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The Effect of Working Capital Management On Profitability of Micro and Small Enterprises: The Case Of Selected Sub Cities in Bahir Dar City Administratio

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THE EFFECT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY OF MICRO AND SMALL ENTERPRISES: THE CASE OF SELECTED SUB CITIES IN BAHIR DAR CITY ADMINISTRATION

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Bahir Dar, Ethiopia

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Statement of Approval

This is to verify that, this thesis is prepared by Belete Minwuye Andargie on the topic of "The Effect of Working Capital Management on Profitability of Micro and Small Enterprise (In Case of selected sub cities in Bahir Dar City Administration)" for the requirement of award of degree in Master of Business Administration (MBA) to the college of Business and Economics, in Bahir Dar University and it is conformed with the rule and accepted standard requirements of the institution.

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Declaration

I, Belete Minwuye, affirmed that this thesis entitled "The Effect of Working Capital Management on Profitability of Micro and Small Enterprise (In Case of selected sub cities in Bahir Dar City Administration) is my own original work and I confidently declare that this thesis is not offered to any other organization anywhere for the award of every academic purpose. And also I have done this thesis alone with the great assistance of my advisor, Dr. Alem Gebremedhin. The supplementary sources used for the purpose of this study have been appropriately acknowledged.

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Statement of Certification

This thesis entitled "The Effect of Working Capital Management on Profitability of Micro and Small Enterprise (In Case of selected sub cities in Bahir Dar City Administration)" is conducted independently by Belete Minwuye. This is to certify that this study is undertaken for the partial fulfillment of the requirements for the degree of Masters of Business Administration (MBA) at Bahir Dar University and it is an original work and also was not submitted in advance for any degree either at this University or whichever other institution.

Advisor's Name: Alem Gebremedhin (PhD)

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Date _____

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List of acronyms

APP: Accounts payable period

ARP: Accounts receivable period

COGS: Cost of goods sold

WP: Working capital

WCM: Working capital management

CCC: Cash conversation cycle

CR: Current ratio

DR: Debt ratio

FS: Firm size

IHP: Inventory holding period

SG: Sales growth

ROA: Return on asset

NWC: Net Working capital

GWC: Gross working capital

MSE: Micro and small enterprises

OLS: Ordinary least square

CSA: Central statistical authority

ROI: Return on investment

ROE: Return on equity

CLRM: Classical linear regression model

Abstract

Working Capital Management is an important corporate financial decision since it directly affects the profitability of the firm. Because of its routine nature, working capital management is the most important one among all issue of financial management. The purpose of this study is to examine the impact of working capital management on profitability of selected micro and small enterprises found in Bahir Dar city administration. This study employed quantitative approaches and explanatory research design in order to achieve the objectives. The study used audited financial statement of sixty (60) purposively selected micro and small scale enterprises for a period of five years (2016-2020) with the total of 300 observations. Accounts receivable period, inventory conversion period, account payable period, and cash conversion cycle were used as independent variable to measure working capital management. The dependent variable, firm profitability, was measured by return on asset. For data analysis the study used descriptive analysis, correlation analysis and a fixed effects regression model. The result of fixed effects regression showed that; there was significant positive relation between account receivable period and profitability indicating that aggressively collecting receivable adversely affects micro and small enterprises profitability. There was significant positive relation between inventory holding period and profitability suggesting that maintaining high inventory increase sales. Accounts payable period had significant negative impact on profitability indicate that less profitable firm wait longer periods to pay their obligation. There was significant negative relation between cash conversion cycle and profitability suggesting that sample firms improve their profitability by shortening the time gap between firm's actual cash inflows and outflows. The study conclude that liberal credit collection, holding high inventory, quick payment of debt and keeping the length of cash conversion cycle to possible minimum level can increase the profitability of a firm.

Key words: Working capital management, Profitability, micro and small enterprises, panel data

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CHAPTER ONE

INTRODUCTION

This study examines the effect of working capital management on profitability of micro and small scale enterprises in the case of selected sub cities in Bahir Dar City Administration. This chapter encompasses the background of the study, statement of the problem, objective of the study, research hypothesis, the significance of the study, scope and limitations of the study, and organization of the paper.

1.1. Background of the Study

Working Capital is a firm's investment in short term assets such as cash, short term securities, bills receivable, inventory of raw materials and finished goods (Ross et al., 2008). It entails management of current assets and liabilities, and financing of those current assets. Khan and Jain (2007) define working capital as the financing, investment and control of the net assets within the policy guidelines. From this perspective, working capital is the difference between current assets and current liabilities.

Corporate financial management primarily deals with three core areas that have a bearing on a firm's financial goals. As postulated by Firer et al. (2008) the three core areas of corporate finance are capital budgeting; which encapsulates the process of planning and managing firm's long-term investments, capital structure; which outlines the specific mixture of long-term debt and equity maintainable by a firms and Working capital management; which deals with management of firm's short term assets and liabilities. One of the most important factors for a firm to consider is the management of working capital, which is related to short term financing and investment decision of a firm. The function of obtaining efficient working capital management is to maintain current assets and current liabilities in respect to each other and to generate maximum returns.

Working capital management is an important corporate financial decision since it directly affects the profitability of the firm. Working capital management efficiency is vital for firms where the major part of assets and liabilities are composed of current assets especially inventory and trade receivables, and current liabilities; trade payable (Arunkmar & Ramanan, 2013).

The concept of working capital management addresses companies' managing of their short-term

capital and the goal of the management of working capital is to promote a satisfying liquidity, profitability and shareholders' value. It is the ability to control effectively and efficiently the current assets and current liabilities in a manner that provides the firm with maximum return on its assets and minimizes payments for its liabilities (Gill et al., 2010).The short term capital refers to the capital that companies use in their daily operations and it consists of companies' current assets and current liabilities. A well-managed working capital promotes company's wellbeing on the market in terms of liquidity and it also acts in favor of the growth of shareholders value.

The significance of working capital management efficiency is irrefutable (Filbeck et al., 2005). Working capital is known as life giving force for any economic unit and its management is considered among the most important functions of corporate management. Every organization whether profit oriented or not irrespective of size and nature of business requires necessary amount of working capital. Working capital is the most crucial factor for maintaining liquidity, survival, solvency and profitability of business (Charitou et al., 2010).

Efficient management of working capital plays an important role of overall corporate strategy in order to create shareholder value. Working capital is regarded as the result of the time lag between the expenditure for the purchase of raw material and the collection for the sale of the finished goods. The way of managing working capital can have a significant impact on both the profitability and liquidity of the company (Shin et al., 1998). The main purpose of any firm is to maximize profit. But, maintaining liquidity of the firm also is an important objective. The problem is that increasing profits at the cost of liquidity can bring serious problems to the firm. Thus, strategy of firm must maintain a balance between these two objectives of the firm. Dilemma in working capital management is to achieve desired tradeoff between liquidity and profitability ((Raheman & Nasr, 2007).

Keep the above in mind it is a critical issue to know and understand the effects of working capital management on firm's profitability. Indeed, a lot of research have been conducted in different parts of the world to examine the impact of working capital components on firm's profitability like (Raheman& Nasr, 2007; Mathuva, 2010 ; Charitou et al., 2010; Niresh, 2012; Arshad & Gondal, 2013; Amit Das, 2015). Despite to this there were few studies conducted in Ethiopia on the impact of working capital on firm's profitability. Tewodros (2010), Mulalum (2011), Henok (2015), Niman (2015), Arega et al. (2016), Abnet (2016) studied the impact of

working capital management on profitability in case of manufacturing firms. However, to the best of the researcher's knowledge, no another research has been conducted on impact of working capital management on profitability of micro and small scale enterprises.

Therefore, the main aim of the study is to examine the effect of working capital management and its components on firm profitability of selected micro and small scale enterprises in selected sub cities of Bahir Dar city administration.

1.2. Statement of the Problem

Profitability and liquidity are the most crucial issues that management of each organization should consider when studying and thinking about working capital management. Liquidity refers to the ability of a firm to meet its short term obligations whereas profitability is a measure of the amount by which a firm's revenue exceeds its relevant expenses. Both profitability and liquidity are necessary for survival and success of the firm. In order to achieve the objective of the firm profitability and liquidity effective working capital management play great role (Niresh, 2012).

Firms can maximize their profits by maintains appropriate level of working capital (Deloof, 2003). Firms have large inventory and liberal trade credit policy leads to higher sales. Larger inventory reduces the risk of stock-outs and decrease cost of production during inflation. Trade credit stimulates sales because it allows customers to assess product quality before paying (Gill et al., 2010; Shin & Soenen, 1998). On the other hand the more firm invest on receivable and inventory leads to reduction of profitably and harm the present value of cash follows (Deloof, 2003). Thus, the greater the investment in current assets, the lower the risk but also the lower the profitability obtained (Charitouet al., 2010). The existence of excessive and inadequate working capital level leads to reduction of profit of business and unable to meet day to day obligation respectively (Samiloglu & Demirgunes, 2008). In order to maintains optimal level of working capital it should be strike between profitability and liquidity.

Working capital management is a very important part of corporate finance because of its immediate effect on profitability of a company as well as liquidity (Arshad & Gondal, 2013). Working capital has undeniable role for success of firm since the primary objective of any firm is to maximize profit and increase shareholders wealth (Raheman & Nasr, 2007). In order to achieve this objective efficient working capital management play a great role. Efficient working capital management means making decision on components of working capital by considering its

effect on profitability as well as liquidity (Arshad & Gondal, 2013). Efficient working capital management involves managing and controlling current assets and current liabilities in order to prevent the risk of a company's inability to meet short term obligations and to avoid excessive investment in current asset (Eljelly, 2004). Effective working capital management leads to better profitability, increase cash flows, decrease needs of external financing and reduce business failure (Charitou et al., 2010). Therefore working capital management is not only important to reduce risk and failure of business, but also necessary for long lasting success of any business. Because of this working capital management is the most important and requires continuous decision making process in the field of financial management.

Working capital management plays an important role in financing micro and small enterprises (MSEs). Working capital related problems are cited among the most significant reasons for the failure of MSEs and strong statistical relationship has been found between working capital management and profitability(Eljelly, 2004).Working capital management is important issue in the financial decision of firm because of its effect on firm's profitability and risk and consequently its value (Raheman & Nasr, 2007). The ability of the firm to continuously operate for longer period is depending on how they deal with management in working capital.

Even though there are many evidences in the financial literature that present the significance of working capital management (Teruel & Solano, 2007; Raheman & Nasr, 2007; Deloof, 2003; Wang, 2002; Shin & Soenen, 1998). Results of empirical analysis show that there is statistical evidence for a strong relationship between the firm's profitability and its WCM efficiency. The studies also give significant evidence that issues of WCM vary from different industries and firms from different industry sectors adopt different approaches to working capital management and follow an appropriate working capital management approach that is favorable to their industry.

Every business requires working capital for its long lasting success because of its immediate effect on liquidity, solvency and profitability. Working capital management is the crucial area of financial management and plays a vital role in any industry. However, the level of working capital needs vary from industry to industry based on the nature of operation. Firms in an industry that has less competition would have to focus on reducing credits granted and number of days allowed for receivable to increase their cash flow and firms in industry where there are

large numbers of suppliers of raw materials; their focus would be on maximizing number of days payable (Teruel & Solano, 2007; Raheman & Nasr, 2007; Deloof, 2003; Wang, 2002; Shin & Soenen, 1998). Since smaller firms experience difficulties in accessing external finance, they rely more strongly on internally generated funds than large firms. Working capital management thus plays an important role in financing MSE.

As cited by Tirngo. (2013), Lukkari (2011) reviewed that different researchers from different environment on the relationship between working capital management and profitability identified that most studies focused on the developed economies but no enough evidence has identified on the developing countries. In addition, those few studies in the developing countries even focused only on large sized companies and he recommend that researchers of developing countries to look for the relationship between working capital and profitability of micro and medium sized firms. This especially is more evident to Ethiopian micro and small enterprises that had not empirical evidence on impact of working capital management on profitability of micro and small enterprise in Bahir Dar city administration. Due to the importance of working capital management on profitability of firm and because of the topic is under-researched in the micro and small firms the researcher was inspired to study the impact of working capital management on firm's financial performance.

Therefore, the main aim of this study is to analyze the effect of working capital management on profitability micro and small scale enterprise in the selected sub cities in Bahir Dar city administration.

1.3. Objective of the Study

1.3.1. General Objective of the Study

The general objective of the study is to examine the effect of working capital management on profitability of micro and small scale enterprises in the case of selected sub cities in Bahir Dar city Administration.

1.3.2. Specific Objectives of the Study

The specific objectives of this study are:

1. To examine the effect of account receivables period (ARP) on firm profitability.
2. To determine the effect of inventory holding period (IHP) on firm profitability.
3. To analyze the effect of account payable period (APP) towards firm profitability.
4. To identify the effect of cash conversion cycle (CCC) to wards firm profitability.

1.4. Research Hypothesis

As per the objective of the study stated above, the following research hypotheses (H) were adapted with their respective basis.

The levels of accounts receivable a firm maintain have a significant impact on a company's profitability. Many researchers like Deloof (2003),Laziridis &Tryfonidis (2006), Padachi (2006), Raheman&Nasr (2007), Samiloglu & Demirgunes (2008), Falope & Ajilore (2009), Mathuva (2010), Ponsian et al. (2014), Samiloglu & Akgun (2016) found that significant negative relationship between account receivable and profitability. It means that a firm enhances their profitability by minimizing account receivable to possible minimum level. Others like Sharma & Kumar (2011), Ali & Ali (2012), Uremadu & Egbide (2012), Tariq et al. (2013), Mbawniet al. (2016),Zbigniew (2020),Xuan et al. (2020), Fekadu (2021), Roy-Ares et al. (2021) found that significant positive relationship between account receivable and profitability. It means that firms enhance their profitability by keeping account receivable to maximum level. Finally this study developed the following hypothesis agree with holding higher amount of receivable results lower profitability.

H1: Accounts Receivable Period (ARP) has negative and significant effect on firm's profitability.

The level of inventory hold by a firm has strong impact on profitability. Mathuva (2010), Makkori & Jagongo (2013), Abenet(2016), Samiloglu & Akgun (2016) found a significant positive relationship between profitability and levels of inventory. It means that firms enhance their profitability by holding higher amount of inventory. On the other hand, other researchers like Padachi (2006), Raheman & Nasr (2007), Samiloglu & Demirgunes (2008), Charitou et al. (2012), Tiringo (2013),Ponsian et al. (2014), Arega et al. (2016),Zbigniew (2020) found significant negative relationship between inventory level and profitability. It means that profitable firms are those which holds minimum amount of inventory on warehouse. The following hypothesis is developed by supporting negative relationship between inventory level and profitability.

