THE EFFECT OF WORKING CAPITAL MANAGEMENT ON THE PERFORMANCE OF STATE-OWNED PUBLIC ENTERPRISES IN ETHIOPIA

BY

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DEPARTMENT OF ACCOUNTING AND FINANCE

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I, Demelash Nega, confirm that this thesis report is done solely by myself and has not been submitted for any previous degree or professional qualification. Except where states otherwise by reference or acknowledgment, the work presented is entirely my own and appropriate credit has been given within this thesis where reference has been made to the work of others.

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STATEMENT OF CERTIFICATION

This is to certify that the thesis entitled "The Effect of Working Capital Management on State-owned Public Enterprises in Ethiopia" submitted by Demelash Nega to Addis Ababa University for partial fulfillment of the requirements for the award of the degree of Master of science in Accounting and Finance is carried out by him under my supervision and guidance

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Abstract

The aim of this paper is to study the effect of working capital Management on performance of public enterprises owned by Ethiopian Government. Previous related studies did not cover the state-owned enterprises as part of their study and thus unable to explain the matter. Thus, the study fills this gap. This study used Return on Asset (ROA) as a dependent variable while cash conversion period, accounts receivable days, inventory conversion period, current asset to total asset, current Liability to total asset and firm's size were used as an independent variable. The data were collected from eight companies for five years between 2013 to 2017 and Eviews 10 is used to analysis the Ordinary least squire (OLS) regression. The key findings are, account receivable days, account payable days, current Asset to total asset and firm's size resulted significantly and positively affected the profitability. This means that the companies need to keep their account receivable days, account payable days, current Asset to total asset and firm's size at higher level to be profitable which eventually help them manage their working capital properly.

Key words: Working capital, Return on Asset, Profitability, Public enterprises

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Acronyms

APD	Accounts Payable Days
ARD	Account Receivable Days
CA	Current Asset
CATAR	Current Ssset to Total Asset Ratio
CCC	Cash Conversion Cycle
CL	Current Liability
CLTAR	Current Liability to Total Asset Ratio
CUR	Current Ratio
EOQ	Economic Order Quality
FSZ	Firm's Size
ICP	Inventory Conversion Period
OLS	Ordinary Least Squares
ROA	Return on Asset
ROE	Return on Equity
WCM	Working Capital Management

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The business of a firm involves a series of activities performed in an established manner, and this forms their general business operations. To conduct their business effectively and efficiently, they must adopt and follow a set of techniques and policies which will help sustainability of the business. Working capital management (WCM) focuses the short term and the enhancement of processes, beginning with purchases of material and payments to suppliers and ending in the collection of receivables from the customer. To make policy one of the key parameters is WCM, and it affects multiple aspects of business, including profitability and liquidity (Iman S. & Mehdi K., 2019).

Working capital management is one of the important parts of the financial management. It is concerned with short-term finance of the business concern which is a closely related trade between profitability and liquidity. Efficient working capital management leads to improve the operating performance of the business concern and it helps to meet the short-term liquidity. Hence, study of working capital management is not only an important part of financial management but also are overall management of the business concern. Working capital is described as the capital which is not fixed but the more common uses of the working capital is to consider it as the difference between the book value of current assets and current liabilities according to Paramasivan & Subramanian (2008).

WCM efficiency is important, in which a portion of assets is composed of current assets (Horne and Wachowitz, 2000). It directly {affects the profitability plus liquidity of organizations (Raheman and Nasr, 2007). The profitability liquidity tradeoff is usually important because when working capital management is usually not given considerations then businesses are likely to fail and deal with bankruptcy (Kargar and Bluementhal, 1994). Typically, the significance of working capital management performance is unquestionable (Filbeck and Krueger, 2005). Working capital is usually known as life giving force for almost any economical unit as well as its management is considered among the most crucial functionality of corporate administration.

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 (Mukhopadhyay, 2004). Working capital management is one of the most important areas while making the liquidity and profitability comparisons among firms (Eljelly, 2004), involving the decision of the amount and composition of current assets and the financing of these assets. The greater the relative proportion of liquid assets, the lesser the risk of running out of cash, all other things being equal. All individual components of working capital including cash, marketable securities, account receivables and inventory management play a vital role in the performance of any firm.

From many researchers' and authors' point of view it can be said that effective working capital management focuses on improving firms' performance to achieve their day to day operations. Proper working capital management is significant to solve the challenges in financial instability of business organizations. A lot of research has been conducted in different countries to show the impacts of working capital components on firms Performance. However, there are few studies done in Ethiopia on working capital management and firm profitability that attracts the Public enterprise companies or state-owned companies. By considering this problem, the purpose of this study deals with effect of working capital management on public enterprises that are currently owned by the government of the country.

1.2 Statement of the Problem

The management of short-term assets involves decisions related to cash, marketable securities, accounts receivable, and inventory. The reason as per Frank J. & Pamela P. (2003), is short-term assets support the long-term investments of the firm, they are linked to the firm's capital budgeting decision. The company needs to strike the right balance between the cost of having and not having the asset. The "right balance" is different for each firm. Each firm must assess its costs of having and not having the asset.

Different researches have been made regarding the Working capital management and the profitability and performance of different companies and sectors. In accordance with the review done by Filbeck and Krueger (2005), businesses accomplishment heavily is determined by typically the ability of the financial managers to successfully manage receivables, stock and payables. Reddy and Kameswari (2004) also explained that a poor and inefficient working capital management led to binding funds in idle assets and reducing the liquidity and profitability of the company.

Working Capital Management and its impact on firms' performance had been studied significantly by different researchers such as (Abuzayed, 2012; Afza & Nazri, 2011; Deloof, 2003; Makori & Jagongo, 2013; Padachi, 2006; Mifta, 2016; Woubeshet, 2014; Ayichelet, 2018 and so on).

Much of the currently available empirical literature on working capital management is concentrated on its impact on firms in developed countries. However, there have been research on working capital management and company profitability in Ethiopia; Tewodros (2010) looked at the effects on profitability of 11 private limited manufacturing enterprises. He took Return on Asset (ROA), and Return on Equity (ROE) as a measure of profitability. The results show that long outstanding accounts receivable and inventory holding periods are associated with lower profitability. Additionally, there is negative relationship between accounts payable period and profitability measures. However, apart from operating margin of profit, this relationship is not statistically significant. The findings also suggest that the cash conversion cycle and profitability metrics of the tested enterprises have a substantial negative association. On the other hand, Tiringo (2013) examined the impact of WCM on profitability of micro and small enterprises in Ethiopia for the case of Bahirdar city administration. The result showed that there is a robust positive relationship between number of day's accounts payable and enterprises profitability. However, number of days accounts receivable, number of days inventory and cash conversion cycle have a significant negative impact on profitability (as cited by Ephrem, 2018, P3)

Mifta (2016) examined the impact of working capital management on profitability of large taxpayer manufacturing share companies in Ethiopia. He found that working capital components have a significant effect on firm's performance.

Ayichelet (2018) also studied the impact of working capital management on profitability of large taxpayer printing firms and he also found that working capital management components have a big impact on firm's performance.

Another research that was made on SME's, by Ephrem Woldu (2018), working capital management impact suggests that working capital is negatively affected by the period required by the enterprises to receive their debts, pay their bills and collect cash. Beside that, the financial leverage, size and current ratio of the SME's under the study have effect on the availability of enough working capital requirements.

Considering the importance of Working capital management in company's performance the researcher planned to conduct a study on Working capital management in public enterprise's performance. As far as the researcher's knowledge there was no research done on Working Capital Management on Public enterprises. Public Enterprises attracts the public at large and thus the society deserves to know how well managed the enterprises are which justify the importance of this research. It is also better to start by looking its performance since performance is a good tool to overview the company's activity. The selected area, in the opinion of the researcher, would represent the enterprises owned by the government of Ethiopia. Therefore, the current study focused on impact of working capital management on the financial performance of public enterprises in Ethiopia.

1.3 Objective of the study

1.3.1 General Objective

The main objective of the study is to examine the effect working capital Management on performance of public enterprises that are currently owned by the government of Ethiopia.

1.3.2 Specific Objective

In order to achieve the above general objective, the following specific objectives will be considered:

- To analyze the effect of cash conversion cycle management on firm's performance
- To evaluate the effect of receivable management on firm's performance
- To analyze the effect of inventory management on firm's performance
- To evaluate the impact of payable management on firm's performance
- To analyze the effect of current asset and current liability management on firm's performance
- To see the effect of size of the company on their performance

1.3.3 Research hypotheses

The conceptual framework for the hypotheses drafted below is based on commonly used independent effect on the dependent by different scholars like Henok Y. (2015), Mifta A. (2016),

Aychelet K. (2018) and Ephrem A. (2018). Based on the broad objective of the study, the following hypotheses (HP) were developed. As per the analysis result of Ephrem A. (2018) Cash conversion cycle is negatively and significantly related with profitability. This result is also supported by Henok Y. (2015) and Mifta A. (2016). The relationship of profitability with account receivable days is negative and significant according to Mifta A. (2016) while Positive and significant relation exists between accounts payable days and profitability as per the study of Tewodrs D. (2013) and. David M. (2010) resulted positive and significant relational effect between Inventory conversion period and Profitability and Henok Y. (2015) suggested that profitability is positively and significantly correlated with current asset and current liability ratio to asset.

Research hypotheses:

- H1: Cash Conversion Cycle has negative and significant effect on Profitability
- H2: Account receivable days has negative and significant effect on profitability
- H3: Inventory Conversion Period are positively and significantly affect profitability
- H4: Average Payment Period has positive and significant effect on Profitability
- H4: Current asset ratio to asset has positive and significant effect on Profitability
- H4: Current liability ratio to asset has positive and significant effect on Profitability
- H5: Firms' size has positive and significant effect on profitability

1.4 Significance of the study

The aim of the study is to examine the effect working capital Management on profitability of public enterprises that are currently owned by the government of Ethiopia. Due to the current changes in the country, political and economic interest by the government, public enterprises are getting much higher attention than they used to be which lead the interest of the researcher to study in this area. Thus, the outcomes and results of the study will have potential value to these companies to understand the effect of working capital management on the performance of the enterprises. In addition, the study will have vital use for policy makers to consider the identified factor and to take corrective measure that promote and contributes the transformation that the government is doing in the enterprises.

The study will also be 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 performance/profitability.

1.5 Scope and limitation of the study

This study was delimited to study the impact of working capital management on company's' performance of public enterprises that are currently owned by the government of Ethiopia. The sample size of the study is eight companies and the study took five years data from the year 2013 to 2017. The eight companies are Chemical Industries Corporation, Ethiopian Shipping and Logistics Services Enterprise, Ethiopian Tourist Trading, Berhanena Selam Printing Enterprise, Ethio-Telecom, Ethiopian Airlines, Ethiopian Airports Enterprise and Ethiopian Insurance Corporation. The reason for this is that the available audited data. The companies are still working on auditing their financial data and the available audited data that the researcher could get was for five years.

