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EVALUATION OF FINANCIAL FACTORS THAT AFFECT THE OPERATIONAL PERFORMANCE OF LISTED MANUFACTURING FIRMS IN NIGERIA (2001—2015)

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ABSTRACT

The study evaluates the financial factors that affect the operational performance of listed manufacturing firms in Nigeria from 2001 to 2015. Secondary data extracted from the central bank of Nigeria statistical bulletin, international financial statistics and data files and annual report and accounts of the manufacturing companies in Nigeria were used. The statistical tools used for analysis are correlation matrix and multiple regression analysis. The study found that exchange rate interest rates/ working capital and taxation individual do not significantly affect the operational performance of listed manufacturing firms in Nigeria. The study recommended that government and regulatory authorities should implement interest rate, exchange rate and tax policies that are conducive to the development and growth of the manufacturing sector in Nigeria.

Keywords: Financial factors, operation, manufacturing and firms.

INTRODUCTION

It is well believed that all agents that have to make any financial decision about a company are concerned with its financial position [1, 2 and 3]. Thus, owners, managers, potential investors, banks, other financial Institutions, creditors, business partners, employees and government are always interested in models that help to analyze the performance of firms [4, 5, 5 and 6].

Financial factors such as high interest rates, taxation, increased exchange rate and inadequate working capital are some of the factors in the current business environment that are affecting the operational performance of manufacturing firms in Nigeria [7, 8, 9 and 10].

According to [11, 12 and 13], Organizational performance encompasses three specific areas of firm outcome.

- Financial performance (profits, return on assets, return on investment etc).
 - Market performance (sales, market share etc)
 - Shareholder return (total shareholder return economic value added etc).
- According to [14], exchange rate fluctuation generate internal and external shocks to the economic well-being of every country that opens its doors to international trade in goods and services. On the other hand [15], points out that high interest rates are likely to curb business investments and innovation, so much so that rising interest rates can increase loan defaults in the banking system and bank. Vulnerability, and also drive the cost of business financing. To this end [15], maintains that insignificant contribution of the manufacturing sector to gross domestic product is attributable to continued deterioration in infrastructural facility as well as lack of access to cheap finance characterized by rising lending rate. According to Man annual report [16], most Nigerian manufacturing firms die before their 5th anniversary as a result of tax related issues.

Statement of the Problem

Over dependence on importation of raw materials and labour by most Nigerian manufacturing firms make their operational performance subject to exchange rate and interest rate fluctuations. It follows that high cost of production induces high selling price which in turn reduces customer demand on account of unaffordability. Definitely the situation ends up with low profit margin and retarded growth.

There is a consensus of opinion by previous authors among whom is Jhingan 2005 that productivity growth in Nigerian manufacturing firms has been too low to the extent of 1.75 percent on the average. Despite this consensus, there is no agreement as per the factors that contribute to the state of low productivity hence this study on evaluation of financial factors that affect the operational performance of listed manufacturing firms in Nigeria (2001-2005).

Obective of the Study

The main aim of the study is to evaluate the financial factors that affect the operational performance of listed manufacturing firms in Nigeria, with the specific objectives as follows:

- To determine the extent to which interest rate affects operational performance off listed manufacturing firms in Nigeria.

- To establish the extent to which exchange rate affects operational performance of listed manufacturing firms in Nigeria.
- To assess the extent to which company income tax affects operational performance of listed manufacturing firms in Nigeria.
- To examine the extent to which working capital affects operational performance of listed manufacturing firms in Nigeria.

Research Question

- To what extent does interest rate affect the performance of listed manufacturing firms in Nigeria.
- To what extent does exchange rate affect performance of listed manufacturing firms in Nigeria.
- To what extent does taxation affect performance of listed manufacturing firms in Nigeria.
- To what extent does working capital affect the performance of listed manufacturing firms in Nigeria.

Statement of Hypotheses

1. Ho: Interest rate does not significantly affect the operational performance of listed manufacturing firms in Nigeria.
2. Ho: Exchange rate does not significantly affect the operational performance of listed manufacturing firms in Nigeria.
3. Ho: Taxation does not significantly affect the operational performance of listed manufacturing firms in Nigeria.
4. Ho: Working capital does not significantly affect the operational performance of listed manufacturing firms in Nigeria.