H2: Inventory Holding Period (IHP) has negative and significant effect on firm's profitability.

The amount of account payable has significant impact on profitability. Researchers like Padachi (2006), Raheman & Nasr (2007), Charitou et al. (2012), Tariq et al. (2013), Samiloglu & Akgun (2016) found significant negative relationship between account payable period and profitability. This shows that less profitable firm's takes longer time to pay their obligation. On the other hand, other researchers Mathuva (2010), Falope & Ajilore (2009), Tiringo (2013), Ponsian et al. (2014), Sadiq (2016) found that significant positive relationship between account payable period and profitability by suggesting that longer time a firm takes to pay its obligation the higher profitability will be since account payable is the cheapest and flexible source of finance. From the above contradictory empirical results the researcher developed the following hypothesis.

H3: Accounts Payable Period (APP) has positive and significant effect on firm's profitability.

The effect of working capital management on profitability can be best explained by cash conversation cycle. Researchers like Padachi (2006), Raheman & Nasr (2007), Arega et al. (2016), Abenet (2016), Samiloglu & Akgun (2016) found significant negative relationship between cash conversion cycle and profitability. The higher profitability firms are those which have shorter cash conversion cycle, it means that minimum amount of cash tied in working capital. On the other hand others like Gill et al.(2010), Tariq et al.(2013), Akoto et al. (2013, Ponsian et al. (2014), Sadiq (2016) found direct relation between cash conversation cycle and profitability. It means that to be profitable a firm should invest higher amount on working

capital as on as possible. Based on the above contradictory result the researcher developed the following hypothesis.

H4: Cash Conversion Cycle (CCC) has negative and significant effect on firm's profitability.

1.5. Significance of the Study

The aim of the study is to examine the effect of working capital management on profitability of micro and small enterprise in the selected sub cities in Bahir Dar city administration. The findings of the study will help the chief finance officer of enterprise in designing intervention strategies aimed at maximizing profit for their firms. Moreover, the finding of the study will contribute to the body of knowledge by identifying how micro and small enterprises manage their working capital in the local setting.

Finally, the finding of study will serve as an important resource document for academicians and future researchers who may wish to investigate the performance of firms in relation to working capital management and profitability. In other words, the study can potentially serve as a stepping stone for further research in the same area.

1.6. Scope and Limitation of the Study

This study is delimited to the effect of working capital management on the profitability of micro and small scale enterprise in the case of selected sub cities in Bahir Dar city Administration. Among300 micro and small enterprise the researcher include only 60 micro and small enterprises. The sample size is too small to represent MSEs at the country level. However, due to shortage of time and money the study limited to enterprises found in the selected sub cities in Bahir Dar city Administration. In addition the study depends on secondary data collected from audited financial statement of selected sub cities micro and small enterprise for the period of 2016-2020 and primary data would not be included in the study. Finally, this study focused on only the research objective and hypothesis drawn and there may be other variables related to working capital management that are not included in this study.

1.7. Organization of the Study

This paper organized in to five chapters. Chapter one includes background of the study, statement of the problem, research objectives and hypothesis, significance of the study, scope and limitation of study and organization of the paper. Chapter two includes literature review in theoretical and empirical evidence on working capital management and profitability and the summary of chapter or gap identified. Chapter three contains the population, sampling technique; research design and data source and collection procedures. It also includes description of variable included in model and data analysis techniques. Chapter four includes data analysis, result and interpretation of the study. Finally, chapter five includes conclusions, recommendations and future direction made by researcher.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

This chapter focuses on the literature related to working capital management and how it affects profitability of a firm. It includes the theoretical and empirical evidence on the relation between working capital management and profitability. Finally, it presents conceptual framework and identified knowledge gap the study want to address.

2.1. Theoretical review of Related Literature

2.1.1. An Overview of Working Capital

Efficient working capital management is an integral component of the overall corporate strategy to create shareholder wealth. The way in which working capital is managed can have a significant impact on both liquidity and profitability of a company. Research by Taggart (1977) first signaled the importance of tradeoffs between dual goals of working capital management; that is liquidity and profitability. In other words, decisions that tend to maximize profitability tend to maximize adequate liquidity. Conversely, focusing entirely on liquidity tend to reduce the potential profitability of the company (Hendrickson, 1992).

Working capital management is concerned with making sure of a firm has exactly the right amount of cash and lines of credit available to the business at all times (Deloof, 2003). Cash is the lifeline of a company. If this lifeline deteriorates, so does a company's ability to finance operations, reinvest and meet capital requirement and payment needs. Understanding a company's cash flow health is essential for making investment decisions. An individual company's investment in working capital has been related to the type of industry in which it operates and the essential working capital policy each individual company adopts (Nyakundi, 2003). The investment concerns how much of the firm's limited resources should be invested in working capital. If further observes that finance decisions relate to how the investment in working capital is to be allocated.

2.1.2. The Concept and Definition of Working Capital

The concept of working capital was first evolved by (Marx, 1867). Marx used the term variable capital meaning expenditure for payrolls advanced to workers before they completed the goods they worked on. He differentiated this with 'constant capital', which he regulated as nothing but 'dead labor', that is, expenditure for raw materials and other instruments of production produced by labor. This 'variable capital' was the wage fund which remains blocked in terms of financial management, at work in process along with other operating expenses until it is released through sale of finished goods. Although Marx did not mention that workers also gave credit to the firm by accepting periodical payment of wages which funds a portion of working capital in process. The concept of working capital, as we understand today, was embedded in his concept of 'variable capital'. With the evolution of the concept came controversy about the definition of working capital, which different people use the term 'working capital' differently. Working capital is usually defined as the current assets less current liabilities. The major part of current assets are inventories, accounts receivables and cash in hand and at bank while that of current liabilities are accounts payable and bank overdrafts.

Weston and Brigham (1977) defines 'working capital' as the capital invested in different items of current assets needed for the business, that is, inventory, debtors, cash and other current assets such as loans and advances to third parties. These current assets are essential for smooth business operations and proper utilization of fixed assets. Net Working capital technically, is the difference between current assets and current liabilities, while gross working capital refers to the sum of all current assets.

Khan and Jain (2007) also argued that there are two concepts of working capital: gross and net.

The term gross capital also refers to as working capital means the total current assets of business. The term net working capital can be defined in two ways (i) net working capital is the difference between current assets and current liabilities; (ii) the portion of current assets which is financed with long term funds.

2.1.3. Nature and Importance of Working Capital

The working capital meets the short term financial requirements of a business enterprise. It is a trading capital, not retained in the business in a particular form for longer than a year. The money invested in it changes form and substance during the normal course of business operations. The need for maintaining an adequate working capital can hardly be requested. Just as a circulation of blood is very necessary in the human body to maintain life, the flow of funds is extremely necessary to maintain business in a healthy situation. If this becomes weak, the business can hardly prosper and survive. Working capital starvation is generally credited as a major cause of a business failure in many developing countries. The success of a firm depends ultimately, on its ability to operate cash receipts in excess of disbursements.

The cash flow problems of many businesses are worsened by poor financial management and in particular, the lack of planning cash requirements (Jarvis et al., 1996). While the performance levels of business have traditionally been attributed to general managerial factors such as manufacturing, marketing and operations, working capital management have a consequent impact on business survival and growth (Kargar& Blumenthal, 1994). The management of working capital is important to the financial health of business of all sizes. The amount invested in working capital is often high in proportion to the total assets employed and so it is vital that these amounts are used in an efficient and effective way.

2.1.4. Types of Working Capital

Working capital is the amount of capital employed to run day to day business operation. Working capital characterized by seasonal fluctuation, one time the need for working capital will be high in response to sales increase and expansion of economy, in another time the need for working capital will be law due to sales reduction and down of economy. However, all of current asset is not affected similarly some may affected by greater magnitude others may not affected. By considering time as a basis of classification working capital can be categorize as permanent and temporary working capital (Paramasivan& Subramanian, 2009).

2.1.4.1. Permanent Working Capital

Permanent working capital is also commonly called fixed working capital and it refers to a minimum amount of investment in all current asset which is required at all times to carry out activities of business irrespective of time and sales volume. Even if working capital was short lived asset and usually not exceeding a year. In actual practice business operated more than a

year and production does not stop at end of particular accounting year some of the investment in current year transferred to the next year. Such type of working capital continues without seasonal variation and it depends on nature of business and change with the passage of time as the size of business increase is commonly called permanent working capital (Paramasivan&Subramanian, 2009).

2.1.4.2. Temporary Working Capital

Temporary working capital is also known as variable working capital. It is the amount of investment in current asset which required in order to meet seasonal variation in business activity and to fulfill some unusual business activity (Paramasivan& Subramanian, 2009). It is not feasible to carry this type of working capital throughout in the year, or year after year, it may be better to use short-term loan rather than long-term sources of capital to satisfy short term working capital needs. In other words different amount of working capital required at different times during the operating year or from year to year. Further temporary working capital can be classified in to seasonal working capital and special working capital, the capital required to meet for seasonal variation and for some infrequent expense such as advertising respectively. In general temporary working capital fluctuates over time with seasons and special needs of firm operations and its source of fund mostly short term maturity (Fabozzi& Peterson 2003).

2.1.5. Working Capital Management

A significant number of studies have been conducted on the issue of working capital management, although from different perspectives and in different situations and environment.

According to Mawhiraju(1999) explanation working capital management involves administration of current assets and current liabilities which consists of optimizing the level of assets in partial equilibrium context. Working capital management involves the relationship between a firm's short term assets and liabilities.

Khan and Jain (2007) also stress that working capital management is concerned with the problems that arise in attempting to manage the current assets, the current liabilities and the interrelationship existing between them. Working capital management also refers to the decisions relating to working capital and short term financing and it involves managing the relationship between a firm's short term asset and its short term liabilities. The goal of working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short term debt and upcoming operational expenses. Working

capital entails short term decisions generally relating to the next one year period which are 'revisable'. These decisions are therefore, not taken on the same basis as Capital Investment Decisions rather, they have been based on cash flow and/ or profitability. Every running business needs working capital. Even a business which is fully equipped with all types of fixed assets required are bound to collapse without (i)adequate supply of raw materials for processing;(ii) cash to pay for wages, power and other costs; (iii) creating a stock of finished goods to feed the market demand regularly; and (iv)the ability to grant credit to its customers. All these require working capital, which is thus, the lifeblood of a business. The business will not be able to carry on day to day activities without the availability of adequate working capital. Working capital cycles measures being supplied to the buyer and the final receipt of cash from the sale of these goods. Advantageous to keep the cycle as short as possible as it increases the effectiveness of working capital.

2.1.6. Factors Determining Working Capital Requirements

There are several factors determining the working capital requirement of a company. However, it should be noted that it is subject to different circumstances. Primarily, the determining factors can be classified in to two types which are internal and external factors. These factors represent each category is presented below:

2.1.6.1. Internal Factors

The following factors are considered by a company when determining the working capital requirement for a particular period of time. Each variable is explained in details.

Nature of the business: The working capital requirement depends on the type of business the firm undertakes. Manufacturing and trading organizations hold more stock and have many trade debtors and in turn they may be funded by trade payables and short term debt. Therefore, the working capital requirement is a lot. On the other hand, services organizations like a hotel or a restaurant have cash sales and hence and a small debt amount. As a result, the working capital of such companies is far less than a manufacturing firm. However, hotels and/or restaurants also carry food and drink stocks to enable them to do their business on a sustained manner.

Size of the business: small companies, specifically those which are just established, may not have adequate funds to finance their business as creditors do not lend to people or companies they do not trust without seeing their credit worthiness. As a result, small firms tend to maintain low levels of working capital. However, large firms with a massive turnover and profits look to

build on the growth momentum and have substantial stock and debtors. Therefore, the large firm's working capital requirements are generally huge.

Firm's production policy: Firms working capital requirement may be influenced by the firm's production policy. Generally, there are two extreme production policies: steady policy, where there is a steady capital need during the period. The other is seasonal policy, where the firms increase their production in the peak sales period. As a result, the working capital requirement becomes more in the period.

Firm's credit policy: Some companies may allow only 15 days credit, while others may allow 60 days or more credit to its customers. The longer the credit period the more the amount of the working capital used firms to pay their debts. When a company has a credit policy for a short period, cash comes in and the firm may not run short of finance. Hence, the working capital requirement is less.

Growth and expansion of business: When the directors of a company decide to expand the business or when the business is growing organically, there is a greater need to fund fixed assets and current assets. In this case the need for working capital is at the most. Stocks are bought in the intention of selling and trade credits are given on generous terms. Therefore, there is a growing need for working capital to sustain the business in the long run. There is a risk of over trading, in this case.

2.1.6.2. External Factors

There are external factors against which managers do not any control. These factors are mainly determined by the environment of the company which operates.

Economic and business seasonal cycle: Most firms experience fluctuations in demand, may be due to seasonality for their products and /or services. Such regularities in the business operations affect the working capital requirements. When there is a boom in the economy, generally, the demand for the product or the service increase and hence sales increases. As a result, it inevitably leads the firm's investment inventories, debtors and short term debts to increase. In this scenario, additional investment in productive fixed assets may be undertaken. The firm may usually take long term debt or retained earnings, if there is a cash balance to finance such fixed asset inventories. Where there is a slowing down economy, sales may reduce and as a result the firm may try to reduce their short term borrowing as stocks and the number of debtors may decrease.

Change in the technology: if the company is a manufacturing firm, better technology might fasten the production process and hence reduce the cash operating cycle, as finished goods could be put improved finished products to the market fast. However, the initial investment cost of the technology may be high.

Taxation policy: A taxation system of a country determines how much tax to be paid. If the countries business climate is investment friendly, there might be lower taxation rates and will not put a strain on the firm's ability to pay taxes. In most of the times, this is not the case. Some taxation regimes require tax to be paid up front, such as quarterly of firm's financial period. As a result, the firm may have to borrow a part of the sum to be paid for taxation, if the cash is tied upby debtors. Taxes have a bearing in the management of working capital.

In conclusion, a firm's financial manager should be aware of the internal and external factors that can influence the company's working capital needs. He/she should prepare strategies to address these factors to manage the working capital.

