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COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

THE EFFECT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY OF ALCOHOL AND LIQUOR MANUFACTURING FIRMS IN ETHIOPIA: WITH REFERENCE TO NATIONAL ALCOHOL AND LIQUOR FACTORY

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A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY COLLEGE OF BUSINES AND ECONOMICS THE DEPARTMENT OF ACCOUNTING AND FINANCE IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR MASTERS OF BUSINESS ADMINISTRATION IN FINANCE

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ABSTRACT

The ultimate objective of any firm is to maximize wealth. However, the preservation of the liquidity of a firm is an important objective too and it is the efficient management of the various components of working capital that helps to preserve liquidity. However, problem lies in the efficient management of these various components that makes up the working capital by managers. The objective of the current study is to investigate the effect of working capital management on the profitability of alcohol and liquor firms with reference to National alcohol and liquor factory. The study was limited to the effect of working capital management on the profitability of alcohol firms in Ethiopia with reference to National alcohol and liquor factory and also limited to cash conversion cycle, average collection period, inventory conversion period, and average payment period as measures for working capital management determinant, and firm size, current ratio, and leverage as control variables that affect profitability of firms. The study covered the period of ten (10) years (i.e. from 2011-2020). The study adopts explanatory research design with quantitative research approach. The target population of this study was liquor factories operating in Ethiopia and this study used convenience sampling method and selected National alcohol and liquor factory for its convenience for availability of audited annual financial reports for the study periods. This study employed the use of secondary source of data. The secondary data was derived from audited financial statements of National alcohol and liquor factory. The data collected using the data collection instrument was presented using tables and analysed using percentages, means, and standard deviation in line with the objectives of the study. The data was cleaned, coded, and entered in to Microsoft excel 2010 and Eviews 8 for analysis. The study used descriptive statistics, correlation and multiple regression analysis to establish the relationship between the independent variables of working capital components and the profitability of firms. The regression results investigated a negative significant relationship between average collection period and inventory conversion period and profitability of national alcohol and liquor factory. Also, the regression results examined constant effect of cash conversion cycle on profitability of national alcohol and liquor factory. Additionally, the study revealed that there is a positive significant relationship between firm size and current ratio and profitability but firm leverage has a negative significant relationship with profitability of national alcohol and liquor factory. The study also revealed significant positive relationship between average payment period and profitability of national alcohol and liquor factory which indicates that delaying paying creditor's increases profitability. The study concludes that a relax debt collection policy reduced profitability of national alcohol and liquor factory. Further, the study examined that firm size and current ratio have a significant positive relationship with profitability but firm leverage is found to have insignificant negative relationship with profitability. This indicates that firm size and current ratio enhances profitability while firm leverage inversely affects profitability. Hence, the study concludes that firm size and current ratio enhances while firm leverage negatively affects the profitability of national alcohol and liquor factory. Based on the result the study recommends that national alcohol and liquor factory managers should speed up the collection of receivables so that they can maximize profits. In addition, the study recommends that the factory should avoid holding excessive stocks since this would reduce profitability.

Key words: *Cash conversion cycle, Average collection period, Inventory conversion period, Average payment period, Firm size, current ratio, leverage, profitability of firms.*

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ABBREVIATION /ACRONYMS

ACP = Average collection period

APP = Average payment period

CCC = Cash Conversion Cycle

CR = Current Ratio

EBIT = Earnings Before Interest and Tax

EOQ = Economic Ordering quantity

FL = Firm Leverage

FS = Firm Size

ICP = Inventory Conversion Period

N = Number of Years

NTC =Net Trade Cycle

OLS = Ordinary Least Square

ROA = return on asset

ROI = Return On Investment

S.E = standard Error

SD = Standard Deviation

TA = Total Asset

WC = Working Capital

WCM = Working Capital Management

WCP = Working Capital Policy

CHAPTER ONE
INTRODUCTION

1.1. Background of the study

Working capital management is a financial management strategy focusing on maintaining efficient levels of a firm's current assets and current liabilities. It deals with the administration of a firm's current assets and current liabilities (Harris, 2005). Working capital management ensures that a company has sufficient cash flow in order to meet its short-term debt obligations and operating expenses (Mekonnen, 2011). Working capital management is a very important component of corporate finance because it directly affects the liquidity and profitability of a company (Knauer & Wöhrmann, 2013).

Working capital management is important for many reasons. Usually, the current assets of a typical manufacturing firm accounts for over half of its total assets. Thus working capital represents a significant investment in the manufacturing firms. Excessive levels of current assets can easily result in a firm's realizing a substandard return on investment. However, too few current assets may occasion difficulties in maintaining smooth firm operations (Lu, 2013).

Management of working capital, which aims at maintaining an optimal balance between each of the working capital components, that is, cash, receivables, inventory and payables, is a fundamental part of the overall corporate strategy to create value and is an important source of competitive advantage in businesses (Deloof, 2003). In practice, it has become one of the most important issues in organizations with many financial executives struggling to identify the basic working capital drivers and the appropriate level of working capital to hold so as to minimize risk, effectively prepare for uncertainty and improve the overall performance of their businesses (Gill, Biger & Mathur, 2010). The crucial part in managing working capital is maintaining sufficient liquidity for the day-to-day business operation to ensure the firm's smooth running and meeting its obligations (Ganesan, 2007). A well calculated and employed working capital management is anticipated to add positively to the firm's performance (Padachi, 2006). Holding of excess amounts of working capital can cause a decline in the profitability of a business (Lu, 2013).

Working capital management involves managing the firm's inventory, receivables and payables in order to achieve a balance between risk and returns and thereby contribute positively to the creation of firm value. Excessive investment in inventory and receivables reduces firm profits, whereas too little investment increases the risk of not being able to meet commitments as and when they become due. Therefore, the importance of maintaining an appropriate level of working capital and its contribution to business survival is a concept that should be understood by every company (Harris, 2005). Similar view was expressed by Mekonnen (2011) who noted that efficient working capital management involves planning and controlling current assets and current liabilities in a manner that eliminates the risk of inability to meet due short term obligations on the one hand and avoiding excessive investment in these assets on the other hand.

1.2. Statement of research problem

Effective working capital management focuses on an optimal level of working capital for maximizing shareholders value. According to Abdul et al., (2014) the effect of working capital management on profitability is highly important because firms required a balance between risk and efficiency to achieve an optimal level of working capital. When there is a surplus working capital, it may lead to unnecessary purchasing and accumulation of inventories causing more chances of theft, waste and losses. On the other hand for inadequate working capital, the firm cannot pay day to-day expenses of its operations and it creates inefficiencies, increases costs and reduces the profits of the business.

Working capital management efficiency directly affects the profitability and liquidity of firms (Abdul et al., 2014). Therefore, efficient management of working capital is a fundamental part of the overall corporate strategy to create shareholder value. In general, companies try to keep an optimal level of working capital that maximizes their value. Some firms try to increase their profits at the cost of liquidity which can bring serious problems to the firm. Therefore, there must be a balance between these two objectives of the firms. If we do not care about profit, we cannot survive for a longer period. On the other hand, if we do not care about liquidity, we may face the problem of insolvency or bankruptcy.

There is no doubt that the ultimate objective of any firm is to maximize wealth. However, the preservation of the liquidity of a firm is an important objective too and it is the efficient management of the various components of working capital that helps to preserve liquidity. However, problem lies in the efficient management of these various components that makes up the working capital by managers. This problem arise as a result of the fact that most managers fight to increase inventory turnover in a bid to increase profitability without been mindful of the need to speed up the debtor collection period and to delay creditor payment period as far as possible, so as to provide the funds needed to keep the cycle flowing. This puts the firms in poor liquidity position and it consequently affects the profitability of such firms (Raheman, A. and Nasr, M, 2007).

There are plenty of studies conducted in the area of working capital management and profitability of firms both inside and outside Ethiopia. However, as stated in the literature, these studies, specially, studies conducted in Ethiopia did not consider alcohol manufacturing firms. This is, therefore, the objective of this study to investigate the effect of working capital management on the profitability of alcohol and liquor manufacturing firms in Ethiopia with reference to National alcohol and liquor factory.

1.3. Objectives of the study

1.3.1. General objective of the study

The general objective of the current study is to investigate the effect of working capital management on the profitability of firms with reference to National alcohol and liquor factory.

1.3.2. Specific objectives

More specifically, the study has the following objectives;

- To investigate the effect of average collection period on the profitability of firms with reference to National alcohol and liquor factory.
- To assess the effect of inventory conversion period on the profitability of firms with reference to National alcohol and liquor factory.
- To examine the effect of cash conversion cycle on the profitability of firms with reference to National alcohol and liquor factory.

- To analyse the effect of average payment period on the profitability of firms with reference to National alcohol and liquor factory
- To investigate the effect of firm size on the profitability of firms with reference to National alcohol and liquor factory
- To examine the effect of firm leverage on the profitability of firms with reference to National alcohol and liquor factory
- To analyse the effect of current ratio on the profitability of firms with reference to National alcohol and liquor factory

1.4. Research Hypotheses

Hypotheses of the study stands on the theories related to the effect of working capital on firms' profitability and past empirical studies. The present study aimed to test the following alternative hypotheses with respect to the objectives of the study.

Average Collection Period

The result of a study by Raheman and Nasr (2007) showed that profitability has significant negative relation with accounts receivable as a measure of liquidity. Furthermore, there is a negative relationship between average collection period and profitability found by Alipour (2011). Hypothesis 1 was developed based on these studies and formulated as follows;

H1: Firms profitability is significantly and negatively affected by Average Collection Period in case of National alcohol and liquor factory.

