



WORKING CAPITAL LEVEL AND PROFITABILITY OF MANUFACTURING FIRMS IN UGANDA: A RESEARCH PAPER

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Key words

Manufacturing firms, Profitability, Uganda, Working Capital Level,

ABSTRACT The purpose of this paper is to obtain evidence from different theories like Baumol Theory, Net Trade Cycle Theory, Agency Theory and the Resource – Based Theory and to establish whether working capital level has a relationship with profitability of manufacturing firms in Uganda. The data was analyzed using SPSS (version 20.0), the equation was obtained by both correlation analysis and pooled panel data regression models of cross sectional and time series. The correlation between the log transformed ROA (profitability) and Working Capital Level was weak and non – statistically significant ($r = -.077, p > .01$). The model of goodness of fit showed a weak and non – statistically significant relationship between Working Capital Level and Profitability, $R^2 = 006, F = (1, 87) = .523, p > .05$. The model of overall significance also revealed that findings were not sufficient to support influence of Working Capital Level on Profitability. The regression coefficient (β) value was -0.000001 and significance level $.472$ which confirms that relationship is statistically insignificant. Most manufacturing firms in Uganda have a perception that manufacturers need liquid much more than anything else to enhance profitability, probably explaining why some manufacturing firms have not lived long enough to realize their dream. This study confirms that Working Capital Level has no significant effect on profitability. Appropriate levels of working capital can be managed through proper control of cash, accounts receivable and inventory level. In the Ugandan context, manufacturers

could use these findings as a guide line and do further research to check on variables that could enhance profitability of manufacturing firms. The study is also one of the few that partly answer questions relating to working capital level and profitability of manufacturing firms in Uganda. The study contributes to literature in that it has taken into account a mediating variable and a moderating variable which variables have not been used in any research known to the researcher and some theories have been brought up in support of the study such as the Baumol Theory, Net Trade Cycle Theory, Agency Theory and Resource – Based theory which involves the ability of business managers to put emphasis on effective management of current assets of the business (Alvarez & Busemitz, 2001).

Paper type: Research

Introduction Working Capital Level (WCL) denotes the financial amount injected to Working Capital (WC) that a firm may choose to operate with. Large amounts of Current Assets (CA) can cause a firm to realize low returns on the venture made if not well managed. Nevertheless, units with very low current assets may suffer inadequacies and challenges in upholding fair operations (Van - Horne & Wachowicz, 2000). It is therefore important that financial managers focus their attention to determining an optimal level, which maximizes return on investment without putting the firm to a high liquidity risk. The management of the WCL is a tool used to safeguard firms against financial disruptions and when managed purposefully can enhance a firm's competitive position and profitability (Gill, 2011). Management of working capital level is very crucial in determining firm performance since it has an effect on the liquidity and profitability levels (Vahid, Mohsen & Mohammadreza, 2012). Working capital level may be grounded by the Baumol Theory, the Net Trade Cycle Theory, Agency Theory and Resource – Based Theory.

Working Capital Level Working capital (WC) is referred to as the resources obtained for financing the daily obligations of business activities (Adeniji, 2008). Working capital is also seen as the driving force for productive units and is used for short term financing (Dong & Su, 2010). Therefore, it is important for firms to maintain sustainable investment in WC to enable their survival over a period of time (Bhunja & Das, 2012) as inefficiency in the level of WC may cause adverse effects on firm's performance (Islam & Mili, 2012). Akinsulire (2008) defines WC as resources necessary for daily manufacture of goods for sale by a firm. It is expressed as the excess of CA over CL, this is an indicator that a company has funds to settle current liabilities as they occur.

