



Cost Control and Financial Performance: An Empirical Investigation of Selected Quoted Manufacturing Firms in Nigeria

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Abstract: The study examined the link between cost control and the financial performance of selected Nigerian manufacturing firms. Specifically, the study examined the effect of administrative cost, selling and distribution cost on profit after tax of manufacturing firms in Nigeria. The study employed secondary source of data and that were collated through annually financial reports of ten (10) sampled firms through 2011 to 2020. Data were analyzed using descriptive statistics, correlation analysis and panel regression which involve, pooled OLS, random effect estimation and fixed effect estimation including Hausman test as well as post estimation test for the models considered in the study. The findings of the study reported that administrative cost exert insignificant negative effect on profit after tax of the sampled firms, while selling and distribution cost exert insignificant positive effect on profit after tax. Therefore, this study concluded that cost control has both positive and negative effect on financial performance of manufacturing firm in Nigeria, especially, when measured in terms of profit after tax. The study recommended that manufacturing firms need to ensure optimal control of administrative cost as any attempt to employ as positive change agent for a specific financial performance measure can lead to unfavourable effect in another measure. As such control of administrative cost by manufacturing firms should be carried out by taken into consideration the overall performance objective of the firms per time, so that provision can be made available for possible trigger of one measure of financial performance at the expense of the other

Keywords: cost control; administrative cost; selling and distribution costs; manufacturing firms

JEL Classification: L6; L25

1. Introduction

Managing costs involves formulating and adhering to a consistent performance strategy in order to boost overall business effectiveness. Controlling costs is consequently vital for a company in order to manage and eliminate unwelcome expenditures, and it also contributes to the enhancement of market

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demand in an environment where there is intense competition. According to Pandy (2009), the primary objectives of any company are to maximize the wealth of their shareholders, maximize their profits, and restore the pleasure of their customers. On the other hand, non-financial goals include prioritizing financial performance and professional advancement. In particular, the maximizing of profits is the focus of the majority of attention. In order for businesses to accomplish their most important goals while keeping their expenses to a minimal, cost management must be given the highest importance. Companies in Nigeria have seen an unexpectedly large settlement, which has led to a loss of revenue in recent years (Siyabola, 2013). Despite what seems to be increasing attention and aid from institutions in Nigeria to the running of firms, the performance of enterprises is below what is expected. (Adebayo, 2018). The unpredictability of the economic process, the complexity of the tax system, and the ongoing proliferation of varied tariffs were all factors that contributed to this result. Therefore, effective management of costs is essential to the operations of businesses in order to make effective use of the constrained resources that are available.

It was necessary for businesses to take into consideration the ever-changing character of our time since they could not prosper without doing so. Businesses face a significant obstacle as a result of the rise in their operating expenditures, which requires them to take steps to minimize costs, which many of these businesses find challenging to achieve. Every company that wants to be successful and keep hold of its clients has to continually work to improve the pricing, quality, and packaging of their products in order to stay in the competitive market. Companies have to keep expenses under tight control and look for opportunities to save money wherever they can in order to avoid going over their budgets and suffering losses while yet maintaining high quality standards (Lawal, 2017). According to Akintoye, Onakoya, Amos, and Ifayemi, the deterioration of Nigeria's infrastructure is causing costs to rise and quality to decline, which is having a negative impact on businesses in Nigeria (2015). According to Adeleke (2014), due to their failure to effectively control their costs, a significant number of businesses in Nigeria have either been acquired by bigger corporations or have combined with other businesses to form a single entity. As a direct result of this, a number of companies have moved their operations to nations that are nearby (Abdul & Isiaka, 2015). Even with the current state of the economy, no company would be able to remain in operation long enough to accurately assess their costs. As a result, the implementation of cost management procedures is widely regarded as an essential component of any organization that engages in profit-generating activities. If the company's costs are not carefully investigated, the company's operations are going to suffer as a direct consequence.

