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WORKING CAPITAL MANAGEMENT AND PROFITABILITY OF MANUFACTURING FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE, KENYA

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Abstract: **The inability of manufacturing firms to grow at the target rate of 8% per annum is slowing down the realization of vision Kenya's 2030. This is because the target can only be steered by an increase in profits. Managing working capital efficiently is vital to the overall corporate strategy of firms in creating shareholders value and wealth maximization. Limited studies have been conducted on working capital management (WCM) and its effect on profitability considering inflation as a moderator between the variables since vision 2030 was launched in Kenya thus leading to the study. The study was informed by components of working capital which are cash, inventory, debtors', creditors' management and the moderating effect of inflation to form the specific objectives. Findings from the regression analysis indicated that cash management has a negative and insignificant effect on profitability, inventory management has no significant effect on profitability, debtors' management has a negative and significant effect on profitability while creditors' management has a positive and significant effect on profitability. The test for moderation revealed that inflation has an insignificant moderating effect on the relationships between cash management, inventory management, creditors' management and profitability while it has a significant moderating effect on the relationship between debtors' management and profitability. The study recommends that management should ensure high inventory levels to reduce the costs of possible interruptions in the production process, negotiate shortest periods possible for payments of debts as longer payment periods decrease profitability, negotiate for longer payment period for paying creditors so as to invest in other profitable portfolios and lastly come up with structures to reduce credit sales since these debts are easily depleted by inflation.**

Keywords: **working capital management, cash, inventory, debtors, creditors, inflation, profitability, manufacturing firms and vision 2030.**

1. INTRODUCTION

Manufacturing sector has globally become the major contributor to realization of stable economy to the developing countries like Kenya (Amakom, 2016). Kenya's manufacturing sector today has become one of the most crucial sectors in the realization of vision 2030 since it bridges the income gap with the industrialized world (Kung'u, 2015). Structured working capital is vital for any firm targeting profitability (Musau, 2015). Working capital management is pertinent because of its influence on the financial performance of the company, its risk, and therefore its worth (Soimo, 2010). WCM not only improve profitability in today's unstable economy but also assist in meeting firm's daily operations. Consequently, it is an important issue to be knowledgeable and get the idea of the effects of working capital management as well as its effect on profitability of organisations (Kassim, 2011). Profitability is the measure of how well a firm is generating income to its owners and is an important aspect in WCM.

The influence to which working capital management has on the liquidity and profitability positions of the firm makes it to be a paramount financial function in any organization. It focuses on the invested money by shareholders so as to service the daily operations by the management of the organization. Working capital is arrived at by establishing the difference between current assets components which includes, but not limited to, inventories, debtors, cash balances, bank balances, marketable securities and current liabilities which as well includes, creditors, accrued expenses, short-term loans (Kusuku, 2015). Therefore, the efficiency of working capital management is primarily evaluated through the inventory management, receivables management, payables management and current and quick ratio. Profitability is a vital measure of financial performance which refers to the likelihood of a business to be financially successful (Hidaya, 2016).

1.1 Research Problem

The manufacturing sector of Kenya has contributed immensely to the growth of the country. The sector has experienced a stagnant 10% contribution to the gross domestic product (GDP) and this dropped to 8.4% in 2017 (KAM, 2018). According to the Big 4 Agenda, the sector should contribute 15% to the GDP by 2022 if the country is to achieve the middle income status as per the vision 2030. Companies such as CMC Holdings had to be delisted from the NSE due to financial implications (Chebii et al., 2011). The regulator of Nairobi Stock Exchange has had to put some public and private companies such as Hutchings Biemer and A Baumann under statutory watch out (NSE, 2010). This has however been a source of concern to the government and other stakeholders thus forming a platform for the study.

The profitability of manufacturing firms has been attributed to WCM (Kusuku, 2015; Polycarp & Tabitha, 2016). Inefficient working capital management damages a firm's profitability and its overall financial performance (Kassim, 2011). Empirical literature on working capital management and profitability in Kenya has focused majorly on the direct relationship and again not comprehensively. For example, Hidaya (2016) focused her study on the aggressive/ conservatism working capital management policies while Waithaka (2016) considers working capital management in terms of efficiency of its variables and on the other hand Kamula (2015) looked at working capital management in view of operating cycle. The current study aimed to find out both the direct influence of WCM on profitability and the moderating effect of inflation on the relationship.