Average Payment Period

The study of Deloof (2003) shows a negative relation between average number of day's accounts payable and profitability which indicates that profitability has an effect on accounts payable policy as a company with less profit takes longer payment period. Hypothesis 2 was developed based on this study and formulated as follows;

H2: Firms profitability is significantly and negatively affected by Average Payment Period in case of National alcohol and liquor factory.

Inventory Conversion Period

Deloof (2003) found a significant negative relation between gross operating income and number of day's inventories. This explains that an increase of the inventories is an affect from

a decrease in sales which leads to lower profit for the companies. Demirgüneş (2008) findings of the study show that inventory period affect firm profitability negatively. Hypothesis 3 was developed based on these studies and formulated as follows;

H3: Firms profitability is significantly and negatively affected by Inventory Conversion Period in case of National alcohol and liquor factory.

Cash Conversion Cycle

Izadi Niya and Taaki (2010) selected a sample composed of the big and small Iranian firms to find empirical evidences about the impact of working capital management on the profitability. The regression results indicated that the cash conversion cycle and return on asset are significantly and inversely related. Eljelly (2004) also reports significant negative relationship between the liquidity level and profitability in companies with long cash conversion. Hypothesis 4 was developed based on these studies and formulated as follows;

H4: Firms profitability is significantly and negatively affected by Cash Conversion Cycle in case of National alcohol and liquor factory.

A study conducted by Raheman and Nasr (2007) current ratio is a traditional measure of checking liquidity of the firm. The finding in this study shows that the current ratio has a significant negative relationship with profitability. It indicates that the two objectives of liquidity and profitability have inverse relationships.

Another finding in this study also shows that there is positive significant association that exists between profitability and firm size. It shows that as size of the firm increases, it will increase its profitability.

The study used the Debt ratio as a proxy for leverage; it shows a significant negative relationship with the dependent variable (profitability of firms), which means that, when leverage of the firm increases, it will adversely affect its profitability. Based on these findings, the researcher formulated the following hypotheses for control variables and presented as follows;

H5: Firms profitability is significantly and positively affected by its size in case of National alcohol and liquor factory.

H6: Firms profitability is significantly and negatively affected by its current ratio in case of National alcohol and liquor factory.

H7: Firms profitability is significantly and negatively affected by its leverage in case of National alcohol and liquor factory.

1.5. Significance of the study

The study has immense significance to corporate managers, researchers and students. First, managers of companies, especially of liquor or alcoholic beverage companies will have insight on how best to optimize balance between liquidity and profitability in their companies. Secondly, researchers and students who are interested in the working capital management of companies and the impact on performance will find this work of immense benefits. It will therefore, contribute to existing literature in the area of corporate finance.

1.6. Scope of the study

The study was limited to the effect of working capital management on the profitability of manufacturing firms in Ethiopia with reference to National alcohol and liquor factory. The study is also limited to cash conversion cycle, average collection period, inventory conversion period, and average payment period as measures for working capital management determinant, and firm size, current ratio, and leverage as control variables that affect profitability of firms. The study covered the period of ten (10) years (i.e. from 2011-2020). The choice of this period is to be able to use recent data to confirm results of prior studies.

1.7. Organization of the Study

This research report was organized in to five chapters that are chapter one is made from: the background of the study, problem statement, objectives of the study, a research hypothesis, scope and significance of the study. In chapter two various theories and empirical studies are overviewed and the studies are summarized. Third chapter is the methodology part and includes the research design, nature of data used, and sampling design. Under chapter four the result the study was presented and analyzed. Finally, in chapter five findings were summarized, conclusion made based on the findings and recommendations was given.

CHAPTER TWO

LITERATURE REVIEW

2.1. Theoretical Review

2.1.1. Definition and Concept of Working Capital

The term working capital is that portion of total funding needed for day to day operation of an entity (Nwude, 2004). Adarquah and Korankye (2013) saw it as basically short-term resources available to a company for financing its day-to-day activities. Ani, Okwo and Ugwunta (2013) the view that working capital is the stock stored that has a conversion or resale value in order to gain profit.

Working capital is needed every day until the on-going project is completed. Rahman (2011) as cited in Ariful Hoque (2015) stated that working capital is needed in every step of the process but it changes after certain steps. It is a circulating capital which flows and changes forms as the firm pursues its goal and performs its operations (Nwude, 2004). Also according to Nwude, (2004) it is a financial lubricant or life stream for firm and maintain constant process of circulation throughout the firm. A narrow definition for the working capital is inventory plus account receivable minus account payable. Working capital meets the short term financial requirement of a business enterprise.

The major concepts of working capital are the gross working capital and the net working capital. Gross working capital is the totality of firms' investment in current assets such as inventory, accounts receivable, short term marketable securities and cash. Net working capital is the totality of firms' investment in current assets less the totality of the firms' current liabilities. Current liabilities includes items such as accounts payable, notes payable, accruals, customers deposit (i.e. prepayment) deferred taxes and short- term deposit obligation (Ariful Hoque (2015).

2.1.2. Overview of Working Capital (WC)

There are two kinds of working capital that is gross capital and net capital. Gross investment mentions to investing in all current assets. Pure work Capital is more than the sum of current assets in the total current debt. Need for working capital of the company it depends largely on the company's operating cycle. The operating cycle is the start time of Preparing goods or raw

materials and ending sales. Working capital management includes the steps and strategies needed to organize work Capital. It might be prominent that the profit of the company is depending on the decision of the investment of the company (Hassan Subhi, 2018).

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

2.1.3. Rationale for Working Capital

Every business needs adequate working capital in order to maintain day to day cash flow. It needs enough cash to pay wages & salaries as they all due and to pay creditors if it is to keep its workforce and ensure its supplies. Maintaining adequate working capital is not just important in the short-term because sufficient liquidity must be maintained in order to ensure the survival of the business in the long-term as well. Working capital as the life blood of every business concern for this reason, no business can be run successfully without adequate amount of working capital.

The advantages of maintaining adequate working capital are as follows;

a) **Continuous production:** Adequate working capitals ensure regular supply of raw materials and continuous production.
b) **Solvency and Goodwill:** adequate working capital enables prompt payment to creditors. This help in creating and maintaining goodwill.
c) **Easy loans:** a concern having sufficient working capital enjoys high liquidity and good credit standing. Hence it can secure loan from bank and other easy and favorable terms.

d) **Cash Discount:** adequate working capital enables a concern to avail cash discount on the purchases, leading to a reduction in cost.

e) **Regular payment of Expenses:** a company which has ample working capital can make regular payment of salaries, wages and other day to day commitment. Such prompt payment raises the morale of the employees and increases their efficiency. As a result costs are minimized and profit increases.

f) **Exploitation of the Market Conditions:** a concern with adequate working capital can exploit favourable market conditions. It can buy its requirements of raw materials in bulk when the market price is lower. Similarly, it can hold stock of finished goods to realize better prices.

g) Adequate working capitals enable a concern to face business crisis such as depression because during that period there is much pressure on working capital.

h) **High Return on Investment:** adequate of working capital facilitates continuous production and effective utilization of fixed assts. According to the adequate working capital is able to generate more profits and ensure higher return on investment.

2.1.4. Rationale for Working Capital Management(WCM)

Working capital management is a very important component of corporate finance because it directly affects the liquidity and profitability of the company (Raheman and Nasr, 2007). It can be expected that the way in which working capital is managed will have a significant impact on the profitability of the firm (Deloof, 2003). Working capital management is important due to many reasons;

a) Every organization needs proper management of working capital in order to avoid the problem of illiquidity. Poor management of working capital results to liquidity problems which might lead to bankruptcy in severe cases (Nwude, 2004).

b) Proper working capital management helps to improve sale and consequently the profit of the company.

c) Working capital management increases cash flow speed, decreasing irrecoverable receivables and decreasing the costs to create opportunities to maximize the wealth of the shareholders.

d) Effective working capital management consists of applying the methods which remove the risk and lack of ability in paying short term commitments in one side and prevents over investment in these assets the other side by planning and controlling current assets and liabilities (Amarjit Gill, 2010).
e) For one thing, 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 (Raheman and Nasr, 2007).

2.1.5. Working Capital Policy

Working capital policy can be best described as a strategy which provides the guideline to manage the current assets and current liabilities in such a way that it reduces the risk of default (Afza & Nazir, 2007). Working capital policy is mainly focusing on the liquidity of current assets to meet current liabilities. Liquidity is very important because, if the level of liquidity is too high then a company has lot of idle resources and it has to bear the cost of these idle resources. However, if liquidity is too low then it will face lack of resources to meet its current financial liabilities (Arnold, 2008). Current assets are key component of working capital and the WCP also depends on the level of current assets against the level of current liabilities (Afza & Nazir, 2007). On this base the literature of finance classifies working capital policy into three categories as defensive or hedging, aggressive and conservative working capital policy and discussed as follows:

Defensive Policy: Company follows defensive policy by using long term debt and equity to finance its fixed assets and major portion of current assets. Under this approach, the business concern can adopt a financial plan which matches the expected life of assets with the expected life of the sources of funds raised to finance assets (Paramasivan and Subramanian 2009). Inventory expected to be sold in 30 days could be financed with a 30- day bank loan; a machine expected to last for 5 years could be financed with a 5-year loan; a 20-year building could be financed with a 20 year mortgage bond; and so forth (Weston and Brigham, 1977, P. 716).

Defensive policy reduces the risk by reducing the current liabilities but it also affects profitability because long term debt offers high interest rate which will increase the cost of

financing (Arnold, 2008). This means a company is not willing to take risk and feel it appropriate to keep cash or near cash balances, higher inventories and generous credit terms. Mostly companies that are operating in an uncertain environment prefer to adopt such a policy because they are not sure about the future prices, demand and short term interest rate. In such situation it is better to have a high level of current assets. Which means, keeping higher level of inventory in the stock, to meet sudden rise in demand and to avoid the risk of stoppage in production.