Interest rate

The manufacturing sector plays a significant role in the transformation of the economy. For example, it is an avenue for increasing productivity related to import replacement and export expansion, creating foreign exchange earning capacity and raising employment and per capital income which causes unique consumption patterns [15].

[3], asserted that the growth rate of manufacturing sector in Nigeria has been constrained due to inadequate funding, either due to the inefficient capital market or the culture of the Nigerian banks to finance mainly short term investment. The long term funds from the banking sector are not easily accessible

as a result of the stringent and restrictive credit guidelines to the sector as well as high interest rates.

Foreign Exchange Rate

[5], state that movement in exchange rate has ripple effects on other economic variables, such as interest rates, inflation rate, unemployment, money supply, and others. In other word, it links domestic prices with international price. According to Asher (2012) exchange rate is used to determine the level of output growth of the country.

Taxation

[6], argued that in the olden days, government imposed taxes to generate enough revenue solely to cover the cost of administration and defence while in modern economies taxes are the important source of government revenue. They are compulsory levies that are regularly imposed and as a rule, not designated for a special purpose, they are regarded as a contribution to the general revenue pool from which most government expenditures are financed.

Working Capital

As resources available to organizations are scarce, it is believed that management of an organizational working capital has a fundamental role to play in the achievement of profitability and overall performance of such an entity.

In this vein [4], believe that efficient use of the firms resources leads to increased performance and reduces volatility which leads to the reduction in default risk and thus improves the firm's value.

Interest Rate

[7], used ordinary least square method to ascertain the assessment of the effects of interest rate deregulation in enhancing agricultural productivity in Nigeria. The study found out that interest rate play a significant role in enhancing economic activities and as such, monetary authorities should ensure appropriate determination of interest rate level that will break the double-edge effect of interest rate on savers and local investors.

Chude and Chude (2015) analyzed the relationship between interest rate and economic growth in Nigeria from 2000 to 2009, using the OLS technique of analysis. The findings indicate that there is strong relationship between interest rate and economic growth in Nigeria, and that exchange rate exerts positive

impact' on economic growth and that high interest rate is shown to be negatively related to growth.

Foreign Exchange Rate

[7], carried out a study on the effect of exchange rate shocks on pricing decision of multi product firms and its impact on firm's performance. Constructed a model using the quantity of the scope of the product to analyze firm's price adjustment in circumstances of exchange rate depreciation. The study reveals that, in the event of exchange depreciation, most firms increase the prices of products closer to their core competency, thereby enhancing firm's performance. Baggs, Beaulieu, Fung & Lapham's (2011) studied the impact of exchange rate on retail firms and its impact on different industry's groups. The study showed that the effect of exchange rate movement was most adverse on profitability while the obtained effect diminished over time in accordance to the location of the firm, i.e. nearness to the market. They observed a negative exchange rate effect due to a net effect on the prices of input as a result of an increase in the domestic rate of exchange, which causes the prices of inputs to fall and as a consequence, the retail price of the good to be reduced. This indicates that a real appreciation of a currency reduces the level of sales, increases the labor supply and firm profit.

Taxation

[13], measured the relative importance of quality and quantity effects of corporate taxation on foreign direct investment. They concluded that both effects of corporate tax have a negative impact on foreign direct investment.

Working Capital

[14], examined the impact of working capital management on profitability for a sample of 21 listed cement companies in Karachi stock exchange, for the period of 2004-2010. Empirical findings showed that there is a significant negative relationship between working capital management on profitability of firms.

[15], explored the effective working capital management and profitability on selected manufacturing companies in Nigeria. The study used multivariate analysis to test the hypothesis. The results indicates that each working capital component affected the company's level of profitability at varying rates, but, these effects when pooled together are not significant.

Taxation

[4], conducted a research work on the recent developments in company's income taxation in Nigeria and analyzed the variables with the use of quantitative survey method. The study reveal that the Nigerian tax system is unduly complex, and low revenue yielding.