Irrespective of the level of WC a firm maintains, an opportunity cost is incurred, which affects either the firm's liquidity or profitability. Increasing WC by taking long to settle incoming invoices from suppliers would raise interest expense and even make the credit rating weak (Sharma & Kumar, 2011) and on the other hand ensuring an optimal investment in accounts receivable, a firm must have a suitable credit policy to reduce costs that may arise due to failure of clients to settle their debts like bad debts and costs of recovering debts by the firm (Filbeck & Kruegar, 2005). As regards inventory, when a firm maintains a high level of inventory in raw materials and finished goods, smooth production and sales will be ensured. However, problems of high level of inventory will crop in like high holding costs and abnormal wastage which will affect firm profitability (Pandey, 2008). Having low inventory level is risky as ordering costs will appear high leading to running out of stock. Watson and Head, (2010) assert that maintaining optimal inventory and cash levels has benefits but involves serious planning and controlling cash inflows and out flows within the firm (Pandey, 2008). Idle cash in the statement of financial position would not generate any profit whereas little cash will cause shortages in inventory and will freeze payments of expenses in the firm which may affect firm. Working capital procedures try to attain the optimum level of WC as both shortage and excess of WC involves a cost to the business. When the levels of CA and CL are well managed, there is an improvement in cash level and this is reflective in enhancement of the value of the shareholders (Jeng - Ren, Li, & Han - Wen, 2006).

Motivation and contribution of the paper The manufacturing sector in the Ugandan economy remains one of the most powerful engines for economic growth. The manufacturing industry has to a great extent curbed the level of unemployment especially among the youth in the Ugandan economy and has brought about an improvement in the balance of payment in that some of the manufactured products cross borders and are sold internationally. Some manufacturing firms in Uganda have been referred to as distressed after failing to meet their debt obligations on loans they had acquired. Such firms have been appealing to the government for a possible bail out and an example is Roofings Ltd which has obligations of shs 201 billion on a loan from the international Finance Corporation (IFC) and shs 8 billion from Diamond Trust bank. This is a clear indication of liquidity problem reflecting failure in managing working capital and thus in turn affects the profitability of the firm. Studies regarding working capital in manufacturing firms advocate for management of the components of working capital and ensuring that these

components are at optimal levels. The reasons for previous studies' focus on working capital is because of its crucial influence as a resource and its important role in manufacturing firms in Uganda. It is widely accepted that the profitability of a business concern depends upon the manner in which working capital is managed (Kaur, 2010). Both inadequate and excessive working capital positions are dangerous from the point of view of a firm (Islam & Milli, 2012)

Theoretical Foundation. A theoretical frame work avails the base for conducting the study and interpreting the results (Turner et al., 2013). The theories upon which working capital level is based vary from one firm to another and these include; the Baumol, Cash Conversion Cycle, Agency, Net Trade Cycle and Resource – Based Theories.

The Baumol Theory. Baumol (1952) designed a cash management model which offers a conventional method for ascertaining a firm's optimal cash balance under certainty. It provides that cash management and inventory management have a similar problem. The model assumes that the firm is able to predict cash requirements with confidence and that cash outflows are uniform over a period of time. Uniformity in cash flows is a contradiction of the reality in that it is almost impossible to have uniform cash flows as financial requirements differ over a period of time. It further assumes that the opportunity cost of holding cash is known and uniform and the same transaction cost is to be incurred whenever securities are converted into cash. This theory was relevant to the study because it is a working capital theory and represents the interplay between CA and CL and the flow of liquidity in the firm. The investigation therefore confirmed no relationship between WCL and profitability.

The Resource – Based Theory. Business profitability and survival highly depends on the resources invested in the firm in various forms. Firm resources include capital invested and brand names among others. Therefore the sources of a given firm's capability are referred to as resources (Grant, 2001). Resource – Based theory involves the ability of business managers to put emphasis on effective management of current assets of the business (Alvarez & Busenitz, 2001). Current assets comprise inventory, accounts receivable and cash among others and when these are managed effectively, good results are expected to be yielded. Akinsulire (2008) is in support of this theory when he says that WC are resources necessary for the daily manufacture of goods to be sold by a firm. Firm resources must therefore be accorded utmost importance as they

are a vital aspect in manufacturing firms. This theory is relevant to the study in that once managers effectively control the resources of a firm, an association between WCL and profitability manifests.

