An accounting reflection of quality cost and customer satisfaction of health products in Nigeria

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Keywords

Abstract

The purpose of this study was to examine the accounting reflection of quality cost and customer satisfaction of health products in Nigeria. To achieve this purpose, hypotheses were raised and a critical review of extant literature was made. The population of the study consisted of seven (7) pharmaceutical companies quoted in the Nigerian Stock Exchange. Both primary and secondary data were utilized for this study. The primary data were collected through the administration of questionnaire on management accountants of the selected companies, while the company's financial statements serve as the secondary data source. The findings generated in this study revealed a positive significant relationship between quality conformance cost and customer satisfaction of health products but a negative significant relationship between quality non conformance cost and customer satisfaction. It was recommended in the study that pharmaceutical firms in Nigeria should increase their quality conformance cost so as to eliminate internal and external failure cost for improved customer satisfaction.

Introduction

Customer's satisfaction occurs when the benefit derived from a product is greater than or equivalent to the sacrifice made by the customer in obtaining the product. For decades, it has been observed that customer satisfaction of health products in Nigeria has been at very low ebb because the country is plagued by counterfeit and poor-quality health products. The World Health Organization (WHO) in 2002 reported that 70 percent of health products in Nigeria were fake or substandard. More so, the National Agency for Foods and Drug Administration and Control (NAFDAC) estimated that 41 percent of drugs alone were counterfeit (Akunyili, 2007). The problems of sub-standard health products proliferation in Nigeria have affected the credibility of pharmaceutical companies and can exert very harmful effects on customer satisfaction.

There are high chances for the proliferation of poor health products when prices are high due to increase cost of production resulting from quality costs of rework, wastage, returns, etc. A survey conducted by World Health Organization (WHO) and Health Action International (HAI) in Nigeria 2004 to determine the prices people pay for their health products showed a high rise in the prices . For example, consumers pay between 2 to 64 times international reference prices for medicines in various health facilities. This is not because the product is of high quality, but due to lack of adequate attention given to quality cost accounting. Quality cost accounting is an art of determining and reporting the cost of a product quality. Quality cost means extracted, by quality out of the attribute "good" into a measurable parameter presented by money. Measuring quality by money enables simple comparison and defining priorities of various problems. It also enables measuring quality trends within certain period of time. Since each company's management is forced to economize with money, quality cost is the most reliable tool for evaluation of efficiency and effectiveness of the realized measures for quality promotion and a basis for all decisions referring to quality. Eliminating inferior quality by

implementing quality improvement initiatives can therefore result in customer satisfaction for substantial cost savings and higher revenues to the firm.

While analysts have explored institutional answers such as improving laws, increasing criminal penalties for counterfeiters, and making enforcement stronger and more consistent to the problem of substandard health products, there seems to be inadequate empirical answers to the link between quality cost and customer satisfaction of health products in Nigeria. This is the gap, which the present study tends to close.

To achieve the objective of this study, the following hypotheses are raised-

(i)   There is no significant relationship between quality conformance cost and customer satisfaction of health product

(ii)   There is no significant relationship between quality non-conformance cost and customer satisfaction of health product

Nature of Quality Cost

Quality has become one of the key competitive variables generating the need for evaluation of spending resources needed for the given level of quality by which a company can expect and achieve competitive advantage on the market. Under the influence of total quality management (TQM), the last decades of the 20th century were marked by a clearly defined need for measuring total quality cost to provide the company's management with information about, above all, investments into quality and the effects of such investments. According to Gajic (2005), since management speaks the language of money, putting quality under the conditions of costs offers powerful means of communication and control.

To compete successfully in today's global competitive environment companies are becoming 'customer-driven' and making customer satisfaction an overriding priority. Customers are demanding ever-improving levels of service regarding cost, quality, delivery and the choice of innovative new products. Quality has become one of the key competitive variables in both service and manufacturing organizations and this has created the need for management accountants to become more involved in the provision of information relating to the quality of products and services and activities that produce them (Drury,2008). Plunkett, Dale, and Tyrrell, (1995) claimed that in the UK, quality related costs have been reported to range from 5 percent to 15 percent of total company sales revenue.

