A Factor-Analytic Evaluation of Operational Efficiency on Performance: Evidence from PZ Cussons PLC

* Okezie, Benedette Nneka Ph.D, and Eric Chamone

*Abstract---*The study examined the influence of operational efficiency symbolized by COS on performance represented by PAT, TO, DPS, NAPS and EPS. Data was collected from the Company's reported Financial Statements (2000 – 2013). The multiple regression model applied suggests that there is a negative and insignificant relationship between PAT, NAPS with COS; and a weak positive relationship between DPS and EPS with COS. Percentage of Turnover was omitted from the regression of test scores on the output-input ratio, by the OLS estimator as Omitted Variable Bias (OVB). This variable was stratified by holding another factor constant; revealing a very high relationship: collinearity of 1.96 (showing absence of type I and II errors). The residual analysis gave -82.488 as the residual minimum point meaning that bias has been eliminated. The study reveals no strong negative or positive influence of COS on performance in PZ Cussons PLC.

*Keywords----*PAT, Turnover, Dividend Per Share, Earning Per Share, Net Asset Per Share, Cost of Sales, Operational Efficiency, Performance, Omitted Variable Bias, Financial Statements.

I. INTRODUCTION

HISTORICAL data and performance indicators empower us to objectify into the future. Production arrangement is instrumental to analytical explanation of input-output quantitative relationship. Operational efficiency is referring to output-input ratio. While input can be substituted by cost of sales as operational expenditure and fixed assets as capital expenditure, output discusses revenue, customer numbers, quality, growth and customer satisfaction. Operational expenditure represents the expired costs and capital expenditure represents the unexpired expenditure. The efficiency metric has to be stated against which bench mark performance indicators will be stepped; and this varies from industry to industry. Load and complexities in the same industry differentiates customer behavior, and accounts for variations between two markets or countries in narrating operational efficiency measurement. A firm is efficient if it identifies appropriate strategic goals and achieves them with minimal resources (Atkinson and Dorfman, 2005).

The operational efficiency of a firm is established on the orbit of skillfully delivering products or services cost effectively without sacrificing quality.

PZ Cussons is a manufacturing company with its head office in Lagos. The workforce is 3,000 employees; and the primary activities include manufacture and marketing of soaps, detergents, health and beauty products, electrical goods and nutritional products. In 1899 it commended as a traditional West African Merchant; acquired the soap factory of PB Nicholls & Co. Ltd. In 1948; in 1953 changed its name to Alagbon Industries (Associated Industries in 1960). In 1976, it further changed its name to Paterson Zochonis Industries PLC. In 2003, PZ Cussons entered into a joint venture (Nutricima) with Glanbia PLC to supply evaporated milk and milk powder in Nigeria. In 2005, Nutricima commenced manufacturing in Nigeria, changed to Pz Cussons Nigeria PLC in 2007 and in 2010 entered into a joint venture (PZ Wilmar Ltd.) with Wilmar International to build a palm oil refinery in Nigeria and built up an associate food ingredients business.

A. Statement Of The Problem

Operating activities are not clearly defined. The art of separating operating activities from financing activities is not without difficulties as presented in the income statement and statement of financial position. Sometimes, the notes to the account are not adequately informative, and this hampers the measurement of the quality of earnings. Financial statements reporting only reveal the amount of profits/earnings but not the quality of the earnings which may go further to inform economic decisions; hence, the logic of this study.

Objectives: The main objective of the study is to ascertain the effects of input costs (operational efficiency) on Performance of the PZ Cussons Nigeria PLC. However, the specific objectives include:

1. To evaluate the effect of Profit After-Tax on Cost of Sales in PZ Cussons PLC.
2. To investigate the extent of relationship between Dividend Per Share and Cost of Sales in PZ Cussons PLC.
3. To establish the degree of relationship between Earnings Per Share and Cost of Sales in PZ Cussons PLC.
4. To determine the effect of Net Asset Per Share on Cost of Sales in PZ Cussons PLC.
5. To ascertain the influence of Turnover on Cost of Sales in PZ Cussons PLC.

