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## Article

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Original Research Article

## **Determinants of Auditor Choice in Manufacturing Firms in Nigeria**

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### **Abstract**

*This particular study examines the factors determining the choice of a particular auditor by manufacturing companies focusing on a mixture of both characteristics of both the audit firm and the client. The longitudinal research design is used in this study. The sampling approach used was the simple random sampling technique for selecting the 35 manufacturing companies for 2010-2016 financial years. The binary regression technique was used in estimating the models. The results reveal that corporate governance mechanism and firm complexity have significant effect on the likelihood that a firm chooses a type of auditor. The recommendation argues for the need to regulate audit pricing so as not to take the big 4 auditors above the reach of most firms. Again audit clients must efficiently look at the cost and benefits analysis before selecting a particular audit firm. Also, the companies must ensure that complexity comes with increases in revenue generated to sustain the choice of the big 4 for those firms that prefer that option. Finally, audit service delivery of all audit firms whether big 4 or non-big 4 should be of the highest quality possible*

### **1. INTRODUCTION**

Auditors play a very crucial role as a key corporate governance instrument to ensure corporate accountability and the thus the importance of the hiring quality auditors. Given the latitude to select from several

audit firms available and coupled with the fact that there are accompanying benefits and even cost of this decision, this area is one that is of interest to stakeholders. At present, there is still no clear cut unanimous factors that drive auditor

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selection process. The intervening variables are quite diverse and cannot be pinned down exclusively to a particular set. The main reason proposed in the literature for a company to hire an auditor and to accept the additional monitoring by an external party is derived from the agency theory. The intention to reduce agency cost and also address issues of information disclosure stands behind the need for external auditors. In the views of DeAngelo (1981) the level of agency costs associated with firms are not similar and reflects to a large extent the peculiarities of the firm.

In retrospect, to make predictions about the selection of an auditor based on auditor-client compatibility requires two conditions: (i) dissimilarity in client taste regarding the audit and auditor and (ii) variation across auditors in relation to their capacity to meet client's expectations. In a situation where there is auditor homogeneity an all auditors are equivalent one to another, selection is not necessarily an issue. However, if there are variations in the quality of auditors, but clients possess similar preferences, then all the clients would prefer a particular type of auditor subject. Prior studies in this regard show evidence of variation in both what clients are interested in and also in the capacity and quality of auditors (Chaney, Jeter, & Shaw 2004). The Nigerian audit market has enough variation to suggest that auditor selection is an issue worth examining.

Particularly, the choice of what type of auditor a company hires is a very intricate issue that is surrounded by a lot of objective and subjective factors. In this regards, Lennox and Park (2007) found that a particular auditor may be hired if a former employee of that auditor is on the management team of the client. Krishnan (2004) found that a disagreement between the auditor and the client could result in a switch to another auditor. Again the author pointed out that where an auditor may be

hired if management suspects that the auditor is more likely to comply with company's preferences. This same view is supported by Bamber and Iyer (2007). Hence, in the context of substantial differences in both the demand and supply for audit services, an audit client is likely to hire an auditor that best matches its preferences and needs.

Hence the focus of this study is to examine the factors determining the choice of auditor for manufacturing companies in Nigeria. Particularly, we narrow our focus to three important variables; Firm complexity, audit fee and Corporate governance. Theoretically speaking, how complex a firm is can influence the type of auditor selected. Most firms will prefer auditors with developed competency in auditing companies with such complex operational structure. For corporate governance, the need to properly minimize agency cost and information asymmetry will be top most priority in the preference for an external auditor. The Audit fee charged by the auditor is also another important consideration in selecting an auditor. If the fees are too high, it will be difficult for certain companies to hire a particular auditor. In this study, the focus is on manufacturing companies because unlike services or financial companies; they are unique in their accounting systems with a high concentration of physical assets especially plants and machinery.

