

Inventory Management and Financial Performance of Selected Quoted Firms in Nigeria

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Abstract: - This study examines the impact of Inventory Management and Financial performance of selected quoted firms in Nigeria. The study have been conducted in different parts of the globe and in Nigeria with different findings that are mixed and inconclusive. The population of the study consists of ten (10) firms quoted on the Nigerian stock exchange as at 31st December 2018 out of which ten (10) firms were selected as samples for a period of seven (7) years from 2012 to 2018 based on purposeful sampling technique. The study uses multiple regressions as a tool for analysis. The study reveals that Inventory turnover ratios showed a positive significant impact on financial performance of selected quoted firms in Nigeria.

Keywords: Inventory management, financial performance, Revenue.

I. INTRODUCTION

Inventory management is the supervision of non-capitalized Assets and stock items. Inventory Management as a component of supply chain management supervises the flow of goods from manufacturers to warehouses and from these facilities to point of sale. A key function of inventory management is to keep a detailed record of each new or returned product as it enters or leaves a warehouse or point of sale. A good inventory management strategy improves the accuracy of inventory orders, lead to a more organized warehouse, Saves Time and money, increases efficiency and productivity and Keeps existing and new customers. One of the variables that measures Inventory management is Inventory Turnover. The inventory turnover ratio shows how quickly a company sells its Products. It is computed by dividing the Revenue generated by average inventory. Inventory turnover ratio is one of the financial ratios that provide information about the liquidity of a company. Liquidity ratios identify whether a company can meet its short-term financial obligations. Moreover, financial managers may use liquidity ratios to manage companies' assets more efficiently. Managing inventory for companies that sell goods can play an imperative role in their success or failure. Having a large quantity of unsold inventory may mean interest expense and additional cost for storage.

A high turnover ratio indicates that a firm has a low amount of inventory for sale, which may cause it to lose potential sales. In other words, since the company's funds allocation to inventory is not optimal, it may lose some potential profit.

However, a low Inventory turnover ratio may reveal that the company spends too much on inventory that is not selling fast enough. So, a firm needs to strike a balance by not having a high Inventory turnover or Low inventory turnover in order to maximize profit.

Empirical studies have been conducted on Inventory management and financial performance like Lwika, Ojera, Mugenda and Wachira (2013), John, Etim and Ime (2015) Alrjoub and Ahmad (2017) Dedunu (2018), Koumanakos (2003) and Anshur, Ahmed and Dhodi (2018) which are foreign and African based and have provided mixed and inconclusive findings due to the data collected, methodology used and the industry used and to the best of our knowledge, among studies conducted in Nigeria, we have not seen a study that took into consideration the selected quoted firms from food and beverage and agricultural industries. To this end, this study attempt to fill the gap by examining the impact of Inventory management on financial performance of selected quoted firms in Nigeria. The main and only objective of the study is to examine the impact of Inventory management on financial performance of quoted selected firms in Nigeria. In line with the objective, a hypothesis is formulated which is: H₀₁ Inventory turnover ratio has no significant impact on financial performance of quoted selected firms in Nigeria.

II. LITERATURE REVIEW

Lwika, Ojera, Mugenda and Wachira (2013) examined the impact of Inventory Management Practices on Financial Performance of Sugar Manufacturing Firms in Kenya analyzing the extent to which lean inventory system, strategic supplier partnership and technology are being applied in these firms. Research survey was conducted in all the eight operating sugar manufacturing firms from the period 2002- 2007. Primary data was collected using structured and semi-structured questionnaires administered to key informants in the organizations. Secondary data was obtained from annual financial performance statements available in the year Book sugar statistics. Descriptive statistics was used to test the impact of inventory management practices and Correlation analysis was used to determine the nature and magnitude of the relationship among inventory management variables. The results of the Study indicated a positive correlation between inventory management and Return on Sales.