The present economic environment in Nigeria has posed huge challenges for the country's businesses; as a consequence, in order for companies to continue operating, they have been forced to place a greater emphasis on cost control as a strategic weapon for corporate survival during a recession (Berliner, 1998; Lasisi & Nuhu, 2015). Cost-cutting strategies cited by Edom, Inah, and Adanma (2015) as examples of cost-cutting measures include limiting the amount of calls made by workers to just those that are required for business reasons, increasing the price of internet service, and lowering the price of power (Abdul & Isiaka, 2015). Even though the topic of corporate performance has been getting more attention as of late, this is due to the fact that the capacity of a business to make a profit is the single most important factor in determining whether or not it will be successful. According to Siyanbola and Raji (2013), company performance is becoming an increasingly prominent topic in the literature of finance and accounting. According to Maliki (2011), maximizing profitability is the major objective of monetary and pricing management. This is done with the intention of maximizing the

wealth of owners. It is common practice to see a company's profitability as the single most significant element in determining the extent to which it can maximize shareholder value.

A company that is running at a loss financially can never hope to be successful in the long run. The fierce competition in the market today has made it simpler for non-financial businesses to keep their spending under control or become more cost-effective, both of which are necessary for these businesses to be profitable and viable in the long run (Adebayo & Onyeiwu, 2018). According to Oyerogba Olaleye and Solomon (2014) in the modern day, every firm has the power to govern not just prices but also the quality of packages and the packaging itself three times today. Customers will never stop looking for the highest possible quality and improved performance. If an employee is not motivated to work, it is possible that the staff will not implement cost controls to ensure that the business is profitable. It's possible that a company has to do more than simply bring in money to stay in business. When profit margins are low, it is less probable that a company will be able to compete successfully with other businesses in its industry. If the company's costs are too high, it is unavoidable that shareholders will have an effect on the price of the company's shares. An organization needs to generate a profit in order to fulfill its responsibilities to its various stakeholders, pay its taxes, give dividends to its shareholders, pay its wages to its employees, and invest in the social responsibility of the company toward the environment in which its employees are employed. Businesses who are not profitable will be the ones to suffer the most. As a result of this, the performance of the company is contingent on its ability to increase revenue while simultaneously working to improve its cost profile. It would be difficult for businesses in Nigeria to exceed expectations unless they have a thorough understanding of the specific expenditures associated with their goods and how the pricing of those items affects their profit margins (Premeh, 2016).

Studies have been conducted on a broad variety of topics concerning the management of costs and performance of businesses (Olalekan & Tajudeen, 2015; and Abdul & Isiaka 2015). These examinations concentrated on the company's performance rather than on the company's financial results because of this. This study will employ data gathered from companies on their financial performance in order to fill the gap in their previous research. As a result of this, the purpose of this research was to evaluate the connection between cost control and financial performance in Nigerian manufacturing firms that were listed on the stock market between the years 2012 and 2021

2. Literature Review

2.1.1 Cost Control

The identification of the unit cost, the measurement of delegated performance, and the modification of that performance are all included in the cost control component of marginal costs. This ensures that both the goal and the means of achieving it are fulfilled in a manner that is both effective and efficient (Lockey, 2002). Cost control is the process of keeping expenses at the level that was meant for them to be at or at the level that was anticipated for them using substantial budgetary and budgetary management systems. The area where corrective measures are conducted has implemented cost control in order to compare actual costs with expected expenditures in order to allow for comparison of both sets of figures (Arora, 2004). According to the definition provided by lawyers (2014), cost control refers to a complete set of accounting processes and management strategies that improve business efficiency by reducing expenses or, at the very least, decreasing the growth in costs. According to Akeem (2017), an aspect of marginal costs is included in cost management. This aspect

of cost management includes unit cost, measurement, and the correction of subordinate performance. The purpose of this aspect of cost management is to ensure that the company's goal and its means of achieving it are met in an effective and inexpensive manner. Monitoring the operational expenditures of the company is another definition of cost management. This definition entails ensuring that costs remain within parameters that are deemed to be fair. In the formal operational plan, they are sometimes referred to as the standard costs or the objective costs.