The gap that we observed is that most of the studies did not make mention of firm complexity and corporate governance though audit fee issues have been extensively examined. Hence the study will throw light on the role of firm complexity and corporate governance not leaving out audit fees. Another gap that was observed is that despite the critical nature of this issue, in the Nigerian environment, the issue of auditor selection for manufacturing companies have been scarcely examined. Aside from the recent study Olowokere and Janis (2016) using manufacturing sector but

used primary data which may be highly subjective and prone to respondent bias, the researcher to the best of his knowledge is unaware of any other study that has explored this issue. The broad objective of the study is to identify the factors determining auditor selection. Specifically, we focus on firm complexity, corporate governance and audit fees.

## 2. LITERATURE REVIEW AND HYPOTHESES

### 2.1. Auditor Choice

The rationale behind a firm's choice of an auditor may be complex and are likely to vary across organizations and this is because the gains and cost hiring an auditor are versatile (Knechel 2002). Wallace (1981) identifies numerous gains from an audit and they include;

(i) Reduction in information risk due to more reliable reporting (2) improvement inefficiency of the company as a result of auditor examination of internal processes, (3) prevention of management malfeasance, (4) increased compliance with legal provisions and (5) market permission to undertake certain activities (e.g., participate in public capital markets). The decision to have an auditor, the selection of different auditors, and the choice to change auditors are complex choices. Prior research has partially explained auditor choice by using agency theory (Carey, Simnett & Tanewski 2000).

In Nigerian audit market, over 2,000 firms presently provide audit services to both listed and unlisted companies (World Bank, 2011). Despite the huge presence of audit firms, the supply of audit services is dominated by only a few of large audit firms called the "Big Four". The Big four audit firms in the country are: KPMG Professional Services; Ernst and Young (E & Y); Akintola Williams Deloitte (AKWD); and PriceWaterhouseCoopers (PWC)]. World Bank (2004) notes that, the 'Big Four' international accounting firms audit

about 90 percent of listed companies in Nigeria, while the 15 national firms with international affiliation audit the remaining 10 percent. The market share gap between Big Four and smaller audit firms is growing wider and it is potentially reducing the possibility for the small firms to become significant service providers in this market segment (World Bank, 2004). The growing competition in the supply of audit services has resulted in the need to examine the factors that influence the choice of a particular auditor.

### 2.2. Firm Complexity

The complexity of a firm can be examined by how many branches and subsidiaries the company has. Generally, the more complex the firm is, the higher the number of branches and the extent of diversification, the more the audit work that is required. Sandra and Patrick (2006) found that it is the big 4 auditors that normally provide services to very complex firms and fees charged are also commensurate. According to them, foreign subsidiaries need to comply with the diverse procedures and laws with regards to financial reporting in their host country which gives rise to a lot of audit work, and most times needing more time and manpower to deliver on the audits. Consequently, organizations that are complex tend to favour a high-quality auditor (Hay & Davis 2004). Hence the decision of what auditor to hire will be affected by the degree of the complexity of the engagement.

**H1: Firm Complexity has no significant impact on auditor's choice.**

### 2.3. Audit Fee

According to Gist (2002), the amount of audit fees charged by the audit firm obviously of interest to companies. By law, companies are expected to have their financial statements audited. The auditors provide such services and then ensures that a fee is charged which is commensurate with work done. In addition, other stakeholders

such the shareholders in particular and the public, in general, are also interested in the fee paid by the audit client. Furthermore, the audit fees and how they are determined are significant matters to both professional accounting bodies regulating the audit profession. The interest of these professional bodies is especially in the area of ensuring that auditors do not charge fees that are incompatible with the ethical standards of the audit profession. It has been argued that the fees paid by clients has some implications on the level of independence and objectivity of auditors (Olowokere, & Inneh, 2016).

