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## Standard Costing and Performance of Manufacturing Firms in Nigeria

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### **Abstract:**

*Standard costing is one of the traditional management accounting practices that has been considered irrelevant in the 21<sup>st</sup> century business environment on the ground that its information is not relevant for managers' planning and control decision. This study examined whether the manufacturing companies in Nigeria are still practicing the techniques or not, and what is its effect on performance. We sent structured questionnaire to the management accountants of 200 manufacturing firms but received 130 useful responses. The descriptive analysis shows that manufacturing companies in Nigeria are still using standard costing techniques, and the regression results indicate that standard costing for sales and Direct labour have positive effect on performance, while the Direct material standard costing and overhead standard costing have negative effect. However, only the effect of Sales standard costing was statistically significant. We recommend that managers of manufacturing firms in Nigeria should selectively use standard costing as the situations arise.*

**Keywords:** Standard costing, profitability, performance, management accounting practices

### **1. Introduction**

Standard costing is a traditional management accounting technique which originated during industrial revolution. The traditional management accounting practices such as standard costing, marginal costing and absorption costing have been criticized of being too weak to cope with the dynamic environment of the 21<sup>st</sup> century business because they are subservient to financial accounting and hence produces information that is too late, too aggregated and too distorted to be relevant for managers' planning and control decisions (Johnson & Kaplan, 1987; Kaplan, 1984; Watts *et al.*, 2014; Waweru, 2010).

Despite the several criticisms against the relevance of standard costing in the 21<sup>st</sup> century business environment, it is still widely used because it is useful for other purposes apart from cost control (Drury, 1999). Standard costing is still being practiced in many nations including UK, New Zealand, Dubai and Turkey (Rashid, 2016). Besides relevance loss on cost control, other drawbacks of standard costing include inconsistent updates of the standards, time lagged data (delayed report) and the need for more granular feedback (Bargerstock & Shi, 2016). Moreover, the advent of lean manufacturing system which Toyota adapted by its commitment to team-based culture, continuous process improvement and respect for people which has produced extraordinary operating efficiencies and long-term customer loyalty has drawn the attentions of many manufacturers away from standard costing and variance analysis (Bargerstock & Shi, 2016).

However, extant studies show that companies are practicing traditional techniques such as standard costing together with the modern techniques such as lean manufacturing system (Arora & Soral, 2017). The survival of manufacturing the 21<sup>st</sup> century largely depends on the efficiency of its operation which can be achieved through standard costing (Iliemena, Rachael & Amedu, 2019). Mackey and Pforsich (2019) argued that the traditional control culture supported by standard costing and annual budgeting is not efficient in dynamic business environment and for taking advantage of new opportunities for future survival and growth. However, the authors argued that standard costing and budgeting allow efficient contract, reduce uncertainties, allocate resources and solve problem via analysis of variance.

In the 1990s, manufacturing firms in Nigeria underwent a significant decline in manufacturing activities losing approximately 8,708 manufacturing jobs due to plant shut-downs and relocations (Ayeni, 2012). Their abysmal performance is not unconnected with their uninformed decisions occasioned by reliance on traditional management accounting information (Ojua, 2016). In order to bring relevance back to management accounting information in the 21<sup>st</sup> century business environments, new management accounting techniques with various benefits over the traditional techniques have been developed and suggested for practices (Chai-Amonphaisal & Ussahawanitchakit, 2010).

However, the empirical studies show that many manufacturing companies in Nigeria are still using the traditional technique including standard costing (Oyerogba, 2015). Hence, it has become very imperative to examine the level of

application of standard costing in Nigeria and its effect on performance. This is very crucial in order to avert another failure of manufacturing sector due to uninformed management decisions.

## 2. Material and Methods

This section comprises the literature review and methodology

### 2.1. Conceptual Review

This section comprises clarifications on the key concepts of the study.

#### 2.1.1. Standard Costing

Standard costing is a conventional management accounting technique for cost control. It is applied for ascertaining how much cost should be and for investigating the causes of variance between how much cost should be and how much actually incurred (Rashid, 2016). Standard costing can be applied to direct materials, direct labour, variable overhead, fixed overhead and sales (ICAN, 2014)

#### 2.1.2. Performance

Performance is a measure of organisations' results in terms of their operations. This measure can be in financial or nonfinancial metrics. Financial performance refers to monetary measurement of results of firm's policies, and procedures over a period of usually by computing Return on Assets or Return on Equity (Akenga, 2017). A company should earn profit to survive and grow over a long period. Profitability is crucial to a business firm, but it should not be pursued at the expense of other stakeholders' interests. The profitability ratios are calculated to measure the operating efficiency of the company.

