
**ACCOUNTING INFORMATION AND PROFIT PLANNING: THE CASE OF NIGERIA
LISTED MANUFACTURING COMPANIES.**

Adesina, Oluseyi Temitope, PhD.

Corresponding author
Federal Polytechnic, P.M.B. 402,
Department of Accountancy,
Offa.

Ikhu – Omoregbe, Sunday

Federal Polytechnic, P.M.B. 402,
Department of Accountancy,
Offa

Aboaba, Kehinde Olusesan.

Federal Polytechnic, P.M.B. 402,
Department of Social Sciences and Humanities
Offa.

ABSTRACT: *In this study, the relationship between accounting information and profit planning was empirically investigated. Specifically, the study investigated the effect of cost information, sales information and marketing information on profitability. Descriptive and inferential statistics were carried out on the opinion of 222 top management staff purposively selected from the listed manufacturing companies in Nigeria with the aid of statistical package for social sciences (SPSS version 20). The results of the data analysis carried out in the study revealed that a positive significant relationship exists between accounting information and profitability of manufacturing organizations. Based on this, the study recommends that functioning accounting system should be put in place by the manufacturing companies in Nigeria.*

KEYWORDS: *Accounting information, Profit planning, Cost, Marketing, Profitability and Manufacturing.*

INTRODUCTION

The main goal or objective of any business organization according to Lucey (1993) is to make and maximize profit while other secondary objectives include going concern, growth, corporate social responsibility, benefits to employees and so on. Although other objectives are also considered very important as listed above, but profit maximization is usually the ultimate because it maximizes the shareholders wealth which is the ultimate aim of investing in a business (Oyerogba, Olaleye & Solomon, 2014). But, it is however saddens to observe that the profitability objective of many companies has suffered a setback in recent time. This setback in the profitability of companies was

attributed to the aftermath of the global economic downtown of 2008 which has lingered up to the present moment (Osisioma, 2010).

Most economies are still battling with adjustment programs meant to combat the impact of the crisis. Also, manufacturing organizations are not left out, as access to finance constantly declines primarily due to volatility of the capital market. Similarly, corporations are forced to down scale the size of their operating activities. Osisioma (2010) observed that manufacturing firms, particularly automobile industries witnessed a drop in sales level, an accumulation of unsold stocks, and a declining demand level leading to a fall in profit level. Thus, engaging in adequate planning with the help of accounting information before the commencement of operation is therefore required of the management.

Accounting information which is sometimes referred to as a means to an end, with the ending being the decision that is helped by the availability of accounting information as described by Arneld and Hope (1990) helps managers understand their tasks more clearly and reduces uncertainty before making decisions. Since profitability have long-term effect on the business, it is therefore important to analyze accounting information before making profit decisions (Chong, 1996). Similarly, Budugan and Georscu (2009) stated that accounting information is one type of information recognized as a 'learning machine' that can help to evaluate how objectives might be achieved by quantifying the financial impact of each alternative available to the decision.

Regardless of the recent challenges faced by the global economy, the manufacturing sector still plays a significant role in the economic growth. Oyerogba, (2014) posits that manufacturing organizations have been found to be the pivot of Nigeria economy as it contributed 39.67 to the nations GDP in 2011. It was also noted from the SEC report for the year 2012 that manufacturing industries remains the major employers of labor apart from banking industries. Since the enormous contribution of the manufacturing organization to the economy cannot be overlook, it is therefore essential for the management to put in place necessary mechanism to ensure profit making and promote its welfare because lack of profit can lead to untimely death of any industry.

Therefore, this study is set to determine the role of accounting information in profit planning using data from the Nigeria listed manufacturing sector. The three major accounting information considered in the study which represents the independent variables are cost information, sales information and marketing information while the dependent variables is the profitability.