The study used one dependent variable, return on asset, and seven independent variables i.e. cash conversion cycle, inventory conversion period, accounts receivables period, account payable period, liquidity measured by current ratio (CATAR and CLTAR) and size of firm since these variables can clearly, as they are also commonly used by different researchers, show the effect of working capital Management on profitability of the firms.

The research is limited to five years of data due to unavailability of audited data. The research also used only one dependent variable return on asset (ROA) as a proxy to show profitability. The reason is due to the limited time the researcher had others were not included.

1.6 Organization of the study

The organization of this paper is organized in five chapter. The first chapter one is about the introduction, statement of the problems, objectives of the study, significance of the study, and scope and limitation of the study. In chapter two different literature that relates to the topics of the study will be reviewed and presented. In the third chapter, the research design including the population and sampling procedure, data and data collection instrument and data analysis will be presented. In chapter four, data analysis, presentation and discussion are covered. Finally, in chapter five conclusion and recommendation is presented. Then, the references used for the research are listed.

CHAPTER TWO

LITERATURE REVIEW

It is very crucial to dig into the working capital of business and how they manage it affects the survival of the company since working capital is concerned on the current asset of a firm. The Current Asset is where the companies spend their time and effort on daily basis. In order to assess and identify the research gap the researcher presented existing related journals, thesis, review of literature, etc. in this section and their results.

The chapter comprises drivers behind working capital, the theoretical review and the prior research reviews made on working capital management. This chapter structurally is composed of twelve sections. Section 2.1, 2.2, 2.3 & 2.4 explains overview, nature and importance, definition and concept, and types of working capital. Working capital management its determining factors and significance of WCM are dealt in section 2.5, 2.6 and 2.7 respectively. Working capital policies and theories are covered in section 2.8 and 2.9. Empirical review of previous studies is also done and included in section 2.10 while knowledge gap is under section 2.11. lastly, 2.12 shows Conceptual Framework of the Study.

2.1 Overview of Working Capital

As the financial markets is changing from time to time, there is an increase in number of companies turn to their working capital to search for liquidity. A liquid company has the ability to pay in hand to its debtors in time and reduce its net financial costs. Furthermore, a more liquid company can quickly invest in profitable opportunities (Erik R., 2012). Since the working capital is the difference between the current asset and current liability the companies need to have a proper management. The main reason is that it will affect the future sales and profit. Erik suggests that without operational compromises, the issue with working capital cannot be reduced to a minimum. This means that companies need to optimize and manage their working capital in a way that does not compromise future revenues and earnings. If a company shorten its payment terms too much the company might have difficulties in selling its products. A longer payment period is appreciated by customers to improve their own working capital. By minimizing inventory levels, a company might not be able to take advantage of a sudden upturn in their demand and miss out on sales. Also, by deferring payments the company can incur heavy financing rates on their creditor miss out on discounts given for prompt payment.

2.2 Nature and Importance of Working Capital

James C. and John M., (2008), explained importance of working capital as, "the current assets of a typical manufacturing firm account for over half of its total assets. For a distribution company, they account for even more. Excessive levels of current assets can easily result in a firm realizing a substandard return on investment. However, firms with too few current assets may incur shortages and difficulties in maintaining smooth operations.

For small companies, current liabilities are the principal source of external financing. These firms do not have access to the longer-term capital markets, other than to acquire a mortgage on a building. The fast-growing but larger company also makes use of current liability financing. For these reasons, the financial manager and staff devote a considerable portion of their time to working capital matters. The management of cash, marketable securities, accounts receivable, accounts payable, accruals, and other means of short-term financing is the direct responsibility of the financial manager; only the management of inventories is not. Moreover, these management responsibilities require continuous, day-to-day supervision. Unlike dividend and capital structure decisions, you cannot study the issue, reach a decision, and set the matter aside for many months to come. Thus, working capital management is important, if for no other reason than the proportion of the financial manager's time that must be devoted to it. More fundamental, however, is the effect that working capital decisions have on the company's risk, return, and share price."

2.3 Definition and Concept of Working Capital

The term working capital originated with the old Yankee peddler who would load up his wagon and go off to peddle his wares. The merchandise was called "working capital" because it was what he actually sold, or "turned over," to produce his profits. The wagon and horse were his fixed assets. He generally owned the horse and wagon that means they were financed with equity capital, but he bought his merchandise on credit, by borrowing from his supplier, and or with money borrowed from a bank. Those loans were called working capital loans, and it will be repaid after each trip to demonstrate that the peddler was solvent, and he is worthy if a new loan is granted. Banks that followed this procedure were said to be employing "sound banking practices." The more trips the peddler took per year, the faster his working capital turned over and the greater his profits Brigham & Houston., (2013).

2.4 Types of Working Capital

Working capital is funds required for day to day operations of the business. According to Paramasivan and Subramanian (2009), Working capital can be understood with the help of the following two important concepts (gross working capital and net working capital)

The investment that is needed for receivables, inventories and cash is generally called working capital or gross working capital. It is simply called current assets in the balance sheet of a firm. Generally speaking, net Working Capital is the specific concept that considers both current assets and current liability of the concern. Net Working Capital is the excess of current assets over the current liability of the concern during a period. When current assets is greater than the current liabilities it is said to be positive working capital; and the vice versa is said to be Negative working capital.

The following table shows as an example the part of the balance sheet that has an impact on working capital.

Table 1 Example of working capital in a balance sheet

Working Capital			
Current Assets		Current Liabilities	
Cash in hand	XXX	Bills Payable	XXX
Cash at Bank	XXX	Sundry Creditors	XXX
Bills receivable	XXX	Outstanding expenses	XXX
Sundry debtors	XXX	Short-term loan and advances	XXX
Short-term loan advances	XXX	Dividend payable	XXX
Inventories	XXX	Bank Overdraft	XXX
Prepaid expenses	XXX	Provision for Taxation	XXX
Accrued income	XXX		

Sources: Drafted by the author from Paramasivan and Subramanian (2009)

Working capital as per Frank J. & Pamela P, (2003), comprises permanent working capital and temporary working capital.

2.4.1 Permanent working capital is that investment necessary to satisfy the continual demands of operations. A firm invests cash in inventory, which is then sold for credit (creating accounts

receivable), which are then collected in cash. This process continues throughout the year, with some funds circulating as current assets over time. To ensure sustainable investment of a firm permanent working capital is most likely financed with long-term capital.

2.4.2 Temporary working capital is the difference between actual working capital and permanent working capital. It arises from seasonal fluctuations in a firm's business. Because firms do not have to maintain this form of working capital throughout the year, nor year after year, it may be better to use short-term rather than long-term sources of capital to satisfy temporary needs, Fabozzi and Peterson (2003).

2.5 Working Capital management

Working capital is defined as the difference between current asset and current liability by Van Horne and Wachowics, (2008), but Ding et al., (2013) further discuss it as often used to quantify a company's liquidity. According to Kesseven Padachi, (2006), the working capital meets the short-term financial requirements of a business enterprise. It is a trading capital that is not kept for more than a year. Ward, 2010, stated that Working Capital is the net investment as a result of a business in commissioning current assets (such as cash and bank, inventories and trade receivables) and commissioning current liabilities like overdraft (OD) and trade payables.

Working capital management is defined by Ross, westerfield and Jordan (2008), as managing the firms working capital is a day-to-day activity that ensures the firm have enough resources to continue its operations and avoid cost fluctuations. This involves several activities related to the firm's collection of receivables and payment of cash.

Furthermore, Chandra (1994), referred Working capital management as short-term financial management, refers to the day-to-day financial activities that deal with current assets like inventories, debtors, short-term holdings of marketable securities, and cash; and current liabilities like short-term debt, trade creditors, accruals, and provisions. The key issues in working capital management are: How much cash should the firm carry on hand? Where should the firm invest its temporary cash surpluses? What is the optimal level of inventory for the operations of the firm? Should the firm grant credit to its customers and, if so, on what terms? What sources of short-term finance are appropriate for the firm?

2.6 Factors determining Working Capital

The working capital needs of a firm are influenced by numerous factors. The important ones are:

Nature of Business: The working capital requirement of a firm is closely related to the nature of its business. A service firm, like an electricity undertaking or a transport corporation, which has a short operating cycle, and which sells predominantly on cash basis, has relatively modest working capital requirement. however, a company's concern like a machine tools unit, which has a long operating cycle, and which sells largely on credit, has a very substantial working capital requirement.

Seasonality of Operations: Firms which have marked seasonality in their operations usually have highly fluctuating working capital requirements. To illustrate, consider a ceiling fan firm. The sale of ceiling fan reaches a peak during the summer months and drops sharply during the winter period. The working capital need of such a firm is likely to increase considerably in summer months and decrease significantly during the winter period. On the other hand, stable working capital is required for a firm selling a product like lamps, which have even sales round the year,

Production Policy: A firm marked by pronounced seasonal fluctuation in its sales may pursue a production policy which may reduce the sharp variations in working capital requirements. For example, a manufacturer of ceiling fan may maintain a steady production throughout the year rather than intensify the production activity during the peak business season. Such a production policy may dampen the fluctuations in working capital requirements.

Market Conditions: The degree of competition prevailing in the marketplace has an important bearing on working capital needs. During existence of high competition, a larger inventory of finished goods is required to promptly serve customers who may not to wait because other companies are ready to meet their needs. Further, generous credit terms may have to be offered to attract customers in a highly competitive market. Thus, working capital needs tend to be high because of greater investment in finished goods inventory and accounts receivable. If the market is strong and competition is weak, a firm can manage with a smaller inventory of finished goods because customers can be served with some delay. Further, in such a situation the firm can insist on cash payment and avoid lock-up of funds in accounts receivable it can even ask for advance payment, partial or total.

Conditions of Supply: The inventory of raw materials, spares, and stores depends on the conditions of supply. If the supply is prompt and adequate, the firm can manage with small inventory. However, if the supply is unknown and limited then the firm, to ensure continuity of production, would have to acquire stocks as and when they are available and carry larger inventory on an average. A similar policy may have to be followed when the raw material is available only seasonally and production operations are carried out round the year, Chandra, P., (2014)

2.7 Significant components of Working Capital Management

2.7.1 Cash Management

Cash is the most liquid asset and it has key importance to the daily operations of business firms. While the proportion of corporate assets held in the form of cash is very small, often between 1 per cent and 3 per cent, its efficient management is crucial to the creditworthiness of the business because in a very important sense cash is the focal point of fund flows in a business. In view of its importance, it is generally referred to as the "life blood of a business enterprise" Chandra, (1994).

