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Cost Control and Its Impact on the Survival of Nigeria Firms: A Case Study of Nigeria Bottling Company Plc.

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Abstract

The purpose of this research paper is to examine the importance of cost control and the various cost control method used and their impact on the survival of Nigeria firms. We used primary and secondary data sources. The primary data were obtained using a structure questionnaire which was administered to 30 randomly selected staff as well as discussion with some targeted staff of Nigeria Bottling Company Plc (NBC) Jos plant, Plateau State of Nigeria. The scoring on the questionnaire was done using a five point Likert scale. The secondary data sources comprised of journal articles, books, newspaper articles, company financial reports and internet. The student t-test statistic and comparative percentage were used to test the hypothesis and the significance level was α=0.05. This research discovered that 70% of the respondents were of the view that cost control has greatly helped in boosting profitability in the company and 13.3% were undecided while 16.7% disagreed. Seventy nine percent of those discussed with, strongly agree that cost management has boost the profitability of the company while 7% disagree and 14% undecided. The study revealed that the problem of manufacturing company is the high cost of overhead incurred in the company. These costs are getting out of what the company could bear. The paper recommended that mechanisms for conducting value analysis (incorporating value engineering) should be put in place on a permanent basis; a good budgeting process should also be put in place to control cost; Just – in – Time (JIT) techniques should be employed to meet production and sales requirement in Nigeria Bottling Company Plc.

Keywords: Cost control, survival, and profitability, value analysis, budgeting and Nigeria firm.

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Introduction

Cost control is an important and has always been an important issue but perhaps most important in today's unpredictable market with few exceptions, at no other time in history has the business market been more dynamic. Unlike the large scale enterprises, the small and medium scale enterprises (SMES) have been starve by financial needs, poor implementation and monitoring of projects, time and cost overrun, nonpayment of loans and harsh economic conditions. (Adam, 2005).

The issue of cost control management is necessary in the operations of manufacturing companies in order to adequately utilize the material resources. Furthermore, cost control involves the management measures implemented to ensure that cost proceeds in accordance with management plan. The importance of cost control cannot be over emphasized as a survival technique for manufacturing companies, because they ensure proper monitoring of cost against budget and correct any financially impropriety of the company.

Moreover, one of the most important traits for business success in a recession economy in especially Nigeria is that more and more manufacturing companies had been chased out of market and are thus using cost control as a competitive weapon.

The macroeconomic environment, for the year 2006 has remained tough and challenge. The international monetary fund (IMF) estimated that Nigeria gross domestic product (GDP) has declined marginally from 6.9% attained in 2005 to 6% in 2006, which has fall short of set target of 7%. The bottle neck created as a result of the poor state of infrastructure namely poor roads, lack of proper management of its revenue in a suitable basis and unreliable power supply have been compounded due to the lack of investment in these vital sectors (Abdulaye Bio – Tchane, 2006).

This in turn, has been identified as major challenge towards economics of scale that result in infrastructural change and suitable economy growth. This situation has undoubtedly affected the overall performance of most companies (Abdulaye Bio-Tchane, 2006).

In a review of the business and economic environment (Idufueko, 2006) a member of growing body of National Association of Chamber of Commerce, Industry, Mines and Agriculture (NACCIMA) review that most business in the country had been crippled by two problems of multiplicity in the taxes/levies and incessant increase in electricity tariff. The government has to harmonise tax structure so as to eliminate multiple taxes/levies and also urge the government to put in place appropriate incentives to encourage independent power producer to invest in the power sector for economic growth and development. This is necessary to ensure the continuous survival of business in Nigeria.

Although the economic crisis has created enormous challenge for companies, as the economic times demanded that companies make the right management decisions if they were to survive, opportunities were also emerging companies were under increasing pressure to scrutinize all parts of the business processes to identified new areas of efficiency. Strategy cost management therefore became a tool to look unto as a competitive tool for business survival in the recessionary times (Berliner, 1998).

The specific objective of undertaking this study is to appraise various cost control techniques and its impact on Nigeria firm, and to further investigate whether cost control can be used as competitive strategy for survival tools. The remainder of the paper is structured as follows. The following section develops the analytical framework for the study and reviews the relevant cost control management literature. The third section outlines the research methodology; this is followed by the forth section that presents result including the figures/table. The fifth section discusses key theme that originate from the evidence and conclusion of the paper.

