

COMPETITOR POSITION MONITORING AND FINANCIAL PERFORMANCE OF QUOTED MANUFACTURING FIRMS IN NIGERIA

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KEY WORDS

ABSTRACT

The study examined competitor position monitoring and its effect on the financial performance of quoted manufacturing firms in Nigeria, spanning the period 2011 – 2020. Competitor position monitoring was to relate the financial performance which was represented by net profit before tax, return on equity, earnings per share, and return on assets. The population of the study is the sixty (60) quoted manufacturing companies as at 2012. Data was obtained from the financial statements of the companies studied, as well as from the Nigerian Exchange Group. The study adopted both descriptive and inferential statistics for the analyzing of the data, this study goes further adopted panel data technique, the panel Autoregressive Distributed Lag (P-ARDL). The results obtained showed p-values of 0.0000 for CPM and NPBT, CPM and ROE, and CPM and EPS respectively, which are less than the 0.05 level of significance. On CPM and ROA, a p-value of 0.0171 which is less than the 0.05 level of significance was obtained, thus, leading to the rejection of all four null hypotheses. We therefore concluded that competitor position monitoring has significant effect on financial performance, and recommended that firms should develop competitive intelligence for the purpose of assessing and utilizing of real time market information. This will help them to constantly understand the cost structure and the market position of their competitors. Integrating technology for market data gathering can help them achieve this.

Introduction

It is argued that strategic management accounting (SMA) is one of the practice in the field of accounting that is required to create value (Abdullah & Said, 2016). While SMA practices are globally acceptable by many countries, such as Australia, Europe and other parts of the world; but when viewed from local perspective, the practices of SMA is not broadly practiced. A study by Sulaiman et al. (2004), concluded that there are many firms that still adopt conventional

management accounting techniques, this condition occurs due to lack of awareness, expertise, and top management support. Yap et al. (2013) found that the adoption rates for SMA practices by Malaysian companies were comparatively lower than in other countries. However, in manufacturing industries such as Electrical and Electronics companies, it is found that certain SMA techniques are widely used (Nordin et al., 2009). Due to this uncertainty level of SMA usage in Malaysia context, it becomes imperative for a study to ascertain the extent to which SMA practices, with particular emphasis on competitor position monitoring among quoted manufacturing firms in Nigeria is utilized. The manufacturing firms in Nigeria have contributed greatly to the economic advancement of the nation, hence studying them cannot be said to be overemphasized, just as it was opined that Malaysia public interest companies have contributed extensively towards the development of economic growth of the nation by improving the quality of life for Malaysians society such as a large scale of infrastructure (Abdullah, 2019; Abdullah & Said, 2016; Ahmad et al., 2017). It is on the basis of this, that this study seek to examine competitor accounting and the effect (if any) on the financial performance of quoted manufacturing firms in Nigeria. Competitor position monitoring is the analysis of competitor position within the industry by assessing and monitoring trends in competitor sales, market share, volume, unit costs, and return on sales. Competitive position is regarded as being synonymous with the market relative share (Amir et al., 2014). According to Drury (2008), competitive position monitoring is the analysis of competitor's positions within the industry by assessing and monitoring trends in competitor's sales, market share, volume, unit costs, and return on sales. This requires obtaining information on competitors' performance such as sales, market share volume and unit costs and company performance with these in order to control and formulate strategy (Cinquini & Techucci, 2006 cited in Egbunike et al., 2014). Competitive position monitoring as an index that measures the relative power and dominance of a given business in a market compared to the competitors and it is gained using the business weighted average in the market share compared to competitor's customer loyalty, product quality, and price competitiveness. According to the information provided, the company can assess its position relative to main competitors and consequently, control or formulate its strategy. Competitor position monitoring has proved to be the most useful tool of competitor accounting (Malinic et al., 2012) and that information on competitor's position affects the performance of companies and such information is especially important for productivity (Hassan et al., 2011). To maintain the company's competitive position and determine the strategy aimed at improving future competitiveness, managers require information which indicates by whom, to what extent, and why they are defeated.

In their quest to obtaining the answer to the above-mentioned questions, one of the biggest challenges for managers in the contemporary business environment seems to be collecting the information on current and potential competition.

Competitor Position Monitoring, as advocated by Simmonds (1986) represents a more holistic model of competitor analysis than competitor cost assessment. It involves two main methods of supervision (Simmonds, 1986). First, the competitive position of Graph, mapped using the method map relative to the market leader in business and other major competitors in the current and future competitor's position. Indicators are some of the key variables such as unit costs, price profitability, sales revenue, sales volumes, market share, and relative market share, cash flow, cash flow rates, future needs, etc. This method provides different competitors with information in each competitive force in different periods of up and down panorama. Thus, the monitoring of competitor position is a more comprehensive approach for a competitor evaluation. With competitor position monitoring, firms are able to analyze their competitors and react based on their future goals, assumptions, capabilities, and their current position. Besides, it allows the firm to monitor the competitive position through extensive analysis of the competition. Hence, the objective of this study is to investigate the extent of competitor position monitoring to financial performance of quoted manufacturing in Nigeria.