2.1.7. Working Capital Components

2.1.7.1. Accounts Receivable

When a company sells goods or services on credit, it records this as accounts receivable in the ledger and the balance sheet. Companies get cash within a given period that it provides to a customer, which is known as the credit period. Companies manage their receivables intimating the credit period to the buyer so that the buyer will know when to pay. Companies usually carry out a credit analysis to gauge who are paying on time and who are not. By receiving cash early, it could improve the company's life-blood that is the working capital. Collecting cash too early and not providing generous credit terms may hamper business sales in the long run as customers might turn to competitors to get the required goods. Another option to improve working capital and to get cash early is to sell and handover the trade receivables to a factoring company. The factoring company discounts the trade receivables to make a profit and return rest of the money to the company. There might be a slight risk when obtaining the factoring facility as such companies might treat the credit customers harshly when they don't pay on time. There by harming the trade relations with the company that have been given credit (Brealey et al, 2006).

2.1.7.2. Inventory Management

Inventory or stocks are a crucial make-up of current assets. Manufacturing firms usually contain in their inventory: raw materials, works in progress or finished goods, whereas consultancy

companies have no inventory. In most cases, it is a balancing to keep inventory for sales and having less inventory to improve working capital. When there are less stocks the company may not meet the customers demand immediately. In this case, companies may lose their customers as it is difficult to make them wait until the products are manufactured. On the other hand, holding too much stock may cost the company by ting up working capital. The best way is to maintain low inventory levels as much as possible. The concept invented by Japan known as just in time is the best stock policy. The just in time keeps suppliers ready to supply goods or stocks when the need arises for organizations to satisfy their demand.

2.1.7.3. Cash Management and Short-term Securities

Cash in the current asset section can have multiple uses. It can be used to buy stock, pay salaries and purchase and purchase fixed assets etc. It is safe for organizations to hold big amount of cash for companies cash needs as they do not have to raise an overdraft, call on stakeholders to put in additional capital or raise debt. Large amount of cash which is not used for buying stocks, to fund the expansion of business or to pay dividends gives the company a lost opportunity to earn a return. This cash can be invested in a saving account, fixed deposit or government bonds. For example to earn an interest, a company should prepare a forecast cash-flow and see whether they are not in need of cash, otherwise, after investing cash in securities it may be called on to buy stock or pay creditors. This leads to costs for a company in investing cash in securities, such as administrative time taken to inform the bank and get the money to the company and in some cases there might be a penalty. Some large organizations, at the end of the day when they have cash balance; they invest it in an overnight money market deposit account which pays an interest rate. Other short term securities that companies can invest their liquid funds in government treasury bills, commercial papers, bonds, mutual funds, corporate notes and mortgage backed securities (Brealey et al., 2006).

2.1.7.4. Accounts Payable Management

Account payable is the liability that comes from credit sales and is posted as a sum receivable by the seller and account payable from the buyer. Most companies, specially retail and manufacturing buy goods on credit and record it as a liability that has to be paid. A company can extend its credit policy based on the relationship between the suppliers. However, it should be noted that it is a form of short term debt, effective management of which is important and a company should make sure suppliers are receiving the payment on time to make them satisfied.

Arnold (2008) said that buying goods on credit and then selling them on credit to customers is a cheaper form of finance than an organization taking a bank overdraft to finance credit sales. Goods purchased on credit are usually will be paid at a future date; this credit period is given by the seller. Businesses obtaining trade credit is regular norm, which has benefits such as debtors do not have to be financed by short term debt. If the creditor period is long the cash could be used to buy inventory for sales. Companies need to manage their forecasted cash-flow and pay the creditors when the amount falls. Paying on the creditors on time will enable a company to obtain more credit from suppliers and other too, will be given on credit as the company's image and hence will prevent any legal action taken by creditors. A method to identify when the payable are due is to analyze past instances where how much time was taken to pay creditors. Another method would be to take trade payable outstanding as at now divide it by credit sales and multiply in by the number of days. That will provide an indicator roughly how long it takes to pay the creditors.

2.1.8. Working Capital Policy

An individual company's investment in working capital is related to the type of industry in which it operates and the essential working capital policy the company adopts. Working capital investment decisions concern how much of the firm's limited resources should be invested in working capital. Financing decisions relate to how the investment in working capital is to be funded. What may be considered an acceptable level of working capital for one industry or line of business may be unacceptable (i.e. too low or too high) in another due to different operating or business characteristics across industries. Working capital requirements are also likely to change over time in response to the nature of a company's operations, for example, as firm progresses from growth to a maturity stage in its life cycle (Collins et al., 1996).

Pandey (1993) underlines three distinct types of working capital policies which a company can pursue; conservative policy, aggressive policy and moderate policy. The type of policy adopted relates to the firm's general approach to the investing and financing of its working capital needs. Aggressive and conservative policies tend to represent the opposite ends of a spectrum of working capital policy options. The policies differ in other attitudes to both the investment in and the financing of current assets. The more conservative in attitude the policy is, the greater the level of investment in current assets and the greater the firm's reliance on long term capital (in the form of debt or equity) to finance the investment in current assets.

Conversely, the more aggressive the working capital policy the lower the level of investment in current assets and the less is the firm's reliance on long term capital to finance current assets.

2.1.8.1. Conservative Policy

A conservative policy implies relatively high investment in current assets in relation to sales, the current assets to sales ratio is comparatively high and asset turns over ratios were low. In a conservative approach, stock and cash levels generally kept high to avoid stock- out and illiquidity costs. There is also likely to be a sizeable investment in short-term bank deposits and other short term liquid investment (Copeland et al.2005).

The investment in current asset is divided into permanent current assets and temporary current assets. The investment in permanent current assets represents the core, or minimum level of investment in current assets required on a continual basis. In addition to permanent current assets, the business needs to invest in temporary assets, to accommodate fluctuations in its business (Brealey& Myers, 1996).

Weston and Brigham (1977) further observe that as the conservative policy relies on long- term financing, this also makes it a more expensive policy to follow than one which follows short-term financing. However, they say it is also the low risk working capital policy as the company is not dependent upon access to short term funds and is not therefore exposed to the volatility of short-term interest rates or to unexpected changes in general economic conditions.

2.1.8.2. Aggressive Policy

An aggressive capital policy relies on minimum investment in current assets and is highly dependent on access to short-term financing. With an aggressive policy total investment in current assets is kept to a minimum. The current asset to sales ratio is much higher and the current turnover rates much higher in comparison to a conservative policy.

In terms of financing, McMenamin (1999) says that a company following an aggressive working capital policy uses long-term finance to fund its investment in permanent fixed assets and also a substantial part of its permanent current assets. Short term financing is used to fund temporary current assets needs and also part of the permanent current assets requirements.

Compared with conservative and moderate policies, an aggressive working capital policy achieve higher returns but also carry high risk due to its higher dependency on short term finance (McMenamin, 1999).

2.1.8.3. Moderate Policy

A moderate or balanced working capital policy falls midway between the aggressive and conservative working capital policies. With a moderate policy, the level of investment in current assets is neither lean nor excessive. Following a moderate policy, long-term funds are used to finance the investment in fixed asset and permanent components of current assets investments. Temporary or seasonal current assets are financed by short term sources of finance.

2.1.9. Working Capital Management and Profitability

Working capital management plays a significant role in improved profitability of firms. Firms can achieve optimal management of working capital by making the trade-off between profitability and liquidity. The concept of working capital management addresses companies' managing of their short-term capital and the goal of the management of working capital is to promote a satisfying liquidity, profitability and shareholders' value (Makori and Jagongo, 2013). Shortage of working capital can cause problems on the firm daily activities, which will inversely affect to the firm's profitability while overinvestment on working capital can increase opportunity cost, especially when the firm has to use external funds to finance its working capital (Thoa and Nguyen, 2014).

Most of the previous studies support that working capital management is a vital issue in financial decision-making since it is a part of investment in asset and it directly affects the liquidity and profitability of the company. Firms that manage the trade-off between profitability and liquidity could achieve the optimal of working capital management (Sarbapriya, 2012). Ali and Ali (2012) posits that working capital management has a positive impact on profitability, thus sufficient proportion of working capital has a positive effect on total assets and profitability of the firms. Prudent working capital management policies help firms to overcome liquidity crisis and to enhance their profitability (Akoto et al., 2013). Through proper working capital management, a company can increase its profitability. Hence, efficient management of working capital is very vital for a business survival and therefore a factor for overall boost in profitability.

Additionally, several studies have also established that management of working capital components affects profitability either positively or negatively. For example, Majeed et al. (2013) examined the impact of different variables of cash conversion cycle on firm's performance and found that the average collection period of accounts receivables, inventory conversion period and cash conversion cycle have negative relationship with firm's performance.

Murega (2013) also established that managing inventory as well as cash conversion cycle to an optimum level yields additional profit. Muscettola (2014) also established that average receivables period has significantly positive association with profitability.

2.1.10 Relationship between profitability and liquidity

Every decision on working capital management will affect either profitability or liquidity.

Financial manager of every firms face the dilemma between profitability and liquidity when making decision in any area of corporate finance (Eljelly, 2004). Profitability means the ability of firms to raise anticipated return and maximize shareholders wealth whereas liquidity shows the ability of business to meet day to day obligation or having of sufficient cash to pay its debts and ability to satisfy unexpected cash needs. Profitability and liquidity are the two primary objective of any financial manager but they contradictory each other. When profitability of firms increase its liquidity decease, when profitability decease liquidity increase (Padachi, 2006).

Financial managers always face confusion between short term investment and long term investment. When firm invest in long term asset its profitability will increase because long term asset has higher present value of future cash follows however the risk of firm also increase since long term asset are non-liquid asset and it needs more time to covert in to cash. On the other hand, if a firm invest in short term investment like current asset liquidity problem will be solved the higher firms invest in short term asset the more a firm's ability to meet business day to day needs however it results redaction of profitability (Niresh, 2012).

Walker (1964) describe that when firm builds large amounts of current asset it could satisfy liquidity objective however, the problem was current asset has less returns. If a firm has large current asset such as cash, stocks and receivable it will face less risks however, its return also reduced holding to many current asset on hand has an opportunity cost if such fund invested in other assets, carrying large inventory has high storage cost and offering large credit sales leads to unnecessary bad debt expense. On the other hand, holding to few current assets leads to higher profitability however, its liquidity position will be week. In general to be solvent and sustain its operation any financial manger making decision on working capital management should avoiding the two extreme positions and try to make optimal decisions by balancing the two opposite objectives because business will not be continues its operation without the fulfillment of the two objectives(Arnold, 2008).Thus, one needs the other.

2.1.11 Measurement of Liquidity and profitability

The most commonly used method to evaluate financial performance of business by using financial statement is ratio analysis. As the name indicates ratio means mathematical relationship between two numbers. There are various ratios analysis exists in field of financial management. This study includes only profitability ratio and liquidity ratio from various financial ratios because all other ratios are less relevant to this study.

Profitability ratio: used to measure how efficiently a firm utilizes its asset in generating profit and the ability of managers of a company in managing its operation (Ross et al., 2008).

Net profit margin (NPM): this ratio calculated by dividing net income over sales it also called profit margin on sales and measures profit generated from each dollar sales. The higher profit margin ratio, the better firm's financial performance will be.

$$\text{NPM} = \frac{\text{Net Income}}{\text{Sales}} * 100$$

Gross operating profit (GOP): this ratio used to evaluate how a firms efficiently utilizing its operating assets. This ratio can be calculated by dividing gross profit over operating asset.

$$\text{GOP} = \frac{\text{Gross Profit}}{\text{Total Asset} - \text{Financial Asset}}$$

Return on asset (ROA): this ratio masseurs how efficiently firms utilize its asset to generate a given level of income. It principally measures the amount of profit generated by utilizing a given level of asset. It can be calculated dividing net income by total asset employed. The higher the value of this ratio the better firms utilize its asset.

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}}$$

Liquidity ratio: This ratio measures a company's ability to meet its short term obligations at payment date and it measures the degree of convertibility of current assets in to cash (Brealey et al., 2006). The two commonly used liquidity measures presented and discussed as follows.

Current ratio (CR): is one of the most known and frequently used measurers of short term solvency. It measures the extent in which current liability covered by those assets that converted in to cash in near future date and calculated by dividing current asset over current liability. The higher this ratio, the greater firm's ability to meet its sort term obligation will be (Horne &Wachowicz, 2009).

$$\text{CR} = \frac{\text{Current Asset}}{\text{Current Liability}}$$

Quick ratio (QR): it also known as acid test ratio and measures the ability of firms to meet its current obligation with its most liquid asset (quick asset). This ratio is similar with current ratio except the only difference excludes inventory which is the least liquid part of current asset (Horne &Wachowicz, 2009).

$$QR = \frac{\text{Current Asset} - \text{Inventory}}{\text{Current Liability}}$$

Debt ratio: which also known as leverage ratio is one part of financial ratio which is used to measure long term solvency. It measures the extent of debt used by firm as source of finance relative to its asset and it measure over all ability of firm to pay its obligation. The higher this ratio, the grater firms vulnerable to financial risk (Ross et al., 2008)

$$DR = \frac{\text{Total Debt}}{\text{Total Asset}}$$

2.2 Empirical Review of Related Literature

Various studies have analyzed the relationship of working capital management (WCM) and firm profitability in various countries. The results are quite mixed, but a majority of studies concluded a negative relationship between WCM and firm profitability. The studies reviewed have used various variables to analyze the relationship with different methodology such as linear regression and panel data regression. This section reviewed the previous studies on the impact of working capital management on firm's profitability.

Makori and Jangongo (2013) analyzed the effect of working capital management firm's profitability in Kenya for the period 2003 to 2012. For this purpose, balanced panel data of five manufacturing and construction firms each which are listed on the Nairobi Security Exchange was used. The dependent variable, firm's profitability was measured by return on asset. With regard to independent variables, average collection period, inventory conversion period, average payment period and cash conversion cycle were used to measure working capital management. Pearson's correlation and ordinary least squares regression models were used to establish the relationship between working capital management and firm's profitability. The study found a negative relationship between profitability and number of day's accounts receivable and cash conversion cycle, but positive relationship between profitability and a number of days of inventory and numbers of days payable.

Yadav and Kumar (2014) studied the relationship between working capital management and profitability. Profitability is a dependent variable whereas determinants of working capital are

independent variables such as average collection period, inventory turnover in days, average payment days, cash conversion cycle, and net trading cycle were used to assess working capital management and return on total assets. The study was considered sample of the size of ten large scale steel manufacturing companies in India over a ten year period from 2003to 2013. The analysis was done by using OLS regression, shows whether there is a significant relationship between these variables. From the study, though it is evident that working capital management does not have a significant impact on profitability.