Quality costs are generally divided into two groups: cost of conformance and cost of non-conformance (Plunkett et al, (1995). The first group implies prevention cost, i.e. cost of the activities that prevent decreases of quality below the required level (e.g. training of staff, maintenance, technical support, etc.) and cost of examination so called cost of internal and external failures, i.e. cost caused by errors in quality. Within the cost of internal failures one measures cost of eliminating the errors on the product which has not been delivered yet, cost of finishing, rework and waste. Within the cost of external failures, one measures additional cost of low quality product which has already been delivered: warranties, reduced price due to below standard sale, as well as opportunity cost of decreased business activity due to loss of customers (Brummet, Flamholtz, and Pyle, 1998). Orientation towards quality implies elimination of other group of costs through creation of awareness that the quality is not monitored but built into the product and the entire system. Promotion actions are focused on prevention in order to eliminate the causes of error occurrence and prevent the cost of low quality.

Quality Cost Measurement

A cost of quality report should be prepared to indicate the total cost to the organization of producing products or services that do not conform to quality requirements. Drury (2008) opined that four categories of costs should be reported. These include-

1. Prevention costs are the costs incurred in preventing the production of products that do not conform to specification. They include the costs of preventive maintenance, quality planning and training and the extra costs of acquiring higher quality raw materials.

2. Appraisal costs are the costs incurred to ensure that materials and products meet quality conformance standards. They include the costs of inspecting purchased parts, work in process and finished goods, quality audits and field tests.

3. Internal failure costs are the costs associated with materials and products that fail to meet quality standards. They include costs incurred before the product is dispatched to the customer, such as the costs of scrap, repair, downtime and work stoppages caused by defect.

4. External failure costs are the costs incurred when products or services fail to conform to requirements or satisfy customer needs after they have been delivered. They include the costs of handling customer complaints, warranty replacement, repairs of returned products and the costs arising from a damaged company reputation. Costs within this category can have a dramatic impact on future sates.

It should be noted that some of the items in the quality cost report will have to be estimated. For example, included in the external failure costs category is the forgone contribution from lost sales arising from poor quality. This cost is extremely difficult to estimate. Nevertheless, the lost contribution can be substantial and it is preferable to include an estimate rather than omit it from the report. By expressing each category of costs as a percentage of sales revenues comparisons can be made with previous periods, other organizations and divisions within the same group. Such comparisons can highlight problem areas. For example, comparisons of external failure costs with other companies can provide an indication of the current level of customer satisfaction.

According to Gate (2001), the cost of quality report can be used as an attention-directing device to make the top management of a company aware of how much is being spent on quality-related costs. The report can also draw management's attention to the possibility of reducing total quality costs by a wiser allocation of costs among the four quality categories. For example, by spending more on the prevention costs, the amount of spending in the internal and external failure categories can be substantially reduced, and therefore total spending can be lowered. Also, by' designing quality into the products and processes, appraisal costs can be reduced, since far less inspection is required.

Prevention and appraisal costs are sometimes referred to as the costs of quality conformance or compliance and internal and external failure costs are also known as the costs of non-conformance or non-compliance. Costs of compliance are incurred with the intention eliminating the costs of failure. They are discretionary in the sense that they do not have to be incurred whereas costs of non-compliance are the result of production imperfections and can only be reduced by increasing compliance expenditure (Hanson and Mowen, 2000). The optimal investment in compliance costs is when total costs of quality reach a minimum. This can occur when 100 per cent quality compliance has not been achieved. It is virtually impossible to measure accurately all quality costs (particularly the lost contribution from forgone sales) and determine the optimal investment in conformance costs. However, some people argue that a failure to achieve 100 per cent quality compliance is non-optimal and that a zero-defects policy is

optimal. With a zero-defects policy the focus is on continuous improvement with the ultimate aim of achieving zero-defects and eliminating all internal and external failure costs.

