nair & Yee Soon Nian, 2017). Organization size as these existing literatures reveal may be taken as important determinant of MAPs as large organizations tend to adopt MAPs compared to SMEs.

Ahmad (2012) examined 110 Malaysian companies in the manufacturing sector. The findings of the study revealed that organization size has a significant impact on MAPs in business operations because larger firms have greater resources to facilitate MAPs. The study also found that larger firms required more comprehensive MAPs compared with SMEs. A study by Ismail and Mahmoud (2012) that examined organization size with MAPs in Egyptian manufacturing firms found that only few manufacturing firms that have adopted modern MAPs because modern MAPs are sophisticated to Egyptian manufacturing firms. Also, majority of the manufacturing firms in Egypt prefer to adopt traditional MAPs because traditional MAPs are simple and are convenient to use. Finally, in the research by Mbawuni and Anertey (2014) examining MAPs in telecommunication companies in Ghana, it was found that the extent of the usage and reasons for adoption of MAPs in Ghana depended on the nature and organization size. Therefore, depending on these findings about size of an organization, hypothesis one was developed as:

H1: Size of a company could have positive and significant effect on Management Accounting Practices(MAPs)

ii. Production Technology

Recent days, trends for business environment and technology has been evolving rapidly and getting widely disseminated in order that larger firms could follow the trends. However, it is difficult to SMEs to practice these trends which is attributed to lack of resources in adopting the current technology (Ahmad, 2012). Business production process in a manufacturing company determines the type of costing system used by the organization. Thus, production technology, affecting the production process, could have impact on designing of a new accounting system in manufacturing companies. Because of this, the production process requires MAPs to become more complex and sophisticated (Haldma, &Laats, 2002). Using modern technology in the production activities have effect on MAPs mainly in larger companies but not for SMEs. In other words, the necessity of production technology is limited to SMEs as larger firms are highly dependent on technology to assist their production activities compared with SMEs(Haldma, &Laats, 2002).

According to Leite et al.'s (2015), it was investigated that technology in textile industry has been evolving rapidly through recent decades. It was reflected through stages of manufacturing process which is electronics and automation. Thus, the results indicated that there is a significant impact of advanced production technology on MAPs. More over, Abdel-Kader and Luther (2008) corroborated also that there is impact of production technology on MAPs based on level of sophistication of production process. It was assured by Ahmad (2012) that there is significant influence of advanced production technology on certain MAPs such as costing and performance evaluation. In the same manner, a research was conducted by Ajibolade (2013) using 200 manufacturing companies in Lagos and investigated that the effect of manufacturing technology on MAPs is positive and significant. As a result, these reviewed findings made the researcher developed the second hypothesis as:

H₂: production technology could affect Management Accounting Practices(MAPs) positively and significantly

iii. Company Strategy

According to Baines and Langfield-Smith(2003), it was investigated conducting a research taking 700 manufacturing firms in Australia and conclude that the effect of firms' competitive strategy towards product differentiation strategy leads to choice of modern management accounting practices. On the other words, impact of company strategy on management accounting practices was positive and significant. Using a survey of Russian enterprises, Chenhall, Kallunki and Silvola(2011)confirmed that product differentiation is associated with innovation and management accounting practices. Further more, a research with sample of 350 manufacturing firms was conducted by Spencer, Joiner and Salmon(2009) assured also that product differentiation strategy is associated with new management accounting techniques. According to Ghasemiet al.(2015),it was suggested depending on findings of a research with 120 sampled manufacturing companies in Iran that changes in competitive strategy leads to changes in Management accounting practices towards strategic management accounting. Thus, based on these reviewed findings the researcher developed the third hypothesis as:

H₃: Strategies of a company can affect Management Accounting Practices(MAPs) positively and significantly

iv. Qualification of Accounting staff

Availability of qualified accountants may be one of the most crucial factors to make a company profitable, as far as the application of contemporary management accounting techniques are concerned. Level of qualification of accounting staff is defined as the knowledge obtained by an accountant to perform some activity in their organization. Level of qualification according to Abdel-Kader and Luther (2008) is essential and crucial for accountants. And they examined the relationship between level of qualification of accounting staff and MAPs in United Kingdom. The results indicated that the level of qualification of accounting staff will differ between sophistication of management accounting and organization.

Haldma and Laats's (2002) conducted a study on accounting staff on MAPs in Estonian manufacturing companies and found that there is a significant and positive impact of level of qualification of accounting staff on MAPs. They also assured that there are a number of accounting staff members that did not have proper knowledge about how to use the accounting information. Further more, Ahmad (2012) using a research paper conducted in Malaysian SMEs in examined the relationship between the level of qualification of accounting staff and MAPs. Thus, he found that the level of qualification of accounting staff has a significant and positive impact on MAPs. The study also found that education level of accounting staff significantly influenced the preparing and usage of accounting information.

Large firms hire qualified accountants to use MAPs for internal reporting and to assist managers in the decision making process (Ismail & King, 2007). In terms of the SMEs context, MAPs applied by qualified accountants may have a significant role affect the organization's productivity and growth (Collis & Jarvis, 2002). Thus, qualification of accounting staff is one of the factors that might affect the adoption of MAPs in an organization.

Hence, depending on review of findings of different researchers here, the fourth hypothesis was developed as:

H₄: Qualification of Accounting staff of a company could affect Management Accounting Practices(MAPs) positively and significantly

v. Intensity of market competition

The intensity of market competition also plays an important role in encouraging companies to adopt MAPs. As time goes by and as market competition increases; MAPs are important as it allows companies to compete with their competitors effectively and it allows companies to make better decisions (Ahmad, 2014). In addition, MAPs in companies today face intense competition from internal factors and external factors. Internal factors are factors such as technology and strategy of the company while external factors features the external environment at the level of business and accounting that shape the internal system (Ahmad, 2014).

Intensity of market competition is defined as one organization competing with another organization in terms of product, services and prices in the external environment (Cadez&Guilding, 2008). Ahmad (2012) mentioned that intensity of market competition is an external factor of competition and managers need to gain knowledge and experience regarding new costing system to compete in an intense market competition. Leite, Fernandes, and Leite (2015) examined the market competition faced by organizations that have adopted MAPs. The authors found that MAPs are required for the organization due to complexity of the business environment and that MAPs assist organizations to determine the resources incurred in each production process. Furthermore, Luther and Longden's (2001) study on MAPs in South Africa found that MAPs change due to the volatility of the market competition faced by companies.

Haldma and Laats (2002) examined the impact of the intensity of market competition on MAPs of manufacturing company in Estonia. The findings of the study revealed that there is a significant relationship between intensity of market competition on MAPs as the external environment aspect affected the nature of the accounting system. Tuanmat and Smith (2011) studied the impact of business environment on MAPs of manufacturing company in Malaysia. The results of the study indicated that there is a positive significant relationship between the external business environments with MAPs. Also the study found these companies' using MAPs in their external business environment affected the performance of their companies. Therfoe, depending on review of findings the fifth hypothesis was developed as:

H₅: Intensity of market competition could affect Management Accounting Practices(MAPs) positively and significantly

2.4. Summary of Empirical Reviews

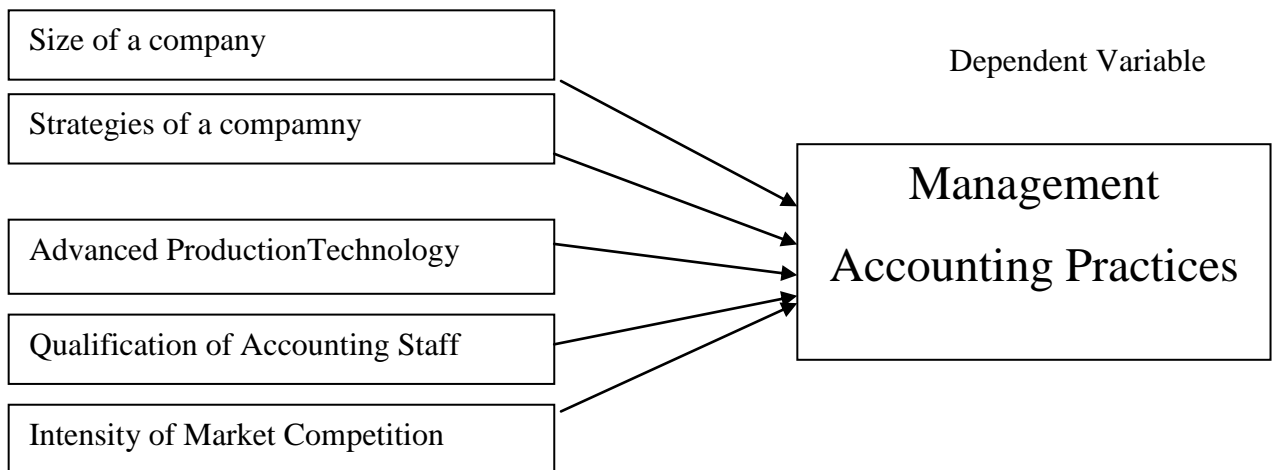
Objective of the study was investigating determinants of MAPs in selected manufacturing companies in Ethiopia. Eventhough it was not possible to get sufficient and directly related existing literatures from Ethiopian perspective, the researcher tried to develop empirical review depending on different available studies conducted by scholars and Ethiopians to show consistency of proposed determinants in the study. Thus, the propsed determinants were size of a company, production technology, strategies of a company, qualification of accounting sttaffs and intensity of market competition and these determinants were selected reviewing these different previous studies like Nair & Nian (2017), Haldma and Lääts(2002), Ogungbade, Olweny & Oluoch(2017) so on.