Lawalet al. (2015) studied by taking six selected companies in Nigeria covering the period between 2006 and 2013. A purposive sampling technique was adopted and data was analyzed using panel date least square method of working capital (ARP, APP and IHP) and profitability (ROI). They concluded that working capital management has significant impact on profitability and of manufacturing companies.

Tirngo (2013) examined impact of working capital management on profitability of micro and small enterprises in Ethiopia for the case of Bahir Dar City Administration. The study had taken a sample 67 micro and small enterprises. Date for this study was collected from the financial statement of the enterprises listed in Bahir Dar City micro and small enterprises agency for the year 2011. The study applied Pearson's correlation and OLS regression with a cross-sectional analysis. The result showed that there was a strong positive relationship between numbers of days of accounts payable and enterprises profitability. However, number of days accounts receivable, number of days of inventory and cash conversion cycle had a significant negative impact on profitability.

Gill et al. (2013) researched the influence of working capital management (WCM) on performance of small and, medium enterprises (SMEs) in Pakistan. The duration of the study was 7 years (2006-2012). The data used in this study was taken from SMEDA, Karachi Stock Exchange, tax offices, company itself and Bloom Burgee Business week. The dependent variable of the study was return on assets (ROA) which was used as a proxy for profitability. Independent variables were Number of days accounts receivable (ACP), Number of days of inventory (INV), Cash conversion cycle (CCC) and number of days on accounts payable (APP). In Addition to these variables some other variables were used which included Firm Size (SIZE), Debt Ratio(DR) and Growth (GROWTH). The regression analysis was used to determine the relationship between WCM and performance of SMEs in Pakistan. The result suggested that

APP, growth and size have positive relationship with profitability whereas ACP, INV, CCC and DR have inverse relation with profitability.

Oldipupo and Okafor (2013) examined the implication of firm's working capital management practice on its profitability and dividend payout ratio. The study focused on the extent of the effects of working capital management on the profitability and dividend payout ratio. Financial data were obtained from 12 manufacturing companies quoted on the Nigeria Stock Exchange over a period of 5 years (2002-2006). The study used Pearson's product moment correlation techniques and ordinary least square (OLS) regression techniques. The result sowed that observed that shorter net trade cycle and debt ratio promotes high corporate profitability. While the level of leverage had negative significant impact on corporate profitability, the impacts of working capital management on corporate profitability appeared to be statistically significant at 5% confidence level. On the other hand, dividend payout ratio was influenced positively by profitability and net trade cycle but negatively by growth rate in earnings.

Almazari (2013) researched the relationship between the working capital management (WCM) and the firm's profitability for the Saudi cement manufacturing companies. The sample included8 Saudi cement manufacturing companies listed in the Saudi Stock exchange for the period of 5years (2008-2012). Pearson Bivariate correlation and regression analysis were used. The finding showed that Saudi cement manufacturing industries' current ratio was the most important liquidity measure which affected profitability. Therefore, the cement firms must set a trade-off between these two objectives so that neither the liquidity nor profitability suffers. It was also found that as the size of a firm increases profitability also increases. Besides, when the debt financing increased, profitability declined. Linear regression tests confirmed a high degree of association between the working capital management and profitability.

Akoto et al. (2013) analyzed the relationship between working capital management practices and profitability of listed manufacturing firms in Ghana. The study used data collection from annual reports of all 13 listed manufacturing firms in Ghana covering the period (2005-2009). Using panel data methodology and regression analysis, the study found a significant negative relationship between profitability and accounts receivable days. However, cash conversion cycle, current asset ratio, size and current asset turnover significantly positively influence profitability. The study suggested that mangers can create value for their shareholders by creating incentives to reduce their accounts receivable to 30 days. They also further recommended that enactment of

local laws that protect indigenous firms and restrict the activities of importers and eminent to promote increased demand for locally manufactured goods both in the short and long runs in Ghana.

Gakure et al. (2012) analyzed the relationship between working capital management and performance of 15 manufacturing firms listed at the Nairobi NSE from 2006 to2010 and for a total of 75 firms' observations. They used secondary data from a sample of 18companies at the NSE. A regression model was used to establish the relationship between the dependent variable and the independent variables. Pearson's correlation and regression analysis were used for the analysis. The results indicated that there was a strong negative relationship between firm's performance and liquidity of the firm. The study found out that there was a negative coefficient relationship between accounts collecting period, average payment period, inventory holding period and profitability while the cash conversion cycle was found to be positively correlated with profitability. However, the effects of the independent variables, except the average payment period were not statistically significant.

Sharma and Kumar (2011) investigate the impact of working capital on profitability of companies in India. It employed data from the audited financial statement of 263 non-financial firms quoted in the Bombay Stock Exchange (BSE) for the financial years 2000 – 2008 and analyzed though OLS. The findings showed that WCM and profitability had positive correlation in India firms. However, it was equally observed that the number of days inventory were held and the number of days accounts payable were outstanding had negative correlation with the firms' profitability, while the number of days accounts receivable were outstanding and CCC were positively correlated with profitability of firms in India.

Mathuva (2010) investigate the impact of working capital management components on profitability on sample of 30 firms listed on Nairobi stock exchange for period of 6 years between1993 -1998. He used Pearson and Spearman's correlations to measure the degree of association between variable and he used fixed effect regression model to analyze data. He found that there was highly significant negative relationship between receivable collection period and profitability; there was highly significant positive relationship between inventory conversion period and profitability; there was highly significant positive relationship between average payment period and profitability. This showed that the more profitability firms were the lower it

takes to collect its credit sales, those who hold high inventory level and the longer it takes to pay its credit purchase.

Magwiro (2014) examines the influence of working capital management on the profitability of retail firms in the South African economy. Panel data were used through the time frame of 2009 to 2013 in South Africa. Firm data from 15 firms in the general retail sector listed on the Johannesburg Stock Exchange (JSE) was analyzed through panel data regression technique. The finding showed that a significantly negative relationship exist between working capital management and profitability of industries in South Africa. The study recommended that retail firms should choose the option of long-term debts which are mostly obtained under favorable terms of payment that will not subject the firm's cash position into difficulty. Also, retail firms should formulate alternative strategy on how to collect outstanding payments due to them faster.

Asaduzzaman and Chowdhury (2014) examine the impact of WCM on the profitability of Bangladeshi Textiles companies from 2008 to 2012. Data were collected from the annual accounts of 21 textile companies quoted on Chittagong Stock Exchange (CSE) and were analyzed through multiple regression technique. Results of the study showed that number of days account receivables, inventory of number of days, and cash conversion cycle were positively related with the profitability of the firm whereas the number of day's accounts payable correlate negatively. The study concluded that firms can achieve good WCM by improving on profitability and liquidity.

Uguru et al. (2018) examine the effect of working capital management on the profitability of brewery firms in Nigeria. Therefore, the study aimed to ascertain the effect of working capital management (number of days account receivables are outstanding, number of days inventory are held, and cash conversion cycle) on the profitability (return on assets). The covered a sample of Nigerian Breweries Plc and Guinness Nigeria Plc for the period of 2006 to 2014. The findings of the study suggest that number of days account receivables, numbers of days inventory, and cash conversion cycle were significant factors in the accomplishment of the profitability objective of brewery firms in Nigeria.

Abdullah (2019) investigate the effects of working capital management on profitability of mineral water manufacturing firms in Mogadishu, Somalia. The results revealed that inventory management, cash management, account receivables management and account payable

management have significant and positive effects on profitability of manufacturing companies in Mogadishu.

Mohamud(2018) studied the effect of working capital management and financial performance of small and medium enterprise in Kampala. From 327 respondents of small and medium enterprise in Kampala central division primary data was collected to answer study questions specifically to seek relationship between inventory management, payable management, receivable management and cash management and financial performance of SME in Kampala Uganda. ROA and ROE was adapted to measure financial performance. Findings revealed cash management, receivable management and inventory management had positive significant relationship with financial performance while payable management had negative non-significant relationship. The study concluded components of working capital management under study can improve the state of profitability of SME in Kampala. Study recommended owners and managers of SME to control working capital efficiently in such a way to maintain working capital in optimal level.

Lyimo (2015) carried out a studyon the impact of working capital management on profitability of listed cement companies in Tanzania. The objective of the study were to find out the relationship between average payment period, average collection period, inventory turnover in days and cash conversion cycle and profitability of listed cement companies in Tanzania. Secondary data was collected from financial statements for period of 8 years from 2003 to 2013. Data analysis was carried out through correlation and multiple regressions and revealed that negative relationship between average collection period, cash conversion cycle and gross operating profit while inventory turnover in days and average payment had positive correlation. The study concluded that profitability of Cement Company depends on effectiveness of working capital management.

Odhiambo (2014) evaluated the effect of working capital management on profitability of retail store in Migori county Kenya. The study used a sampled of 30 retail shops from population of 50 retails shops. Secondary data was collected from financial statement of income and balance sheet to establish the effect of average collection period, average payment period, and average inventory turnover and cash conversion cycle on financial performance. Regression analysis revealed that inventory turnover had a big correlation with ROA while Profitability increased with decrease in cash conversion cycle period. The study concluded that there was a strong relationship between working capital management and profitability of retail stores in Migori County.

Fredrick (2013) assessed the effect of working capital management on firm's profitability a case of selected manufacturing companies in Dares Salaam. Secondary data was collected from sample of manufacturing companies in Tanzania for period of 4 years from 2008 to 2011. The study sought to find out the effect of accounts receivable days, cash conversion cycle, accounts payable in days inventory in days and cash conversion cycle on firms profitability. The study found non-significant positive relationship with accounts receivable days and cash conversion cycle profitability while inventory days and accounts payable in days had significant positive relationship. He Study concluded that working capital components directly affects the firm's profitability. Study recommended he firms to have proper management of inventory to avoid overstocking, equally accounts payable to be given consideration.

Komba (2017) examined the impact of working capital management on profitability a case of Tanzania Portland Cement Company. Study adopted both primary and secondary data. Primary data collected from 60 respondents from Portland cement. ROA was used as measure of profitability. Result from study revealed a positive relationship between accounts payable and profitability while negatively correlated with accounts payable period. Study recommended that managers need to efficiently administer their working capital in more efficient ways, reduce number of inventory period to optimal level and reduction of cash conversion cycle.

Kiptoo (2015) carried out research on effect of working capital management on profitability of sugar manufacturing firms in Kenya. Study focused on sample of 8 sugar firms for period of 6 years from 2008 to 2013. Study specifically sought to find out the impact of average collection period, inventory turnover in days, average payment period and cash conversion cycle on profitability of sugar firms in Kenya. Secondary data was collected from firm's financial statements and analyzed through Pearson correlation and regression. The study found negative relationship between working capital management and profitability of sugar firms in Kenya. The study recommended firms to reduce their accounts receivables periods and increase inventory to reasonable level. Equally study recommended for firms to take long to pay their creditors.

Maisiba, (2017) assessed the effect of working capital management on profitability of retail firms in Kisii County. The study adopted sample of 57 firms out of population of 66 firms. The study covered period of three years 2014 to 2016. Profitability of retail firms was measured through return on asset. Correlation and regression analysis showed that profitability of retail firms in Kisii County was influenced by the working capital management significantly.

Ratemo (2018) evaluated the effect of working capital management and profitability of selected supermarket in Nairobi County, Kenya. The study analyzed secondary data that was collected from financial statement of 31 sampled supermarkets out of 102 targeted populations. The period under study was 7 years from 2010 to 2016. Based on the findings the study concluded that working capital management turnover, inventory turnover and accounts payable turnover had significant effect on profitability of the supermarkets.

2.3 Summary of the chapter and knowledge gap identified

In general what we understand from theoretical and empirical part of the study working capital management plays great role for long lasting success for any organization particularly it is very essential for micro and small firms for their smooth day to day operation and to generate enough profit for their long term success was undeniable fact and proofed by scholars like (Louw, 2014), (Garg&Gumbochuma, 2015). Every business requires working capital to carry out day to day business operation weather business is large or small. Without working capital is difficult for firms to undertake day to day activities of business. Efficient management of working capital has so many advantages and it was the key for success for any organization. Inefficient management of working capital leads to failure even leads to bankruptcy and one of the causes for the failure of many organizations in the past was due to inefficient management of working capital (Smith, 1973; Egbide, 2009). There were many study exist on the relation between working capital management and profitability in different part of the world however, their results contradict one with the other and lack consistent across different countries of the world and industry to be studied. The difference was mainly based on the relationship, sign and the extent of relationship between working capital management components with profitability.

From theoretical and empirical evidences we can understand that there was lack of consensus on the impact of working capital management and its components on profitability and still it is open for further investigation and this study try to minimize the above mentioned gap by examining the impact of main working capital management variable on profitability of micro and small firms.