*Okezie, Benedette Nneka Ph.D, Federal University Ndufu Alike Ikwo (FUNAI), Abakaliki, Ebonyi State, Nigeria benedette_igwe@yahoo.com
Eric Chamone, Nigeria Maritime Agency, Lagos, Nigeria

B. Research Questions

1. What is the relationship between Profit AfterTax and Cost of Sales in PZ Cussons PLC?
2. What is the relationship between Dividend Per Share and Cost of Sales in PZ Cussons PLC?
3. What is the relationship between Earnings Per Share and Cost of Sales in PZ Cussons PLC?
4. What is the relationship between Net Asset Per Share and Cost of Sales in PZ Cussons PLC?
5. What is the relationship between Turnover and Cost of Sales in PZ Cussons PLC?

C. Research Hypotheses

1. There is negative relationship between PAT and COS in PZ Cussons PLC.
2. There is negative relationship between DPS and COS in PZ Cussons PLC.
3. There is negative relationship between EPS and COS in PZ Cussons PLC.
4. There is negative relationship between NAPS and COS in PZ Cussons PLC.
5. There is negative relationship between Turnover and COS in PZ Cussons PLC.

II. MATERIALS AND METHODOLOGY

A. Model Specifications

For the purpose of this study, input (operational efficiency) will be represented by operational expenditure (Cost of Sales) whereas performance will be represented by performance indicators: Profit After Tax (PAT), Dividend Per Share (DPS), Earnings Per Share EPS), Net Asset Per Share(NAPS) and Turnover (TO). Thus

$$a_o + \beta_1 PAT_{jt} + \beta_2 DPS_{jt} + \beta_3 EPS_{jt} + \beta_4 NAPS_{jt} + \beta_5 TO_{jt} + \varepsilon_{jt}$$

where PAT = Profit Before Tax
  DPS = Dividend Per Share
  EPS = Earnings Per Share
  NAPS = Net Asset Per Share
  TO = Turnover
    ε = Error term

III. REVIEW OF LITERATURE

Performance management entails enabling people to perfume their work to the best of their ability, meeting and perhaps exceeding targets and standards. For successful performance management, a culture of collective and individual responsibility for the continuing improvement of business processes needs to be established, and individual skills and contributions need to be encouraged and nurtured (Rugman, 2007; Cox 2014; Elston, 2014 and Tyson 2014).

The essence of evaluating effects of operational efficiency on performance is to ascertain whether business operations are being managed in an economic, efficient, and effective manner; whether procedures for promoting and monitoring the 3Es are adequate; and, more importantly, whether improvements can be made, (Reding, Anderson, Head, Ramamoorti, and Riddle, 2007; Swayer, Dittenhofer and Scheiner; Lawrence, Sawyer, Graham and Makosz, 2003).

Operational efficiency and performance will actually add value and intend to increase the bottom line or profitability index of an organization. The centrality of the exercise is to ensure that things are done in accordance with management strategic plans and objectives. Economy is involved in minimizing the cost of resources used (people, materials, equipment, money and so forth), having regard to the satisfaction of customer needs, maintaining cost effective processes without sacrificing quality. Efficiency on the other hand is considering the relationship between goods and services (outputs) produced, and the resources used to produce them (inputs). The interest is to get the best from available resources. Effectiveness talks about achieving predetermined objectives. Ideal performance and best observed performance, however, is best explained by the industry points.

Papadogonas (2007) in a study on the financial of large and small firms: evidence from Greece attempted to determine probable changes in the main factors that influence a firm's profitability, using data from Greek manufacturing for 1995-1999. The study was analysed using regression model and performed on a longitudinal sample of 3035 firms classified by size of employment. The econometric analysis revealed that size, managerial efficiency, debt structure, investment in fixed assets and sales in fixed assets growth significantly affect a firm's profitability. Adelegan (2008) in Okwor (2011) studied Tax, Investment and Q: Evidence: from firm and industry level data in Nigeria. The study aims at establishing the link between tax and real investment to address the effect of the incentive and disincentive structures of different taxes on investment at the firm and industry level in Nigeria. The study used the neoclassical of model that incorporates adjustment costs and tax parameters using a firm's level of industry level data from 1984 – 2000. It was shown that adjusted for tax, cash flow, debt shield and cost of capital have significant positive effects on investment, while marginal tax rates and interest expenses have significant negative effects on a firm's fixed investment.