2.5. Conceptual Frameworks

The relationship between MAPs (dependent variable) and independent variables (size of a company, production technology, strategies of a company, qualification of accounting sttaffs and intensity of market competition) is shown diagrammatically as conceptual framework in Figure-1 below.

Figure 1 Conceptual Frameworks

Independent Variables



2.6. Proxies to measure Selected variables

A. Dependent variable:

According to Kamilah (2012), there are different details of MAPs that had been grouped into five major parts and they are being used as proxies to measure/determine the dependent variable (MAPs) and these are costing system, budgeting system, performance evaluation system, decision support system and strategic management accounting.

According to (Ogungbade, Olweny and Oluoch, 2017), these major grouped parts of MAPs have different fifteen fractions that are being used as proxies to measure the aforementioned major groups and these are activity based costing, activity based budgeting, activity based management, target costing, throughput accounting, backflush costing, life cycle costing, product profitability analysis, quality costing, kaizen costing, balanced score card, just in time, value chain analysis, benchmarking and shareholders' value analysis. Referring different existing literatures, the researcher tried here to show how it is possible to use these detailed components as proxies to measure/determine MAPs in general and grouped major five components of MAPs in particular.

i. Costing System:-

According to (Kamilah, 2012), both traditional and contemporary costing practices have been included in MAPs research lists though managers need the activity based costing and target costing as important information. Different previous studies assured that information about product costs generated by costing systems was being used by a number of business organizations and these are like pricing decisions and cost control etc (Lukka and Granlund, 1996; Cinquini et al. 1999; Van Triest and Elshahat, 2007) and evaluation of production processes; and transfer pricing (Bjornenak, 1997). Absorption costing and direct (variable) costing were the two major costing system components used by a number of developed countries and absorption costing was preferable globally (Drury et al, 1993; Kamilah, 2012; Shields et al, 1991).

For example, (1993) observed that 58 per cent of U.K firms often or always used absorption costing and Scherrer (1996) found that around half of German firms applied this technique.

Similarly, AbdelKader and Luther (2006) indicated just over 50 per cent of British firms implemented this technique. A considerable amount of research has focused on activity-based costing (ABC) despite the survey evidence generally indicating that with the exception of the U.S and Australia, it is only used in a small minority of companies surveyed. Use of other costing techniques such as process costing and job costing has also been widely researched in different countries. Shields et al. (1991), for example, noted that Japanese firms report more a frequent use of process costing (55 per cent to 61 per cent) compared to U.S companies (24 per cent to 36 per cent).

ii. Budgeting System:-

A number of previous studies have used different types of budgeting practices in their researches such as budgeting for controlling costs, budgeting for coordinating activities across the business units, budgeting for planning cash flows, capital budgeting and budgeting day-to-day planning of operations.

According to (McLellan, 2014), the predominate practice in the management control systems of American businesses was budgeting practices. Further more, in less developed countries like Ghana budgeting system is practical (Mbawuni & Anertey, 2014). Farouk and Bose (2012) has found using their study in Egypt that Egyptian companies are known to use budgets, specifically budgeting for controlling costs and budgeting for day-to-day planning of operations. It was explained by different studies depending on their findings that the main purposes of budgeting is planning future performance, planning the future financial position, planning future cash flows, planning future day to day operations and controlling costs (Sulaiman et al., 2004; Fruitticher et al., 2005; Abdel-Kader and Luther, 2006). It is also used to performance evaluation, communication of goals and strategy formation (Hansen and Van der Stede, 2004; Sulaiman et al., 2004; Fruitticher et al., 2005). Puxty and Lyall (1989) found that majority of UK industrial companies were using both standard costing and budgeting system in their firms as control system of budgeting. Kamilah (2012) authenticated following findings of her research work (80 per cent of her respondents agreed that there were frequent revision of budget during the budgeting process) that different companies in different countries set budgets, typically starting from the process four to six months before the start of the financial year.

Thus, the researcher will try to investigate whether budgeting system as part of MAPs is being practiced in Ethiopian largest companies using budgeting to day-to-day activities/operations, budgeting for controlling, budgeting for planning etc as proxies of budgeting system.

iii. Performance Evaluation System:-

Performance evaluation is an important function of management accounting practice (Emmanuel et al., 1990). It provides critical information to managers so that they could achieve strategic objectives of their business organization's (Jusoh and Parnell, 2008). Performance evaluation is mainly implemented categorizing it in to financial and non - financial measures. Financial performance is referred to as the level of profit that represent successful achievement of competitive advantage (Noordin et.al., 2015). It includes some TMAPs such as return (profit) on investment, divisional profit, controllable profit, variance analysis and other CMAPs such as Economic value added (EVA) and residual income. Majority of different studies provide recognition to the high adoption level of performance evaluation based on traditional financial measures (Alleyne and Weekes-Marshall, 2011; Rababa'h, 2014).

According to (Anh et al., 2011), non-financial performance is evaluated based on higher achievements compared to competitors in terms of cost advantage, quality, delivery schedule, sales volume, market share and in terms of product innovation. Non-financial performance also takes in to account of measures like employee attitudes, team performance, supplier evaluations, customer satisfaction surveys, balanced scorecard and some add benchmarking. (Abdel-Kader and Luther, 2006; Alleyne and Weekes-Marshall, 2011).

According to (Hall, 2008), comprehensive PMS are developed by organizations to provide managers and employees with information and these PMS include a more diverse set of performance measures, and performance measures that are linked to the strategy of the firm. He also stated examples of these popular PMS/techniques for delivering a wider set of performance measures as balanced scorecard and performance hierarchies. Newly developed performance measures based on non-financial measures, have more widely been applied by organizations over time (Gomes et al., 2004; Ismail, 2007). Banker et al. (2000) argued that the primary reasons suggested for the use of nonfinancial performance measures are that these

measures are better indicators of future financial performance than accounting measures, and they are valuable in evaluating and motivating managerial performance.

iv. Decision Support System:-

According to (Amani Hussein, 2017), customer profitability analysis, value chain analysis and product life cycle are some of the proxies that can be used to measure or determine decision support system. Wu et al. (2007), stated that effective decision making is the most important key factor in today's rapid and changing competitive environment. The decision support analysis can be divided into short term and long term analysis. Abdel-Kader and Luther (2006) argued that for regular or short-term decisions management accountants can use cost-volume-profit (CVP) analysis, product profitability analysis, customer profitability analysis, and stock control models. For longer-term capital investment decisions management accountants can produce and review accounting rates of return and payback periods as well as complex signals based on discounted cash flow. Capital budgeting techniques capture both non-discounted and discounted approaches. Klammer et al. (1991) argued that the superiority of internal rate of return (IRR) and net present value (NPV) analysis has been repeatedly demonstrated under conditions of certainty. Under uncertainty, the techniques used are sensitivity analysis, increased required rates of return, game theory, and Monte Carlo computer based simulation.

Techniques for dealing with uncertainty have also been researched (see for example Lazaridis, 2004; Abdel-Kader and Luther, 2006). Abdel-Kader and Luther indicated that the U.K companies used computer simulation (6 per cent); and "what if" analysis (22 per cent). Another decision support technique; breakeven analysis had a relatively moderate adoption rate. For example, in the U.K the adoption rate was 38 per cent (Abdel-Kader and Luther 2006). In contrast, Chenhall and Langfield-Smith (1998) found an 86 per cent adoption of breakeven analysis in Australia. Product profitability analysis has been adopted to a significant extent in both developed and developing countries. For example, in U.K 69 per cent of respondents reported its use (Abdel-Kader and Luther, 2006); in Australia 89 per cent (Chenhall and LangfieldSmith, 1998); and in India 82 per cent (Joshi, 2001).

v. Strategic Management Accounting:-

According to Bromwich (1990), strategic management accounting could be determined by provision and analysis of financial information about a business organization's product markets, competitors' costs and cost structures. It also includes monitoring implementation of strategies of the given business organization and how its competitors are implementing their marketing strategies for a long period of time.

Drury (1994) argued that conventional management accounting does not provide the financial information required to monitor existing strategies or support strategy formulation. SMA seeks to remedy this situation by providing the financial analysis to support the formulation of successful competitive advantages. Lord (1996) identified the three important elements from the previous literatures in SMA as collection of competitor information, exploitation of cost reduction opportunities and matching of the accounting emphasis with strategic position.

Although there is strong academic support for the concept of SMA, Guilding et al. (2000) argued that, there appears to be negligible use of the term 'strategic management accounting' in organizations and practising accountants have a limited appreciation of what the term means. Smith (2007) who reviewed previous studies in Australia concluded that SMA techniques has not been adopted widely, nor is the term SMA widely understood or used. However, SMA has influenced the thinking and language of business, and the way in which companies undertake various business processes (Abdel-Kader and Luther, 2006).