1.2 Objectives of the study

The specific objectives of the study were:

i. To determine the effect of cash management on profitability of the firms.
ii. To establish the effect of inventory management on profitability of the firms.
iii. To determine the effect of debtors' management on profitability of the firms.
iv. To establish the effect of creditors' management on profitability of the firms.
v. To establish the moderating effect of inflation on the relationship between working capital management and profitability of the firms.

***The study formulated null hypotheses for each specific objective and tested the same at a level of significance of 0.05.**

1.3 Significance of the study

This study will be of relevance to the Government of Kenya since it will assist policy makers in formulation of policies pertinent to manufacturing firms listed on the NSE, Kenya. In addition, the findings of this study will be of value to the management of manufacturing firms as it gives insight concerning the degree to which WCM affects their profits. The study also educates the society and the general public on the influence of WCM on profit capacity of manufacturing firms listed on the NSE, Kenya. Finally, this study lays a foundation for academicians and gives guidance to those who may be interested in advancing the study in this field.

2. LITERATURE REVIEW

A study conducted by Muchoki and Njuguna (2020), on the effect of M&A on financial performance revealed that organizations used strategic alliances to gain more value. This means that, to obtain the necessary cushion against financial turmoil that affect the survival of small firms, it is important for organizations to gain more capital to run their day to day activities.

Küçükkocaoğlu and Bozkurt (2018) analyzed the effects of M&A on the performance of Turkish financial institutions. Research findings from the study indicate an increase in foreign capital investments owed to M&A which led to the strengthening of operations in the market. From this, organizations gained the necessary financial muscle to outshine their competitors.

According to Njambi and Kariuki (2018), in the banking industry M&A has been considered a strategy that can be used to overcome competition in the Kenyan market. Equally, Muchoki and Njuguna (2020) discovered that to overcome competition players in the Kenyan banking industry consider M&A as a tool since it accords firms' competitive edge in the market.

Warter & Warter (2015) in their paper, mention that due to challenges intrinsic in all bank M&A stages, turning a merger or acquisition into a success may be difficult. In order to deal with differences in regulatory and accounting systems and, cultural differences among banks with operations in different countries, a high-level of management skills and significant resources is required.

Kim & Finkelstein (2008) show that when banks merge, the combined bank can use the resources more proficiently by directing capital from the lower capital cost market to the market with greater return prospects.

3. THEORETICAL FRAMEWORK

The study was anchored by four theories namely: Trade off Theory, Cash Conversion Cycle Theory, Transaction Cost theory and agency theory. Trade off theory propounded by Myers (1984) proposes that there is an exchange between liquidity and profitability. A well-managed WC adds to an organization's overall success on the market regarding liquidity and it likewise contributes to the increase of profits (Jeng-Ren, Li & Han-Wen, 2015). Trade off Theory is applicable to the study as it assists in comprehending how the firms can manage their working capital components such as inventory in order to reduce the risk of bad debts so as to increase the levels of cash flows for the firms.

Cash Conversion Cycle Theory was introduced by Richards and Laughlin (1980). This theory shows the overlap among the constituents of working capital and the cash flow within a firm. It is used as part of the measure of working capital due to its capacity to display the time delay between expenditure for purchasing the raw materials and when the return for the finished products was being counted for (Padachi, 2006). The shorter the cash conversion cycle, the lesser resources needed by a firm, and the broadened the cash conversion cycle is, then the investments will be convoluted.

Transaction cost theory by Ferris, centres around transactions and costs that go to completing transactions by one institutional mode instead of another (Williamson, 1975). The theory's focal claim is that the transactions will be dealt with so as to limit the costs engaged with carrying them out (Muchina & Kiano, 2011). Administrators need therefore to come up with a way of decreasing costs and maximizing profit. Agency theory tries to clarify the relationship that exists between the management of an institution and the proprietors of the institution who generally are, the individuals holding stocks for the institution (Mulwa, 2015).In significance to this study, it purports that the financial performance of firms as far as Return on Equity is reliant on how managers approach their obligations to the firm so as to amplify shareholders' value. The financial performance will suffer in case the relationship between managers and shareholders is not positive.