### 2.2. Theoretical Underpinning

Some studies have proposed neo contingency theory which implies integrating different approaches (Donaldson, 2001, 2005). These studies of Donaldson represent the evolution of contingency theory (McKinley & Mone, 2003). The contingency theory also known as situational approach theory of organization is a very significant theory in management accounting research; hence, it has been tremendously used by the researchers in the field (Ajibolade, 2013a). Contingency theory asserts that what constitute the effective management is situational, depending on the unique characteristics of each circumstance (Woodward, 1980). The theory is based on the premise that "there is no universally appropriate accounting system applying equally to all organizations in all circumstances" (Emmanuel, Otley, & Merchant, 1990, p.57). Contingency theory has been described as a major development to the behavioral Management accounting research which seek to define specific aspects of an accounting system design that is appropriate for different set of circumstances (Ajibolade, 2013). Even though standard costing has been heavily criticized of the relevance loss in the 21<sup>st</sup> century alongside other traditional techniques that were developed during industrial revolution, contingency theory posits that all hope is not lost on the use of standard costing. Business firms in the 21<sup>st</sup> firms can still choose to use standard costing for one reason or the other.

### 2.3. Empirical Review

An investigation of effect of standard costing on the profitability of manufacturing companies in Edo -state Nigeria shows that it has a significant positive effect on cost reduction and profitability (Iliemena, Rachael & Amedu, 2019). The z-test the authors employed was however not suitable for the study's objectives and the data collected. Also, investigation of the effect of standard costing on profitability of telecommunication companies in Nigeria shows that standard costing is widely used, and it has positive effect on profitability, adequate planning, control, and decision making process (Abdullahj, Oni, Ahmeb, & Shakur, 2016). However, the chi-square that the authors employed for this study is not appropriate for the study's objectives and the collected data.

A case study of furniture industry in Romania reveals that cost management per order which is an approach of traditional costing techniques is still very useful and entirely efficient despite being criticized of obsolescence (Mărginean, 2019).

In like manner, a survey study of 130 pharmaceutical companies in Pakistan use traditional costing techniques (Marginal costing) and many managers were satisfied (Aleem, Khan, & Hamad, 2016). The authors also argued that costing system determines profitability. Similarly, an investigation of 15 hotels in Brazil reveals that from 2014-2016, they practices traditional costing techniques comprising absorption costing and standard costing (Lunkes, Costa, Bortoluzzi, & Rosa, 2019). In Bangladesh, a survey of manufacturing firms via structured questionnaire also reveals that standard costing was among the techniques that the companies practiced in 2007 and 2011 but it was not practiced in 2010 (Shil, Hoque, & Akter, 2015).

Also, a study of adoption of management accounting practices among Small and Medium -sized Enterprises (SMEs) in Romania reveals that many of them use traditional management accounting practices while the modern management accounting practices were scantily used (Dacian, 2017). The authors also found out that only 11 out of the 37 investigated companies used standard costing. Similarly, an empirical investigation of application of standard costing among pharmaceutical and chemical firms in Bangladesh shows that the firms still apply standard costing for cost control and for several management decisions (Rashid, 2016).

Some of the empirical studies did not use appropriate methodology, and none of them examined the effect of components of standard costing such as standard costing for raw materials, labour, overhead and sales separately.

Therefore, this study shall investigate the extent of application of standard costing among manufacturing companies in Nigeria, and test the following hypotheses.

- $H_{01}$ : Raw materials standard costing does not have a significant effect on the performance of manufacturing firms in Nigeria.
- $H_{02}$ : Direct Labour standard costing does not have a significant effect on the performance of manufacturing firms in Nigeria.
- $H_{03}$ : Overhead standard costing does not have a significant effect on the performance of manufacturing firms in Nigeria.
- $H_{04}$ : Sales standard costing does not have a significant effect on the performance of manufacturing firms in Nigeria.