THEORETICAL REVIEW

Clark Theory of Profitability

Clark begins his theory with an analysis of a profit -less economy and taking into account its key futures. The profit less economy is compared with a profit -generating economies and significant differences were identified to indicate the causes of profit. This theory was adopted in a study by Schumpeter and Knight. According to Kamath, Khaksari and Hylton (1985), the profit- less economy is refer to as 'static state', in which all factors are constant and not subject to change, the market is assumed to be perfect; hence the absence of monopoly and entrepreneurial efforts are

rewarded according to management wage levels. There is perfect mobility and flow of all economic units in a frictionless environment; in short all impediments to perfect competition are dissolved. The society acts and lives, but does so in a changeless manner (Siddiqi, 1971). Any change in these factors will produce a tremor in the system but the economy will adjust and settle at new equilibriums.

Therefore, changes in population and capital will result in corresponding fluctuations in wages and interest rates and the economy will absorb these changes and then settle back to a static state. Similarly, changes in techniques of production will affect output and prices; adoption of the same techniques by other producers will cause a shift in the equilibrium, but once these become ubiquitous the equilibrium will resume. The ability of the economy to endure such changes is due to the competitive equilibrium dynamics of the free market. According to Clark theory, competition has the tendency to eliminate profit or loss and bring the value of economic goods to equality with their cost (Kamath, Khaksari & Hylton (1985)). Real economies as noted by Clark will, however, not buffer such changes instantaneously as there will necessarily be a time lag. It is into this frictional delay that the entrepreneur seeks to enter and make his profit before equilibrium returns and consumes his profit. Profit is hence a transitional phenomenon, untransformed increments of wages and interest (Siddiqi, 1971). Its temporary nature demands from the entrepreneur a dynamic endeavor to seek out or generate opportunities on which he can capitalize. This process is summed up in Clark's statement that dynamic forces, then, account today for the existence of an income that static forces will begin to dispose of tomorrow (Siddiqi, 1971).

Economies are, however, in constant change, the five variables mentioned by Clark are never static; population and capital are in constant growth, innovation in production and management of resources are continually researched and consumer demands are subject to ever -changing fashions and trends. The entrepreneur thus finds permanence for as long as he can keep ahead of the changes, react before competitors and organize his efforts with sound knowledge of the market. Clark's analysis determines that the essential cause of profit is change. These changes yield a surplus in the market prior to equilibrium and they are the sought - after profits of the entrepreneur. Since the essential cause of profit is change, it is therefore essential for entrepreneur to have timely information to enable them monitor the change as it occurs in the economy (Admareli, 1999).

EMPIRICAL REVIEW

Accounting Information and profit Planning

Accounting information for profit planning usually covers three major elements such as cost information, marketing and sales information. However, cost information has been found to be the pivot (Admareli, 1991). According to Norton, (1997) costing contributes to an understanding of how profits and value are created, and how efficiently and effectively operational processes transform input into output. It can be applied to resource, process, product/service, customer, and channel-related information covering the organization and its value chain (Metcalf, 1998). Costing information can be used to provide feedback on past performance and to motivate and

change future performance. Costing is thus an essential tool in creating shareholder and stakeholder value which is a function of profit (Garcke and Fells, 1992).

Drucy, (2008) posits that given the importance and breadth of scope of costing information, it is unsurprising that many different costing methods exist, both in the literature and in practice. This can create confusion and uncertainty for managers, and need a sufficient understanding of sound costing principles to be able to select and apply useful approaches. The history of Absorption Costing is as old as Cost accounting (Raheman & Nasr, 2007). Metcalfe, (1998); Sebastian, (2010); Norton, (1997); Lewis, (1999) and Pass & Pike (1984) introduced the concepts of various costing techniques including Absorption and Marginal Costing (Cited by Chandra and Paperman, 1976).

Similarly, a study conducted by Kidane, (2012) on the role of cost analysis in managerial decision making in profit- oriented organizations saw a positive significant relationship between cost information and profitability. It was also discovered that cost analysis helps managers in making decisions in such areas like pricing, profit planning, setting standard cost, capital decisions, marketing decisions, cost management decisions and others. In like manner, empirical evidence by Innes and Michel (1991) on cost management and companies' performance using a sample of 380 respondents drawn from the US listed companies revealed that companies with low administrative and selling expenses had better performance than those with high administrative and selling expenses. Also, fixed manufacturing overhead was found to be negatively correlated with profitability which was used as one of performance indicators in the study.