According to Akenbor and Agwori (2015), the implementation of cost management strategies should lead to a reduction in expenditures that are not necessary. This should be the case, for example, when the budget for material waste is exceeded or when productivity levels fall short of predetermined standards. However, the cost reduction program may be developed in order to cut down on the expenses that are expected to be incurred in the future. This may be accomplished by lowering costs to levels that are lower than the norms of the industry through the purchase of new machinery, the modification of production processes and procedures, etc. The term “cost control” may also refer to the efforts made by management to influence people in charge of the duties, costs, and income creation of the company. Planning and monitoring are the two processes that make up the management process as a whole. Control refers to the processes that are used to assess whether or not actual performance is compatible with the objectives that were established, while planning concentrates on how management hopes that workers will apply it. By way of the process of budgeting and maintaining financial control, the management of the firm determines the essential corporate goals for each center of responsibility, and it also develops the standards and procedures for reporting and evaluation. (Siyabola & Raji, 2013).

2.1.2 Financial Performance

Experts in business and strategic management have a significant emphasis on an organization's financial performance. Since the health of a firm and even its very survival are intimately related to its financial performance, this issue is a primary concern for business experts in all fields of endeavor. Owners, present shareholders, and future shareholders all want to see an increase in the market value of their firm, which can only be accomplished by growing the business's earnings. They are inspired to put in more effort because managers are concerned about the health of the business, which in turn benefits the organization. The capacity of the firm to make timely dividend payments for capital is one of the primary metrics that current and future shareholders use to evaluate the performance of a company (Valentin, 2013). Banafa, Muturi, and Ngugi (2015) are of the opinion that one of the most important factors affecting an organization's financial performance and the amount of profit it generates is the degree to which it successfully carries out its primary mission, which is to engage in commercial activity. It is possible that the financial performance of a firm may also be regarded to represent the state of the company's finances in general within a certain time period. For the sake of comparison, the financial performance of businesses in the same industry as well as businesses operating in separate industries may be reviewed or compared. One of the most important goals of businesses, particularly those whose major motivation is to maximize profits, is to ensure that their companies are successful from a financial standpoint (Yahaya & Lamidi, 2015).

2.2 Theoretical Review

2.2.1 Kaizen Costing theory

In 2001, Yashuhiro Monden created Kaizen Costing Theory as the costing equivalent of the Kaizen method (Industrial and Financial Systems, 2001). This term relates to the ongoing improvement process. The concept underlying the application of Kaizen Costing is to achieve incremental, gradual

but continuous production improvements at a minimum cost. (Ansari & Lockwod, 2004) said that Kaizen Costing guarantees that goods meet or surpass consumer requirements on quality, functionality, and pricing in order to maintain the competitiveness of the product. This may be done by sequentially eliminating all procedures that would increase the production costs of the product without increasing its value accordingly (Rof, 2012). The concept underlines the constant progress of our lifestyles, social lives, and homes. This approach has produced enormous improvements not just in Japan but around the world in its management policies (Ogundele, 2004).

2.3 Empirical Evidence

Nelson, George, Muriithi, and Isaac (2014) studied the influence of cost reduction techniques on the performance of tea factories in Embu, Kenya. A primary data source, 18 supervisors, 40 workers, and 225 tea producers from the target demographic were sampled. Structured questionnaires collected data from the respondents. In the description, the collected data were evaluated using frequencies and percentages. The investigation revealed that cost-reduction methods were implemented in the factories. Some metrics have been identified as being completely applicable. These included methods such as employee development, technology, and energy sources. The findings also revealed that the data obtained statistically demonstrated that comparing equal periods before and after 2006 (when cost reduction methods had been put in place), the volume of tea processed was not connected to cost reduction techniques. This is because the amount of tea declined from 191.258.695kg to 189.880.652kg. The yearly farmer return rate rose from an average of 67.47% to 72.6%, which suggested that cost reductions were correlated with financial performance.

Sharma (2017) has investigated the use of cost reduction methods in Pokhranian industrial organisations. The research assessed the use of cost reduction methods with reference to the Pokhran valley in Nepalese industrial companies. The designed questionnaire collected primary data. The study utilized the planning of raw materials and production as control variables. The survey revealed that most companies use product line rationalisation, supply chain management, Kaizen systems, and reengineering as a cost-reduction technology. Most companies do not utilize manufacturing design and simultaneous engineering, lean production on demand, order building, part standardization, and just-in-time production as methods for reducing costs.