B. Independent variables

Five contingent variables that may be positively associated with the extent of use of management accounting practices were identified. The selection is based on theoretical appropriateness and the availability of the information. The measurements used as proxies for these contingent factors are detailed below:

- i. Size of a company

It was indicated by kamilah (2012) citing previous studies like (Haldma and Laats, 2002; Al-Omiri and Drury, 2007 and Kader and Luther, 2008) in her doctoral study that firm's size has inevitable role to adopt MAPs in business organizations. As she has stated, a larger firm has

greater total resources, better internal communication systems that facilitate the diffusion of management accounting practices, and are more complex and face more difficult problems. Thus, greater total resources, better internal communication systems, being more complex company and facing more difficult problems were identified as proxies of size of a company in her desertation.

According to Babajide Oyewo (2017), CIMA (2009), Adejuyigbe *et al.* (2013) and Sunarni (2013) it was authenticated that number of employees was commonly used as proxy of size of a company and they have argued that it is very easy to get information on the number of employees than updated information on sales revenue or profit. According to Haldma & Lääts(2002), size of a company can be measured by extended hierarchies and greater decentralisation down to hierarchical structures and diversification in product lines.

ii. Production Technology

According to kamilah (2012), the use of modern or advanced technology in production activities has been shown to affect the use of MAPs in many large companies. Moreover, in today's modern business environment, technology has been evolving very quickly and widely disseminated. Furthermore, as technology constraints from the production process, manufacturing system in large companies requires MAPs to become more complex and sophisticated (Haldma, & Laats, 2002). According to Ahmad (2012), use of production technology is limited to SMEs because larger firms are highly dependent on technology to assist their production activities.

According to Ogungbade, Olweny and Oluoch(2017), the research instrument developed by Baines and Langfield-Smith (2003) was adapted to measure manufacturing technology, firms strategy and management accounting practices. If a company be familiar with use of advanced manufacturing technologies, then we are able to measure and conclude whether the organization is using production technology or not. Therefore, the use of modern or advanced technology in production system of a firm is used as proxy of production technology of the company.

iii. Strategise of A company

Companies competitive strategy towards product differentiation could leads to choice of modern MAPs and product differentiation here used as proxy of strategy of a company. The authors also tried to show citing others research work to reveal how product differentiation is used to measure company strategy as “Using a survey of Russian enterprises and path analysis, Chenhall, Kallunki and Silvola(2011) confirm that product differentiation is associated with innovation and management accounting practices. Similarly, using a sample of 350 manufacturing firms, Spencer, Joiner and Salmon(2009) also suggest that differentiation strategy is associated with new management accounting techniques. The study of Ghasemi et al.(2015) also suggests that changes competitive strategy of the 120 sampled manufacturing companies in Iran lead to changes in Management accounting practices towards strategic management accounting.”

iv. Quality of Accounting staff

According to kamilah(2012), the existence of qualified internal accounting staff can be a significant factor underlying the adoption of MAPs. Most large firms have specific accounting and finance departments and prefer, therefore, to hire qualified internal staff to do professional reporting and consultation. Previous studies like Halma and Laats (2002); Al-Omiri (2003) and Ismail and King (2007) assured that the presence of competent accounting staff is associated with a high level of uptake of MAPs. Therefore, the level of qualification of accounting staff will be included as one of the potential factor that might affect adoption of MAPs in Malaysian SMEs. The qualification status of the firm’s accountant is measured simply by the type of qualifications that the accountant possesses to be able to performe his or her day to day management accounting activities. In other words, since larger organizations normally have accounting and finance departments (Ismail & King, 2007), and if these departments are present and are able to function properly, then we are able to say the organization had already employed qualified accountants. Therefore, having accounting and finance departments and making the departments function properly be taken as proxy of qualified accounting staff.

v. Intensity of market competition

Citing from other researchers, kamilah(2012) indicated that the intensity of market competition can play a great role in encouraging managers to enhance management accounting systems and

adopt sophisticated MAPs. As competition increases, business organizations need and use more reliable management accounting information to be competent enough and environmental uncertainty is used to measure and test existence of intense market competition. According to Nair & Nian(2017), intensity of market competition can be measured in terms of product, services quality and prices competition among organizations.

2.7.Knowledge Gap

To conduct the paper, it was necessary for the researcher to identify the knowelege gap to which the researcher needs to contribute for. As it was authenticated by different studies, the demand for MAPs is becoming more and more as the size of manufacturing companies and competition among tese companies increase. Moreover, it was necessary to know why implementation of management accounting concepts vary from country to country and from companies to companies. However, it was not possible to get sufficient directly related literatures that provide full information about the topic. Therefore, the thesis was conducted to test the proposed determinants and to contribute to the existing literatures to minimize the gap to the lower possible level.

CHAPTER THREE

3. Methodology and Research design

3.1.Introduction

To arrive at sound conclusions and recommendations, a researcher is required to take care in the process of selecting research design, sample size, target population, source of data, data collection methods, and analysis methods. As a result, the researcher have chosen sample selection out of total population method as the title indicates that data was collected from some selected manufacturing companies in Ethiopia.

3.2.Research Approach

As different previous studies indicated, deduction approach is a type of research approach that uses previous studies and theories to built conceptual framework. In other words, a deduction approach adopts current theories and concepts to justify research relationships. Thus, conceptual framework of this research paper was built depending on review of previous studies. Deductive approach is also helpful to identify the causal relationships among factors by collecting data in most cases using a quantitative method. It also helps in generalizing from the chosen sample to the whole population. Therefore, deduction approach is used here to conduct the study because the researcher concluded and generalized about MAPs habit of large companies in Ethiopia depending on his finding which was found from analysis of primary data collected from sampled companies.

3.3.Research Design

A research design is the conceptual structure with in which a research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. Therefore, the design includes an outline of what the researcher have done from writing the hypothesis and its operational implications to the final analysis of data (Kothari, 2004, pp.31). Thus as a research design, primary data was collected from randomly selected twenty large companies and the researcher applied OLS(multiple linear regression model) to identify determinants of MAPs in Ethiopia in general and large companies in particular.

3.4. Source of data

The paper used primary data from 20 randomly selected (out of A-level companies) manufacturing companies in Ethiopia. To collect adequate and reliable data, the researcher purposively selected up to five individuals like managers, deputy managers, financial directors, chief accountants, senior management accountants or chief executives etc. These respondents were selected purposively out of all employees within a selected Company to increase reliability of data that was collected from the respondents. Thus, Amharic version of questionnaire, that was prepared by the researcher, was distributed to these purposively selected respondents.

3.5. Target Population

According to Kothari (2004), a researcher should use a well specified target population so that the researcher could make all his inferences regarding validity of what he/she is investigating on. A population frame is a comprehensive itemized list of all subjects, which comprise the study population, from which a sample is to be taken (Uma sekaran, 2003). The target population for this study included all individuals that work in A-level manufacturing companies in Ethiopia and work as top manager and all financial activities related employees.

3.6. Sample size

size of a sample should neither be excessively large, nor too small. Rather, it should be optimum. An optimum sample is one which fulfills the requirements of efficiency, representativeness, reliability and flexibility (Kothari, 2004). Based on their structural arrangement/behavior, A-level companies were purposively selected (as target population) and Simple random sampling was applied to get representative samples. 15-20 large manufacturing companies as sample elements were proposed first to be selected. As a result, 20 large manufacturing companies as sample elements were selected depending on the proposal. Purposive sampling was applied on each randomly selected company to get more reliable data.

3.7. Data collection methods

Simple random sampling and purposive sampling method were applied on selection of companies and respondents respectively. Since implementation of MAPs increase as size of a

company increase, then the researcher purposively selected his sample elements from A-level(larger) companies. Purposive sampling also was applied to select directly related respondents out of all of the employees in a selected company. Amharic version of questionnaire was distributed to selected respondents like financial directors, chief accountants, senior management accountants or chief executives. The questionnaire was prepared using a five item likert- scale type and each of the variables in the study were measured using this 5-point Likert scale which is ranged from lowest(“Strongly Disagree”) to highest (“Strongly Agree”) scale. Likert-scale type was preferred since it is relatively easier to be constructed and performed without a panel of judges; it is more reliable when respondents answer each statement included in the questionnaire and it also provides more information and data than does other scale methods(A.L. Edwards and K.C. Kenney,1946, cited in Kothari, 2004).

3.8.Variables used in the Research

3.8.1. Dependent Variable

As dependent variable, it may be possible to get different measurement methods what previous studies used to measure MAPs. It is because MAPs is a variable with binary behavior as it needs to be checked whether a given company implements different branches of modern MAPs or not in parallel with identification of determinants of MAPs.To do so, the researcher will organize/condense fifteen different branches of modern MAPs as Oluyinka Isaiah Ogungbade(2017) stated that implementation of MAPs could be measured using fifteen modern management accounting techniques like activity based costing, activity based budgeting, activity based management, target costing, throughput accounting, backflush costing, life cycle costing, product profitability analysis, quality costing, kaizen costing, balanced score card, just in time, value chain analysis, benchmarking and shareholders’ value analysis.

Hence, averaged value from these fifteen different dimensions (summed and averaged value of these fifteen questions) were used to measure and check whether modern MAPs is being implemented in a given company in Ethiopia or not. To get genuine evidence about MAPs, a questionnaire containing fifteen items of five level Likert-scale type was developed by the

researcher. And Amharic version of duplicated questionnaire were distributed to the respondents (directly related individuals) in randomly selected companies.