Statement of Problem

Over the years, globalization enabled by advancement in technology has intensified competition across industries and the flux of volatility, uncertainty, complexity and ambiguity has increased the dynamic nature of the operational environment of businesses. This has placed most organizations under pressure and the quest for survival and sustainability have become a critical component of every strategic discuss. Understanding that activities of their competitors has significant influence on their performance, organizations are now give attention to continuous monitoring of their competitors with intent of using the information obtained to develop both responsive and market leadership strategies, thereby enhancing their own performance. Monitoring of competitors however is not without a cost since it involves time and finance. It may even involve having an employee of a competitor on a company's payroll in order for such employee to provide espionage services; this may backfire with devastating negative consequences on the performance of the sponsoring company.

Objectives of the Study

This study has the major objective of ascertaining the relationship between competitor position monitoring and the financial performance of quoted manufacturing firms in Nigeria. However there are specific objectives which includes, to

- i. Evaluate the relationship between competitor position monitoring and net profit before tax of quoted manufacturing firms.
- ii. Determine the relationship between competitor position monitoring and return on equity of quoted manufacturing firms.

- iii. Investigate the relationship between competitor position monitoring and earnings per share of quoted manufacturing firms.
- iv. Ascertain the relationship between competitor position monitoring and return on assets of quoted manufacturing firms.

Statement of Hypotheses

For the purpose of this study, the following hypotheses are formulated:

Ho1: There is no significant relationship between position monitoring assessment and net profit before tax of quoted manufacturing firms.

Ho2: The relationship between competitor position monitoring and return on equity of quoted manufacturing firms is not statistically significant.

Ho3: There is no significant relationship between competitor position monitoring and earnings per share of quoted manufacturing firms.

Ho4: The relationship between competitor position monitoring and return on assets of quoted manufacturing firms is not statistically significant.

Theoretical Review

The Survival-Based Theory

This theory like the previous one was also initially introduced in the field of economics. Researchers such as Alchian (1950); Harrod (1939); Marshall (1949) and Schumpeter (1934) were among the first who introduced the idea of evolutionary thinking and natural selection into the concept of economics. Hence it is not a surprise to find the most common application of survival of the fittest theory found in economics, mainly being used to analyze how firms thrive and compete in industries, and also to explain change in economy (Nelson & Winter, 1982).

The concept of survival-based theory or some might call it "survival of the fittest" theory was originally developed by Herbert Spencer (Miesing & Preble, 1985). It was him who synthesized Darwin's theory of evolution and natural selection with Adam Smith's invisible hands to come up with the idea of Social Darwinism. This theory, which was quite popular during the late 19th and early 20th century, emphasized the notion that by following the principle of nature, only the best and the fittest of competitors will win, which in the end would lead to the improvement of the social community as a whole. Social Darwinism assumed it is normal for the competition to behave in hedonistic ways to produce the fittest business, who survived and prospered by successfully adapting to its environment or become the most efficient and economic producer of all. Hence, ruthless business rivalry and unprincipled politics are acceptable under this assumption. The survival-based view in strategic management emphasized on the assumptions that to survive, organizations have to deploy strategies that should be focused on running very efficient operations and can respond rapidly to the changing of the competitive environment (Khairuddin, 2005) since the one that survives is the one that is the fittest and ablest to adapt to the environment. This theory is appropriate

for this study as it reawakens the company's zeal to survive at all costs by taking competitive information about its competitors to gain a competitive advantage.

Market Power Theory

The Market Power (MP) theory states that the performance of the bank is influenced by the market structure. The hypothesis suggests that only firms with large market share and differentiated portfolios can win their competitors and earn monopolistic profits. The market structure matters for the bank's power irrespective of the nature of banks, whether Islamic or conventional, as it can directly affect bank performance. There are two distinct approaches within the MP theory: The traditional structure-conduct performance and the relative market power theories. The traditional structure-conduct-performance (SCP) hypothesis developed by (Bain, 1956) states that increased exogenous market forces in bank's conduct influences its profitability. The SCP paradigm assumes that higher level of bank concentration allows a higher degree of cooperation between banks thus result to set of higher prices and consequently gains substantial profits through oligopolistic behavior and collusive argument. The SCP hypothesis states that bank performance depends on various elements of market concentration, market structure, number and size of banks, and collusion. The more concentrated the market, the less the degree of competition and hence, the higher profitability. Shepherd (1986) formulated Relative Market Power (RMP) theory, which states that earning supernormal profits are due to firms with well-differentiated products that can increase market share and exercise their market power in pricing products. Consequently, under the RMP hypothesis, individual market shares accurately determine market power and market imperfections. The RMP hypothesis is empirically proved when concentration introduced in the explanatory equations of performance is found non-significant in contrast to market share which should be positively and significantly correlated with price and/or profitability. Therefore, the bank with a strong position in the market may either reinforce its domination over the market or achieves a higher efficiency.