According to Littleton and Zimmerman (1992), majority of companies have no idea how much they spend on quality planning and control, i.e. how much the established quality system costs them. Successful and best-led companies found out that initial cost of this type ranges from 20% to 40% of sales. These companies managed to reduce their quality cost from 30% to only 3% of sale in several years Baxter and (Oxenfeldt, 1991). This was done through orientation towards continuous quality improvement, i.e. through approach that it is acceptable and economically justified to introduce measures to increase the quality cost since they will result in reduction of total costs of the company.

On the other hand, experience of large number of managers who wait and hesitate to introduce measurement, show that they never manage to introduce functional system of quality cost measurement. They are most frequently too occupied with attempts to obtain as precise amount of costs as possible, and at the same time they neither realize nor understand completely why this is done at all. They do not realize that only by defining the quality cost (either precise or approximate) clear objectives for its reduction can be set. Even worse, they lower the prevention cost below minimum, which hides the threat of unnoticed but multiple increases of some other costs, at some other places in the production process and product promotion.

To make correct decisions one needs information on all costs "burdening" the product, as well as on causes of their generation. Unfortunately, Dugdale, Jones, and Green, (2006) observed that most companies nowadays recognize only the costs of waste, finishing, warranty as well as the costs of examination and costs caused by errors, which are only the tip of the iceberg. One predicts all other losses that are not directly visible, although they are a much bigger burden to a company than directly visible costs. Therefore, it is needed to make all these costs visible first and then to define the areas where some savings can be made. The point of Deming's definition that "quality equals dollar" (Q=$) is in setting of such a quality system that will lead to saving, i.e. to reduce total business costs, and to achieve that, one has to establish efficient system of measuring quality costs.

Methods that are most frequently used for this purpose are the following-
• Traditional accounting according to financial accounting,
• Accounting according to predefined categories,
• Accounting according to cost centre, and
• ABC accounting (activity based cost)

The first two methods are based on traditional accounting of costs where the highest value cost categories are generally separated. Majority of organizations and their managers, who do not understand the meaning of a more complete viewing of quality cost, find this method very reliable and effective. However, Drury and Tayles (1994) identified the mistakes that are made in this way to include the following:

• After they obtain data based on their requirements, they believe that they have good information. Most frequently they are not aware of the fact that the information is neither sufficient nor "all-inclusive".
• They frequently forget that, when classifying quality costs, the main constraint is how to gather data. They do not see the costs they do not know how to systemize and recognize. Or, even worse, they do not know why and how certain costs occurred.
• The third and the biggest mistake is that they believe that according to these semi or insufficient information they can define where they should save and how to organize the process.

Viewing cost according to the cost centre is widely used in the existing information systems. It implies that the predefined categories are further developed and that each of them becomes a "cost centre". The advantage of such data gathering lies in the fact that it is more detailed than the previous ones and it is most frequently done automatically. However, this is not a satisfactory solution either, since it does not eliminate the basic remark made for "accounting" approach — the costs are visible, but why they occurred is not (Dugdale et al, 2006).

New accounting concept generating the concrete way of understanding and accounting of the price, i.e. quality cost is: ABC (Activity Based Costs/costs based on activities). This methodology gained in significance along with popularization of management process and it is based on differentiating the cost bases (real financial indicators — budgeted, planned, engineered), monitoring costs for particular resources (labour, material, equipment) and monitoring costs according to the process that generate them. This means that one follows what cost has been generated (cost centre), who made it (an individual, equipment) and during which process (sale, procurement, training, etc.). This is, therefore, a multidimensional and process oriented cost measurement, which, unlike traditional quality approach, enables viewing and measuring of quality cost generated, apart from production, in other parts of the company.