James, C. and John, M. (2008), put forth that there are three possible motives for firms to hold cash.

Transaction Motive: Firms need cash to meet their transaction needs. The collection of cash from sale of goods and services, sale of assets, and others is not perfectly coordinated with the disbursement of cash for purchase of goods and services, acquisition of capital assets, and meeting other obligations. Hence, some cash balance is required as a safeguard.

Precautionary Motive: There may be some uncertainty about the magnitude and timing of cash inflows from sale of goods and services, sale of assets, and issuance of securities. Likewise, there may be uncertainty about cash outflows on account of purchases and other obligations. To protect itself against such uncertainties, a firm may require some cash balance.

Speculative Motive: Firms would like to tap profit making opportunities arising from fluctuations in commodity prices, security prices, interest rates, and foreign exchange rates. A cash-rich firm is better prepared to explore such bargains. Hence, firms which have such

speculative leanings may carry additional liquidity. However, for most firms their reserve borrowing capacity and marketable securities would suffice to meet their speculative needs.

Even though, Cash provides these functions, it is also an idle resource which has opportunity cost in case of excess cash on hand. The liquidity provided by cash holding is at the expense of profits sacrificed by foregoing alternative investment opportunities. As a result, companies should establish reliable forecasting and reporting systems, improve cash collections and disbursements and achieve optimal level of funds.

2.7.2 Account Receivables Management

Paramasivan & Subramanian, (2009), explained the term receivable as debt owed to the concern by customers arising from sale of goods or services in the ordinary course of business. Receivables are also one of the major parts of the current assets of the business concerns. It arises only due to credit sales to customers; hence, it is also known as Account Receivables or Bills Receivables. Management of account receivable is defined as the process of making decision resulting to the investment of funds in these assets which will result in maximizing the overall return on the investment of the firm.

The objective of receivable management as per Paramasivan & Subramanian is to promote sales and profit until that point is reached where the return on investment in further funding receivables is less than the cost of funds raised to finance that additional credit. The costs associated with the extension of credit and accounts receivables are identified as follows:

i. Collection Cost: cost incurred in collecting the receivables from the customers to whom credit sales have been made. ii. Capital Cost: the cost on the use of additional capital to support credit sales which alternatively could have been employed elsewhere. iii. Administrative Cost: is an additional administrative cost for maintaining account receivable in the form of salaries to the staff kept for maintaining accounting records relating to customers, cost of investigation etc. iv. Default Costs: are the over dues that cannot be recovered. Business concern may not be able to recover the over dues because of the inability of the customers.

2.7.3 Inventories (Stock) Management

Ephrem, A., (2018) explained, "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 stock 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."

2.7.4 Accounts Payables Management

Account payable according to Ephrem, A., (2018) 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 buy goods on credit and record it as a liability that must be paid. Based on the relationship between the suppliers a company can have extended credit policy portfolio. It should be noted that a company should make sure suppliers are receiving the payment on time to make them satisfied.

Arnold, G., (2008) stipulated that purchasing goos 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 does not have to be financed by short term debt. If the creditor period is long, the cash could be used to buy inventory to be sold. Companies need to manage their budgeted cash-flow and pay the creditors when the amount decreases. 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 this will avoid any legal action taken by creditors. A method to identify when the payable is 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.

2.7.5 Liquidity

Liquidity ratios indicate a firm to pay its obligation in short run. Potential lenders scrutinize the status of the company before making short-term loan to firms.

Financial managers must pay close attention to liquidity ratios to ensure they reveal a high probability of firm being able to promptly and full pay its obligation. In addition, the preceding paragraph, the authors stated that the most widely measurement used to determine liquidity ratio is current ratio which is the result of current assets dividing to current liabilities, Baker & Powell, (2005).

Current ratio (CUR) = Current Asset (CA)/Current Liability (CL)

Eljelly, M., (2004) stated that one of the competent liquidity management includes planning and controlling current assets and current liabilities in such approach that avoids the risk of the failure to meet due short-term obligations and avoid excessive investment in current assets. The author in addition explained that in every area of financial management, finance managers are always faced with dilemma of liquidity and profitability; hence must strike a balance between liquidity and profitability of firms

Most of the time, liquidity goals of a firm are to have enough cash to pay for bills, to make unexpected purchase and finally, firms have an adequate cash reserve to meet emergencies in all time. Whereas, profitability goal on the other hand requires that, funds of firm are used to yield higher returns. Therefore, when cash increases, the profitability decreases and vice versa as per Brigham and Houston, (2003).

2.7.6 Firms Size

Size of the business directly affects the working capital requirements. The greater the size of a business unit generally large will be the requirements of working capital. However, in some case even a smaller company may need more working capital due to high over charges and inefficient use of resources.

Bayyurt, N., (2007) stated that big firms have more competitive power when compared to small firms in fields requiring competition. Since they have a bigger market share, big firms could profit more. In addition to this, big firms are able to seize the opportunity to work in the fields which require high capital rates since they have better resources, and this situation provides them the opportunity to work in more profitable fields with little competition(as cited in Mahdi et al., 2014).

Manoori & Muhammed (2012) stated that large firms have enhanced access to capital markets and have large capacity to extend more trade credits that enable them to have more investment in working capital as compared to smaller firms. He used natural logarithm of total assets as a proxy for firm size.

According to Abiodun (2013) the size of a firm plays a key role in determining the kind of relationship the firm have within and outside the operational environment it is having. The larger firm is greater influences of on its stakeholders. The size of the firm is one of important variables in many studies. In addition, in the review of Chiou et al., (2006) make obvious that the working capital necessity has significantly affects on size of firms (as cited in Hassan et al., 2014, 121).

2.7.7 Return on Asset (ROA)

Return assets the dependent variable in this study to measure the ratio how profitable companies are relative to its assets. It also indicates that how well management is employing the company's total assets to make profitable. Therefore, the higher the return ratio mean that the management more efficiently and effectively utilizing its assets.

The authors emphasized that, "The rate of return on total assets, or simply return on assets, measures a company's success in using assets to earn profit" (Horngren et al.,2012, p739).

Hassan et al., (2014) described return on asset: Return on assets is very important and provide a standard for changing how efficiently financial management employs the average amount which is invested in the firm's assets, whether the amount come from investor or creditors. A low level of return on assets shows that the profits are low for assets. The return on asset ratio calculates how efficiently profits are being collected from the asset's employee. Thus, as expected, the variable return on assets, which is calculated by the ratio earnings before interest and tax over total assets, was introduced into the analysis and which is factor that will have a negative effect

on the cash conversion cycle. Return on asset explains that how efficient a company is to utilize its available assets to generate profit. It calculates the percentage of profit a company is earning against per each amount of assets (Weston and Brigham, 1977) i.e. Return on Assets (ROA) = Net Income/Total Asset (As cited by Ayichelet, P12)

2.8 Working Capital Policies

Taking the simple definition of working capital 'current assets minus current liabilities', which implies that the liquidity problem may rises if a company fails to manage it current liability by current asset. Too excess of current asset on the other hand might also arises poor management of working capital. The above two are not favorable for the company. Thus, the management of working capital supported by policy is needed. Let us see further see what Brigham & Houston, (2008) considered about Working capital policy. Working capital policy can be mainly classified in three categories. They are Maturity matching policy, aggressive policy and conservative policy.

Brigham & Houston, "Investments in current assets must be financed; and the primary sources of funds include bank loans, credit from suppliers (accounts payable), accrued liabilities, long-term debt, and common equity. Each source has advantages and disadvantages, so each firm must decide which sources are best for its situation."

They further note that most businesses experience seasonal and/or cyclical fluctuations. For example, construction firms tend to peak in the summer, retailers peak around Christmas, and the manufacturers who supply construction companies and retailers follow related patterns. Similarly, the sales of virtually all businesses increase when the economy is strong; hence, they build up current assets at those times but let inventories and receivables fall when the economy weakens. Note, though, that current assets rarely drop to zero, companies maintain some permanent current assets, which are the current assets needed at the low point of the business cycle. Then as sales increase during an upswing, current assets are increased, and these extra current assets are defined as temporary current assets as opposed to permanent current assets. The way these two types of current assets are financed is called the firm's current assets financing policy. The financing policies as per Brigham & Houston, (2008) are:

A) **Maturity Matching, Or "Self-Liquidating," Approach**

The maturity matching, or "self- liquidating," approach calls for matching asset and liability maturities. All the fixed assets plus the permanent current assets are financed with long-term capital, but temporary current assets are financed with short-term debt. Inventory expected to be sold in 30 days would be financed with a 30-day bank loan, a machine expected to last for 5 years would be financed with a 5-year loan, a 20-year building would be financed with a 20-year mortgage bond, and so forth. Two factors prevent an exact maturity matching: (1) There is uncertainty about the lives of assets. For example, a firm might finance inventories with a 30-day bank loan, expecting to sell the inventories and use the cash to retire the loan. But if sales are slow, the cash would not be forthcoming, and the firm might not be able to pay off the loan when it matures. (2) Some common equity must be used, and common equity has no maturity. Still, when a firm attempts to match asset and liability maturities, this is defined as a moderate current assets financing policy.

B) Aggressive Approach

Aggressive firm finances some of its permanent assets with short-term debt. There can be different degrees of aggressiveness. All the current asset both permanent and temporary and part of the fixed assets can be financed with short-term credit. This policy would be a highly aggressive, extremely nonconservative position; and the firm would be subject to dangers from loan renewal as well as problems with rising interest rates. However, short-term interest rates are generally lower than long-term rates, and some firms are willing to sacrifice some safety for the chance of higher profits.

The reason for adopting the aggressive policy is to take advantage of the fact that the yield curve is generally upward-sloping; hence, short-term rates are generally lower than long-term rates. However, a strategy of financing long-term assets with short-term debt is quite risky. To illustrate, suppose a company borrows $2 million on a 1-year basis and uses the funds to purchase machinery that will reduce labor costs by $400,000 per year for 10 years. Cash flows from the equipment would not be sufficient to pay off the loan at the end of only 1 year, so the loan would have to be renewed. If the company encountered temporary financial problems, the lender might refuse to renew the loan, which could lead to bankruptcy. Had the firm matched maturities and financed the plant with a 10-year loan, the required loan payments would have been better matched with the cash flows and the loan renewal problem would not have arisen.

C) Conservative Approach

Long-term capital is used to finance all the permanent assets and to meet some of the seasonal needs. In this situation, the firm uses a small amount of short-term credit to meet its peak requirements, but it also meets part of its seasonal needs by "storing liquidity" in the form of marketable securities. The humps above the dashed line represent short-term financings, while the troughs below the dashed line represent short-term security holdings. This is a very safe, conservative financing policy.