Review of related literature

One of the simplest ways of economizing efforts in an inquiry is to review and build upon the works already done by others. Such works would include books, journals, newspapers, articles and official documents. This is the concern of this section of the paper.

Conceptual and theoretical foundation

According to Horngren, Forster and Datar (2002), the term cost control ‘’ is widely used today, and no uniform definition exists. They explained that cost control is used to describe the activities of manager in short-run and long-run planning and management of costs. They further proceed that the planning and cost control is often inextricably linked with revenue and profit planning.

Agara, (2005) opines that cost control is “a process whereby targets are set against which the daily incidence of cost is compared to ensure that cost targets are not unduly exceeded’’. He went further to buttress the point that cost control, therefore, involves all methods of limiting the frivolous and unguarded expense of resources by managers to avoid unnecessary creation of liabilities.

Adeniyi, (2007) explained that cost control is the regulation of cost of operating a business and it’s concerned with keeping costs within acceptable limit. He said these limits will usually in a formal operational plan or budget. He proceeded to state that, if actual cost differ from planned cost by an excessive amount, cost control action will be necessary.

I.C.A.N (2009), define cost control as a process that involves all methods of controlling costs within a pre-determined target. He further explained that cost control ‘’is a process of setting targets and receiving feedback information in order to ensure that actual performance are in line with set target and, if not, take corrective action’’. The researcher is of the view that most standard definition of cost control are more or less along the lines of quoted authors above. The researcher sees cost control as the practice of managing and/or reducing business expenses. Cost controls starts by the businesses identifying what their costs are and evaluate whether those costs are reasonable and affordable. Then, if necessary, they can look for ways to cut costs through methods such as cutting back, moving to a less expensive plan or changing service providers. The cost-control process seeks to manage expenses ranging from phone, internet and utility bills to employee payroll and outside professional services. For example, the researcher observed in the course of this study, that for a company to be profitable, they must not only earn revenues, but also control costs. If costs are too high, profit margins will be too low, making it difficult for a company to succeed against its competitors. In the case of a public company, if costs are too high, the company's may find that its share price is depressed and that it is difficult to attract investors.

Review of empirical literature

Adam, 2005, Despite the seeming gain of democracy in 1999, the mobilization of domestic and foreign resources has become problematic due to several year of dictatorial misrule, the business environment continues to be severely impacted by widespread religious, cultural and political disturbance in Nigeria, infrastructural by all intents and purposes, remain to be grossly inadequate and in a poor state, with the cause by supply of power leading to serious disruptions in production are constituting serious strains in the company’s finances, with greater reliance been placed on the use of private generating facilities. However, the productivity of the manufacturing sector is also associated with high production cost related with high tariffs, increase in cost of energy, rising cost of imported inputs as a result of continues depreciation of naira exchange rate, and rising rate of inflation. Furthermore, the net import requirement of the manufacturing sub- sector grew rapidly as more than 60% of the raw materials consumed is imported due to lack of economics of scale, difficulty in obtaining technical expertise, inadequate research into local substitute and cost of production of locally sources material.

There are a number of studies that were carried out in Nigeria and outside with the view to appraise the various cost control and strategy cost management in manufacturing firms as a survival technique. Some utilize primary data (questionnaire and /or interview) while others used secondary data. According to a research conducted in India by Barbole (2013), is one of those that used secondary data such as books, online articles and descriptive statistics to analysis the study and title ‘’Impact of cost control and cost reduction techniques on manufacturing sector’’ the study review that for a business enterprise to survive, grow, and prosper. Cost Control and Cost Reduction are the activities necessary for ensuring objectives are fulfilled. The researchers further highlighted that, with the liberalization of the Indian Economy and Globalization, there is now a cut throat competition from various concerns of the world. This has now increased the importance of Cost Control as a survival technique. They further explained different tools and techniques used for Cost Control and cost reduction and analysis the changes in component cost after implementing the various techniques. The researchers study is limited to material cost; it does not cover other overhead such as salary, marketing and distribution expense etc. The study therefore recommends that value engineering; quality control and budgetary control should be used for the purpose of cost control and cost reduction in production plant.