This approach gives a longer cash conversion cycle for the company. It also provides the shield against the financial distress created by the lack of funds to meet the short term liability but as the researcher discussed earlier long term debt have high interest rate which will increase the cost of financing. Similarly, funds tied up in a business because of generous credit policy of company and it also have opportunity costs. Hence, this policy might reduce the profitability and the cost of following this policy might exceed the benefits of the policy (Arnold, 2008).

Aggressive Policy: Companies can follow aggressive policy by financing its current assets with short term debt because it gives low interest rate. However, the risk associated with short term debt is higher than the long term debt. Paramasivan and Subramanian (2009) pinpointed that in aggressive policy the entire estimated requirement of current assets should be financed from short-term sources and even a part of fixed assets financing be financed from short- term sources. This approach makes the finance mix more risky, less costly and more profitable. Furthermore, few finance managers take even more risk by financing long term asset with short term debts and this approach push the working capital on the negative side.

Managers try to enhance the profitability by paying lesser interest rate but this approach can be proved very risky if the short term interest rate fluctuates or the cash inflow is not enough to fulfil the current liabilities (Weston and Brigham, 1977). Therefore, such a policy is adopted by the company which is operating in a stable economy and is quite certain about future cash flows. A company with aggressive working capital policy offers short credit period to customers, holds minimal inventory and has a small amount of cash in hand. This policy increases the risk of default because a company might face a lack of resources to meet

the short term liabilities but it also gives a high return as the high return is associated with high risk (Arnold, 2008).

Conservative Policy: Some companies want neither to be aggressive by reducing the level of current assets as compared to current liabilities nor to be defensive by increasing the level of current assets as compared to current liabilities. So, in order to balance the risk and return these firms are following the conservative approach. It is also a mixture of defensive WCP and aggressive WCP. In these approach temporary current assets, assets 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 assets (Weston and Brigham, 1977). Thus, the follower of this approach finds the moderate level of working capital with moderate risk and return. It is called as "low profit low risk" concept (Paramasivan and Subramanian, 2009). Moreover, this policy not only reduces the risk of default but it also reduces the opportunity cost of additional investment in the current assets.

On the other hand apart from the above points the level of working capital also depends on the level of sale, because, sales are the source of revenue for every companies. Sales can influence working capital in three possible ways (Arnold, 2008).

- As sales increase working capital will also increase with the same proportion so, the length of cash conversion cycle remains the same.
- As the sales increase working capital increase in a slower rate.
- As the sales increase the level of working capital rises in misappropriate manner i.e. the working capital might raise in a rate more than the rate of increased in the sale.

Company with stable sale or growing sale can adopt the aggressive policy because it has a confidence on its future cash inflows and is confident to pay its short term liabilities at maturity. On the other hand a company with unstable sale or with fluctuation in the sale can't think of adopting the aggressive policy because it is not sure about its future cash inflows. In such a situation adoption of aggressive policy is similar to committing a suicide. Hence, searching other method might be the best choice.

2.1.6. Working Capital Theories

Working capital management could be measured either by the operating cycle, cash conversion cycle or the net-trade cycle. The most popular is the cash conversion cycle and it best indicates how efficient a firm is in managing its working capital.

Operating Cycle Theory

The operating cycle is the average period of time required for a business to make an initial outlay of cash to produce goods, sell the goods, and collecting the money from the same operating activity. It is the period between the start of production process to the time cash is collected from debtors in a typical business (Gitman, 2009).

The total time taken to hold the inventory and collection of cash from customers is the operating cycle of the firm. Most firms try to keep their operating cycles at a year or less. The cumulative days per turnover for accounts receivable and inventory investments approximates the length of a firm's operating cycle.

The operating cycle continues as long as the firm remains in operation. Thus for effective management of working capital a firm must incorporate both inventory holding period and accounts receivables measures into its operating cycle. Pricing of raw materials and stock valuation is also a critical area in inventory management.

Receivables Management: The main objective is to reduce the period between the day of sale and the day cash from the goods sold was received from customers. Average collection period is that time expected to receive cash from customers. It's when a firm's average receivables investment is converted to cash. The unpaid credit that is a firm has extended to pay its customers. This might include trade credit which in turn leads to increase in sales but the firm must be cautious when deciding the time allocated for payment of purchases (Prasana, 2000). Extending a credit period has opposite effect as it is likely to reduce sales. Management of receivables is crucial as it might prevent the firm from incurring large losses from bad debts.

Inventory Management: Inventory consists of finished goods, supplies, work in progress and raw materials. Raw materials are inputs in making the final product whereas work in

progress refers to goods in stages of production. Finished goods are final products ready for sale. Having too much or too less stock incurs costs.

Proper management of inventory ensures a stable working capital, which ultimately increase profitability. It is critical for business to maintain an adequate and sufficient level of inventories (Amarjit Gill, 2010). Thus the firm must take two factors into consideration

a) Size of the inventory-determines the holding costs (costs associated with storing inventory or assets that remain unsold)
b) The level an order is placed as this determines the ordering costs (expenses incurred to create and process an order to a supplier).

A classical production scheduling model called the Economic Ordering Quantity (EOQ) is used to determine that optimum order quantity that minimizes both the holding and ordering costs.

Transaction Cost Economic Theory

Transaction cost theory is used to explain a number of different behaviours. Often this involves considering as transactions not only the obvious cases of buying and selling but also day to day emotional interactions and informal gift exchanges (Williamson, 1975). The transaction cost theory suggests that there are certain costs that people normally incur without knowing that they are a cost to them. These costs must be incurred whenever a transaction takes place. These costs are known as transaction costs. The idea that transactions form the basis of an economic thinking was introduced by John R. Common in 1931 (Williamson, 1975).

Transaction cost theory focuses on transactions and costs that attend completing transactions by one institutional mode rather than another (Williamson, 1975). The theory's central claim is that the transactions will be handled in such a way as to minimize the costs involved in carrying them out (Muchina & Kiano, 2011).

Net Trade Cycle Theory

Net Trade Cycle is a popular metric that new business clients always want to learn more about. The Net Trade Cycle is sometimes known by the name Cash Conversion Cycle. The

whole idea of the Net Trade Cycle or Cash Conversion Cycle is how fast it takes for cash to go from the cash balance through the regular trade cycle of the business.

Cash, along with vendor payables, are used to purchase inventory, which goes through processes to become a service or product for sale, ultimately to be sold and held as an account receivable balance until eventually being paid off by the customer. The shorter the net trade cycle, the higher the present value of the net cash flow generated by the assets and thus, the higher the value of the firm for its shareholders. Thus, firms try to keep an optimal level of working capital that maximizes their value (Afza and Nazir 2011).

The number of day's accounts receivable, inventories and accounts payable are used as measures of trade credit and inventory policies. The net trade cycle is used as a comprehensive measure of WCM.NTC is an easy device to estimate for additional financing needs with regard to working capital expressed as a function of the projected sales growth.

Cash Conversion Cycle Theory

The cash conversion cycle is a basic tool that is applied in the evaluation of the efficiency of working capital management (Richard & Laughlin, 1980). It is a metric used to evaluate how quick an organization can change over money available into stock and record payables, and then collect cash from sale of the goods. Basically it is that period where money is held up in stock before receipt of the same from debtors.

According to (Gitman, 2009) calculate the minimum cash balance needed by looking at the total cash cycle (period in days from the time a company pays its suppliers to the time it receives payment from debtors for the goods sold). This cycle shows the time taken once purchase is made from suppliers to when money has been collected from customers (Padachi, 2006). A negative CCC especially if the trade payable is high means the firm is receiving cash from debtors faster than it's paying its creditors thus generating cash flows.

A longer cycle increases sales thus increase in profitability while at the same time this longer cycle means a firm will have to invest more working capital. Thus the firm needs to ensure that the increase in working capital investment doesn't rise faster than the increase in profitability.

This might be the case especially if cash is held up in accounts that don't yield interest such as accounts receivables. That why researchers and authors have argued that if firms intend to increase the shareholders' value they must shorten the CCC to a reasonable minimum.

2.1.7. Determinants of Profitability

Various studies identified the determinants of profitability (Velnampy, 2005 & 2013). Working capital management involves the relationship between a firm's short-term assets and its short-term liabilities. The basic goal of working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses. In relation to the relationship between working capital and profitability, there are mixed results from different scholars across the world. In the study conducted by Padachi (2006) on the trend in working capital management and its impact on firm's performance, it was found that high investment in inventories and receivables is associated with lower profitability. A case study conducted by Abdul and Nasir (2007) on working capital management and profitability of Pakistan firms, a strong negative relationship between variables of working capital management and profitability of the firm has been observed. Anup chowdhury and Amin (2007) conducted a research on working capital management practiced in pharmaceutical companies listed on share stock exchange. A positive correlation had been found in the mathematical model, between current assets management and financial performance of pharmaceutical firms.

Firm Growth

The use of growth as a measure of firm performance is generally based on the belief that growth is a precursor to the attainment of sustainable competitive advantages and profitability (Markman, 2003). In addition, larger firms have higher rates of survival, and may have the benefits of associated economies of scale. While growth has been considered the most important measure in small firms, it has also been argued that financial performance is multidimensional in nature and that measures such as financial performance and growth are different aspects of performance that need to be considered. However, larger firms are found to grow faster than smaller, and younger firms are found to grow faster than older.

