Determinants of auditor independence: A comparison of the perceptions of auditors and non-auditors in Lagos, Nigeria

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ABSTRACT

Audit independence refers to the ability of the external auditor to act with integrity and impartiality during his/her auditing functions. Public opinions about audit independence are based more on their perception of auditor independence than on actual independence. The purpose of this paper is to investigate the determinants of auditor independence as perceived by practicing auditors, and non-auditor executives. Particularly, this paper studies perception about the effects of provision of non-audit services, audit firm and client company size, auditor regulation, audit/client relations, auditor tenure, and audit market competition in the Nigerian context. This study uses a survey method to study the determinants of perceptions of auditor independence among auditors and non-auditor professionals. Twenty statements were included in the questionnaire representing the seven variables of interest. Seventy-nine auditors and 127 non-auditor professionals were included in the final sample. The results show that there is a general agreement about the factors that enhance auditor independence, and those that impair auditor independence between the two groups however there were differences in the degree to which they affect auditor independence.

Keywords: Determinants, auditors, independence, perceptions and opinions.

INTRODUCTION

Nigeria is located in West Africa with an estimated 2011 population of 155 million people (Central Intelligence Agency [CIA], 2011). Since its independence from England in 1960, the country has strived to develop its economy into a market economy, and has copied practices in developed countries, particularly Britain and the United States. Despite this effort, Nigeria remains a developing country with the usual characteristics of a developing country.

Nigerian economy is dominated by the oil production, and it derives about 80 percent of its total national revenues from oil sector (CIA, 2011). This dependence on oil has led to a situation where Nigerian economy is influenced significantly by economic trends in developed countries.

Over the past three decades, Nigeria has witnessed a huge growth in its private sector with the development of free enterprise, and influx of foreign corporations (Zhao & Murinde; 2011, Ezeoha, 2007; Ningi & Dutse, 2008). Also, the level of private sector investments increased the need for fairly stated financial statements became more important.

This surge in the private sector came along with many positive and negative aspects. The economy witnessed a rapid growth in the level of corruption, and fraud perpetuated by businesses. This pointed to the need for further governmental efforts to regulate business reporting in the country (Ayoola-Akinjobi, 2010).

Auditing is not yet well developed in Nigeria. Currently, there are two accounting bodies, Institute of Chartered Accountants of Nigeria (ICAN) and Association of National Accountants of Nigeria (ANAN), recognized in the country to regulate the practice of accounting, however, ICAN is the oldest and most dominant accounting body in Nigeria. The house and senate approved a bill to set up a third accounting body (Certified Public Accountants of Nigeria) in 1998, but the bill was not signed by President Obasanjo before he left office, and his predecessors are yet to sign the bill into law. While both bodies have witnessed great improvements in their regulation of the practice of accounting in the country, they have not done much in the area of auditing.

Recent reports of questionable accounting practices employed by some companies in Nigeria have brought the issue of auditor independence to the forefront, and put the auditing profession in a serious credibility crisis (Otusanya & Lauwo, 2010). In response to this, the public has called for auditors to be independent of their clients.

Audit independence refers to the ability of the external auditor to act with integrity and impartiality during his/her auditing functions. Two types of auditor independence were developed by Mautz and Sharaf (1961) namely practitioner-independence (or independence in fact), and profession independence (or independence in appearance). Communication of accurate financial statements is vital to the operation of the economy since users of financial statements depend on this information to make financial decisions. To increase the confidence in their financial statements, companies utilize the services of external independent auditors to audit their books. Independent auditors audit the financial statements and express an opinion on the fairness of the statements. The confidence placed on these statements depends ultimately on the perceptions held by the users of these statements regarding the independence of the external auditors. While the external auditors may in fact be independent of the management of the company being audited, if they are perceived not to be independent, then the value of their opinions to the users of the statements is diminished.

The purpose of this paper is to investigate the determinants of external auditor independence as perceived by practicing auditors, and non-auditor executives. Particularly, this paper studies perception about the effects of provision of non-audit services, audit firm and client company size, auditor regulation, audit/client relations, auditor tenure, and audit market competition in the Nigerian context.