The relationship between audit fees and auditor choice is a straight one. Companies are at different levels financially and this means that their capacity to also incur cost will differ considerably. Most firms are unable to handle the cost of hiring big 4 auditors due to the fee charged. Consequently, these firms will shift to the next available auditor with fees that are affordable. It is well known that big audit firms tend to charge higher fees due to their expertise, size and reputation effect amongst others (Krishnan 2003). Most big 4's are often affiliated and have a wide network of offices, workforce and competencies. Hence, the existence of a significant relationship between audit fees and the auditor choice.

**H2: There is a significant relationship between corporate governance and auditor choice.**

#### **2.4. Corporate Governance**

On the link between corporate governance and auditor choice there are two conflicting views, namely, the agency theory view and the audit production view that exist in extant literature to show the relationship between both. These views also tend to be reflected in empirical evidence (Knechel & Willekens, 2006). For instance, Abbott (2003); Boo and Sharma (2008); Goodwin-Stewart (2006); Zaman, Hudaib, Haniffa,

(2011), present evidence in support of the agency theory view. According to the agency theory, corporate governance quality heightens the clamour for quality auditing and therefore this will influence the type of auditor to be selected. Goodwin and Kent (2006); and Mitra, Hossain and Deis, (2007) have shown in their studies that independent directors tend to demand the services of big 4 auditors. The reason is because of the need to validate their own reputational capital and justify their presence on the board.

On the other hand, the production view keeps in mind the inherent and control risk of the client (Knechel & Willekens, 2006). The production view holds that the quality and effectiveness of the internal control process of the firm especially in ensuring transparency will determine auditor detection risk. Therefore, a strong corporate governance environment can minimize the amount of substantive and compliance test needed by the auditor, and when the quality of the internal monitoring is high, a non-big auditor can be chosen to do the job (Cohen & Hanno, 2000). This perspective is supported by Bliss (2011) and Boo (2008). Hence the hypothesis;

**H3: There is a significant relationship between corporate governance and auditor choice.**

### **3. METHODOLOGY**

#### **Theoretical Framework and Model Specification**

The analyses of the factors determining auditor choice is anchored on the lending credibility theory. The theory is of the view that main goal of the audit is to validate and give credence to the financial statements. Hence, the key service that the audit clients are actually buying is credibility. Audited financial statements is supposed to make stakeholders more confident in the disclosures of the company as presented by the management in the financial statement). Thus those who rely on financial statements

value credibility highly and as such companies know that the auditor choice decision and the audit firm that is eventually hired must be one that provides that credibility for the firm (Hayes et al. 2005). Against the backdrop of the above, the study builds on that Zaman, Hudaib, Haniffa, (2011), which was modified to suit the peculiarity of the research.

$$AUDC_{it} = \partial_0 + \partial_1 FCOMP_{it} + \partial_2 CORG + \partial_3 AUDF + \mu_{it} \text{----- (1)}$$

Where

- AUDC = Auditor choice
- FCOMP= Firm complexity
- CORG= Corporate governance
- AUDF= Audit fee
- u= error term

The apriori signs are  $\partial_1 > 0, \partial_2 > 0,$

**Research Design**

The longitudinal research design is used in this study. The study population is manufacturing companies listed under conglomerates on the Nigerian stock exchange as at the study period. However,

resulting from the practical difficulties of accessing the entire population, a subset regarded as a sample was utilized. The population comprises of the 40 listed manufacturing firms that are conglomerates. The simple random sampling technique was employed in selecting the thirty five (35) of them for 2010-2016 financial years. The technique is well suited for sample selection as it affords each firm the same probability of been selected and as such minimizes selection bias. Secondary data was used for the study. The secondary data were retrieved from financial statements of the sampled companies for 2010 -2015 financial years. The data analysis methods deals with the various statistical analysis involved in the description of the collected data and consequently, making decisions and possible inferences. More importantly, the binary regression analysis was used in those model estimations and in the determination of the causal relationship between the variables.