Ibam (2008) studied investment in fixed assets and firm profitability. The study assesses the impact of a company's investment in fixed assets on its operating profit margin. The study suggests that a company's investment in fixed asset is dependent, to a large extent, on its line of business. This is because some businesses are more capital intensive than others (Okwor, 2011). Pandey (1981) in Okwor (2011), explains that the fixed assets turnover ratio measures the efficiency with which a firm is utilizing its investment in fixed assets, such as land, building, plant and machinery, furniture, etc. It also circumscribes the adequacy of sale in relation to the investment in fixed assets. The fixed assets turnover ratio is sales divided by net fixed assets. According to Okwor (2011) a firm acquires plant and machinery and other productive fixed assets for the purpose of generating sales. This implies that the efficiency of fixed assets is judged in relation to sales. Therefore, a high fixed assets turnover ratio depicts efficient utilization of fixed assets in generating sales, whereas a low ratio shows inefficient management and utilization of fixed assets.

Pandey (2002) argues that one of the steps in financial planning is analysis of the firm's operating characteristics –

product, market, competition, production and marketing policies, control systems, operating risk and so on, to decide about its growth objective. Activities and efforts should be coordinated in such a way that the use of resources is maximized; a means of measuring and controlling the performance of individuals and units provided, and information on the basis of which the necessary corrective action can be taken supplied. Past performance or the performances of other workers doing the same job exist to measure employees' performance.

Profit is syntax of a variety of factors: it is influenced by changes in volume, costs and prices. The orthodox break-even chart indicates the effect changes in volume on profits, other factors remaining constant. The enterprising cost-volume-profit (CVP) analysis is used to indicate the effect of changes in one or more factors on profits, (Pandey,2002). Costs and revenues have linear relationship throughout relevant range of activities. Changes in activity are the only factors that affect costs; and where a company is involved in sales of more than one commodity, the sales mix – the ratio of each product to total sales will remain constant. Hence, the components of CVP analysis are level/volume of activity, unit selling prices, variable cost per unit and total fixed costs. Peavier (2014) reports that CVP analysis estimates how much change in a company's costs, both fixed and variable, sales volume and price affect a company's profit.

Operating income = Sales – Total Variable Costs – Total Fixed Costs

The gross profit margin is the difference between sales and cost of goods sold. Cost of goods sold includes all costs: fixed and variable costs. The contribution margin only considers variable costs. The contribution margin is the difference between sales and variable costs. Calculating both can give the financial manager valuable, but different information for different purposes (Peavier, 2014).

Riley (2012) describes efficiency as a measure of how well the production or transformation process is performing. According to him it steps the association between inputs into the production process and the ensuing effect (outputs). For labour productivity, measure output per worker. For unit costs, determine cost per unit; a falling ratio indicates improvement in efficiency. For stock level, a business will have set itself a target stock level of finished goods that it should achieve. This is calculated to satisfy the demand expected by the marketing department plans and based on what the production department thinks they can produce. A falling ratio indicates reduced productive efficiency for failure to meet planned requirements.

Eze (2009) reports that quality management system policy as a strategic component of management objectives aims sustainability in the competitive business environment. It is a planned effort, enterprise-wide, operated from the top, to achieve internal capacity to most efficiently and effectively attain its goal land sustain itself over the long term. Extant literature confirm the usurpation of quality management practices to live up to management's expectation in the provision of employee training and quality performance (Sammy and Godwin, 2013; Eze, 2009; Youndt, Snell, Dean and Lepal, 1996; Ishikwa, 1984; and Deming, 1982).

Onwe (2013) explains that human capital development is a competitive weapon that is very potent and effective in enterprise management. It enhances firm financial performance and productivity in addition to customer satisfaction through enlarged work roles by delegating responsibilities for quality. Efficiency is a measure of whether the right quantity of resources has been used to deliver a process, service or activity without negotiating quality with cost reduction (Burrows, 2012). An efficient operation accomplishes the set goal within minimal time, money people and materials. Anderson (2010) describes cost reduction by design, as process of proactively designing products to optimize all the manufacturing functions like fabrication, assembly, test, procurement, shipping, delivery service, and repair. Problem-solving skills are receiving top billings on career successes today. Mason, Van-Ark, and Wagner (1996); Paris (1995) affirm that success of quality strategies adoption by the firm and the effectiveness of the quality of management system is a function of supply of appropriate skilled labour.