#### 2.4. Methodology

The study employed a structured questionnaire designed on Likert scale 1- 5. 1 is "Strongly Disagree", 2 = "Agree", 3 = "Undecided", 4 = "Agree" and 5 = "Strongly agree". A sample size of 222 manufacturing firms were arrived at out of 500 manufacturing firms in Lagos state via Taro Yamane technique. Purposive sampling technique was used because not all of them were ready to participate in the research. The questionnaire was sent to the companies via email and personal delivery and 130 useful responses were retrieved. The study employed descriptive analysis to measure the extent of application of standard costing, and multiple regression analysis to examine its effect on performance. Some important diagnostic tests were conducted before applying regression techniques. Standard costing was measured along its different components including Direct material standard costing, Direct labour standard costing, Overhead standard costing and Sales standard costing. Similarly, performance was measured along several dimensions including operating profit, gross profit, net profit, market share, return on investment, and various variances as contained in Table 7.

### 3. Results

This section presents descriptive and inferential analysis, factor analysis, reliability test, diagnostic tests and regression output.

#### 3.1. Descriptive Analysis

The study employed frequency, percentage, mean, mode, minimum, maximum and standard deviation to examine the extent of application of standard costing among manufacturing firms in Nigeria. The details are provided in the Table 1.

	Strongly Disagree Count Row N %	Disagree Count Row N %	Undecided Count Row N %	Agree Count Row N %	Strongly Agree Count Row N %	Subtotal					
						Count Row N %	Max	Mini	Mean	Mode	SD
standard output	2 1.5%	6 4.6%	10 7.7%	85 65.4%	27 20.8%	130 100.0%	5.00	1.00	3.99	4.00	.78
standard for the quantity of raw materials	3 2.3%	1 0.8%	6 4.6%	86 66.2%	34 26.2%	130 100.0%	5.00	1.00	4.13	4.00	.73
Standard price for raw material	4 3.1%	11 8.5%	20 15.4%	73 56.2%	22 16.9%	130 100.0%	5.00	1.00	3.75	4.00	.94
indirect manufacturing expenses.	4 3.1%	10 7.7%	12 9.2%	83 63.8%	21 16.2%	130 100.0%	5.00	1.00	3.82	4.00	.90
Standard number of hours for production	2 1.5%	17 13.1%	23 17.7%	70 53.8%	18 13.8%	130 100.0%	5.00	1.00	3.65	4.00	.93
standard for labour rate	6 4.6%	6 4.6%	26 20.0%	77 59.2%	15 11.5%	130 100.0%	5.00	1.00	3.68	4.00	.91
standard for fixed production overhead	2 1.5%	4 3.1%	27 20.8%	79 60.8%	18 13.8%	130 100.0%	5.00	1.00	3.82	4.00	.76
standard for selling price	2 1.5%	0 0.0%	10 7.7%	83 63.8%	35 26.9%	130 100.0%	5.00	1.00	4.15	4.00	.68
standard for sales quantity	2 1.5%	3 2.3%	6 4.6%	81 62.3%	38 29.2%	130 100.0%	5.00	1.00	4.15	4.00	.74

Table 1: Descriptive Analysis  
Source: Author's Computation (2020)

From the Table 1, 2(1.5%) of the respondents strongly disagreed that their company sets standard output for the number of products it manufactures and 6 (4.6%) of them disagreed and 10 (7.7%) of them were neutral. However, 85(65.4%) of them agreed while the remaining 27(20.8%) strongly agreed to the statement. The maximum option selected

was "Strongly Agree" (5) while the least option was "Strongly Disagree" (1). Majority of the respondents agreed as reflected by the mode. On average, all the respondents agreed to the statement as indicated by the mean 3.99 (approximately 4). The standard deviation which is 0.78 shows that the opinions of the respondents do not vary much. The standard deviation shows that the opinion of the respondents spread between "undecided" ( $3.99 - 0.78 = 3.21$  approximately 3) and "Strongly agree" ( $3.99 + 0.78 = 4.77$  approximately 5).

Similarly, 3(2.3%) respondents strongly disagreed that their firms set standard for raw materials used, one (0.8%) of them disagreed and 6(4.6%) were neutral. However, 86(66.2%) of them agreed and 34(26.2%) strongly agree that they set standard for the quantity raw materials used. The mode (4) and the mean (4.13) indicate that on average, all the investigated manufacturing firms set standard for raw materials quantity they use. In like manner, only 4 (3.1%) firms disagreed that their firms set standard for the price of raw materials used, 11 (8.5%) of them disagreed and 20 (15.4%) were indifferent. In contrary, 73 (56.2%) of them consented that their firms set standard price for raw material used while 22 (16.9%) of them strongly agree. The mean (3.75) indicates that on average on all the sampled firms agree to the statement and the standard deviation which is .94 indicates that the opinions of the respondents do not differ much.

