



Target Costing Technique and The Performance of Quoted Food and Beverages Manufacturing Companies in Nigeria

**MOHAMMED,
Samuel R.**

Department of
Accountancy,
Federal Polytechnic,
Iloro

m_samuelramon
@yahoo.com.

**OJETOLA,
Temitope Juliana**

Department of
Accountancy,
Federal Polytechnic,
Iloro

ojetolatemitopeo
@gmail.com

ABSTRACT

Cost information and cost management have become an essential fact for businesses that want to be more successful in the risen heat of the competition of today's economic climate. The rapid developments in the modern production environment and the short product life cycle, showed inadequacy of traditional and management accounting methods. Hence, this study investigated the impact of target costing technique on the performance of quoted food and beverages manufacturing companies in Nigeria. The study adopted descriptive research design method. The population for the study comprises of all quoted food and beverages manufacturing companies on the Nigerian stock exchange as a 31st December 2018. Five quoted food and beverages companies were selected based on personal judgmental qualitative factors. 100copies of structured questionnaire were administered on the respondents while 87 were completed and returned. The data were analyzed using Spearman Rho Correlation and Kendall's W. Test with the aid of Statistical Package for Social Sciences (SPSS). The findings revealed among others that there was significant relationship between speed of operation and the long term stability as well as productivity and cost reduction of food and beverages manufacturing companies in Nigeria with (p-value of $0.000 < 0.05$). The study concluded that food and beverage

companies can rely on speed of operation in determining the long term stability of the companies and productivity can also lead to cost reduction. It was recommended that managers should be effective in implementing target costing and product costs to the actual business situations in order to be more profitable.

Keywords: *Target costing, Speed of operation, Long term stability, Cost Reduction.*

Background Information to the Study

Traditional costing techniques do not provide detailed information to managers; they can lead to erroneous decision making by ignoring the fact that complex products consume more resources than simply structured products. In recent years, companies have drastically reduced their reliance on traditional costing technique by developing activity-based and target cost management systems. Traditional costing technique of assigning costs can be very inaccurate because there is no actual relationship between the cost pool and the cost driver (Nitin&Dalgobind, 2013). Nowadays, global competition forced manufacturing services and organizations to become more flexible, integrated and highly automated in order to increase their productivity at reduced costs. But it is impossible to sustain competitiveness without an accurate cost calculation mechanism (Ozbayrak, Akgün&Türker, 2004). Target costing plays a crucial role in managing costs because once a product is designed; most of its costs are committed (Copper &Slagmulder, 2011).

The objective of the target cost is to identify the production cost of a proposed product so that when sold is generates the desired profit margin (Cooper, 1995). Target costing is an important tool for sustaining manufacturers overall effort to remain cost competitive while meeting standards and specialization demanded by customers (Ellram, 2006). Target costing uses price information on the market to determine product cost (Zeng&Ada, 2010).

The decision making process under target costing approach involve a cross functional team in which employees from various departments (production, engineering, research and development, marketing and accounting) are given the responsibility of determining acceptable market price and corresponding return in sales as well as feasibility cost in which a given items may be produce. In order to reduce costs (as one objective of target costing), team members of organizations focus on eliminating non-value cost process, improving product design and modifying process method. Target costing(TC) is one alternative management technique which can help companies strengthen their competitiveness in meeting today' business challenges (Al-Suboo& Suleiman,2000).Intense global competition and ongoing technology changes have increased the level of difficulty for companies to acquire and maintain their competitive advantages (Ax,Greeve&Nilsson,2008). The intense

economic rivalry among firms in the industry has negatively affected all aspect of the business –individuals firms sales volume, industrial market share and bottom line (Ghafeeret, Abdul-Rahman&Mazahrih, 2014).This scenario has raised a major question of whether or not there is any tool within the management accounting discipline that can be employed to moderate the key parameters influencing competition variables. These variables include the cost of production, pricing policy, quality of goods and customers satisfaction and efficient economic product delivery service. In order to deal with these issues, government adopted some economic policies in favor of local manufacturing firms such as increased tariff on imported goods and the outright import prohibition were necessary. Sometimes tax holiday is used as a means of encouraging local firms (Imeokparia&Adebisi, 2014).