The Net Trade Cycle Theory. The net trade cycle theory (NTC) was initiated by Shin and Soenen (1998) and is not different from the CCC except that it is presented in percentages in relation to the turn over. They further asserted that NTC is a better WC efficiency measure compared to CCC as it shows sales period the firm has to finance and this improves the financial management of the production unit. The study was anchored on this theory because it is relevant to the study in that it depicts sales period to be financed in relation to firm size and takes into consideration short term assets. Weinraub and Visscher, (1998) argue that finance approach of a firm is of fundamental importance and has an effect on profitability and liquidity.

Agency Theory. The agency theory poses as a very crucial theoretical paradigm in Finance and Accounting and was introduced by Jensen & Mecking (1976). An agency relationship involves a business engaging an agent to carry out functions on their behalf which concerns delegation of authority in making decisions. This relationship arises when the owner of the firm does not manage or control it by himself. Agency theory is deeply rooted in Economic theory and states that investors who own the company delegate the operations of the business to the manager or an agent. Although the theory has a wider applicability, it is still surrounded by a controversy in that the interests of the principal and agent differ. Agents are entrusted with resources and are urged to ensure that firm's resources yield fruit but in most cases the agents have their own personal interests that may even have adverse effects to the firm. The relevancy of agency theory to WCL could be judged from the angle of financial manager, who is delegated power to work on behalf of the owners of the business. He is entrusted with taking decisions regarding short term assets of the business and ensuring that there is profitable investment in the venture.

Empirical Literature Review

This section looks at pragmatic literature, which concerns the link between the WCL and profitability.

Working Capital Level and Profitability. An investigation was made by Lazaridis and Trifonidis (2006) whereby they studied relationship of WC and profitability of 131 Greek companies that were quoted for a period of five years (2001 – 2004) using the regression estimation approach.

Their revelation was that Cash Conversion Cycle (CCC) had a negative impact on gross profit besides other working capital components. Consistent with Deloof (2003), he argues that using capital that is tied up enhances returns, while the negative effect of payables could be by low profitable firms delaying settlement of their payables. They concluded that having an optimal level of WC components improves performance.

By shortening the conversion period of inventory and cash conversion cycle, Nobanee and Alhajjah, (2009) proved that it was possible for managers to improve and increase profitability of their companies. By using Pearson correlation coefficient, they found a direct association between profitability and accounts payable period which form part of working capital management and so concluded likewise. This observation was carried on a sample of 2123 listed Japanese firms and to arrive at the results, however, their study ignored firm characteristics.

By using correlation analysis and weighted least square (WLS) regression Gill, Biger and Mathur (2010) analysed 88 listed firms on New York Stock Exchange NYSE for a 3 year period. Observations indicated a profound connection between the CCC and profitability. The study emphatically affirmed the possibility by managers to create profit for their companies if they could correctly regulate the CCC as well as maintaining an optimal level of accounts receivable. The study considered listed firms unlisted firms were left out.

A negative relationship was observed after a study of Dong and Su (2010) on using pooled data regression. Secondary data on listed companies of the Vietnam Stock Exchange (VSE) was obtained and the study considered three constructs of working capital management thus; accounts receivable, inventory holding period and cash conversion cycle. Resultant observation held that long hold of inventory would affect profitability negatively and similarly a longer or shorter accounts receivable period would also influence returns of a company.

According to Mathuva (2010), his focus on relationship between WCM and profitability showed an indirect relationship between the time firms take to be cleared by their clients and corporate profitability. His revelation was that there appeared a direct association between days' inventory due and profitability. Firms had a perception that more inventory influence costs and cut down challenges like lack of inventory that may lead to loss of customers for failure to provide enough products. The study also exhibited a direct linkage between the average payment period and

profitability. However, small firms were excluded meaning that the results of this study could only be compared to large companies.