Firm Size

Firm size has a positive impact on profitability since larger firms benefit from economies of scope, exploit scale economies or access capital at lower costs than smaller firms do. The size of the firm significantly enhances firm performance. In addition, there exist a long-standing relationship between firm size and profitability, because of economies of scale and increased customers bargaining power. Large firms with huge total assets based that are managed well and tend to cause increased in firms profit level and are able to outperform smaller firms with small total assets based (Mekonnen, 2011). Several studies have established that there exists a relationship between firm size and profitability. For instance, Zawaira and Mutenheri (2014); found that the size of the company has a significant influence on firm profitability since large firms are more profitable than small firms are. Another study also established that larger firms are more profitable in comparison to smaller firms because larger firms exploit scale economies and benefit from economies of scope and those larger firms can access capital at lower costs than smaller firms can. Tufail (2012) also established that the size of the firm is positively related with profitability and concluded that a firm with greater size will also have greater profitability.

Productivity Levels

Firms that are more productive are more profitable. Highly productive firms are more profitable than their less productive rivals are and this effect strengthens with increasing persistence in high productivity levels. High levels of total factor productivity cause high firm profitability because high productivity is manifested in low average costs of production, higher product quality or higher output quantities produces with fewer inputs, leads to higher profits. Accordingly, high productivity levels and persistence of high levels together are more important than high productivity alone since the higher the level of productivity and the more persistent the high productivity is, the more profitable the firm. The level of efficiency distinguishes the firms from each other since higher productivity increases a firm's competitive edge over less productive competitors and leads to profitability. It is believed that firms' profitability is higher when they have higher degrees of total factor productivity (Salman and Yazdanfar, 2012).

Leverage Levels

Leverage is concerned with total debt and total liability of the firms and influences both the profitability and riskiness of the firm. A study by Vural et al. (2012) established that leverage has a significant negative relationship with firm value and profitability of firms which means that an increase in the level of leverage will lead to decline in the profitability of the firm and the value of the firm. Gachira et al. (2014) also established debt level as measured by debt to asset ratio has a significant negative relationship with firm value and profitability. Tufail (2012) also found a negative relationship between leverage and profitability which exhibits the presence of a negative relation between leverage of a firm and its profitability and that when leverage increases, then it negatively affects the profitability.

Liquidity

Liquidity refers to a firm's ability to meet its short-term obligations as and when they fall due. Liquidity ratios are used to assess the adequacy of a firm's working capital. The Current ratio is the traditional measure of checking liquidity of the firm. Numerous studies have revealed the level of liquidity determines a firm's profitability. For example, Nzioki et al. (2013), Gachira et al. (2014) established that liquidity has a negative relation with profitability.

Competition

There are certain competitive forces that affect profitability in every industry. These forces are said to be the drivers of competition and profitability in every industry as emphasized in the porter five forces model. It is difficult for firms, which operates in highly competitive industries to earn favorable returns on investment. Higher rivalry among existing competitors, which takes many forms including the fight for higher market share, erodes profitability of an industry. Especially in slow growth markets with numerous competitors who are equal in size and power (Harvard Business Review, 2008).

Management Efficiency

Management efficiency measured in terms of total asset growth, firm's growth and earnings flow is also a key factor that determines a firm's profitability. Previous studies have established that better growing firms increase their profitability mostly if there is an increase

in total assets it means it has high growth and it tends to be more profitable (Bhutta and Hasan, 2013). In addition, earnings flow from firm's growth is likely to improve their working capital, which in turn has a positive effect on profitability. Financial ratios like operating profit to income ratio and operating expenses to total assets ratio can be used to assess the efficiency of management in terms operational efficiency to income generation. Performance of management can also be expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff and others (Ongore and Kusa, 2013).

2.1.8. Impact of Working Capital Management on Company Profitability

When the cash conversion cycle shortens, cash becomes free for other usages such as investing on equipment and infrastructure or innovating manufacturing and selling process or lowering the total investment in current assets (Huynh, 2012). It accordingly brings company with higher operating profitability. In contrast, when the cash conversion cycle lengthens cash is tied up in firms' operation activities, leaving little chance for other investments of this cash flow. Company profitability is decreased as a result. In those cases cash conversion cycle is said to have a negative relationship with company profitability. On the other hand, cash conversion cycle can also have positive influence on company profitability. It could be interpreted through a chain of positive impact of inventory periods and account receivable period with a negative impact of accounts payable period on the company profitability.

2.2. Review of Empirical Studies

There have been a number of studies and academic researches to find out the relationship between working capital management and profitability. Working capital management is important for enhancing profitability and creating shareholders value, and was found in so many studies in different countries that it has a significant impact on profitability and liquidity. So this section presents the major studies related to this study.

Raheman, Afza, Qayyum and Bodla (2010) analysed the effect of working capital management on firm's performance in Pakistan for the period 1998 to 2007. For this purpose, balanced panel data of 204 manufacturing firms was used which are listed on Karachi Stock Exchange. The effects specify that the cash conversion cycle, net trade cycle and inventory

turnover in days are significantly affecting the performance of the firms. They concluded that manufacturing firms were in general facing problems with their collection and payment policies. Moreover, financial leverage, sales growth and firm size also had significant effect on the firm's profitability. They study mentioned that effective policies must be formulated for the individual components of working capital.

Deloof (2003) explored the relationship between management of working capital and performance of Belgian firms, where he concentrated on 1009 vast Belgian non-budgetary firms for the time of 1992 to 1996. Using regression and correlation tests he established a noteworthy negative relationship between gross operating income and account receivables, inventories and payables of Belgian firms. On the basis of these outcomes he proposed that managers could make value for their shareholders by diminishing the receivable and inventories days to a sensible minimum.

Padachi (2006) investigated the pattern in working capital needs and performance of firms to identify the causes for any noteworthy disparity between the industries. He used the return on total assets as the dependent variable as a measure of profitability. He sampled 58 small manufacturing firms for the period between 1998 –2003. The regression results demonstrated that huge investment in stock and high debtors is yields lower return. The working capital components used in the analysis were inventories days, accounts receivables days, accounts payable days and cash conversion cycle.

Makori and Jagongo (2013) analysed the effect of working capital management on firms' profitability in Kenya. Observation of 5 manufacturing firms listed in Nairobi securities exchange for the period of 2003 to 2012. Pearson's correlation and ordinary least square regression models were used to establish relationship between working capital management and firms' profitability. The study found negative relationship between profitability and number of day accounts receivable and cash conversion cycle, but a positive relationship between profitability and number of inventory and number of days payable. Moreover the financial leverage sales growth, current ratio and firm size also have significant effects on the firms' profitability.

Huynh & Su (2010) examined the relationship existing between the cash conversion cycle, profitability, and its components for firms in Vietnam Securities Exchange. The findings demonstrated that the relationship between profitability and the cash conversion cycle is negative. This means that the lower the cycle the higher the profitability of firm. Therefore for managers to achieve a desirable return on shareholders' investment then they should ensure the cash cycle is optimum i.e. keep all the components of working capital to a reasonable minimum.

Mathuva (2010) examined the influence of working capital management components on corporate profitability by using a sample of 30 firms listed on the Nairobi Stock Exchange (NSE) for the periods 1993 to 2008. He used Pearson and Spearman's correlations, the pooled ordinary least square (OLS), and the fixed effects regression models to conduct data analysis. The key findings of his study were that: There exists a highly significant negative relationship between the time it takes for firms to collect cash from their customers (accounts collection period) and profitability; There exists a highly significant positive relationship between the period taken to convert inventories into sales (the inventory conversion period) and profitability; and There exists a highly significant positive relationship between the time it takes the firm to pay its creditors (average payment period) and Profitability

Ali (2011) studied the association between working capital management and the profitability of textile firms in Pakistan. The efficiency of working capital management is reflected by three variables: cash conversion efficiency, days operating cycle, and days of working capital. They used return on assets, economic value added, return on equity, and profit margin on sales as proxies for profitability. A balanced panel dataset covering 160 textile firms for the period 2000–05 was analysed and estimated with an ordinary least squares model and a fixed effect model. Return on assets is found to be significantly and negatively related to average days receivable, positively related to average days in inventory, and significantly and negatively related to average days payable. Also, return on assets has a significant positive correlation with the cash conversion cycle, which would suggest that a longer cash conversion cycle is more profitable in the textiles business. The findings of the regression analysis show that average days in inventory, average day's receivable, and average days payable have a significant economic impact on return on assets. The findings of the fixed effect model reveal

that average days in inventory and average day's receivable both have a significant impact on return on assets.

Melita (2010) investigated the effect of working capital management on firms' financial performance in an emerging market. They hypothesized that working capital management leads to improved profitability. Data set consists of firms listed in the Cyprus Stock Exchange for the period 1998-2007. Using multivariate regression analysis, results supported their hypothesis. Specifically, results indicate that the cash conversion cycle and all its major components; namely, days in inventory, day's sales outstanding and creditors' payment period are associated with the firms' profitability. The results of this study should be of great importance to managers and major stakeholders, such as investors, creditors, and financial analysts, especially the recent global financial crisis and the latest collapses of giant organizations.

Tewodros (2010) studied the effect of management of working capital policies on firm's profitability a sample of 11 manufacturing private limited companies in Tigray region, Ethiopia for the period of 2005-2009. The finding of descriptive statistics shows that, on average cash conversion cycle takes 313 days and with minimum and maximum days of -315 and 2264 respectively. It also took an average 314 days to sell inventory. Firms wait an average 120 days to pay their purchases and receive payment against sales on an average of 118 days. The results show that longer accounts receivable and inventory holding periods are associated with lower profitability. 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. 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.

Tiringo (2013) examined impact of working capital management on profitability of micro and small enterprises in Ethiopia for the case of Bahir Dar City Administration. The study had

taken a sample of 67 micro and small enterprises. Data for this study was collected from the financial statements of the enterprises listed on Bahir Dar city micro and small enterprises agency for the year 2011.The study applied Pearson's correlation and OLS regression with a cross sectional analysis. The result showed that there is a strong 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.