Furthermore, an investigation of the relationship between cost management practices and firm's performance in the manufacturing organizations in Nigeria was carried out by Oyerogba, et al (2014) using data from 40 manufacturing companies listed on the Nigeria stock exchange during the period of 2003 to 2012. The study relied on secondary data extracted from the audited financial statement of the selected companies. Direct material cost, direct labour cost, production overhead cost and administrative overhead cost were taken as independent variables while profitability (Operating profit) was taken as dependent variable representing the firm's performance. Their result indicates that a positive significant relationship exists between cost management practices and firm's performance in the manufacturing organization.

Another empirical evidence was found in a study of Kaizen Costing practice among SMEs conducted by Jayeola, Sokefun and Oginni (2012) using a sample of 269 respondents purposively drawn from SMEs in agro-allied (72); confectioneries (67); general trading (71) and transport (59); distributed across the three senatorial districts in Ogun state, Nigeria. The Chi-square value was given as 13.034 ($p < 0.05$) showing that a relationship existed. The test of the relationship between kaizen cost management technique and survival of the SMEs gave a Chi-square value of 10.445 ($p < 0.05$). The results of the Logistic Regression showed that only the fixed cost with Beta value of 2.309; was the most significant cost component that affected the average annual profit.

RESEARCH METHODOLOGY

This study adopted a descriptive design which can be described as a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. This research design was considered appropriate for this study as it answers research questions who, what, where, when and how is the problem. This study used mixed sampling techniques; specifically both stratified random sampling and simple random sampling techniques were used. Stratified random sampling was preferred because it enabled the population to be sampled to be divided into homogenous groups based on characteristics considered important to the variables being measured. This method also helped to achieve gain in precision, flexible in the choice of the sample design for different strata and finally one is able to get estimates of each stratum in addition to the population estimate (Kothari, 2004).

The data collection instrument for this research was a questionnaire as the study used primary data. The study targeted all the listed manufacturing companies in Nigeria. There are 74 listed manufacturing companies in Nigeria. In each company three copies of the questionnaire were issued to the finance, marketing and production managers. Therefore the sample size for this study was 222 managers of listed manufacturing companies. Descriptive statistics such as percentage and mean were used to perform data analysis. These measures were calculated using Statistical Package for the Social Sciences (SPSS 20) software. SPSS tool (Statistical Package for the Social Sciences) was used to organize and analyze data simply because it is user friendly and gives all the possible analysis.

The relationships between the variable were determined using the Ordinary Least Squares (OLS) regression model prescribed by Faraway (2002), Cohen, West & Aiken, (2003). The use of ordinary Least Squares Regression is preferred due to its ability to show whether there is appositive or a negative relationship between independent and dependent variables (Castillo, 2009). In addition, OLS is useful in showing linear elasticity/sensitivity between independent and dependent variables (Cohen, West & Aiken, (2003). For instance, the current study would like to investigate the degree by which companies profit is influenced by accounting information.

Therefore, OLS was useful in showing whether the identified linear relationship is significant or not. The regression model formulated for the study is stated as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where:

- i. Y = the value of the dependent variable
- ii. $\{\beta_i; i=1,2,3\}$ = The coefficients representing the various independent variables.
- iii. $\{X_i; i=1,2,3\}$ = Values of the various independent variables.
- iv. e is the error term which is assumed to be normally distributed with mean zero and constant variance.

Y = Profitability

X_1 = Cost Information

X_2 = Sales Information

X₃ = Marketing Information

DATA PRESENTATION AND ANALYSIS

Descriptive Analysis

The results of the descriptive analysis carried out on the relationship between accounting information and companies' profitability was presented in Table 1 – 4. Based on the opinion of the respondents as presented in table 1, the profitability of manufacturing companies in Nigeria can be considered to have improved in the last five year owing to the quality of accounting information used in profitability decision making. This was supported by the 88% of the respondents agreeing that the company's profitability has increased in the last five years as well as 90% attesting to the increase in the annual turnover. 89% of the respondents also opined that investment in the manufacturing companies has also increased in the last five years. This could perhaps be a function of the perceived increase in the profitability of the manufacturing companies by potential investors. Similarly, 93% of the respondents also agreed that there has been an increase in the market share of the manufacturing organizations in the last five years while 91% agreed that employee base of the manufacturing companies in Nigeria has also increased in the last five years. In summary, the mean score is 4.3 which imply that the profitability of manufacturing companies has increase due to the quality of accounting information used for profit planning.

