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# The Effect of Ownership Structures on Audit Fees of Listed Firms in Ghana

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## Abstract:

**Research aims:** The study examined the effect of ownership structures on audit fees of listed firms in Ghana. The study used four indicators to measure ownership structure: managerial ownership, foreign ownership, government ownership, and substantial (block) ownership.

**Design/Methodology/Approach:** The study sampled 21 listed non-financial firms over ten years, covering the period 2010 to 2019. The study also relied on secondary data extracted from the financial statement of these listed firms. Data were analyzed using descriptive statistics, correlation analysis, and panel regression analysis.

**Research findings:** The study results showed a positive and significant association between foreign ownership and audit fees in Ghana. The study further found a positive and significant relationship between block ownership and audit fees. The results, however, uncovered an insignificant association between government ownership and audit fees. Furthermore, the study reported a positive coefficient between block ownership and audit fees, and the relationship was statistically significant.

**Theoretical contribution/Originality:** The study is among very few studies that have examined ownership structures such as foreign ownership, managerial ownership, government ownership, and block ownership on audit fees in a developing country context and Ghana.

**Practitioner/Policy implication:** This study found that the higher agency conflict through ownership structures will give rise to the higher audit fees paid to external auditors, which managers and auditors should consider in future assignments.

**Research limitation/implication:** The study is limited by geographical area (Ghana), and as such future studies can conduct cross-country analysis of ownership structures on audit fees.

**Keywords:** Foreign Ownership; Managerial Ownership; Government Ownership; Block Ownership; Audit Fees; Ghana

## Introduction

External auditors are an essential piece of the corporate governance puzzle as they are responsible for protecting and guaranteeing the interest of investors (Coffie & Bedi, 2019; Desender, Aguilera, Crespi-Cladera, & Garcia-Cestona, 2009). Auditors help ensure that contractual commitment is agreed to, thereby improving investor confidence through quality audits (Al-Okaily, 2010).

Several studies have examined determinants of audit fees after the seminal work on the subject matter by Simunic (1980).

The numerous works on the subject matter emphasize their importance to the business world and academia. The audit fee is seen as agency cost, and its determination has a significant influence on other aspects of the company's governance (Coffie & Bedi, 2019; Shan, Troshani, & Tarca, 2019). The importance of audit fees has prompted standard setters and regulatory bodies to demand its disclosure in financial statements (Musah, Anokye, & Gakpetor, 2018; Kikhia, 2014; Hentati & Jilani, 2013). Even though determinants of audit fees are not a new area of study, the influence of ownership structure on audit fees is relatively new (Nelson & Mohamed-Rusdi, 2015; Al-Okaily, 2020; Shan et al., 2019). The collapse of larger organizations with accounting scandals as the underlying cause has affected the accounting profession's reputation and, more significantly, financial reporting (Barroso, Ben Ali, & Lesage, 2016; Griffin, Lont, & Sun, 2009). The key lesson from these scandals globally and recently the banking scandal in Ghana attest that corporations must take corporate governance more seriously than ever to strengthen financial reporting quality and audit quality (Nelson & Mohamed-Rusdi, 2015). Previous studies agree that ineffective corporate governance mechanism is one of the major causes of the numerous accounting scandals worldwide (Nelson & Mohamed-Rusdi, 2015; Mustapha & Che Ahmad, 2011; Aswadi Abdul Wahab, Mat Zain, & James 2011). Auditors have been suggested as one of the mechanisms for an organization to help reduce corporate scandals and improve the quality of financial reporting.

Studies have also shown that there is some connection between interference of corporate governance on auditor remuneration in the form of audit fees (Desender et al., 2009; Abdullah, Ismail, & Jamaluddin, 2008; Mitra, Hossain, & Deis, 2007). Ownership structure has been cited as one of the major interferences in effective corporate governance mechanisms (Shans et al., 2019; Liang, Qi, Xin, & Zhan, 2020; Choi, Kwak, & Yoo, 2007). It will definitely have a direct impact on audit risk, which can subsequently affect audit fees. It is because research shows that ownership structures affect the degree and extent of corporate governance as some investors will follow a company's activities very keenly than others (Zureigat, 2011). For instance, institutional investors believe in having greater interest usually and following up on how the firm is managed than individual investors (Nawaiseh, Bader, & Nawaiseh, 2018). It suggests that firms with more institutional investors are likely to have closer monitoring from these institutional investors, which can have implications on audit fees.