Empirical Review

Egbuhuzor, Akoba, and Chukwu (2021) investigated competitor accounting and profitability of listed financial institutions in Nigeria. The study adopted competitor cost assessment, competitive position monitoring, and competitor financial statement performance appraisal as proxies for competitor accounting, while and net profit margin was used as proxy for profitability. 53 financial institutions were identified as the population for the study, while a total of 40 drawn to represent the sample through a judgmental sampling technique. Data was obtained from the financial statements of the various financial institutions, while the analyses were conducted through the use of multiple regression analyses. The results indicated that a positive and significant relationship between competitor cost assessment and net profit margin, a negative and significant relationship between competitive position monitoring and net profit margin, and a positive and

insignificant relationship between competitor financial statement performance appraisal and net profit margin.

In an attempt to ascertain the relevance of competitor accounting, Phornlaphatrachakorn (2019) carried out a study on competitor accounting and marketing performance: an empirical investigation of electronics and electrical appliance businesses in Thailand. The study made use of 175 electronics and electrical appliance businesses in Thailand as its sample size alongside a structured questionnaire. Correlation analysis and multiple regression analysis were used in testing the research hypotheses. The study revealed that both competitor cost assessment and competitor performance appraisal have significant effects on marketing capability and competitive advantage while competitive position monitoring has an important influence on marketing capability, marketing effectiveness, and marketing performance.

Okoye, Njideka, Egbunike and Odum (2015) examined competitor focused accounting (CFA) and financial performance in selected manufacturing firms listed on Nigerian stock exchange. Specifically, it determined the relationship between competitor cost assessments (CCA), competitor position monitoring (CPM) and competitor financial statement performance appraisals (CPA) and financial performance. The study additionally evaluated the impact of CFA methods on firms' financial performance. The population of this study comprised 56 manufacturing companies and two-hundred and twenty-four (224) respondents were drawn from the population. The primary data collection instrument was the questionnaire while the secondary data instrument was the annual report of companies under study. The result of the study revealed among others that competitor cost assessment, competitor position monitoring and competitor financial statement performance appraisal all demonstrate significant positive relationship with financial performance and that competitor focused accounting has a positive and significant impact on financial performance. Manufacturing firms in Nigeria should give priority to strategic management accounting and its sub-divisions especially CFA in order to enhance its competitive edge over competitors.

Amir, Mohammad and Mehdi (2014) in an attempt to ascertain the competitive position of companies operating in Iranian battery carried out a study on the analysis and identification of competitive positions of companies operating in the Iranian battery industry using hierarchical analysis. The descriptive survey research design was employed and the sample size of the study was 30 sales agencies of battery-making companies' products, 17 in Isfahan and 13 in Shiraz. Data for the study was collected from several questionnaires prepared and distributed among agencies and sellers active in Shiraz and Isfahan. The data collected were studied using SPSS Software. Then the strongest companies in terms of their competitive positions were identified according to the opinions of experts and professionals in the field of the industry using Expert Choice Software. The study revealed that of five domestic and foreign active companies including Saba

Battery, Borna Battery, Sepahan Battery, Azar Battery, and Korean battery-making companies, the Korean companies gained the highest ranking in terms of competitive position.

Anucha (2019) researched on customer accounting and competitor accounting as a strategic approach for goal achievement: evidence from auto parts manufacturing companies in Thailand. The study investigated the influences of customer accounting and competitors accounting on goal achievement through customer relationships and competitive advantage as mediating the study. The study employed the survey research design with the aid of a well-structured questionnaire. The sample size for the study was 136 auto parts manufacturing companies in Thailand. T-test statistical method was used to test the postulated hypothesis. From the test, it revealed that customer profitability analysis, valuations of customers as assets, competitor position monitoring have a significant positive influence on competitive advantage.