Sharma and Kumar (2011) investigated the relationship between WC and profitability of firms in India. Data was obtained, a sample of 263 firms at Bombay Stock Exchange (BSE) from 2000 – 2008 and this data was analyzed using OLS multiple regression. Findings were that WCM and profitability correlated positively and it was further revealed that number of days accounts payable and inventory are not positively correlated with firm returns, while cash conversion period and accounts receivable displayed a positive relationship with profitability.

Researchers such as Bhunia and Das (2012), investigated the relationship between WCM and returns of firms in India. The predictor variables considered in the study were ratios that influence WCM and were; liquidity ratio, current ratio, debt equity ratio, cash position ratio, inventory turnover ratio and payables' turnover ratio. Having used multiple regression analysis a weak relationship was displayed between WCM and profitability. However, the current study used a different measure of profitability.

Oladipo and Okafor (2013) investigated the implication of WCM practices on profitability and dividend payout ratio. Having extracted data from twelve manufacturing firms in Nigeria from 2002 up to 2006, correlation analysis was done and Ordinary Least Square (OLS) regression technique were performed and it was discovered that NTC and debt ratio promoted corporate profitability. Study would have been improved if in addition to debt, size had been investigated as well.

Samilogh and Akgum (2016) examined the relationship between WC and profitability for a period of ten years. A sample of 120 manufacturing firms from Turkey was taken into consideration and multiple linear regression models were used for analysis. Findings showed a significant and negative relationship all variables.

Kasozi (2017) analyzed WCM and profitability in South Africa. Panel data was used and outcome was that days sales outstanding and accounts payable period were negative and significant in relation to profitability. Similarly, a significant relationship between days inventory outstanding and profitability was displayed implying that productive units with optimal levels of

inventory suffer less from stock outs. However, the measure of profitability was Earnings before Tax which is different from the current study that used Earnings after Tax.

Having investigated the effect of WCM on Jordan firms, Dalayeen (2017) used secondary data from financial statements to check relationship between predictor variable WC and profitability. The proxy for profitability was ROCE and findings were that a significant impact of WCM related to returns of firms.

Methodology

This study used a sample of 116 manufacturing firms from 12 sectors, 38 availed financial statements respectively. The response rate was therefore computed based on 116 manufacturing firms and was 33%. This rate is adequate because it is very difficult to obtain financial statements from manufacturing firms given the sensitivity of the information in the financial statements and this is attributed to the fact that most firms may not believe that such information is required for academic purposes only and some firms thought the information would be divulged to competitors. Other firms argued vehemently that such information was private and confidential.

Firms having data for the required five years was very difficult to obtain as firms begin operations at different times. For some reason or the other, some firms that had been sampled did not have the data for the five years. Some had for four years, others three years or two years data was available. Worse still, while some sampled firms had all sets of data for the five years, some key aspects would be found missing. In the event, firms with serious missing data which could not be mitigated were left out and the firms considered were those that had all the data for the required period. This therefore reduced the response rate to 16% as there were 89 observations in total. Boeckelman, (2017) argues that average response rates hover around 26%, while others say a response rate between 10 – 20% is reasonable.

Results and discussion

Table 1: Pearson Product-Moment Correlations between Return on Assets, Firm Size, Working capital level and Working capital financing

| Scale | 1 | 2 | 3 | 4 |
|---------------------------|---|---------|-------|---------|
| Return on Assets | 1 | -.390** | -.077 | .143 |
| Firm Size | | 1 | .003 | -.437** |
| Working Capital Level | | | 1 | -.123 |
| Working Capital Financing | | | | 1 |

** . Correlation is significant at the 0.01 level (2-tailed).

The study revealed that the correlation between the log transformed ROA (profitability) and WCL is weak and non – statistically significant ($r = -.077$, $p > .01$) as shown in Table 1 suggesting that as WCL increases, ROA reduces. Working Capital Level have the following constructs; cash position level, accounts receivable level and inventory level. Cash level reflect liquidity and when it is high, profitability goes down and similarly when accounts receivable level goes up, the firm will incur costs of recovering debts which will affect profitability. On the other hand if accounts receivable level is low, this will translate into a low sales level leading to low profitability. A high inventory level will bring about costs such as holding costs, insurance costs among others and in turn profitability will reduce and on the other hand if inventory level is low, the firm will suffer stock outs and may lead to loss of customer loyalty.

