

Effect of Working Capital Management on Organizational Performance

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Abstract: This study aimed at examining effects of working capital management on organizational performance. Both primary data and secondary data were collected and analysed to achieve our objectives. By using SPSS 16, the results from analysis of primary data showed that company sells more on cash than on credit, liabilities are well managed even in short period, and there is a good inventory management which helps the company to improve its performance. The findings showed that DR (-0.232) and CCC (- 0.292) have a negative effect on GOP while DP and DI are positively related to GOP (0.301, 0.165 respectively). LNSALES (0.135) has a positive effect on GOP while inflation (-0.00632) has a negative effect on GOP. Therefore, the reduction of the days in accounts receivable will facilitate the company to have ready cash to reinvest and can prevent the cash from getting eroded by effects of inflation as well as benefit from cheap source of financing. The increase in inventory levels also will help the company to create value but this requires efficient level that can maximize returns and minimize the costs of keeping it considering the effects of inflation. Thus working capital management is viewed as an effective lever to increase cash flow and preserve, or even to enhance company value.

Keywords: Working capital Management, organizational performance.

1. INTRODUCTION

Working capital management (WCM) refers to all management decisions and actions that ordinarily influence the size and effectiveness of the working capital (Kaur, 2010). It is a managerial accounting strategy which focuses on maintaining efficiency levels of current assets and current liabilities to ensure that a firm has sufficient cash flow in order to meet its short term obligations. WCM is an essential part of financial part of financial management and contributes significantly to a firm's wealth creation as it directly influences organizational profitability and liquidity (Raheman and Nasr, 2007; Naser et al, 2013). The most important issue in WCM is the maintaining of liquidity in the day to day operations of the firm.

Working capital performance provides critical insight into the state of a company's financial position. As an important indicator of financial fitness, the availability of a company's working capital is one of the first items a lender or investor will examine on a balance sheet (Financial Executives International Canada, 2013).

Globally 1000 companies lose about \$2 billion per year due to poor working capital management. The recent financial and economic crisis has shown how important it is for firms to maintain a healthy cash position. The risk of becoming illiquid always increases in times of credit constraints and economic downturn. However, companies are still unable to properly assess their cash needs (Frankfurt Business Media, 2012).

Long term finance and short term are two ways of financing a business enterprise. Long term is requirement means a firm's needs for capital expenditure while short term financing is requirement for certain expenditure like procurement of raw materials, payment of wages, day to day expenditures. Working capital management is the short term finance of

business which is a closely to trade between profitability and liquidity. Efficient working capital management seeks to improve the operating performance of business concern and it helps to meet the short term liquidity. Hence, the study of working capital management is not only an important part of financial management but also an overall management of a business concern(Paramasivan C;Subramania T,2009)

Inflation on the other hand affects working capital management and policy. It plays out on the balance sheets and the income statement of businesses and shareholders. Anticipating the future effects of inflation can work to the advantage of the savvy financial manager. The fundamental principle to be followed in the inflationary times is that cash is guaranteed to lose value over time while the physical assets will gain in value. Incorporating this principle into all financial transactions becomes critical for success (Carl S; Dan L;Ellisabeth D,2011).

Shareholders, economies and lenders have invested heavily in the listed firms financially and providing a healthy environment for conducting business. Therefore these stakeholders expect such companies to perform to the expected standards. Some companies have so far performed well while others have suffered declining performance. Some companies have been listed from the NSE due to financial reasons (Chebii, Kipchumba,&Wasike,2011).

Working capital presents a huge opportunity for companies to release cash from their balance sheets and operate more effectively. Actually well managed cash provides firms with growth without the need for additional funding (Frankfurt Business Media, 2012).

From company's annual reports from Nairobi Security Exchange (2013), it is evident that many companies quoted at Nairobi Stock Exchange do not pay dividends consistently, and when they pay, the level of payout is very low contrary to shareholders' expectations. Further with corporate failures witnessed in Kenya like Uchumi Supermarkets and Kenya Cooperative Creameries, with some undergoing through receivership Maina&Sakwa(2010), there was need and motivation to undertake this study on companies whose business is the distribution of petroleum products as they require a huge working capital.

Entities always faced with increasing pressure from costs rising and financial needs growing because of increased competition in global market. Because of this, they are looking for more methods to operate. Working capital management is one of the methods that have been considered intensively in financial management literature.

The competition is increasing drastically; consequently companies are becoming more keen their working capitals.