Chiekezie et al. (2014) in their study examined the extent of adoption of competitor-focused accounting (CFA) in selected manufacturing firms listed on the Nigerian Stock Exchange to establish whether there are differences in the financial performance of the firms. The study was descriptive and used survey techniques. Accordingly, two-hundred and twenty-four (224) key respondents in the Nigerian manufacturing industry were surveyed. This was complemented with secondary data collected from annual accounts and reports of fifty-six (56) manufacturing companies listed in the Nigerian stock exchange. In addition to descriptive statistics, analysis of variance (F-Ratio) and Scheffé's (fs) test were used in analyzing collected data. The result of the study revealed that 14 companies representing (25%) were non-adopters of competitor focused accounting methods, 36 (64.3%) were partial adopters while 6 (10.7%) were full adopters. Also, the mean financial performance of full adopters of CFA methods was 25.1 greater than that of partial adopters and also 45.71 greater than non-adopters. This showed a large difference. On the other hand, partial adopters' mean financial performance was 20.61 greater than that of non-adopters of CFA methods. However, the study proved that the practice of CFA in Nigerian manufacturing companies is still below average and the necessity to improve this situation is the current challenge. It was therefore recommended that manufacturing firms in Nigeria should give priority to strategic management accounting and its sub-divisions especially CFA in order to enhance its competitive edge over competitors in the industry.

Thapayom (2019) studied customer accounting and competitor accounting as a strategic approach for goal achievement with evidence from auto parts manufacturing companies in Thailand. The study adopted all the auto parts manufacturing companies in Thailand and administered 618 questionnaires to expected respondents by mail, out of which 136 valid responses were received. For the analyses, multiple regression analyses was conducted using the data obtained from the valid questionnaire received, and the result showed that competitive

position monitoring and competitive performance appraisal have a significant positive influence on competitive advantage.

Methodology

The research design for this study is the quasi-experimental research design. This form of research design takes into cognizance what has already occurred, or that it is currently happening. As a result of this, the researcher will have no control over the variables under consideration, in which case, he will not be able to manipulate such variables. The population of this study consist of all the quoted manufacturing firms in Nigeria which stands at sixty (60) in the Nigeria Exchange Group as at 2022. The study covers the period from 2011 to 2020. The study retained all 60 manufacturing companies as quoted in the Nigerian Exchange Group, hence the population and the sample size are same. The data for this study were collected from two major sources, which are from the published financial statements of manufacturing firms that constitutes the population and sample, as well as from the Nigerian Exchange Group, and it covers the relevant periods of the study.

Model Specification.

$$\begin{aligned} npbt &= f(cpm) \\ eps &= f(cpm) \\ roa &= f(cpm) \\ roe &= f(cpm) \end{aligned}$$

Where:

- NPBT - Net Profit Before Tax
- EPS - Earnings Per Share
- ROA - Return on Assets
- ROE - Return on Equity
- CPM - Competitive Position Monitoring

Net Profit Before Tax (NPBT): In this study, net profit before tax is adopted from the financial statements of the various companies under consideration.

Return on Equity (ROE): This is the measure of a company's net income divided by its shareholders' equity. In this study, the ROE is calculated mathematically as

$$\text{ROE} = \frac{\text{Profit After Tax}}{\text{Equity}}$$

Earnings Per Share (EPS): this divides the net earnings available to ordinary shareholders by the average outstanding shares over a certain period of time. It will be measured by

$$\text{Earnings per Share} = \frac{\text{profit after tax}}{\text{No of share outstanding}}$$

Return on Assets (ROA): This shows how efficient a company is in utilizing its assets to generate the desired profit. In this study, the ROA was calculated mathematically as

$$ROA = \frac{\text{Net Profit Before Tax}}{\text{Total Assets}} \times 100$$

Competitive Position Monitoring (CPM): This was operationalized in terms of the market share of the firm, which is the ratio of a firm’s earnings to the industrial earnings of the respective years.

Mathematically it is $CPM = \frac{\text{Firms Earnings}}{\text{Industrial Earnings}}$

Since our study contain the combination of time series with cross-section data, panel data analysis becomes the most ideal technique of model estimation. Based on the advancements in econometric modelling technique, this study goes further to adopt a more recent panel data technique, the panel Autoregressive Distributed Lag (P-ARDL).

The variable used in this study are tested with panel unit root test, specifically the Levin, Lin and Chu test (2002). The decision rule is that if the absolute p-value of the LLC test is less than 5 percent critical value, then it is adjudged that the tested variable is stationary or does not have unit roots. If, on the other hand, the p-value of the LLC test statistic is greater than 5 percent critical value, then it is adjudged that the tested variable is non-stationary or has unit roots.

Before the panel error cointegration model (PECM) is estimated, it is necessary to first establish the presence of cointegration among the variable of interest. As a result, the panel Engle and Granger based cointegration test proposed by Pedroni (2004) was conducted. The Pedroni cointegration is based on the form below:

$$\Delta y_t = \alpha_i + \prod y_{it-1} + \sum_{j=1}^p \Gamma_j \Delta y_{it-j} + v_{it} \dots \dots \dots (3.1)$$

Where the hypothesis of no cointegration implies that $\rho(\Pi) = 0$ and presence of cointegration if otherwise.