Even though a few studies have examined corporate governance characteristics and ownership structures as potential determinants of audit fees, Nelson and Mohamed-Rusdi (2015) argue that institutional differences exist, especially in developing capital markets like Ghana. These differences include a weak market for corporate control, highly concentrated stock ownership, and high government ownership. The unique ownership structures in Ghana are possible evidence for differences in control and financial reporting processes and practices (Bopkin, 2011; Darko, Aribi, & Uzonwanne, 2016; Owusu & Weir, 2018). Owusu and Weir (2018) argue that many corporations in

Africa have similar ownership structures dominated by high ownership concentration, high control, and high state ownership, which presents a unique environment for the study of its effect on audit fees. It means that the findings from the Ghanaian environment will be applicable in other African countries with similar ownership structures. The unique ownership structures of listed firms in Ghana provide an opportunity to examine their influence on audit fees. Besides, the evidence will also serve as a new empirical dimension in audit fees literature that can be tested in other contexts with different ownership structures.

The fees auditors charge varies from firm to firm depending on the control environment of the clients and other factors. Previous studies on the effect of ownership structures and audit fees have mainly focused on developed and emerging markets, with none in the Ghanaian context. Evidence from prior studies suggests that audit fees paid to external auditors are affected by ownership structures of the clients (Nelson & Mohamed-Rusdi, 2015; Mitra et al. 2007; Niemi, 2005; Khan, Hossain, & Siddiqui, 2011; Adelopo, Jallow, & Scott, 2012; Shan et al. 2019; Liang et al. 2020). The reason for this conclusion is that different ownership structures give rise to different control mechanisms used by shareholders to monitor the day-to-day activities of the organization and financial reporting practices. It has also been established that the control environment, which is primarily influenced by ownership structures, also influences audit fees. Even though some studies have been done on the above subject in other jurisdictions, ownership structure varies from jurisdiction to jurisdiction, which might have a different impact on audit fees. Most of these studies have been conducted in the United States, Europe, and Malaysia, where ownership structures are mostly diffused against a more concentrated ownership structure in Ghana. Besides, foreign ownership is one variable that has not been explored in literature as one of the ownership structures that influence audit fees. Most of the studies conducted in developed markets found a negative association between ownership structure and audit fees since audits play a critical role in reducing agency problems (Nikkinen & Sahlstöm, 2004; Gul & Tsui, 2001; Hay, Knechel, & Wong, 2006; Fan & Wong, 2005). However, Nelson and Mohamed-Rusdi's (2015) study in Malaysia found a positive association between ownership structure and audit fees. The absence of previous studies linking ownership structures and audit fees in Ghana and the inconclusive evidence from previous studies in developed and emerging markets make this study very timely and useful. The study, therefore, seeks to examine the influence of various corporate ownership structures on audit fees in Ghana.

The study makes a significant contribution to literature and policy in several ways. First, it is the first study that seeks to examine the influence of ownership structure on audit fees in Ghana to the best of our knowledge. Second, the study includes both foreign ownership and government ownership, which have received little attention in developed country studies concerning determinants of audit fees. The study also expands previous studies on determinants of audit fees in Ghana from corporate characteristics and corporate governance variables to include ownership structures. The study results are useful to regulators and policymakers as it reveals which ownership

structures enhance monitoring and control, which can be the basis for improving corporate governance mechanism through appropriate ownership regulations.

Besides, some prior studies concern about the relationship between corporate ownership structure and audit fees, such as Niemi (2005), Mitra et al. (2007), Khan et al. (2011), and Adelopo et al. (2012), utilized outdated data before 2006. Therefore, this study utilizes the latest available data (2019) of listed companies in Ghana to investigate any new development that might have occurred in audit fees.

## **Literature Review and Hypotheses Development**

### **Corporate Ownership Structures and External Audit Fees**

Yatim, Kent, and Clarkson (2006) assert that ownership structure provides a better ground for the study of audit fees' determinants compared to corporate governance structures. On this same point, Nelson and Mohamed-Rusdi (2015) argue that a company's ownership structure determines its level of monitoring, which also affects its risk environment. According to Desender et al. (2009), from the production point of view of audit fees, audit fees charged by external auditors can be a function of ownership structure, especially where the perceived risk of the audit is higher in one ownership structure than the other. Within the context of ownership structure, three variations emerge stock as against mutual companies, public as against private companies, and a dominant shareholder. According to Villalonga and Amit (2006), it can be argued that the presence of a large shareholder could result in higher agency cost or higher control which can affect audit fees. Research has shown that dispersed shareholders are more likely to rely on external audits to monitor management behavior in addition to other mechanisms (Liang et al. 2020). It means that monitoring becomes more expensive when shareholding is dispersed, affecting audit fees. In the context of block ownership or concentrated ownership structures, there is a greater incentive for these shareholders to monitor management behavior because of their investment's quantum, thereby reducing the role of external auditing.