Saia (2013); John-Creek, (2013) and O'Dell (2013) report that effective revenue management is a critical factor in achieving operational efficiency in continuing operations. It is a demonstration of operational excellence that provides an inroad to increased earnings per share. Adequate cost estimation and cost savings can enhance sales and operational efficiency; which invariably will result in an enhanced return on profitability. Focus on quality and customer on-time service constitutes a strong foundation for improvement in every quality metric and sets the stage for high financial performance. Investment in the people, technology and equipment are standard roadmap inbound operational efficiency (O'Dell, 2013).

Cost of Goods Sold and Performance

Cost of goods sold to a manufacturer entails the cost of buying raw materials and producing basic and finished products. Ostwald and McLaren (2004) report that cost of goods sold enables the company to fix the prices of its products and services, thus determine the production level required to make a desired profit. This serves as an inroad to establish opportunities of cost reduction and improvement of operations. It represents the total cost of all resources consummated in the process of adding value to raw materials by applying a chain of operations to sustain a deliverable product. Zimmerman (1990) suggests that the operating managers provide the thrust for controllers to make the difference. According to him, the accounting system should make available the information required to identify the most profitable products and the pricing and marketing strategies to achieve the desired production volume levels. The information generated and analysed by the accounting system should enable the firm to discover production inefficiencies and ensure targeted products and volumes are produced at minimum cost. The accounting information should empower the firm to combine performance evaluation with reward systems, create incentives for managers to optimize firm value. Financial and tax accounting should be promoted, together with benefit-cost ratio greater than 1 (Zimmerman, 1990).

Operational efficiency is a level of efficiency wherein an organization is operating with optimal outcome and minimal resources in terms of cost and time, labour and quality. Hackman,(2008) opines that the analysis of productivity and efficiency is associated with production economics which focuses on assessment and uses an aggregate description of technology to answer questions such as

1. How efficient is the firm in utilizing its input to produce its output?
2. How right is the mix of inputs or manufactured output at reasonable price?
3. How well does a firm respond to a price hike in a critical input?
4. How proficient is the firm in scaling its operations?

Major (2014), reports that succeeding companies seek to gain a hold upon their processes to determine the cost of sales and increase their turnover. Profitability is directly affected by cost of sales, and the metrics of the actual profit relating to every dollar of revenue is of paramount interest to the investors, shareholders and management for accountability purposes. The kernel issue of the company is to ascertain the cost factors in actualizing cost of sales to avoid inflating revenue. This can be accomplished by establishing line item costs (by internalizing commissions and incentives); hard costs (like salaries for new sales representatives, travel costs for new and extant customer meetings, additional production and delivery costs); and soft costs (like prospecting costs, on-boarding and training new representatives, marketing and training new customers (Major, 2014).

Cost of sales to the manufacturing company involves input costs of purchasing raw materials and producing its finished goods; but to a service company, it is the cost of employee services it supplies. Knowledge of cost of sales enables the company to fix prices on its products/services; determine the level of business activities required to maintain a desired level of profitability; income tax planning and maintenance of

expected inventory over time. In order to ascertain the actual cost of goods produced, opening and closing work-in-progress (WIP), that is, finding the difference between the opening WIP and closing WIP and adding to the cost of goods produced; (Igben, 2000).