Once cointegration is established between competitor accounting and financial performance of manufacturing companies in Nigeria, the conditional P-ARDL long-run model can be specified as:

$$NPBT_t = \omega_0 + \omega_1 CPM_{t-i} + \epsilon_t \dots \dots \dots (3.2)$$

$$EPS_t = \omega_0 + \omega_1 CPM_{t-i} + \epsilon_t \dots \dots \dots (3.3)$$

$$ROA_t = \omega_0 + \omega_1 CPM_{t-i} + \epsilon_t \dots \dots \dots (3.4)$$

$$ROE_t = \omega_0 + \omega_1 CPM_{t-i} + \epsilon_t \dots \dots \dots (3.5)$$

Where,

ω_0 = intercept

ω_1 = coefficients of long-run estimates

ϵ_t = error term of long-run estimates

In the next step, we obtain the short-run dynamic parameters by estimating an error correction model associated with the long-run estimates. This is specified as follows:

$$\Delta NPBT_t = \alpha_0 + \sum_{i=1}^a \beta_i \Delta NPBT_{t-i} + \delta_k \sum_k \Delta CPM_{t-k} + \phi ECT_{t-1} + \mu_t \dots \dots \dots (3.6)$$

$$\Delta EPS_t = \alpha_0 + \sum_{i=1}^a \beta_i \Delta EPS_{t-i} + \delta_k \sum_k \Delta CPM_{t-k} + \phi ECT_{t-1} + \mu_t \dots \dots \dots (3.7)$$

$$\Delta ROA_t = \alpha_0 + \sum_{i=1}^a \beta_i \Delta ROA_{t-i} + \delta_k \sum_k \Delta CPM_{t-k} + \phi ECT_{t-1} + \mu_t \dots \dots \dots (3.8)$$

$$\Delta ROE_t = \alpha_0 + \sum_{i=1}^a \beta_i \Delta ROE_{t-i} + \delta_k \sum_k \Delta CPM_{t-k} + \phi ECT_{t-1} + \mu_t \dots \dots \dots (3.9)$$

Where,

ECT = error correction term, and

ϕ = the speed of adjustment.

Descriptive Statistics

Before we begin the analysis, it is important to redefine the variables of interest. There are four (4) dependent variables, the Net Profit Before Tax (NPBT), Return on Equity (ROE), Earnings Per Share (EPS) and Return on Assets (ROA), while the independent variable is Competitive Position Monitoring (CPM). A critical examination of the descriptive statistics for the dependent and explanatory variable reveals several issues. The average for NPBT for the sample as a whole is N29,110,404.00. In the same vein, the means for ROA, ROE and EPS are 164.28%, 8.82% and 4.19%. In a comparative term, ROA seem to outperform ROE and EPS. This means that competitor accounting seem to have favored the return on asset more than the other financial performance indicators.

Descriptive Statistics for Dependent and Explanatory Variables

	ROE	ROA	NPBT	EPS	CPM	CFSPA	CCA
Mean	8.818811	164.2846	29110404	4.199537	48.20487	3767.225	7.295374
Median	0.090000	4.920000	340628.0	0.970000	9.000000	1.160000	0.210000
Maximum	3296.370	18227.64	2.48E+09	1186.180	1555.990	1708493.	499.7900
Minimum	-22.06000	-60.82000	-24873065	-497.0000	0.200000	-13.46000	-0.390000
Std. Dev.	158.0610	1450.524	2.07E+08	66.68110	173.3761	80183.36	51.87856
Skewness	20.06714	9.945808	9.975152	11.92746	6.845849	21.23680	7.731162
Kurtosis	414.8431	106.3714	105.6002	230.7710	52.96364	452.0019	64.08768

Source: Researcher's Computation using EViews

Correlation Matrix of the Variables

Correlation Probability	ROE	ROA	NPBT	EPS	CPM	CFSPA	CCA
ROE	1.000000 -----						
ROA	-0.007356 0.8758	1.000000 -----					
NPBT	-0.010746 0.8194	0.965298 0.0000	1.000000 -----				
EPS	-0.005084 0.9140	0.000207 0.9965	0.009517 0.8397	1.000000 -----			
CPM	-0.012456 0.7912	-0.022580 0.6313	0.010771 0.8190	0.078361 0.0954	1.000000 -----		
CFSPA	-0.002415 0.9591	-0.004571 0.9226	-0.002471 0.9581	0.011727 0.8032	0.107818 0.0216	1.000000 -----	
CCA	-0.007517 0.8731	0.740978 0.0000	0.674093 0.0000	0.050489 0.2830	-0.032148 0.4944	-0.006146 0.8961	1.000000 -----

The correlation matrix for the variables as shown above is in order to examine the correlation that exists among variables. The results show that there is a negative relationship between return on equity and competitive position monitoring. Relatedly, the return on asset is negatively related to competitor position monitoring. However, positive relationship exists between earnings per share and competitor position monitoring, as well as net profit before tax and competitor cost assessment.