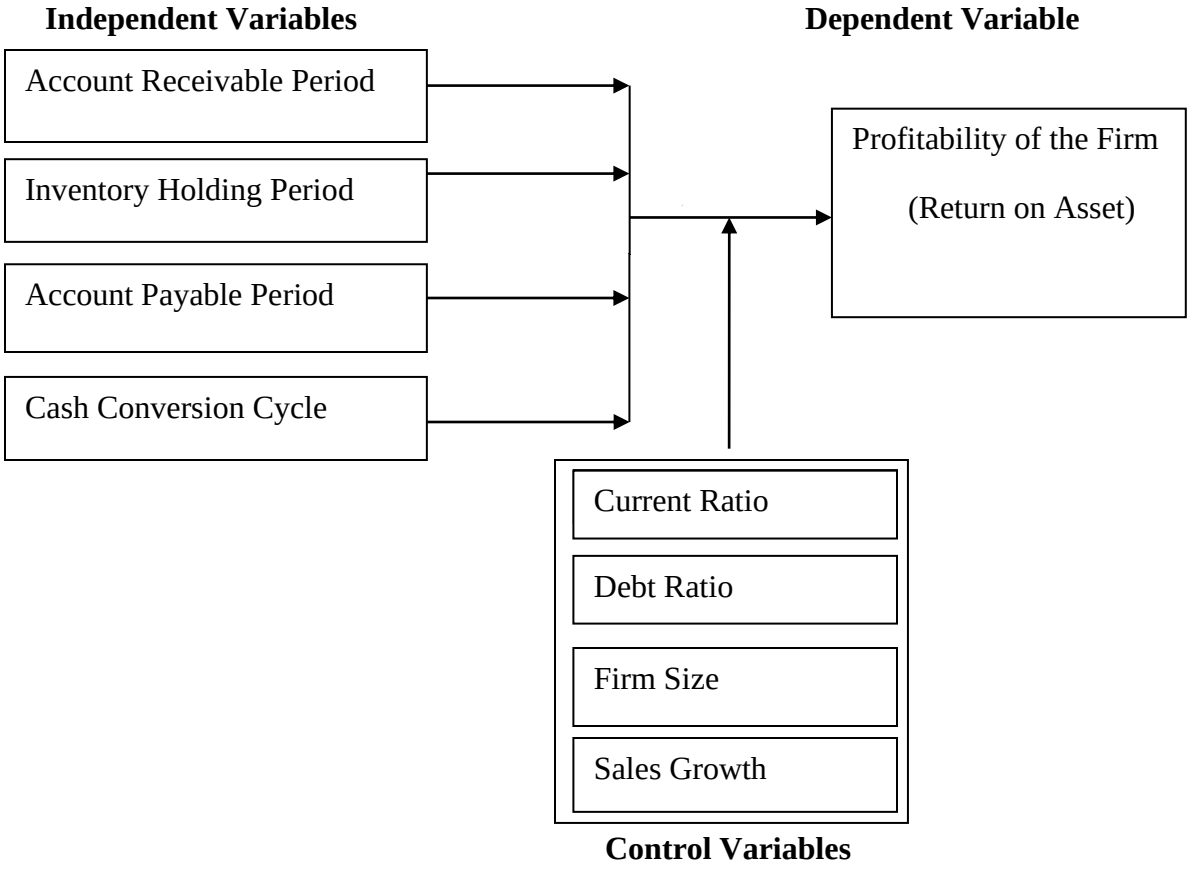
There had been studies conducted in different countries on the impact of working capital management on profitability of micro and small firms in different part of the world. Most of studies found that working capital management has significant effect on profitably of micro and

small firms. In case of Ethiopia no enough empirical evidences had been found on the impact of working capital management on profitability of micro and small enterprises. Therefore, this study addressed the knowledge gap and provide use full support for better understanding on the impact of working capital management on firms profitability in selected micro and small enterprises that located in Bahir Dar city administration, Ethiopia.

2.4 Conceptual Framework of the Study

The following figure presents the conceptual framework of the relationship between working capital management measures (independent variables and control variables) and profitability of the firm (dependent variable).

Figure 1: Conceptual framework



Source: author's design

CHAPTER THREE
RESAERCH METHODOLOGY

Introduction

The purpose of this chapter is to explain the methodologies adapted by the researcher in the course of the study in order to accomplish the research objectives. This chapter presents research design used in order to examine the effect of working capital management on profitability. It also describes about source of data and collection tools. Moreover, it includes explanation about sampling design, description of variables and the analysis techniques used in the study. Finally, discussion about model specifications was include under this chapter

3.1. Description of the Study Area

There is no common definition of micro and small enterprise (Scarborough &Zimmerer, 1984and Meredith, 1993).The definition of micro and small enterprises differ from country to country. The micro and small enterprises definition is generally consisted of three basic criteria. Thoseare:-Full timer employed manpower /head count staff/, Total asset, net asset and paid capital, and annual turnover legal entity sometimes is used by some countries (FeMSEDS, 2011). Generally the definition of the sector is viewed from the country's economic status and level of growth. In some countries for instance, China , USA ,S. Africa, MSE are divided in to manufacturing, construction, transport, wholesale and retail agriculture (urban), and service sectors (FeMSEDS, 2011).

In our country two different definitions of micro and small enterprises (MSEs) are used so far. These are definition of MSEs development strategy and definition by central statistics authority (CSA, the formers definition is only based on paid capital or capital investment as most business were confined to family man power basis and lack of availability of manpower information of the sector. The definition given by central statistics authority (CSA) is based on size of employment and automation for small, medium and large-scale enterprises and a combination of criteria for informal sector operators (FeMSEDS, 2011).

The micro and small enterprises (MSEs) sector is characterized by highly diversified activities which can create job opportunities for a substantial segment of the society. This indicates that the sector is a quick remedy for countries unemployment problem. To reduce unemployment and facilitate the environment for new job seekers and self-employment a direct intervention and

support of the government is crucial (FeDMOTI, 1997). Facilitating economic growth, bring about equitable development, create long-term jobs strengthen cooperation between MSEs ,providing the basis for medium and large scale enterprises, participating in export market especially in leather and leather products and textiles are some of the important roles of micro and small enterprises (MSEs).

In most developing countries, small businesses face a wider range of constraints and problems and they are incapable to address these problems by themselves, even in effectively functioning market economies. Some of the constraints are related to the legal and regulatory environments, access to markets, finance, business information, business premises (at a reasonable rent), the acquisition of skills and managerial expertise, working capital, access to appropriate technology, access to quality business infrastructure, and, in some cases discriminatory regulatory practices. In Ethiopia's situation, since there have not been any organized policy and support systems that cater for the sector, MSEs have been confronted by serious marketing problems, shortage of supply of raw materials, lack of working capital are the first and most pressing problems facing small manufacturing industries for not expanding their businesses(FeDMOTI, 1997).

3.2. Research Design

Research design is the plan and structure of investigation so conceived as to obtain answers to research questions. The plan is the overall scheme or program of the research .Research design is also the conceptual structure within which research is conducted. It includes the way sample selected, type of data used, the variables included in the study and the analysis techniques employed in the study. It also called the overall outline or plan the researcher do which starts from research objective up to the final analysis part (Kothari, 2004). There are three main alternatives of research approach exists in which their main difference was based on nature of research, the objective of the study and the instruments used during data collection, analysis and interpretations. These are quantitative, qualitative and mixed methods approach (Creswell, 2009). The main purpose of this study is to examine the effect of working capital management on firm profitability. And by considering the nature of the problem and objective of the study quantitative approach was appropriate for this study. Quantitative approach is one of the approaches of research which is structured, systematic and scientific investigation of variables and their relationship. This approach starts from theory and known facts and mathematically proofs that theory by using different analysis techniques and finally objective generalizations are

made. According to Abiy et al. (2013) explained that research objective and hypothesis developed determined research design used by the researcher. In order to achieve the objective of this research, the study was adapted explanatory research design. The rational for choosing explanatory research design was first it used to examine the cause and effect relation between dependent and independent variables, second used to explain how they affect each other and to know the magnitude of relation between them. It also used to examine the trends over time and to compare across different firms and to proof already existing theory and to made prediction and generalization (Abiy et al., 2013).

3.3. Population and Target Population

Population refers to all the members of a real or hypothetical set of people, events or objects to we wish to generalize the results of our research. A population is the total number of elements in which researcher wants to study. It is difficult to study the whole population due to shortage of time and money and it became difficult to manage the study and to make analysis of the whole population data. In order to avoid such type of problem most of researcher select a portion of the population which is called sample. Accordingly, the target population of the study includes all micro and small enterprises that found in the selected sub cities in Bahir Dar city administration.

3.4. Sample and Sampling Technique

The study consists of 60 purposively selected MSEs from a population of 300 enterprises listed at Bahir Dar city micro and small enterprises agency. The enterprises from all sectors that have audited financial statements for the period of five years from 2016 to 2020 were considered for the study.

Purposive sampling method was used in order to select firms in included in the study which have the advantage of getting rich, informative data and give chance for researcher to emphasis on needed information. Purposive sampling method was adapted due to the following requirements to be included in the study. The first criteria used by the researcher in order to select sample firms was including that all micro and small enterprises that had a complete record of five years financial statement for a period of 2016 to 2020. So, in order to include only those firms which had a complete record for five years the researcher used purposive method of sampling.

The second criteria purposive sampling method appropriate for this study is the data of the sampled enterprises was collected from revenue authority of Bahir Dar city administration that enterprises submit for tax purpose as result some organizations prepare financial statement

inappropriately. In order to avoid making false analysis based on wrong data the researcher used purposive sampling by including only those firms prepare financial statement according to international standard.

The study includes 60 purposively selected micro and small scale enterprises from the total of 300micro and small enterprises found in the selected sub cities of Bahir Dar city administration. The researcher tried to make the sample representative of the population. Mugenda and Mugenda (2003) conclude that a sample of 10-30% of the total population is adequate if the sample is properly selected. The sample of firms include in the study was 20% of the total population which is adequate for making analysis.

3.5. Sources of Data and Data collection Tools

By considering objective and research design the study was only depends on secondary data which was collected from selected 60 micro and small enterprises found in Bahir Dar city administration for the period of five years (2016-2020) with the total number of 300 observations. The secondary data was derived from financial statements of selected micro and small enterprise in Bahir Dar city administration. These data include audited balance sheet and income statements showing annual financial statements of the sampled enterprises. Using secondary data a as source of data have the advantage of reliability and objectivity of data to make trend analysis at different time and across different cross-sections and it is a better source of data to answer the question why and how one variable affect the other variable.

3.6. Data Analysis Technique

There were various analytic techniques exist in order to undertake one research. Based on the objective of this study, balanced Panel data of 60micro and small scale enterprises for the period of five years (2016-2020) were used. Panel data which combining both time series and cross sectional data has greater advantage over only cross section or time series data because of its two dimensional nature, it have the advantage of more information for accurate analysis and it helps to minimize the problem of co-linearity between variables (Gujarati, 2004). By considering objective of research, the hypothesis drawn and type of research approach the study this study used descriptive analysis, correlation analysis and the regression analysis in order to investigate the collected panel data.

3.6.1. Descriptive analysis

Descriptive analysis was used in this study as a first part of analysis and use by many prior researchers in order carried out quantitative analysis before going to detailed regression analysis. It is used to describe relevant aspects of working capital management and profitability on micro and small enterprises found in Bahir Dar city administration and to provide detailed information about each variable included in this study.

3.6.2. Correlation analysis

Correlation analysis was used to identify the direction of relationship between two variables and to measure the degree of association between variables. Pearson's correlation coefficient is used in this study in order to find out whether there is direct or inverse relation between variables and to measure the extent of relationship between two variables. The value of correlation lies between +1 and -1. A correlation coefficient nearly close to either –1 or +1 indicates that there is strong inverse or direct relationship between variables respectively; whereas a correlation coefficient of zero indicates that the variables are uncorrelated.

3.6.3. Diagnostic tests

Diagnostic tests were used in order to check the model fulfill the basic assumptions of classical linear regression model (CLRM). Diagnostic tests like heteroscedasticity test, autocorrelation test, multicollinearity test and normality test were used in this study. Moreover, the Hausman specification test was used in order to select between the random effect (RE) and fixed effect (FE) model in order to determine which is appropriate for this study.

3.6.4. Regression analysis

Multiple regression analysis was used to determine the cause and effect relationship between working capital management and profitability of selected micro and small enterprise in Bahir Dar city administration. This study employed ordinary least square method analysis in order to find out whether there is significant relation between working capital measurers and profitability.

3.7. Descriptions of Variables

In order to investigate the effect of working capital management on profitability, the study used a total of nine variables which further categorized in to dependent, independent and control

variables. The selection of variable for this study was based on alternative existing theories on the relation between working capital management and profitability and variables used by prior researchers to find out the impact of working capital on profitability in different countries (Padachi, 2006; Raheman& Nasr, 2007; Niresh, 2012; Wahab, 2015; Zelealem, 2016).

3.7.1. Dependent Variable

Dependent variable is variables that depend on other variable and some wants to estimate. This study used return on asset as proxy of dependent variable to measure profitability in line to other prior researcher such as (Samiloglu&Demirgunes, 2008; Sharma & Kumar, 2011; Arshad&Gondal, 2013; Mbawni et al., 2016). Return on asset is a widely used financial tool to evaluate the amount of profitability that a firm has generated from their employed total assets. Since it measures how a firm efficiently managing and utilizing its operating asset to generate the given level of profit and it relates asset of firm with performance of firm it can be considered as a best to measure profitability of firm (Padachi, 2006). The greater this ratio indicates that a firm is better efficiently utilizing its asset for the amount of profit generated. It can be calculated by the following formula.

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}}$$

3.7.2. Independent Variables

Explanatory variables are variables related to dependent variable and used to estimate the value of dependent variable. Independent variable such as accounts receivable period, accounts payable period, inventory conversion period, and cash conversion cycle were used in this study to measure the effect of working capital management on firm's profitability. The description and the formula used to calculate each independent variable listed as follows.

3.7.2.1. Accounts Receivable Period (ARP)

Accounts receivable period measure and used as proxy to credit policy and to measure its effectiveness. The longer the accounts receivable period indicate that a firm taken longer time to collect its receivable and a firm has a larger amount of investment on receivable and a firm follows liberal credit policy. The formula used to calculate ARP is as follows.

$$\text{ARP} = \frac{\text{Account Recivable}}{\text{Sales}} * 365$$

3.7.2.2. Accounts Payable period (APP)

Accounts payable period: it used as proxy for account payable. It measures average number of days a firm takes to pay its short term obligation which a rise from purchase of products in credit from supplier. The longer account payable period represent a firm requires longer time to pay their short term obligation and the lower the amount of capital tied up in working capital. This ratio calculated as follows.

$$APP = \frac{\text{Account Pyable}}{\text{Cost of Goods Sold}} * 365$$

3.7.2.3. Inventory Holding Period (IHP)

Inventory holding period: it is the average period a firm takes to acquire goods and to sale those goods to customer. It measures the effectiveness of firm in managing its inventory and to evaluate inventory policy. The longer inventory holding period indicate that larger amount of capital invested in inventory. This ratio calculated as follows.

$$IHP = \frac{\text{Inventory}}{\text{Cost of goods sold}} * 365$$

3.7.2.4. Cash Conversion Cycle (CCC)

Cash conversion cycle measures the length of time a firm takes between cash out flows due to purchase of products and cash inflows due to sale of products. It used a proxy to measure over all working capital management efficiency. The longer the cash conversion cycle indicates that a firm has higher amount of investment in working capital. This ratio calculated by adding receivable collection period and inventory holding period and then subtracting account payable period from the sum of two periods. Cash conversion cycle calculated as follows.

CCC = Accounts Receivable Period+ Inventory Conversation Period- Account Payable Period

3.7.3. Control Variables

Control variables were used to measure the strength of relationship between variables and to identify the degree of influence of independent variable on dependent variable. These variables are not the major focus of the study but it inherently affects the study. The control variable which is specific to firms include in these study were; current ratio, debt ratio, firm size and sales growth.