4. EMPIRICAL REVIEW

Mohamad and Noriza (2010) analysed data from 72 listed companies in Bloomberg, Malaysia so as to determined effects of WC constituents on company's profitability and performance estimated by ROA, Tobin's Q ratio, and return on invested capital (ROIC). Multiple regression and correlation were utilized and demonstrated a noteworthy negative connection between working capital constituents and firm's overall performance. This study applied a different method of analysis from the present study which was anchored on panel data; therefore, panel regression model was utilized in the study as against multiple regression model. In addition, diagnostic tests were carried out on the study data before the regression analysis.

Kamula (2015) undertook a study to formulate the relationship between Working Capital Management and Profitability of Cement companies in Kenya. The population in view was both listed and unlisted cement companies doing business in Kenya as at 30-12-10. Spearman's Correlation analysis was applied and the study outcomes stated that there is a negative relationship between WCM and profitability. The study was on cement companies which do not give a clear view of the whole industry (manufacturing industry) considering that there are other firms which produce different products. Moreover, as a prolonged extension to the study by Kamula, the present study incorporated inflation as a moderating variable on the relationship between WCM and profitability.

Alipour (2011) considered 1063 companies listed in Tehran security exchange to examine the effect of working capital management on corporate profitability. He tested the hypothesis using Pearson's correlation and multiple regressions. He broke down that sale and profit of an organization is highly impacted by WCM. A company that has poor WCM techniques will not settle its debts when they fall due. The outcomes to the study demonstrated huge connection between WCM and profitability of a firm. It further depicts that the relationship that exists between average collection period, inventory in days, cash conversion cycle and profitability is negative. This study, though, was carried out in Iran which has an alternate social, political and economic settings and structures from those predominant in Kenya.

Runyora (2012) carried out his study on the relationship between Working Capital Management and Profitability of the Oil Industry in Kenya by taking into consideration 30 Oil firms. Cross sectional study was applied therefor regression analysis established the relation between the variables. The Chi Square test was utilized to test the extent of fit, the significance of association between the two traits and to test significance of population variance. The study built up that WCM essentially influences earnings of oil firms. However, the study was carried out in the context of oil firms which is in the energy and petroleum industry.

Kaddumi and Ramadhan (2012), focused on industrial corporations which are listed at Amman Securities Exchange, Jordan, to evaluate the effect of WCM on their financial performance. They used two elements of working capital that is, accounts collection period and average age of inventory and found that there exists a negative relationship in reference to profitability. Considering the other variable, average payment period, they found a positive relationship. The study by Kaddumi and Ramadhan was based on firms in Jordanian Industrial Corporations listed at Amman Stock Exchange. In addressing this contextual gap, the current research focused on manufacturing firms listed on the NSE, Kenya.

Makori and Jagongo (2013) examined the effect of WCM on firm's profitability in Kenya for a 10 year period from 2003 to 2012. The data was collected from a sample of five firms listed on the NSE under manufacturing and construction and a balanced panel data was utilized for the variables. To set up the relationship between independent variables and dependent variable, Pearson's correlation and Ordinary Least Squares regression models were applied. They found out that there exist a negative relationship between profitability and number of day's accounts receivable as well as cash conversion cycle but a positive relationship with number of days of inventory and number of day's payable. The current study was based on all the 16 manufacturing firms listed in the NSE so as to give a wider view of the industry, for the period 2013 to 2017 which represent the period for the launch of vision Kenya 2030.

Almazari (2013) examined the relationship between WCM and firms profitability of Saudi Cement Manufacturing companies. A sample of eight out of the thirteen cement companies was used and data collected. Linear regression was applied to analyse the data. The researcher found out that the degree of association between profitability and WCM is high. Though this is so, this study was fixated on cement manufacturing companies in Saudi. The current study focused on manufacturing firms listed on the NSE, Kenya. The study necessitated the need for a similar study in Kenya and thus this study that considered inflation and its moderating effect on the relationship between working capital and profitability of manufacturing firms listed on the NSE, Kenya.