Another study was carried out by Emengini (2014) and title 'product cost management in relation to Activity-Based costing (ABC) by manufacturing companies in a developing country like Nigeria. Data were collected from 58 sampled companies using questionnaire and analyzed using student's t-test and Multivariate analysis variance (MANOVA). The study disclosed that product cost management through application of ABC and traditional costing is geared towards cost reduction and are good strategic cost techniques in controlling cost. They further review that there is no statistically significant difference in cost reduction attained by ABC over Traditional costing, but though ABC tend to have higher effect and profit realized of ABC is equally higher. Base on the findings, the study recommends that manufacturing companies in developing countries should develop a good tone of management and core values that will promote the utilisation of ABC in their costing system, and the use software to facilitate application of ABC. The research is limited to South East of Nigeria. The study also recommends that the initial cost of implementation of ABC should deter the companies from adoption of ABC since its long run benefits surpasses its costs.

Oyewo (2013), study the impact of ''strategic cost management as a recession survival tool in the Nigerian manufacturing and financial service industries''. The study used questionnaire for collecting the data from targeted 280 respondents, out of which 212 were completed and returned from both manufacturing and financial sectors and the collected data where analysis using the Mann-Whitney test. The objectives of the research is to determine whether strategic cost management (SCM) techniques are practically used by Nigerian companies and the extent of their utilization particularly in the Nigerian manufacturing and financial services industries. The study reveals that survival of businesses in recessionary times dependent on managing cost strategically and the SCM techniques is more feasible, applicable and implemented in Nigeria manufacturing industry than in financial service industry because of the predominant application of SCN to manufacturing concerns and, product tangibility of the two industries. The author recommends more researches in SCM should be done in other industries apart from manufacturing industries in order to demonstrate that management accounting can be applied with resounding success in any industry and country. The Nigeria government should formulate more policies that create enabling environment to promote higher adoption of SCM.

Ayodele and Alabi, (2014) topic of research was ''Effect of cost control on building projects delivery in Nigerian''. The study aims at determined the effects of cost control techniques on building projects delivery for both government and private developers based on quality, time and cost. Interviews were conducted for selected quantity surveyors, architects, civil engineers, builders and contractor. Observations were also made on construction sites of government and private developers. The data collected were analysed by percentage. The study reveals that bill of quantities and other cost control techniques was utilizes on government building contracts while none of the cost control techniques was utilized by private developers. The research did not specify the cost control techniques used by government and is limited to south west of Nigerian.

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The paper recommends that the Federal Government of Nigerian should make regulations to compel private developers to utilise cost control techniques, so as to raise quality of building projects, zero down delivery time and ultimate cost.

Objectives of the study

The principal objective of this paper is to evaluate and analyse various cost control techniques and its impact on Nigeria firm. The secondary objectives are as follows:

- To assess if these cost control strategies have actually been effective.
- To examine effectiveness of cost control in relation to the profitability of Nigerian firms, using Nigeria Bottling company plc as a case study.

Research methodology

This is a descriptive research in which the researcher made use of primary and secondary data. The population of the study is Nigeria Bottling Company Plc, the manufacturer and distribution of coca-cola, fanta, spirit, Eva premium water, five alive juice brand and other soft drinks and has been operating in Nigeria since 1951. It went public in 1972 and is quoted on the Nigeria Stock Exchange with 60% of its shares held by Nigeria with a trade mark ‘’coca-cola. The company operates bottling plants and depots and achieves nationwide distributions.

Determination of sample size

The sample size was determined by the use of the formula by (W. G. Cochrain, 1963).