LITERATURE REVIEW

One of auditing's most vital concepts is auditor independence (Barkes, Simnet, & Urquhart, 2002), however independence as perceived by users of accounting information may differ from independence in fact. An auditor does not only have to have independent in fact, but independent in appearance also. The independence of auditors in Nigeria has been frequently questioned. The ways in which Nigerian auditors secure their audit assignments and the rate at which they lobby for auditing job put their independence in jeopardy (Abubakar. N.d.).

The recent collapse and related frauds which occurred in Nigeria have raised doubts about the financial reporting practices of quoted companies in Nigeria (Adeyemi & Fagbemi, 2011), and led to a growing demand for accountability in public and private sectors in Nigeria. Otusanya and Lauwo (2010) studied the role of auditors in the failure of the Nigerian banking system, and indicted Nigerian auditors with numerous instances of sloppy audit reporting. This study further pointed out that the quality of audits depends on both technical skills of the audit teams and organizational values and labor processes embedded within the forms. While efforts are being made to address the lapses in the audit systems in developed countries, there have been little or no efforts at positively addressing the challenges posed by non-adherence to corporate governance principles and ethical guidelines in developing countries (Adeyemi & Fagbemi, 2011).

While the debate continues on the factors affecting auditor independence, and the effects of impaired auditor independence on user confidence, numerous factors have been studied as determinants of auditor independence.

Audit firm size has been identified as one of the factors affecting perception of auditor independence (Al-Ajmi & Saudagaran, 2011). This study concluded that being a sole-practitioner and being a small, local audit firm impair auditor independence. Bakar, Rahman, & Rashid (2005) argued that audit firm size is the most important factor affecting auditor independence, as smaller audit firms are more likely to lose independence.

Provision of non-audit services has attracted much interest as a determinant of audit independence. Non-audit services are services other than audit provided to an audit client by an incumbent auditor (Erah & Izedonmi, 2012). The issue of non-audit services has created controversy among auditors about its impact on auditor independence. The economic dependence resulting from the provision of non-audit services has been said to negatively impact auditor independence (Schmidt, 2012). In studies, Beattie, Brandt, & Fearnley (1999) suggested that the most threatening factors are economic dependence of auditors on the client and the non-audit services. Ojo (2009) argued that the provision of non-audit services does not necessarily impair auditor independence especially when the fees from such services are less than the fees from audit services. In addition, Quick and Warming-Rasmussen (2005) pointed out that the provision of both audit and non-audit services could lead to economies of scale, hence improving efficiency.

Previous studies have looked into the effects of auditor/client relationships on auditor independence (Goodwin & Seow, 2002). Some of the relationships studied include auditor tenure, partner rotation, client gifts to auditors. Abu Baker (2005) Alleyne, Devonish, and Alleyne (2006), Moore, Tetlock, Tanlu, & Bazerman (2006), and Al-Ajmi & saudagaran, (2011) pointed out that lengthy tenure impairs auditor independence among other factors. However Kaplan and Mauldin (2008) suggested that audit firm rotation does not necessarily strengthen independence among nonprofessional investors compared to audit partner rotation.

Various audit attributes have been studied recently to determine their effect on audit independence. The impact of the proportion of fees received from audit services on auditor independence has been a thing of concern to auditors for some time. Barkes, Simnet, and Urquhart (2002) indicate that the dependence on audit fees does not impair auditor independence, but could become a problem when a large proportion of the gross audit fees is received from one client.

Competition in the audit market is one of the factors that have been identified as undermining auditor independence. Beattie, Brandt, & Fearnley (1999), MacLullich and Sucher (2005), and Law (2008) found that a highly competitive environment undermines auditor independence, however, other researchers have pointed out that a competitive environment is actually a positive event for auditing since it forces auditors to provide more efficient services to their clients (Windmoller, 2000; and Raynolds & Francis, 2001).

RESEARCH QUESTIONS AND HYPOTHESES

The purpose of this quantitative research study is to compare the perceptions of auditing and non-auditing professionals about the determinants of auditor independence in Lagos, Nigeria. In particular the effects of auditor and client size, provision of non-audit services, client audit control, auditor-client relationship, auditor tenure, auditor regulation, and audit market competition, on auditor independence were studied. Answers to each of the following research questions would serve as a basis for designing policies about the auditor independence in Nigeria. Seven research questions will be addressed in this study. A review of the literature provided the basis for developing these research questions and hypotheses.