2.9 Working Capital Theories

There are various theories that support the significance of working capital. Some of the most important theories that applies to working capital management include the following:

2.9.1 Quantity Theory of Money

According to the 'quantity theory' money is held only for purpose of making payments for current transactions (Keynes, 1973). This theory was proposed by Irving Fisher in 1911. Fisher's version of the quantity theory can be explained in terms of the equation of exchange model.

$MV = PT$ …… (i)

Where M is the nominal stock of money in circulation, V is the transaction velocity of circulation of money, that is, the average number of times the given quantity of money changes hand in transactions, P is the average price of all transactions and T is the number of transactions that take place during the time period. Both MV and PT measure the total value of transactions during the time period and so must be identical. Thus, 'the equation' is really an identity which must always be true; it tells us only that the total amount of money handed over in transactions equal to the value of what is sold.

2.9.2 Keynesian Theory of Money

Keynes (1973) in his great work: "The General Theory of Employment, Interest and Money" identified three reasons why liquidity is important; the speculative motive, the precautionary motive and the transaction motive.

The speculative motive is the need to hold cash to be able to take advantage of, for example, bargain purchase, and favorable exchange rate fluctuations in the case of international firms. For

most firms, reserve borrowing ability and marketable securities can be used to satisfy speculative motives.

The precautionary motive is the need for a safety supply to act as financial reserve. Once again, there is probably a precautionary motive for liquidity. However, given that the value of money market instruments is relatively certain and that instruments such as T – bills are extremely liquid, there is no real need to hold substantial amount of cash for precautionary purpose.

Cash is needed to satisfy the transaction motive, the need to have cash on hand to pay bills. Transaction related needs come from collection activities of the firm. The disbursement of cash includes the payment of wages and salaries, trade debts, taxes and dividends.

2.9.3 Baumol Inventory Model

Baumol (1952) developed the inventory development model. The Baumol model is based on the Economic Order Quality (EOQ). The objective is to determine the optimal target cash balance. Baumol made the following assumptions in his model. The firm is able to predict its cash requirements with precision and receive a precise amount at regular intervals; the company's cash payments occur uniformly over time, that is, a steady pace of cash outflows; the firm's cash payments occur uniformly over time, that is, a steady pace of cash outflows; Cash holdings incur an opportunity cost in the form of opportunity forgone and the firm will incur the same transactions cost whenever it converts securities to cash. Each transaction incurs a fixed and variable cost. Below is the equation representation in Baumol model of cash management:

Holding cost = K(C/2) Total cost =K(C/2 +c (T/C) and Transaction Cost = c (T/C)

Limitations: it assumes no cash receipts during the projected period, obviously cash is coming in and out on a frequent basis and, no safety stock is allowed for reason being it only takes a short amount of time to sell marketable securities.

2.9.4 The Modern Quantity Theory

Milton Friedman restated the quantity theory of money in 1956 as a theory of demand for money and this modern quantity theory has become the basis of news put forward by monetarists (Copeland et al, 2005). In this theory, money is seen as just one of several ways in which wealth can be held, along with all kinds of financial asset consumer durables, property and human

wealth. According to Friedman, money has a convenience yield in the sense that its holding saves time and effort in carrying transactions.

2.10 Empirical Review of Previous Literatures

Many researchers have studied about working capital management on firm's performance from different perspective. The following are presented which is relevant and useful for this research.

Gill, Biger, & Mathur (2010) studied the relationship between working capital management and profitability; evidence from the United States. They found a positive relationship between a cash conversion cycle and gross operating profit, if firms that have higher cash conversion cycle will have larger profitability. They also observed a negative relationship between average days of account receivable between profitability. In addition, their finding shows slow collection of account receivables is correlated with low profitability. However, unlike other researcher's, they didn't get statically significant relationship between gross operating and account payable.

Erik Rehn has done a research on whether Working capital management can affect company profitability in Finnish and Swedish. Quantitative, correlation analysis and OLS regression was used and results shows that there is a significant effect of working capital management on corporate profitability. The net trade cycle and the cash conversion cycle were used as determinants of working capital management efficiency and gross operating profitability as the profitability variable. The result also yields that there are major differences from industry to industry in terms of working capital. Rehn suggested that a careful conclusion could be made that some industries can use their investment in working capital to increase profitability. In most industries, though, such as machinery, retail and wood products, the correlation between the NTC and CCC to profitability is negative which indicate Finnish and Swedish corporations in these industries could significantly increase profitability by more effectively managing their working capital.

Abdul R. et.al analyzed the impact of working capital management on firm's performance in Pakistan for the period 1998 to 2007 and used 204 companies that are listed in Karachi stock exchange for this study. Their result indicates that the cash conversion cycle, net trade cycle and inventory turnover in days are significantly affecting the performance of the firms. The firms are in general facing problems with their collection and payment policies. Moreover, the financial leverage, sales growth and firm size also have significant effect on the firm's profitability. They

also concluded that firms in Pakistan are following conservative working capital management policy and the firms are needed to concentrate and improve their collection and payment policy.

In 2014 Osundina Jacob made investigative survey study on Working capital management and profitability of 120 selected food and beverages manufacturing firms in Nigeria using Descriptive Statistics, Correlation Analysis and Multiple Regression Analysis on secondary data. The study found out there is relatively strong positive and significant relationship between Working Capital management and Net Operating Profit and that a positive but insignificant relationship exist between Cash Conversion Cycle and Net Operating Profit. Additionally, Account Collection Period has significant negative relationship with Net Operating Profit while Inventory conversion Period and Account payment period have insignificant negative relationship with Net operating profit of food and beverages companies in Nigeria.

Another investigative study was made by Sarbapriya Ray in 2012 on 311 Indian companies for the period of 14 years between 1996-97 to 2009-10 and have studied the effect of different variables of working capital management including the average collection period, inventory turnover in days, average payment period, cash conversion cycle and current ratio, debt ratio, size of the firm and financial assets to total assets ratio on the net operating profitability of Indian firms. The result suggests a strong negative relationship between the measures of working capital management including the number of days accounts receivable and cash conversion cycle, financial debt ratio with corporate profitability. Unlike most of related studies, this study did not find any statistically significant relationship between average days of accounts payable and the profitability of the firm. Another finding by this study is insignificant negative relationship between firm size and its net operating profit ratio.

Back in 2019 in India Seth H. et.al tried to get insight on working capital management (WCM) practices and the determinants of its efficiency prevailing in the Indian manufacturing sector using firm-specific as well as macro-economic variables by examining three efficiency models, i.e. cash conversion cycle (CCC), cash conversion efficiency (CCE) and net working capital level (NWCL). They used panel data techniques on 1,207 firms of the Indian manufacturing sector, as well as on its nine key manufacturing industries from 2008 to 2018 for the analysis and found out that several firm-specific variables such as net fixed asset ratio, size of the firm, profitability, firm’s growth, asset turnover ratio, age of the firm, interest rate and leverage have

significant effect on WCM efficiency, whereas total assets growth rate, gross domestic product growth rate and inflation rate have insignificant effect on WCM efficiency.

Kessevan Padachi, 2006, studied the trends in working capital management and its impact on firms' performance using return on total assets as a dependent variable as a measure of profitability. Using panel data analysis, the relationship between working capital management and corporate profitability is explored for a sample of 58 small manufacturing enterprises from 1998 to 2003. The regression results show that high investment in inventories and receivables is associated with lower profitability. The key variables used in the analysis are inventories days, accounts receivables days, accounts payable days and cash conversion cycle. A strong significant relationship between working capital management and profitability has been found. An analysis of the liquidity, profitability and operational efficiency of five industries shows significant changes contributed to better performance. The findings also reveal an increasing trend in the short-term component of working capital financing.

Another study by Monica S. et.al, (2014) examined the relationship between working capital management strategies of a firm and its profitability in 2014. The study also attempted to understand the impact of the global macroeconomic conditions on this relationship. They applied correlation analysis and fixed effects estimation on sample of Indian companies. Cash conversion cycle has been utilized as a measure of the working capital management, whereas gross operating profit is used as a proxy for a firm's profitability. Furthermore, interactive dummies are utilized to investigate the impact of global macroeconomic conditions on the relationship under consideration. The results reveal that cash conversion cycle of a company has a negative correlation with its profitability. The results also suggest that the performance can also be improved by decreasing the number of days receivables and increasing the number of days payables. Furthermore, the outcomes demonstrate that the working capital strategies should be formulated taking global macroeconomic conditions into consideration. The findings highlight the importance of efficient working capital management practices to improve the profitability of companies.

Back in 2010, Tewodros studied the effect of working capital investment and financing policies on firms' profitability by using audited financial statements of a sample of 11 private limited companies in Tigray region, Ethiopia for the period of 2005 to 2009 using both correlation

analysis and pooled panel data regression models of cross-sectional and time series data were used for analysis. The results show that longer accounts receivable and inventory holding periods are associated with lower profitability and there is also negative relationship between accounts payable period and profitability measures; however, except for operating profit margin this relationship is not statistically significant. The results also show that there exists significant negative relationship between cash conversion cycle and profitability measures of the sampled firms. The study suggests no significant relationship between current assets to total assets ratio and profitability measures has been observed. On the other hand, findings show that a highly significant positive relationship between current liabilities to total assets ratio and profitability. Finally, negative relationships between liquidity and profitability measures have also been observed.

Henock Y., 2015, empirically reviewed the impact of working capital management on profitability. To investigate this relationship between these two, the author collected secondary data from 19 manufacturing share companies in Addis Ababa, Ethiopia for the period of 2010 to 2014. The results also show that there exists significant negative relationship between cash Conversion cycle and profitability of the sampled firms. In addition to that there is significant positive relationship between current assets to total assets ratio and profitability measures has been observed. On the other hand, results show that a significant positive relationship between current liabilities to total assets ratio and profitability.

In his study, Miftah A., 2016, examined the impact of working capital management on profitability of manufacturing share companies in Ethiopia with special reference to large taxpayers. The data that was collected for period of seven years (2008-2014) in sixteen companies were analyzed on quantitative basis using descriptive and regression analysis (Ordinary Least Square) method. The key findings from the study are; First, there exists a significant negative relationship between average collection period and profitability indicating that an increase in the number of days a firm receives payment from sales affects the profitability of the firm negatively; second, there is a negative relationship between inventory holding period with profitability and positive relationship between accounts payable period and profitability. But both inventory holding period and accounts payable period was found to be insignificant in affecting profitability of the firms. Third, a negative relationship between cash conversion cycle

and profitability of the firm. Which indicates that as the cash conversion cycle decreases it leads to an increase in profitability of the firm, and managers can increase profitability of their firms by shortening the time lag between a firm's expenditure for purchases of raw materials and the collection of sales of finished goods. Finally, positive relationships between liquidity and profitability measures have also been observed.