Panel Unit Root Test

Variables	Levin, Lin & Chu test:			Levin, Lin & Chu tests:		
	Levels			First Difference		
	Test Statistic	p-values	Order of Integration	Test Statistic	p-values	Order of Integration
NPBT	-9.8543	0.0000***	$I(0)$			
EPS	-5.8088	0.0000***	$I(0)$			
ROE	-178.3940	0.0000***	$I(0)$			
ROA	-13.6289	0.0000***	$I(0)$			
CCA	-6.9658	0.0000***	$I(0)$			
CFSPA	-8.3067	0.0000***	$I(0)$			
CPM	-12.2906	0.0000***	$I(0)$			
Note: *, **, *** are significance at 10%, 5% and 1% respectively						

Source: Researcher’s Computation using EViews

The results of the unit root tests show that the p-values of all the dependent variables (net profit before tax, return on equity, earnings per share and return on assets) and independent variable (competitor position monitoring) were less than 0.05, indicating that the null hypothesis for non-stationary series is rejected at a 0.05 significance level. Thus, it is concluded that competitor position monitoring and financial performance variables are integrated of order zero or $I(0)$.

Pedroni Residual Cointegration Tests for Net Profit Before Tax (NPBT) Models

	$NPBT = f(CCA)$		$NPBT = f(CFSPA)$		$NPBT = f(CPM)$	
	Statistic	Prob.	Statistic	Prob.	Statistic	Prob.
Panel v-Statistic	-0.5355	0.7038	-2.8774	0.9980	-1.3934	0.9183
Panel rho-Statistic	-1.6874	0.0458**	2.8135	0.9975	1.9114	0.9720
Panel PP-Statistic	-3.1017	0.0010***	2.1812	0.9854	1.2460	0.8936
Panel ADF-Statistic	-3.1619	0.0008***	-5.3486	0.0000***	1.1148	0.8675
Weighted	-0.9110	0.8188	-0.6363	0.7377	-0.9838	0.8374
	-0.2518	0.4006	0.013983	0.5056	-1.6408	0.0504**
	-2.8745	0.0020***	-2.4929	0.0063***	-6.2122	0.0000***
	-5.1641	0.0000***	-4.5093	0.0000***	-8.6632	0.0000***
Group rho-Statistic	2.5196	0.9941	2.7585	0.9971	1.1154	0.8677
Group PP-Statistic	-2.0117	0.0221**	-1.8493	0.0322**	-6.2888	0.0000***
Group ADF-Statistic	-5.8421	0.0000***	-4.9977	0.0000***	-9.7068	0.0000***

Note: *, **, *** are significance at 10%, 5% and 1% respectively

Source: Researcher’s Computation using EViews

For the NPBT-CPM models to produce five out of eleven evidences of cointegration, we conclude that there is sufficient information enough to establish the existence of long-run relationship between NPBT and CPM. With very appreciable traces of the test statistics rejecting the null hypothesis of no cointegration; and with the p-value being lower than 0.05, we conclude that there exists a cointegrating relationship between Net Profit Before Tax (NPBT) and competitor position monitoring Model examined.

Pedroni Residual Cointegration Tests Earnings Per Share (EPS) Models

	<i>EPS = f(CCA)</i>		<i>EPS = f(CFSPA)</i>		<i>EPS = f(CPM)</i>	
	<u>Statistic</u>	<u>Prob.</u>	<u>Statistic</u>	<u>Prob.</u>	<u>Statistic</u>	<u>Prob.</u>
Panel v-Statistic	2.3136	0.0103***	6.9328	0.0000***	-3.8677	0.9999
Panel rho-Statistic	-3.5920	0.0002***	-3.3623	0.0004***	-1.7623	0.0390**
Panel PP-Statistic	-6.9394	0.0000***	-7.7148	0.0000***	-11.6564	0.0000***
Panel ADF-Statistic	-6.9896	0.0000***	-7.6583	0.0000***	-9.3174	0.0000***
Weighted	-0.7053	0.7597	-0.2665	0.6051	-1.5007	0.9333
	-2.1010	0.0178	-2.0486	0.0202**	-2.5794	0.0049***
	-6.1146	0.0000***	-7.0508	0.0000***	-8.8415	0.0000***
	-6.9511	0.0000***	-7.0979	0.0000***	-9.1949	0.0000***
Group rho-Statistic	1.0804	0.8600	0.6615	0.7459	0.1095	0.5436
Group PP-Statistic	-5.0289	0.0000***	-7.9601	0.0000***	-9.3315	0.0000***
Group ADF-Statistic	-5.7724	0.0000***	-9.0703	0.0000***	-9.7221	0.0000***

Note: *, **, *** are significance at 10%, 5% and 1% respectively

Source: Researcher’s Computation using EViews

For the EPS-CPM model to produce eight out of eleven evidences of cointegration, we conclude that there is sufficient information enough to establish the existence of long-run relationship in EPS-CPM relationship. With very appreciable traces of the test statistics rejecting the null hypothesis of no cointegration; and with the p-value being lower than 0.05, we conclude that there exists a cointegrating relationship between Earnings per share (EPS) and competitor position monitoring Model examined.