John, Etim and Ime(2015) examined inventory management practices on operational performance of flour milling manufacturing firms. The population of the study was 2569 staff population of five flour milling manufacturing firms. Out of the population, 150 respondents were randomly selected. Structured questionnaire was the major instrument for the collection of relevant primary data while mean and standard deviation was used to analyze descriptive data. Results of the study showed that most of the medium-sized flour milling firms adopts different inventory management strategies from the scientific models. Their inventory management strategies and policies were rather based on factors such as changing level of customer demand, prevailing industry practices, forecast estimates and guesses, and available production capacity. Findings also revealed significant differences between effective management of inventory and optimal operating performance.

Alrjoub and Ahmad (2017) examined the relationship between inventory management and firm performance. 48 firms for the period 2010–2016 was used for the study which formed 279 firm-year observations. Pearson correlation and panel Generalized Method of Moments (GMM) estimation was used. The findings of the study showed that inventory management with consideration of its types influence firm performance in the long term. They also found out that cost of capital moderates the relationship between inventory management and firm performance.

Dedunu (2018) examined the effect of Inventory management on Company Performance of listed Manufacturing Companies in Sri Lanka. They used inventory days as a dependent variable and gross profit and net profit as an independent variable. They employed descriptive analysis, correlation analysis and regression analysis using STATA package. The result of the study showed a positive relationship between inventory management and gross profit. Net profit had a negative relationship and inventory management significantly affect to gross profit margin and net profit margin. Koumanakos (2003) examined the effect of inventory management on firm performance. The study tested the hypothesis that efficient (lean) inventory management leads to an improvement in a firm's financial performance. Data for the analysis from the ICAP database was used which contains financial information on all medium to large Greek firms. The study period was from 2000 to 2002. For each year all manufacturing firms with the corporate form of societ'e's anonyms operating in any one of the three representative industrial sectors in Greece: food, textiles and chemicals were selected. The result of the study showed that the higher the level of inventories preserved (departing from lean operations) by a firm, the lower its rate of returns. Anshur, Ahmed and Dhodi (2018) investigated the role of inventory management on financial performance of Selected Manufacturing Companies in Mogadishu. The Study selected 72 respondents with the use of questionnaire as instrument and data was analyzed using both descriptive and correlation statistics

of mean and frequency (percentage) for SPSS. The study found that there is significant positive relationship between the inventory management and financial performance. Ahmed (2016) examined the effect of inventory management on financial performance of Nigerian Conglomerate Companies. The Population Study comprised of all Conglomerate companies Quoted on the Nigerian Stock Exchange Market as at 31st December, selected 72 respondents with the use of questionnaire as instrument and data was analyzed using 2010. The scope of study covered from 2010-2014. Descriptive, Pearson correlation and Multiple Regressions were used to analyze data. The study found out that there is significant positive relationship between the inventory management and Profitability.

III. METHODOLOGY

This research adopted correlation research design and was considered adequate and appropriate for this study because it describes the statistical relationship between independent variable of the study (Inventory ratio) and the dependent variable (Return on Equity). The population consists of selected firms namely Ellah Lakes Plc, FTN Cocoa Processing Plc, Livestock Feeds plc, Okomu Oil Palm Plc, Presco Plc, Nestle Nigeria Plc, Unilever Nigeria Plc, Cadbury Nigeria Plc, Seven Up Nigeria Plc quoted on the Nigerian Stock Exchange as at 31st December 2018 and covered a period of thirteen years (2012-2018). Purposeful sampling technique was employed to select the sample. The sample selected are: Ellah Lakes Plc, FTN Cocoa Processing Plc, Livestock Feeds plc, Okomu Oil Palm Plc, Presco Plc, Nestle Nigeria Plc, Unilever Nigeria Plc, Cadbury Nigeria Plc, Seven Up Nigeria Plc. In line with this, the sample size are all the ten (10) selected quoted firms on the Nigerian stock exchange.

The study employed panel data using statistical package for social sciences (SPSS 25) and Ordinary Least Square (OLS) method adopted in this study is a parametric statistical test that is based on a number of assumptions, the violation of which could affect the reliability of the results. The Pearson correlation and t-test statistics were used for inferential analysis. Two of the most commonly encountered problems addressed in this study relate to normal distribution of the variables and Kolmogorov – Smirnov test was used to test for normality of data.