Ephrem A., 2018, evaluated the Impact of working capital management and firm's performance in the case of grade one construction companies in Ethiopia. The study used secondary data obtained from audited financial statements of forty-five grade one construction companies registered and work in Ethiopia. The result revealed that company size in the study have positive coefficient and statistically significant effect on profitability, cash conversion cycle, and debit ratio in the research have negative sign of coefficient and significant effect. In contrast, the number of days inventory and the cash conversion cycle-CCC), on profitability measured are statistically insignificant.

Richard K. et.al, 2013, examined the relationship between working capital management practices and profitability of listed firms in Ghana using secondary data collected from all the 13 listed firms in Ghana covering the period from 2005-2009. The study finds a significantly negative relationship between profitability and accounts receivable days. However, the firms' cash conversion cycle, current asset ratio, size, and current asset turnover significantly positively influence profitability.

In 2015 study was made by Prof. Dr. Carla M. et.al by investigating the relationship between working capital management and profitability of firms in the Middle East and Europe. The objective of this research is to test the effect of working capital management in the form of cash conversion cycle measurements on the profitability of firms in the Middle East and Europe. This study used a sample of 54 firms listed in the Middle East and West Europe for the period of 2012-2013 and the result revealed that there is no statistically significant relationship between cash conversion cycle measurements and profitability of firms measured as Return on Asset. Moreover, managers should use other tools and strategies to improve their firm's profitability rather than managing the working capital efficiently.

Ayichelet K., 2018, investigated the impact of working capital management on profitability of large taxpayer printing firms by using financial statements of large taxpayer printing firms in

Addis Ababa, Ethiopia from the period of 2011 to 2015. The data was analyzed using descriptive and regression analysis method. The result of this study indicated that inventory conversion period, account collection period and current ratio have significant negative relation with profitability but positive significant relationship between cash conversion cycle and profitability. However, the researcher found insignificant negative relationship between the size of firm and profitability.

2.11 Knowledge Gaps

Under the topic of empirical literature review above a lot of literatures have been analyzed and reviewed. The literatures reviewed has shown different findings regarding the working capital management effect on the performance of a firm regarding some factors like Cash Conversion Cycle.

According to Miftah (2016) and as it can be seen from the empirical review made, it is clear from the empirical evidence, there is no common results on the impact of WC on profitability. This may be due to lack of not incorporating all relevant and most important variables used to measure both WC and profitability.

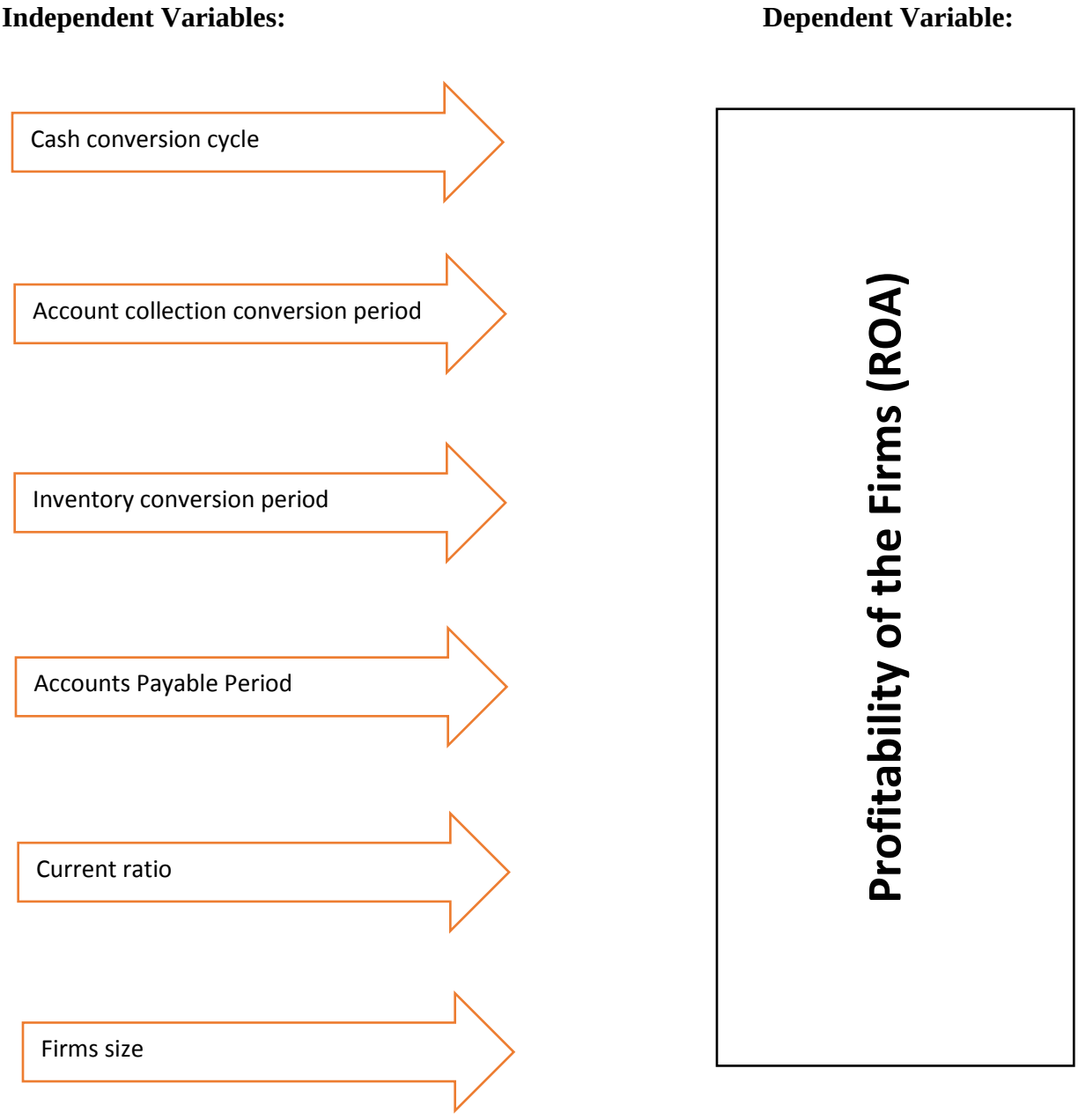
Generally, from above and other empirical studies it can be clearly understood that there is an impact of working capital on performance of the companies. However, the variables considered in these studies are different and the concluded result on the studies are different. As an example, lets take CCC and profitability of the company's relation. Richard A. et.al, (2013), found out that firms' cash conversion cycle significantly positively influences profitability while Tewdros A. (2010), concluded that there exists significant negative relationship between cash conversion cycle and profitability. On the other hand, Carla M. et.al in 2015 depicted that there is no statistically significant relationship between cash conversion cycle and profitability of firms.

The other and main issue that initiated the researcher's interest to make this study is that, the studies conducted in Ethiopia did not cover the public enterprises that are currently owned by the government of Ethiopia. The reason why the public enterprises selected is that since the government is privatizing some of the companies and making reform in all of them the researcher thought it is better to see the details of Working capital management ahead in order to have visibility of the company's asset management.

2.12 Conceptual Framework of the Study

Figure-1 below presents schematic conceptual framework of the relationship between working capital management measures and profitability of firms.

Figure 1: Schematic Conceptual Framework



Source: researcher's own design (adopted from Mwanahamisi Ali Wembe, 2015)

CHAPTER THREE

RESEARCH METHODOLOGY

In the previous chapter the theoretical and review of related literature works in relation to capital management on firm's performance was tried to be covered. This chapter presents the general research methodology of this study. In this section all relevant methodology techniques to conduct this research will be discussed as follows.

3.1 Research Design

John et al., (2007) stated that research design is the blueprint for fulfilling the research objectives and answering the research questions. In research there are different research methods which can be used to address the research objectives. For this study, explanatory type of study based on a quantitative approach was used to analyses the collected data. This is because this type of study helps the researcher understand the subject matter in depth. Besides, according to Grover, (2003) explanatory research is devoted to finding causal relationships among dependent and independent variables. It does so from theory-based expectations on how and why variables should be related.

In this study Quantitative methods approach was applied to meet the objective of the study and to answer research question under it. First: The researcher used correlation to measure the degree of association between variables under consideration. Second: Regression analysis was conducted to estimate the causal relationships between the chosen dependent and independent variables. According to Kothari (2004) regression analysis is about the study of how one or more variables make changes in another variable.

The above selected methods used since we are studying the relationship of the independent variables on the performance of the public enterprise companies. We have seen the effect of these independent variables how they are correlated to the performance of the companies.

3.2 Data Source and Collection Procedure

Study used secondary data sources in order to gather the data from relevant sources. Secondary data was collected from review of journals, journal articles, company profile and financial reports, books and magazines. Mainly financial report from governmental office called Public Enterprises Holding and Administration Agency was used. This was done to analyze and evaluate the dependent variables which eventually helps understanding the what has happened during the selected period. i.e. cash and receivable cycle, payable period and inventory management is clearly evaluated.

3.3 Population and Sample Size

3.3.1 Target Population

When we say population, it is to refer members of a real or hypothetical set of people, events, or objects to which we try to take a broad view of the results of our research. The target populations of this study are all enterprises that are owned by the state of the government which are generally twenty-one in number. The data was collected from bureau of Public Enterprises Holding and Administration Agency (PEHAA). PEHAA is responsible in monitoring the state-owned enterprises.

3.3.2 Sample and Sampling Technique

All available data for eight out of the twenty-one enterprises was selected as a sample of the study and this is of course to cover the study objective as much as possible within the limited resource that the research has. The researcher used purposive sampling technique due to data of some enterprises might not be available or shorthanded. The criterion for inclusion of the below listed companies is mainly due to availability of the data required. The data was collected for five years from 2013 to 2017.

Table 2: List of sampled enterprises and period of data collected

S.no.	Name of enterprises	Period of data
1	Chemical Industries Corporation	2013 to 2017
2	Ethiopian Shipping and Logistics Services Enterprise	2013 to 2017
3	Ethiopian Tourist Trading	2013 to 2017

4	Berhanena Selam Printing Enterprise	2013 to 2017
5	Ethio Telecom	2013 to 2017
6	Ethiopian Airlines	2013 to 2017
7	Ethiopian Airports Enterprise	2013 to 2017
8	Ethiopian Insurance Corporation	2013 to 2017

Source: Authors draft

The researcher used Ordinary Least Square (OLS) Regression Model to explain the effect between the independent and the dependent variable. This has an advantage of determining the nature of relationship between the independent variables and the dependent one. It also benefits to identify anomalies.