The rapid developments in the modern production environment, such as increased local and international competition, the speed of technological progress, the diversity of customers need, and the short product life cycle, showed inadequate traditional and management accounting methods to cope with these developments, therefore they imposed new dimensions to the concept of cost, the content of the measurement accuracy and cost comparisons methods. These factors have led to the emergence of target costing method as one of the tools of cost management.The dilemma for manufactures is to match the lower prices of the global competition and still offer the highest quality products that customers demand. Some manufacturers find it difficult to practice target costing in this competitive market. However, some manufacturing firms practicing target costing can hardly justify their competitive advantage in manufacturing industry. Based on the foregoing, therefore, the study was designed to determine the impact and usage of target costing on the performance of food and beverage manufacturing companies in Nigeria.

The research problem is the inability of many of the companies in the modern production environment particularly manufacturing to reduce costs and therefore some research problems can be formulated; how is the implementation of target costing organization and which department of the company are involved in the use of target costing, does the application of target costing strengthen firm's competitiveness. It is on this background that this current study intends to examine the impact of target costing techniques on the performance of quoted food and beverages manufacturing companies with special reference to Nestle Nig. Plc., Flour mills Nigeria Plc., Dangote Flour plc. Honeywell Nigeria Plc. and Cadbury plc.

The general objective of this study was to evaluate the impact of target costing technique on the performance of quoted food and beverages manufacturing companies in Nigeria. The research was also guided by the two specific objectives which include: to examine the significant relationship between speed of operation as a target costing technique and that of the long

term stability; productivity and cost reduction of quoted food and beverages manufacturing companies.

Research Hypotheses

The following null hypotheses have been developed based on the theoretical evaluation of the subject matter of the topic under study:

Ho₁: There is no significant relationship between speed of operation and the long term stability of quoted food and beverages manufacturing companies.

Ho₂: There is no significant relationship between productivity and cost reduction of quoted food and beverages manufacturing companies.

Literature Review

The study is supported by pricing strategy theory, the theory of constraints and the contingency theory. The pricing strategy theory describes the relationship between product cost and profit under competitive environment while the theory of constraints was developed by Goldratt (1990). The primary focus of the TOC is managing bottleneck activities that restrict the firm's performance and the contingency theory to management accounting is based on the premise that there is no universally appropriate management accounting systems that applies equally well to all firms in all circumstances (Adeniji, 2014). This suggests that the particular features of an appropriate accounting system will depend upon the specific circumstances in which firms must find it. The study also reviewed some related literatures.

Feil, Keun, Hyo and Yook, (2014) studied the historical development of target costing in Japan. The authors stated that target costing originated in Japan in the 1960's. Since 1980's, when target costing was widely recognized as a major factor for superior competitive position of Japanese companies, extensive efforts have been made to convey target costing to west Africa. In a related study conducted by Helms, Etkin, Baxer and Gordon, (2005); they concluded that some of the benefits of implementing target costing within a supply chain include the following: the most appropriate product development and process technologies, minimizing the complexities of product lines, eliminating cost over runs, limiting design problems and deliver the lower priced, highest valued product to customers. Target costing is not just a cost reduction technique or control framework but part of a profit management system including value analysis and value engineering.

According to Bricui, & Capusneanu, (2013) they looked into the pros and cons for the implementation of target costing method in Nigeria manufacturing firms. The critical factors of implementation, he demonstrated that there is possibility for gaining in implementing target costing method in manufacturing industries. The benefit of target costing are as follows; It improves the understanding of a product cost, thus allowing early identification of problems that may occur in the cost reduction process, staff from all department is

involved in cost analysis thus encouraging responsibility for cost management.

Impokparta and Adebisi, (2011) explored the extent of target costing system adoption and implementation by manufacturing firms in Nigeria and the impact on their performance. It was noted that the level of adoption and application of target costing was low in the region (Olabisi&Dafe, 2011). Other researchers who studies target costing outside Nigerian environment were also considered in order to have a robust atmosphere for discussion and conclusion. Murat, Kadir and Mehmet, (2009) examined the application level of target costing among the Turkish manufacturing enterprises. Findings indicated that the companies applying target costing had extensive market analysis and excellent marketing information system. It was concluded that target costing had significant relationship with competition advantage as it allows for a balance competition strategy.