Problems of Quality Cost Measurement

The companies having passed through the quality system certification process know best the significance and problems in defining quality cost. Soon after the certification, management of these companies is faced with the problem of defining the real unit cost of the established quality system and the measures realized on its promotion. According to Milicevic (2000), research project "Costs to be eliminated if products of the company and their processes in business are perfect", conveyed at Royal Technology Institute in Stockholm (Sweden) analyzed the methods of measurement and work with quality cost in about 30 companies in Sweden industry (Volvo, Saab, Ericsson, Sandvilc, IBM, Telia, etc.). The project provided interesting data about problems faced by these companies as shown in the table below.

Problems type	Description
Area of Measurement	Many organizations measure quality cost referring to production including, for instance, waste, reworks, control and examination. Costs generated in other parts of business system were measured at a very limited extent or were not measured at all. These costs are considered to be difficult to measure.
Causes for Measurement	In some organizations adequate methods of measurement have not been developed and accepted. They believe their basic objective is to provide neat reports and not to use the information from the reports to promote the status. There is no real connection with promotion activities. In these cases quality cost measurement can become the objective in its own right without any practical application.
Responsibility	The question that should be "blamed" for various costs or how to define who really caused the cost generation are yet another difficulty in measurement. Since many organizations build systems in which the staff reports on problems and errors, it frequently happens that the stall finds very unpleasant to report on quality cost generated at their position, and very frequently they fear to do that which results in hiding of certain costs, unpleasant for the staff.
Management	Purpose of reporting on quality cost is for management to be able to define the priority of prevention activities. One of the reasons this does not function properly is lack of interest and responsibility on the part of leadership for the obtained information, which reduces motivation of the staff for future

	reporting on problems and errors.
Staff	In many companies the staff considers reporting on quality cost as additional work and they do not understand either the meaning of good and reliable measurements or their purpose.
Accuracy	The management frequently thinks that the results of measurement of quality cost contain unreliable information, therefore they find the results weak bases for decision making and they do not use them. Successful companies most frequently initiate their measurements by small scope, i.e. they include only the costs with the highest amount, and then they gradually develop and build reliable system of measurement and perceiving of all costs.
Application	It is interesting that various experiences show that it is the best practice to apply quality cost measurement system from the very beginning. The companies that tried to initiate measurement several times face serious problems when refreshing these activities and being offered new methods due to the negative response of the staff.
Comparability	Production oriented companies find their quality costs higher than in service oriented companies. This is caused by the fact that measurement of production costs is far easier and more widely accepted. Of course, the highest quality costs are registered in companies that developed the best methods of measurement. Therefore, quality costs in different companies cannot be compared, unless it is certain that the same methods were used in data gathering.

Figure1. Problems in measuring quality cost

Source: Milicevic, V (2000) Accounting of costs and business decision-   making; Belgrade; Faculty of Ecomomics Press; pp 239

Osisioma and Enahoro (2006) posited that apart from the threatening ethical challenge in accounting practice, there is also the challenge for accounting re-engineering, a shift from accounting practice paradigm to Total Quality Accounting (TQAc). Osisioma (2004:6), postulates that:

"firms need to obliterate existing work processes rather than automate   them, if they wish to achieve the performance improvement needed to survive in increasingly competitive global markets. He suggests three critical factors to the process namely: process thinking, radical change and the potential of information technology".

Customer Satisfaction

Consumers form judgments about the value of marketing offers and make their buying decisions based upon these judgments. Customer's satisfaction depends upon the product's performance relative to a buyer's expectations. It occurs when the customer's need for buying a product has been met. This is possible by providing product of the right quality, price, quality, and delivered in the right place at the right time (Thom-Otuya, Keme, and Akenbor, 2004). According to Chow Hon and Cheemy (1991), a customer might experience various degrees of satisfaction. If the product's performance falls short of expectations, the customer is dissatisfied. If performance matches expectations the customer is satisfied. If performance exceeds expectations, the customer is highly satisfied or delighted. But the question that is normally asked is "how do customers form their expectations"? Kotler et al (1999), revealed that expectations are based on the customer's past purchase experiences, the opinions of friends and associates, and marketer and competitor information and promises. Marketers must be careful to set the right level of expectations. If they set expectations too low, they may satisfy those who buy, but fail to attract enough buyers. In contrast, if they raise expectations too high, buyers are likely to be disappointed. For example, Holiday inn ran a campaign a few years ago called "no