In the words of Zimmerman (1990), the cost of another salesperson includes all the direct costs of the salesperson (wages, medical benefits, payroll taxes, pensions, and so forth; and indirect costs of the human resource office, which hires the person, maintains records, and administers benefits. Adding an additional employee requires human resource and security services and who can sue the firm and steal property imposes externalities that are not captured in the direct cost. However, overhead rate, R (Cost Allocation) proxies for these hard-to-observe externalities, and it is a factor price/cost that tends to understate total cost. Hard costs comprises the cost of another salesperson including all the direct costs of the salesperson (wages, medical benefits, payroll taxes, pensions, etc); and indirect costs of the human resource office, which hires the person, maintains records, and administ4ers benefits. Adding an additional employee requires human resource and security services and who can sue the firm and steal property imposes externalities that are not captured in the direct cost. However, overhead rate, R (cost allocation) proxies for these hard –o-observe externalities, and it is a factor price/cost that tends to understate total cost, (Zimmerman, 1990).

Cost of goods sold is the historical cost of products sold as reported in the income statement (Zimmerman, 1990). Cost of quality is the cost of preventing, identifying, and correcting quality problems. It also includes external costs such as the cost of lost sales and lost goodwill due to failing to prevent or correct quality problems. Failure costs are the costs of return, warranty work, and opportunity cost of lost sales from reputation effects when the product fails to meet customer expectations. Quality cost consists of three components: training, prevention, and software maintenance and customer service costs.

IV. FINDINGS

TABLE I
CORRELATIONS

	COS	PAT	TO	DPS	EPS	NAPS
Pearson Correlation COS	1.000					
PAT	.580	1.000				
TO	.818	.797	1.000			
DPS	-.387	-.532	-.544	1.000		
EPS	-.108	-.565	-.221	.757	1.000	
NAPS	.746	.797	.915	-.579	-.285	1.000

Source: Author's SPSS computation, 2014

Where: COS Cost of Sales; PAT = Profit after Tax; TO = Turnover; DPS = Dividend Per Share; EPS = Earnings Per Share; NAPS = Net Asset Per Share.

This shows details of the correlation between each pair of variables. PAT, Turnover, and Net Asset Per Share have positive relationship with the Cost of Sales; whereas Dividend Per Share and Earnings Per Share have negative relationship with the Cost of Sales. Therefore, Hypotheses 2 and 3 should

be accepted which say DPS and EPS have negative relationships with COS; while hypothesis 1, 4 and 5 are rejected which say there is negative relationship between PAT, NAPS and Turnover with COS in PZ Cussons PLC

TABLE II
MODEL SUMMARY[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.818[a]	.669	.641	59.5639						1.108

Source: Author's SPSS computation, 2014

a. Predictors: (Constant), Turnover
b. Dependent Variable: Cost of Sales

This table depicts that R and R^2 value, .818 and .669 representing simple correlation at 81.8% and therefore, indicates a good degree of correlation. The R^2 .669 shows 66.9% much of the dependent variable, cost, can be explained by the predictor variables. Thus, the model explains 66.9% of variance in cost of sales in PZ Cussons PLC.

TABLE III
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	85867.474	1	85867.474	24.203	.000[b]
	Residual	42574.341		3547.862		
	Total	128441.815	12 13			

Source: Author's SPSS computation, 2014

a. Dependent Variable: Cost of Sales
b. Predictors: (Constant), Turnover

The table provides the ANOVA, which assesses the optimal significance of the model. At a sum of squares of 128441.814 degree of freedom of 13 and an F Statistics of 24.203, the model is significant at P = .000 < 0.05.

TABLE IV
COEFFICIENTS[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	95.0% Confidence Interval for B		Correlations			Collinearity	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	150.918	57.559		2.622	.022	25.507	276.329					

Source: Author's SPSS computation, 2014

The Beta value (standardized regression coefficients) shows the measure of contribution each variable made to the model. A large value implies that a unit change in the particular predictor variable has a strong influence on the criterion variable. The table reveals that PAT, and NAPS have negative relationships with cost of sales.

$$COS = 150.918 - .196_{PAT} + .082_{DPS} + .076_{EPS} - .014_{NAPS}$$

The result suggests that PAT and NAPS, -.196 and -.014 have a negative relationship with cost of sales and are not statistically significant. DPS and EPS have positive relationship with cost of sales but are not statistically significant.

V. DISCUSSION

1. A unit change in PAT would amount to a 0.196 decrease in COS in PZ Cussons PLC.
2. A unit change in DPS would result in a 0.082 increase in COS in PZ Cussons PLC.
3. A unit change in EPS would amount to an increase of 0.076 in COS in PZ Cussons PLC
4. A unit increase in NAPS would amount to a decrease of 0.014 in COS in PZ Cussons PLC.