3.8.1. Independent Variable

The study focused on five independent variables that are supposed to have positive and significant impact on MAPs (dependent variable) in manufacturing companies in Ethiopia. These supposed variables in this paper were: size of a company, production technology, strategies of a company, qualification of accounting staffs and intensity of market competition.

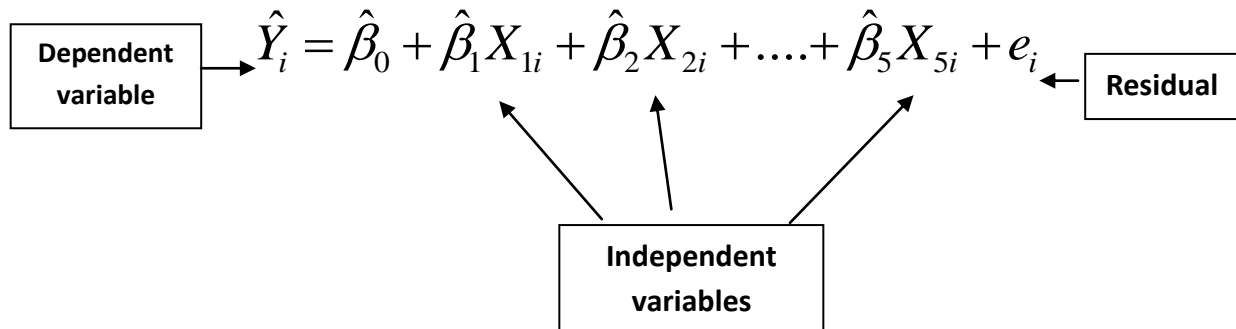
3.9. Data Analysis Method

Descriptive statistics was applied to conducted analysis of demographic data and MAPs (to identify whether these selected companies properly exercise modern management accounting practices or not). To examine the research hypotheses, to test the relationship among proposed factors, to test some of OLS assumptions, OLS multiple linear regression analysis, the Pearson correlation analysis and other methods like Breusch and Pagan (for heteroscedasticity test) respectively were applied. And also, the Statistical Package for Social Sciences (SPSS) version 20 and Stata-13 was used accordingly. To test overall significance of the model and reliability and consistency of constructed questionnaires, F-statistics and Cronbach's Alpha (α) were applied respectively. Ordinary least squares (OLS) multiple linear regression was executed to estimate the magnitude of the effect of the proposed factors (the independent variables) on MAPs (the dependent variable).

3.10. Model Specification

To specify suitable model (to select consistent model) and to propose the independent variables included in the model, the researcher tried to refer different previous studies like (Sudhashini Nair & Yee Soon Nian, 2017; Tariq H. Ismail and Nancy Mohamed Mahmoud, 2012; Pham Quang Huy and Vu Kien Phuc, 2019; Kamilah Ahmad and Shafie Mohamed Zabri, 2015) and many others. So, the reliability and validity of the model were tested in parallel with analyzing data and interpreting the results in the study.

Model of the paper:



$$\text{MAPs} = \alpha + \beta_1 \text{SOC} + \beta_2 \text{PT} + \beta_3 \text{SOAC} + \beta_4 \text{QAS} + \beta_5 \text{IMC} + e_i$$

where: -

MAPs → Implementation of Management Accounting Practices

SOC → Size of a company

PT → Production Technology

SOAC → Strategies of A company

QAS → Quality of accounting staff

IMC → Intensity of market competition

e_i → the error term

CHAPTER FOUR

4. Results and Discussion

4.1.Introduction

The main objective of this study was identifying determinants of Management Accounting Practices collecting data from Selected Manufacturing Companies in Ethiopia. Thus, this chapter includes the analysis result and discussions for findings of the analysis. The discussion begins with the questionnaires' response rate followed by the descriptive statistics of the respondents related questions; like the gender, age, field of study, work experience and level of education. The results of the reliability analysis and the regression assumption test also reported and finally the results of hypothesis testing are presented.

4.2.Descriptive Statistics

4.2.1. Response Rate

Amharic version of two type questionnaires were distributed to managers and accountants in randomly selected large companies. Out of these distributed 99 questionnaires, 76 questionnaires from both groups were collected back (38 responses from accountants group and 38 from managers group) achieving response rate of 76.77% showing good response rate for the managers and accountants. Thus, 76 questionnaires(38 from each group) were used for regression analysis purpose.

4.2.2. Respondents Background

As it is shown in the table-1 below, analysis of data about respondents' age, sex, field of study and level of education is presented in detail. Out of the total respondents from Managers, 29(76.32%) were males and 9(23.68%) were females. As the analysis showed majority of the respondents from company managers were males. As far as analysis result about age group is considered, 9(23.68%) of top managers were from age group between 30-39, 25(65.79%) of them were from age group between 40-49 and 4(10.53%) of them were from age group between 50-59. Analysis of data about the field what top managers studied shown that 19(50%) of them were accounting graduates, 8(21.05%) of them were graduates of management department, 5(8.6%) of the respondents were graduates of economics department and the remaining 6(15.79%) of them were graduates of different departments.

Additionally, analysis of data regarding to qualification of respondents showed that 33(86.84%) of these top managers were first degree holders and 3(7.89%) of them were masters degree graduates and the remaining 2(5.26%) of the respondents were individuals who did not say something about their academic qualification. As the result showed here, most of the respondents were identified to be first degree holders.

Table 4. 1 General profile of Managers

Demographic information		Response from Top management members	
		Frequency	Percentage
Gender	Male	29	76.32%
	Female	9	23.68%
	Total	38	100%
Age	30-39	9	23.68%
	40-49	25	65.79%
	50-59	4	10.53%
	Total	38	100%
Field of study	Accounting	19	50%
	Management	8	21.05%
	Economics	6	15.79%
	Others	5	8.6%
	Total	38	100%
Qualification	Degree holder	33	86.84%
	Master Holder	3	7.89%
	Missed data	2	5.26%
	Total	38	100%

Source: personal Survey data & SPSS-20/2021

Table 4. 2 General profile of Accountants

Demographic information		Response from Accountants	
		Frequency	Percentage
Gender	Male	23	60.53%
	Female	15	39.47%
	Total	38	100%
Age	20-29	4	10.53%
	30-39	16	42.11%
	40-49	18	47.37%
	Total	38	100%
Field of study	Accounting	18	47.37%
	Management	12	31.58%
	Economics	6	15.79%
	Cooperative Accounting	2	5.26%
	Total	38	100%
Qualification	Degree holder	32	84.21%
	Master	6	15.79%
	Total	38	100%
Work experience	Less than 1 year work experience	0	0%
	1-2 years of work experience	2	5.26%
	3-5 years of work experience	8	21.05%
	6-10 years of work experience	19	50%
	More than 10 years of work experience	9	23.68%
	Total	38	100%

Source: personal Survey data & SPSS-20/2021

Detailed analysis about age, sex, field of study, qualification and work experience is presented in the above table-4.2. As a result, the analysis showed that 23(60.53%) of the respondents were male and 15(39.47%) of them were female internal audit officers. Out of these total respondents, 4(10.53%), 16(42.11%) and 18(47.37%) of them were from age group between 20-29, 30-39 and 40-49 respectively.

Analysis of data showed also that 18(47.37%), 12(31.58%), 6(15.79%) and 2(5.26%) of the respondents from Accountants were from field of study of accounting, management, economics and cooperative accounting departments respectively. If analyzed result about their academic qualification is considered, 7(12.1%) of them were diploma holders and the remaining 51(87.9%) of these contacted Accountants were first degree holders.

Out of total Accountants contacted for data collection purpose, 2(5.26%) of the respondents have 1-2 years of work experience, 8(21.05%) of them have 3-5 years of work experience, 19(50%) of them have 6-10 years of work experience and the remaining 9(23.68%) of them have More than 10 years of work experience. As the analysis showed, majority of the Accountants in this .study have 6 -10 years of work experience.

4.2.3. Descriptive Analysis of Management Accounting practice

Table 4. 3 Descriptive Analysis of Management Accounting practice

No.	Five major parts of MAPs like costing system; budgeting system; performance evaluation system; decision support system and strategic management accounting are detailed in to fifteen parts to ascertain whether the respondents use each particular practice in their firms or not	N	SDA	DA	NEU	AG	SAG	Mean	Median	Std. Deviation
1	Activity based costing: a cost accounting system that uses both unit-and non-unit based cost drivers to assign costs to cost objects by first tracing costs to activities and then tracing costs from activities to products.	38	0.053	0.026	0.105	0.579	0.237	3.92	4	.969
2	Activity based budgeting,	38	0.026	0.237	0.105	0.474	0.079	33.11	4	1.371
3	Activity based management: an advanced control system that forces management's attention on activities with the objective of improving the value received by the customer and the profit received by providing this value	38	0.000	0.158	0.184	0.447	0.211	3.71	4	.984
4	Target costing: a method of determining the cost of a product or service based on the price the customers are willing to pay.	38	0.026	0.079	0.079	0.579	0.237	3.92	4	.941
5	Throughput accounting,	38	0.000	0.263	0.026	0.342	0.368	3.82	4	1.205
6	Back flush costing,	38	0.026	0.079	0.079	0.421	0.368	3.95	4	1.207

