

Target Costing: A Critical Success Factor for Manufacturing Business in Nigeria

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Abstract: The study examined the impact of target costing (TC) on success of manufacturing enterprise in Nigeria. The aim of the study is to ascertain the role of TC on product costs and profitability of manufacturing business in Nigeria. Using primary data, questionnaire designed on a five (5) point Likert scale were administered on a sample of two hundred and thirty five (235) staff out of a population of four hundred and ten (410) staff of seven (7) textile firms operating in Northwestern states of Nigeria. The data obtained were analyzed descriptively using mean (\bar{x}) score index of non-parametric statistics as well as empirically using simple regression. The variables of the study are business success proxied by business profitability (BP) being the dependent variable (y) while TC represented by X as the explanatory variable. The results suggest that TC has significant impact on BP with 65% variation in BP explained by TC. By implication, the study has established that implementation of TC impact significantly on manufacturing success. The study concludes with recommendation of TC implementation for manufacturing enterprises in Nigeria for cost reduction and improved profitability.

Keywords: Target Costing, Cost reduction, Manufacturing enterprises, Firm success, Improved profitability.

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I. Introduction

In a competitive global economy, businesses into manufacturing have no choice but to produce goods that are readily acceptable to consumers anywhere in the world. The survival and growth of any manufacturing enterprise depends largely on its ability to produce quality goods as connection can always be established between quality, increased sales and profitability of manufacturing business. Production of quality goods for customers' satisfaction is always at a cost defrayed through prices paid by the consumers to obtain the goods, therefore, the long-term success of a manufacturing business depends on whether the prices charged exceeds the costs of the goods and a margin to finance further expansion (growth), reinvestment and yield a good return to investors. To achieve a comfortable profit margin to cater for their success, manufacturing outfits must manage their product costs relative to the price the market allows or the price the business set to achieve key objectives of market penetration for products especially new ones. For market penetration therefore, the price that drive allowable cost of the business has to be attained. The allowable cost is necessary because if a business were to realize sufficient margin for growth, reinvestment, plough back and reasonable return for investors, product costs have, to be managed to earn profit. It is in this view that many Japanese manufacturing companies, such as Ford Motors and Chrysler began to use target costing technique in their effort to improve their competitiveness and profitability. Target costing is a managerial accounting technique of looking at the relationship between price and cost of a product with arithmetic equation of price-profit margin cost (Toma & Adawu, 2011).

The target costing equation above means that in a competitive manufacturing environment, product price is driven and set either by competitive market forces of demand and supply or by the enterprise as it consciously and deliberately lower it prices to increase market penetration and patronage. Target costing therefore is a technique that requires a manufacturing business to plan in advance for its product costs, prices and the margin it intends to achieve. To sell for a desired margin, three key levels namely: product costs, product price and desired profit levels must be planned or determined in advance.

A management decision whether to continue production or not depends on whether the planned levels can be attained. With target costing, a manufacturing business has a powerful tool to continually monitor product costs right from the design phase (stage) through the product lifecycle. The essence is to ensure that the target (planned) profit and cost can be realized. This therefore means that all issues concerning product costs and the target prices must be taken into consideration before actual production takes place.

Statement of the Problem

Cost effectiveness with improved quality have become critical for competitiveness and success for manufacturing business all across the globe. It therefore behooves manufacturing enterprises to implement a suitable technique for planning in advance, product costs, prices, product quality and the desired profit. Achieving these requires effective management's proactive action to monitor product cost through target costing.

In Nigeria manufacturing environment, product cost management is only reactive as cost ascertainment only take place after production must have been completed (Umoaha & Noah, 2017). Collaborating, Ochonu (2014) and Ogam (2016) noted that most manufacturing enterprises in Nigeria, large, medium or small are in troubled state struggling to survive due to failure to determine in advance the targeted and competitive price point, product costs and the desired profit margin from inception when the idea to produce was first conceived or muted. Ogaru (2016) further stated that though manufacturing firms in sub-Saharan Africa especially Nigeria are faced with challenges of near absence of critical infrastructure that has hiked their cost of operation, implementation of endogenous managerial techniques for cost reduction such as target costing is a panacea that would have assisted in reducing their cost of operation for profitability in business but unfortunately many manufacturers in the country have ignored this important technique.

However, Umoaha & Noah (2017) observed that while few manufacturing enterprises in Nigeria have understood and apply/implement the concept of target costing as a potent managerial technique for cost planning and management for overall success of their ventures, quite many of them have issues of survival in competitive global environment for failure to establish in advance their targeted product cost, selling price, estimated sales, volume, the market and the target profit. The success of any manufacturing business hinges on proactive determination on this variable which many manufacturing business in Nigeria fail to consider (Toma & Adawu, 2017).