Okwo and Ugwunta (2012) expanded the relevance of cost management on profitability in companies by studying the influence of firm profitability of the company's input costs. The annual reports of a sampling of breweries from 1999 to 2010 were used to construct cross-sectional data for analysis. Profitability measures are analyzed and connected to input costs absorbed by brewers. In the study, Ordinary Least Squares (OLS) was presented as a multiple regression model. The study showed that the focus variable, Rsgae, which aims to capture the influence of a company's operational expenditures on profitability, was statistically positive and has an impact on the profitability of breweries in Nigeria. For the Nigerian brewers to improve or improve their profitability, sales costs are therefore a significant contributing factor.

Akeem (17) highlighted the relevance of cost management to the success of the company by analyzing the effects of cost control and cost reduction on organizational performance. The study considered cost overheads as a useful instrument for controlling and reducing costs. The study employed descriptive investigation. The primary data source was used by using the questionnaire. The idea was tested using

regression analysis. The study found that cost containment has a beneficial effect on the performance of organizations.

Godwin, Amos, and Sunday (2019) also investigated the effect of cost management on the profitability of a selection of Nigerian manufacturing companies. The study population was 78 manufacturers listed as of December 31st, 2017 on the Nigeria Stock Exchange. A sample frame was selected for 23 businesses in the consumer products industry, five of which were evaluated for a period of 10 years (2005–2017). The study employed a strategy of judgmental sampling. The audited financial statement data was collected, and the accounts confirmed by regulatory authorities. The study used descriptive and inferential statistics (regression). It has been shown that the cost of raw materials (CoRM) and profit before taxes for manufacturers in Nigeria are substantially negatively linked. The study showed that cost management had a substantial beneficial influence on producers' profitability in Nigeria for the reporting period. Even though the results showed that the selected manufacturing businesses had a big positive effect, cross-sectional research would have been a better way to get a better result than panel data analysis.

This study looked at the relationship between firm cost control measures and financial performance in Nigeria's listed manufacturing companies. It analyzed data from the public financial statements of manufacturing firms listed on the Nigerian Exchange Group (NGX) from 2012 to 2021

3. Research Method

3.1 Model Specification

Panel data analysis was used as the appropriate statistical instrument and approach based on Godwin, Amos, and Sunday (2019). Panel data regression was used to examine the influence of independent variables on the dependent variable in this investigation. Godwin, Amos, and Sunday's (2019) model is as follows:

$$\text{PRT} = f(\text{CORM}, \text{DEXP}, \text{SWEXP}, \text{RDC}, \text{TRC}) \quad 3.1$$

Where;

PRT = Profitability (measured by profit before tax)

CoRM = Cost of raw material

SWexp = Salaries and wages

SDexp = Selling and Distribution expenses

RDC = Research and Development costs

TRC = Training cost

The research developed a cost-control and performance-monitoring model for Nigerian listed manufacturing companies after a few tweaks. In functional terms, the revised model was described as follows:

$$\text{PAT} = f(\text{ADC}, \text{SDC}, \text{FZE}) \quad 3.2$$

Financial performance indicators such as profit after tax (PAT) and cost control variables such as administrative costs (ADC) and selling/distribution expenses, firm size (FZ), pooling observations

across firms and time, without taking into consideration the uniqueness/heterogeneity that may exist in the firms during this time period (2011-2020). Following are the linear forms of the model:

$$PAT_{it} = \delta_0 + \delta_1 ADC_{it} + \delta_2 SDC_{it} + \delta_3 FZE_{it} + \mu_4 \quad (3.3)$$

The definition of the variable is shown below:

Where;

μ_1 = is the error term

PAT=Profit after tax

ADC=Administrative Costs

SDC=Selling and Distribution Costs

FZE=Firm Size

Ao=Constant

$a_1 a_2 a_3$ =Vector of the independent variables

it =cross sectional of the observation and period of the research

3.2 Sources of Data and Method of Analysis

The annual reports of ten (10) randomly chosen publicly traded manufacturing enterprises provided the data for this research due to anomalies in the financial statements submitted by the companies. Consequently, Vitafoam Nig. Plc. (VF), Nascon (NC), and Unilever Nig. Plc. (UN) were all implicated (U.L.). Berger Paint (B.P.), Beta Glass (B.G.), Cutix (C.U.), First Aluminum (F.A.), Lafarge (L.G.), Meyer Plc (M.E.) and Paints & Coatings are some of the companies in the industry (P.C). It took from 2012 to 2021 for the study to be carried out. In order to ensure the accuracy and reliability of the estimates, descriptive statistics, panel least squares, and post-estimation diagnostic tests were used to evaluate them.