In like manner, 4 (3.1%) of the respondents strongly disagreed that they set standard for indirect manufacturing expenses, 10 (7.7%) of them also disagreed and 12(9.2%) of them were undecided. However, 83(63.8%) of them agreed and 21 (16.2%) strongly agreed. The mode which is 4 implies that the most chosen option is "Agree" and the mean (3.82) implies that all of them agreed to the statement and the standard deviation which is .9 indicates that their opinions do not vary much. Also, only 2 (1.5%) respondents strongly disagreed that their firms set standard hours for production, 17(13.1%) of them agreed and 23 (17.7%) of them were neutral. Meanwhile, 70 (53.8%) of them agreed to the statement and 18 (13.8%) of them strongly agreed. The mean (3.65) indicates that on average all of them set standard for indirect manufacturing expenses, and their opinions do not vary much (SD = .93).

Furthermore, 6 (4.6%) of the respondents strongly disagreed that they set standard rate for labour, and 6(4.6%) of them disagreed while 26 (20.0%) were unresponsive. Nevertheless, 77 (59.2%) of them agreed and 15 (11.5%) of them strongly agreed. On average all of them agreed that they set standard for labour rate (Mean = 3.68) and their opinions do not vary much (SD =.91). In like manner, only 2 (1.5%) strongly disagreed that their firms set standard for fixed production overhead, 4(3.1%) disagreed, and 27 (20.8%) were undecided. However, 79 (60.8%) of them agreed and 18 (13.8%) strongly agreed. On average, all of them agreed that they set standard for fixed production overhead (Mean = 3.82).

Similarly, 2(1.5%) strongly disagreed that they set standard for selling price, and 10(7.7%) were undecided. However, 83 (63.8%) of them agreed to the statement and 35(26.9%) of them strongly agreed. On average, all of them agreed that they set standard for selling price (Mean =4.15). Likewise, 2 (1.5%) of them strongly disagreed that they set standards for sales quantity and 3 (2.3%) disagreed while 6(4.6%) of them were indifferent. Notwithstanding, 81(62.3%) of them agreed and 38 (29.2%) strongly agreed. The mean (4.15) also reflects that all of them agreed to the statement and there was not much variation in their opinions (SD =.74).

This study is consistent with the studies in Pakistan (Aleem et al., 2016), Brazil (Lunkes et al., 2019), Bangladesh (Rashid, 2016; Shil et al., 2015), Romania (Dacian, 2017) and Nigeria (Abdullahj et al., 2016; Iliemena, Rachael & Amedu, 2019; Oyerogba, 2015).

### 3.2. Inferential Analysis

#### 3.2.1. Factor Analysis

The study employed principal component analysis and adopted 0.4 as the threshold for factor loading as suggested by the extant literature.

Questions	Component 1
Your company sets standard output for the number of products it manufactures.	.445
Your company sets a standard for the quantity of raw materials to be used for production.	.724
Your company sets a standard for the purchase price for the required raw materials for production.	.810
Your company sets a standard for all the indirect manufacturing expenses.	.802
Your company sets a standard for the number of hours required of labour to produce a unit of the finished good.	.827
Your company sets standard for labour rate	.705
Your company sets standard for fixed production overhead	.466
Your company sets standard for selling price	.407
Your company sets standard for sales quantity	.458

Table 2: Factors Analysis for Application of Standard Costing  
Source: Authors Computation (2020)

From the Table above, since none of the questions has a factor loading below 0.4, hence, all the questions are valid, and they are subjected to further statistical analysis.

Questions	Component
	1
Your company sets standard for price paid for material	.685
Your company sets standard for quantity of material to be used for a desired output	.489
Your company sets standard for quality of materials to be used	.786
Your company sets attainable standard for material price	.809
Your company sets attainable standard for material usage	.653

*Table 3: Factor Analysis for Material Costing*

*Source: Author Computation (2020)*

Similarly, from the Table above, since none of the questions has a factor loading below 0.4, hence, all the questions are valid, and they are subjected to further statistical analysis.

Questions	Component
	1
Your company sets standard for labour rate per hour/day/week	.710
Your company sets standard for hours used for a desired output	.566
Your company sets standard for quality of labour employed	.750
Your company sets attainable standard for labour rate	.700
Your company sets attainable standard for hours usage	.588

*Table 4: Factor Analysis for Labour Costing*

*Author's Computation (2020)*

In the same way, since all the questions used to measure direct labour standard costing have factor loading that are equal to or greater than 0.4, it implies they are all valid for measuring the variable, and they can be subjected to further statistical analysis.