surprises", which promised consistently trouble-free accommodation and service. However, Holiday Inn quests still encountered a host of problems and the expectations created by the campaign only made customers more dissatisfied. Holiday Inn had to withdraw the campaign. Still, some of today's most successful companies are raising expectations and delivering performance to match. These companies embrace total customer satisfaction. For example, Honda claims, "one reason our customers are so satisfied is that we value their business and want them to buy from us again (Cook, 1995). These companies aim high because they know that customers who are only satisfied will still find it easy to switch to suppliers when a better-oiler comes along. In one consumer packaged-goods category, Kotler et al (1999) revealed that 44% of consumers reporting satisfaction later switched brands. In contrast customers who are highly satisfied are much less ready to switch. One study showed that 75% of Toyota buyers were highly satisfied and about 75% said that they intended to buy a Toyota again. Thus, customer delight creates an emotional affinity for a product or service, not just a rational preference, and this creates high customer loyalty (Green and Williams, 1996).

Customer satisfaction is an advantage over competitors because as the customers become highly satisfied they are less sensitive to price, they buy additional products over time as the company introduces related products or improvements, they talk favourably to others about the product and the company, any eventually become loyal and pay little or no attention to competitors. The firm must continue to generate more customer value and satisfaction. Kotler et al (1999) noted that you do not have to be big to succeed, and strategy management accounting provides useful information through value-chain analysis, customer accounting and competitive intelligence, for this purpose. According to Michael and Wiersema (1993), a company that aimed at customer satisfaction as its competitive posture, must understand and practice the ten commandments of good business, which include the following:-

(i) The customer is the most important person in the business

(ii) We are depending on the customer, and not the customer dependent on the firm;

(iii) A customer is not an interruption of our work rather he is the purpose of it;

(iv) A customer does us a favour when he calls; we are not doing him a favour by serving him;

(v) The customer is part of the business, not an outsider;

(vi) The customer is not a cold statistic; he is a flesh and blood human being with feelings emotions like ours;

(vii) The customer is not someone to argue or match wits with;

(viii) The customer brings us his wants; it is our job to fill these wants;

(ix) The customer is deserving of the most courteous and attentive treatment we can give him;

(x) The customer is the lifeblood of this, and every other business.

In measuring and tracking customer satisfaction, the basic questions that must be asked by a firm, include:- How satisfied are the customers? Are they more or less pleased with our company than they were in previous years? How does our customer satisfaction level compare with that of the competitors? What impact does it have on our company's profit? Customer satisfaction is tied directly to profitability. If our customers are happy, they tend to be loyal; and if they are loyal they not only buy more but refer other customers (Lester, 2006). A well-established research by Bain and company as reported by Reichheld (2001) found that, for many companies, an increase of 5% in customer retention can increase profit by 25% to 95%. The same study indicated that its cost six to seven times more to gain a new customer than to keep an existing one. Moreover, one bad experience can outweigh a whole lot of good experiences. Because of e-mails and GSM text messages, bad experience can quickly be broadcasted to

dozens, hundreds or thousands of other customers, magnifying its impact. Conkin (2009) stated that it is critical to give customers the opportunity to provide feedback about their overall satisfaction level and specific likes and dislikes. It is equally important to consistently measure and monitor that input. Ademola (2007) claimed that the ue of complaint and suggestion boxes has tremendously improved customer service excellence in Nigerian banks of today. Without an effective customer satisfaction research programme in place, companies will be losing business, missing opportunities and putting itself at a competitive disadvantage situation. According to Reichheld (2001), if possible, dissatisfied customers should be personally contacted to see if there is something that can be done to improve their perception of the business. This is important not simply to increase the odds of keeping that customer but also prevent negative word-of-mouth. If customer satisfaction is very high, it implies a highly competitive advantage for the firm (Reichheld, 2001).