Research Questions

Q1. To what extent, if any, is there a relationship between the provision of non-audit services by the auditor and the perceptions of auditor independence among the respondent group in Nigeria?

Q2. To what extent, if any, is there a relationship between auditor/client size and the perceptions of auditor independence among the respondent group in Nigeria?

Q3. To what extent, if any, is there a relationship between auditor regulation and the perceptions of auditor independence among the respondent group in Nigeria?

Q4. To what extent, if any, is there a relationship between auditor-client relationship and the perceptions of auditor independence among the respondent group in Nigeria?

Q5. To what extent, if any, is there a relationship between auditor tenure and the perceptions of auditor independence among the respondent group in Nigeria?

Q6. To what extent, if any, is there a relationship between audit market competition and the perceptions of auditor independence among the respondent group in Nigeria?

Research Hypotheses

The following null (H_0) and alternative (H_a) hypotheses will be used to evaluate the research questions:

$H1_0$. There is no statistically significant relationship between the provision of non-audit services by the auditor and the perceptions of auditor independence among the respondent group in Nigeria.

$H1_a$. There is a statistically significant relationship between the provision of non-audit services by the auditor and the perceptions of auditor independence among the respondent group in Nigeria.

$H2_0$. There is no statistically significant relationship between auditor/client size and the perceptions of auditor independence among the respondent group in Nigeria.

$H2_a$. There is a statistically significant relationship between auditor/client size and the perceptions of auditor independence among the respondent group in Nigeria.

$H3_0$. There is no statistically significant relationship between auditor regulation and the perceptions of auditor independence among the respondent group in Nigeria.

$H3_a$. There is a statistically significant relationship between auditor regulation and the perceptions of auditor independence among the respondent group in Nigeria.

$H4_0$. There is no statistically significant relationship between auditor-client relationship and the perceptions of auditor independence among the respondent group in Nigeria.

$H4_a$. There is a statistically significant relationship between auditor-client relationship and the perceptions of auditor independence among the respondent group in Nigeria.

$H5_0$. There is no statistically significant relationship between auditor tenure and the perceptions of auditor independence among the respondent group in Nigeria.

$H5_a$. There is a statistically significant relationship between auditor tenure and the perceptions of auditor independence among the respondent group in Nigeria.

$H6_0$. There is no statistically significant relationship between audit market competition and the perceptions of auditor independence among the respondent group in Nigeria.

$H6_a$. There is a statistically significant relationship between audit market competition and the perceptions of auditor independence among the respondent group in Nigeria.

DATA AND METHODOLOGY

This non-experimental quantitative study is based on a survey conducted in the fall of 2012. The questionnaire was divided into two parts. Part one contained twenty audit-related questions. These audit-related questions included questions related to audit agency and client size, non-audit services, client audit control, auditor-client relations, auditor tenure, auditor regulation, and audit market competition questions. Two hundred questionnaires were administered to the non-accounting employees of the selected companies in Lagos, Nigeria, and 100 auditors in selected accounting firms in Lagos, Nigeria. All companies and accounting firms included in the sample were obtained from the listings of businesses in the Nigeria Yellow Pages.

Twenty-five categories of businesses were first randomly selected from a listing of categories in the yellow pages, excluding accounting firms. Fifty businesses were randomly selected from the categories. The businesses were contacted and invited to participate in the study. Thirty seven businesses participated in the study. Nine businesses could not be contacted. Four declined to participate. Another thirteen businesses were randomly selected and invited to participate in the study. Seven declined to participate. Another seven were randomly selected from the remaining list of companies to replace the seven that declined to participate. Two hundred questionnaires were distributed to employees of the businesses through the managers or owners of the businesses.

Secondly, twenty accounting firms were randomly selected from the list of 137 accounting firms listed in the Nigerian Yellow Pages. Twenty-five firms were randomly selected from the list. Eight declined to participate. Another eight firms were selected from the remaining firms on the list. Three of these declined to participate. Finally, another three firms were selected from the remaining list and they agreed to participate in the study.

Though this selection process guarantees that the desired number of companies can be obtained, it has certain limitations. Since it is not a true random sampling method, the usual biases associated with such data are applicable to this one study. The results of this study may not be applicable to other firms, or other geographical areas.