Wubshet (2014) examined the impact of working capital management on firm's performance by using a sample of 11 metal manufacturing private limited companies in Addis Ababa, Ethiopia for the period of 2008 to 2012.The performance was measured in terms of profitability by return on total assets, and return on investment capital as dependent financial performance (profitability) variables. Results indicate that longer accounts receivable and inventory holding periods are associated with lower profitability. The results also show that there exists significant negative relationship between cash conversion cycle and profitability measures of the sampled firms. No significant relationship between cash conversion cycle, account receivable period, inventory conversion period and account payable period with return on investment capital has been observed. On the other hand, findings show that a highly significant negative relationship between account receivable period, inventory conversion period and account payable period with return on asset. The results conclude that cash conversion cycle has significant negative relationship with return on asset.

Mifta (2016) examined that the impacts of working capital management on profitability of manufacturing share companies in Ethiopia. During his study, He was measured firms performance in terms of return on asset which is a dependent variable and average collection period, average payable period and inventory conversion period and cash conversion cycle as an independent variable. The results showed that a negative relationship between average collection period, inventory conversion period and cash conversion period with profitability. However, he found that a positive relationship between average payable period with profitability.

2.3. Summary of the Chapter and Knowledge Gap

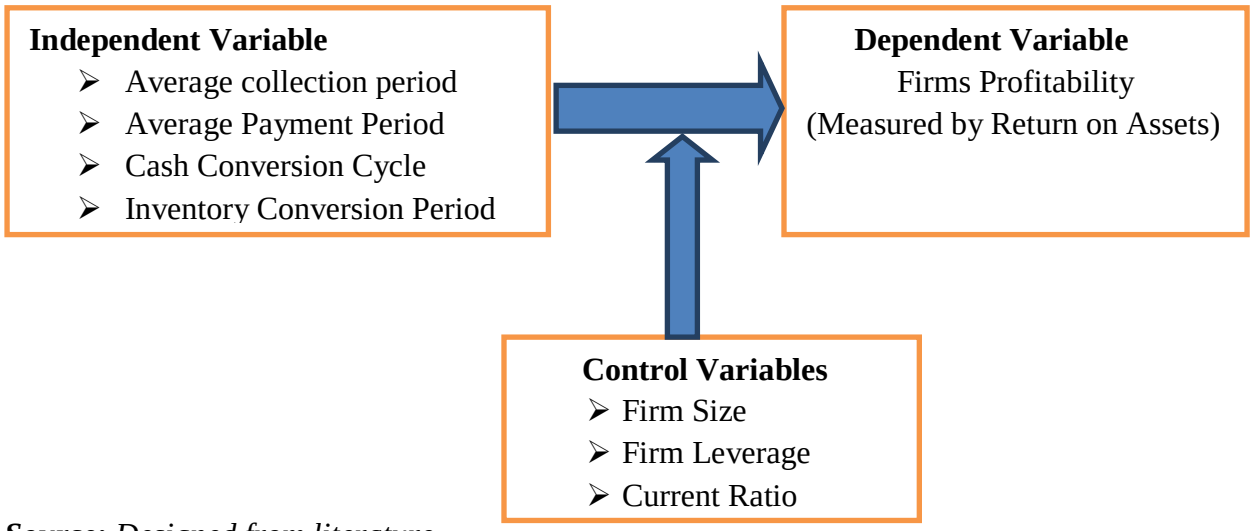
Working capital management is a very important component of corporate finance because it directly affects the liquidity and profitability of the company. It deals with current assets and current liabilities. Moreover, it involves planning and controlling of current assets and current liabilities in a manner that eliminates the risk of inability to meet due short-term obligations on one hand and avoid excessive investment in these assets on the other hand (Eijelly, 2004). There are combination of policies and techniques for the management of a company's working capital. These policies involve the three working capital policies; defensive or hedging, aggressive and conservative policies and inventory, debtors' and short-term financing management techniques respectively. A popular measure for evaluating working capital management is cash conversion cycle (account collection period plus inventory conversion period minus account payment period).

From the empirical study listed above it could be depicted that working capital have impact on profitability. These researchers identified a negative relationship between the trade payables and profitability. This supports the fact that less profitable firms fully utilize the credit period granted by the suppliers. The negative relationship between the trade receivables and firms profitability means that profitable firms take less time to collect trade receivable. Likewise the negative relationship between the inventories and profitability indicates that profitable firms convert inventory in to finished goods within a short period. Also it is evidenced that the total debt and size of the firm also affect the profitability of the firm. All these give us a clear indication that the working capital management is given a higher priority by the corporate world.

Although these studies have been carried out, there is still vagueness on the appropriate variables that might serve as delegations for working capital management. Further examination on these studies discloses that there is very little empirical evidence on the effect of working capital management on firms' profitability. In Ethiopia, which is the focus country of this study, there are plenty of studies conducted in the area of working capital management and profitability. However, these studies did not consider alcohol manufacturing firms. This is, therefore, the objective of this study was an attempt to fill the existing gap of the effect of

working capital management on profitability of firms with reference to alcohol and liquor manufacturing firms in Ethiopia.

2.4. Conceptual Framework



Source: *Designed from literature*

CHAPTER THREE
RESEARCH METHODOLOGY AND DESIGN

3.1. Research Design

Research design is the overall strategy that aims to address the research problem. It involves collection, estimation and investigation of information or data. The purpose of this research is to assess the effect of working capital management on profitability of manufacturing firms in Ethiopia with reference to National alcohol and liquor factory for the period of ten years from 2011 to year 2020. The study adopts explanatory research design. Explanatory survey design was used since it provides insights into the research problem by explaining the variables of interest. It is used for defining, estimating, predicting and examining associative relationships. This helps in providing useful and accurate information to answer the questions based on who, what, when, and how (Kombo &Tromp, 2006).

3.2. Research approach

From the three research methods (approaches), the current study used quantitative research method (approach). According to John et al. (2007), quantitative research approach used in almost every sphere of life including sociological and business research. In addition, they explained that the method best approach for quantitative measurement which enables to conduct statistical analysis. The quantitative research approach method had been applied by different previous researcher to determine the impact of working capital management on firm's performance i.e. (Gill et al., 2010; Wubshet, 2014; Makori & Jangango, 2013 and Mifta, 2016).

3.3. Target Population

A research population is a well-defined collection of individuals or objects known to have similar characteristics. The target population of this study is Liquor or alcohol factories operating in Ethiopia.

3.4. Sample Size and Sampling Technique

A sample is a sub set of the total population that is interest for the study topic. This total population is called the target population, to which the results of the study can be generalized (Bryman & Bell Emma, 2003). This study used convenience sampling method, which is a

non-probability sampling procedure. This study selected National alcohol and liquor factory for its convenience for availability of companies for audited annual financial reports for the study period of ten years from 2011 - 2020.

3.5. Data Source and Collection Procedure

This study employed the use of secondary source of data. The secondary data was derived from audited financial statements of National alcohol and liquor factory. This data included audited balance sheet and profit and loss accounts showing annual financial statements. The data collection covered a period of ten years from 2011 – 2020.

3.6 Operational Definition of Variables

In this study, the researcher has one dependent variable (Profitability) and seven explanatory variables. The operational definition of each of the variables is provided below.

3.6.1 Dependent variable

Return on Assets (ROA) is a type of return on investment (ROI) metric that measures the profitability of firms in relation to its total assets. This ratio indicates how well a company is performing by comparing the profit (net income) it's generating to the capital it's invested in assets. The higher the return, the more productive and efficient management is in utilizing economic resources. The profitability of the firms was measured by return on assets (ROA). The return on assets (ROA) as measure of profitability was determined based on the calculation of the earning after interest and taxes (EAIT) and total assets (T.A) (Olawale et al, 2010).

3.6.2 Independent Variables

Average collection period

Average Collection Period is defined as the number of the days which is needed to collect cash receipts, that, the average period for which collections are outstanding. Average collection Period defined by (Hillier et al. 2010) as time duration involved in the collection of cash. Accordingly, early cash receiving will largely reduce the time lag between the inflow of sales and outflow of the products raw materials and cost for labour already incurred. Practically there arise obstacles for the entities in accomplishing all sales in cash basis because of a number of reasons like its trade policy or pressure from competitors. Reducing average collection has impact to the firm's earnings since bad debts are reduced through accelerated collections.

Average Collection Period = (Accounts Receivable ÷ Net credit sales) x 365.

Average Payment Period

Companies should lengthen the payables deferral period by finding those suppliers with good credit terms e.g. longer repayment period so as to maintain liquidity. However, it should be kept at the optimum level because persistent lengthening of the payables' deferral period may increase payables in the statement of financial position hence creditors may be reluctant to deal with the company due to massive payables (Agu, S. Ikechukwu, 2018).

Average Payment Period = (Account Payable ÷ Cost of Goods Sold) x 365.

Cash Conversion Cycle

Vijay Kumar (2011) examined the relationship between working capital management and firm's profitability in automobile industries in India. He used 20 firms as sample for the period from 1996-2009. The result showed that there is negative relationship between the length of cash conversion cycle and firm profitability.

Cash Conversion Cycle = (Average Collection Period + Inventory Conversion Period) – Average Payment Period

Inventory Conversion Period

Inventory Conversion Period is being defined as the time duration involved from ordering the raw materials, production of the product and finally selling of the product (Hillier et al, 2010). Inventory period accounts for the time that stocks are stored by the company before they are sold out. Inclusively, period of days' time inventory goes through over the production process and selling process. Time involved in the production process shall depend basically on the product nature, smooth automation and the technology involved in the manufacturing of such product.