4. Results and Discussion

4.1 Descriptive Analysis

Table 4.1. Descriptive Statistics of Variables

Variables	Obs	Mean	Std. Dev.	Min	Max
PAT	100	18.59113	61.74941	-102.4004	481.456
ADC	100	8.006264	16.44777	.0049716	103.131
SDC	100	8.717299	18.03293	0.0033144	109.188
FZ	100	17.02119	2.053894	12.93095	21.32429

Source: Data Analysis, (2022)

The above table provides descriptive statistics for the variables that were used. These data include the mean, the standard deviation, as well as the lowest and maximum values for each variable. According to table 4, there was an average profit of 18.59113 after taxes, an average administrative cost of 8.006264, an average selling and distribution cost of 8.71729, and an average firm size of 17.02119. After-tax profit can range anywhere from -102.4004 billion to 481.456 billion naira; administrative costs can be anywhere from 0.0049716 billion to 103.1131 billion; selling costs can be anywhere from

0.0033144 billion to 103.9188 billion; and the size of the firm can be anywhere from 12.93095 to 21.32429.

4.2 Correlation Analysis

Table 4.2. Correlation statistics

	PAT	ADC	SDC	FZ
PAT	1.0000			
ADC	0.0910	1.0000		
SDC	0.6091	0.6275	1.0000	
FZ	0.4810	0.4834	0.566	1.0000

Source: Data Analysis, (2021)

Table 4.2 displays the correlation coefficients for each pair of variables included in the study's models. The correlation calculations reveal the extent and direction of the relationship between two variables employed in the investigation. This research demonstrated a link between net profit after taxes, administrative expenses, sales and distribution costs, and the firm itself with coefficients of 0.1837 and 0.0910, and 0.6091 and 0.4810. Multi-collinearity is unlikely to occur among the explanatory factors because of the low amplitude of interaction between the majorities of pairs of variables included in the estimated models, as shown in table 4.2.

4.3 Analysis of the effect of the Administrative Cost, and Selling and Distribution Costs on Profit after Tax of selected manufacturing firms in Nigeria.

This section presents findings from an investigation of the influence of administrative and sales and distribution expenses on a sample of publicly listed manufacturing companies' profit after tax (PAT). Pooled OLS estimates, estimations of fixed and random effects, and assessments of consistency and efficiency using restricted f-tests and Hausman post-estimation tests are among the findings described in this section. Further post-estimation results were presented to confirm the model's fitness.

Table 4.3. Estimation Result

Coefficient	Pool	Probability	Fixed	Prob	Random	Probability
Coefficient						
C	-12.34563	0.000	-3422422	0.9332	-10.45356	0.0000
ADC	-1386646	0.0453	.000000	0.0453	-0.040257	0.7676
SDC	.3232456	0.0032	-.094833	1.3242	0.0466454	0.5646
FZ	-2145567	0.0000	.4358394	0.0000	0.575678*	0.0000
	R.Square Adj.R.Square F.statistic=47.86 Prob(F-stat)=0.0000		R-square=0.8567 Adj R-square=0.8391 F-statistics=48.58 Prob(F-stat)=0.0000		R.Square Wald Chi Prob> chi2 = 0.000 Prob >chi2+0.000	
	Restricted F-Test 23.55(p=0.000>0.05)					
			Hausman Test=2.77(p=0.59876>0.05)			

Note: parameter estimates are expressed in percentage change since the variables used for the model estimation were converted to natural log form alongside those in percentage.

Source: Data Analysis, (2022)

Table 4.3 displays the estimate results for pooled OLS estimation, fixed effect estimation, and random effect estimation, as well as limited F-test and Hausman test, which were used to assess the estimators' consistency and efficacy. There is sufficient evidence to reject the null hypothesis that all differential intercepts belonging to each cross-sectional particular unit (firms) are equal to zero, as shown in table 4.3, but not for the period specific intercepts. Since manufacturing enterprises have a large amount of cross-sectional variability in their data, pooled OLS estimation is no longer applicable and should be replaced with cross-sectional fixed effect estimation instead.