Methodology

The population of this study consisted of pharmaceutical companies quoted in the Nigerian stock Exchange Market with five-year financial reports of 2008 – 2012. A total of seven (7) companies met this requirement. The primary data for the study were therefore collected through the administration of questionnaire on a cross-section of management accountants from the selected companies. The questionnaire was designed in five-point Likert scale of strongly agree, disagree, strongly disagree, and undecided, which was coded as 5, 4, 3, 2, and 1 respectively. The secondary data were generated from the companies' annual report and statement of accounts.

The data generated for the study were analysed with mean scores while the stated hypotheses were tested with the regression analysis, which was computed with the aid of the statistical package for social sciences (SPSS) version 17.

Model Framework and Specification

There are two variables in this study – quality cost and customer satisfaction. While customer satisfaction is the criterion variable, quality cost is the predictor (explanatory) variable. Quality cost was measured as conformance cost and non-conformance cost, which were operationalized in various dimensions. But customer satisfaction was measured as sales revenue of the companies. The model specification is as shown below

CUSAT	=	$f[\alpha + \beta_1 COCOST + \beta_2 NOCOCOST + - - - - \mu i]$
COCOST	=	Conformance Cost
NOCOCOST	=	Non-Conformance Cost
B1 and $\beta 2$	=	Regression co-efficient
α	=	Regressiion Constant
μi	=	Stochastic term

Data Analysis and Result

The data generated for this study were analysed in this section. The respondent were asked to rate the strength of quality conformance cost, and the result obtained is shown in the table below.

S/N	Items	SA(5)	A(4)	D(3)	SD(2)	U(1)	Total	$\bar{X}$
1.	Quality training is essential for improved productivity	10	8	3	2	1	24	3.43
2.	There is need for a regular review of supplies of raw materials for improved standards	0	8	9	4	0	21	3.00

		SA(5)	A(4)	D(3)	SD(2)	U(1)	Total	$\bar{X}$
3.	Quality engineering services improve the firm's product standard	5	0	6	6	1	18	2.57
4.	It is necessary for material received by the firm to be inspected	10	8	6	2	0	26	3.71
5.	Equipment and facilities need to be tested regularly for production process.	0	8	9	2	1	20	2.85
6.	An independent examination of product quality is usually essential to ensure that standards are met	5	16	4	7	1	28	4.00
	Average Rating	5	8	6.2	3	0.6	22.4	3.4

Table 1: Respondents' rating on quality conformance costs
Source; Field Work, 2013

The table above revealed an average rating of 3.26, which is greater than the expected mean (3.0). This indicates a high strength of quality conformance cost, which leads to increase in product quality.

The respondents were asked to rate the strength of quality non-conformance cost, and the result obtained in shown in the table below.

S/N	Items	SA(5)	A(4)	D(3)	SD(2)	U(1)	Total	$\bar{X}$
1.	There is a high level of customers' complaints in the firm.	5	12	6	2	0	25`	3.75
2.	Scrap and rework of product undermine its quality.	0	12	9	2	0	23	3.29
3.	Lost sales result in forgone contributions.	5	8	6	2	1	22	3.14
4.	Warranty replacement is a regular phenomenon	10	8	6	2	0	26	3.71
5.	Seizure of product by NAFDAC and other regulatory agencies	15	8	3	2	0	28	4.00
6.	Legal penalties against the firm arising from sub-standardization of product	5	12	3	4	0	24	3.43
	Average Rating	6.67	10.0	5.5	2.33	0.17	24.67	3.55

Table 2: Respondents' rating on quality non-conformance costs
Source; Field Work, 2013

The table above indicated an average rating on quality non-conformance cost of 3.55, which is greater than the expected mean (3.0). This suggests a high strength of quality non conformance cost, thereby resulting to poor product standard.