The results agreed with that of Knight, (1991), which posits that despite the facts that management accounting information is not being regulated, companies should generate sufficient management accounting information to guide their operation. He stressed further that since profitability decisions have long-term effect on the business and therefore it is important to analyze accounting information for profitability decisions making before the commencement of the operation.

Furthermore, the results of descriptive analysis on the link between cost information and profit planning in the manufacturing organization was presented in table 2. The result revealed an existence of cost unit in most of the sampled companies as supported by 88% response rate. It was also observed that every project undertaken by the manufacturing companies was subjected to cost analysis before the commencement of the project as viewed by 83% of the respondents. Also, there was evidence (94%) that cost analysis was a collective effort of the cost unit and the production department which implies that both managers are aware of their responsibilities and the basis up on which their performance will be evaluated. Also, a strict compliance with the cost data seems to exist among the sampled manufacturing companies as 87% of the respondent agreed to the question on strict compliance with cost data. Similarly, the mean score of 4.24 on questions relating to cost information implies that cost information has a direct link with the profitability of manufacturing organizations in Nigeria.

In like manner, the descriptive result of the relationship between sales information and profit planning in the manufacturing organizations was presented in table 3. In this result, there was high level cost information being used for profit planning in the sampled manufacturing companies. This was supported by 62% respondents affirming that annual sales budget was prepared in their

companies as well as 77% affirming that each project was treated separately in the budget. This implies that management is likely to meet their profit target as only profitable project are likely to be undertaken and they are aware of what to expect during the period. However, management may be prone to decision error by not considering the effect of deleting a project considered not profitable on the demand for other products and the overall profitability of the company. It was also observed that the use of sales budget for performance evaluation and quarterly review of sales budget was frequently practices by the sample companies.

Consequently, on the relationship between marketing information and profitability of manufacturing organizations in Nigeria, 93% of the respondents testify to the availability of marketing budget in the manufacturing organizations in Nigeria. Also, on the adequacy of information disclosed in the marketing budget, 90% of the respondents agreed that the company's competitive position was disclosed in the marketing budget while 89% of the respondents also agreed that tactics to reach the target market were also contained in the marketing plan. Similarly, impact of certain marketing activities on the company's revenue was measured periodically as perceived by the respondents.

Inferential Analysis

To empirically establish the statistical significance of the independent variables on the dependent variable, regression analysis was carried out. From the results presented in table 5 – 7, R^2 was 0.655. This implies that the combine effects of cost information, sales information and marketing information was responsible for 66% of variation in the profitability of manufacturing companies in Nigeria while the remaining 34% was due to the other factors not captured in this study. Consistent with the findings of Oyerogba et al (2015) on a sample of 40 companies drawn from the Nigeria stock exchange which found a significant relationship between cost management and firm performance, the coefficient on cost information was significantly positive at 0.463 (t-statistics =10.085), suggesting that higher profitability in the manufacturing organization is associated with adequate cost analysis. It can also be inferred that profitable manufacturing organizations maintained low period cost since it is not directly related to the manufacturing activities.

Similarly, the coefficient of sales information was also positive and significant at 1% level of significance. The coefficient was 0.143 while the t-statistic was 3.365. This implies that an increase in dependent variable sales information causes an increase in profitability by 0.143. Thus, our alternative hypothesis which predicts a significant relationship between sales information and profitability was not rejected. So, the findings of Forsaith et al (2003) which perceived a link between profitability and direct cost were supported by this result.

Furthermore, the relationship between marketing information and profitability was positively significant. This was in disagreement with the findings of Agmole, (1989) which perceived a negative relationship between companies' investment in marketing and financial growth. Therefore, since the coefficient of marketing information was 0.323 and t- statistic was 8.467, it can be said that an increase in independent variable marketing information causes an increase in profitability by 0.323.