1.1 Objectives of the study:

1. To examine how cash influences organizational performance.
2. To identify how inventory influences organizational performance.
3. To establish the influence of receivables on organizational performance.
4. To explore effect of payable on organisational performance.

1.2 Research Questions:

1. How does inventory influences organizational performance?
2. How do receivables influence the performance of an organization?
3. How do payables affect organizational performance?
4. How does cash contribute to the performance of organization?

2. LITERATURE REVIEW

The main theme of the theory of working capital management is the interaction between current assets and current liabilities and it involves managing the balance between a firm's short-term assets and short-term liabilities with an aim of ensuring to continuity of operations (Pandey, 2011).

2.1 Cash Theory:

Cash includes money at hand, petty cash, bank account balance, Customer, customer cheques; it includes also a portion of unutilized portion of an overdraft facility or line of credit. Davidson (1992) defined cash management as a term which refers to the collection concentration and disbursement of cash. It encompasses a company's level of liquidity,

management of cash balance and short term strategies. Pindado (2004) also defines cash management as part of working capital that makes up the optimal level needed by a company. Bort (2004) noted that, cash management is of importance for both new and growing businesses. Companies may suffer from cash flow problems because of lack of margin of safety in case of anticipated expenses such that they experience problems in finding the funds for innovation or expansion. Weak cash flow makes it difficult to hire and retain good employees (Beranek, 2000).

Ross (2000) says that, it is only natural that major business expenses are incurred in the production of goods or the provision of services. In most cases, a business incurs such expenses before the corresponding payment is received from customers. In addition, employee salaries and other expenses drain considerable funds from most business. These make effective cash management an essential part of the business financial planning. According to Bort (2004) cash is the lifeblood of the business. The key to successful cash management lies in tabulating realistic projections, monitoring collections and disbursements, establishing effective billing and collection measures, and adhering to budgetary parameters because cash flow can be a problem to the business organization.

2.2 Inventory Theory

Inventory is the raw material, work in progress goods and completely finished goods that are considered to be the portion of a business' assets that are ready or will be ready for sale. Inventory control systems have been of concern for many years to business firms worldwide. Inventory control systems play a crucial role in enhancing effectiveness and efficiency in handling inventory of business firms. Companies have been continually in search for sources of sustainable competitive advantage in their operations. Therefore, there is need for business enterprises to embrace effective inventory management practices in order to improve their competitiveness (Rajeev, 2008). In 1980s inventories of raw materials, work in progress components and finished goods were kept as a buffer against the possibility of running out of needed items (Salawati, Tinggi, & Kadri, 2012). However, large buffer inventories consume valuable resources and generate hidden costs (Salawati, Tinggi, & Kadri, 2012). Too much inventory consumes physical space, creates a financial burden, and increases the possibility of damage, spoilage and loss (Nyabwanga & Ojera, 2012). On the other hand, too little inventory often disrupts business operations (Dimitrios, 2008).

Kenya manufacturing firms are facing competition in the current markets which has led to the need for coming up with better methods of managing and measuring how resources are utilized by various jobs or products, and therefore eliminate any wastage in the supply chain (Ondiek & Odera, 2012). Consequently, many companies have to adopt appropriate inventory control systems leading to reduction of inventory and improve operational performance of tea firms. Chen, Frank, & Wu, (2005) observed that the firms with abnormally high inventories have abnormally poor stock returns. They further argued that firms with slightly lower than average inventories perform best over time.

According to Hardgrave, Langford, & Waller, (2008) firms have to acquire the right technology of inventory control systems for managing their supply chain inventories. Brent & Travis, (2008), examined inventory control systems through collaborative models. They further discussed the integration of traditional logistics decisions with inventory management decisions using traditional control models. Inventory control systems would integrate the farmers, tea factories and customers of the tea products. However, according to Mathuva, (2013) the direction of the relationship between inventory control systems and operational performance of business firms had not been clear. Furthermore studies on the relationship between inventory control systems and performance had produced mixed results (Gill, Biger, & Mathur, 2010). This acted as the fundamental concept behind the present study.

Inventory control is the supply of goods and services at the right time with the right quality and quantity. It is a reliable means in which businesses are managed to ensure customers are satisfied and organization remains in operations via minimization of losses. Inventory management has been a problem to many business organizations in Nigeria. Inventories provide a significant link between production and sales of product, and constitute a large percentage of the cost of production. It is one of the most expensive and important assets of many manufacturing companies representing a considerable percentage of the total invested capital. At any level of a firm, inventory is among the largest investment made and therefore logically deserves to be treated as a major policy variable, highly responsive to the plans and style of top management. However, to date in most organization, both analysts and managers have been relatively unsuccessful in convincing top management to give this area the due consideration that it logically deserves (Ogbo, 2011).