Kusuku (2015) carried out a study on the impact of working capital management and capital structure on financial performance of manufacturing firms listed in the Nairobi Securities Exchange, Kenya. Using multiple regression analysis the study finalized by concluding that corporate capital ratio has a significantly negative effect on the level of profitability of manufacturing companies listed in the NSE for the period of this study. Notably, the study by Kusuku was based on a multiple regression analysis. This study utilized panel regression analysis which creates room for diagnostic test of the variables to ensure efficiency, consistency and non-biasness of the parameter estimates. Furthermore, the study was based on gross operating profit as the measure of profitability, where vital WCM practices such as debtors' management and cash management were not considered. The current study adopted ROE as proxy for profitability including all the aspects of working capital management as variables (debtors' management, creditors' management, inventory management and cash management).

Polycarp and Tabitha (2016) studied the impact of WCM on the financial performance of manufacturing companies listed in Kenya. The study indicated that the management of WC aims to keep up an ideal harmony between each of its components. Furthermore, WCM is relevant to the liquidity of the firm. They focused on 10 listed manufacturing firms to explain the impact of WC components on the financial performance. They found that inventory, cash and debtor (management) have a negative relation to financial performance and that it's only creditor management which has a positive relationship to the dependent variable (financial performance). Notably, the study focused on financial performance where it centred on liquidity unlike the current study which centred on profitability. Also, the study only

considered 10 manufacturing companies which gave a small scope, thus there was need to increase the number of companies in the industry to do a more efficient study.

5. RESEARCH METHODOLOGY

5.1 Research design

The study used causal research design which is usually adopted in a research to establish cause and to effect relationships among research variables (Mugenda & Mugenda, 2013). Hence, causal research design was fit for this study since this study sought to determine the effect of working capital management on profitability of manufacturing firms and the moderating effect of inflation on the relationship between working capital management and profitability of manufacturing firms listed on the NSE, Kenya. Census sampling design technique was applied in a target population of 16 manufacturing firms listed at the NSE. The study used secondary data from the firms' financial statements for the period 2013 to 2017. This marks the period when the big 4 agenda was put in place so as to drive the economy to the realization of vision 2030. For analysis, Panel regression model was used and diagnostic tests for stationarity test for correlation and tests for fixed effect and random effect were carried out. Stata was used for analysis of the data and the findings were presented using descriptive and inferential statistics.

5.2 Data Analysis

After gathering the research data, analysis of data was conducted using STATA since it was panel data and this was done within the framework of a panel regression model. Descriptive (mean, minimum and maximum number of perceptions and standard deviation) and inferential statistics were used for the data analysis. These have been displayed using tables and figures. Null hypothesis was tested at 5 per cent level of significance, (95 per cent confidence level) which was either rejected or not rejected.

The study used panel regression model based on a panel data. Therefore, profitability of manufacturing firms in terms of ROE was outlined as a function of cash management, inventory management, debtors' management and creditors' management.

$Yit = \beta 0 + \beta 1X1it + \beta 2X2it + \beta 3X3it + \beta 4X4it + \epsilon it$

Where:

Y it - Profitability (ROE)

β0 - Constant

X1it – Cash Management

X2it – Inventory Management

X3it – Debtors' Management

X4it – Creditors Management

β1 – β4= Regression coefficients, which measure the sensitivity of a variable Y to changes in variable X

Єit= Error term, it captures the excluded variables in the model

Moderating effect of inflation on the zero-order correlation between working capital management and profitability was tested using the two models presented below.

$Yit = \beta 0 + \beta 1Xit + MOit + \varepsilon$

$Yit = \beta 0 + \beta 1Xit + \beta 2M0it + \beta 3\ Xit * M0it + \varepsilon$

Where;

Yit = Profitability

Xit = Working Capital Management

M0it = Moderating Variable (inflation)

Xit * M0it = Interaction term

β1, β2 and β3 = Beta coefficients

ε = Error term

In the case of general effect to be moderated, the test for moderation specifically focused on examining if the coefficient for the interaction term differ from zero statistically (Whisman and McClelland, 2005).