Percentage of turnover was omitted from the regression of test scores on output-input ratio. Turnover (on average) perform worse on standardized tests than do other performance indicators.

^

The estimated coefficient βSTR (Test Scores) is higher (more negative) than the true effect of BSTR. The regressor (y, STR) is correlated with a variable that has been omitted from the analysis (TO) but that determines, in part, the dependent variable (test scores), then the OLS estimator will have omitted variable bias. Both of these conditions must hold for OVB:

1. the omitted variable is a determinant of the dependent variable, and
2. the omitted variable is correlated with the included regressor.

Turnover is a determinant of the dependent variable (COS)) and is also correlated with the error term.

OVB is a broad complaint against a causal model in the social sciences, well beyond the range of mere statistics, although statistics offers a good opportunity to systematize the complaint (Ash, 2013)

VI. CONCLUSION

The PZ Cussons PLC is a leading firm in Nigeria. It has actually taken hold of its production processes through its design of operations together with the quality of the provident services and profitability. Great value is not great pricing, but quality that compares with prices, capable of sustaining and increasing customers over the years. Indeed, it is one of the world's best managed companies that have drastic cost-cutting measures across the board, staying afloat in terms of liquidity and profit maximization.

This study could not identify any strong negative or positive influence of COS on performance in PZ Cussons PLC. What this implies is that there is a direct and linear relationship between COS and profitability, as COS increases, the profit also increases. This is in consonance with the works of Okwo, Ugwunta and Nweze (2012) which suggests a positive impact on profitability.

A contribution to knowledge is therefore made through the determination of model for the explanation of the quality of earnings in PZ Cussons PLC based on the findings from the various hypotheses tested. The study therefore suggests that PZ Cussons management policy maker or administrator give top billings to COS with an eye on increasing profit maximization and thus italicize cost of sales to underscore profitability. Efficiency of operations in PZ Cussons is empirically satisfactory; the company has drastic cost-cutting measures across the board that keeps it afloat in terms of liquidity and profit maximization. This implies that there is a direct and linear relationship between COS and profitability, as the COS increases, the profit also increases.

REFERENCES

[1] Adebiyi, M. A. and Babatope-Obase, 1 B. (2004) Institutional framework, interest rate policy and financing of the Nigerian Manufacturing sub-sector. African Development and Poverty Reduction: The Macro-Micro Linkage 13-15 October.

[2] Adelegan, O,. J. (2008)Tax, Investment and Q: Evidence from firm and Industry level data in Nigeria. International Research Journal of Finance and Economics Issue 16. Euro Journals Publishing Inc. http//www.eurojournals.com/finance.htm. Retrieved on 5th January, 2010.

[3] Agiomirglanakis, G; Voulgaris, F. and Papadogonas, T. (2006) Financial Factors Affecting Profitability and Employment Growth.

[4] Alao, R. O. (2010) Interest Rate Determination in Nigeria: An econometric X-ray. International Research Journal of Finance and Economics Issue 47 Euro Journals Publishing Inc. (Online:http//www.eurojournal.com/finance.htm) Retrieved on 20th February, 2011.

[5] Anderson, D. (2010) Beyond Change Management: How to Achieve Breakthrough Results Through Conscious Change. eBook. www.networks.nhs.uk/.../ebooks-1

[6] Ash, M. (2013) Linear Regression with Multiple Regressors 5.1-5.3 Lecture 13

[7] Atkinson, S. E. and J.H. Dorfman (2005) Bayesian Measurement of Productivity and Efficiency in the Presence of Undesirable Outputs: Crediting Electric Utilities for Reducing Air Pollution. Journal of Econometrics 126, 445-468.
http://dx.doi.org/10.1016/j.jeconom.2004.05.009

[8] Baum, C. F., Boarkoulas, J. and Caglayam, M. (2001) Exchange Rate Uncertainty and Firm Profitability Journal of macroeconomics 23(4)565-576.