Inventory is the stock of any item or resource used in an organization. Inventory includes: raw materials, finished products, component parts, supplies, and work-in-process. An inventory system is the set of policies and controls that

monitors levels of inventory and determines what levels should be maintained, when stock should be replenished, and how large orders should be.

2.3 Receivables Theory:

Accounts receivable refer the unpaid claims a firm has over its customers at a given time, usually comes in the form of operating line of credit and is mainly due within a relatively short time period (up to one year). The volume of accounts receivable indicates firm's supply of trade credit while accounts payable shows its demand of trade credit. The study of accounts receivable and accounts payable during periods of financial crisis is an important topic, particularly when the global economy is going through a credit shock. During global financial crisis, characterized by high liquidity risk faced by the banks, trade credits may increase, operating as a substitute for bank credits, or decrease acting as their complement. Bastos and Pindado (2012).

In order to keep current customers and attract new ones, most firms find it necessary to offer credit. Accounts receivable represents the extension of credit on an open account by a firm to its customers. Accounts receivable management begins with the decision on whether or not to grant credit.

2.4 Payables Theory:

Accounts payable is an accounting entry that represents an entity's obligation to pay off a short term debt to its creditors. The accounts payable entry is found on a balance sheet under the heading current liabilities.

2.5 Gaps in the literature review:

Working capital management involves the management of most liquid assets of the company and its liabilities to enhance organizational performance. It entails management of inventory, cash in hand and at bank, management of receivables, and management of creditors. Management of inventory is to insure that a company has proper quantity and incurs less associated cost of the stock. However, for products whose prices are by the government can cause a loss to the firm. Recently, the government of Rwanda has reduced the selling price on fuel by Rwf 50, companies which had huge stock have experienced losses. One of the weaknesses of stock management is that it can't predict future prices/costs.

The objective of management of receivables is to keep current customers and attract new ones hence increasing sales and reducing bad debts and recovery expenses. This theory does not take into consideration the situation when the supplier of every supplier firm takes the same measures of collecting debtors earlier. At this time the organization will always be having a line of credit from bank. Interests attached to credit line are attached with interests which are expenses to the company; therefore the company performance is affected negatively.

3. RESEARCH METHODOLOGY

3.1 Introduction:

Research design, population and the target population, sampling frame, sample and sample techniques, instruments, data collection procedure; data processing and analysis of research findings were described in this chapter.

3.2 Research Design:

To remain consistent with other studies (Vural, Sokmen, & Cetenak, 2012), the study used quantitative method to carry out properly the research. The researcher used this type of research because it is dealing with mathematical issues of how working capital management affects organizational performance.

3.3 Population of the study:

The target population for this research composed of employees at HASHI Energy Rwanda. Total employees of the company were 105 in different categories. The population was constituted with 6 upper level managers, 6 Middle level managers, and 93 operational staff.

3.4 Target Population:

This study's target population was employees of one of Rwandan petroleum industries called HASHI Energy Rwanda as it was chosen by the researcher as Case Study Company.

3.5 Sampling Frame:

In order to get complete data, the study used staffs from procurement department for stock; from operations; from marketing for Receivables; and finance department for the cash.

3.6 Sample and sampling technique:

Due to lack of time and financial resources, the study made a sample to be able to conduct the research work. Sample size was not taken randomly rather was the real result of the calculation.

3.7 Sample Size Calculation:

There are several approaches to determining the sample size. Within this study, the researcher used the strategy of calculating the sample size for proportions. For this population, the sample design was done using the formula of Morgan with confidence interval of 90% and a margin error of 10% as follows:

$$n = \frac{N}{1 + N(e^2)}$$

Where,

n: the minimum sample size

N: the total population.

e: the margin of error estimated at 10%

Using this formula, taking the level of confidence of 90% and obtained the following:

$$n = \frac{N}{1 + N(e^2)} = 105/2.05 = 51.21 \approx 51 \text{ Respondents.}$$

The sample of this study is 51 respondents.

3.8 Instrument:

Research instrument is referred to a testing device for testing a given phenomenon. During this work, the researcher used questionnaires and unstructured interview.