Pedroni Residual Cointegration Tests for Return on Assets (ROA) Model

	<i>ROA = f(CCA)</i>		<i>ROA = f(CFSPA)</i>		<i>ROA = f(CPM)</i>	
	<u>Statistic</u>	<u>Prob.</u>	<u>Statistic</u>	<u>Prob.</u>	<u>Statistic</u>	<u>Prob.</u>
Panel v-Statistic	0.2961	0.3836	-1.6418	0.9497	-3.6686	0.9999
Panel rho-Statistic	-0.8399	0.2005	1.8466	0.9676	0.5427	0.7064
Panel PP-Statistic	-3.8857	0.0001***	-4.0000	0.0000***	-7.7491	0.0000***
Panel ADF-Statistic	-5.5183	0.0000***	-18.3457	0.0000***	-9.4068	0.0000***
Weighted	-1.0749	0.8588	-0.8451	0.8010	-1.0171	0.8455
	-1.5225	0.0639*	-1.3620	0.0866*	-2.2305	0.0129**
	-5.5742	0.0000***	-5.8329	0.0000***	-8.8560	0.0000***
	-6.4575	0.0000***	-6.7653	0.0000***	-10.2119	0.0000***
Group rho-Statistic	1.5725	0.9421	1.3505	0.9116	0.2060	0.5816
Group PP-Statistic	-5.6218	0.0000***	-6.3276	0.0000***	-10.6478	0.0000***
Group ADF-Statistic	-6.246	0.0000***	-7.1705	0.0000***	-10.8452	0.0000***

Note: *, **, *** are significance at 10%, 5% and 1% respectively

Source: Researcher’s Computation using EViews

For the ROA-CPM models to produce seven out of eleven evidences of cointegration, we conclude that there is sufficient information enough to establish the existence of long-run relationship in ROA-CPM relationship. With very appreciable traces of the test statistics rejecting the null hypothesis of no cointegration; and with the p-value being lower than 0.05, we conclude that there exists a cointegrating relationship between Return on assets (ROA) and competitor position monitoring Model examined.

Pedroni Residual Cointegration Tests for Return on Equity (ROE) Model

	<i>ROE = f(CCA)</i>		<i>ROE = f(CFSPA)</i>		<i>ROE = f(CPM)</i>	
	<u>Statistic</u>	<u>Prob.</u>	<u>Statistic</u>	<u>Prob.</u>	<u>Statistic</u>	<u>Prob.</u>
Panel v-Statistic	4.1532	0.0000***	-1.5249	0.9364	-3.9002	1.0000
Panel rho-Statistic	-3.9384	0.0000***	-4.0003	0.0000***	-6.3428	0.0000***
Panel PP-Statistic	-8.8961	0.0000***	-8.7101	0.0000***	-12.8034	0.0000***
Panel ADF-Statistic	-8.8631	0.0000***	-8.7115	0.0000***	-12.7656	0.0000***
Weighted	-0.5075	0.6941	-1.5776	0.9427	-0.9945	0.8400
	-1.3706	0.0853*	-1.0291	0.1517	-2.5500	0.0054***
	-5.4446	0.0000***	-5.4678	0.0000***	-8.5718	0.0000***
	-5.4316	0.0000***	-7.0212	0.0000***	-8.8281	0.0000***
Group rho-Statistic	1.0179	0.8457	1.9516	0.9745	0.5715	0.7162
Group PP-Statistic	-7.83423	0.0000***	-5.2887	0.0000***	-9.1697	0.0000***
Group ADF-Statistic	-6.9655	0.0000***	-7.32461	0.0000***	-10.1618	0.0000***

Note: *, **, *** are significance at 10%, 5% and 1% respectively

Source: Researcher’s Computation using E-Views

For the ROE-CPM model to produce eight out of eleven evidences of cointegration, we conclude that there is sufficient information enough to establish the existence of long-run relationship in ROE-CPM relationship. With very appreciable traces of the test statistics rejecting the null hypothesis of no cointegration; and with the p-value being lower than 0.05, we conclude that there exists a cointegrating relationship in Return on Equity (ROE) and competitor position monitoring Model examined.

Hypotheses Testing

H01: There is no significant relationship between competitor position monitoring and net profit before tax.