[9] Burrows, T. (2012) New Energy Efficiency Grants for Local Governments. Posted on May 8. The Washington State. Insight.mrsc.org/2012/05/08/new-ene…

[10] Coelli, T. J., Prasada-Rao, D.S., O'Donnell, C. J. and Battese, G. E. (2005) An Introduction to Efficiency and Productivity Analysis Springer nuthhills 183@yahoo.com www.springer.com>Home>Economics>Econometrics/Statistics.

[11] Cox, A (2014) Incorporating Operation and Performance Auditing Into Compliance and Financial Auditing.

[12] Deming, W. E.(1982). Quality, Productivity, and Competitive Position: MIT Centre for Advanced en.m.wikipedia.org/wiki/W. Edward.Q

[13] Elston, P (2014) Why turning growth into profit is challenging for Asian Economies. Food CPT and Expenditures (2007) How changes in Input Cost Affect Food Prices US Dept. of Agriculture (USDA)

[14] Hackman, S. T. (2008) Production Economics: Integrating the Microeconomic and Engineering Perspectives. Heidelbers: Springer-Verkg. eBook ISBN 978-3-540-75751-1.

[15] Heinz, H. J. (2010) Management Discussion and Analysis of Financial Condition and Result of Operation. Annual Report (Online: seekingalpha.com/…/1723759-heinz-h-j-co-10-q management) Retrieved on 20th February, 2011.

[16] Ibam, R. (2007) How to Evaluate a Company before Investing: Stock Exchange News Sat. 22 March (On-line: freemanskrikesblogspot.com) retrieved on 20th March, 2011.

[17] Igben, R. O. (2000) Financial Accounting Made Simple Lagos: ROI Publishers 445P.

[18] Mason, Van-Ark, and Wagner (1996)

[19] Nokia Siemens Network (2009) Efficiency and Beyond- Forward-thinking Solutions for Improving Efficiency

[20] Ogbodu, E. B. (2009) Profitability through Effective Management of Materials Journal of Economics and International Finance 1(4)099-105.

[21] Okwo, I. M., Ugwunta, D. Ok., and Nweze, A. U. (2012) Investment in Fixed Assets and Firm Profitability: Evidence from the Nigerian Brewery Industry. European Journal of Business and Management ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) www.iiste.org

[22] Onwe, B. U.(2013) The Nigerian Financial Market and Challenges of Information Technology Based Operational Services International Journal of Advancement in Management Science 3(2) 103-108.

[23] Pandey, I. M. (2002) Financial Management Eighth Edition. New Delhi: Vikas Publishing House PVT Ltd. 1226P.

[24] Papadogonas, T. A. (2007) The financial Performance of Large and Small Firms, Evidence from Greece. International Journal of Financial Services Management Issues 2(1).

[25] Porter, M. E. (1996) "What is Strategy?" Harvard Business Review.

[26] Riley, C. M., Thompson, J. P. and Eberlein, R. L.(2012) Using Systems Research and Behavioural Science International Journal of Operations and Production Management 29 194-208 www.systemdynamics.org/bib_updates/

[27] Sayeed, M.A. and Hogue, M.S. (2009) Impact of Assets and Liability Management on Profitability: A Study of Public Vs Private Comm. Bank in Bangladesh. (On-line: www.wbicconpro.com/30%5B/%5D.pdf).

[28] Reding, k.F., Sobel, P.J., Anderson, U.L., Head, M. J., Ramamoorti, S., Salamasick, M. and Riddle, C. (2007); Operational and Performance Auditing: Internal Auditing and Consulting Services. Orlando, FL: IIA Research Foundation.

[29] Rogman, A (2007) Multi-nationality and Financial Performance Oxford: Elsevier

[30] Swift, R. (2002) Measuring the Effect s of Exchange Rate Changes on Investment in Australian Manufacturing Industry, Economic and Business Statistics Department of Accounting, Finance and Economics.

[31] Timothy, Coelli, et al (2005) An Introduction to Efficiency and Productivity Analysis

[32] Tyson, S. (2014) Executive Rewards: Ensuring That Financial Rewards Match Performance

[33] Zimmerman (1990) Accounting for Decision Making and Control (2nd ed.) USA: Irwin/McGraw-Hill 720P.