3.8.1 Questionnaire:

In the process of collecting data, the researcher used structured questionnaires to be responded by the sampled respondents within the organization. By this instrument the respondents read questionnaires themselves and answer them without the assistance of the researcher.

3.8.2 Secondary data:

These are data that have been already collected by others and readily available from other sources. Such data are cheaper and more quickly obtainable than the primary data. The researcher used data from company records such as audited financial statements, brochures, and so forth. In this study we used data concerning balance sheets of this company from 2011 to 2014. They helped us to compute Gross Operating Profit, Days in accounts receivables, Days in accounts payables, Days in inventory and Cash Conversion Cycle which are major variables under analysis.

3.8.3 Data collection procedure:

To get the permission to collect Data, the researcher got the approval letter from Jomo Kenyatta University of Agriculture and Technology (JKUAT). This permission letter was presented to the General Manager of the organization under case study. Thereafter the researcher booked appointment from the concerned departments.

3.8.4 Data processing and analysis:

Data collected were analysed basing on objectives of the study. The regression analysis was used to establish a relationship between the independent variable and organizational performance. Regression analysis is the study of how independent variable(s) affects dependent variable(s).

3.9 Population:

With this study on the performance of effects of working capital management of company performance, the information is get from the finance department of Hashi Energy ® Ltd.

The researcher used non-probability sampling where by the sample units were the knowledgeable persons on the finance.

3.10 Data Analysis Design:

Data of account receivable, account payable, inventories, sales turnover, total assets, and cost of goods sold were extracted from the annual financial statements of the sampled company.

Raw data were analysed then transformed into meaningful information as the way of easing their understandability. This is a quantitative and descriptive design.

Data provided by the respondents in their own words are the qualitative methods. By contrast, quantitative method is a type of method where the researcher is interested in quantities and numbers. The researcher analysed secondary data by computing regression analysis where Gross Operating Profit is the dependent variable.

To find out the difference between the effects of the working capital management on performance of firms in different sectors, a one-way ANOVA was carried for each variable.

The following regression equations were estimated;

$$\text{Model I: } \text{GOP} = \beta_0 + \beta_1 \text{DR}_{it} + \beta_2 \text{LNSALES}_{it} + \beta_3 \text{INFL}_{it} + \epsilon_{it}$$

$$\text{Model II: } \text{GOP} = \beta_0 + \beta_1 \text{DP}_{it} + \beta_2 \text{LNSALES}_{it} + \beta_3 \text{INFL}_{it} + \epsilon_{it}$$

$$\text{Model III: } \text{GOP} = \beta_0 + \beta_1 \text{INV}_{it} + \beta_2 \text{LNSALES}_{it} + \beta_3 \text{INFL}_{it} + \epsilon_{it}$$

$$\text{Model IV: } \text{GOP} = \beta_0 + \beta_1 \text{CCC}_{it} + \beta_2 \text{LNSALES}_{it} + \beta_3 \text{INFL}_{it} + \epsilon_{it}$$

$$\text{Model V: } \text{GOP} = \beta_0 + \beta_1 \text{DR}_{it} + \beta_2 \text{DP}_{it} + \beta_3 \text{CCC}_{it} + \beta_4 \text{LNSALES}_{it} + \beta_5 \text{INFL}_{it} + \epsilon_{it}$$

The last model was estimated as a control model to establish the relationship and significance of the individual working capital components to the overall model as done by Mathuva (2010) and Cyprian Nyarige Nyamweno (2014).

Model I: Relationship between account receivable and Gross profit

Model II: Relationship between account payable and Gross profit

Model III: Relationship between inventory and Gross profit

Model IV: Relationship between cash and Gross profit

Model V: Relationship between account receivable, account payable, inventory, cash and Gross profit.

During data analysis, researcher examined each item individually to find out its Relationship on company performance.

4. RESULTS

Findings revealed that satisfactory performance of manager would increase profitability by reducing CCC. DR and CCC are negatively correlated with GOP indicating that if the both duration of both increase, it will have a negative impact on the profitability. DP and INV are both positively correlated with GOP meaning that an increase in DP and INV leads to increase in GOP. Furthermore, the results reveal that LNSALES and INFL are directly correlated with GOP indicating that profitability increase with increase in both size of the firms and inflation.

The research found out that DR has a negative effect on GOP meaning an increase in the DR leads to a decline in GOP. A one day increase in DR is associated with a 0.5% decrease in profitability. This negative relationship is consistent with the cost trade-off theory.