Questions	Component
	1
Your company sets standard for indirect materials	.575
Your company sets standard for indirect labour	.677
Your company sets standard for indirect expenses	.550
Your company sets standard for production overhead	.659
Your company sets standard for Administrative overhead	.742
Your company sets standard for selling overhead	.700
Your company sets standard for Distribution overhead	.332

*Table 5: Factor Analysis for Overhead Costing*

*Author's Computation (2020)*

As regards Variable overhead standard costing, six out of the seven questions that were asked have factor loading greater than or equal to 0.4, therefore, they are all valid metrics and can be subjected to further statistical analysis. However, the seventh question which is "Your company sets standard for Distribution overhead" has a factor loading of .332 which is below 0.4, hence, it is excluded from further statistical analysis.

Questions	Component
	1
Your company sets standard for selling price	.731
Your company sets standard for sales quantity	.643
Your company sets achievable selling price	.613
Your company sets realizable sales quantity	.369

*Table 6: Factor Analysis for Sales Standard Costing*

*Source: Authors Computation*

In like manner, from the Table above, since none of the questions has a factor loading below 0.4, hence, all the questions are valid, and they are subjected to further statistical analysis. The last question which is "Your company sets realizable sales quantity" has a factor loading of .369 approximately 4, therefore, it cannot be excluded from further statistical analysis.

Questions	Component
	1
Your company records high operating profit	.679
Your company records high gross profit	.783
Your company records high net profit	.663
Your company records high market share	.766
Your company records high sales growth	.740
Your company records favourable material price variance	.851
Your company records favourable material usage variance	.806
Your company records favourable labour rate variance	.774
Your company records favourable labour usage variance	.796
Your company records favourable variable overhead variance	.756
Your company records favourable Fixed production variance	.752
Your company records favourable sales margin price variance	.727
Your company records favourable sales margin quantity variance	.768
Your company records overabsorption of overheads	.608
Your company records high Return on Investment (ROI)	.679

Table 7: Factor Analysis for Profitability  
Source: Author's Computation

Furthermore, the factor analysis for profitability shows that all the questions have factor loading greater than 0.4, hence, they are all valid metrics, and can be subjected to further statistical analysis.

### 3.2.2. Reliability Tests

All the variables of the study were tested for reliability using Cronbach's Alpha. According to existing literature, a Cronbach Alpha of 0.6 and above implies that the variable is reliable.

Variables	Cronbach's Alpha	N of Items
Application of Standard Costing	.820	9
Direct Material Standard Costing	.721	5
Direct Labour standard costing	.680	5
Overhead Standard costing	.719	7
Sales Standard costing	.403	4
Profitability	.939	15

Table 8: Reliability Statistics  
Source: Author's Computation

From the Table above, all the variables passed the reliability test by having Cronbach's Alpha not less than 0.6, except Sales standard costing which has a Cronbach's Alpha of .403 which is below the acceptable standard.

### 3.3. Diagnostics Test

The study carried out some diagnostic tests including autocorrelation and multicollinearity tests.

#### 3.3.1. Autocorrelation Test

Model	Durbin-Watson
1	1.708

Table 9: Durbin-Watson Statistics  
Source: Author's Computation (2020)

From the table above, the Durbin-Watson test which is 1.708 falls within the acceptable range of 1.5 – 2.5, which implies there is no autocorrelation in the variables.

#### 3.3.2. Multicollinearity Test

Likewise, the study tested if a strong or perfect correlation exists among the independent variables because the presence of multicollinearity can lead to a misleading result.

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Standard Costing for Raw material	.648	1.542
	Standard Costing for Direct labour	.596	1.679
	Standard costing for Overhead	.578	1.730
	Standard Costing for Sales	.738	1.355

Table 10: Multicollinearity Test  
Source: Author's Computation (2020)

The study used variance Inflation Factor (VIF) and Tolerance to check for the presence of multicollinearity. The VIF value that is greater than 1 but less than 10 implies the absence of multicollinearity. In like manner, any Tolerance value that is greater than 0 but less than 1 implies the absence of multicollinearity. Since all the variables have VIF and Tolerance values that falls within the acceptable brackets, it implies there is no multicollinearity problem.