Relationship between working capital level and profitability of manufacturing firms in Uganda.

The first objective of this study was to analyze the relationship between working capital level and profitability of manufacturing firms in Uganda and profitability was measured by Return on assets (ROA).

The study predicted that the relationship between working capital level and profitability of manufacturing firms in Uganda is not statistically significant. Simple regression analysis was used to assess if the association between working capital level (WCL) and profitability was statistically insignificant. To assess the association between working capital level and profitability, the following null hypothesis was tested.

Hypothesis 1: The relationship between working capital level and profitability of manufacturing firms in Uganda is not significant.

Table 2: Model Goodness of fit with Return on Assets as dependent variable and Working Capital Level as predictor

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .077 ^a | .006 | -.005 | .03676 | .006 | .523 | 1 | 87 | .472 |

a. Predictors: (Constant), Working Capital Level

b. Dependent Variable: Return on Assets

The results of simple multiple regression with Return on Assets as dependent variable and Working Capital Level as predictor are reported in Table 2. The multiple regression model produced $R^2 = .006$, $F(1, 87) = .523$, $p > .05$. The model reveals a weak non-statistically significant relationship between working capital level and profitability of manufacturing firms in Uganda. Working Capital Level accounted for 0.6% of the variance in profitability and the remaining 99.4% was accounted for by other factors.

Table 3: Model Overall Significance with Return on Assets as dependent variable and Working Capital Level as predictor

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|----|-------------|------|-------------------|
| 1 Regression | .001 | 1 | .001 | .523 | .472 ^b |
| Residual | .118 | 87 | .001 | | |
| Total | .118 | 88 | | | |

a. Dependent Variable: Return on Assets

b. Predictors: (Constant), Working Capital Level

The analysis from the model had F value of .523 at $p > .05$, the findings were not sufficient to support influence of WCL on profitability implying WCL is not a significant predictor of profitability as shown in Table 3.

Table 4: Regression coefficients with Return on Assets as dependent variable and Working Capital Level as predictor

| Model | Unstandardized Coefficients | | T | Sig. |
|-----------------------|-----------------------------|------------|--------|------|
| | B | Std. Error | | |
| 1 (Constant) | .058 | .004 | 14.838 | .000 |
| Working Capital Level | -9.889E-007 | .000 | -.723 | .472 |

Dependent Variable: Return on Assets

The regression coefficient (β) value of WCL was -0.000001 and significance level (p-value) of .472 confirm that the relationship is statistically insignificant as per Table 4.

The null Hypothesis one (H_1) that explored the relationship between working capital level and profitability (measured as Return on Assets) of manufacturing firms in Uganda by suggesting that there is no statistically significant relationship between WCL and Profitability. Results of this study indicate that the relationship between WCL and Profitability is not statistically significant ($p > .05$) as shown in Table 4. The null hypothesis (H_1) was therefore supported. In modeling for the effect of Working Capital Level (WCL) on profitability (P) the equation below was used with ϵ as error term

$$P_{it} = \beta_0 + \beta_1 WCL_{it} + \epsilon_{it}$$

$$P_{it} = .058 - 0.000001WCL + \epsilon_{it}$$

The regression coefficient of WCL is not different from zero and the strength of the relationship between Return on Assets and WCL was not statistically significant ($p > .05$).