7	life cycle costing: the time a product exists from conception to abandonment; the profit history of the product according to four stages: introduction, growth, maturity, and decline.	38	0.053	0.289	0.342	0.263	0.026	2.84	3	1.053
8	product profitability analysis,	38	0.000	0.237	0.053	0.500	0.184	3.55	4	1.201
9	quality costing,	38	0.00	0.15	0.18	0.50	0.15	3.66	4	.938
10	kaizen costing:	38	0.079	0.289	0.237	0.184	0.184	3.03	3	1.345
11	Balanced score card: a strategic – based performance management system that typically identifies objectives and measures for four different perspectives: the financial perspective, the customer perspective, the process perspective and the learning and growth perspective.	38	0.000	0.026	0.237	0.658	0.053	3.66	4	.847
12	Just in time (JIT) a demand –pull system that strives to produce a product only when it is needed and only in the quantities demanded by customers.	38	0.026	0.132	0.158	0.447	0.237	3.74	4	1.057
13	Value chain analysis: identifying and exploiting internal and external linkages with the objective of strengthening a firm’s strategic position.	38	0.000	0.289	0.237	0.395	0.079	3.26	3	.978
14	Benchmarking: uses best practices as the standard for evaluating activity performance.	38	0.05	0.28	0.10	0.47	0.07	3.24	4	1.12
15	Share holders’ value analysis: the after tax operating profit minus the total annual cost of capital.	38	0.02	0.07	0.13	0.63	0.13	3.76	4	.883

Source: computed Survey data & SPSS-20/2021

To measure central tendency of detailed items through examination of mean score of collected data about management accounting practice(Dependent variable), descriptive analysis is used by the researcher. The lower the mean score indicates that most of the respondents responded that they strongly disagreed or disagreed about practicing management accounting concepts and the reverse is truth if the mean score is high. But, standard deviation is used to measure the variability or dispersion. The higher the standard deviation, the more will be the scores to get spread out. Table 4.3 above showed management members suggestion or perception about management accounting practice in selected companies. A questionnaire containing fifteen items related to management accounting practice was distributed to these management members and descriptive analysis of the collected data used to measure MAP.

Out of these fifteen items, ten of them showed mean score between 3.55 and 3.95. This means most of top management members from selected companies agreed that management

accounting principles are being practiced though the response from the rest of the respondents show that they are in doubt about MAP. In other words, mean score from most of the respondents revolve around four indicating that most of management member respondents agreed that MAPs are functional in most of the companies. The higher mean score (3.95) for item no. six showed that 42.1% and 36.8% of management members agreed and strongly agreed respectively that Back flush costing is being practiced in randomly selected companies.

4.2.4. Descriptive Analysis of Independent Variables

Table 4. 4 Descriptive Analysis of Independent Variables

R.No.	1. size of a company	N	SDA	DA	NEU	Ag	SA	Mean	Media	Std. Deviation
1	As larger firm, your company has greater amount of total resources	38	0.026	0.105	0.079	0.421	0.368	4.000	4	1.065
2	There is better internal communication systems that facilitate the diffusion of management accounting practices	37	0.000	0.158	0.026	0.711	0.079	3.730	4	0.838
3	As a larger company, your company is more complex and facing more difficult problems.	38	0.079	0.342	0.158	0.395	0.026	2.947	3	1.089
4	As a larger company, your company requires more control on information, its business activities and then needs more comprehensive and sophisticated MAPs.	38	0.000	0.237	0.079	0.526	0.158	3.605	4	1.028
5	Size of your firm is measured based on annual sales turnover	38	0.000	0.079	0.053	0.632	0.237	4.026	4	0.788
	2. Production technology									
1	There is flexible manufacturing system	38	0.026	0.079	0.132	0.500	0.237	3.763	4	1.149
2	Computer numerically controlled machines	38	0.000	0.263	0.105	0.500	0.132	3.500	4	1.033
3	There is local training program about advanced techniques	38	0.053	0.263	0.158	0.395	0.079	3.026	3	1.305
4	Your company uses software packages relevant to advanced techniques	38	0.079	0.316	0.184	0.316	0.105	3.053	3	1.184
5	There is access of relevant skilled professionals to use required technologies	38	0.026	0.184	0.079	0.500	0.184	3.553	4	1.224

6	There is sufficient support from top management to apply technology	38	0.026	0.158	0.132	0.500	0.184	3.658	4	1.047
7	There no lack of compatibility of the advanced techniques with existing system	38	0.000	0.237	0.158	0.474	0.132	3.500	4	1.007
8	High cost to implement these advanced techniques	38	0.000	0.053	0.105	0.737	0.105	3.895	4	0.649
9	These advanced techniques are too complex	38	0.053	0.579	0.184	0.132	0.000	2.289	2	0.956
10	Benefits from advanced techniques are not difficult to recognize	38	0.079	0.132	0.053	0.684	0.053	3.500	4	1.059
11	There is significant benefit being obtained and perceived from adopted advanced techniques	38	0.000	0.105	0.079	0.658	0.158	3.868	4	0.811
3. Strategies of a Company										
1	Your Company Uses Target Costing In the Design of New Products	38	0.000	0.079	0.184	0.553	0.158	3.711	4	1.011
2	Your Company Uses Strategic Costing in Determining the Firm's Strategy	38	0.000	0.053	0.079	0.711	0.158	3.974	4	0.677
3	An Analysis of the Costs Incurred In Each of the Activities In The	38	0.000	0.289	0.184	0.421	0.079	3.211	4	1.119
4	Firm's Value Chain is being applied	38	0.000	0.026	0.053	0.632	0.289	4.184	4	0.652
5	Monitoring The Costs That Occur Across Stages of Product	38	0.000	0.026	0.132	0.605	0.237	4.053	4	0.695
6	Development is a common practice	38	0.026	0.184	0.132	0.579	0.079	3.500	4	0.980
7	There is taking into account of any strategic factors when setting price	38	0.026	0.263	0.158	0.342	0.211	3.447	4	1.179
4. Qualification of Accounting Staffs										
1	Your company already employed accounting staff	38	0.000	0.026	0.132	0.421	0.421	4.237	4	0.786
2	As a larger company, your company specifically has accounting and finance department	38	0.000	0.053	0.053	0.237	0.632	4.368	5	1.101
3	your firm's internal accountants have the highest required qualification	38	0.000	0.026	0.105	0.553	0.316	4.158	4	0.718

4	your company owner/manager participates highly in the development of management accounting practices for your firm	38	0.000	0.079	0.105	0.632	0.184	3.921	4	0.784
5	Your company also has active management accounting professionals	38	0.000	0.079	0.132	0.553	0.211	3.816	4	1.036
6	All standardized accounting principles are being practice to prepare monthly, quarterly annual accounting reports	38	0.026	0.158	0.132	0.263	0.421	3.895	4	1.203
5. Intensity of Market Competition										
1	Competition is intense for the firm's main product/product lines	38	0.026	0.184	0.158	0.500	0.132	3.526	4	1.033
2	You practice analysis of competitors' strengths and weaknesses	38	0.000	0.395	0.132	0.368	0.105	3.184	3	1.087
3	Your Customers are highly sensitive to price change	38	0.026	0.132	0.316	0.395	0.132	3.474	4	0.979
4	Your company simply takes the price set by the market	38	0.158	0.474	0.132	0.211	0.026	2.474	2	1.084
5	There are a number of companies producing the same type of product to that of yours company	38	0.026	0.053	0.026	0.711	0.184	3.974	4	0.822

Source: computed Survey data & SPSS-20/2021

Eventhough it is not common to see descriptive analysis to independent variables, it is tried here to measure central tendency of detailed items to examine mean score data to each independent variable. Thus, descriptive analysis result about each and every independent variable in table 4.4 is preented as follows. Additionally, multiple linear regression model is applied to investigate effect of independent variables on dependent variable

i. size of a company

Five questions were presented under the first independent variable to identify whether size of accompany has effect or not using perception of accountants. Except for third item, mean score for all of the items was obtained to be more than 3.5 and even revolving around four. Analysis result about the first item showed 2.6%, 10.5%, 7.9%, 42.1% and 36.9% of the respondents responded strongly disagree, disagree, neutral, agree and strongly agree respectively that “as a firm get larger, a company own greater amount of total resources ,,. But analysis result about

the third item with the lowest mean (2.947) score showed 7.9%, 34.2%, 15.8%, 39.5% and 2.6% of the officers responded SDA, DA, NEU, AG and SAG respectively that “As a larger company, your company is more complex and facing more difficult problems,.. But when we see analysis result about item number four with the highest mean (4.21) score and standard deviation of 0.796 showed 0%, 5%, 7%, 49% and 39% of the officers responded SDA, DA, NEU, AG and SAG respectively that “As a larger company, your company is more complex and facing more difficult problems,.,

ii. Production technology

There are detail of eleven different items included under the second independent variable to identify the effect of production technology on MAPs. As the analysis revealed, mean score for most of the items is obtained to be between (3.5) and (3.895). Aanalysis result for item number three (with lowest mean score) showed mean score of (3.026) and standard deviation of (1.305).

iii. Strategy of a company

There are seven items included under the third independent variable to identify effect of the variable on MAPs. As the analysis result revealed, mean score for the items was obtained to be between (3.211) and (4.184). This shows that the response from most of the respondents assured as strategy of a company has influence on MAPs. Aanalysis result for item number three (with the lowest mean score) showed the lowest mean score of (3.211) and standard deviation of (1.119) whereas item number four (with the highest mean score) showed the highest mean score of (4.184) and standard deviation of (0.652)

iv. Qualification of Accounting Staffs

Qualification of Accounting Staffs is the fourth independent variable for which six detailed items prepared to collect data and to identify the effect of the variable on MAPs. As the analysis result revealed, mean score for all of the items is obtained to be more than 3.8 and even for thre of them was identified to be more than 4. Thus, it is possible to conclude here depning on analysis result that effect of the fourth independent variable on dependent variable is the most crucial. Aanalysis result for item number five (with the lowest mean score) showed the lowest mean score of (3.816) and standard deviation of (1.036) whereas item number two

(with the highest mean score) showed the highest mean score of (4.368) and standard deviation of (1.101).

v.Intensity of market competition

When we come to the last independent variable, there are five different items included under this variable to investigate the influence of intensity of market competition on MAPs. Analysis result authenticated here that mean score for the items is obtained to be between (2.474) and (3.974). Analysis result for the fourth item (with the lowest mean score) showed the lowest mean score of (2.474) and standard deviation of (1.084) whereas the fifth item (with the highest mean score) showed the highest mean score of (3.974) and standard deviation of (0.822).