Some studies have examined how ownership structure influences audit fees in different contexts, especially in developed economies but with conflicting results. For instance, O'Sullivan's (2000) study of United Kingdom firms revealed a negative association between executive directors' proportion of equity shares and audit fees. However, block/institutional ownership had no significant impact on audit fees. Mitra et al. (2007) study on United States firms disclosed a positive association between diffused institutional ownership and audit fees. However, their study found a negative and significant association between block ownership and audit fees. Finally, their study also reported a negative association between managerial ownership and audit fees. In their study of Bangladesh firms, Khan et al. (2011) found a negative association between institutional ownership and audit fees. Their findings support the agency cost theory, showing that companies with a concentrated ownership structure would have lower demand for audit quality, resulting in lower audit fees. Nelson and Mohamed-Rusdi

(2015) examined the influence of ownership structure on audit fees using a sample of listed firms in Malaysia. The study uncovered a positive and significant association between audit fees and companies with more extensive foreign ownership and government-owned firms. The study, however, found no significant association between managerial ownership and audit fees. Hence, literature review shows that there is currently no study that examine the influence of ownership structures on audit fees in the Ghanaian context. A significant part of the literature on the above subject matter has focused on Europe, America, Malaysia, and other emerging economies. Little is known about how ownership structure influences audit fees in the African and Ghanaian context.

### **Theoretical Review based on Agency Theory**

The agency theory has been the most dominant in audit research (Nelson & Mohamed-Rusdi, 2015). Most of these studies see audit as a consequence of agency problems, and as such, they use audit fees as a proxy for agency costs (Mustapha & Che Ahnad, 2011; Nelson & Mohamed-Rusdi, 2015). Others have also employed audit fees as a proxy for audit quality and agency conflicts (Salleh, Stewart, & Manson, 2006; Dey, 2008). Other strands of literature on the audit service market utilized audit fees in their agency framework analysis without necessarily using it as a proxy (Musah et al., 2018; Adelopo et al., 2012; Khan et al., 2011; Ghosh, 2011; Yatim et al., 2006; Niemi, 2005).

Research has shown that the separation of ownership from management has a potentially adverse effect on firm value (Nelson & Mohamed-Rusdi, 2015). It is based on the existence of a potential conflict of interest that necessitates corporate governance. Where ownership in a company is widely diffused or dispersed, significant control of the company resides in management. Management may use this opportunity to fulfill their personal interest at the expense of shareholders. The fact that shareholders vote in General meetings to elect directors does not guarantee them enough power as their individual ownership is small, giving them less control in decision making. To be able to monitor management in this scenario, the company will have to incur high monitoring costs which will include high audit fees.

Previous studies have exposed that agency theory is the best theory that explains how ownership structure can affect agency cost, measured as audit fees in this study. Corporate governance is seen as one of the mechanisms used to reduce agency problems by increasing management monitoring, which will eventually reduce possible misstatement and enhance the credibility of financial reporting (Nelson & Mohamed-Rusdi, 2015). One of the most important control mechanisms every company must have is a control mechanism over its financial reporting. This control system helps to provide reasonable assurance that the financial statement prepared are reliable. The reliability of the control mechanism also impacts the external auditor's work and hence audit fees. A lower control mechanism will result in increased audit risk and require more effort in terms of substantive tests and other tests to ensure the reliability of the financial statement (Musah et al., 2018). Nelson and Mohamed-Rusdi (2015) affirm that the control mechanism is usually low in diffused ownership structures. It means that

auditors will require more time and effort, which will increase audit fees. In effect, diffused ownership structure will increase audit effort, thereby increasing cost. Research showed that high audit fees were associated with internal control deficiencies (Hogan & Wilkins, 2008).