Current ratio (CR) is one of the most known and frequently used measurers of short term solvency. It measures the extent in which current liability covered by those assets that converted in to cash in near future date. This ratio calculated by the following formula.

$$CR = \frac{\text{Current Asset}}{\text{Current Liability}}$$

Debt ratio (DR) measures the ability of firm to satisfy its total obligations and long term solvency. It is the portion of asset financed by debt. This ratio calculated by the following formula.

$$DR = \frac{\text{Total Debt}}{\text{Total Asset}}$$

Firm size (FS) is one of the control variables included under this study. The intention to include firm size as a control variable was to determine degree of the effect of firm size on the association between working capital management and profitability. It measured by natural logarithm of sales.

$$FS = Ln(Sales)$$

Sales growth (SG) is one of the control variable used in this study. It calculated by subtracting last year sales from current year sale and divided by last year sales. The following formula used to calculate Sales growth.

$$SG = (Sales\ t - Sales\ t\text{-}1)/Sales\ t\text{-}1$$

3.8. Model Development and Specification

As shown in the analysis part the study was used panel data regression model combining both cross sectional and time series data together. The study included account receivable period, inventory holding period, account payable period, cash conversation cycle as an independent variable and return on asset as dependent variable along with some control variables. In order to examine the effect of working capital management on profitability of selected micro and small enterprises in Bahir Dar city administration this study used the model used previously by (Raheman& Nasr,2007); (Jamiu&Ayokunle, 2014); (Ademola, 2014).

The general model specified as

$$\mathbf{ROA\ it = \beta 0 + \Sigma\ \beta\ i\ Xit + \varepsilon\ it}$$

Source: Samiloglu&Demirgunes, 2008

Where:

ROA it = Return on asset of a firm i at time t; i = 1, 2, 3…, 60 firms

β_0=the intercept of equation

β_i=are coefficients of Xi variables

X it = the different independent variables for working capital management of firm i at time t.t=Time from 1, 2…, 5years and

£it=Error term

Based on the above general regression model in order to examine the effect of working capital management on profitability of micro and small enterprise this study further converted the general model in to specific variables.

ROA it =βo+ β1 (ARP it) + β2 (IHP it) + β3 (APP it) + β4 (CCC it) + β5 (CR it) +β6 (DR it) + β7 (FS it) + β8 (SG it) + € it

Where:

ROA it = Return on asset of firm i for time period t

β_0= intercept of the regression,

β1, β2 ....., β8= coefficients of each respective explanatory variables,

ARP it= Accounts receivable period of firm i for time period t

APP it = Accounts payable period of firm i for time period t

IHP it = Inventories holding period of firm i for time period t

CCC it= Cash conversion cycle of firm i for time period t

CR it = Current ratio of firm i for time period t

DR it = Debt ratio of firm i for time period t

SG it = Sales growth of firm i for time period t

Size it= Natural logarithm of sale of firm i for time period t

ε it = is the error term of the regression – for firm i at time t

CHAPTER FOUR

DATA INTERPRETATION AND ANALYSIS

Introduction

This chapter includes the result of analysis of the impact of working capital management on profitability of micro and small scale enterprises. Section 4.1 and section 4.2 presents the summary of descriptive statistics and correlation analysis of each variable respectively. Section 4.3discusses about the diagnostic test employed in order to test the assumptions of CLRM and to select the model. Section 4.4 presents the regression result in order to examine the impact of working capital management on profitability. Finally, section 4.5 includes discussion of the result of regression between dependent and explanatory variable and compression of the result of this study with the finding of prior empirical studies.

4.1. Descriptive statistics

In this section the result from descriptive statistics of both dependent and independent variable is presented. Table 1presents the mean, Standard Deviation, minimum and maximum value of each variable for sample of 60micro and small enterprises for the period of 5 years from year 2016 to 2020 with a total of 300 observations.

Table 1: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROA	300	.1709679	.1779559	-.717317	.7460
ARP	300	41.45643	54.69413	0	800.3201
IHP	300	131.1311	115.3117	0	683.1824
APP	300	33.92641	53.43977	0	515.8735
CCC	300	139.2433	130.4377	-389.3947	1004.931
CR	300	3.737448	5.899087	.2773946	59.15891
DR	300	.5357451	.2658019	.0628168	1.693048
FS	300	18.78587	1.114059	16.02424	23.48331
SG	300	.2709538	.6980679	-.8318409	7.280148

Source: STATA output from financial statement of sample firms 2016-2020

As it is presented in the above table 1 the mean value of profitability measured by ROA was on average 17 percent. It means that, sample micro and small enterprise on average 17 percent from their total asset employed. The higher the value of return on assets indicates that firms is effective in generating profit from its asset employed and the reverse is true for lower the value in return on assets. The standard deviation of return on asset (ROA) is 17.79 percent and it shows that the value of return on asset can vary both sides by 17.79 percent from the mean. Its minimum value is -71.73 percent while the maximum is 74.60 percent.

Accounts receivable period, a measurement for credit collection policy, is averaged to 41 days for the sampled firms. It means that, sample firms wait 41 days on average to collect their credit sales. The account receivable period, can vary both sides by 55 days from the mean value and the value of account receivable period for sampled firms ranges between 0 and 800 days of minimum and maximum values respectively. The minimum value of zero represent the firm didn't use receivable to sale goods or firm sales goods in cash only.

The mean value of inventory holding period is 131 days. This shows that, a sampled firm takes on average 131 days to sale inventory. The standard deviation of inventory holding period is 115 days. The value of inventory holding period for sampled firms ranges between 0 and 683 days of minimum and maximum values respectively.

The mean value of account payable period is 35 days. The standard deviation of account payable period for the sample firms is 53 days with 0 and 516 days as minimum and maximum periods respectively.

The mean value of cash conversion cycle, which used as a comprehensive measure of working capital management, has an average 139 days with the standard deviation of 130 days. The minimum value of -389 days shows that a firm records a large inventory turnover and/or cash collections from credit sales before making a single payment for its credit purchases. It means that the accounts receivable period and/or the inventory holding period are very short and/or the accounts payable period of the firm is very long. On the other hand, the maximum time for cash conversion period is 1005 days which is a very long period and it shows that a firm records a small inventory turn-over and/or cash collections from credit and/or shortest payment period for credit purchases. It means the accounts receivable period and/or the inventory holding period are very long and/ or the accounts payable period of the firm is very short. The above table 1 also includes the descriptive statistics of control variables that were used in the study. The

first control variable included in this study current ratio, which is traditional measure of liquidity, is on average 3.74with standard deviation of 5.90. It means that, current asset of sample firms is on average 3.74 more than its current liability and it indicate that sampled firms are good in liquidity position. The value of current ratio ranges between 0.28 and 59.16 minimum and maximum respectively. The result of descriptive statistics shows that the average debt ratio for sample firms is 54 percent with a standard deviation of 27 percent. The minimum and maximum value of debt financing used was 6 percent and 169 percent respectively. The third control variable, sales growth is 27 percent on average and this value vary to both sides of the mean value by 70 percent. The minimum and maximum values of sales growth are -0.83 and 7.28. Lastly, firm size which measured by the natural logarithm of annual sales, is 18.79 on average and standard deviation is 1.11. The minimum and maximum values of firm size for the sampled firms are 16.02 and 23.48 respectively.

4.2. Correlation analysis

It is common in most study making correlation analysis among variables before going to detail regression analysis. Correlation analysis is used to identify the direction of relationship and to measure the degree of association among variables. Correlation analysis is conducted in this section in order to analyze the relationship between working capital variables and profitability.

The table 4.2 below shows the correlation among components of working capital, profitability and some control variables.

Table 2: Correlation matrix between variables included in this study

	ROA	ARP	ICP	APP	CCC	CR	DR	FS	SG
ROA	1.0000								
ARP	-0.5998	1.0000							
ICP	-0.1489	0.0691	1.0000						
APP	-0.2225	0.4161	0.1200	1.0000					
CCC	-0.3395	0.3721	0.8716	-0.1067	1.0000				
CR	-0.0465	-0.0520	0.1531	-0.1769	0.1851	1.0000			
DR	-0.0926	-0.0400	-0.1874	0.1114	-0.2360	-0.1974	1.0000		
FS	0.1349	-0.1513	-0.1953	-0.0691	-0.2189	-0.1373	0.0229	1.0000	
SG	0.1044	-0.0781	-0.1441	0.0073	-0.1649	-0.0634	0.0243	0.0870	1.0000

Source: STATA output from financial statement of sample firms 2016-2020

The result of correlation analysis in the above table 2 shows that there is negative relation between average receivable period and profitability measured by return on asset. It means that, the better firm profitability associated with faster collection of credit sales. Correlation analysis also carried out between inventory conversion period and return on asset and the result shows that there is negative relation between inventory holding period and return on asset. The longer inventory conversion period results lower profitability. There is negative relation between account payable period and return on asset. It means that, the longer the period of payable results lower profitability. This relation suggests that, less profitable firm wait longer periods to pay their obligation. The correlation coefficient indicates that, there is also negative relationship between cash conversation cycle and profitability. The longer the cycle results the lower profitability. This relation suggests that, a firm improve their profitability and create value for shareholders are mainly depends on the ability of a firm to reduce its cash conversation cycle to possible minimum level as on as possible.

In addition, as it can be clearly seen in table 2. There is a negative correlation coefficient between current ratio and return on asset. There is also negative correlation between debt ratio and profitability. Finally, the correlation coefficient indicates that, there is positive relation between sales growth and firm size with firm profitability.

However, the relations we get from the correlation could be misleading for various statistical reasons. One and the important is that, the simple correlation above may reflect the effect of other factors which can influence both working capital management and profitability. Thus, an econometric analysis which controls other factors is needed in order to make sure that the pattern shown by the correlation above is not spurious. To do so, the fixed effect regression analysis was used and the discussion was based on the result of regression analysis.

1. Diagnostic test

4.1.1. Normality test

A normal distribution is not skewed and is defined to have a coefficient of kurtosis of 3. A distribution said to be normal when it is symmetric about its mean and also called Mesokurtic, while a skewed distribution is not symmetric to its mean, it may be skewed to the left or right side of its mean. According to Brooks (2008) explained that if the residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be

significant. This occurs when the p-value given at the bottom of the normality test screen should be bigger than 0.05 to do not reject the null hypothesis of normality at the 5% level. This assumption is particularly essential if the sample size is small however, for sample sizes that are sufficiently large, violation of the normality assumption is virtually inconsequential. According to a central limit theorem, the test statistics will asymptotically follow the appropriate distributions even in the absence of error normality. However, in case of small sample size it is important to meet the assumption of normality for the p- values of the F-test to be valid (Brooks, 2008). For small sample size specifically which is less than 100 observations, the normality assumption has crucial role for the test to be true and valid. For sample size that is sufficiently large, the assumption of normality is relaxed (Gujarati, 2004).

In small samples most statistical methods do require distributional assumptions; however least squares linear regression doesn't require any assumption of normal distribution in sufficiently large samples or observations. Linear regression can perform well with the data that are not normally distributed in case of large samples (Lumley et al., 2002). The statistical test used in this study in order to check normality of distribution is Shapiro-Wilk test statistic. The null hypothesis that the error term is normally distributed should not be rejected when the p-value of the test static greater than 0.05. In this study, the normality test statistic result indicates that the p- value of all variables is 0.000 which is less than 0.05 (**see appendix table 1**). This implies that there is a problem of normality in the model which is common in large sample. However, this study used large sample size the violation of this assumption doesn't have a severe impact on test validity.

4.1.2. Heteroscedasticity test

Homoscedasticity error term is one of the classical liner regression models(CLRM) assumption required for the OLS estimator to be efficient. The homoscedasticity assumption was fulfilled when the variance of disturbance term is constant and the same for all observation. If the disturbance terms do not have a constant variance across all observations the assumption of homoscedasticity will be violated. The violation of this assumption said to be heteroscedasticity. If the problem heteroscedasticity exist in the model, the least squares estimators are still unbiased(consistent) however the Gauss- Markov theorem was violated in other words confidence interval will be unnecessary larger . As result, the t-test and f-test gives inaccurate

result because of overestimation of variance the t-test will be smaller and statistically insignificant which lead s to wrong conclusion (Gujarati, 2004). There are several tests present to detect the violation of this assumption. This study used Breusch-pagan test in order to check the presence of the problem of heteroscedasticity in the model.

H0: There is homoscedasticity (no heteroscedasticity problem)

H1: There is heteroscedasticity

Table 3: Heteroscedasticity test

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity
Ho: Constant variance
Variables: fitted values of ROA
chi2(1) = 1.54
Prob> chi2 = 0.2149

Source: STATA output from financial statement of sample firms 2016-2020

As it is indicated in table 3 the result of heteroscedasticity test shows that p- value of statistic is 0.2149 which is more than 0.05. Therefore, the null hypothesis of homoscedasticity is failed to reject at 5 % significance level. This implies that, there is no detected evidence for the existence of heteroscedasticity in the model.

4.1.3. Autocorrelation test

This is an assumption that made on the covariance between the error terms is to be zero. It is assumed that the errors are not correlated with one another. If the errors are correlated with one another, it would be stated that they are auto correlated or serially correlated. The violation of this assumption means if there is a problem of autocorrelation between error terms has similar effect to the violation of heteroscedasticity. The OLS estimators are still unbiased and consistent, but they are no longer efficient, it means that the standard error estimates could be wrong. The usual t-test and f-test of significance will be in valid. Thus, misleading inference made about the statistical significance of the estimated regression coefficients (Brooks, 2008).This study used Wooldridge test in order to check the presence of the problem of autocorrelations.

H0: There is no autocorrelation

H1: There is autocorrelation

Table 4: Wooldridge test for autocorrelation

F(1, 61) =	0.771
Prob> F =	0.3833

(H0: no first-order autocorrelation)

Source: STATA output from financial statement of sample firms 2016-2020

As it is indicated in table 4, the result of autocorrelations test shows that p- value of f- statistic is 0.3833 which is more than 5% of significance level. Therefore, the null hypothesis of no autocorrelation is failed to reject at 5 percent level of significant. This implies that, there is no detected evidence for the existence of autocorrelation in the model.