Formula for representative sample for proportions in large populations:

$$no = \frac{Z^2 \text{ x } p \text{ x } (1-p)}{e^2}$$

Where,

no = the sample size

Z^2 = the abscissa of the normal curve that cuts off an area α at the tails

P = the estimated proportion of an attribute that is present in the population

e = the acceptable sampling error

Formula for finite population correction for proportion:

$$n = \frac{no}{1 + \frac{(no - 1)}{N}}$$

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Where, N = population size

n = adjusted sample size

no = initial sample size

using a confidence interval of 90%, the sample size was determined as follows with these variables.

$$no = \frac{Z^2 p \times (1-p)}{e^2}$$

Where, $Z = \frac{90\%}{2} = 0.45$

0.45 is 1.65 from the normal distribution table

P = 70% or 0.7

e = 100% - 90% = 10% (0.1)

N = 60

Therefore,

$$no = \frac{(1.65)^2 \times 0.7 \times (1 - 0.7)}{0.1^2}$$

$$no = \frac{2.7225 \times 0.21}{0.01}$$

$$no = 57.1725$$

$$no = 57$$

The sample size (n) will be obtained using the formula:

$$n = \frac{no}{1 + \frac{(no - 1)}{N}}$$

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57

1+ (57 – 1)

60

57

1.9333

29.5

n = 30

Data analysis and interpretation

Data were presented in figures and tables and further analyzed with the aid of some statistical tools. The data were analyzed sequentially as they relate to research questions and hypothesis and complemented with discussion with targeted staff of the company.

Table 1. Department, Educational qualification and Year of Working Experience of the respondents.

S/N	Variable	Frequency	Percentage (%)
1	**Department**		
	Finance & Account	12	40
	Operations	8	26.7
	Marketing	6	20
	Human Resources	4	13.3
	Total	**30**	**100**
2	**Educational qualification**		
	GCE/SSCE	0	0
	OND/NCE	2	7
	Bsc/BA/HND/ACA/ACCA	12	40
	Msc/MBA/Phd	16	53
	Total	**30**	**100**
3	**Year of Working Experience**		
	1 – 5 years	7	23
	6 – 10 years	8	27
	11 – 15 years	6	20
	16 – Above	9	30
	Total	**30**	**100**

Source: Researcher's survey, 2007

Key: GCE/SSCE= Senior secondary school, OND/NCE= Diploma degree, Bsc/BA/HND= Graduate degree and Msc/MBA/Phd= Postgraduate degree

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Table1. (S/N 1), above indicate that 30 questionnaires were administered to targeted staff of the company and return to the researcher. It was administered to only Finance and Account, Operations, Marketing and Human Resources staff who had requisite expert knowledge in their professions. (S/N 2) shows that over 93% of respondents have good academic qualifications. This implies that respondents have requisite technical knowledge to provide answer to items in the research instrument, thereby enhancing the quality of data. In addition to possessing technical qualification, (S/N3) on table 1, contains the work experience of respondents, Over 95% have minimum of 5years work experience. Combining the respondent's qualification with their work experience shows that they possess technical competence in the research subject matter, data provided by them can therefore be viewed as reliable as they have requisite skill.

Table 2. Responses to Questionnaire and Discussions with staff on whether; Cost control in the company has greatly help in boosting profitability.

S/N	Variable	Finance & Account	Marketing	Operation	Frequency	Percentage (%)
1	**Questionnaire**					
	Strongly Agree				12	40
	Agree				9	30
	Undecided				4	13.3
	Strongly Disagree				2	6.70
	Disagreed				3	10
	Total				**30**	**100**
2	**Discussion**					
	Strongly Agree	4	2	2	**8**	57.1
	Agree	1	1	1	**3**	21.4
	Undecided		1	1	**2**	14.3
	Strongly Disagree					
	Disagree		1		**1**	7.2
	Total				**14**	**100**

Source: Researcher's survey, 2007.

Discussion of Findings

Questionnaire

Table 2 (S/N1) above indicates that 12 which represent 40% of the respondents strongly agreed that cost control in the company has greatly helped in boosting profitability, 9 which represent 30% agreed, 4 which also represent 13.3% were undecided, 2 which represent 6.70% strongly disagreed while 3 which have 10% disagreed.

Outcome of Discussions with the staff of the company

Table 2 (S/N2) above show that, 14 targeted staff of the company from Finance and account, marketing and operation department were discuss with and it was revealed that 57.1% strongly agreed that cost management has boost the profitability of the company, 21.4% of the respondents agree while 14.3% undecided and 7.2% of the respondents disagree .

From the above analysis, percentage of respondent that agree that cost control technique is important through the respondents of questionnaire and discussions are 70% and 78.5% respectively. As shown in the table, reduction in cost helps in increasing production of goods this in turn leads to increase in revenue and therefore increases in profitability of the company, which 21 represent 70% and 11 represent 78.5% of the respondents agreed.