The first specific objective of the study was to analyze the relationship between working capital level and profitability of manufacturing firms in Uganda. Hierarchical linear regression analysis was applied to determine the association between working capital level as the predictor variable and profitability as the outcome variable. It was hypothesized that the relationship between working capital level and profitability was not significant. The regression results confirmed the findings from the correlation as they depicted a weak and non – statistically significant relationship between working capital level and firm profitability and showed that working capital level does not influence profitability and this is not consistent with Gartia – Teruel and Martinez – Solano (2007).

The working capital level in the current study comprised cash level, accounts receivable level and inventory level. The cash level position was measured using the cash position ratio and a high ratio is an indication that the manufacturing firm has liquidity. This ratio measures the

percentage of realization of cash out of sales proceeds and the higher the ratio, the better will be the management of cash or idle cash will be minimized and this will have a positive effect on profitability. A firm desires to have an optimal level of liquidity as too much liquidity has an adverse effect on profitability and equally low level of liquidity has effects on profitability as well. In the Baumol Theory (1952), a cash management model was designed for determining firm's optimal balance under certainty. The model assumed that the firm is able to forecast its cash needs with certainty and that cash payments are uniform over a period of time. Uniformity of cash flows is a contradiction of the reality in that it is almost impossible to have uniform cash flows as financial requirements of firms differ. Liquidity is a vital aspect of firms and this is consistent with Mathuva (2010) when he explained that more profitable firms take the shortest time to collect cash from customers. It must be ensured that the three constructs are maintained at the optimal level because having them in excess or having inadequacy of these constructs may cause adverse effects to returns of the firm.

However, in the Ugandan context the cash payments cannot be uniform in the manufacturing firms as manufacturers differ in line of production and therefore there will be variations in the payments. In addition, Moyer et al. (2003) discovered that cash levels are of paramount importance to the liquidity position of a firm and if they are well maintained, they will save the firm from bankruptcy. Chatterjee (2010) was consistent with current study as he discovered a significant negative relationship between liquidity and profitability of the United Kingdom companies implying that when liquidity is high, profitability will be low and vice versa.

Accounts receivable level denotes the degree to which inventory of finished goods has been sold out on credit and inventory is sold out on credit to clients who are trust worthy and have a proven record in their credit status. Both cash sales and credit sales are combined to make up the total turnover of the business implying that they have an influence on firm profitability which contradicts the findings of the study. The level of accounts receivable has been measured by $\text{Accounts Receivable} \times 365 / \text{Net Sales}$, this can also be referred to as the Days Sales Outstanding. When this ratio is high, it implies that it is taking too long to recover funds that are tied up in accounts receivable and if the ratio is low, this implies that obtaining funds tied up in accounts receivable is fast and therefore the firm has enough liquid to produce and have a high rate of turn over which influences the profitability. As regards the study, Uganda manufacturing

firms have a high ratio of days' sales outstanding and therefore take many days to recover from the accounts receivable. If the ratio of Days Sales Outstanding is high, costs crop in like bad debts and discounts allowed which in turn impact the level of profitability. Financial managers in manufacturing firms should ensure that the ratio of days' sales outstanding is kept as low as possible. A high rate of turnover on the other hand may imply costs of recovering debts which would also influence profitability.

The inventory level was yet another construct of working capital level and its measurement was $\text{Average inventory} \times 365 / \text{Cost of goods sold}$. Inventory level comprises the following; raw materials, partially finished inventory and inventory of finished goods. The ratio of rate of turn over which measures the level of inventory is a clear signal of the movement of inventory in the manufacturing firm. The level of inventory could be improved by employing sales promotion techniques such as advertising which on the other hand has a cost associated with it. It should be done at the lowest cost possible because when this ratio is high, it is an indication that inventory is being turned very fast and this implies that there may be an effect on firm profitability. Consistent with the study, Barbosa and Louri (2005) found that the inventory negatively impacted on profits and even suggested that large inventories created a drag on firm profitability. Padachi (2006) found out that a high investment in inventories had an association with low profitability level. Deloof (2003) also analyzed a sample on Belgium industries and his findings were that firms could improve in performance by reducing the period for inventory conversion. Ogbo, Victoria and Ukpere (2014), who studied the relationship between effective systems of inventory management and firms' performance, found that flexibility in inventory control management was important to enhance firms' profitability. Mathuva (2010) had his focus on working capital management and profitability and according to his findings, there was a direct association between days' inventory and profitability. His perception was that firms with high levels of inventory influence costs and cut down challenges like lack of inventory that may lead to loss of customers.