On the contrary, where management is concentrated or in the case of high management ownership, there is the possibility of strong control systems. It means to control risk will be lower, resulting in less effort by external auditors. It will eventually result in lower audit fees in consonance with less audit risk and effort. The bottom line is that different ownership structures will affect audit fees differently in line with agency theory and hence the need to examine these factors in the Ghanaian context empirically.

### **Managerial Ownership and Audit Fees**

Managerial ownership in Ghana, even though low, has a significant influence on firm outcomes, especially firm value (Bopkin, 2011). As a result, a number of studies have examined various ownership structures on various firm outcomes except for audit fees. Research on managerial ownership and audit fees by Gul, Lynn, and Tsui (2002) using Australian firms revealed that outside directors with a financial interest in a company by way of owning shares compromised their independence and hence affected their ability to monitor management effectively, increasing audit risk and subsequently audit fees. Previous studies have suggested that managerial ownership could reduce agency problems as there was less separation of ownership and management (Nelson & Mohamed-Rusdi, 2015). Moreover, management owning a share in a company is one of the recommended mechanisms for dealing with agency problems (Bopkin, 2011; Fleming, Heaney, & McCosker, 2005). It means that the more shares held by management, the more they are likely to work to enhance firm value as they will be eventual beneficiaries. In their study, Ali, Chen, and Radhakrishnan (2010) argued that in Common law countries like the UK and even the United States, the relationship between managerial ownership and audit fees is generally negative, consistent with the agency theory. The result means that these directors have access to private information needed to enhance monitoring, thereby reducing audit risk. On the other hand, Nelson and Mohamed-Rusdi (2015) study revealed no significant association between managerial ownership and audit fees. In line with agency theory, this study expects managerial ownership to enhance monitoring and reduce audit risk and fewer audit fees. In line with the above argument, the study hypothesizes that:

***H<sub>1</sub>**: There is a negative association between managerial ownership and audit fees of listed firms in Ghana.*

### **Foreign Ownership and Audit Fees**

Foreign ownership is high in many African countries in terms of their ownership structures, and Ghana is no exception (Bokpin, 2011). It is because most of the larger companies in these countries are subsidiaries of multinational companies. Research has

shown that foreign ownership has some influence on the level of complexities in a firm in terms of audit, affecting audit risk and, hence, audit fees (Nelson & Mohamed-Rusdi, 2015; Pronobis & Schaeuble, 2020). According to Niemi (2005), foreign subsidiaries, or foreign-owned companies, have additional financial reporting complexities because of their geographical separation, which will increase audit fees. The complexities are high in a situation where the parent company is in another country, primarily where accounting and reporting rules differ. Niemi (2005) argues that apart from the additional complexities, foreign-owned firms require greater control due to the separation of high ownership and management, which increases the agency conflict. Moreover, foreign investors are more likely to demand greater audit quality (Zureigat, 2011). Findings from previous studies on audit fee determinants in other jurisdictions found that foreign ownership increased audit fees due to additional complexities (Salleh et al. 2006; Goodwin-Stewart & Kent, 2006; Abdullah et al. 2008). In their study of Malaysian firms, Nelson and Mohamed-Rusdi (2015) also found a positive and significant association between foreign ownership and audit fees. In line with the results of previous studies and agency theory, the study hypothesizes that:

*H<sub>2</sub>: There is a positive association between foreign ownership and audit fees of listed firms in Ghana.*

### **Government Ownership and Audit Fees**

According to Nelson and Mohamed-Rusdi (2015), government ownership is very different from other ownership structures. These companies are owned and financed by the state through the people's taxes, which suggests that, in theory, ownership is very dispersed. There is also a high potential of free-riding as there is less incentive to monitor management behavior. On the other hand, individual acting as directors has a reputation to protect even though they have no cash flow rights. It may motivate them to improve their monitoring. However, research has shown that these shareholders bear no costs. It can result in weak controls, which will require quality audits to address those weaknesses (Nelson & Mohamed-Rusdi, 2015). This variable has received little attention in the literature, and as such, very little evidence is available in the empirical literature on how government ownership affects audit fees. Government-owned companies in Ghana have a high level of political interference with less control comrade to other companies. It makes the inclusion of this variable very important. Nelson and Mohamed-Rusdi's (2015) study on Malaysian listed firms found a positive association between audit fees and government ownership. In line with the above argument, the study hypothesizes that:

*H<sub>3</sub>: There is a positive association between government ownership and audit fees in Ghana.*