Table 4.1: Profitability

Statement	Strongly Agreed	Agree	Indifferent	Disagreed	Strongly Disagreed	Mean
There is an increase in the profitability of manufacturing companies over the last five years.	35.6%	52.0%	0.0%	2.8%	9.6%	4.30
The annual turnover of manufacturing companies has increased in the last five years.	47.5%	42.9%	5.6%	2.8%	1.1%	4.30
Investments in manufacturing companies has increased in the last five years	50.3%	38.4%	2.8%	7.3%	1.1%	4.29
The market share of the manufacturing companies has increased in the last five years	43.5%	49.2%	1.1%	1.1%	5.1%	4.34
The number of employees in the manufacturing companies has increased in the last five years.	45.8%	42.9%	3.4%	6.8%	1.1%	4.25
Mean						4.30

Table 4. 2: Cost Information

Statement	Strongly Agreed	Agree	Indifferent	Disagreed	Strongly Disagreed	Mean
There is a cost unit in the manufacturing organization.	42.4%	45.8%	5.6%	4.5%	1.7%	4.23
Cost analysis is done before each project is undertaken.	53.1%	29.4%	3.4%	10.7%	3.4%	3.94
Cost accounting is prepared annually with the annual budget.	54.8%	31.6%	6.8%	3.4%	3.4%	4.31
Cost analysis is done in conjunction with the production department.	41.2%	52.5%	2.8%	3.4%	0.0%	4.43
There is strict compliance with the cost information in the manufacturing organizations.	52.0%	34.5%	7.3%	3.4%	2.8%	4.29
Mean						4.24

Table 4.3: Sales Information

Statement	Strongly Agreed	Agreed	Indifferent	Disagreed	Strongly Disagreed	Mean
Sales budget is prepared annually by the manufacturing companies.	44.6%	16.9%	16.9%	7.9%	4.0%	4.16
Each product is treated separately in the sales budget.	54.2%	23.2%	11.9%	8.5%	2.3%	4.33
Sales budget is used for performance evaluation in the manufacturing companies.	48.6%	20.9%	15.8%	11.3%	3.4%	4.20
There is quarterly review of sale budget in the manufacturing companies.	65.0%	16.4%	4.00%	11.3%	3.4%	4.48
Mean						4.32

Table 4.4: Marketing Information

Statement	Strongly Agreed	Disagreed	Indifferent	Disagreed	Strongly Disagreed	Mean
There is marking budget 4.34 in the manufacturing companies	49.2%	43.5%	1.1%	5.1%	1.1%	
The companies' competitive 4.30 position is disclosed in the marketing plan.	47.5%	42.9%	2.8%	5.6%	1.1%	
The tactics to reach the 4.25 target market are disclosed in the marketing plan.	45.8%	42.9%	3.4%	6.8%	1.1%	
The impacts of certain marketing activities on the revenue is measured periodically.	52.0%	35.6%	2.8%	9.6%	0.0%	4.30
The marketing budget includes the brand development costs.	50.4%	38.4%	2.8%	7.3%	1.1%	4.29
Mean						4.30

Table 5: Model Summary

Indicators	Coefficient
R	0.809
R Square	0.655
Std. Error of Estimate	0.34924

Table 6: Analysis of Variance

Indicators	Sum of Square	Df	Mean Square	F	Sig.
Regression	40.041	3	13.347	109.431	0.000
Residual	21.1	218	0.122		
Total	61.042	221			

Table7: Regression Coefficient

Variable	Beta	Std. Error	t	Sig.
Constant	0.243	0.233	1.043	0.298
Cost information	0.463	0.046	10.085	0.000
Sales Information	0.143	0.043	3.365	0.001
Marketing Information	0.323	0.038	8.467	0.000

CONCLUSION

This study investigated the relationship between accounting information and profitability of listed companies with a particular reference to the listed manufacturing companies in Nigeria from where a total sample of 222 top management staff were drawn using stratified and purposeful sampling techniques. Independent variables captured in the study were cost information, sales information and marketing information while the dependent variable was profitability. The results indicate that a positive significant relationship exists between accounting information and profitability of manufacturing organization. It is therefore recommended that functioning accounting system should be put in place by the manufacturing organization to enable them actualize their profit target.

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