The research findings of this study were consistent with other researchers like Dong and Su (2010) who used secondary data to investigate working capital management and profitability of manufacturing firms in Vietnam. As the working capital constructs, they applied cash conversion cycle, inventory level and accounts receivable level and related them to profitability. Resultant

observations held that long hold of inventory had a negative effect on profitability and similarly, a longer or shorter accounts receivable period influenced profitability of firms, their focus was basically management of the levels with an aim of getting to optimal levels. Lazaridis and Trifonidis (2006) carried out a somewhat similar study on working capital and profitability.

They applied levels of inventory, accounts receivable level, cash conversion cycle and accounts payable level and these had a negative impact on gross operating income which is consistent with the current study but on the other hand differed because they used accounts payable as one of the constructs which the current study did not use. Vida, Seyed and Rezvan (2011) investigated cash conversion cycle and profitability of 101 listed companies on Tehran Stock Exchange during the period 2004 -2008. Multivariate regression and Pearson Correlation were used to test hypotheses and findings were that cash conversion cycle had a significant relationship with profitability. These studies also differed from the current study in that they were carried out in developed nations and they did not use both moderating and mediating variables.

Conclusions and implications. The first objective was to analyze the relationship between working capital level and profitability of manufacturing firms in Uganda. According to the research findings, a weak and non - significant relationship was displayed between working capital level and profitability implying that any change whether positive or negative in the constructs of working capital level will have no influence on firm profitability. If the cash level is high, it is an implication of sufficient liquidity but on the other hand, may cause idle cash and this does not generate any profit. A high level of accounts receivable is an indication of high sales implying high profits though on the other hand, may bring about costs like bad debts and cash discounts. When inventory level is high, wastage may crop up. The optimal level of

working capital constructs is desired. The insignificant relationship between working capital level and profitability is evident.

The present study adds value to the existing theories in the management of working capital level constructs. The WCL constructs thus, cash level, accounts receivable level and inventory level all surface in the Resource – Based Theory, Net Trade Cycle Theory and the Agency theory and as all these are resources of the firm, they require effective management by whoever may be in charge and if duty is delegated to the agent, must ensure that they are well managed so as to enhance profitability of the manufacturing firm.

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PUBLICATION TWO

DOES WORKING CAPITAL FINANCING INFLUENCE THE LEVEL OF PROFITABILITY OF MANUFACTURING FIRMS IN UGANDA?: A RESEARCH PAPER.

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Abstract

Purpose

Methodology

Findings

Research implications

Originality/value

Key words

Introduction

Motivation and Contribution of the paper

Theoretical background

1.1.2 Working Capital Financing Approaches

Working capital involves the total resources needed by the firm to finance its daily activities (Nkwankwo & Osho, 2010) and therefore meaningful financing decisions, require assets to be divided into non – current assets, permanent CA and fluctuating CA. In an effort to determine whether there existed differences in working capital financing (WCF) among firms, Weinraub and Visscher (1998) developed a concept of aggressive, conservative and moderate approaches to financing. Further studies have since been carried out by different scholars among whom include (Nazir & Afza, 2009).

The conservative financing approach is a technique by which the firm opts to use more of long-term finance sources and less from short-term sources for its WC. When the asset and liability strategies are combined, the conservative strategy maintains a low level of short term liabilities thus below 0.5 and on the other hand, current assets are on the higher side of all the assets thus above 0.5 (Meszek & Polewski, 2006). This decision implies that the firm's funding is going to suffer a high interest and this will create an adverse effect on the firm's profit despite the avoidance of liquidity problems. The firm will primarily finance all the long term CA and most of its fluctuating CA using long term debt. When it chooses to adopt a conservative policy, it is just a trivial part of the circulating CA, which is funded by the short-term financial sources. Al – mawalla (2012) established that a conservative policy contains a notable influence on the firms' value and profitability.