**4. ESTIMATION RESULT AND DISCUSSION OF FINDINGS**

Table 4.1: Descriptive Statistics

	AUDCH	AUDFEE	BSIZE	COMP	BDIND
Mean	0.656885	41573617	11.0011	4.698565	0.636837
Median	1.000000	11719306	9.000000	1.000000	0.625000
Maximum	1.000000	4.53E+08	17.00000	42.00000	1.000000
Minimum	0.000000	422741.0	4.000000	0.000000	0.333333
Std. Dev.	0.499908	68034458	2.313066	8.837205	0.156702
Jarque-Bera	34.83707	1181.406	15.11843	942.2015	4.843573
Probability	0.000000	0.000000	0.0000	0.000000	0.018763

Source: Researchers compilation (2017)

Where:

- AUDCH= Audit firm choice
- AUDFEE= Audit fee
- BSIZE= Board size
- BDIND= Board independence
- COMP= Complexity

The table above shows the descriptive statistics for the variables and as can be observed, AUDTCH has a mean value of 0.657 which suggest that about 65.7% of the sample use the big 4 audit firms. The

Jarque-bera statistics for data normality reveals that the series is normally distributed given the P-value of the J.B (p= 0.000). The mean for AUDFEE stood at 41573617(mn) with maximum and minimum values of

4.53e+08(mn) and 4227410(mn). The Jacque-bera statistics for data normality reveals that the series is normally distributed given the J.B value of 1181.406 (p= 0.000). The mean for board independence stood at 0.646 which suggest that on the average about 64% of the board members are independent directors with maximum and minimum values of 1 and 0.33 respectively. The Jacque-bera statistics for data normality reveals that the series is normally distributed given the J.B value of 4.8434 (p= 0.0187). The mean for board size stood at

approximately 11 with maximum and minimum values of 17 and 4 respectively. The Jacque-bera statistics for data normality reveals that the series is normally distributed given the J.B value of 15.11 (p= 0.000).The mean for complexity stood at approximately 5 which suggest that on the average most companies in the sample have about 5 branches with maximum of 42 and minimum of 0. The Jacque-bera statistics for data normality reveals that the series is normally distributed given the J.B value of 942.2015 (p= 0.000).

Table 4.2: Pearson Correlation Statistics

	AUDCH	AUDFEE	BSIZE	COMP	BDIND
AUDTY	1				
AUDFEE	0.06378	1			
BSIZE	0.12002	0.57576	1		
COMP	0.33601	0.039961	-0.07155	1	
BDIND	0.0480023	0.226959	0.37263	-0.186083	1

Source: Researchers compilation (2017)

Table 4.2 shows the correlation statistics for the variables. The correlation coefficient that is of particular interest to us in this study is the correction between Audit fee, Complexity, Board size, Board independence and Audit firm choice. As seen, AUDCH is positively correlated with AUDFEE (r=0.063), board independence (r=0.048), COMP (r=0.336), and Board size (r=0.1200). The positive correlation implies

that the choice of a particular type of auditor can be associated with an increase in the variable and vice-versa. However, correlation analysis is limited in its inferential abilities since it does not necessarily imply functional dependence between the variables. Regression analysis is more suitable for inferences as it implies functional dependencies between variables. The regression result is presented below;

Table 4.3: Regression Result

<i>Dependent</i>	<i>Variable = ETR</i> <i>Aprori sign</i>	<i>Binary LOGIT</i> <i>Estimation</i>	<i>BinaryPROBIT</i> <i>Estimation</i>
<i>C</i>		0.6820* (0.3126) {0.0444}	-3.3482* (-3.3428) {0.0008}
<i>AUDFEE</i>	+	0.1994* (0.0623) {0.0056}	2.1054* (0.5260) {0.0040}
<i>BS</i>	-	0.2421* (0.1099) {0.0427}	0.1003* (0.0213) {0.0011}

<i>COMP</i>	-	0.1429* (0.3126) {0.0050}	0.2202* (0.0621) {0.0062}
<i>BDIND</i>	+	0.3353** (0.1643) {0.0581}	0.04837** (0.0231) {0.0653}
<b>Model Parameters</b>			
McFadden $R^2$		0.7391	0.7384
<i>LR.stat</i>		52.4116	51.8932
<i>P(LR-stat)</i>		0.0000	0.0000
<i>Mean of d.v</i>		0.6558	0.6558
<i>S.D of d.v</i>		0.4999	0.4999