Research Questions

The postulating question that guides the study is: what impact does the implementation of target costing as a managerial technique has on the success of manufacturing enterprise in terms of product costs, cost reduction and profitability of manufacturing business?

Objective of the Study

The general of the study is to examine the impact of target costing on success of manufacturing business in Nigeria. The specific however is ascertained the impact of target costing on profitability of manufacturing enterprise in Nigeria.

Research Hypothesis

H_0 = Implementation of target costing has no significant impact on profitability of manufacturing enterprise in Nigeria.

Conceptual Clarification

Target Costing: Target costing is considered as a cost management tool for reducing the overall cost of a product over its entire life cycle (Harris & Hazzanad, 2002). It is a comprehensive cost planning, cost management and control used at the early stage of product design to influence product cost structure (Drury, 2005). It is a strategic approach for cost management used in the management of product cost (Ewerl & Emst, 1999). Target costing is seen as a cost management technique oriented to the market used in presenting the cost of a product from early stage through its lifecycle for profitability ascertainment (Al-Thahabi & Al-Ghabban, 2007). Abdel & Safau (2001) and Fouda (2007) viewed target costing as a strategic entry point in modern manufacturing environment as it helps manufacturers in planning low cost for new products with high quality or order to achieve a reasonable profit by reducing the stages of productive factors. It is a managerial technique employed to reduce product cost from early stage in order to achieve future profit (Cooper & Slagmuder, 2002). Target costing is one of the management accounting innovations and techniques used for cost management and profitability in a manufacturing setting (Mufti & Sheikh, 2005).

Theoretical Framework

The study is anchored on cost of production theory of value propounded by Adam Smith in 1790. In the theory, Smith contrasted natural prices (the price that drive allowable cost) with market price. Smith theorized that market prices would tend towards natural prices where outputs would stand at. Smith characterized as the level of effectual demand. At this, level, the natural prices of commodities are equal the sum of the natural rates of wages and amount paid for inputs into production. The theory assumes that the price of a product or an object is determined by the sum of the cost of the resources that went into making it. For

profitability, product cost must be tightly managed in all phases of product lifecycle from design phase. This therefore underscores the relevance of the theory to the study.

Empirical Review

Studies in Nigeria

Lawrence and Sanusi (2014) conducted a study on target costing and performance of manufacturing industries in south western Nigeria. The study examined the extent to which the implementation of target costing by manufacturing firms has impacted on their performance. Using primary data, responses from 282 firms listed on the Nigerian Stock Exchange (NSE) were analyzed using Ordinary Least Square (OLS) and T-test with Cronbach's Alpha to test the reliability of the instrument. It was found that there is a strong positive relationship between adoption of target costing and improvement in cost of operation and profitability of firms. The study recommended implementation of target costing for manufacturing companies in Nigeria.

In the study of Iware and Nuru (2016) on target costing as a managerial tools for cost reduction in manufacturing firms in Borno state. The extent to which manufacturing firms within the state adopt TC was investigated. Data were collected through questionnaires designed on a four (4) point likert scale. Responses from 63 staff of three manufacturing firms in the state were analyzed descriptively using simple percentage. The result indicated that there is low usage of target costing by manufacturing firms in the state. The study recommended the use of target for manufacturing firms.

Kenneth (2016) conducted a study on target costing implementation for cost reduction and competitive advantage of companies, a study of brewery industry of Nigeria. The aim of the study was to investigate the relationship between target costing and competitive advantage of brewery manufacturing firms in Nigeria. Primary data collected from 1242 staff of the company were empirically analyzed using regression. The result indicated that there is a significant relationship between target costing and cost reduction for profitability. The study recommended the implementation of target costing for manufacturing enterprises.

Studies in other Economies

Hamoh and Baker (2012) did a study on effects of target costing technique on profitability of manufacturing firms in Brazil. The aim of the study was to examine the impacts of target costing on profitability of manufacturing business in two (2) manufacturing firms in Salvador. Using primary sources, data were obtained through questionnaire administered on fifty (50) staff of these companies. Responses from thirty-five (35) returned questionnaires were analyzed empirically using simple regression. The result showed that there is significant impact of target costing on profitability of the firms. The study recommended implementation of target costing for manufacturing business.

Henrik (2015) conducted a study on the use of target costing in Swedish manufacturing firms. The aim was to investigate the extent to which Swedish manufacturing companies use target costing in their operations. Data obtained primarily from responses of 310 staff were analyzed using simple percentage of inferential statistics. The result indicated that 63.4 percent of Swedish manufacturing firms are using target costing in their operation. It was also found that the use of the technique has assisted the profitability of these firms.