Inventory Conversion Period = (Inventory ÷ Cost of Goods Sold) x 365

Firm Size

Firm size has a positive impact on profitability since larger firms benefit from economies of scope, exploit scale economies or access capital at lower costs than smaller firms do. The size of the firm significantly enhances firm performance (Stierwald, 2009). In addition, there exist a long-standing relationship between firm size and profitability, because of economies of scale and increased customers bargaining power. Large firms with huge total assets based that are managed well and tend to cause increased in firms profit level and are able to outperform smaller firms with small total assets based (Mekonnen, 2011).

Firm Size = Natural Logarithm of Sales

Firm Leverage

Leverage is concerned with total debt and total liability of the firms and influences both the profitability and riskiness of the firm. A study by Vural et al. (2012) established that leverage has a significant negative relationship with firm value and profitability of firms which means that an increase in the level of leverage will lead to decline in the profitability of the firm and the value of the firm. Gachira et al. (2014) also established debt level as measured by debt to asset ratio has a significant negative relationship with firm value and profitability.

$$\text{Firm Leverage} = \frac{\textbf{Total Debt}}{\textbf{Total Assets}}$$

Current Ratio

The Current ratio is the traditional measure of checking liquidity of the firm. Numerous studies have revealed the level of liquidity determines a firm's profitability. For example, Nzioki et al. (2013), Gachira et al. (2014) established that liquidity has a negative relation with profitability. Sarbapriya (2012) using the current ratio as a measure of liquidity established that there is a significant negative relationship between liquidity and profitability.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

3.7 Model Specification

A multiple linear regression model was used to determine the relative importance of each independent variable to determine the profitability of firms. The data collected from National

Alcohol and Liquor Factory was used to analyze the effect of working capital management on firm's profitability. This study used random effect econometric model of multiple linear regressions where return on asset (ROA) was regressed against Average Collection Period (ACP), Average Payment Period (APP) or Cash Conversion Cycle (CCC), Inventory Conversion Cycle (ICC), and Firm Size (FS), Firm Leverage (FL) and Current Ratio (CR). The regression model to be used is expressed as follows;

$$\mathbf{ROA = \alpha + \beta_1 (ACP) + \beta_2 (APP) + \beta_3 (CCC) + \beta 4 (ICC) + \beta 5 (FS) + \beta 6 (FL)\ \beta 7 (CR)\ \varepsilon}$$

Where

ROA = Net Income to Average Total Asset

α = the constant (intercept) term

$\beta 1$, $\beta 2$…. B5 respective coefficients for independent variables

(ACP) = ACP as Measure for working capital management

(APP) = APP as Measure for working capital management

(CCC) = CCC as Measure for working capital management

(ICC) = ICC as Measure for working capital management

(FS) = FS as Measure for working capital management

(FL) = FL as Measure for working capital management

(CR) = CR as Measure for working capital management

ε = represents error term which is constant over time

3.8 Data Presentation and Analysis

The data collected using the data collection instrument was presented using tables and analysed using percentages, means, and standard deviation in line with the objectives of the study. The data was cleaned, coded, and entered in to Microsoft excel 2010 and Eviews 8 for analysis. The study used descriptive statistics, correlation and multiple regression analysis to establish the relationship between the independent variables of working capital components and the dependent variable.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

This chapter presents the results of the various indicators of profitability of national alcohol and liquor manufacturing firm and its respective working capital management variables. The study selected Return on assets (ROA) as the measure of the firm's profitability. On the other hand average collection period (ACP), average payment period (APP), cash conversion cycle (CCC) and inventory conversion period (ICP), was used as the measure of working capital (or working capital management variables) for the study, and firm size, current ratio, and leverage as control variables that affect profitability of firms. Empirical results from quantitative data analysed using Microsoft excel 2010 and E-views 8 as well as presenting results from descriptive statistics, correlation matrix and regression results was used as the study main statistical tool.

4.1. Descriptive Statistics

This section dealt with the results of descriptive statistics for National alcohol and liquor manufacturing factory. It showed the mean, standard deviation, minimum and maximum values of the variables employed in the study and it also gives a clear picture about these values, which helped in understanding the different dimensions of variables. The descriptive statistics are calculated and presented in Table 4.1

Table 4.1 Descriptive Statistics

Variables	ACP	APP	CCC	ICP	FS	FL	CR	ROA
Minimum	9.1183	1.4137	87.2408	66.7984	18.2356	0.2396	0.0814	0.2594
Maximum	30.8275	40.4858	1284.9931	1316.3606	20.8370	0.9704	2.0774	0.4421
Mean	22.6364	7.7834	237.3514	222.4983	19.5938	0.7588	0.5718	0.3707
SD	8.0997	11.9567	368.6960	384.9267	0.8909	0.2332	0.5951	0.0621
N	10	10	10	10	10	10	10	10

Source: Excel Output from Secondary Data (2011 – 2020)

Table 4.1 gives descriptive statistics for 10 years data of national alcohol and liquor factory. The study has used eight variables for the analysis purpose which is classified in to seven independent variables and one dependent variable. The dependent variable which measures the profitability of the firms' is return on asset. Out of seven independent variables, four are

(average collection period, average payment period, cash conversion cycle and inventory conversion period) proxies for profitability of the firm. The remaining three independent control variables used are firm size as measured by natural logarithm of sales, leverage of the firms and current ratio which measures liquidity.

As it is presents in table 4.1, the average return on assets for the whole sample period is 37.07% in which the lowest number is 25.94% and the highest one is 44.21% and standard deviation is 6.21%. This figure means that the value of return on assets can deviate from mean to both sides by 6.21%.

Information from descriptive statistics shows that the factory collects its bills on average 22.64 days with standard deviation of 8.10 days. The maximum and minimum average collection period for the factory is 30.83 and 9.12 days respectively.

The mean time of paying to suppliers is 7.78 days and the standard deviation is 11.96 days. Maximum time taken by the firm to pay for their suppliers is 40.49 days while minimum time taken for this purpose is 1.41 days.

Also, the table 4.1 shown the mean of cash conversion cycle (CCC) that used as a comprehensive measurement of managing working capital is 237.35 days and standard deviation is 368.70 days. The maximum and minimum values of cash conversion cycle are 1284.99 days and 87.24 days respectively.

Likewise, it takes an average 222.50 days in order to sell inventory with standard deviation of 384.93 days. Maximum time taken by a firm is 1316.36 days, while minimum time to convert inventory into sales is 66.80 days.

Natural logarithm of sales that measure the size of the firm is used as a control variable. From table 4-1 you can see that the mean of logarithm of sales is 19.59 and standard deviation is 0.89. The maximum value of log of sales for a firm in a year is 20.84 while the minimum value is 18.24.

Leverage ratio is used to check the relationship between debt financing and the profitability. It is also used as a control variable. The result of descriptive statistics indicates that the average

of leverage ratio is 75.88% with standard deviation of 23.32%. The maximum leverage ratio used by a firm is 97.04%. While the minimum of leverage ratio is 23.96%, this means that the factory uses less debt in its operation.

Lastly, liquidity of the factory, a traditional measure of liquidity is used. The average current ratio for the factory is 0.57 with a standard deviation of 0.59. The highest current ratio for the factory in a particular year is 2.08 times and in the same way the minimum ratio for the factory in a year is 0.08.

4.2. Classical linear regression model assumptions

4.2.1. Linearity

Linearity is the situation in which the relationship between the dependent variable and the independent variables is linear. It is the main assumption of the OLS estimation method. If linearity exists, the effect of an exogenous variable on the endogenous variable is the same for all values of the other exogenous variables in the model (that is, the slope of the population regression function is constant, so that the effect on y of a unit change in x does not depend on the value of one or more exogenous variable). In this sense, non-linearity has important consequences for the interpretation of the estimation results (Göksu Ali and Ergun Ugur (2013). Ramsey RESET test (Ramsey, 1969) may be constructed by adding powers of fitted values to the regression model. It is a test of linear specification against a nonlinear specification. It tests the hypothesis stating that the values of added parameters are zero. If probability F-statistics is larger than its significance level, conclude that there is no enough evidence to reject the null hypothesis of linearity.

Table 4.2: Linearity test result

Ramsey RESET Test
Equation: UNTITLED
Specification: ROA C ACP APP CCC ICP FL FS CR
Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.110676	1	0.4666
F-statistic	1.233600	(1, 1)	0.4666
Likelihood ratio	8.036148	1	0.0046

Source: Computed by using Eviews 8

As we can see from the above table 4.2 that the reset F- statistics is 1.233 and the corresponding P-value is 0.466, so we can conclude that there is no enough evidence to reject the null hypothesis of linearity

4.2.2 Heteroscedasticity

$V(u_t)=\sigma^2$ for all observations. That is, the variance of the error term is constant (Homoscedasticity) over the sample period. If the error terms do not have constant variance, they are said to be heteroscedastic (Göksu Ali and Ergun Ugur (2013).

The test can be represented in an auxiliary regression form, in which the squared residuals of the proposed model are regressed on the predictors believed to be the cause of the heteroscedity. Heteroscedasticity uses the Breusch-Pagan test for Heteroscedasticity which takes as its null hypotheses that the variance is constant across all observations. The alternative hypothesis is that variance is not constant (i.e., that there is Heteroscedasticity). The calculated statistic has a chi-squared distribution test states that if the p-value is significant at 95 confidence interval, the data has Heteroscedasticity problem, whereas if the value is insignificant (greater than 0.1 in case of this study), the data has no Heteroscedasticity problem.

Table 4.3: Heteroskedasticity test result

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.659938	Prob. F(7,2)	0.4264
Obs*R-squared	8.531524	Prob. Chi-Square(7)	0.2881
Scaled explained SS	0.225235	Prob. Chi-Square(7)	1.0000

Source: Computed by using Eviews 8

As we can observe from the above table 4.3, the probability value for the Chi-Square is insignificant, so we no enough evidence to reject the null hypothesis for no heteros kadasticity.