	AUTHOR	YEAR	TITLE	METHODOLOGY	FINDINGS
1.	Chude & Chude	2015	The relationship between interest rates and economic growth in Nigeria.	Ols technique of Analysis	There is strong relationship between interest rate and economic growth in Nigeria.
2.	Zubair and Muhammad	2013	The impact of working capital management on profitability	Sampling	There is significant negative relationship between working capital management on profitability of firms
3.	Owolabi and Alu	2012	Effective working capital management and profitability of elected manufacturing companies in Nigeria.	Multivariate analysis	Each working capital component affected the company's level of profitability at varying rates, but, these effects when pooled together are not significant.
4.	Becker, Fuest and Riedel	2012	The Relative importance of quality and quantity effects of corporate taxation on foreign direct investment	Sampling	Both effects of corporate tax have a negative impact on foreign direct investment.
5.	Becker, Fuest and Riedel	2012	The Relative importance of quality and quantity effects of corporate taxation on foreign direct investment	Sampling	Both effects of corporate tax have a negative impact on foreign direct investment.
6.	Bags, Beaulieu	2011	Impact of exchange	Non parametric method	Indicates that real

	Fung and Laphams		rate on retail firms and its impact on industry groups			appreciation of a currency reduces the level of sales increase the labour supply and firm profit.
7.	Chatterjee, carniro and Vichyanond	2010	Effect of exchange rate shocks on pricing decision of multi-product firms	Simultaneous equation and reduced form model		Revealed that in the event of exchange rate depreciation, most firms increase the firms increase the prices of products closer to their core competency.
8.	Adofu and Audu	2010	Assessment of the effects of interest rate deregulation in enhancing agricultural production in Nigeria.	Ordinary least square method		Interest rate plays a significant role in enhancing economic activities

Source: Compiled by the researcher, 2015.

RESEARCH METHODOLOGY

Research Designs

This study basically adopted an expost-facto research design, by using already existing data from CBN statistical bulletin (2015) and FACT BOOK (2001-2015). Five (5) manufacturing firms listed in the Nigerian stock exchange were selected with the use of simple random sampling technique for the period 2001-2015.

The study applied multiple regression analysis. While earning per share is the dependent variable, interest rate, exchange rate, working capital and taxation are independent variables.

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \Sigma$$

Where y = EPS , x₁ = Int, X₂ = Ex, x₃ = Wc and x₄ = Tax

$$EPS = \beta_0 + \beta_1 Int + \beta_2 Ex + \beta_3 wk + \beta_4 tax + \Sigma$$

An explanation of the variable is as follow:

Int is interest rate

Ex = exchange rate

Wc = working capital

Tax =taxation

B_0 = constant

B_1, β_2, β_3 and regression coefficients.

Earning per Share

YEAR	PRESCO NIG PLC	NASASCN PLC	CADBURY NIG PLC	DONGOTE FLOOR PLC	UNILEVER NIG PLC
	#	#	#	#	#
2001	0.72	70.00	206	47	0.72
2002	0.52	56.00	300	30	0.52
2003	0.62	56.00	357	44.30	0.62
2004	0.72	43.00	281	50.234	0.72
2005	0.53	70.00	270	47.107	0.53
2006	1.76	62.00	1.23	30.75	-1.46
2007	2.78	84.00	4.00	30.18	-1.48
2008	7.00	1.04	5.17	63	-1.25
2009	81	1.02	9.41	107.90	-.64
2010	24	2211	4.00	75.80	-.32
2011	110	107	517	18.90	1.46
2012	169	311	941	(63)73	1.48
2013	6.78	452	11,543	(90) 6.52	1.25
2014	7.89	44	821	80.62	0.64
2015	3.67	50	567.00	90.72	0.32

Source: annual report and account of the companies.

Taxation

YEAR	PRESCO NIG PLC	NASASCN PLC	CADBURY NIG PLC	DONGOTE FLOOR PLC	UMILEVER NIG PLC
	#	#	#	#	#
2001	1,260,714	410,019	757,884	543,117	66,080
2002	1,382,467	870,102	1,010,788	481,171	44,005
2003	2,011,579	934,900	1,107,579	907,857	55,322
2004	1,398,258	1,270,030	1,036,650	802,798	35,019
2005	2,213,716	1,338,863	1,142,173	664,959	52,869
2006	2,317,116	1,344,772	6,561,905	664,504	54,721
2007	202,662	492,458	5,535,281	445,166	189,760
2008	182,781	599,324	3,517,632	117,390	54,045
2009	98,721	870,102	4,401,824	1,253M	203,060
2010	238,593	410,019	1,382,467	1,486 M	1,727,829
2011	887,884	934,904	1,011,579	1,575M	4,864,690
2012	415,431	1,270,030	1,672,514	1,697M	3,517,632
2013	451,431	1,338,863	248,572	1,851M	5,838,281
2014	399,453	398,200	424,117	1.378	6,561,905
2015	905,058	303,085		21,144	6,061,905

Source: annual report and account of the companies.