Normah, Suzana, Wees, Ibrahim and Hussein (2015) did a study on target costing implementation and organizational capabilities: empirical evidence from selected Asian countries. The purpose of the study was to examine the level of implementation of target costing in the Asian countries of Japan, Thailand and Malaysia. Questionnaires were developed to elicit responses from managers of manufacturing organizations of these countries. The findings, from responses analyzed using simple percentage, indicated that high percentage of these firms uses target costing and it has assisted profitability of these enterprises. The study recommended implementation of target costing implementation for manufacturing organizations.

Ghassan and Abel (2014) examined the role of TC in reducing cost for profitability of developing products in Jordanian public shareholding industrial companies. The aim of the study was to identify the impact of TC on profitability of the companies. Data were collected through distribution of questionnaires to a sample of sixty (60) respondents of which 51 were returned. The responses were analyzed using z-test and inferential/descriptive statistics of simple percentages. The result of the analysis showed that application of TC technique accounted for profitability of many Jordanian manufacturing companies. The study recommended TC implementation for manufacturing firms.

Yasemin and Erhan (2010) did a study on cost reduction through product design: TC approach. The aim of the study was to explore the role of TC in managing product costs while promoting quality specification for customers' requirement. Data for the study were obtained through questionnaire administered on ninety (90) staff of Small and Medium Enterprises (SMEs) in Ukraine. Responses from sixty-one (61) respondents were analyzed using simple percentage of non-parametric statistics. The result of the analysis indicated that TC process is an essential technique for cost reduction and profitability of manufacturing business. The study recommended implementation of TC for manufacturing enterprises.

Sorin (2013) investigated the cost of profitability of firms using TC method in Romanian economic entities. The aim of the research was to examine the impact of TC on efficiency and competitive advantage of Romanian household appliances manufacturing firms. The research was carried out with the use of theoretical information from literature that deals with the implementation of TC method used by Romanian industries for reducing cost. It was found that TC implementation has been instrumental to competitiveness and profitability of Romanian firms into the business of manufacturing household appliances. The study recommended implementation of TC method for long term profitability of manufacturing organizations.

II. Methodology

It is survey design using primary data through administration of questionnaire designed on a five (5) point Likert scale to a sample of two hundred and thirty-five (235) out of a population of four hundred and ten (410) staff of seven (7) textile firms in North western states of Nigeria. One hundred and seventy-three (173) questionnaires were returned representing a response rate of 73.6%. The data were analyzed descriptively with mean (x) score index as well as empirically using simple regression with the aid of R-Statistical package.

Model Estimation

The empirical model for this study is formulated as follows:

$$y = a + \beta_1 X_1 \dots \text{equation 1}$$

From the study, firm's success is proxied by business profitability (y) while X_1 represents the explanatory variable decomposed as TC.

Substituting in equation 1 therefore:

$$BP = a + \beta_1 TC \dots \text{equation 2} \dots \text{therefore, equation 2 was used for the analysis.}$$

Where;

BP = Business profitability

a = intercept

TC = Target Costing

III. Results

Table 1: Mean, Variance and Standard Deviation for dependent and explanatory variables

	BP	TC
Mean	55.63	3.996
Variance	54.97	0.0174
Standard Deviation	8.283	0.136

Source: Computation using R-Statistical Package.

Table 2: Analysis of Variance (ANOVA)

Source of Variation	Df	SS	MS	F-Test value	p-value
TC	1	193.47	193.47	8.246	0.0434
Residual	5	135.43	27.88		

Source: Computation using R-Statistical Package.

Table 3: Summary of Simple Regression

Source of Variation	Estimate	Std Error	F- value	z-test
Intercept	118.98	69.74	-1.921	0.1361
TC	56.71	17.15	3.04	0.0434
R ²	0.6348	Adjusted R ² = 0.6212		

Source: Computation using R-Statistical Package.

IV. Findings and Discussion

The descriptive results revealed that TC has significant impact on BP at 0.05 level of significance as the mean score index of 3.996 is greater than the 3.0 on a five point Likert scale. Therefore the null hypothesis of the study is rejected. This collaborates with findings of Yasemin & Erhan (2010), Ghassan & Abel (2014) and Normah et al (2015) that TC implementation is a managerial tool that triggered profitability of manufacturing business in European middle east and Asian countries.

Also, the ANOVA result indicating a p-value of 0.0434 implies that TC has significant impact on BP at 0.05 level of significance. This findings is also in agreement with that of Hannoh & Baker (2012), Henric (2014) and Normah et al (2015) which in the studies discovered that TC implementation has boosted profitability of manufacturing enterprises.