In testing the stated hypotheses in this study, the model specification was dis-integrated for each hypothesis.

H_o; there is no significant relationship between quality conformance cost and customers' satisfaction of health products in Nigeria.

The first hypothesis was tested by regressing data on quality conformance cost as shown in table 1, with data on sales revenue (proxy for customer satisfaction) as generated from the firms' financial statements, and the result obtained is shown in the table below.

Statistical Variables	Values
Regression Constant (α)	25944.184
Regression Co-efficient (β)	0.138
Correlation Co-efficient (R)	0.499
Co-efficient of Determination (R^2)	0.249
P-value	0.039
t-statistic	2.996

Table 3; Quality Conformance Cost and Customers' Satisfaction
Source: SPSS Version 17 Window Output

The result presented in the table above revealed a correlation co-efficient (R) of 0.499, which indicate a strong positive association between quality conformance cost and customers' satisfaction. The regression co-efficient shows that a percentage increase in quality conformance cost brings about 13.8% increase in customers' satisfaction. It is also revealed that about 24.9% of customers' satisfaction is attributable to quality conformance cost. The p-value (0.039) and t-statistic (2.996) suggest a significant positive association between the two variables. Therefore, the null hypothesis is rejected. This implies that there is a significant relationship between quality conformance cost and customer satisfaction of health products in Nigeria.

The second hypothesis was tested by regressing data on quality non-conformance cost as shown in table 2 with data on sales revenue (proxy for customers' satisfaction) as generated from the firm's financial statements, and the result obtained is shown in the table below.

Statistical Variables	Values
Regression Constant (α)	14931.338
Regression Co-efficient (β)	-0.092
Correlation Co-efficient (R)	-0.374
Co-efficient of Determination (R^2)	0.140
P-value	0.021
t-statistic	-2.570

Table 4; Quality Non-Conformance Cost and Customers' Satisfaction
Source: SPSS Version 17 Window Output

The data presented in the table above revealed a correlation co-efficient (R) of -0.374, which indicate a moderate negative relationship between quality non-conformance cost and customers' satisfaction. The regression co-efficient shows that a percentage increase in quality non-conformance cost leads to about 9.2% decrease in customer satisfaction. It also revealed that about 14% decrease in customers' satisfaction is attributed to quality non-conformance cost. The P.-value (0.021) and t-statistic (-2.570) suggests a significant negative relationship between the variables. Therefore, the null hypothesis is rejected. This implies that there is a significant relationship between quality non-conformance cost and customers' satisfaction of health products in Nigeria.

Conclusion and Recommendations

Since customer is the "King" of a business, it is imperative that he is adequately satisfied with product performance. A satisfied customer buys again, increases his volume of purchase and makes referral purchases. The quality cost of a product is significant to customer

satisfaction. Management accounting system can help firms achieve their quality goals by providing a variety of reports and measures that motivate and evaluate managerial efforts to improve quality.

The result of this study shows a high strength of quality conformance cost thereby resulting in improved product quality. It also revealed a high strength of quality non-conformance cost, which leads to poor product standard. Further analysis indicated a significant positive relationship between quality conformance cost and customer satisfaction. As quality conformance cost increase by one percent, customer satisfaction is increased by 13.8%. More so, we observed a negative significant relationship between quality non-conformance cost and customer satisfaction. The study shows that an increase in quality non-conformance cost brings about 9.2% decrease in customers' satisfaction.

Based on the above result, it is therefore recommended that pharmaceutical firms in Nigeria should increase their quality conformance cost such as quality engineering, preventive maintenance, inspection of materials, equipment and facilities, etc, so as to eliminate internal and external failure costs for customers'; satisfaction of health products.

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