### **Ownership Diffusion and Audit Fees**

Al-Okaily (2020) argued that shareholders in companies with widely dispersed ownership have less control and less monitoring effort; hence, they need a quality audit to complement their efforts. Diffused ownership also means that the need for audit quality is high as the dispersed owners cannot properly monitor management hence a good external audit is needed to make up for that deficiency (Nelson & Mohamed-Rusdi, 2015; Hogan & Wilkins, 2008). Even though previous studies on ownership structure have acknowledged that diffused ownership affected audit fees, only a few of them actually included it in their model. For instance, Mitra et al. (2007), in their study of listed US firms, found a significant positive relationship between diffused ownership and audit fees. Diffused ownership may also increase the monitoring of shareholders' behavior, thereby reducing audit risk and reducing audit fees. This study measured ownership diffusion using block ownership measured as having 5% or more individual shareholding. Based on the argument presented, the study hypothesizes that:

*H<sub>4</sub>: There is a negative association between block ownership and audit fees of listed firms in Ghana.*

### **Research Method**

The population for this study consisted of all listed firms on the Ghana Stock Exchange in Ghana. The total number of listed firms in Ghana stood at 37 as of August 2020. Therefore, the population for this study was made up of 37 listed firms in Ghana. The sample for this study consisted of 21 listed firms on the Ghana Stock for the period 2010 to 2019. The sample selection was based on the availability of data and financial statement covering the study period. The main sample selection criteria were that the firms were listed on the Ghana Stock Exchange for at least ten years starting from 2010. Any firm listed after this period was excluded from the sample. Secondly, the full annual report of the company was available to allow data on all the variables, primarily disclosed in the notes to the account, to be collected. Finally, the sample also excluded financial institutions because they have regulated ownership structures, unlike non-financial firms with no such regulations. Based on the above criteria, only 21 listed firms met the sample selection criteria.

#### **Empirical Model Estimation**

The dependent variable for this study was audit fee (AFEE). The operational definition for the AFEE is defined in this study as the auditor remuneration paid to the external auditors for the audit service rendered for the respective companies (Coffie & Bedi, 2019; Musah et al., 2018; Barroso et al. 2016). The audit fees are measured in Ghana cedis and can be directly obtained from the annual reports. All Ghanaian companies registered under the Companies Act 2019, Act 992 are required to disclose audit fees or auditor remuneration in their financial statements either in the face of the financial



statements or in the note to the financial statements in accordance with the Companies Act 2019, Act 992.

The independent variables in this study were managerial ownership (MOWN), foreign ownership (FOWN), government ownership (GOWN), and substantial (Block) ownership (SS). These variables can be directly obtained from the annual report that shows the “Analysis of Shareholding” of the company.

On managerial ownership, consistent with prior studies (Mustapha & Che Ahmad, 2011; Al-Fayoumi, Abuzayed, & Alexander, 2010), this study employed some common measurements of managerial ownership based on the total percentage of share held by the executive directors within the company and their families either direct or indirect shareholding. This study considered both direct and indirect shareholding by the executive directors and their families to get a better picture of managerial ownership.

The following panel regression model is adopted for the study.

$$LNAudFee_{it} = \beta_0 + \beta_1 MOWN_{it} + \beta_2 FOWN_{it} + \beta_3 GOWN_{it} + \beta_4 SS_{it} + \beta_5 BIG4_{it} + \beta_6 SIZE_{it} + \varepsilon_{it}$$

Where,

Variable	Meaning	Measurement
NLAFEE	Audit fees	Natural Logarithm of Audit fees
MOWN	Managerial ownership	The proportion of share held by executive directors and family
FOWN	Foreign ownership	Dummy, 1 if the firm is foreign-owned, and 0 otherwise
GOWN	Government ownership	Dummy, 1 if firm controlled by the government, and 0 otherwise
SS	Substantial (Block) Shareholding (Ownership diffusion).	Percentage of shares held by substantial shareholders (3% or more)
SIZE	Firm size	Natural logarithm of total assets
Big4	Big four audit firm	Dummy, 1 if a firm is audited by big4 audit firm, and 0 otherwise