YEAR	INTEREST RATE	EXCHANGE RATE
2001	23.44	106
2002	24.77	113
2003	20.71	127
2004	19.18	130
2005	17.95	136
2006	16.90	131-80
2007	16.94	125
2008	15.48	120
2009	18.36	171
2010	17.59	152.63
2011	16.02	162.33
2012	16.79	162.33
2013	16.72	162.96
2014	16.55	180.33
2015	14.00	199.268

Source: International financial statistics and data files

Working Capital

YEAR	PRESCO NIG PLC	NASASCN PLC	CADBURY NIG PLC	DANGOTE FLOOR PLC	UMILEVER NIG PLC
2001	1.52	1.2	1.4	1.1	1.2
2002	0.73	1.3	1.5	1.1	1.2
2003	0.46	1.4	1.7	1.02	1.3
2004	0.95	1.4	1.9	1.05	1.2
2005	0.30	2.1	1.7	1.10	1.4
2006	0.5	7.3	1.7	1.2	1.4
2007	0.6	7.4	0.56	1.2	1.5
2008	1.0	3.1	0.78	1.2	1.4
2009	1.2	1.8	0.87	1.3	1.4
2010	1.3	2.4	1.02	1.4	1.5
2011	1.5	1.9	1.5	1.5	1.6
2012	1.7	2.1	1.5	1.7	1.6
2013	1.5	1.5	1-9	1.9	1.8
2014	1.6	1.4	1-0	1.7	1.6
2015	1.5	1.2	1-1	1.6	1.5

Source: from the annual report and account of the listed manufacturing firms.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	294.577	2706.150		.109	.914
	Exchange rate	4.386	8.370	.090	.524	.602
	Interest rate	-1.342	82.439	-.003	-.016	.987
	Taxation	-119.933	148.849	-.098	-.806	.423
	Working capital	-3.389	156.227	-.003	-.022	.983

Dependent Variable: EPS

		EPS	Exchange rate	Interest rate	Taxation	Working capital
EPS	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	75				
Exchange rate	Pearson Correlation	.101	1			
	Sig. (2-tailed)	.388				
	N	75	75			
Interest rate	Pearson Correlation	-.067	-.661(**)	1		
	Sig. (2-tailed)	.569	.000			
	N	75	75	75		
Taxation	Pearson Correlation	-.103	-.061	.064	1	
	Sig. (2-tailed)	.387	.613	.593		
	N	72	72	75	75	
Working capital	Pearson Correlation	-.003	-.003	-.146	.020	
	Sig. (2-tailed)	.977	.980	.211	.868	
	N	75	75	75	72	75

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

The study was able to prove that exchange rate does not significantly affect the operational performance of listed manufacturing firms in Nigeria since value of coefficient exchange rate is 4.38 which shows a positive insignificant effect on earning per share of listed manufacturing firms. This finding shows that the Ho be accepted and also disagree with [7] that the annual percentage variation of exchange rate that are significant on real non oil export growth.

Interest rate and taxation proved negative insignificant effect, with coefficient values of -1.342 and -119.93 respectively. This shows that Ho: should be accepted and this finding is in line with the empirical review of [4] which stated that the impact of interest rate in the economy is not significant.

The findings also prove that working capital does not significantly affect the operational performance of listed manufacturing firms in Nigeria. This shows that the Ho: should be accepted. This finding is not in agreement with the finding of [9] that there is a negative relationship between working capital variables and the organizations performance.

In line with the findings, the study recommends as follows:

- The government rate should play an important role in enhancing an atmosphere of favourable exchange rate in the economy such as encouraging exportation rather than importation.
- Interest rate charged by banks should be made to be in the interest of manufacturing firms.
- Taxation should be of the type that protects the industries. Multiple taxation should be banned.

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