Survey Instrument

The survey instrument utilized for this study was adapted from the one used in many studies of the perceptions of auditor independence in previous studies (Alleyne & Devonish, 2006; Al-Ajmi & Saudagaran, 2011). The statements were adapted to suite the unique characteristics of the Nigerian environment. Twenty statements were included in the questionnaire, representing the areas of interest of this study. The items on the survey are listed in Table 1.

A Likert type scale was used for this study in which respondents were asked to express their personal views about how the statements on the questionnaire affected auditor independence. The response options are:

1. Strongly increases independence
2. lightly increases independence
3. No effect on independence
4. Slightly reduces independence
5. Strongly reduces independence

A cover letter was included with the questionnaire that explained the purpose of the study, and explained the answer options. Due to the problems of mail delivery, and the limited time for this study, the questionnaires were delivered to the businesses selected for distribution to selected professional employees. The completed questionnaires were picked up from the businesses one week after delivery from the managers or owners of the businesses.

RESULTS

Three hundred questionnaires were distributed to the respondents. A definition of the questions asked is presented in Table 1. Out of the 300 questionnaires, 206 were returned representing an overall response rate of 68.67%. A description of the respondents is presented in Table 2. Thirty-eight percent of the respondents are auditors while 61.65% are non-auditor professionals. Thirty-eight percent of the respondents are female. Fifty-seven percent of the respondents have five or more years of work experience, though the question was not specific about the type of work.

A breakdown of the respondents shows that among the auditors, 30.38% were female while men accounted for 69.62%. In the case of non-auditor professionals, 42.52% were females while 57.48% were male. Among the auditors, 63.29% have five or more years of experience. On the other hand, 53.54% of the non-auditor professionals had five or more years of work experience.

Table 4 contains the results of the survey for the full sample. Means above 3.00 indicate that the item impairs the perception of auditor independence while means below 3.00 indicate that the item enhances auditor independence. The Cronbach’s alpha is shown in Table 4. The alpha coefficient for the 20 items is .7512. This suggests that the items have relatively high internal consistency. The usual requirement for internal consistency is a Cronbach’s alpha of

0.70. Table 5 shows a comparison of the perceptions on auditors and non-auditor professionals. Both groups agree on the factors that impair the perceptions of auditor independence, and those that enhance the perceptions of auditor independence from the items included. Their rankings of the items are not the same for some of the items. Table 5 contains ANOVA test for the data. The ANOVA test shows that the mean responses are not significantly different between auditors and non-auditor professionals in 18 of the 20 items included in the study.

Determinant of perceptions of auditor independence

Research Question 1: To what extent, if any, is there a relationship between the provision of non-audit services by the auditor and the perceptions of auditor independence among the respondent group in Nigeria?

The effect of the provision of non-audit services on perception of auditor independence has interested researchers for a long time. While a majority of studies show that this impairs auditor independence, others argue that it has no effect on auditor independence. To answer this question, survey statements 1, 2, and 3 were used. The means obtained were 2.17, 2.56, and 3.95 respectively for non-audit services more than 50% of audit fees, non-audit services more than 25% of audit fees, and auditor performs non-audit services for client. All of these questions were significant at the 0.01 level. This result is consistent with Quick and Warming-Rasmussen (2009) who found that German investors perceive non-audit services to impair auditor independence. This study further shows that the degree to which non-audit services impairs perceptions of auditor independence depends on the type of non-audit service. Law (2008) surveying Big 4 and non-Big 4 auditors, also found similar result.

Research Question 2: To what extent, if any, is there a relationship between auditor/client size and the perceptions of auditor independence among the respondent group in Nigeria?

This question deals with how respondents perceive that the size of the audit firm and the size of the client company affect the independence of auditors. Survey statements 4 and 5 are used to answer this question. The mean were 2.63 and 3.40 for Big 4 firm and client is a large company respectively. The results support the view that large accounting firms are perceived as enhancing auditor independence while large client company impairs auditor independence. The Big 4 firms are associated with large size and foreign partnership influence. It is possible that Big 4 firm captures the effect of foreign firms also. The result for the size of the client company may be consistent with the view that large companies have large economic power, and may be intimidating to the auditor. When the sample was segmented into auditor and non-auditor samples, the mean were 2.43 and 3.38 (for auditors), and 2.74 and 3.42 (non-auditors) for Big 4 firm and client is a large company respectively. The results were consistent with those for the full sample.