Source: Researchers compilation (2017)

Table 4.3 above is the regression result for the estimation of the model specified earlier in the previous chapter. The binary regression (Logit & Probit) is used in this study due to the nature of the dependent variable. Binary regression is suitable for cases in which the data for the endogenous variable is a dummy indicator variable that has two possible outcomes “0” and “1”. In the case of this study, the dependent variable of auditor choice is a dummy indicator that assumes a value of “1” if a firm chooses a big 4 audit firm and 0 if otherwise. Logit and Probit are part of the family of binary regression though based on different distributional assumptions. Regressing the independent variables on AUDCH using the Logit regression, the McFadden  $R^2$  for model is 0.7391 which implies that the model explains about 73.9% of the systematic variations in the dependent variable. The LR-stat is 52.4116 (p-value = 0.00) is significant at 5% and suggest that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also indicative of the joint statistical significance of the model. Focusing on the performance of the coefficients, we observe that AUDFEE is positive (0.1994) and also statistically significant at 5% level

(p=0.0056). The coefficient for BS is positive (0.2421) and significant at 5% level (p=0.0427), BDIND is positive (0.3353) and significant though at 10% level (p=0.0581), while COMPL is also positive (0.1429) and also significant at 5% (p=0.0427).

Regressing the independent variables on AUDCH using the Binary probit regression, the McFadden  $R^2$  for model is 0.7384 which is not significantly different for that found for binary logit and implies that the model explains about 73.8% of the systematic variations in the dependent variable. The LR-stat is 51.8932 (p-value = 0.00) is significant at 5% and suggest that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also indicative of the joint statistical significance of the model. Focusing on the performance of the coefficients, we observe that AUDFEE is positive (2.1054) and also statistically significant at 5% level (p=0.004). The coefficient for BS is positive (1.003) and significant at 5% level (p=0.0011), BDIND is positive (0.04837) and also significant though at 10% level (p=0.0011), while COMPL is also positive (0.2202) and significant at 5% (p=0.006).

In both binary logit and probit results, we observe that the coefficient for complexity is positive and significant at 5%. The results imply that the complexity of the client has a significant effect on the likelihood that a firm will select a big 4 audit firm. Hence the null hypothesis (H1) that complexity has no significant impact on auditor choice is rejected. It has been put forward, that when a company is very complex having several diversified subsidiaries and operations, more audit work will be required. Therefore, bigger audit firms may be employed. The finding is in tandem with Carson, Fargher, Simon, and Taylor (2004) and Hay and Davis (2004). Both the binary logit and probit results, show that the coefficient for AUDFEE is positive and also statistically significant at 5% level. Hence the null hypothesis (H2) that audit fee has no significant impact on auditor choice is rejected. The results imply that the amount of fees charged by the audit firm has a significant effect on the likelihood that a firm will select a big 4 audit firm. The amount of audit fees charged by auditors is a key issue. As stated earlier, the link between audit fees and auditor selection is a straight one. Companies are at different levels financially and this affects their capacity to also incur costs. Hence firms that cannot afford hiring big 4 auditors due to the fee charge will shift to the next available auditor with fees that are affordable. It is well known that big audit firms tend to charge higher fees because of their expertise, size and reputation effect amongst others. Most big 4's are often affiliated and have a wide network of offices, workforce and competencies. Using the regression results, the coefficient for Board size and Board independence is statistically significant at 5% for board size and at 10% level for board independence. Hence the null hypothesis (H3) that corporate governance has no significant impact on auditor choice is rejected. On the overall, result implies that corporate governance has a significant influence on the likelihood that a firm

chooses a particular auditor. According to the agency theorists, corporate governance quality will lead to more demand by clients with respect to audit scope from the auditor, and hence this will influence the type of auditor to be selected. Goodwin and Kent (2006); and Mitra, Hossain and Deis, (2007) Boo and Sharma (2008) all find a positive relationship between big 4 and corporate governance.