### 3.4. Effects of Standard Costing on Profitability of Manufacturing Firms in Nigeria

This section explains the individual and joint effects of the independent variables on the dependent variable.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F	Sig
1	.555 <sup>a</sup>	.308	.286	6.57605	1.708	13.932	.000

Table 11: Model Summary  
Source: Author's Computation

From the Table above there is a strong correlation between the standard costing and performance of manufacturing firms in Nigeria ( $R = .555$ ). However, standard costing can only explain about 31% changes in the profitability of manufacturing firms in Nigeria ( $R\text{-Square} = .308$ ). Even though the contributions of the variables in the model is low, the p-value shows that the model is significant and valid ( $F = 13.932$ ,  $p = .000$ ).

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.553	7.556		1.794	.075
	Rawmaterial	-.119	.319	-.034	-.372	.711
	Directlabour	.276	.302	.088	.914	.362
	Overhead	-.015	.255	-.006	-.057	.955
	SalesSD	2.360	.370	.552	6.371	.000

Table 12: Hypotheses  
Source: Author's Computation

The Table 11 indicates that Raw material standard costing has an insignificant negative effect on performance of manufacturing firms in Nigeria ( $\beta = -.119$ ,  $P = .711 > 0.05$ ). Therefore, the hypothesis 1 of this study which states that "Raw materials standard costing does not have a significant effect on the performance of manufacturing firms in Nigeria" cannot be rejected. In like manner, overhead standard costing has an insignificant negative effect on performance ( $\beta = -.015$ ,  $P = .955 > 0.05$ ). Therefore, the hypothesis 3 of this study which states that "Overhead standard costing does not have a significant effect on the performance of manufacturing firms in Nigeria" cannot be rejected. Similarly, Direct Labour standard costing has a positive effect on performance, but the effect was not statistically significant ( $\beta = .273$ ,  $P = .362 > .05$ ). Hence, the hypothesis 2 of this study which states that "Direct Labour standard costing does not have a significant effect on the performance of manufacturing firms in Nigeria" cannot be rejected. However, Sales standard costing has a significant positive effect on performance of manufacturing firms in Nigeria ( $\beta = 2.360$ ,  $P = .000 < .05$ ). In the light of this, the hypothesis 4 of this study which states that "Sales standard costing does not have a significant effect on the performance of manufacturing firms in Nigeria" cannot be rejected.

## 4. Discussion

From the table above, direct material standard costing has an insignificant negative effect on profitability of manufacturing firms in Nigeria ( $B = -.119$ ,  $P = .711 > .05$ ). It implies every unit increase in the direct material standard costing reduces profitability by .119. Similarly, the study shows that standard costing for overhead has an insignificant negative effect on profitability of manufacturing firms in Nigeria ( $B = -.015$ ,  $P = .955 > .05$ ). This result also indicates that every one unit increase in overhead standard costing reduces profitability by .015. However, Direct labour standard costing insignificantly has positive effect on profitability of manufacturing firms in Nigeria ( $B = .276$ ,  $P = .914$ ). This output shows that a unit increase in Direct labour standard costing increases profitability by .276. This study contradicts some of the existing studies (Abdullahj et al., 2016; Aleem et al., 2016; Dacian, 2017; Iliemena, Rachael & Amedu, 2019; Lunkes et al., 2019; Oyerogba, 2015; Rashid, 2016; Shil et al., 2015)

In the same manner, Standard costing for sales has a significant positive effect on profitability of manufacturing firms in Nigeria ( $B = 2.360$ ,  $P = .000$ ). This result implies that every unit increase in the standard costing for sales increases profitability by 2.360 units. This study is consistent with the studies This study lends credence to the studies in Pakistan (Aleem et al., 2016), Brazil (Lunkes et al., 2019), Bangladesh (Rashid, 2016; Shil et al., 2015), Romania (Dacian, 2017) and Nigeria (Abdullahj et al., 2016; Iliemena, Rachael & Amedu, 2019; Oyerogba, 2015). The finding of this study also lends support to contingency theory that management accounting practices is not stereotyped but contingent on some circumstances.

## 5. Conclusion

This study concludes that standard costing is still being widely practiced among many manufacturing companies in Nigeria. However, Direct material and overhead standard costing have inverse effect on performance but the effect were not statistically significant. Similarly, Direct labour has insignificant positive effect on performance. In the contrary, Sales standard costing has a significant positive effect on performance of manufacturing firms in Nigeria. We recommend that managers of manufacturing firms in Nigeria should selectively apply standard costing since not all its components have positive effect on performance. We also recommend that future studies should investigate why standard costing is still widely practiced across the globe.

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