Results revealed that DP has a direct effect on GOP with a one day increase in the days of accounts payables which is associated with increase in GOP by 0.8%. LNSALES has also a direct effect on GOP with a coefficient of 0.0565 meaning that a 1% increase in sales leads to a 5.65% increase in GOP which means that under high sales level, a company will make more profits by delaying in paying off its creditors. The company will utilize the cash due to the creditors so to increase its production thereby influencing its profitability. The Inflation also was identified as being indirectly related to the GOP with coefficient of -0.0732 meaning that a 1% increase in inflation, leads to a 0.732% decrease in profitability. During high inflation, company will delay its payments to creditors in order to reinvest to increase its profitability. This is because company finds it hard to access credit from the banks as interest for such loans will increase with inflation.

The results revealed that the days in inventory has a direct effect on GOP with a coefficient value of 0.001 meaning that one day stay in inventory leads to a 0.1% increase in GOP. This implies that an appropriate and timely flow of inventory is necessary for the success and growth of company. LNSALES (0.0264) and inflation (-0.00778) were both found to affect GOP. LNSALES is interpreted to mean that a 1% increase in sales leads to a 2.64% increase in GOP. This is also from the theoretical relationship between sales revenue and GOP. And a 1% increase in inflation leads to a 0.0778% decrease in GOP and this happens because inflation reduces disposable income of consumers hence they cannot afford to buy more thereby reducing company's sales revenue. These results are consistent with that of Mathuva (2010) and Cyprian & Tobias (2014).

The findings showed that CCC has an indirect effect on GOP where a one day increase in cash conversion period has shown to lead to decrease in profitability of 0.23%. This implies that manager to increase profitability, he should reduce the CCC and this is also consistent with cost trade-off theory. LNSALES and inflation were found also to have effect on gross operating profit with coefficient values of 9.975 and 0.586 respectively. This means that at high inflationary times, company will try as much as possible to shorten the CCC to protect the sales gains from being eroded by inflation and take advantage of delaying the cash to creditors and making the most out of it.

The findings confirm that DR (-0.232) and CCC (-0.292) have a negative effect on GOP while DP and DI are positively related to GOP (0.301, 0.165 respectively). LNSALES (0.135) has a positive effect on GOP while inflation (-0.00632) has a negative effect on GOP.

5. CONCLUSION & RECOMMENDATIONS

The main objective of this study was to assess effect of working capital management on organizational performance. Specifically, the researcher intended to explore the company's inventory conversion period on organizational performance, to examine how the company's average collection period influence the performance of the organization, investigating how the company's payables deferral period affect organizational performance and also exploring how cash in contribute to the company performance. Finally, the working capital management was found to have a significant effect on performance of the company.

Furthermore, with secondary data got from Hashi Energy Rwanda, the researcher has run tests of regression analysis to examine the effect of working capital management on firm profitability. The results revealed that DR and CCC have a negative effect on GOP while DP and DI are positively related to GOP. This implies that by shortening collection period and CCC Company may increase their profitability and an adequate and timely flow of inventory is imperative for the success and growth of any company. Also, Control variables LNSALES and IR were found to have different effects on the choice company's working capital policy. Thus working capital management is viewed as an effective lever to increase cash flow and preserve, or even to enhance company value.

Working capital management was found to have effects on organizational performance. The effective management of assets and liabilities is very important to achieve a balance between profitability and risk that contributes positively to the firm's value. Thus, effective management of account receivable, account payable and inventory is crucial to analyze working capital. As it was emphasized by Praxedes (1990), Proper management of working capital is necessary function of all business operations. Skillful working capital management could mean great savings for the company, and would maximize the company's profit and thus a good performance.

Based on results of regression analysis, the management of a company can create more value for its shareholders by reducing the CCC and DR and also by lagging payments to their creditors taking care not to ruin their credibility which may prevent future credit facilities and possible litigation from creditors in order to overcome negative effects of DP and DI. The reduction of the days in accounts receivable will facilitate the company to have ready cash to reinvest and can prevent the cash from getting eroded by effects of inflation as well as benefit from cheap source of financing. The increase in inventory levels also will help the company to create value but this requires efficient level that can maximize returns and minimize the costs of keeping it considering the effects of inflation.

5.1 Recommendation:

Keeping a positive net working capital is very crucial to improve performance of company. Therefore, each company has to struggle with maintenance of current assets exceeding the current liabilities.

Future study should use other softwares like STATA as SPSS did not show deeply the results of significance in regression analysis and EVIEWS was not applicable due to limited number of variables.

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