4.3. Reliability Analysis

Reliability analysis is important in reflecting the overall reliability of the constructed questionnaire to measure the consistency of a five level Likert-scale type questionnaire used for data collection. Cronbach's Alpha (α) is the most commonly used tool to carry out reliability analysis; and a value greater than 0.700 is very acceptable. According to Lee Joseph Cronbach(1951), a reliability value (α) greater than 0.600 also is acceptable. As a result, Cronbach's Alpha (α) of **0.924** for questionnaire one and Cronbach's Alpha (α) of **0.889** for IA officers Accountants questionnaire two were obtained

Table 4. 5 Reliability Statistics

Cronbach's Alpha for Managers Questionnaire		Cronbach's Alpha for Accountants Questionnaire	
Cronbach's Alpha	No. of Items	Cronbach's Alpha	No. of items
.658	15	.843	34

Source: personal Survey data &SPSS-20/2019

4.4. Assumptions of Classical Linear Regression Model Test for Normality

To test whether error terms are normally distributed or not, we can use different methods or tools as Shapiro-wilk test(p-value should be greater than 0.05); and histograms, Normal Q-Q plots and Box plots(visually, these diagrams should reflect that the researchers data is approximately normally distributed). Thus, the researcher used Histograms to this case study. As the result showed from the visual estimation of the histograms below, all the variables are approximately normally distributed.

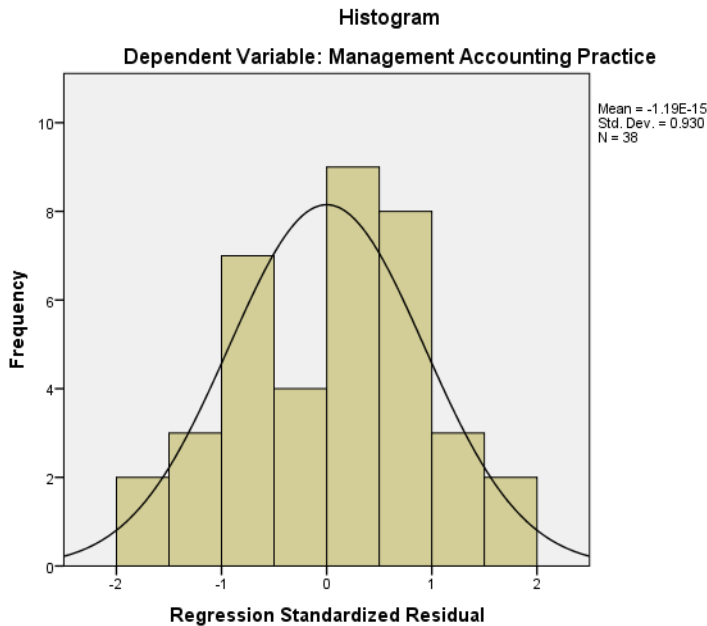


Figure 2-graphical method to test normality

4.4.1. Testing for Heteroscedasticity

To get Breusch-Pagan/Cook-Weisberg test for heteroscedasticity, regression of the model was conducted using stata 13 software. As the output showed ($p > 0.05$), in table 4.4 below and Appendix D, ($p\text{-value} = 0.5812$) for the model which was greater than 0.05, the critical value, ensured homogeneity of variance across the model.

Table 4. 6 Test of Heteroskedasticity

. hetttest
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of practice
chi2(1) = 0.30
Prob > chi2 = 0.5812

Source: personal Survey data & stata-13/2021

4.4.2. Multi-co-linearity Test

According to Field (2009) and Pallant (2007), we could detect existence of Multi-co-linearity when variables correlate strongly each other; there is r value that is greater than 0.80, tolerance value below 0.10 and Variance Inflation Factor (VIF) that is greater than 10 in the correlation matrix. Tolerance is a statistics used to indicate the variability of the specified independent variable that is not explained by the other independent variables in the model.

Table 4. 7 Colinearity Statistics

Variables	Co linearity Statistics	
	Tolerance	VIF
Size of a company	.814	1.229
Production Technology	.672	1.488
Strategies of a company	.887	1.127
Qualification of Accounting staff	.858	1.166
Intensity of Market Competetion	.795	1.257

Source: personal Survey data & SPSS-20/2021

As it is shown in the Co-linearity statistics (table-4.5) above, the tolerance values for all of the variables are greater than 0.10 and the VIF values are less than 10. The Pearson correlation matrix which is presented below in table-8 also showed that there is no multi-co-linearity problem. It is because the correlation coefficients between explanatory variables are less than 0.80. As a result, there is no need of computing or transforming data and the findings indicated acceptable r value, tolerance and variance inflation factor (VIF) values.

Table 4. 8 Pearson Correlation Matrix

Variables	MAP	SOC	PT	SOAC	QAS	IMC
Management Accounting Practice	1					
Size of a company	.607**	1				
Production Technology	.378**	.379**	1			
Strategies of a company	.221	.034	.240	1		
Qualification of Accounting staff	.461**	.244	.184	.233	1	
Intensity of Market Competetion	-.011	.073	.408**	.151	-.088	1

** . Correlation is significant at the 0.01 level (1-tailed).

Source: personal Survey data & SPSS-20 output /2021

Table-4.6 above revealed also that the correlation among the independent variables and the correlation between the dependent variable and these independent variables. The correlation result showed output level which is acceptable level of correlation among the variables. It is because the correlation among these predictors is not high and this ensures that there is no Multi-co-linearity problem among the variables. The relationship between the dependent

variable (MAP) and independent variables (SOC, PT, SOAC, QAS, IMC) showed that some of the findings are statistically significant.

Furthermore, there were strong correlations between the dependent variable MAPs and independent variables as SOC ($r = .607$) and QAS ($r = .461$) with ($P < 0.01$) level of significant which in turn showed a strong support for first and fourth hypotheses to be accepted respectively. However, there were no significant correlations among the PT, SOAC and IMC with management accounting practice (MAPs) and this forces the researcher to reject the second, third and fifth hypotheses.

4.4.3. Testing for Autocorrelation

This test was to ensure whether there is problem of autocorrelation or not. This assumption can be tested with the Durbin-Watson test which test for serial correlation between errors and the value closer to 2 are acceptable (Field, 2009). As described on table-9 below, the Durbin-Watson statistic value ($d = 1.629$) which is closer to 2 ensured that there is no severe autocorrelation problem among error terms.

4.5. The Regression Results and Hypothesis Testing

4.5.1. Regression Results

Taking IAE as dependent variable and different selected variables as independent variables, OLS regression analysis was conducted using SPSS version 20. As a result, output of the regression analysis is presented here in table-9 below and Appendix-E, hypothesis tests were implemented using obtained output and proposed hypothesis of the model.

Table 4. 9 Regression result of the analysis

R = .713		F = 6.611		Durbin- Watson (d) = 1.629			
R ² = .5081		P = .000					
Adj. R ² = .431		Std. Error of the Estimate = .5406364					
Variables	Un-standardized Coefficients		Standardized Coefficients	t-value	Sign.	Co-linearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	.278	.716		.389	.700		

SOC	.414	.118	.482	3.511	.001**	.814	1.229
PT	.164	.156	.159	1.050	.301	.672	1.488
SOAC	.149	.167	.117	.892	.379	.887	1.127
QAS	.247	.119	.278	2.076	.046**	.858	1.166
IMC	-.096	.129	-.104	-.748	.460	.795	1.257

** P< 0.05, 95% level of Confidence, N = 38

The value of R square ($R^2 = .5081$) revealed here that the model is to be accepted. Regression output of the analysis indicated also that 50.81% ($R^2 = .5081$) of the deviation of dependent variable from its mean is explained by the model (the set of all of the explanatory variables). The value of F-statistics ($F = 6.611$ and p-value ($P = .000$)) in the model summary assured that the overall significance of the model is achieved. The output also corroborated that the model best fitted to predict the practice of management accounting in large companies in Ethiopia. Beta (β) sign to all variables (except for the fifth independent variable) showed there is positive effect of the independent variables coefficient on the dependent variable. In other words, as percentage change in independent variable increases, percentage change in dependent variable also increases except for the last predictor for which the change effect is negative.