3.4 Model Specification

The equation to investigate the relationship between working capital management and companies' performance. The researcher used Akoto, A., & Angmor, (2013), Raheman A., (2007) model as per the reference from Henok Yohannes, 2015. The general formula of the model is:

$ROA_{it} = \beta 0 + \Sigma \beta X_{it} + u_{it}$

Where:

ROA_{it}: Return on Asset of firm i at time t.

$\beta 0$: The intercept of equation or constant (c);

β_i: Coefficients of X_{it} variables;

X_{it}: All independent variables to working capital Management of firm i at time t (Time);

u_{it}: The error term.

Specifically, the above formulation is specified as:

$ROA_{it}=\beta 0+ \beta_1 CCC_{it}+ \beta_2 ARD_{it} +\beta_3 ICP_{it}+\beta_4 APD_{it} + \beta_5 CATAR_{it} + \beta_6 CLTAR_{it} + \beta_7 FSZ_{it} + u_{it}$.

Where:

$\beta 0$: The intercept of equation;

ROA: The return on assets;

CCC: Cash Conversion Cycle;

ARD: Account Receivable conversion period;

ICP: Inventory Conversion Period;

APD: Accounts payable days;

CATAR: Current asset to total asset ratio;

CLTAR: Current liability to total asset ratio;

FSZ: Firm's Size (log of Total Asset);

u_{it}: The error term;

3.4.1 Model selection criteria (Random vs. Fixed effect model)

The approach adopted is first to present the outcomes of the different methods independently in this chapter. Based on the methodology that have discussed by undermine the model Data collected and summarized from different sources were the parameters estimated by Random effect model. Random effect model is preferred by looking that the variable effect is unrelated, and this is supported by Durbin-Watson test shown under the regression result found below.

H0: Random Effects model is appropriate

H1: Fixed Effects model is appropriate

Decision Rule: Reject H0 and go for alternative if p-value less than significance level 5%. Otherwise, do not reject H0.

Hence, the test resulted Random effect model which led to accepting the hypotheses.

Table 3: Random Model assumption test

Model 1: ROA C CCC

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.643948	1	0.4223

Model 1: ROA C ARD

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.759068	1	0.0967

Model 1: ROA C ICP

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.563871	1	0.0183

Model 1: ROA C APD

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.004769	1	0.9449

Model 1: ROA C CATAR

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.636944	1	0.4248

Model 1: ROA C CLTAR

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.348370	1	0.1254

Model 1: ROA C FSZ

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.243189	1	0.6219

Source: Eviews model test

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results and analysis of the findings of the various indicators analyzing the role of working capital management on firms' profitability. The study selected Return on Asset (ROA) as the measure of the public enterprises' financial performance in Ethiopia. On the other hand, Cash conversion cycle (CCC): is the comprehensive independent variables to measure the cash collection policy of firms.

It is computed by the summation of the time taken inventory conversion and account collection period minus account payment period to suppliers. Inventory conversion period (ICP), ARD: Account Receivable conversion period; APD: Accounts payable days; CATAR: Current asset to total asset ratio; CLTAR: Current liability to total asset ratio; Firm Size was used as the measure of working capital (or working capital variables) for the study.

On this score, OLS may be preferable if and only if the Hausman test result shows same result otherwise the OLS was applied. Since the number of time series is greater than the number of cross-sectional units (i.e., the public enterprises' financial performance in Ethiopia), variables are estimated below. The results obtained under different methods are jointly analyzed in the subsequent chapter to address each research hypotheses. Empirical results from quantitative data analysis using Eviews 10 Software as well as presenting results from descriptive statistics, correlation matrix and regression results were used as the study's main statistical tools.

4.2 Descriptive Statistics of the Data

Table 2 below shows summery of descriptive statistics intended to give general descriptions about the dependent and the independent variables. The total number of observations for each variable is 40 (i.e., eight enterprises of five years (2013 to 2017) data) from the public Enterprises in Ethiopia.

In this subtopic the result of the descriptive statistic: mean, standard deviation, minimum and maximum value of the dependent and the independent variables of the model is presented. Because the data are a panel of strongly balanced in type, the study has 40 observations of the dependent and independent variables.

Table 4: Summary of Individual Descriptive Statistics of variables

Variable	ROA	CCC	ARD	ICP	APD	CATAR	CLTAR	SIZE
Mean	0.148000	193.6184	109.0914	128.7531	121.6465	0.546058	0.453473	21615.76
Median	0.140000	219.9004	102.6569	114.9286	106.0096	0.488693	0.363731	7678.687
Maximum	0.270000	458.1950	236.8150	301.1046	228.4305	0.947044	0.937102	100545.1
Minimum	0.010000	35.18158	12.06243	34.53109	28.05069	0.158624	0.137223	205.1090
Std. Dev.	0.056759	118.6112	61.29163	79.09398	51.63815	0.239125	0.230107	28897.57
Observations	40	40	40	40	40	40	40	40

Source: Eviews Descriptive Statistics result

From above table 2 Descriptive Statistics indicating the determinates of working capital in public enterprises' profitability which is the mean value of firms Profit is 14.8% of total assets, and it deviates 5.67 percent from the mean value. Its minimum value is 1 percent while the maximum is 27 percent. It means that value of the profitability can deviate from its mean on both sides by 5.67 percent.

The cash conversion cycle used as a proxy to check the efficiency in managing working capital is on average 193.6 days and standard deviation is 118.6 days. The minimum time taken by a company to convert its overall activity is 35.18158 days and the maximum time taken by the

firm for this purpose is 458.1 days. The descriptive result points out firms spent an average 128.7 days to convert their inventory to cost of production.

The maximum and minimum time taken to convert its inventory has 301.1 days and 12 days respectively. The standard deviation that the value deviates from its mean on both sides is by 79.09 percent.

The result revealed that the time taken to collect their receivables an average 60.5 days. Minimum time taken by firms to collect cash from receivables has 2.64 days while the maximum time taken for collection is 194.5 days and it shows that a firm records a large 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.

In other hand, the Accounts receivable period, a measurement for collection policy, is averaged to 109 days for the sampled firms. This average of the account receivable period shows that, firms in the sample wait 109 days on average to collect cash from credit sales. The Account receivable period can vary by 61.2 days to both sides of the mean value. The minimum and the maximum Account receivable period for the sampled firms are 12 days and 236.8 days respectively. The minimum value of 12 means the firm did use account receivable at 12 minimum days or a firm use cash to sell its product at these days.

The Mean value of Accounts payable period as a proxy for payment policy is 121.6 days with the which is varying by 51.6 days. The minimum and maximum period ranges between 28 and 228.4 days. From study result it shows the higher investment in account receivable, the higher will be the profitability. This intern leads to more sales which ultimately results in an increase in performance.

The above Current Assets to Total Assets Ratio (CATAR) measurements of working capital assets management policy, namely accounts receivable period, inventory holding period, accounts payable period and cash conversion cycle, indicate how efficient are firms in managing their collection, inventory and payment policies. Investment in working capital assets which is found in average 54.6%, however, is broader than managing collection, inventory and payment policies. It also includes management of cash and other short-term assets which is 15% in the

maximum value of 94.7% which the ratio is find out the investment policy of working capital adopted by the firms under consideration.

A lesser value of Current assets to total assets ratio demonstrates more aggressive policy supported in Falope and Ajilore (2009) have been used this ratio as an independent variable to find the impact of working capital management on profitability. So, in this study as well an inverse relation is expected between profitability and current assets to total assets ratio is 54.6% which is lesser.

Similarly, Current Liabilities to Total Assets Ratio included in the study found the average 45.3% working capital financing policy in maximum up to 93.7 and minimum of 13.7% found varying in 23%. It shows the Public Enterprises in Ethiopia financing policy a greater portion of current liabilities is used than long-term debts. In conservative financing policy, more long-term debts are used than current liabilities.

In last result, regarding to the average firm size of firms is 21.6 billion measured by natural logarithms of its total asset. The maximum and minimum the value of log of total asset are 201 million and 100 billion respectively. The table also shows that the deviation from its mean is 28.8 billion in amount.

4.3 Diagnostic Tests for the Classical Linear Regression Model (CLRM) Assumptions

A. Normality Assumption

If the residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant meaning disturbance to be normally distributed around the mean. This means that the *p*-value given at the bottom of the normality test screen should be bigger than 0.05 to not reject the null of normality at the 5% level (Brooks, 2008).

Ho: Normally distributed errors

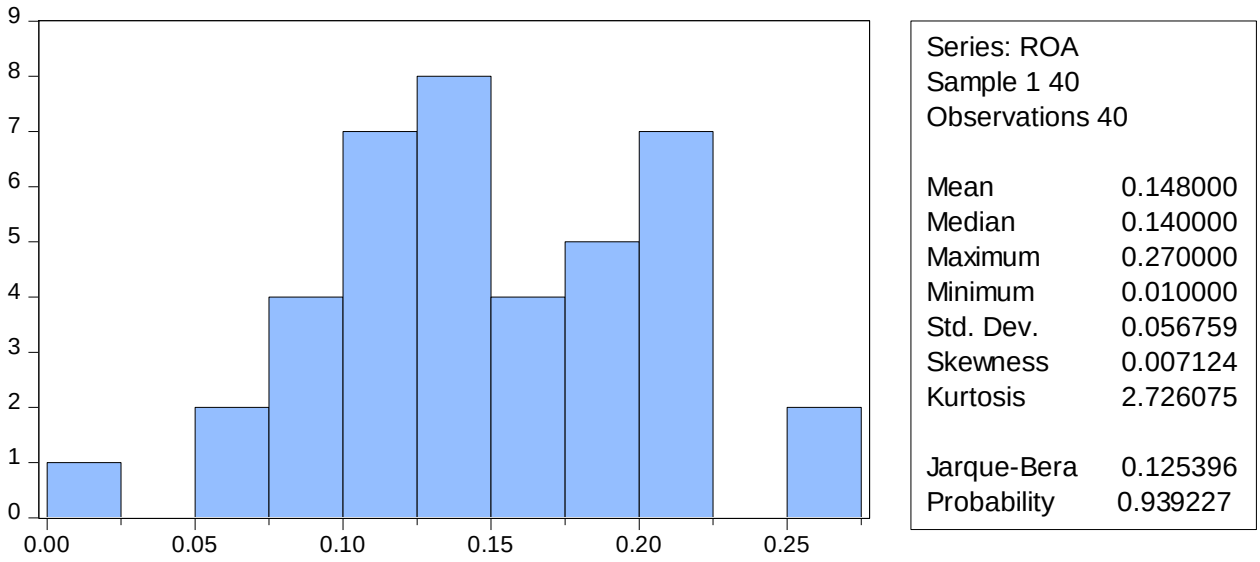
Ha: Non-Normal Distribution error

The normality tests for this study as shown in table below, the Bera-Jarque statistic has a P-value of 0.000 implies that the p-value for the Jarque-Bera test for models is greater than 0.05 which indicates that the errors are normally distributed.