Research Question 3: To what extent, if any, is there a relationship between auditor regulation and the perceptions of auditor independence among the respondent group in Nigeria?

Statements 6, 7, 8, and 9 were used to answer this research question. The risk of punishment has been shown to enhance auditor independence. A high risk of damage to auditor's reputation, disciplinary action by the government, litigation against the auditor, disciplinary action by the professional association are all associated with enhancement of auditor independence. The mean scores for statements 6, 7, 8, and 9 are 2.52, 2.64, 2.73, and 2.48 respectively. These results are consistent with those for the auditor and non-auditor samples;

however the risk of litigation against the auditor was not significant if the non-auditor sample. A segmentation of the sample into auditors and non-auditors shows that the means were 2.43, 2.54, 2.63, and 2.63 respectively while those for the non-auditor sample were 2.57, 2.2.69, 2.79, and 2.39 respectively. These means were lower for the auditor sample except for statement 9. Moreover, statement 8 was not significant in the non-auditor sample at the 0.05 level.
Research Question 4: To what extent, if any, is there a relationship between auditor-client relationship and the perceptions of auditor independence among the respondent group in Nigeria?

Survey statements 12, 13, 14, and 15 were used to answer this question. The means for the full sample are 3.16, 3.22, 3.89, and 4.31 respectively. All of these exceed 3.00 implying that they are all perceived by the respondents as impairing auditor independence. For the auditor sample, the means are 3.10, 3.14, 4.52, and 4.01 respectively while the means are 3.20, 3.26, 4.18, and 3.81 respectively. All of these indicate that they are perceived as impairing auditor independence; however, the means for questions 12 and 13 are not statistically significant in both samples.
Research Question 5: To what extent, if any, is there a relationship between auditor tenure and the perceptions of auditor independence among the respondent group in Nigeria?

Auditor/client relationship has been of interest to researchers of perceptions of audit independence (Alleyne, Devonish, & Alleyne, (2006). Survey statements 16 and 17 were used to answer this research question. The means for statements 16 and 17 are 3.95 and 3.42 respectively in the full sample. In the auditor sample, the means are 4.23 and 3.44 respectively while they are 3.91 and 3.40 respectively in the non-auditor sample. All of these means are statistically significant at the 0.05 level in all the samples, supporting the view that long tenure impairs perception of auditor independence among respondents. In the case of rotation of auditors the result is not as expected.
Research Question 6: To what extent, if any, is there a relationship between audit market competition and the perceptions of auditor independence among the respondent group in Nigeria?

The effect of the level of competition in the audit market on perceptions of auditor independence was tested using survey statements 18, 19, and 20. When the level of competition is intense, auditing firms may find it difficult to remain independent for fear of losing clients (Abu Baker, 2007). Auditor's desire not to lose key clients and high level of competition among auditors for clients are associated with impaired perception of auditor independence. The mean for competitive audit market is 3.90 in the full sample. In the auditor sample, the mean is 3.95 while it is 3.87 in the non-auditor sample. All the means were significant at the 0.05 level. This result supports that in Tahinakis and Nicolaou (2004), and Sawalqa and Qtish (2012). Low audit fee has a mean 2.38 indicating that low audit fee enhances the perception of audit independence.

CONCLUSION

This paper sought to determine factors that impact perceptions about auditor independence among auditors and non-auditor professionals. The results show that economic dependence on the client, provision of non-audit services to the client, and competition in the audit market are the major factors that impairs the perception of independence and that this is consistent among both groups of respondents. On the other hand, low audit fees, risk of punishment against the auditor, and lower audit fees as a proportion of the firm's total revenues are perceived to enhance auditor independence.

This paper contributes to the literature on the perceptions of auditor independence in a developing economy. It is shown that both groups of professionals agree on all the questions regarding whether they impair or enhance the perceptions of auditor independence. The results of ANOVA test shows that both groups agree on 18 of the 20 questions on the survey.

The results of this and similar studies are important because they provide evidence to regulators of auditing in developing countries about the factors that affect the perception of auditor independence in the economy. This study shows the need for regulators to provide clear guidelines about the need for independence in fact, and the perception of independence.