4.1.4. Multicollinearity test

Multicollinearity is an assumption that focus on the relation exist between independent variable included in the model. It is assumed that the explanatory variables are not correlated with one another and that is made when using the OLS estimation method. Actually, the correlation between explanatory variables will be non-zero, although this will generally be relatively benign in the sense that a small degree of association between explanatory variables will almost always occur but will not cause too much loss of precision. However, a problem occurs when the explanatory variables are very highly correlated with each other, and this problem is known as multicollinearity (Brooks, 2008). There is no clearly defined role how much correlation between variables causes multicollinearity. According to Hair et al.(2006) multicollinearity may not a serious problem for the correlation coefficient among the variables are less than 0.90. Pallant (2005) argues that multi-core linearity is a serious problem when the correlation between two independent variables is more than or equal to 90 percent.

Table 5: Correlation matrix between explanatory variables

	ARP	IHP	APP	CCC	CR	DR	FS	SG
ARP	1.0000							
IHP	0.0691	1.0000						
APP	0.4161	0.1200	1.0000					
CCC	0.3721	0.8716	-0.1067	1.0000				
CR	-0.0520	0.1531	-0.1769	0.1851	1.0000			
DR	-0.0400	-0.1874	0.1114	-0.2360	-0.1974	1.0000		
FS	-0.1513	-0.1953	-0.0691	-0.2189	-0.1373	0.0229	1.0000	
SG	-0.0781	-0.1441	0.0073	-0.1649	-0.0634	0.0243	0.0870	1.0000

Source: STATA output from financial statement of sample firms 2016-2020

As it presented in the above table 5 correlation matrix, there is no correlation greater than 0.9 which indicate that the absence of detected multi-core linearity problem in the model.

4.1.5. Random effect versus Fixed effect models

There are broadly two classes of panel estimator approaches that can be employed in financial research. These are fixed effects models and random effects models. Fixed effects models allow the intercept in the regression model to differ cross-sectional but not over time, while all of the slope estimates are fixed both cross-sectional and over time. As with the same as fixed effects, the random effects approach proposes different intercept terms for each entity and again these intercepts are constant over time, with the relationships between the explanatory and explained variables assumed to be the same both cross-sectional and temporally. In order to identify which model is appropriate the study used Hausman test.

H0= Random effect model is appropriate

H1= Fixed effect model is appropriate

Table 6: Hausman test

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho;
Test: Ho: difference in coefficients not systematic
chi2(8) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 21.42
Prob>chi2 = 0.0061
(V_b-V_B is not positive definite)

Source: STATA output from financial statement of sample firms 2016-2020

As presented in the table 6, Hausman specification test shows, the P- value of the models is 0.0061 which is less than 5% level of significance. This showed that the null hypothesis of the model which is random effect model is appropriate rejected at 5 percent of significant level. Therefore, fixed effect model is appropriate for this study.

4.4. Fixed effect regression result

Table 7: Fixed effect regression result

Fixed-effects (within) regression — Number of obs = 300
Group variable: no company — Number of groups = 60
R-sq:
within = 0.6359 — Obs per group: min =5
between = 0.0853 — avg =5.0
overall = 0.3484 — max =5

F(8,232) = 50.64
corr(u_i, Xb) = -0.1874 — Prob> F = 0.0000

ROA	Coef.	Std. Err.	t	P>{t}	[95% Conf.	Interval]
ARP	.0049108	.0015497	3.17	0.002	.0018575	.0079641
IHP	.0054141	.0013102	4.13	0.000	.0028327	.0079955
APP	-.0057357	. 0013205	-4.34	0.000	-.0083374	-.0031339
CCC	-.0056868	.0013128	-4.33	0.000	-.0082732	-.0031003
CR	-.0009127	.0012764	-0.72	0.475	-.0034274	.0016021
DR	-.0360813	.0306553	-1.18	0.240	-.0964796	.0243171
FS	.0494791	.0123726	4.00	0.000	.0251021	.0738561
SG	.0138332	.0089478	1.55	0.123	-.0037961	.0314625
_cons	-.6666522	.2369035	-2.81	0.005	-1.133409	-.1998951

F test that all u_i=0: F(59, 232) = 7.03 — Prob> F = 0.0000

Source: STATA output from financial statement of sample firms 2016-2020

The result of regression in the above table 7 shows, the models R^2 is 63.59%. This implies that 63.59% of the variations in the profitability of the firms are explained by the independent variables of the model. This means that 63.59%variation of profitability of sample micro and small scale enterprises explained by independent variable while the remaining 36.41% of variation of profitability will be explained by other factors which are not included in the model. There is a rule of thumb when the value of R^2 greater than 0.5 % the model was moderate fit. This indicate that the relation between working capital management and profitability moderately explained by the model. In addition, the value of F-test which used to explain the overall fitness

of a model, as it is indicated by the F-value of 50.64 which is highly significant at 1% with p-value of 0.000. C is the coefficient of the intercept of the model and it represents the average value of ROA when all explanatory variables took a value of zero. This means that without these components, sample firms still survive due to some other factors which are not the focus of this study.

The fixed effect regression result in table 7 indicates that, coefficient of ARP is 0.0049 with its p-value of 0.002 and had positive relation with profitability measured by return on asset. This means that, keeping other variables constant a day increase in days sales receivable results an increase in profitability of sampled firms by 0.49 percent and statistically significant at 1 % of significant level.

The regression output for inventory holding period in table 7 indicates that, coefficient of IHP is 0.0054 with its p-value of 0.000 and had positive association with profitability. This implies that, keeping other variables constant a day increase on inventory holding period associated with an increase in ROA of sampled firms by 0.54 percent and statistically significant at 1% of significant level.

As can be seen in the above table 7 reveal that, a coefficient of APP is -0.0057 and p-value of 0.000. This implies that, keeping other variables constant a day increase in the account payable period results a decrease of profitability by 0.57percent and statistically significant at 1%.

The results of the regression analysis for cash conversion cycle table 7 shows that, the coefficient of CCC is -0.0056 with its p-value of 0.000 and negatively related to profitability. This implies that, keeping other variables constant when cash conversion cycle increase by a day ROA would decrease by 0.56 percent and statistically significant at 1%.

Table 8: summary of actual and expected signs and effect of working capital management on profitability

Independent variable	Expected effect on ROA	Actual effect on ROA
ARP	Negative and significant	Positive and significant
ICP	Negative and significant	Positive and significant
APP	Positive and significant	Negative and significant
CCC	Negative and significant	Negative and significant

Source: author's computation

Based on the regression analysis result regression model equation seems like the following

ROA it =βo+ β1 (ARP it) + β2 (IHP it) + β3 (APP it) + β4 (CCC it) + β5 (CR it) +β6 (DR it) + β7 (FS it) + β8 (SG it) + € it

Where:

ROA it = Return on asset of firm i for time period t

β0= intercept of the regression,

β1, β2 ....., β8= coefficients of each respective explanatory variables,

ARP it= Accounts receivable period of firm i for time period t

APP it = Accounts payable period of firm i for time period t

HP it = Inventories holding period of firm i for time period t

CCC it= Cash conversion cycle of firm i for time period t

CR it = Current ratio of firm i for time period t

DR it = Debt ratio of firm i for time period t

SG it = Sales growth of firm i for time period t

Size it= Natural logarithm of sale of firm i for time period t

ε it = is the error term of the regression – for firm i at time t

ROA it =-(0.6666)+ (0.0049)ARP it+(0 .0054)IHP it –(0.0054)APP it –(0.0056)CCC it –(0.0009)CR it –(0.0360)DR it + (0.0494)FS it + (0.0138)SG it + € it

4.5. Hypothesis Testing

H1: Accounts Receivable Period (ARP) has negative and significant effect on firm's profitability.

Based on the model result the independent variable account receivable period (ARP) has coefficient beta value is β1= 0.0049 at P-value /sig.value of 0.002. So that, it is significant at p<0.05. Therefore the null hypothesis is rejected and alternative hypothesis is fully accepted. So account receivable period (ARP) has positive and significant effect on profitability of micro and small enterprise in Bahir Dar city administration.

H2: Inventory Holding Period (IHP) has negative and significant effect on firm's profitability.

Based on the model result the independent variable inventory holding period (IHP) has coefficient beta value is β2= 0.0054 at P-value /sig.value of 0.000. So that, it is significant at p<0.05. Therefore the null hypothesis is rejected and alternative hypothesis is fully accepted. So

inventory holding period (IHP) has positive and significant effect on profitability of micro and small enterprise in Bahir Dar city administration.

H3: Accounts Payable Period (APP) has positive and significant effect on firm's profitability.

Based on the model result the independent variable account payable period (APP) has coefficient beta value is β3= -0.0057 at P-value /sig.value of 0.000. So that, it is significant at $p<0.05$. Therefore the null hypothesis is rejected and alternative hypothesis is fully accepted. So account payable period (APP) has negative and significant effect on profitability of micro and small enterprise in Bahir Dar city administration.

H4: Cash Conversion Cycle (CCC) has negative and significant effect on firm's profitability.

Based on the model result the independent variable cash conversion cycle (CCC) has coefficient beta value is β4= -0.0056 at P-value /sig.value of 0.000. So that, it is significant at $p<0.05$. Therefore the null hypothesis is rejected and alternative hypothesis is fully accepted. So cash conversion cycle (CCC) has negative and significant effect on profitability of micro and small enterprise in Bahir Dar city administration.

In general, the result of regression analysis in line with previous most empirical studies efficient working capital management has significant effect on profitability firms.

4.6. Discussion of the regression result

This section presents the discussion of detail analyses on the results of regression of each explanatory variable and their effect on profitability of firm. In addition, the discussion includes the compression with prior empirical evidence in relation between working capital management and its impact on profitability and the finding of this study in compression with prior empirical finding and hypothesis of the study.

4.6.1. Relationship between accounts receivable period and profitability

The result of regression shows that account receivable period is positively related with profitability and significant at 1 % of significant level. The result is on the contrary of the hypothesis of this study, there is significant negative relation between ARP and profitability. This result implied that, when ARP increased by one day profitability also increase by 0.49 percent. The reason is that aggressively collecting receivable adversely affects micro and small enterprises profitability mostly depends on selling large volume of goods to in delay payment. Thus, giving more collection days lead to increase sales by attracting new customers. Garneting costumers more collection days used as means of testing and evaluating product quality before a payment. Micro and small enterprises gives credit to financial constraint retailers in return increase their future sale. In general, a longer account receivable period has a beneficial impact on micro and small firm profitability. The finding is in line with findings of Chebet (2014) found that there was positive relation between average collection period and return on asset. Arushad&Gondal (2013) explained that longer accounts receivable period results higher profitability. This result also supported by Sharma & Kumar (2011), Ali &Ali (2012), Uremadu&Egbide (2012), Tariq et al. (2013), Onodje (2014), Mbawuni (2016),Zbigniew (2020),Xuan et al. (2020), Fekadu (2021),Roy-Aresetal. (2021). However, the result of the study contradict with the finding of most studies like Lazaridis&Tryfonidis (2006), Raheman and Nasr (2007), Tewodros (2010), Mulualem (2011), found negative relationship between average collection period and profitability. The longer a firm wait to collect its credit sales results profitability to go down because the longer the period of the receivable decrease the present value of cash flows if that fund invested on other more profitable business results more profitability and due to that higher receivable result unnecessary bad debt expense.

The first hypothesis of this study was significant negative relation between account receivable period and profitability. However, the result of this study which is return on asset significantly and positively associated with account receivable period contradicted to the hypothesis. Thus, the hypothesis of significant negative relation between account receivable period and profitability is rejected.

4.6.2. Relationship between Inventory Holding Period and Profitability

The result of regression shows that inventory holding period is positively related with profitability and it is statistically significant at 1 % of significance level. This means that, a day increase in inventory holding period results an increase in profitability by 0.54 percent and it is statistically significant. This implies that a firm increases their profitability by increasing the number of days inventory hold by the firm. Holding higher amount of inventory in store decrease the cost of possible shortage sales and reduces the risk of a stock-out. Keeping high amount of inventories also helps in reducing the cost of supplying the products and protects the firm against price fluctuations because of adverse macroeconomic factors. Micro and small enterprises are has low capital to maintain high level of inventory which subject to vulnerable to price fluctuations and economy variability in the country at large. Maintain high level of inventory increase firm sale and their profitability. This finding consistent with Matheva (2010) found that there was significant positive relation between inventory conversion period and profitability. This means that maintaining high amount of inventory improve profitability by reducing the cost of possible stoppage of production and loss of business because of shortage of products. This finding consistent with prior other studies Makori&Jagongo (2013), Şamiloğlu&Akgün (2016), Gambo&Abdulkarimibn (2016), Abenet (2016),Xuan et al. (2020), Roy-Aresetal. (2021) with their respective studies found there was significant positive relation between inventory holding period and profitability. However, the result obtained is inconsistent with most prior studies Deloof (2003), Lazaridis&Tryfonidis (2006),Tirngo (2013),Yadav& Kumar (2014), Tewodros (2010), Arega et al. (2016),Zbigniew (2020) found that negative relation between inventory holding period and profitability by suggesting that a firm would maintain minimum level of inventory in order to improve their profitability.

The second hypothesis of this study was significant negative relation between inventory conversion period and profitability. In the contrary to the hypothesis the result indicates that return on asset significantly positively related with inventory holding period. Thus, the

hypothesis of significant negative relation between inventory holding period and profitability is rejected.

4.6.3. Relationship between accounts payable period and profitability

As can be presented in the above table 7 account payable period is negatively related with profitability and it is statistically significant at 1% of significance level. This means that, a period increase in account payable period by one day results a reduction in profitability by 0.57 percent and it is statistically significant at 1 % of significance level. The reason for negative relation can be less profitable firm wait longer periods to pay their obligation. When firms purchase products in delay payments and the period becomes longer leads to interest rate fluctuations which harm profitability. The profitability of a firm also affected adversely if there is cash discount for early payment. The finding confirmed by Arega et al. (2016) found significant negative relation between accounts payable period and profitability when there is a benefits payment discount for early payment. This finding also supported by Lazaridis&Tryfonidis (2006), Deloof (2003), Raheman& Nasr (2007), Sharma & Kumar (2011), Şamiloğlu&Akgün (2016) explained that the longer account payable period indicate that firms are less profitable. On the contrary of this finding Mathuva (2010) and Makori&Jagongo(2013),Rehemaet al. (2017)in their respective study found there was positive relation between account payable period and profitability by suggesting that more profitable firms wait longer period to pay their obligations so as to take the advantage of funds available in order to meet their working capital needs. Others like Tirngo (2013), Sharma & Kumar (2011), Abenet (2016),Xuan et al. (2020)in their respective studies also support the positive relation between account payable period and profitability.