## Result and Discussion

The descriptive statistics showed that the natural log of audit fees ranged from 7.6009 to 12.611, with an average natural log of audit fees of 10.691. The main variables of interest were the ownership structure variables. The first ownership structure variable was managerial ownership (MOWN), which showed a mean of 0.1194, suggesting that on average, managerial ownership among listed firms in Ghana stood around 12%. This result is a little different from the findings of Nelson and Mohamed-Rusdi's (2015) study

on ownership structure and audit fees of Malaysian listed firms who reported a means of 30.5%. The results suggested a low level of managerial ownership in Ghana as compared to developed and emerging markets. Managerial ownership is an essential corporate governance mechanism as it is one of the most effective means to reduce agency problems and align the interest of management and shareholders. However, the percentage of managerial ownership was higher than the findings of Chiraz & Lesage's (2010) study of 12 developed and emerging countries, where the overall mean for managerial ownership was 9.3%. In a similar study, Aswadi Abdul Wahab et al. (2011) reported managerial ownership of 8.1% based on a sample of Malaysian firms from 2001 to 2003.

**Table 1** Descriptive Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
LNAudFee	210	10.691	0.967	7.6009	12.611
MOWN	210	0.1194	0.188	0	0.606
FOWN	210	0.35	0.478	0	1
GOWN	210	0.2	0.401	0	1
SS	210	0.824	0.0836	0.53	0.984
BIG4	210	0.665	0.473	0	1
SIZE	210	17.471	2.158	10.204	21.532

The second ownership structure variable Foreign ownership (FOWN), showed a mean score of 35%, suggesting that 35% of the sampled firms were foreign-owned, while the rest were locally owned firms. The result for foreign ownership is also inconsistent with Nelson and Mohamed-Rusdi's (2015) findings, whose study reported a mean of 9.6% for foreign ownership. The results suggested that foreign participation of firms listed on the Ghana Stock Exchange was higher than in Malaysia.

The third ownership variable was government ownership (GOWN), which had a mean of 0.2 or 20%, suggesting that only 20% of firms listed on the Ghana Stock Exchange were state-controlled. The study measured this variable based on whether the company in question had most of its shares held by the government directly or indirectly. The result for this variable appears a little higher compared to the findings from Nelson and Mohamed-Rusdi (2015), whose study reported 14.1%, representing the percentage of companies listed on the Malaysian Stock exchange with significant government influence.

The last ownership variable focused on ownership diffusion, measured by substantial shareholding among listed firms in Ghana. The descriptive statistic results showed that the average substantial shareholding among listed firms in Ghana was 82%, suggesting a lower ownership diffusion. The results suggested that a substantial proportion of shares were held by few individuals, primarily institutional investors, as opposed to small minority shareholders. This percentage of substantial shareholding of 82% is an increase compared to a previous study in Ghana, which should be a mean of 77% (Coffie & Bedi, 2019).

On the control variables, the natural logarithm of firm size ranged from 10.204 to 21.523, while that of big4 audit firms showed that almost 67% of listed firms in Ghana were audited by the big four audit firms. The result clearly revealed that the audit market in Ghana was controlled by international audit firms.

### Correlation Analysis

The correlation analysis was used to determine the relationship between the various independent variables and the control variables and audit fees of listed firms in Ghana. It was also used to determine the presence of multicollinearity. The correlation analysis did not show a high correlation among the independent variables, suggesting little evidence of multicollinearity. Pallant (2011) posits that a correlation coefficient between the independent variable, which is 0.8 and above, is evidence of multicollinearity. The correlation analysis results are presented in Table 2 below

**Table 2** Correlation Analysis Results

	LNAudFee	MOWN	FOWN	GOWN	BIG4	SIZE
LNAudFee	1.000					
MOWN	-0.5357***	1.000				
FOWN	0.5638***	-0.4458	1.000			
GOWN	0.0464	-0.3014	-0.3669	1.000		
SS	0.1095	-0.1236	0.0039	0.140	1.000	
BIG4	0.4841***	-0.4377	0.5208	-0.2278	1.000	
SIZE	0.7078***	-0.6088	0.5393	0.3873	0.3455	1.000

Note \*\*\* means significant at 1% significance level, \*\* means 5% significance level, and \* means significant at 10% significance level

The results from the correlation analysis revealed a negative correlation between managerial ownership (MOWN) and audit fees of listed firms in Ghana. The relationship was also statistically significant at a 1% significance level and showed a strong negative correlation. The result is consistent with Nelson and Mohamed-Rusdi's (2015) findings, who also reported a correlation between managerial ownership and audit fees of Malaysian firms, but with a lower correlation coefficient. The results suggested that an increase in the percentage of share held by management reduced audit risk and audit complexities and improved financial reporting quality, which translated into lower audit fees.