6. RESULTS AND FINDINGS

6.1 Descriptive Statistics and Results

Descriptive analysis include the total number of observation, mean, standard deviation, minimum and maximum values as presented in Table 1.

TABLE 1: DESCRIPTIVE STATISTICS

Variable	Obs	Mean	Std. Dev	Min	Max
ROE	80	29.738	57.191	0.000	479.884
Cash Manage	80	58.412	61.801	0.000	226.200
Inventory M~t	80	91.212	54.245	7.309	265.177
Debtors Man~t	80	93.018	55.314	15.997	295.009
Creditors M~t	80	159.270	112.390	15.349	784.586
Inflation	80	6.840	2.572	2.700	10.000

Source: Study Data (2021)

The descriptive statistics as presented in Table 1 shows ROE having a mean of 29.738 and a standard deviation of 57.191. Cash Management had a mean of 58.412 and a standard deviation of 61.801 which is an indication that cash management has been relatively stable over the time period of the study. This is attributed to the presence of negative cash management values to a number of firms in the data analysed. Inventory Management had a mean of 91.212 and a standard deviation of 54.245. Similarly, Debtors Management is characterized by a mean of 93.018 and a standard deviation of 55.314, an indication that both inventory management and debtors' management have been volatile as they are highly dispersed from the mean. Creditors' Management had a mean of 159.270 where its standard deviation was found to be 112.390. Lastly, the mean value for inflation is 6.840 and the standard deviation is 2.572. In general, it can be concluded that the data on the research variables have been highly dispersed.

6.2 The Test for Correlation

The test for correlation was done by the use of correlation matrix.

TABLE 2: CORRELATION MATRIX

	ROE	CashMa~t	Invent~t	Debtor~t	Credit~t	Inflat~n
ROE	1.0000					
CashManage~t	0.0150 0.8952	1.0000				
InventoryM~t	0.5623 0.0000	-0.1444 0.2013	1.0000			
DebtorsMan~t	-0.3922 0.0003	-0.0897 0.4289	-0.1118 0.3234	1.0000		
CreditorsM~t	0.3478 0.0016	0.1712 0.1288	-0.2674 0.0165	0.2636 0.0181	1.0000	
Inflation	0.0278 0.8068	0.1537 0.1736	0.0254 0.8231	-0.1458 0.1970	-0.1326 0.2410	1.0000

**Significant at 0.05*

Source: Study Data (2021)

Table 2 presents the output from the correlation matrix, the correlation between Cash Management and ROE is found not to be significant with r being 0.0150 and p-value being 0.8952. There exists a positive and significant correlation between inventory management and ROE with a p-value of 0.0000 and r of 0.5623. Similarly, Debtors management has a negative and significant correlation with r being -0.3922 and p-value of 0.0003. Creditors' management and ROE are positively correlated with an r of 0.3478 and p-value of 0.0016. Lastly, inflation and ROE are found to have a positive and insignificant correlation. Green (2008) put forward that a situation where a pair of variables has a correlation of 0.8 or -0.8 (i.e. r2 of 64%) or more implies that the variables are highly correlated which is an indication of high level of multicollinearity. In the current scenario, as displayed in Table 2, none of the correlation between the study variables is having an r above 0.8 (64%), therefore, the research data does not have multicollinearity problem.

6.3 Panel Regression

The panel regression was used in the study which utilised three different models.

6.3.1 Panel regression model without the moderating variable

The direct effect model is the first model which presents ROE as a function of cash management, inventory management, debtors' management and creditors' management.