Model Specification

The model that was used to test the hypothesis formulated for this study is presented below. The null Hypothesis is tested considering the results for the P-values at 1%, 5% and 10% level of significance. The first model is the functional model from which the second model Ordinary Least Square (OLS) was derived that is firm performance model.

$$ROE = f(\beta_1 \text{INVENT} + \beta_2 \text{REV})$$

$$ROE = \alpha + \beta_1 \text{INVENT} + \beta_2 \text{REV} + \epsilon_i$$

Where

α = the intercept

ROE = Return on Equity measured by profit after tax divided equity in book value

INVENT = InventoryTurnoverratio measured ratio ofTotal Revenue to inventory cost.

REV = Revenue measured as natural log of total Revenue

ϵ_i = error term

Revenue is a control variable.

IV. DATA PRESENTATION

This part presents the results of theKolmogorov – Smirnov test and Regression results on the impact of Inventory management on financial performance of selected quoted firms in Nigeria. An explanatory variable and a control variable are employed for the purpose of explaining and predicting the impact of inventory management on financial performance of selected quoted firms in Nigeria.

Test of Normality

The normality tests are supplementary to the graphical assessment of normality. For this study, Kolmogorov – Smirnov test are used to test for normality of the one (1) independent variable; namely inventory turnover ratio.

TABLE 1 KOLMOGOROV – SMIRNOV TEST FOR THE VARIABLE

TESTS OF NORMALITY						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
INVENT	.084	70	.200	.912	70	.000

a. Lilliefors Significance Correction

This table shows the normality test for Inventory management.

For small samples less than 50, Shapriro-wilk test are used but for this study which the number of observations is 70, the Kolmogorov-smirnov test was adopted. The Hypotheses used are: H_0 : The sample data are not significantly different than a normal population. H_a : The sample data are significantly different than the normal population. When testing for normality, Probabilities greater than 0.05 mean the data are normal and probabilities less than 0.05 mean the data are not normal. From the Kolmogorov-smirnov test, the statistics of Inventory ratio is 0.084 and the probabilities of 0.200 which is greater than 0.05, so we accept the H_0 stating that these data are not different from normal (Razali & Wah 2011).

TABLE 2 INVENTORY MANAGEMENT IMPACT ON FIRM PERFORMANCE

Variable	Coefficient	T – value	P – value
Constant	0.244	0.194	0.847
INVENT	0.004	2.678	0.009
REV	0.033	0.380	0.705
R	0.333		
R ²	0.111		
Adj R ²	0.084		
F stat	4.174		
F-Sig	0.020		
DW	1.332		

Source: Author’s computation using SPSS 25

The estimated equation of the study is presented as follows:

$$ROE = 0.244 + 0.004 (INVENT) + 0.033 (REV)$$

The financial performance of firms measured by Return on Equity would be equal to 0.244 when all other variables are held to zero. A one unit change of inventory Turnover ratio all other variables remain constant, would increase Inventory turnover ratio by 0.004.The regression result of the study shows that the beta coefficient in respect of Inventory turnover ratio is (0.004) and the t-value is (2.678) and it is significant at 1%. This means that, Inventory turnover ratio has a positive significant impact on the performance of quoted building material firms in Nigeria. The implication of this is that, Selected quoted firms sell their products quickly which in turn improves their financial performance. This provides an evidence of rejecting the only hypothesis stating that Inventory turnover ratio has no significant impact on performance of quoted building materials firms in Nigeria. The total impact of the Inventory turnover is able to explain the dependent variable up to (33%) indicated by the R valueand the remaining (67%) are controlled by other factors. Similarly, the result of the F- statistic shows the overall fitness of the model. The F- statistic has a value of (4.174) and is significant at 1% which implies that the model is fit because it is significant at all levels of significant. Durbin Watson of (1.332) shows that there is no problem of autocorrelation in the data set (Gujarati, 2004).

V. FINDINGS OF THE STUDY

Inventory Turnover ratio has a positive significant impact on financial performance of quoted selected firms in Nigeria. This result indicates that the Selected quoted firms in Nigeria sell their product quickly.

VI. CONCLUSIONS

This study has contributed to findings on accounting research in Nigeria. The study concludes that Inventory management

improves financial performance of selected quoted building material firms in Nigeria.

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