Decision Criteria: If, p-value < 0.05, then variable is significant: Reject H0

p-value > 0.05, then variable is not significant: Accept H0

Competitor position monitoring and net profit before tax

<i>NPBT = f(CPM)</i>			
Variables	β	p-values	Decisions
CPM	80,922.60	0.0000	Reject H0

Source: Researcher’s Computation using EViews

For the p-value for CPM in the NPBT-CPM model (0.0000), being less than the significance level (0.05), means that Competitors position monitoring has statistically significant positive impact (β = 80,922.60) on the net profit before tax component of financial performance of manufacturing companies in Nigeria for the period of 2011 to 2020. Hence, the null hypothesis that there is no significant relationship between competitors position monitoring and net profit before tax in Nigeria is rejected. We then conclude that competitors position monitoring has a significant positive effect on the net profit before tax of manufacturing companies in Nigeria.

H02: The relationship between competitor position monitoring and return on equity is not

Statistically significant.

Competitor position monitoring and return on equity

$ROE = f(CPM)$			
Variables	β	p-values	Decisions
CPM	0.0011	0.0000	Reject H0

Source: Researcher's Computation using EViews

For the p-value for CPM in the ROE-CPM model (0.0000), being less than the significance level (0.05), means that Competitors position monitoring has statistically significant positive impact ($\beta = 0.0011$) on the return on equity component of financial performance of manufacturing companies in Nigeria for the period of 2011 to 2020. Hence, the null hypothesis that there is no significant relationship between competitors position monitoring and return on equity in Nigeria is rejected. We then conclude that competitors position monitoring has a significant positive effect on the return on equity of manufacturing companies in Nigeria.

H₀₃: The relationship between competitor position monitoring and earnings per share is not statistically significant

Competitor position monitoring and earnings per share

$EPS = f(CPM)$			
Variables	β	p-values	Decisions
CPM	0.0444	0.0000	Reject H0

Source: Researcher's Computation using E-Views

For the p-value for CPM in the EPS-CPM model (0.0000), being less than the significance level (0.05), means that Competitors position monitoring has statistically significant positive impact ($\beta = 0.0444$) on the earnings per share component of financial performance of manufacturing companies in Nigeria for the period of 2011 to 2020. Hence, the null hypothesis that there is no significant relationship between competitors position monitoring and earnings per share in Nigeria is rejected. We then conclude that competitors position monitoring has a significant positive effect on the earnings per share of manufacturing companies in Nigeria.

H₀₄: The relationship between competitor position monitoring and return on assets is not

statistically significant.

Competitor position monitoring and return on assets

$ROA = f(CPM)$			
Variables	β	p-values	Decisions
CPM	0.0129	0.0171	Reject H0

Source: Researcher’s Computation using E-Views

For the p-value for CPM in the ROA-CPM model (0.0171), being less than the significance level (0.05), means that Competitors position monitoring has statistically insignificant positive impact ($\beta = 0.0129$) on the return on assets component of financial performance of manufacturing companies in Nigeria for the period of 2011 to 2020. Hence, the null hypothesis that there is no significant relationship between competitors position monitoring and return on assets in Nigeria is rejected. We then conclude that competitors position monitoring has a significant positive effect on the return on assets of manufacturing companies in Nigeria.

Discussion

The results therefore showed that competitor position monitoring has positive significant effects on the financial performance proxies adopted in this study, which are:- Net Profit Before Tax, Return on Equity, Earnings per Share and Return on Assets. These results implied that net profit before tax, ROE, EPS and ROA tends to increase as competitor position monitoring increases, and decrease as competitor position monitoring decreases. These findings are in consonance with the works of Imo (2022) who established that there is a positive relationship between competitor position monitoring and financial performance. Thapayom (2019) also supported the finding of this study when he confirmed that competitor position monitoring have a significant positive influence on competitive advantage. Adué and Ohaka (2017) and Anucha (2019)’s finding that competitor accounting significantly affects the profitability of quoted manufacturing companies in Nigeria is also in agreement with this study’s finding.

Conclusion

Based on the analysis conducted using the data obtained to ascertain the effects of competitor position monitoring on the financial performance of the firms as used in this study (if any), it is therefore concluded that competitor position monitoring has significant effect on the financial performance of quoted manufacturing firms in Nigeria.

Recommendation

- 1 Firms should develop competitive intelligence for the purpose of assessing and utilizing of real time market information. This will help them to constantly understand the cost structure and the market position of their competitors. Integrating technology for market data gathering can help them achieve this.
- 2 Competitor position monitoring should be a continuous and strategic activity, and not just a one-off periodic engagement. This is because competitors adjust differently to environmental changes, hence, if monitoring is not regular, competitors may be doing something else while their organization depends on outdated knowledge in planning their strategy, this can be counter-productive. A real time feedback system is therefore needed in the marketing communication system of organizations.

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