Probability was calculated using Hausman chi-squared at 0.5975. Results showed that there was not enough evidence to reject the null hypothesis that differences in coefficients of fixed effect estimate and estimation of random effect were non-significant. Therefore, random effect estimate is the most reliable and efficient method for determining the results of a study. Random effect estimates in table 4.3 shows that administrative costs have a negative and insignificant effect on profit after tax when heterogeneity effects across firms sampled in the study and period effects are incorporated into the model via the error term, which reflects that for every 1% increase in administrative costs, profit after tax will decrease by 0.04 percent.

As shown in Table 4.3, the random effect result shows that selling and distribution costs have a positive but insignificant effect on profit after tax, with an estimated coefficient of 0.006885 ($p=0.995 < 0.05$), indicating that a 1% increase in selling and distribution costs results in a 0.006% increase in profit after tax. When the heterogeneity effect is subsumed under the random term, the reported R-square was 0.5616, indicating that cost control variables and firm size account for nearly 56% of the systematic variance in profit after tax.

Table 4.4. Other Post Estimation Test

<i>Wald test</i>		
Null hypothesis	Statistics	Probability
<i>Panel homoscedasticity</i>	1.9116	0.3534
<i>Pesaran test</i>		
Null hypothesis	Statistics	Probability
<i>No cross-sectional dependence</i>	-1.465	0.1428
<i>Wooldridge test</i>		
Null hypothesis	Statistics	Probability
<i>No AR(1)panel autocorrelation</i>	1.8194	0.3538

Source: Data Analysis, (2022)

Given the reported probability statistics of $0.3534 > 0.05$ for Wald test, $0.1428 > 0.05$ for Pesaran test, and $0.3538 > 0.05$ for Wooldridge test, Table 4.4 demonstrates that there is no evidence to reject the null hypothesis of panel homoscedasticity, the null hypothesis of no cross-sectional dependence, and the null hypothesis of no AR (1) panel autocorrelation. Since there is no serial autocorrelation, the investigation may verify the assumptions of cross-sectional independence and residual terms with equal variance.

5. Implication of the Findings and Conclusion

It was shown that administration cost (ADC) and sales and distribution (SDC) had a favorable influence on the profitability of manufacturing, as assessed by profit after tax (PAT). It was discovered that there is a strong connection between selling and distribution costs (SDC) and administrative costs (ADC), which lends credence to the findings of Nelson, George, Muriithi, and Isaac (2014), which indicate that cutting costs to the absolute minimum contributes to greater financial performance. Akeem (2017) found that an increase in cost management led to an increase in the financial performance of a sample of publicly listed manufacturing firms in the United States. This finding emphasizes the significance of cost management in improving the financial performance of these organizations and serves to highlight the relevance of cost management in doing so. As the results of this study, decreasing costs is one of the most effective ways for manufacturing firms to keep their finances in good shape. In addition, Lasisi and Nuhu (2015) found that lowering a company's operating expenses had a beneficial effect on the performance of the business. According to Godwin, Amos, and Sunday's (2019) findings, there is a substantial inverse link between profits before tax and administrative expenses.

The findings of Godwin, Amos, and Sunday (2019) provided empirical support for the hypothesis that improved company cost management contributed to increased profitability throughout the course of the research period. Companies like Lafarge, Meyers, Berger, Unilever, and Beta Glass may see an improvement in their financial performance if they reduce expenditures such as administrative costs) and selling and distribution costs respectively, have a significant effect on the financial performance of two other businesses, namely Nascon and Vitafoam.

For the firm that was analyzed, the expenses of selling and distribution had a little effect on profit after tax, whereas administrative costs had no effect whatsoever on profit after tax. According to the findings of this research, the financial performance of Nigerian manufacturing businesses is not expected to be significantly impacted by cost-control strategies (such as cutting administrative costs). This prediction is based on the findings of the study. It has been established that cost conservation may have both good and negative impacts on the financial performance of Nigerian manufacturing businesses, as measured by profit after tax.

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