Briciu and Capusneamu, (2013).Studied the pros and cons for the implementation of target costing method in roman's household appliances manufacturing entities. The critical success factor was analyzed and the result shows that there is possibility of adopting and implementing target costing method in the manufacturing sector in Romania due to its long term benefits. Hussein and Suliamon (2014) studied the adoption of target costing in Malaysia, the findings show that it is required to enable organization deal with challenges and problem of today's competitive environment where many companies are continuously seeking to produce high quality and functional products based on customer's expectation gleaned from market research. In another related study; Henk and Gustar, (2013) investigated the extent to which Swedish manufacturing companies use target costing. Through random sampling, 250 companies were selected and contacted by telephone and were asked if they would participate in a survey located on a web site. The result from the survey shows the insignificant proportion of Swedish manufacturing firms. Their study indicated that firstly, lack of knowledge about target costing was responsible for many companies not adoption the practice. The study concluded that there was a significant relationship between target costing and competition.

Hussein and Suliamon, (2014) evaluated the adoption of target costing approach in manufacturing companies in Jordan the result indicated that manufacturing companies in Jordan applies the requirement of target costing for obvious advantages some of which are: cost reduction, customer's satisfaction, quality control, efficient pricing decisions and the application of team work approach. However, they saw some limitations which were costly information gathering, data analysis, and lack of management support. TC method requires a functional integration between all business activities such as design, engineering, research and development, marketing, and accounting department. This technique also requires excellent plan through a comprehensive strategic framework that align between price, cost and quality

(Kato, 1993; Cooper & Slagmulder, 1997).

According to Sweeny and Mays (1997), activity based management (ABM) also is considered a vital helpful method for target; ABM concept focuses on efficient service pricing policies that result to an increase in organization profitability through effective management of resources that can be allocated for the benefit of customers. When this method was applied in companion with ABC Tennessee bank in USA witnessed an increase in profitability by \$11 million for the year 1994 (Sweeny & Mays, 1997). Efforts to sustain the current customers and attracting new customers based on desired service price requires from organizations to meet the expected service standards from customers; hence, organizations are demanded to establish a comprehensive inter-organizational cost management system aimed to provide services with high quality at suitable prices (Ellram, 2006). This system should include cost tables, total quality management and value engineering (Cooper, 1995; Kato, 1993). Baharudin and Jusoh, (2015) concluded a research on target cost management as Japanese companies' competition tool. The purpose of the paper was to explore how the TCM was being practiced and the major factors influencing the method. The study findings show that although the fundamental concept is similar, there are differences in details processes due to adaptations with the contextual constraints. The specific gaps identified from the previous studies reviewed indicated that some of the sub variable supporting target costing and competition were not studied while others were poorly examined. To the best of this researcher's knowledge, no study has been carried out on the impact of target costing on the performance of food and beverage manufacturing companies in Nigeria. Therefore, this study is conducted to bridge the gap and contribute to knowledge.

Methodology

This study employed a descriptive survey research design method to find out the impact of target costing technique on the performance of quoted food and beverages manufacturing companies in Nigeria. The population of the study covers all food and beverages manufacturing companies in Nigeria quoted on the Nigerian stock exchange as at 31st December 2018. However, the study adopted judgmental and convenience sampling to select the following 5 food and beverages manufacturing companies which are: Nestle Nig. Plc., Flour Mills Nigeria Plc., Dangote flour Plc. Honeywell Nigeria Plc. and Cadbury Plc. The selected companies are within the acceptable criteria and definition of the application of target costing. The study adopted primary source of data collection. The copies of the questionnaire were addressed and administered among the Chief Executive Officers, Managing Directors, Financial Accountants, Management Accountants, Marketing Managers, Production Managers, and Supervisors of the sample selected.

Reliability and Validity Test

The reliability of the instrument was assured through a pilot study conducted by the researchers. Questionnaire was being administered. The validity of the instrument was done by experts in the field of management accounting. Content validity was also conducted. According to Cronbach's Alpha framework, if alpha coefficients were above 0.80, the reliability of instrument is considered high, and if they were above 0.75, the reliability is accepted, while if they were below 0.60, then the internal inconsistency is considered weak. Cronbach's Alpha results were between 0.993 and 0.995. These results are considered high; that means the internal consistency is strong and the study instrument is valid. Spearman Rho Correlation and Kendall's W Test were used for data analysis with the aid of Statistical Package for Social Sciences (SPSS).

Results and Discussion

The data collection for this study is done basically through the use of questionnaire. The researcher samples a total number of one- hundred (100) respondents. However, a total number of 87 copies of questionnaire were collected and duly completed. This means that the researcher works on a response rate of 87%. Survey results of this study were analyzed using SPSS 20.