## 5. CONCLUSION AND RECOMMENDATION

Auditor choice is a key issue in most companies today. It is a decision that is critical for both the management and shareholders of the company. This is because of the very key role that auditors play in minimizing information asymmetry, monitoring and ensuring that financial information is credible and also serving as an instrument of addressing agency conflict issues. Hence the choice of the type of audit firm hired is one decision that a firm pays close attention to. Several factors exert varying degree of influence on this auditor choice decision ranging from factors related to the audit firms that are in the audit market or factors relating to the audit client. This study focuses on determinants of auditor choice by manufacturing companies focusing on a mixture of both audit firm factors such as the audit fee and then the audit client factors such as complexity and corporate governance. Using the binary regression technique, the study found that the audit fees and firm complexity has significant influence over the likelihood that a firm selects a particular type of auditor. The following recommendations are made; Firstly, the study recommends that since audit fees play a very significant role in influencing over the likelihood that a firm selects a particular type of auditor, there may be need for regulation of audit pricing so as not to take the big 4 auditors above the reach of most firms. Again audit clients must efficiently look at the cost and benefits analysis before selecting a particular audit firm. Secondly, companies must also ensure

that complexity comes with increases in revenue generated to sustain the choice of the big 4 for those firms that prefer that option. Finally, audit quality and delivery of all audit firms whether big 4 or non-big 4 should be of the highest quality possible.

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## APPENDIX

Dependent Variable: AUDTY  
 Method: ML - Binary Probit (Quadratic hill climbing)  
 Date: 19/11/17 Time: 13:10  
 Sample (adjusted): 1 209  
 Included observations: 209 after adjustments  
 Convergence achieved after 5 iterations  
 Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-3.348288	1.001614	-3.342891	0.0008
LOG(AUDFEE)	2.105495	0.069700	2.472822	0.0040
BSIZE	0.100315	0.045193	3.046194	0.0011
COMP	0.220231	0.062170	2.222054	0.0062
BDIND	0.048373	0.023128	1.883709	0.0653
McFadden R-squared	0.738774	Mean dependent var	0.535885	
S.D. dependent var	0.499908	S.E. of regression	0.455075	
Akaike info criterion	1.211078	Sum squared resid	42.24701	
Schwarz criterion	1.291038	Log likelihood	-121.5576	
Hannan-Quinn criter.	1.243406	Deviance	243.1153	
Restr. deviance	288.6580	Restr. log likelihood	-144.3290	
LR statistic	51.89276	Avg. log likelihood	-0.581616	
Prob(LR statistic)	0.000000			

Dependent Variable: AUDTY  
 Method: ML - Binary Logit (Quadratic hill climbing)  
 Date: 11/18/17 Time: 13:11  
 Sample (adjusted): 1 209  
 Included observations: 209 after adjustments  
 Convergence achieved after 5 iterations  
 Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
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C	0.682011	0.312624	-2.192510	0.0444
LOG(AUDFEE)	0.199379	0.062331	2.653554	0.0056
BSIZE	0.242188	0.109925	2.190387	0.0427
COMP	0.142901	0.312663	2.617043	0.0050
BDIND	0.335383	0.164331	1.610341	0.0581
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McFadden R-squared	0.739129	Mean dependent var	0.535885	
S.D. dependent var	0.499908	S.E. of regression	0.454547	
Akaike info criterion	1.210270	Sum squared resid	42.14896	
Schwarz criterion	1.290230	Log likelihood	-121.4732	
Hannan-Quinn criter.	1.242598	Deviance	242.9464	
Restr. deviance	288.6580	Restr. log likelihood	-144.3290	
LR statistic	52.41168	Avg. log likelihood	-0.581211	
Prob(LR statistic)	0.000000			
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