As far as the statistical significance of the explanatory variables over the dependent variable at 5% level of significance is considered, only two variables from positively related variables (SOC and QAS) were investigated to have statistically significant contribution for management accounting practice in large companies in Ethiopia at ($P < 0.05$) level of significance. Therefore, the researcher could conclude that SOC and QAS are the most important factors so that large companies practice management accounting concept. A variable with ($\text{sig} < 5\%$) could make a significance contribution to the predicted value of the dependent variable and for ($\text{sig} > 5\%$) could not make a significance contribution for the prediction of the dependent variable.

4.5.2. Hypothesis Testing

Regression analysis results that were presented in table-4. 7 above and Appendix-E provided appropriate examination of the research hypothesis of the study. The regression result obtained from the model are utilized to test these hypotheses. The hypotheses tried to test whether the independent variables showed statistically significant effect or not. It was recognized from table-

4.7 above that, the p value for SOC and QAS were found to be statistically significant at ($p < 0.05$) which ensured strong support for hypothesis one and four. The hypothesized hypotheses (hypothesis two, three and five) were not supported because the p-values ($p > 0.05$) for these variables were not statistically significant.

H1: Size of a company could have positive and significant effect on Management Accounting Practices(MAPs)

Size of a company is the first hypothesis in this study. It was hypothesized that MAP is directly related with size of a company. The result showed strong correlation between MAP and SOC. The positive beta sign and a statistically significant result of size of a company related with the management accounting practice ($\beta = .414$, $t = 3.511$, $P < 0.05$) supported and assured that the hypothesis should be acceptable. As the result corroborated, as size of a company increase, the tendency to practice management accounting concepts and principles will be more and more. Additionally, the result is consistent with previous studies like (Haldma, & Laats, 2002, cited in Sudhashini Nair¹ & Yee Soon Nian, 2017). Organization size as these existing literatures reveal may be taken as important determinant of MAPs as large organizations tend to adopt MAPs compared to SMEs. Ahmad (2012) examined 110 Malaysian companies in the manufacturing sector. The findings of the study revealed that organization size has a significant impact on MAPs in business operations because larger firms have greater resources to facilitate MAPs and the study also found that larger firms required more comprehensive MAPs than SMEs.

H2: production technology could affect Management Accounting Practices(MAPs) positively and significantly

production technology was proposed as the second hypothesis in this research paper that it has positive and significant influence on MAPs. As the result showed above in tabl-4. 10, production technology has coefficient of ($\beta = .164$, $t = 1.050$, $p > 0.05$) and has positive relationship with MAPs. But, the statistical result ($P > 0.05$) showed that this positive relationship is not statistically significant. In other words, in this study production technology has no significant role to affect MAPs which is in contrast to what was proposed earlier. The result was inconsistent with the previous studies conducted by different researchers as

production process requires MAPs to become more complex and sophisticated (Haldma, & Laats, 2002). Using modern technology in the production activities have effect on MAPs mainly in larger companies but not for SMEs. In other words, the necessity of production technology is limited to SMEs as larger firms are highly dependent on technology to assist their production activities compared with SMEs (Haldma & Laats, 2002).

H3: Strategies of a company can affect Management Accounting Practices (MAPs) positively and significantly

The third hypothesis which was proposed by the researcher is that Strategies of a company in Ethiopia has positive and significant impact on MAPs. Output of regression analysis showed in table- 4. 11 above that SOAC (coefficient of $\beta = .149$, $t = .892$, $p > 0.05$) is positively related with MAPs though its effect is insignificant. Moreover, the result was found to be inconsistent with previous studies like Baines and Langfield-Smith (2003). The researchers investigated conducting a research taking 700 manufacturing firms in Australia and conclude that the effect of firms' competitive strategy towards product differentiation strategy leads to choice of modern management accounting practices. In other words, impact of company strategy on management accounting practices was positive and significant. Using a survey of Russian enterprises, Chenhall, Kallunki and Silvola (2011) confirmed that product differentiation is associated with innovation and management accounting practices.

H4: Qualification of Accounting staff of a company could affect Management Accounting Practices (MAPs) positively and significantly

Qualification of Accounting staff was the fourth hypothesis in this study and it was hypothesized as qualification of Accounting staff of a company could affect Management Accounting Practices (MAPs) positively and significantly. Showing strong correlation between MAP and QAS, the positive beta sign and a statistically significant result of qualification of Accounting staff related with the management accounting practice ($\beta = .247$, $t = 2.076$, $P < 0.05$) supported that the proposed hypothesis is acceptable. As it is assured, hiring qualified accountants has great role for successful accomplishment of management accounting concept in large companies in Ethiopia. Additionally, the result was authenticated to be consistent with findings of Haldma and Laats's (2002) as they conducted a study on accounting staff on MAPs

in Estonian manufacturing companies and found that there is a significant and positive impact of level of qualification of accounting staff on MAPs.

H5: Intensity of market competition could affect Management Accounting Practices(MAPs) positively and significantly

Intensity of market competition is the fifth hypothesis and it was proposed as one of determinants of MAP that IMC and MAPs are directly related. As it is shown in table-4. 12 above ($\beta = -.096$, $t = -.748$, $p > 0.05$), IMC is negatively related with the MAPs which is in contrast to what was hypothesized earlier. Moreover, it is not statistically significant because the result showed ($P > 0.05$). The result is also inconsistent with previous studies. Luther and Longden's (2001) conducted a study on MAPs in South Africa and found that MAPs change due to the volatility of the market competition faced by companies. Haldma and Laats (2002) examined the impact of the intensity of market competition on MAPs of manufacturing companies in Estonia. The findings of the study revealed that there is a significant relationship between intensity of market competition and MAPs as the external environment aspect affected the nature of the accounting system. Tuanmat and Smith (2011) studied the impact of business environment on MAPs of manufacturing company in Malaysia. Results of the study indicated that there is a positive significant relationship between the external business environments and MAPs.

CHAPTER FIVE

4. Conclusions and Recommendations

4.1. Conclusions

Depending on findings of the study, the researcher tried to conclude the findings as follows. The main objective of this study was investigating determinants of MAPs in large companies in Ethiopia. Thus, survey data was collected from randomly selected twenty large companies and the data was analyzed to identify the determinants. Therefore, it was ensured from the findings that size of a company and qualification of accounting staff are the two important factors to affect management accounting practicing habit of large companies and the determinants were identified to have statistically significant (at 5% significant level) influence in large companies in Ethiopia.

Among independent variables that were identified to have positive and statistically significant (at 5% significant level) relationship with MAPs, the contribution of size of a company was identified to be more important than ($\beta = .414$, $t = 3.511$, $P < 0.05$) others. Production technology and strategy of a company were identified to have insignificant positive relationship with MAPs. But intensity of market competition showed unexpected negative beta sign. Regression output of the analysis indicated also that 50.81% ($R^2 = .5081$) of the deviation of dependent variable from its mean is explained by the model (the set of all of the predictors). And the remaining 49.19% is left to variables that were not included in this model.

Additionally, proposed hypotheses were tested and results of hypothesis testing were concluded as follows:-

- ⇒ The positive beta sign and a statistically significant result of size of a company related with the management accounting practice ($\beta = .414$, $t = 3.511$, $P < 0.05$) supported and assured that the hypothesis should be acceptable. As the result corroborated, as size of a company increase, the tendency to practice management accounting concepts and principles will be more and more. Additionally, the result is consistent with previous studies like (Haldma, & Laats, 2002, cited in Sudhashini Nair¹ & Yee Soon Nian, 2017).
- ⇒ Showing strong correlation between MAP and QAS, the positive beta sign and a statistically significant result of qualification of Accounting staff related with the

management accounting practice ($\beta = .247, t = 2.076, P < 0.05$) supported that the proposed hypothesis is acceptable. As it is assured, hiring qualified accountants has great role for successful accomplishment of management accounting concept in large companies in Ethiopia. Additionally, the result was authenticated to be consistent with findings of Haldma and Laats's (2002) as they conducted a study on accounting staff on MAPs in Estonian manufacturing companies and found that there is a significant and positive impact of level of qualification of accounting staff on MAPs.

⇒ Except for the fifth variable which showed negative sign, the remaining four variables showed that they have positive relationship with MAPs. Out of these variables, the second and the third hypothesized variables showed positive but statistically insignificant relationship with MAPs.

4.2.Recommendations

This study was conducted aiming at identifying determinants of MAPs in large companies in Ethiopia. Depending on what is found the researcher needs to recommend some critical points to be considered.

- To investigate more determinants, it is better to include more variables and broader population size.
- In this study intensity of market competition was identified to have negative sign regardless of its insignificant effect. So, it needs further assessment.
- Since size of a company was identified to be crucial factor, all concerned bodies should give attention to improve limitation of MAPs in all leveled companies. In other words, to modernize activities of different companies in Ethiopia, it is important to be familiar with concepts and principles of management accounting. Thus, all concerned bodies like policy makers should provide prior attention so that practicing management accounting will increase from time to time in Ethiopia.
- Finally, depending on the findings of the study, the researcher need to recommend that there should be further study because it was identified only two variable to have significant effect on MAPs.