Table 1: Relationship Between Speed of Operation and Long Term Stability

		SOP	LTS
Spearman's rho	SOP	Correlation Coefficient	1.000
		Sig. (2-tailed)	0.899
	LTS	Correlation Coefficient	0.899
		Sig. (2-tailed)	1.000

SOP = Speed of Operation; LTS = Long Term Stability

Source: Extracted from SPSS, Version 20

Table 1 presented above is considered suitable to treat the research assumption stated above as formulated earlier in this research work. Following the assumption of the first hypothesis, the spearman rho correlation table revealed that speed of operation has a strong positive relationship with the long term stability of the company with a Spearman Rho correlation of 0.899. The researcher therefore rejects the null hypotheses and concludes that the speed of operation has a significant relationship with the long term stability of the company.

Table 2: Correlations

		Productivity	Cost Reduction
Spearman's rho	Productivity	1.000	0.780
		Sig. (2-tailed)	0.003
	Cost Reduction	0.780	1.000
		Sig. (2-tailed)	0.003

Source: Extracted from SPSS, Version 20

The table 2 presented above is considered suitable to treat the research assumption stated above as formulated earlier in research work. Following the assumption of the second hypothesis, the spearman rho correlation table revealed that there exists significant relationship between productivity and cost reduction of the quoted food and beverages companies ($R = 0.780$, $P\text{-value} < 0.05$).

Table 3: Kendall's W Test

	Mean Rank
Speed of operation	2.07
Long Term Stability	2.52
Productivity	2.66
Cost Reduction	2.76

Kendall's W = 0.086; **Chi-square** = 22.468; **P-value** = 0.000

Source: Extracted from SPSS, Version 20

In table 3 above, the Kendall's W coefficient of 0.086 showed that there is a highly significant degree of concordance between speed of operation, long term stability, cost reduction and productivity of the quoted food and beverages manufacturing companies since the P-value (0.000) $< \alpha = 0.05$ significance value. Hence, we can specifically conclude that target costing technique has impacted positively on the performance of Quoted Nigerian Food and Beverages Companies.

Conclusion

The findings of the study did not contradict opinions of the prior researchers, having filled the missing gap in the literature; this study is an effort to reveal the insight dynamics for the determination of target costing with reference to selected food and beverage manufacturing companies in Nigeria. In the light of prior studies, key explanatory variables were identified to know their relationships and impact. The outcome of this research work has empirically

proved that target costing has a significant impact on the performance of food and beverage manufacturing companies in Nigeria. From the findings, it was revealed that target costing (TC) represented by speed of operation (SOP) has a strong positive correlation with the long term stability which is used to measure performance with speed of operation with a Spearman Rho correlation of 0.899. Therefore, quoted food and beverage manufacturing companies can rely on speed of operation in predicting the long term stability (performance) of their companies.

In addition, the findings showed that productivity as a target costing technique has a strong positive relationship with cost reduction of quoted food and beverage manufacturing companies with ($R = 0.780$, $P\text{-value} < 0.05$). It therefore means that quoted food and beverage manufacturing companies can rely on productivity in predicting the cost reduction of the company while the Kendall's W coefficient of 0.086 showed that there is a highly significant degree of concordance among speed of operation, long term stability, cost reduction and productivity since the P-value (0.000) $< \alpha = 0.05$ significance value.

Recommendations

This study examined the usage and impact of target costing technique on the performance of quoted food and beverage manufacturing companies in Nigeria. Based on the study, the following recommendations are made:

First, it has been revealed that target costing (TC) is far better than the traditional system in virtually all quarters, measures should be devised to ensure its general acceptability as well as applicability by all the manufacturing companies as well as their employees. This, if done would add value to the accounting information and subsequently the reliability of the stakeholders on accounting information would be confirmed the more.

Second, manufacturing companies in Nigeria should adopt accounting practices on Target Costing System since it costs products realistically and properly and makes such products stand a chance for global competitiveness.

Third, managers and executives of firms should apply Target costing technique to product costs and actual business situation. Managers should effectively utilize the resources and capability of the firms in order to utilize target costing effectively to gain competitive advantages achieve higher level of firm's value and be more productive.

Fourth, emphases should be laid on new identified accounting fields, the like of TC, ABC, JIT, ABA, Green Accounting, Forensic Accounting etc. in schools of higher learning. They should be taken as area of specialization so that students would perfect in them. This will actually reduce the problems of assimilation of new invented issues as well as its applicability outside the fold of schools.

In conclusion, it is necessary for decision makers to get the benefit of the application of target costing to achieve less cost and more profits supporting

the company's continuity.

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