The result of the regression analysis showed a fairly high value of coefficient of determination (R²) and adjusted R². The R² value at 0.6348 indicated that 63% of the variation of BP is explained by the predictor

variable (TC). Similarly, the adjusted R² value of 0.6212 revealed that 62.12% of changes in BP are explained in the model after all necessary adjustment are taken care of. Thus, it implies that the explanatory variable (TC) has a fairly high ability to predict likely future changes in BP.

Further, the model of the study mathematically represented as $118.98 + 69.74$ as reflected in the intercept of the regression analysis showed that the aprior expectation of $\beta_1 > 0$ is satisfied confirming that the model is a good fit.

V. Conclusion and Recommendation

Implementation of TC technique is a potent accounting based technique that has enabled many manufacturing organizations around the world to attain appreciable measure of success in terms of profitability in business. Implementation of the technique has assisted manufacturers in production of high quality and competitive products at reduced costs for guaranteed customers satisfaction and continuous patronage.

Based on the findings, the study recommends that manufacturing enterprises in Nigeria should implement TC technique in product costs and manufacturing for quality, competitiveness increased sales, profitability and success in business.

References

- [1]. Abdel, D & Safaa, M. (2001). Towards a proposed framework for the management: Target costing in the modern manufacturing environment. *The Scientific Journal of the Economy of Commerce* 6(3), 470-477
- [2]. Cooper, R & Slagmuder, I. (2002) Target Costing from new product development: Product level target costing. *Journal of Cost Management* 8(3), 48-51.
- [3]. Drury, C (2005) *Management and cost accounting* (5th ed.) Thompson hearing Publishers. Pp. 891-901
- [4]. Ewert, R & Ernst, C (1999) Target costing coordination and strategic cost management. *European Accounting Review* 8(1), 20-49.
- [5]. Fouda, S. A (2007) A proposed framework for integration between the target costing method and strategic cost analysis to reduce activities through the concept of the value chain. *Journal of Commerce for Scientific Research* 8(4), 209-235.
- [6]. Ghussan, F. M & Abdel, R. K. E (2014) The role of target costing in reducing costs and developing products in the Jordanian public shareholding industrial companies. *International Journal of Academic Research in Accounting, Finance and Management Sciences* 6(4), 96-104
- [7]. Hamah, G. S & Baker, P. N (2012) Effects of target costing on efficiency of manufacturing firms. *International Journal of Economics and Contemporary Studies* 16(1), 83-91.
- [8]. Harris, J. U & Hazanad, F. N (2002) *Managerial cost accounting*. London. Allen Davis Publishers. Pp. 69-73.
- [9]. Henrik, B (2015). The use of target costing in Swedish manufacturing firms. PhD Thesis, School of Economics and Commercial Law, Cote Borg University. Unpublished
- [10]. Iware, U. K & Nuru, L. N (2016) Efficacy of target costing: A managerial tool for cost reduction in manufacturing firms. *International Journal of Mediterranean Research* 2(5), 76-78
- [11]. Kenneth, E. D (2016) Target costing implementation competition: A case study of brewery industry. *European Journal Applied Business Management* 2(2), 35-41.
- [12]. Lawrence, I. & Sanusi, A (2014) Target costing performance of manufacturing industry in southwestern Nigeria. *Global Journal of Management and Business Research* 14(4), 112-117
- [13]. Mufti, M. H, A. & Sheikh, F. O (2005). The effectiveness of the entrance to the application of target costing industrial enterprises: an exploratory study on a sample of industrial facilities in Jeddah. *Journal of Commerce for Scientific Research* 8(4), 112-118
- [14]. Normah, O., Suzana, S., Wees, S. H., Ibrahim, K.A.R. & Hussein, H. H (2015) Target Costing Implementation and organizational capabilities: an empirical evidence of selected Asian Countries. *Journal of Economics, Business and Management* 3(2), 75-83
- [15]. Ochonu, K, L (2014) *Decision theory in business*. Lagos Fillbon Publishers.
- [16]. Ogam, J. R (2018) *Operations research*. Lagos. AGIES Publishers
- [17]. Sorin, B. (2013). The pros and cons of operational efficiency using target costing method in Romanian economic entities. *Journal of Accounting and Management Information* 12(3), 112-116.
- [18]. Toma, A. F & Adawu, G. T (2011) *Management accounting: New approach to decision making*. Ibadan. Dalton Publishers.
- [19]. Umoaha, H & Noah, D. S (2017) Nigeria textile firms' pathway to recovery. Workshop paper for AFCOLT staff, Yola. May 8th – 9th.
- [20]. Yasemin, Z. & Erhan, A (2010) Cost-reduction through product design: Target costing approach. *International Journal of Production Research* 48(19), 113-118

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