TABLE 3: PANEL REGRESSION MODEL WITHOUT THE MODERATING VARIABLE

ROE	Coef.	Std. Err.	Z	P>|z|	[95% Conf.	Interval]
Cash Management	-.0269585	.0550616	-0.49	0.624	-.1348773	.0809603
Inventory Management	.7317232	.0743968	9.84	0.000	.5859081	.8775382
Debtors Management	-.265963	.0335954	-7.92	0.000	-.3318087	-.2001173
Creditors Management	.723414	.0753681	9.60	0.000	.5756953	.8711328
_cons	-32.45839	11.92413	-2.72	0.006	-55.82925	-9.087525
R^2 =0.8074						
Wald chi2 (4) =207.39						
Prob> chi2 =0.0000						

**Significant at 0.05*

Source: Study Data (2021)

The model in Table 3 shows that cash, inventory, debtors' and creditors' management are satisfactory in explaining the ROE of firms. This is supported by R^2 also known as coefficient of determination of 0.8074. This implies that cash, inventory, debtors' and creditors' management explain 80.74% of the variation in profitability that is ROE of manufacturing firms. The result shows that the overall model is significant as supported by Wald statistics of 207.39 and a p-value of 0.0000.

With respect to cash management and profitability (ROE), a unit increase in cash management bring about a decrease in ROE by 0.027 which is however, insignificant with a p-value of 0.624 at the traditional 0.05 level of significance. The negative effect of cash management on profitability can be attributed to the fact that the data for a number of firms on cash management is characterized by negative values. Also, a unit increase in inventory management leads to a 0.73 increase in ROE of manufacturing firms. This increase is significant at 0.05 significance level. Thirdly, a unit increase in debtors management results in a decrease in ROE by 0.266, this decrease is significant with p-value of 0.000. Furthermore, the findings on creditors' management and ROE indicate that a unit increase in creditors management bring about an increase in ROE by 0.72 which is also significant with a p-value of 0.000 at 5% significance level.

6.3.2 Panel regression model with the inclusion of the moderating variable

The test for moderation entails two steps; the first step entails the inclusion of the moderating variable as independent variables (Whisman & Macclelland, 2005). This model seeks to ascertain if the moderating variable has a direct effect on the dependent variable.

TABLE 4: PANEL REGRESSION MODEL WITH THE MODERATING VARIABLE

ROE	Coef.	Std. Err.	Z	P>|z|	[95% Conf.	Interval]
Cash Management	-.0347284	.0561647	-0.62	0.536	-.1448093	.0753524
Inventory Management	.730739	.0745528	9.80	0.000	.5846182	.8768599
Debtors Management	-.2627435	.0339473	-7.74	0.000	-.3292789	-.196208
Creditors Management	.7318523	.0763184	9.59	0.000	.582271	.8814336
Inflation	.8080842	1.074614	0.75	0.452	-1.298121	2.91429
_cons	-38.96255	14.73214	-2.64	0.008	-67.83701	-10.0881
R^2 =0.8086						
Wald chi2 (5) =207.16						
Prob> chi2 =0.0000						

**Significant at 0.05*__Source: Study Data (2021)__

The model has a coefficient of determination (R^2) of 0.8086 which implies that cash, inventory, debtors' and creditors' management explain 80.86% of the variations in profitability as proxied by ROE. The results in Table 4 indicates that a unit increase in cash management leads to a 0.035 decrease in ROE. However, cash management is insignificant in predicting profitability. Secondly, the results show that a unit increase in inventory management brings about an increase in ROE by 0.73 which is significant with a p-value of 0.000 at 0.05 significance level. In addition, debtors' management negatively decreases ROE by 0.26 which is significant with a p-value of 0.000 at 0.05 level of significance. Similarly, a unit increase in creditors' management increases ROE by 0.73 with a p-value of 0.000 making it significant. Lastly, a unit increase in inflation leads to a 0.81 increase in ROE, however, this increase is insignificant with a p-value of 0.45 at 0.05 significance level. In line with Whisman and Macclelland (2005), the first step in the moderation tests requires the moderating variable when included as an independent variable to have an insignificant effect on the dependent variable.

6.3.3 Panel regression under the interactions between the independent and moderating variables

The third model which is the second step of the moderation test presents the interactions between the moderating variable and the independent variables. If the value of the interaction terms is zero or statistically insignificant it implies that moderation effect is not supported, on the other hand, moderation effect is supported in the case where the value of the interaction is statistically significant (Whisman & McClelland, 2005).