4.2.3 **Autocorrelation**

Autocorrelation can only occur in the models that include time series data and it means that either the model is specified with an insufficient number of lagged variables or not all the relevant explanatory variables are specified in the model. Autocorrelation test is also regarded as misspecification test. Incorrect functional forms, omitted variables and an inadequate dynamic specification of the model can cause autocorrelation (Göksu Ali and Ergun Ugur (2013). Autocorrelation can be tested by using breusch-Godfrey serial correlation LM test. The Durbin-Watson statistic ranges in value from 0 to 4. A value near 2 indicates non-autocorrelation; a value toward 0 indicates positive autocorrelation; a value toward 4 indicates negative autocorrelation.

Table 4.4: Autocorrelation test result

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	4.700970	Prob. F(2,1)	0.3101
Obs*R-squared	9.038641	Prob. Chi-Square(2)	0.0109

R-squared	0.901426	Mean dependent var	0.370704
Adjusted R-squared	0.704279	S.D. dependent var	0.062138
S.E. of regression	0.033791	Akaike info criterion	-3.741218
Sum squared resid	0.003425	Schwarz criterion	-3.529408
Log likelihood	25.70609	Hannan-Quinn criter.	-3.973572
F-statistic	4.572353	Durbin-Watson stat	2.035388
Prob(F-statistic)	0.119948		

Source: Computed by using Eviews 8

As we can see from the above table 4.4 the Durbin-Watson stat is 2.035388, which near to 2, indicating there is no autocorrelation.

4.2.4 Multicollinearity

Multicollinearity is a data problem. Collinearity between variables is always present. It becomes a problem and violation of the classical assumptions if the correlations among the independent variables are very strong. It can affect accuracy of the parameter estimates (Göksu Ali and Ergun Ugur (2013). Multicollinearity can be detected by test coefficient variance decomposition using Eviews. Check the condition numbers of the matrix. A condition number smaller than 1/900 (0.001) could signify the presence of collinearity.

Table 4.5: Multicollinearity test result

Coefficient Variance Decomposition
Date: 06/05/21 Time: 19:06

Sample: 2011 2020
Included observations: 10

Eigenvalues	3.167328	0.023050	0.005956	0.000757	2.72E-05	3.10E-06	4.74E-07	9.72E-10
Condition	0.037	0.0442	0.0167	0.0128	0.0357	0.00313	0.002049	1.000000

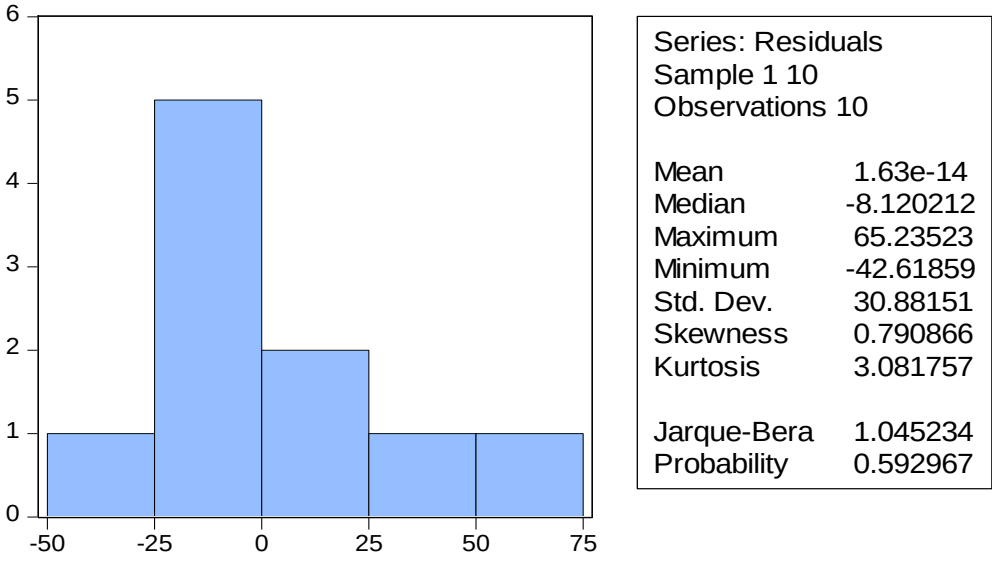
Source: Computed by using Eviews 8

It can be observed from the above table that the condition number is greater than 0.001, which signifies that there is no multicollinearity.

4.2.5 Normality

The Jarque-Bera test statistics requires the value of skewness and kurtosis in the model in order to calculate the Jarque-Bera test statistics value. In null hypothesis, the assumption will be the error term is normally distributed. As shown in figure 4.1 Jarque Bera-statistic is not significant. This means that the p-value given at the bottom of the normality test screen is greater than 0.1, and we are unable to reject the null hypothesis of normality at the 10% significance level so, the residuals are normally distributed in this study, concluded that there was no problem of normality.

Figure 4.1: Normality test result



Source: Computed by using Eviews 8

4.3 Correlation Matrix Result

Prior to regression result, it is important to check the correlation between different variables on which the analysis is built. Correlation matrix is used for data to see the relationship between variables such as those between working capital management and firm's profitability (ROA).

Table 4.6: Correlation Matrix

	ACP	APP	CCC	ICP	FS	FL	CR	ROA
ACP	1.0000							
APP	-0.4540	1.0000						
CCC	-0.5867	0.9562	1.0000					
ICP	-0.5971	0.9565	0.9999	1.0000				
FS	-0.9638	0.3278	0.5021	0.5114	1.0000			
FL	0.1239	-0.1073	-0.0833	-0.0857	0.0326	1.0000		
CR	0.3269	0.1386	0.0303	0.0265	-0.4807	-0.8314	1.0000	
ROA	-0.4362	0.1531	-0.0239	-0.0273	0.6183	-0.3102	0.5735	1.0000

Source: Excel Output from Secondary Data (2011 – 2020)

Table: 4.2, shows that the result of the correlation analysis of profitability measures with average collection period (ACP), average payment period (APP), cash conversion cycle (CCC), inventory conversion period (ICP), firm size (FS), firm leverage (FL) and current ratio (CR). It shows negative relationship between the Correlation Coefficient Matrix and ROA with ACP, CCC ICP and FL. Furthermore, it shows the positive relationship with APP, FS and CR.

The researcher has started the analysis of correlation results between the average collection period (ACP) and return on assets (ROA). The result of correlation analysis shows a negative coefficient 0.44. It indicates that if the average collection period increases it will have a negative impact on the profitability and it will decrease.

Correlation results among the average payment period (APP) with return on assets (ROA) shows that there is a positive relationship between this variable. When businesses delay payment to suppliers, and using for short-term investments will increase profitability. However, in practice, delays in payment will affect the relationship between the two parties,

and then the supplier will reduce the credit limit or punish a loss fee, thus reducing the ability to profit.

The cash conversion cycle (CCC) which is a comprehensive measure of working capital management has negative coefficient 0.02. It is consistent with the view that the time lag between the expenditure for the purchases of raw materials and the collection of sales of finished goods can be too long and that decreasing this time lag increases profitability (Deloof, 2003).

Inventory conversion period (ICP) and return on assets (ROA) relationships are negative with a coefficient of 0.03. This suggests that the shorter the rotation of the inventory, the higher the profitability.

One should not overlook the positive association that exists between return on assets (ROA) and firm size (FS). This is in turn indicates a positive relationship between size and profitability. It shows that as size of the firm increases, it will increase its profitability.

The significant negative correlation between the firm leverage (FL) and its profitability (ROA) is clearly shown in the table with a coefficient of -0.31. The result shows that increase in firm leverage will have an impact of decreasing their profitability.

Current ratio is a traditional measure of checking liquidity of the firm. In this analysis the current ratio has positive relationship with profitability of firms measured. The coefficient is 0.57 with return on assets.

4.4 Regression Results

The previous section showed the correlation of components of working capital management with firm's profitability. The weak side of the above section is that they do not allow identifying causes from consequences. To overcome this shortcoming, the researcher conducted regression analysis to determine how much of each of the variables of working capital management effect on profitability has.

The study examined the study variables at 90% confidence level to establish whether they were significant or not. The results obtained are as shown by table 4.2,

Table 4.7: Regression Output

Dependent Variable: ROA				
Method: Least Squares				
Sample: 2011 2020				
Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.8905	4.5749	1.7247	0.0830
ACP	-0.0205	0.0154	-1.3301	0.0755
APP	0.0022	0.0082	0.2793	0.0981
CCC	7.8591	0.0002	0.3016	0.7826
ICP	-0.0273	0.0131	-0.1335	0.0352
FS	0.3578	0.2160	1.6563	0.0962
FL	-0.0593	0.3190	-0.1861	0.8642
CR	0.0131	0.1368	0.0959	0.0295
R-squared	0.7568	Mean dependent variable		0.3707
S.E. of regression	0.0531	S.D. dependent variable		0.0621
Sum squared resid	0.0085	Akaike info criterion		-2.8382
Log likelihood	21.1911	Schwarz criterion		-2.6264
F-statistic	1.5561	Hannan-Quinn criterion		-3.0705
Prob(F-statistic)	0.0848	Durbin-Watson stat		2.7160

Source: Eviews- 8 Output from Secondary Data (2011 – 2020)

The resultant regression equation is as follows

$$ROA_{it} = 7.8905 - 0.0205ACP_{it} + 0.0022APP_{it} + 7.8591CCC_{it} - 0.0273ICP_{it} + 0.3578FS_{it} - 0.0593FL_{it} + 0.0131CR_{it} + \varepsilon$$

As per the results on table 4.3, Average Collection Period (ACP), Inventory Conversion Period (ICP), and Firm Leverage (FL) have a negative relationship with profitability (ROA). This indicates that an increase in inventory, creditor days, and leverage will have a negative impact on profitability.