The correlation results also showed a strong positive correlation between foreign ownership (FOWN) and audit fees of listed firms in Ghana. The result was also statistically significant at a 1% significance level. The results implied that foreign firms paid a higher amount as audit fees as compared to local firms. The results suggested that the demand for higher audit quality for foreign firms was higher, which translated into higher audit fees. The result is inconsistent with Nelson and Mohamed-Rusdi's (2015) findings, where they reported a weak positive and statistically insignificant correlation between foreign ownership and audit fees.

The next independent variable of interest was government ownership (GOWN) and its relationship with audit fees. The correlation analysis results disclosed a positive but statistically insignificant association between government ownership and audit fees. The last ownership variable, substantial shareholding (SS), used to measure ownership diffusion showing a positive correlation with audit fees. However, the relationship was statistically insignificant, and the coefficient of correlation also showed a weak correlation.

On the control variables, the results exposed that both firm size and audit by big four audit firm were positively correlated with audit fees of listed firms in Ghana. The results suggested that international audit firms provided higher audit quality hence charged higher audit fees. Also, the larger firms paid higher audit fees because they required higher audit effort than smaller firms, translating to higher audit fees. The results are consistent with Musah et al. (2018), who also reported a positive association between firm size and use of big four audit firms and audit fees in Ghana.

**Regression Analysis**

To achieve the study's main objective, the panel regression analysis was conducted after all the tests above were carried out. The R-squared from the regression analysis of 0.5835 implied that the independent variables could explain 58% of the variations in the dependent variable. The probability of the F-Statistics was also significant at a 1% significance level, suggesting that the model was well fit. The regression analysis results are displayed in table 3 below.

**Table 3** Regression Results

Variable	Coefficient	Std. Err	Z
MOWN	-1.5966***	0.5289	-3.02
FOWN	0.8817***	0.3226	2.74
GOWN	0.2284	0.348	0.69
SS	2.956***	0.891	3.32
BIG4	0.1362	0.1621	0.66
SIZE	0.256***	0.0416	6.15
CONST	10.422	0.314	33.19
R-Squared	0.5835		
F-Statistic	88.000		
Probability of F-Statistics	0.0000		

Note \*\*\* means significant at 1% significance level, \*\* means 5% significance level, and \* means significant at 10% significance level

The regression analysis results revealed a negative association between the level of managerial ownership and audit fees of listed firms in Ghana. The results were also statistically significant at a 1% significance level. The results suggested that managerial ownership was a significant determinant of audit fees in Ghana. The result is consistent with the expectations of the study's first hypothesis, predicting a negative and significant association between managerial ownership and audit fees of listed firms in Ghana. The result showed that managerial ownership reduced audit risk through

improved monitoring and financial reporting quality, reducing audit effort and risk leading to lower audit fees. The result is contrary to Nelson and Mohamed-Rusdi's (2015) findings, who found a positive but statistically insignificant relationship between managerial ownership and audit fees. The result is also inconsistent with the findings of Aswadi Abdul Wahab et al. (2011). The negative association between managerial ownership and audit fees is consistent with the agency theory expectations; thus, it suggests that managerial ownership reduces audit risk through improved reporting quality and enhances control, reducing audit fees.

The second ownership variable measured foreign ownership and its effect on audit fees. The findings from the regression analysis disclosed a positive association between foreign ownership and audit fees. The result was also statistically significant at a 1% significance level. The results also showed that foreign ownership increased audit fees and, as such, was a significant determinant of audit fees in Ghana. The result is consistent with the second hypothesis (H2) expectation, predicting a positive and significant association between foreign ownership and audit fees. The results uncovered that foreign ownership was a significant determinant of audit fees of listed firms in Ghana. The results could be interpreted to mean that foreign investors demanded higher quality audits to compensate for the lack of direct oversight of the company's operations, translating to higher audit effort and higher audit fees. The results are consistent with Nelson and Mohamed-Rusdi's (2015) findings, who also reported a positive and significant association between foreign ownership and audit fees of listed firms in Malaysia. The result is also consistent with several other previous studies (Salleh et al. 2006; Goodwin-Stewart & Kent, 2006; Abdullah et al. 2008). According to Niemi (2005), foreign subsidiaries or foreign-owned companies have additional financial reporting complexities due to their geographical separation, which will increase audit fees. The complexities are high in a situation where the parent company is in another country, mainly where accounting and reporting rules differ. Niemi (2005) asserts that apart from the additional complexities, foreign-owned firms require greater control due to the separation of high ownership and management, which increases the agency conflict. Moreover, foreign investors are more likely to demand greater audit quality (Zureigat, 2011).