The third hypothesis of this study was significant positive relation between account payable period and profitability. However, in the contrary to the hypothesis the result indicates that there is negative relation between account payable period and profitability measured by return on asset. Thus, the hypothesis of positive relation between account payable period and profitability is rejected.

4.6.4. Relationship between cash conversion cycle and profitability

As we have seen from random effect regression result table 7, this study confirms that cash conversion cycle has negative impact on profitability of micro and small scale

enterprises. The regression result revealed that, significant negative relation between cash conversion cycle of sample firms and their profitability which indicate that here is a decrease in ROA by 0.56 percent as long as the cash conversion cycle lengthening by a day. This support that cash conversion is significantly negatively related with profitability. As presented in the literature part of this study, cash conversion cycle is the summation of account receivable period and inventory holding period subtracted by account payable period. Managing cash conversion cycle carefully means efficiently managing of the three important components of working capital management. This negative relationship suggests that firms can improve their profitability by shortening the time difference between a firm's actual cash in follows and outflows. In other words by decreasing the time interval between expenditure for purchases of products and the collection of cash from sales. The negative relation can be explained that the shorter the time interval, the lower investment in working capital can help to improve profitability of firm. A shorter cash conversion cycle may improve firm s profitability because it reduces the dependence of firm on external finance in order to meet their working capital needs. In addition, the shorter cash conversion cycle is an indication of firm's efficiency in utilizing its working capital which maximizes their profitability. Cash conversion cycle can be shortened by reducing account receivable period and inventory holding period or by increasing account payable period. The result of the regression indicate that account receivable period and inventory holding period has positive coefficient and it effect positively on the length of cash conversion cycle however the coefficient of cash conversion cycle is negative due to that the effect of account payable period on cash conversion cycle is more than that of receivable and inventory period.

This finding confirmed by Mathuva (2010) and Makori&Jagongo (2013) found significant negative relation between cash conversion period and profitability and they explained that firms should minimize the period of cash conversion cycle as on as possible in order to improve their profitability. This result is consistent to most prior studies like Deloof (2003), Shin &Soenen(1998), Lazaridis&Tryfonidis (2006), Abenet (2016), Arega et al. (2016), Jeyan (2016) ,Şamiloğlu&Akgün (2016), Ahmed et al. (2016),Rehemaet al. (2017),Xuan et al. (2020) all found negative relation between cash conversion cycle and profitability. Contrary to this finding Gill et al. (2010), Sharma & Kumar (2011), Uremadu&Egbide (2012), Soekhoe (2012),Tariq et al.(2013), Sadiq (2016),Fekadu (2021) found positive relation between cash conversion cycle and profitably.

The fourth hypothesis of this study was significant negative relation between cash conversion cycle and profitability. In line to the hypothesis the result indicate that return on asset significantly negatively related with cash conversion cycle. Thus, the hypothesis of the study negative relation between cash conversion cycle and profitably is supported.

4.6.5. Relationship between control variables and profitability

Current ratio

Current ratio used in this study as a control variable. It used to measure the short term solvency of the firm. As we seen in the regression result table 7, the coefficient of current ratio indicate that, there is negative relation between current ratio and return on asset but it is insignificant. This indicate that, keeping other independent variables constant when current ratio increase by 1 unit return on asset (ROA) would be decrease by 0.09 percent but it is not significant. This implied that, the higher firm current ratio results the lower the profitability of the firm. This result consistent with the theory that exist trade of created between liquidity and profitability objective. It indicates that the two objectives liquidity and profitability is inversely related. This result is consistent with the previous study Niresh (2012).

Debt ratio

Debt ratio used in this study as a control variable. It used to measure the long term solvency of the firm. As we have seen from fixed effect analysis table 7,the regression result revealed that, insignificant negative relation between debt ratio of sampled micro and small enterprise with their profitability which indicate that, there is an increase in ROA by 3.6 percent when debt ratio decrease by one unit. This implies that, that debt ratio has negative impact on profitability of sampled micro and small enterprise which means that increase in debt financing negatively affects their profitability. This result supported by Garg&Gumbochuma (2015) found insignificant negative relation between debt ratio and profitability.

Sales growth

Sales growth used in this study as a control variable. The regression results in table 7 indicate that a coefficient of sales growth is 0.0494, but it is not significant. This indicate that, keeping other independent variables constant when firms grows by 1 year return on asset (ROA) would be increased by 4.94 percent but not significant. Thus, sales growth positively related with firm profitability.

Firm size

Finally, firm size used in this study as a control variable. As we have seen in the regression analysis table, there is insignificant positive relation between firm size and profitability. Keeping other independent variables constant when firm size increase by 1 unit return on asset (ROA) would be increased by 13.83 percent This implied that, as the size of the firm increase from time to time its profitability also increases. Therefore, firm size is significantly positively associated with profitability which means that larger firms are not more profitable in sample micro and small enterprises. This result supported by Awan et al. (2014)found insignificant positive relation between firm size and profitability.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents conclusion, recommendation and recommendation made for further researcher.

5.1. Summary

Many prior researchers suggest that efficient management of working capital management plays a great role in order to maximize firm profitability and to create value for shareholders. Maintaining optimal level of working capital helps the firm to run its day today business activities smoothly, improves the ability of generating cash internally, and decrease the dependence of firm from external source for its working capital needs. It also helps the firm to get better competitive position. Therefore, it is necessary for a firm to monitor and evaluate its working capital regularly in order to maintain adequate level of working capital.

This study conducted on the impact of working capital management on profitability of selected micro and small enterprise found in Bahir Dar city administration. Based on the objective, the study employed quantitative approaches. Panel data was used which collected from a sample of 60micro and small enterprise for the period of 2016-2020. The collected data was analyzed by using descriptive statistics, correlation analysis and regression analysis.

5.2. Conclusion

The study aimed to ascertain the effect of working capital management (number of days account receivables are outstanding, number of days inventory are held, account payable period and cash conversion cycle) on the profitability (return on assets) of micro and small enterprise in Bahir Dar university. Using the sample of micro and small enterprise in Bahir Dar university for the period of 2016 to 2020, the findings of the study suggest that the management of the number of days account receivables are outstanding, numbers of days inventory are held, account payable period and cash conversion cycle are significant factors in the accomplishment of the profitability objective of micro and small enterprise in Bahir Dar university. This is because efficient and effective utilization of the firm's current assets and

current liabilities will result to increased profitability of the firm, which will consequently improve the firm's value.

The study used return on asset as dependent profitability variable. Accounts receivable period, inventory holding period, accounts payable period and Cash conversion cycle were used as independent working capital management variables. Cash conversion cycle was also used as comprehensive measures of working capital management. In addition, the study used current ratio, debt ratio, sales growth and firm size as a control variable.

The regression analyses of accounts receivables period showed that, it was positively and significantly related with profitability. It means that, the longer a firm takes to collect its credit sales results higher profitability. The reason is that aggressively collecting receivable adversely affects micro and small enterprise profitability by decreasing sales volume for customers.

The regression analyses of the inventory holding period showed that there was significant positive relation between this period and profitability. This means that, a firm increases their profitability by increasing the period of inventory hold by a firm. The longer firm inventory holding period result higher profitability. The reason was because of holding higher amount of inventory in sore decrease the cost of possible shortage of goods and reduces the risk of price variability.

The regression analyses of the accounts payable period showed that, it was significantly and negatively associated with profitability. This means that, the longer account payable period results lower profitability and vice versa. The reason for negative relation can be less profitable firm wait longer periods to pay their obligation. The other reason explains that, when the period increase results interest rate fluctuation which harms profitability and if there is cash discount for early payment decease profitability.

Lastly, the regression analyses of the cash conversion cycle showed that there was significant negative relation between this cycle and profitability. This implies that, the longer cash conversion cycle, the lower profitability of firm. This negative relationship suggests that firms can improve their profitability by shortening the time difference between a firm's actual cash in follows and outflows. The shorter the cycle, the lower investment in working capital can help in order to improve profitability and reduces the dependence of firm on external finance. Cash

conversion cycle is the summation of account receivable period, inventory holding period subtracted by account payable period. Managing cash conversion cycle efficiently means efficient management of these three important components of working capital management.

In general, the result of regression analysis in line with previous most empirical studies efficient working capital management and optimal level of working capital enables to improve profitability of a firm.

5.3. Recommendations

Furthermore, the study provides the following recommendations to management of micro and small enterprise in Bahir Dar city administration.

a. The study found account receivable period had significant positive effect on profitability. The positive relation indicates less aggressive in collection of receivable leads to increase profitability. The study recommend that firms should be careful in setting credit policy that it does not harm their volume of credit sales which can adversely affect its profitability. The aggressive collection of receivable has harmful effect on profitability of firm. Therefore, the researcher recommends that it is better to a firm to follow a relatively relaxed credit collection policy in order to maximize sales revenue.
b. The study found inventory conversion period had significant positive effect on profitability. Micro and small enterprise that stock-up and maintain adequate inventory levels could decrease the shortage of inventory which leads to higher sales and profitability of a firm. The study recommends that firm should increase the level of inventory to reasonable level in order to improve profitability of a firm and to protect the problem of unexpected price fluctuation of goods.
c. The study found account payable period significantly and negatively affect profitability. It support that the view that quick payment for supplier might improve profitability of firms due to substantial discounts for early payment. Wholesale firms should maintain deferral of creditors at minimum possible level to maximize profitability of firm. This could be done by paying its obligation to supplier with earlier time in order to get substantial discounts for early payment and decreasing interest expense.
d. Lastly, the study found cash conversion cycle had a significant negative impact on profitability. Since strong negative relationship between Cash conversation cycle and

return on asset, management should adapt ways of reducing cash conversation cycle in order to enhance profitability of the firms. This could be done by shortening the length of time between cash out flows due to purchase of goods and cash inflows as result of sales of goods to possible optimal minimum level.

In general, the study confirmed that efficient management of working capital strongly influences profitability of a firm. The finding suggest that liberal credit collection, longer inventory holding period, quick payment of debt and keeping the length of cash conversion cycle to possible minimum level can increase the profitability of a firm.

5.4. Suggestions for further research

This study raised the following points for further research towards on the effect of working capital management on firm's profitability.

First, the researcher used one variable to masseur profitability which is return on asset (ROA).

However there are other variables used as a proxy of profitability such as return on investment (ROI), gross operating profit (GOP), return on equity (ROE). So further studies could include those variables together due to that the result is different on different measurers of profitability.

Second, the study conducted on selected micro and small enterprises for a period of five years. Further researchers should increase the sample size and increase the number of years for more validity.

Finally, this study focuses on the impact of working capital management on profitability specifically on micro and small enterprises only. However, future researchers should also include large firms in order to determine the difference on working capital management across different scale firm.

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Appendix's

Appendix 1: Normality test

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
ROA	300	0.74939	53.392	9.337	0.00000
ARP	300	0.48144	110.478	11.044	0.00000
IHP	300	0.85424	31.054	8.065	0.00000
APP	300	0.62322	80.272	10.294	0.00000
CCC	300	0.84517	32.987	8.207	0.00000
CR	300	0.43579	120.205	11.242	0.00000
DR	300	0.93341	14.186	6.226	0.00000
FS	300	0.90085	21.125	7.160	0.00000
SG	300	0.47857	111.089	11.057	0.00000

Appendix 2: Random effect regression result

Random-effects GLS regressionNumber of obs=300
Group variable: nocompanyNumber of groups =60
R-sq:
within = 0.6269Obs per group:min=5
between = 0.1784avg=5.0
overall = 0.4179max =5
corr(u_i, X) = 0 (assumed)
Wald chi2(8) =398.70
Prob> chi2 =0.0000

ROA	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
ARP	.0052402	.0014298	3.66	0.000	.0024377	.0080426
IHP	.0058425	.0012176	4.80	0.000	.003456	.0082289
APP	-.006071	.001227	-4.95	0.000	-.008476	-.0036661
CCC	-.0060825	.0012159	-5.00	0.000	-.0084656	-.0036994
CR	-.0010862	.0012153	-0.89	0.371	-.0034681	.0012957
DR	-.0630716	.0286195	-2.20	0.028	-.1191648	-.0069785
FS	.0246826	.0093808	2.63	0.009	.0062966	.0430686
SG	.0167531	.008746	1.92	0.055	-.0003888	.0338951
_cons	-.1898625	.1808207	-1.05	0.294	-.5442646	.1645396
sigma_u	.09882481 .08928086					
	5506069 (fractionof variance due to u_i)					

Appendix 3: Fixed effect regression result

Fixed-effects (within) regression — Number of obs = 300
Group variable: no company — Number of groups = 60
R-sq:
within = 0.6359 — Obs per group: min =5
between = 0.0853 — avg =5.0
overall = 0.3484 — max =5

F(8,232) = 50.64
corr(u_i, Xb) = -0.1874 — Prob> F = 0.0000

ROA	Coef.	Std. Err.	t	P>{t}	[95% Conf.	Interval]
ARP	.0049108	.0015497	3.17	0.002	.0018575	.0079641
IHP	.0054141	.0013102	4.13	0.000	.0028327	.0079955
APP	-.0057357	. 0013205	-4.34	0.000	-.0083374	-.0031339
CCC	-.0056868	.0013128	-4.33	0.000	-.0082732	-.0031003
CR	-.0009127	.0012764	-0.72	0.475	-.0034274	.0016021
DR	-.0360813	.0306553	-1.18	0.240	-.0964796	.0243171
FS	.0494791	.0123726	4.00	0.000	.0251021	.0738561
SG	.0138332	.0089478	1.55	0.123	-.0037961	.0314625
_cons	-.6666522	.2369035	-2.81	0.005	-1.133409	-.1998951

F test that all u_i=0: F(59, 232) = 7.03 — Prob> F = 0.0000

Appendix 4: Hasuman test

---- Coefficients ----

	(b) Fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
ARP	.0049108	.0052402	-.0003294	.0005976
IHP	.0054141	.0058425	-.0004284	.0004838
APP	-.0057357	-.006071	.0003354	.000488
CCC	-.0056868	-.0060825	.0003957	.0004949
CR	-.0009127	-.0010862	.0001735	.0003902
DR	-.0360813	-.0630716	.0269904	.0109851
FS	.0494791	.0246826	.0247965	.0080673
SG	.0138332	.0167531	-.0029199	.0018893

b = consistent under Ho and Ha; obtained from xtreg

B =inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho:difference in coefficients not systematic

chi2(8) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 21.42

Prob>chi2 = 0.0061

(V_b-V_B is not positive definite)