On the other hand, Average Payment Period (APP), Firm Size (FS) and Current Ratio (CR) have found to have a positive relationship with profitability (ROA) indicating that firm leverage and liquidity positively affects profitability.

Also, the result on table 4.3, Cash Conversion Cycle (CCC) has constant relationship with profitability (ROA). This indicates that if an increase or decrease in Cash Conversion Cycle (CCC) days it will have no impact on profitability (ROA).

Additionally, table 4.3, showed Average Collection Period (ACP), Average Payment Period (APP), Inventory Conversion Period (ICP), Firm Size (FS) and Current Ratio (CR) have a significant relationship with profitability since P-values of (0.0755, 0.0981, 0.0352, 0.0962 and 0.0295 respectively, which is < 0.10) while Cash Conversion Cycle (CCC) and Firm Leverage (FL) are found insignificant since their P-values of 0.7826 and 0.8642 are greater than the significance level of 0.10 respectively.

4.5 Interpretation of the Findings

This study examined the effect of working capital management on profitability of national alcohol and liquor factory. Profitability is measured using the Return on assets (ROA) while working capital management is measured using Average collection period, Average payment period, Cash conversion cycle and Inventory conversion period as the independent variables while Firm size, Firm leverage and Current ratio are used as control variables.

Hypotheses Testing

To test the hypotheses stated for this study, the decision is based on the following rule:

Decision rule:

H1: Firms profitability is significantly and negatively affected by Average Collection Period in case of National alcohol and liquor factory.

H2: Firms profitability is significantly and negatively affected by Average Payment Period in case of National alcohol and liquor factory.

H3: Firms profitability is significantly and negatively affected by Inventory Conversion Period in case of National alcohol and liquor factory.

H4: Firms profitability is significantly and negatively affected by Cash Conversion Cycle in case of National alcohol and liquor factory.

H1: Firms profitability is significantly and negatively affected by Average Collection Period in case of National alcohol and liquor factory.

The p-value (0.0755) of average collection period (ACP), it is concluded that the effect of average collection period on return on assets (a proxy for profitability) was negative and

significant. This is because the p-value is less than 0.10. Hence, the alternative is rejected. This indicates that delay in collecting receivables reduces profitability. This is similar with findings of Alipour (2011) that there was a negative significant relationship between accounts receivable days and profitability. Additionally, Makori and Jagongo (2013) investigated that there was a negative relationship between profitability and number of day's accounts receivables. The result is similar to those of Aychelet (2018) that there was a significant negative relationship between average collection period and profitability. Also, Mifta (2016) examined that there was a significant negative relationship between profitability and number of day's accounts receivables. Further, Garcia et al. (2011) also established a significant negative relationship between receivables collection period and profitability of companies.

H2: Firms profitability is significantly and positively affected by Average Payment Period in case of National alcohol and liquor factory.

The p-value associated with the coefficient of average payment period (APP) is 0.0981 which is less than 0.10. Based on the decision rule, the null hypothesis is accepted that average payment period has positive and significant effect on profitability of national alcohol and liquor factory. This indicated that delaying paying creditor's increases profitability. These findings are similar to those of Alipour (2011) that there was a direct significant relation between number of day's accounts payables and profitability and Makori and Jagongo (2013) that there was a positive relationship between profitability and number of day's payable.

H3: Firms profitability is significantly and negatively affected by Inventory Conversion Period in case of National alcohol and liquor factory.

The p-value (0.0352< 0.1) implies that inventory conversion period (ICP) has a negative and significant effect on profitability of national alcohol and liquor factory. As such, the null hypothesis is accepted. This indicated that holding inventory for longer periods reduces profitability. These results conform to those of Anojan et al. (2013) that inventory conversion period had a negative relationship on profitability. In similarly, there were the findings of Aychelet (2018) that there was a negative significant relationship between inventory conversion period and firms performance. Napompech (2012) also examined similar results

and suggested that managers can increase the profitability of their firms by shortening the inventory conversion period.

H4: Firms profitability is significantly and negatively affected by Cash Conversion Cycle in case of National alcohol and liquor factory

Also, the p-value (0.7826) of cash conversion cycle (CCC) is greater than 0.10. Consequently, it is concluded that constant and no significant effect on profitability of national alcohol and liquor factory. Hence, the null hypothesis is rejected. This indicated that if an increase or decrease in Cash Conversion Cycle (CCC) days will have no impact on profitability (ROA).

The regression results also indicated the effect of liquidity, leverage and size on profitability as control variables. The regression results found that liquidity has positive and significant relationship with profitability; firm size has a positive and significant relationship with profitability (ROA) but firm leverage has negative and insignificant relationship with profitability. This indicates that liquidity and firm size enhance profitability while firm leverage inversely affected profitability. In similar there were the findings of Zawaira and Mutenheri (2014) that liquidity and size enhances profitability of firms. As such, Ikpefan & Owolabi (2014) also found a positive relationship between the liquidity and profitability.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The chapter presents a summary of the study findings on the effects of working capital management on profitability of national alcohol and liquor factory as per the study objectives. The chapter also presents the study conclusions and recommendations and suggestions of further research.

5.1. Summary

The purpose of this study is to examine the effect of working capital management on profitability of manufacturing firms; with reference to national alcohol and liquor factory. The study aims to examine the statistical significance between firm's working capital management and profitability.

The descriptive results showed that the minimum and maximum ROA for the period (2011 to 2020) is 0.2594 and 0.4421 with a mean of 0.3707 and standard deviation of 0.06. ACP and APP have maximum and minimum values of 30.83, 9.12; 40.49, 1.41 and means and standard deviations of 22.64, 8.10; 7.78 and 11.96 respectively. CCC and ICP have maximum and minimum values of 1284.99, 87.24; 1316.36, 66.80 and means and standard deviations of 237.35, 368.70; 222.50 and 384.93 respectively. The minimum values of FS, FL and CR are 18.23, 0.23 and 0.08 while the maximum values are 20.83, 0.97 and 2.08 respectively whereas the mean values are 19.59, 0.76 and 0.57 respectively. The study used the correlation coefficient matrix to measure of the strength of a linear association between the variables. Average collection period (ACP), cash conversion cycle (CCC), inventory conversion period (ICP), and firm leverage (FL) found to have a negative correlation with return on assets (ROA) while average payment period (APP), firm size (FS) and current ratio (CR) have a positive correlation.

The correlation coefficient (R=0.7568) indicated a strong relationship between working capital management and profitability of national alcohol and liquor factory. In addition, the regression results investigated a negative significant relationship between average collection period (ACP), and inventory conversion period (ICP) and profitability (ROA) of national

alcohol and liquor factory. Also, the regression results examined constant effect of cash conversion cycle (CCC) on profitability (ROA) of national alcohol and liquor factory. Additionally, the study revealed that there is a positive significant relationship between firm size (FS) and current ratio (CR) and profitability (ROA), but firm leverage (FL) has a negative significant relationship with profitability (ROA) of national alcohol and liquor factory.

5.2. Conclusions

The study found that there is a significant negative relationship between average collection period (ACP) and profitability (ROA) of national alcohol and liquor factory which indicates that delay in collecting receivables reduces profitability. Thus, the study concludes that a relax debt collection policy reduced profitability of national alcohol and liquor factory. The study also revealed significant positive relationship between average payment period (APP) and profitability (ROA) of national alcohol and liquor factory which indicates that delaying paying creditors increases profitability. Thus, the study concludes that payables management influence profitability. Additionally, the study found that there is a significant negative relationship between inventory conversion period (ICP) and profitability (ROA) of national alcohol and liquor factory; which indicates that holding inventory for longer periods reduces profitability. Hence, the study concludes that inventory conversion period significantly affects profitability.

In addition, the study assessed that there is no effect of cash conversion cycle (CCC) on profitability (ROA) of national alcohol and liquor factory. Further, the study examined that firm size (FS) and current ratio (CR) have a significant positive relationship with profitability (ROA) but firm leverage (FL) is found to have insignificant negative relationship with profitability. This indicates that firm size (FS) and current ratio (CR) enhances profitability while firm leverage inversely affects profitability. Hence, the study concludes that firm size (FS) and current ratio (CR) enhances while firm leverage negatively affects the profitability (ROA) of national alcohol and liquor factory.

5.3. Recommendations

Based on the study findings the study recommends that national alcohol and liquor factory managers should speed up the collection of receivables so that they can maximize profits. However, they should take caution to avoid losing loyal customers.

In addition, the study recommends that the factory should avoid holding excessive stocks since this would reduce profitability. The firms should hold optimum inventory levels to avoid stock outs due to insufficient stock and avoid wastage due to high levels of inventory.

The study also recommends that the factory should delay paying creditors to maximize profitability but should take caution so that they do not affect their credit status and to avoid losing trade discounts.

Since leverage has found to inversely affect profitability factory management should adopt aggressive financing policies through the use of overdrafts, trade credit and short term credit to finance working capital.

Additionally, the study recommends that the factory managers should develop effective policies on working capital management to ensure that they can maximize profitability and ensure the firms liquid enough to meet their current obligations.

5.4. Suggestions for Further Research

This study was not able exhaust all working capital management components that have effects on profitability in all alcohol manufacturing firms. Therefore, effects of prepayments, accrued expenses, government regulations and policy, economic environment and culture on profitability of firms need to be established in future studies by incorporating all alcohol and liquor manufacturing firms in Ethiopia.

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