Based on the statistical result, the study failed to reject the null hypothesis of normality at the 5% significance level. A normal distribution is not skewed and is defined to have a coefficient of kurtosis 3. Bera-Jarque formalizes this by testing the residuals for normality and testing whether the coefficient of skeweness and kurtosis are zero and three respectively. Skewness measures the

extent to which weather a distribution is symmetric about its mean value or not, and kurtosis measures how fat the tails of the distribution are. To fulfill a normality assumption the Bera-Jarque probability statistics/P-value is expected not to be significant even at 10% significant level (Brooks 2008).

Figure 2: Normality Test for Residuals



Source: Eviews Normality test result

As shown in the histogram 1 above, kurtosis approaches to 3 (i.e., 2.726) and the Jarque-Bera statistics was not significant at 10% level of significance. Hence, the null hypothesis that the error term is normally distributed should not be rejected and it seems that the error term in all of the cases follows the normal distribution.

B. Homoscedasticity Assumption (variance of the errors is constant)

According to Brooks, (2008) it has been assumed thus far that the variance of the errors is constant, $\sigma 2$ – this is known as the assumption of homoscedasticity. If the errors do not have a constant variance, they are said to be heteroscedastic. To test for the presence of

heteroscedasticity, the popular white test was employed.

It is hypothesized that as follows

Ho: There is no heteroskedasticity problem (homoskedasticity)

Ha: There is heteroskedasticity

Table 5: Heteroskedasticity Test: White

Heteroskedasticity Test: White			
F-statistic	0.599194	Prob. F (35,4)	0.8208
Obs*R-squared	33.59277	Prob. Chi-Square (35)	0.5360
Scaled explained SS	38.08751	Prob. Chi-Square (35)	0.3307

Source: Eviews Heteroskedasticity test result

According to Brook, (2008) indicated that if the P-values of these test statistics are considerably in excess of 0.05, then the test give conclusion that there is no evidence for the presence of heteroskedasticity. It is clear evident that the errors are homoscedastic. Therefore, based on this statistic we fail to reject the null hypothesis that is indicated as there is no Heteroscedasticity for the models.

C. Test for Assumption of Autocorrelation

It is assumed that the error terms are uncorrelated with one another. If the errors are not uncorrelated with one another, it would be stated that they are auto correlated. This is an assumption that the errors are linearly independent of one another (uncorrelated with one another). The simplest test is due to Durbin and Watson (Brook, 2008).

Table 6: Autocorrelation test

Autocorrelation test	
Variables	Dw Test Statistics Result
All Specific variables	1.751936

Source: Eviews autocorrelation test result

To test this assumption, the DW stat value in the main regression table should be considered. The Durbin-Watson test statistic value in the regression result was 1.751936 identify the role of working capital management on profitability of Public Enterprises, 40 (8*5) observations were used in the model.

Therefore, to test for autocorrelation, the DW test critical values were used. Then relevant

critical lower and upper values for the test are dL= 1.421 and dU=1.751 respectively. The values of 4 - dU = 4-1.86=2.33; 4 - dL = 4-1.421=1.751.

The Durbin-Watson test statistic of 1.7519 is clearly between the upper limit (dU) which is 1.751 and the critical value of 4- dU i.e., 2.33 and thus, the null hypothesis of no autocorrelation is within the non- rejection region of the number line and thus there is no evidence for the presence of autocorrelation.

D. Multicollinearity Test

Multicollinearity means that there is linear relationship between explanatory variables which may cause the regression model biased (Gujarati, 2004). In any practical context, the correlation between explanatory variables is non-zero; although this will generally be relatively beginning the sense that a small degree association between explanatory variables will almost always occur but not will cause too much loss of precision.

The most important concern is that as the degree of multicollinearity increases, the regression model estimates of the coefficients become unsteady and the standard errors for the coefficients can get uncontrollably inflated (Chris, 2008). Hailer et al., (2006) argued that multicollinearity problem exists when the correlation coefficient among the independent variables in the study are greater than 0.8.

Table 7: Multicollinearity Test

Multicollinearity Test
Date: 05/21/21 Time: 06:52
Sample: 1 40
Included observations: 40

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
.*| . |	.*| . |	1	-0.080	-0.080	0.2739	0.601
. |*. |	. |*. |	2	0.099	0.093	0.7070	0.702
.*| . |	.*| . |	3	-0.116	-0.103	1.3177	0.725
.*| . |	.*| . |	4	-0.114	-0.141	1.9207	0.750
. | . |	. | . |	5	-0.056	-0.056	2.0711	0.839
.*| . |	.*| . |	6	-0.118	-0.120	2.7550	0.839
. | . |	. | . |	7	0.054	0.016	2.9024	0.894
. | . |	. | . |	8	-0.051	-0.057	3.0379	0.932
. | . |	.*| . |	9	-0.042	-0.107	3.1357	0.959
. | . |	.*| . |	10	-0.059	-0.097	3.3320	0.972

. | . |	. | . |	11	0.007	-0.018	3.3352	0.986
. | . |	.*| . |	12	-0.032	-0.071	3.3972	0.992
. | . |	. | . |	13	0.069	0.022	3.6960	0.994
. |*. |	. |*. |	14	0.184	0.168	5.8793	0.969
. | . |	. | . |	15	-0.034	-0.052	5.9574	0.980
. | . |	.*| . |	16	-0.045	-0.106	6.0986	0.987
. | . |	. | . |	17	-0.064	-0.027	6.3953	0.990
. | . |	. | . |	18	0.036	0.066	6.4969	0.994
.*| . |	. | . |	19	-0.074	-0.062	6.9314	0.995
.*| . |	.*| . |	20	-0.085	-0.126	7.5437	0.994

Source: Eviews multicollinearity test result

An implicit assumption that is made when using the panel OLS estimation method is that the explanatory variables (independent variable) are not correlated with one another. If there is no relationship between the explanatory variables (independent variable), they would be said to be orthogonal or uncorrelated to one another. If the explanatory variables were orthogonal to one another, adding or removing a variable from a regression equation would not cause the values of the coefficients on the other variables to change (Brook, 2008). According to Gujarati, (2004) multicollinearity could only be a problem if the pair-wise correlation coefficient among regresses is above 0.80 which is not more or less the case in the study variables. However, Hailer et al., (2006) argued that multicollinearity problem exists when the correlation coefficient among the independent variables in the study are greater than 0.9. but, the result from the above table shows that all lag are less than 0.80. Therefore, it can simply be said that there is no multicollinearity in the coefficients.

4.4 Regression Analysis Results

This section presents the empirical findings from the Eviews 10 statistical results on the role of working capital management on Public Enterprises performance in Ethiopia. The R^2 value indicates the explanatory power of the model to explain dependent variables. The P-value indicates that at significance of the independent variables.

Adjusted R-square lies between 0 and 1 and also put a rough guideline as rule of thumb which can be used to see the adjust R2 value how well our model fits the data. The interval put as a guide lines **are: < 0.1: poor fit, 0.11 to 0.30: modest fit, 0.31 to 0.50: moderate fit,>0.50: strong fit** (Daniel, 2004).The primary objective of data mining is to develop the best model after

several diagnostic tests so that the model finally chosen is a good model in the sense that all the estimated coefficients have the right signs, they are statistically significant on the basis of F tests, the R2 value is reasonably high and the Durbin–Watson (d) has acceptable value around 2 (Gujarati, 2004).

Table 8: Regression Result

Dependent Variable: ROA
Method: Least Squares
Date: 05/21/21 Time: 06:56
Sample: 1 40
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.046787	0.041823	-1.118685	0.2716
CCC	-0.000118	8.89E-05	-1.332162	0.1922
ARD	0.000631	0.000152	4.143578	0.0002
ICP	-0.000184	0.000151	-1.219616	0.2315
APD	0.000358	0.000136	2.622249	0.0133
CATAR	0.155781	0.035064	4.442779	0.0001
CLTAR	0.048310	0.037820	1.277357	0.2107
SIZE	1.02E-06	2.99E-07	3.420130	0.0017

R-squared	0.720010	Mean dependent var	0.148000
Adjusted R-squared	0.658763	S.D. dependent var	0.056759
S.E. of regression	0.033156	Akaike info criterion	-3.798340
Sum squared resid	0.035178	Schwarz criterion	-3.460564
Log likelihood	83.96679	Hannan-Quinn criter.	-3.676210
F-statistic	11.75570	Durbin-Watson stat	1.751936
Prob(F-statistic)	0.000000		

Source: from Eviews Regression result

From the above table 7, the OLS regression model result indicated that the coefficient of determination of R-squared and Adjusted R-square were 72% and 65.8 % respectively. The

result indicated that 72% of the Change in return on asset of Public Enterprises in Ethiopia are successfully explained by the selected firm's specific independent variables (ARD: accounts receivable days; APD: accounts payable days; ICP: inventory Conversion Period; CCC: Cash Conversion Cycle; CATAR: current asset to total asset ratio; CLTAR: current liability to total asset ratio and firms' size).

Whereas the remaining 27% changes in return on asset used to measure profitability of such firms are caused by other variables which were not included in the model. This result indicated that the variables include in the model were strong to explain the dependent variables. The F-test which used measure the model specification indicated that the model is fit with F- value 11.75 at significance p-value 0.00. In addition, the observed DW test result revealed 1.72 which is approximately 2.00. Therefore, there is no auto correlation in regression result.

In the regression outputs the beta coefficient may be negative or positive; beta indicates that each variable's level of influence on the dependent variable. P-value indicates at what percentage or precession level of each variable is significant. The positive beta coefficient means that variable has a positive impact on your dependent variable, and a negative one has a negative impact. It expresses us on middling when independent variable increase by 1 percent the dependent increase by beta amount but the independent variables should a statistically significant impact on the dependent variable.

4.5 Discussion

After we diagnosed the statistical analysis, the topic following this analysis is the empirical data interpreted and discussed by comparing the finding with the theory and evidence from previous empirical studies. The regression model result above table 7 revealed that there no significant relationship between cash conversion cycle and Public Enterprise's performance measured by CCC's P-value>0.05 beta is negative. The implication is that the increase or decrease in cash conversion cycle will insignificantly and negatively affect profitability of the firms. The result is consistent with previous studies like Carle et al., 2015 and Hassan S. 2017.

The regression model result above table 7 revealed that, inventory conversion period and return on asset has no significant relationship at p-value above 10% value. This result is consistent with the previous studies (Hassan et al., 2014) which found negative relationship between inventory conversion period and profitability. This finding is consistent with view, that holding high

inventories will no influence on Public Enterprise's performance because the funds which are tied up in inventories cannot generate interest earnings.