In contrast, the aggressive financing strategy is where a firm primarily finances the circulating CA and majority of its permanent CA using short term financing and a small part of its permanent CA are financed by long term financing. In this strategy, the short term liability level is high thus above 0.5 with fewer current assets compared to all assets thus below 0.5 (Meszek & Polewski, 2006). Such a firm that adopts the use of short-term financial sources more than long-term financial sources will suffer a low cost against a high risk of cash and inventory shortage. Between the conservative and aggressive WC financing strategies lies what is termed as moderate financing strategy. It is termed moderate because those who adopt it use long term source to finance permanent current assets and short term source to finance fluctuating CA. The approach opted to finance WC by a firm is therefore very crucial since it will have an effect on its profitability and liquidity (Weinraub & Visscher, 1998)

Theoretical Foundation

A theoretical frame work avails the base for conducting the study and interpreting the results (Turner et al., 2013). The theories upon which working capital level is based vary from one firm to another and these include; the Baumol, Cash Conversion Cycle, Agency, Net Trade Cycle and Resource – Based Theories.

The Net Trade Cycle Theory

The net trade cycle theory (NTC) was initiated by Shin and Soenen (1998) and is not different from the CCC except that it is presented in percentages in relation to the turn over. They further asserted that NTC is a better WC efficiency measure compared to CCC as it shows sales period the firm has to finance and this improves the financial management of the production unit.

The study was anchored on this theory because it is relevant to the study in that it depicts sales period to be financed in relation to firm size and takes into consideration short term assets. Weinraub and Visscher, (1998) argue that finance approach of a firm is of fundamental importance and has an effect on profitability and liquidity.

Agency Theory

The agency theory poses as a very crucial theoretical paradigm in Finance and Accounting and was introduced by Jensen & Mecking (1976). An agency relationship involves a business engaging an agent to carry out functions on their behalf which concerns delegation of authority in making decisions. This relationship arises when the owner of the firm does not manage or control it by himself. Agency theory is deeply rooted in Economic theory and states that investors who own the company delegate the operations of the business to the manager or an agent. Although the theory has a wider applicability, it is still surrounded by a controversy in that the interests of the principal and agent differ. Agents are entrusted with resources and are urged to ensure that firm's resources yield fruit but in most cases the agents have their own personal interests that may even have adverse effects to the firm. The relevancy of agency theory to WCL could be judged from the angle of financial manager, who is delegated power to work on behalf of the owners of the business. He is entrusted with taking decisions regarding short term assets of the business and ensuring that there is profitable investment in the venture.

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2.3.2 Working Capital Level and Working Capital Financing Approaches

According to Moyer et al., (2003), working capital comprises 50 – 60 % in retailing and whole sale industries which is a large portion of firms and the 40% is considered to be in manufacturing. As a strategy, the firms could increase funds for expansion by downsizing

financing costs. They also discovered that cash levels are of paramount importance to the liquidity position of a firm and this helps the firm out of financial commitments and saves it from bankruptcy.

A relationship between conservative and aggressive WC financing strategies was examined by Afza and Nazir, (2007) on 17 industrial groups with 263 as sample on public companies quoted on Karachi Stock Exchange (KSE). They used cross sectional data for a six year period (1998 – 2003) in conjunction with ANOVA and Least Significant Difference (LSD) tests. Their findings were that, a significant difference existed between WC investment and WC financing. The rank order correlation confirmed that differences were stable for the six years. Finally, OLS analysis revealed a negative association between profitability of firms and the extent of assertiveness and strategies regarding investment and financing of working capital.