Testing of hypothesis

HO; a> 0: Cost control system in a manufacturing company is not significantly capable of increasing overall profitability.

Hi; a > 0: Cost control system in a manufacturing company is significantly capable of increasing overall profitability.

3) α = 0.05 level of significance given by α to be tested at 5%.

4) The standard sample test statistic is the 't'test statistic which is given by

$$T = \frac{x - \mu x}{SD/\sqrt{n-1}}$$

Where, x = sample arithmetic mean ($x = \frac{\Sigma xi}{ni}$),

μx = estimation of population mean using sample mean (μx = (Σx/N)

SD = sample standard deviation

S.E = standard error $S/\sqrt{n-1}$

n = sample size

Critical region:

$-t < t_{0.025,\ 29} = -1.79$

$t > t_{0.025,\ 29} = 1.79$

Ranking	2	1	0	-1	-2
Respondents	12	9	4	2	3

Source: Researcher's survey, 2007.

NB; strongly agrees=2, Agreed=1, Undecided=0, strongly disagreed= -2, Disagreed= -1

The T-test value analysis was done using the formula $\left(T = \frac{x - \mu x}{SD/\sqrt{n-1}}\right)$.

The sample arithmetic Mean, Standard deviation and Standard error have been calculated properly and were used to determine the value of the t as show in the table 3.

Table 3. Sample Statistics

	Analysis of responses by the respondents					Analysis of statistic			Inferential statistic
Ranking	2	1	0	-1	-2	x	µx	S.E	t- test
Respondents	12	9	4	2	3	6	0.8333	0.2966	17.422

Decision: The 't'$_{cal}$ (17.422) is more than the table value (1.79) at 29 degree of freedom, 95% confidence interval and 0.05 level of significance. This implies that Null hypothesis (H_o) is rejected while Alternative hypothesis (H_i) is accepted. Accepting Alternatives hypothesis (H_i) means that cost control in the industry has significantly helped in boosting profitability.

Limitation of study

The limitation of this study is that the sample size is too small and only confined to Jos, Plateau State and more variables, including financial data, should be included to cover a wider scope of the research. The findings are only from the manufacturing firm perspective. Perhaps, similar empirical research in the future should extend to cover the perspective of the financial firm. In addition, there is constraint in the amount of information gathered from the respondent to fill the questionnaire on time.

Summary of findings

The main objective of the research paper was to evaluate the impact of cost control on the survival of Nigeria firms. Nigeria Bottling Company Plc has been able to achieve good results largely by devising and successfully implementing innovative marketing and cost saving strategies, and the study shows various cost control measures that improves production which leads to increase efficiencies and profitability. Also on the finding in hypothesis tested, the 't' calculated value is more than the table figure which means that Alternate Hypothesis (Hi) is accepted, means that cost control in the firm has greatly helped in boosting profitability.

Conclusion and recommendation

In manufacturing firm where its main cost element are direct material, direct labour costs, manufacturing overhead, other costs of high level significance are transportation and administrative costs. Manufacturing companies are preferring techniques like value engineering, quality control, budgetary control, standard costing systems, for the purpose of cost reduction.

Base on the above findings, the paper recommended that company interested in carrying out cost control procedures must necessarily be concerned about cost reduction techniques as a means in achieving its aims. It is recommended that mechanics for conducting value analysis (incorporating value engineering) should be put in place on a permanent basis. Major cost incurred in Nigeria Bottling Company Plc such as direct materials, direct labour costs and manufacturing overhead and other costs of high level significance like transportation and administrative costs should be controlled (i.e minimized to ensure optimal profitability at all times). A good budgeting process would effectively control cost, therefore, Nigeria Bottling Company Plc can improve its budgeting process by adopting Zero- Based Budgeting system.

The inventory management process must provide for the pre determination of economic-order quantities and re-order level for all class of raw material and components in store to achieve its objectives of maintaining minimum stock holding costs. In addition, the company should employ Just-in-Time (JIT) techniques so that there would be timely purchase of raw material and component to meet production and sales requirement. With the above recommendation, the company can achieve its goal of being ‘Low cost management’.

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