The third ownership variable examined the effect of government ownership on audit fees. The regression analysis results showed a positive association between government ownership and audit fees. However, the result was statistically insignificant. The results indicated that government ownership was not a significant determinant of audit fees in Ghana. The study result is contrary to the expectation of the third hypothesis (H3), predicting a positive and significant association between government ownership and audit fees. The result showed that government ownership was not a significant determinant of audit fees in Ghana. The results are also contrary to Nelson and Mohamed-Rusdi's (2015) findings, which found a positive and statistically significant association between government ownership and audit fees. The result disclosed that government-controlled listed firms in Ghana had enough internal controls and good corporate governance systems that improved financial reporting quality and reduced audit fees. On the other hand, individuals acting as directors in government-controlled

firms have a reputation to protect even though they have no cash flow rights. It may have motivated them to improve their monitoring. However, research has shown that these shareholders bear no costs. It might explain why the results were statistically insignificant even though positive.

The last ownership variable, substantial ownership, showed a positive association with audit fees of listed firms in Ghana. The result is also statistically significant at a 1% significance level. The result suggests that substantial ownership increases audit fees, and as such, ownership diffusion reduces audit fees. The result is contrary to the expectation of the 4th hypothesis, which predicted a negative association between block ownership and audit fees. The result is consistent with the findings of Mitra et al. (2007), who found a positive association between block ownership and audit fees of firms in the United States. The result suggests that block ownership does not improve monitoring and quality of financial statement preparation but rather increases audit complexities or audit risk, which increases audit fees.

On the control variable, the study result showed that firm size was positively associated with audit fees. The relationship was also statistically significant at a 1% significance level. The result is consistent with several studies' findings across the globe. Previous studies have revealed that company size affected audit plans (Castro et al., 2015; Kikhia, 2014; Musah et al. 2018; Coffie & Bedi, 2019). Large companies require more attention than smaller companies; therefore, more time will be spent on audit work, and as a result, high audit fees will be charged to more prominent companies as opposed to smaller ones (Xu, 2011; Simon & Taylor, 2002). Large size companies would be involved in more activities than small ones. They are usually more publicly visible, and they tend to disclose more information than small companies. The use of big4 audit firms was not a significant determinant of audit fees even though it showed a positive coefficient with audit fees. This result is inconsistent with previous studies on audit fees in Ghana (Yalley et al., 2013; Musah, 2017; Musah et al. 2018, Coffie & Bedi, 2019). The result showed no significant difference between audit fees charged by local audit firms compared to those charged by the big foreign audit firms.

## **Conclusion**

The study examined the effect of the ownership structure of listed firms in Ghana on audit fees. The study found a negative and significant association between managerial ownership and audit fees in Ghana. The result also showed a positive and significant association between foreign ownership and audit fees in Ghana. The study further uncovered a positive and significant relationship between block ownership and audit fees. The results, however, found an insignificant association between government ownership and audit fees. The results indicated that ownership structure had a significant influence on audit fees in Ghana. The study took inspiration from the agency theory to explain the relationship between ownership structures and fees paid to external auditors. It could be deduced from the study result that the higher the agency conflict, the higher the audit fees to be paid to external auditors as it will increase audit

risk. This study's findings may also have some implications for the regulators by providing a clear picture concerning the effect ownership structure that might have to standardize the internal control among the companies. The result suggested that there was a positive relationship between agency conflict and audit fees. The findings of a negative association between managerial ownership and audit fees, as well as the positive association between foreign ownership and audit fees, are consistent with agency theory. The result showed that different ownership structures resulted in different forms of control, showing the difference in agency problems. Nevertheless, the study was limited to listed firms in Ghana, excluding financial firms, providing an opportunity for future studies to examine the influence of ownership structures on audit fees of financial institutions in Ghana. Also, the future study can conduct a cross-country study using a number of countries in Africa since this study was limited to Ghana, and there is currently limited literature on the subject matter in the African context. Another limitation that can be addressed in future studies is the fact that the study did not distinguish between audit fees and non-audit fees.

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