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Appendices

Appendix-1 Questionnaires

WOLKITE UNIVERSITY
College of Business and Economics
School of Graduate Studies
Department of Accounting and Finance

Dear Participant:

The main objective of this questionnaire is collecting data about determinants of management accounting practices in selected manufacturing companies in Ethiopia to conduct a research as partial fulfillment of the requirements for Masters of Science Degree in Accounting and Finance at WOLKITE UNIVERSITY. Amharic version of this questionnaire will be distributed to the purposively selected employees of companies that will be selected as sample size. Results of the study are expected to identify determinants of MAPs in Ethiopia and Conclusions and recommendations of the study will be drawn without any reference to specific company or individual respondent. As a respondent, you are expected to be sure that the data that you provide will not be used for other purpose and will be treated confidentially. So, your genuine response and committed participation has inevitable value for successful completion of the paper. I would like to express my heartfelt thanks in advance for your cooperation and participation.

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➤ Questionnaire to be filled by chief accountants

A. Personal profiles: General Instruction: Please indicate your choice by putting “√” mark in the bracket.

1. Sex/Gender/: Male (____) Female (____)
2. Age (in year): 20 -29 (____), 30 - 39 (____), 40 -49 (____), 50 -59 (____), above 60 (____)
3. Your field of study: Accounting (____), Management (____), Economics (____), cooperative Accounting (____), if other specify_____
4. Level of education: 10/12/complete (____), TVET certificate (____), Diploma (____), Bachelor's Degree (____), Masters Degree (____) or others specify_____

5. Number of years of experience you work as an internal auditor: _____

B. Main items (questions):- The Questionnaire is prepared in Likert-scale form with five (5) points. Please use this (√) symbol to tick or circle the appropriate scale (point) that indicates your opinion in table below. Scale values are 1= strongly disagree , 2= Disagree, 3= Neutral, 4= Agree, 5= strongly agree

No.	1. size of a company	The scales				
		1	2	3	4	5
1	As larger firm, your company has greater amount of total resources,					
2	There is better internal communication systems that facilitate the diffusion of management accounting practices					
3	As a larger company, your company is more complex and facing more difficult problems.					
4	As a larger company, your company requires more control on information, about its business activities and then needs more comprehensive and sophisticated MAPs.					
5	Size of your firm is measured based on annual sales turnover					
	2. Production technology					
1	There is flexible manufacturing system					
2	Computer numerically controlled machines					
3	There is local training program about advanced techniques					
4	Your company uses software packages relevant to advanced techniques					
5	There is access of relevant skilled professionals to use required technologies					
6	There is sufficient support from top management to apply technology					
7	There no lack of compatibility of the advanced techniques with existing system					
8	High cost to implement these advanced techniques					
9	These advanced techniques are too complex					
10	Benefits from advanced techniques are not difficult to recognize					
11	There is significant benefit being obtained and perceived from adopted advanced techniques					
	3. Strategies of a Company					
1	Your Company Uses Target Costing In the Design of New Products					
2	Your Company Uses Strategic Costing in Determining the Firm's Strategy					
3	An Analysis of the Costs Incurred In Each of the Activities In The Firm's Value Chain is being applied					

4	Monitoring The Costs That Occur Across Stages of Product Development is a common practice					
5	There is taking into account of any strategic factors when setting price decision					
6	The systematic collection of data on competitors' price reaction, demand reaction, and market position is part of strategic management in your company					
7	My Company Uses some innovation and cost leadership strategy					
	4. Qualification of Accounting Staffs					
1	Your company already employed accounting staff					
2	As a larger company, your company specifically has accounting and finance department					
3	your firm's internal accountants have the highest required qualification					
4	your company owner/manager participates highly in the development of management accounting practices for your firm					
5	Your company also has active management accounting professionals					
6	All standardized accounting principles are being practice to prepare monthly, quarterly annual accounting reports					
	5. Intensity of Market Competition					
1	Competition is intense for the firm's main product/product lines					
2	You practice analysis of competitors' strengths and weaknesses					
3	Your Customers are highly sensitive to price change					
4	Your company simply takes the price set by the market					
5	There are a number of companies producing the same type of product to that of yours company					

WOLKITE UNIVERSITY
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➤ **Questionnaire to be filled by managers:-**

A. The personal profiles: Please indicate your choice by putting “√” mark in the bracket.

1. Sex/Gender/: Male (___) Female (___)
2. Age (in year): 20 - 29(____), 30-39(____), 40 -49(____), 50 - 59(____), above 60 (___)
3. Your field of study: Accounting (___), Management (___), Economics (___) cooperative Accounting (___) if Other specify_____
4. Level of education: TVET certificate (___), Diploma (___), Bachelor's Degree (___), Masters Degree (___) or others specify_____
5. Current position in your office/sector_____
6. Number of internal auditors in your office/sector_____

B. The questionnaire items (questions)

The questionnaire is prepared in five points Likert rating scale. I would like to ask you to tick (√) the appropriate scale (point) that indicates your opinion in table below. Scale values are 1=

“never used” 2 = “used some times”, 3 = Neutral, 4=, “Frequently used” and 5= “very frequently used”.

No	Five major parts of MAPs like costing system; budgeting system; performance evaluation system; decision support system and strategic management accounting are detailed in to fifteen parts to ascertain whether the respondents use each particular practice in their firms or not	The scales				
		1	2	3	4	5
1	Activity based costing: a cost accounting system that uses both unit-and non-unit based cost drivers to assign costs to cost objects by first tracing costs to activities and then tracing costs from activities to products.					
2	Activity based budgeting,					
3	Activity based management: an advanced control system that forces management’s attention on activities with the objective of improving the value received by the customer and the profit received by providing this value					
4	Target costing: a method of determining the cost of a product or service based on the price the customers are willing to pay.					
5	Throughput accounting,					
6	Back flush costing,					
7	life cycle costing: the time a product exists from conception to abandonment; the profit history of the product according to four stages: introduction, growth, maturity, and decline.					
8	product profitability analysis,					
9	quality costing,					
10	kaizen costing:					
11	Balanced score card: a strategic – based performance management system that typically identifies objectives and measures for four different perspectives: the financial perspective, the customer perspective, the process perspective and the learning and growth perspective.					
12	Just in time (JIT) a demand –pull system that strives to produce a product only when it is needed and only in the quantities demanded by customers.					
13	Value chain analysis: identifying and exploiting internal and external linkages with the objective of strengthening a firm’s strategic position.					
14	Benchmarking: uses best practices as the standard for evaluating activity performance.					
15	Share holders’ value analysis: the after tax operating profit minus the total annual cost of capital.					

Appendices

Apendix-A

Descriptive Analysis of Management Accounting Practice

No.	Five major parts of MAPs like costing system; budgeting system; performance evaluation system; decision support system and strategic management accounting are detailed in to fifteen parts to ascertain whether the respondents use each particular practice in their firms or not	N	SDA	DA	NEU	AG	SAG	Mean	Median	Std. Deviation
1	Activity based costing: a cost accounting system that uses both unit-and non-unit based cost drivers to assign costs to cost objects by first tracing costs to activities and then tracing costs from activities to products.	38	0.053	0.026	0.105	0.579	0.237	3.92	4	.969
2	Activity based budgeting,	38	0.026	0.237	0.105	0.474	0.079	33.11	4	1.371
3	Activity based management: an advanced control system that forces management's attention on activities with the objective of improving the value received by the customer and the profit received by providing this value	38	0.000	0.158	0.184	0.447	0.211	3.71	4	.984
4	Target costing: a method of determining the cost of a product or service based on the price the customers are willing to pay.	38	0.026	0.079	0.079	0.579	0.237	3.92	4	.941
5	Throughput accounting,	38	0.000	0.263	0.026	0.342	0.368	3.82	4	1.205
6	Back flush costing,	38	0.026	0.079	0.079	0.421	0.368	3.95	4	1.207
7	life cycle costing: the time a product exists from conception to abandonment; the profit history of the product according to four stages: introduction, growth, maturity, and decline.	38	0.053	0.289	0.342	0.263	0.026	2.84	3	1.053
8	product profitability analysis,	38	0.000	0.237	0.053	0.500	0.184	3.55	4	1.201
9	quality costing,	38	0.000	0.158	0.184	0.500	0.158	3.66	4	.938
10	kaizen costing:	38	0.079	0.289	0.237	0.184	0.184	3.03	3	1.345

11	Balanced score card: a strategic – based performance management system that typically identifies objectives and measures for four different perspectives: the financial perspective, the customer perspective, the process perspective and the learning and growth perspective.	38	0.000	0.026	0.237	0.658	0.053	3.66	4	.847
12	Just in time (JIT) a demand –pull system that strives to produce a product only when it is needed and only in the quantities demanded by customers.	38	0.026	0.132	0.158	0.447	0.237	3.74	4	1.057
13	Value chain analysis: identifying and exploiting internal and external linkages with the objective of strengthening a firm’s strategic position.	38	0.000	0.289	0.237	0.395	0.079	3.26	3	.978
14	Benchmarking: uses best practices as the standard for evaluating activity performance.	38	0.053	0.289	0.105	0.474	0.079	3.24	4	1.125
15	Share holders’ value analysis: the after tax operating profit minus the total annual cost of capital.	38	0.026	0.079	0.132	0.632	0.132	3.76	4	.883