TABLE 5: INTERACTION EFFECT OF MODERATING VARIABLE

ROE	Coef.	Std. Err.	Z	P>|z|	[95% Conf.	Interval]
Cash Management	-.3666137	.3334567	-1.10	0.272	-1.020177	.2869494
Inventory Management	.684783	.1617186	4.23	0.000	.3678204	1.001746
Debtors Management	-.1631516	.0637858	-2.56	0.011	-.2881695	-.0381338
Creditors Management	.6662693	.1536675	4.34	0.000	.3650867	.967452
Inflation	1.270467	3.831832	0.33	0.740	-6.239785	8.780719
Infla*Cash Man	.0323285	.035157	0.92	0.358	-.036578	.1012349
Infla*Inventory Man	.0126864	.0221658	0.57	0.567	-.0307578	.0561307
Infla*Debtors Man	-.0202339	.010267	-1.97	0.049	-.0403568	-.0001111
Infla*Creditors Man	.0123459	.0228761	0.54	0.589	-.0324904	.0571821
_cons	-39.50639	26.10902	-1.51	0.130	-90.67913	11.66635
R^2 =0.8255						
Wald chi2 (6) =331.24						
Prob> chi2 =0.0000						

**Significant at 0.05*

Source: Study Data (2021)

Table 5 provides the regression analysis on the interaction effects of the moderating variable and the independent variables on profitability. The model has an R^2 of 0.8255 which implies that 82.55% of the variation in profitability is attributed to the predictors. Holding other factors constant, a unit increase in the interaction term or joint effect of inflation and cash management leads to a 0.03 increase in ROE of Manufacturing firms listed on the NSE, Kenya which is insignificant since the 0.358, therefore higher than 0.05. Secondly, a unit increase in the interaction between inflation and inventory management brings about a 0.12 increase in Roe, this is however insignificant with a p-value of 0.57 at 5% significance level.

Thirdly, the joint effect of inflation and debtors' management negatively and significantly affects ROE as a unit increase in the interaction term of inflation and debtors' management leads to a 0.20 decrease in ROE. Lastly, a unit increase in the interaction between inflation and creditors management results in a 0.12 increase in ROE of manufacturing firms listed on the NSE, Kenya. This effect is however, insignificant at 5% significance level with a p-value of 0.58.

7. CONCLUSION

In line with the findings of the study, cash management does not significantly predict the profitability of Manufacturing Firms listed at the NSE, Kenya. This can be attributed to the fact that some of the data collected had huge negative figures. Secondly, in respect to inventory management and profitability, the study concluded that there exists a positive and significant relationship. Therefore, the study recommends that firms should ensure high inventory levels as this will reduce or eliminate the possibility of the production process being influenced by such costs. Therefore, aggressive inventory management structure should be put in place to help maximize on sale of inventory.

Debtors' management is significant though negatively in determining profitability of the firms. The study recommends that management should strive to negotiate shortest periods possible for payments of debts from sales. By this the management will be able to invest in different portfolios so as to avoid the case of inflation from payments in the future. Also, early payment will enable the management to assess cheap capital for development and growth of the organisation.

Furthermore, with regards to the effect of creditors' management and profitability, the study concluded that creditors' management positive and significantly affects profitability of the firms. Therefore, the study recommends that management should always negotiate for longer payment period for paying creditors in light of protecting its integrity for credit worthiness so as to assess more credit facilities in the future. This will provide the firms with more funds for investing activities and thus realisation of higher profits.

Lastly, on the moderating effect of inflation on the relationship between working capital management and profitability, the study concluded that inflation significantly affects the relationship between debtors' management and profitability of Manufacturing Firms listed at the NSE, Kenya. The study therefore, recommends that management should reduce credit sales and come up with ways that will entice debtors to pay up the debts owed quickly as the value of these debts are easily depleted by inflation. Management should also diversify portfolios in terms of investment strategies so as to capitalize on the cash within the organisation of short term periods

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