In line with the initial hypothesis, the results of this regression indicate that the coefficient of Account receivable days (ARD) is Positive and p-value of 0.0002 attached to the test statistic shows significance at 5% level. It implies that the increase or decrease in the number of days taken by firms to collect cash will significantly positively affect profitability of the firm. This positive relationship implies the number of days to collect cash from credit customers becomes relatively; it will increase 0.63% profitability of the firms.

The reason may because, the degree of freedom they give to their customer to pay their brings and the profitability to the companies. The more they give credit to their client the more they are profitable. The result is consistent with some scholars like Baveld (2012), Sharma and Kumar (2011) who also found positive relation between ROA and Account receivable period even though it contradicts with the results on the impact on receivables on firm's profitability in many developed countries.

Regression result was indicating there is a positive significant relationship between accounts payable period and profitability which is (β=0.0003) explained by the increased availability of funds not caused by the delayed payment of accounts payable. The Regression result shows that there is significant relationship between accounts payable period and profitability can be used for productive purposes that can 0.3% increase profitability.

On the other hand, positive significant relationship between accounts payable period and profitability can be explained by the benefits of early payment discounts. But this positive result is consistent with some previous findings of Tufail, 2008; Kaddumi, 2012) which is a significant relationship between accounts payable period and profitability of firms.

The regression output shows that the influence of Current Assets to Total Assets Ratio on Profitability of Public Enterprises in Ethiopia which the β-coefficient of current assets to total assets ratio (CATAR) is (β= 0.155) positive and significant at 10 percent level. But this positive result is consistent with some previous findings of Tufail, 2008; Kaddumi, 2012; Afza and Nazir 2007. The positive coefficients of current assets to total assets ratio indicates a negative effect of the degree of aggressiveness of working capital investment policy on firms' profitability. It

means that as current assets to total assets ratio increases, degree of aggressiveness decreases, and hence firms' profitability increases. Accordingly, aggressiveness in working capital investment policy affects the profitability of Public Enterprises negatively.

The above measurements of working capital management policy, namely accounts receivable period, inventory holding period, accounts payable period and cash conversion cycle, indicate how efficient are firms in managing their collection, inventory and payment policies. Investment in working capital assets, however, is broader than managing collection, inventory and payment policies. It also includes management of cash and other short-term assets.

For this reason, we need to have this comprehensive measurement of working capital investment policy. In finance literature, there is a long argument on the determinants and the risk/return tradeoff between the different working capital policies. More aggressive working capital policies are associated with higher return and higher risk while conservative working capital policies are concerned with the lower risk and return.

The result acceptable by Padachi (2006), most of firms included in the study may not yet fully use their fixed production capacities. This means that if they want to increase their profitability, they have to increase their investment in current assets until they reach the cost indifference point. Keeping fixed assets constant (even decreasing through depreciation) and investing more on current assets will then result in increased current assets to total assets ratio. So, it may not be surprising to see positive relationship between current assets to total assets ratio and profitability.

The influence of Current Liabilities to Total Assets Ratio on Profitability Public Enterprises in Ethiopia which the β-coefficient of current liability to total assets ratio (CLTAR) is positive 0.048310 and not significant at 22 percent level this result is in line with the research hypothesis and it is consistent with some previous findings of Kaddumi (2012). To this point, the regression analyses were related to Current Liabilities to Total Assets Ratio on firms' profitability, it is also equally important to see the effect of working capital financing policy. Working capital financing policy is measured by the relative aggressiveness/conservativeness in using current liabilities to finance working capital assets. In measuring the effect of working capital financing policy current liabilities to total assets ratio is used.

The positive coefficients in this study point out the positive effect of aggressive working capital financing policy on firms' profitability. The implication is that the increase or decrease in current liabilities to total assets ratio will significantly and positively affect profitability of the firms. The higher the amount of current liabilities the firm uses to finance its working capital assets, the more profitable the firm will be. This implies that there is strong positive relationship between aggressiveness in working capital financing and firms' profitability.

Finally, regression model result indicated that relationship between the size of firm and profitability measured by return on asset is negative significant at p-value 5%. The significant regression result of firm size indicated that it does have positive increase on the profitability of Public Enterprises of Ethiopia. Therefore, on the hypothesis that stated there is a significant positive relationship between firms' size and profitability did support by the regression output. This result is consistent with the previous studies (Manoori & Muhammed, 2012 and Woubeshet, 2014).

In these approaches Public Enterprises of Ethiopian size which appear on the balance sheet for short period will be financed by the short-term borrowings and long-term debts are used to finance fixed assets and permanent current asset. Thus, the follower of this approach finds the moderate level of working capital with moderate risk and return.

Table 9: Summary of expected and actual results of independent variables from the study

Independent variables	Expected result on dependent variable	Actual result on dependent variable
CCC	Negative and significant	Negative and insignificant
ARD	Negative and significant	Positive and significant
ICP	Positive and significant	Negative and insignificant
APD	Positive and significant	Positive and significant
CATAR	Positive and significant	Positive and significant
CLTAR	Positive and significant	Positive and insignificant
FSZ	Positive and significant	Positive and significant

Source: Author's driven summary

CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

The fundamental purpose of this chapter is for concluding the major findings of the analysis, setting recommendation, and put suggestion for future research about the topic.

5.1 Conclusions

From Descriptive Statistics indicating the determinates of working capital and Public Enterprises of Ethiopian profitability which is the mean value of firms Profit is 14.8% of total assets, and it deviates 5.67%, other the cash conversion cycle used as a proxy to check the efficiency in managing working capital is on average 193.6 days and standard deviation is 118.6 days in the minimum time taken by a company to convert its overall activity is 35.18158 days and the maximum time taken by the firm for this purpose is 458.1 days. The regression results stipulated that there is positive but insignificant effect between CCC and ROA. This concludes an increase in cycle of cash conversion has less effect on profitability of the companies.

Similarly, the descriptive result points out firms spent an average 128.7 days to convert their inventory to cost of production the time taken to collect their receivables an average 60.5 days. In other hand, the Accounts receivable period, a measurement for collection policy, is averaged to 109 days for the sampled firms. The accounts payable period as a proxy for payment policy is 121.6 days with the which is varying by 51.6 days. The result from the study implies that the higher account payable day is the higher the profitable the companies are.

The Current Assets to Total Assets Ratio measurements of working capital assets management policy found in average 54.6%, other short-term assets which is15% in the maximum value of 94.7% which the ratio is find out the investment policy of working capital adopted by the firms under consideration. So, in this study as well an inverse relation is expected between profitability and current assets to total assets ratio is 54.6% which is lesser. From the findings it can be concluded that a percent increase in CATAR will increase the ROA by 15.6% at p-value of 0.0001.

Similarly, Current Liabilities to Total Assets Ratio included in the study to found the average 45.3% working capital financing policy in maximum up to 93.7 and minimum of 13.7% found varying in 23% which shows Public Enterprises in Ethiopia financing policy a greater portion of

current liabilities is used than long-term debts. In last result, regarding to the average firm size of firms is 18.2 unit measured by natural logarithms of its total asset.

The regression model result revealed that there no significant relationship between cash conversion cycle and Public Enterprise's profitability measured by return on asset which P<0.00. other regressions result indicates that the coefficient of Account receivable days (ARD) is positive and p-value of 0.0133 attached to the test statistic shows significance at 1% level. It implies that the increase in the number of days taken by firms to collect cash will significantly positively touch the profitability of the firm.

Moreover, Regression result was indicating there is a positive significant relationship between accounts payable period and profitability which is (β=0.0003) explained by the increased availability of funds not caused by the delayed payment of accounts payable. Following to this the regression output shows that the influence of Current Assets to Total Assets Ratio on Profitability of Public Enterprises in Ethiopia which the β-coefficient of current assets to total assets ratio is (β= 0.155) positive and significant at 10 percent level.

Finally, regression model result indicated that relationship between the size of firm and profitability measured by return on asset is negative significant at p-value 5%. The significant regression result of firm size indicated that it does have 1.02-6milion ETB increase the profitability of Public Enterprises of Ethiopia.

Whereas, regressions result inversely indicating the Current Liabilities to Total Assets Ratio on Profitability Public Enterprises in Ethiopia which the β-coefficient of current liability to total assets ratio (CLTAR) is positive 0.048310 is not significant at 22% level this result is in line with inventory conversion period on return on asset also found no significant relationship at p-value above 10% value. Finally, the regression model result revealed that, there no significant relationship between cash conversion cycle and Public Enterprises' profitability measured by return on asset (CATAR) which P<0.0001 which mean that there is caused by the positive, but not relation of inventories holding period with firm's profitability of the Public Enterprises in Ethiopia.

Generally, Improper management and allocation of working capital renders the management inefficiency and reduces the benefits of the companies. The company may miss profitability or suffer short-term liquidity crisis, in case of low working capital and or suffer from overall

inefficiency in case of excess working capital. Thus, proper management of working capital leads to have optimum level of assets and liabilities. The result under this study implies that the companies needs to have higher account receivable days, account payable days, current Asset to total asset and firm's size to be more profitable.

5.2 Recommendations

Based on the problems identified by this study, the following recommendations can be forwarded to managers and top-level management body of the Public Enterprises in Ethiopia.

- The study observed that, firms which are better at Account receivable days are found to be able to make counter cyclical moves to build competitive advantage. They are also better at generating fund internally and face lesser trouble while seeking external sources of financing.
- Contends that the goal of working capital management is to replenish stocking points in such a way need to minimize the total of all associated cost, and there by enhance profitability of the Public Enterprises of Ethiopia.
- There is need for maintaining high inventory levels can reduce the cost of possible interruption occurred during the production process or the cost of business loss due to the product scarcity. It can also reduce supply cost and protect against price fluctuation.
- The study output shows that the influence of Current Assets to Total Assets Ratio on Profitability of Public Enterprises in Ethiopia which the current assets to total assets ratio is positive and significant. But, granting trade credit to customers favors the firm's scales in various ways. Trade credit can incentivize customers to acquire merchandise at times of low demand. And helps firm to strengthen long term relationship with their customers.

Generally, the firms should keep their cash conversion cycle and inventory conversion period at minimal and keep their account receivable days payable period at optimal level. Current asset to total asset, current liability to total asset and firms' size is also to be retained relatively at higher level to maintain better performance.

5.3 Further Suggestion

It can be generalized that there are limited resource or studies done on the working capital management. This gives the opportunity for future researchers to engage themselves into studying the matter and finding more relevant solutions to the table.

Furthermore, the future researchers can use different factors into consideration like more than one dependent variables, in this situation adding Return on Equity, return on Investment, etc, since they explain the performance in more detail way.

Additionally, it can also be more studied into different sectors besides the public enterprises. Primary data collection could also be added as source of data or the data period can be extended based on the requirement of the study to be done.

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