Due to the fact that this study uses data from Lagos Nigeria only, its results may not be applicable to all of the country, or other developing countries. Future studies can expand this data base to include data from a wider area of the country.

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Table 1: Definition of variables

Variable	Definition
1	Non-audit services account for more than 50% of audit fees
2	Non-audit services are more than 25% of audit fees
3	Auditor performs non-audit services for client
4	Auditor is a Big 4 firm
5	Client is a large company
6	Risk of damage to auditors reputation from public scandal is high
7	Risk of disciplinary action against the auditor by government is high
8	Risk of litigation against the auditor is high
9	Risk of disciplinary action by association against the auditor is high
10	Board of Directors controls appointment of auditors
11	Audit committee is independent of directors or owners
12	More than 50 percent of auditors revenues come from one client
13	Client makes significant gifts to auditors
14	Auditor's income depends on retention of a specific client
15	Client is important to the auditors overall portfolio
16	Auditor has been auditing client more than 5 years
17	Rotation of auditors every 3 years
18	Audit fee is low compared to other auditors' fees
19	Auditor's desire not to lose key client
20	Competition for clients is high

Table 2: Description of respondents

	Full Sample		Auditors		Non-Auditors	
	Number	Percentage	Number	Percentage	Number	Percentage
Professions						
Auditors	79	38.35				
Non-Auditors	127	61.65				
Gender						
Female	78	37.86	24	30.38	54	42.52
Male	128	62.14	55	69.62	73	57.48
Experience						
Less than Five Years	88	42.72	29	36.71	59	46.46
Five or More Years	118	57.28	50	63.29	68	53.54

Table 3: Means for the full Sample

	Descriptive Statistics		One-Sample Test Test Value = 3	
Statements	Mean	Std. Deviation	t	Sig. (2-tailed)
Non-audit services more than 50% of audit fees	2.17	1.1356	-10.552	0.000
Audit fee is low compared to other auditors	2.38	1.3659	-6.529	0.000
Risk of disciplinary action by association	2.48	1.0507	-7.046	0.000
Risk of damage to auditors reputation from public scandal	2.52	1.1422	-6.100	0.000
Non-audit services more than 25% of audit fees	2.56	1.1992	-5.287	0.000
Auditor is a Big 4 firm	2.63	1.2375	-4.279	0.000
Risk of disciplinary action by government	2.64	1.0631	-4.915	0.000
Risk of litigation against the auditor	2.73	1.3768	-2.841	0.005
Board of Directors controls appointment of auditors	2.76	1.7722	-1.966	0.051
Audit committee that is independent of directors or owners	2.91	1.2226	-1.026	0.306
More than 50 percent of auditors revenues from one client	3.16	1.6583	1.387	0.167
Client giving significant gifts to auditors	3.22	1.7469	1.759	0.080
Client is a large company	3.40	1.4543	3.976	0.000
Auditors desire not to lose key client	3.41	1.7776	3.292	0.001
Rotation of auditors every 3 years	3.42	1.6321	3.671	0.000
Client is important to the auditors overall portfolio	3.89	1.2336	10.305	0.000
Competition for clients is high	3.90	1.2139	10.676	0.000
Auditor performs non-audit services for client	3.95	1.2523	10.904	0.000
Auditing client more than 5 years	4.03	1.0656	13.927	0.000
Auditors income depends on retention of a specific client	4.31	1.2019	15.652	0.000

Table 4: Cronbach's Test of Stability

Case Processing Summary			
		N	%
Cases	Valid	202	98.0583
	Excluded[a]	4	1.9417
	Total	206	100
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
0.7512	20

Table 5: Comparison of means for auditors and non-auditor professionals

Var Num	Statements	Auditors				Non-Auditors			
		Rank	Mean	Std. Dev	Sig. (2-tailed)	Rank	Mean	Std. Dev	Sig. (2-tailed)
1	Non-audit services more than 50% of audit fees	1	2.11	1.0976	0.000	1	2.20	1.1618	0.000
18	Audit fee is low compared to other auditors	2	2.41	1.3730	0.000	2	2.36	1.3667	0.000
6	Risk of damage to auditors reputation from public scandal	3	2.43	1.0214	0.000	4	2.57	1.2123	0.000
4	Auditor is a Big4 firm	4	2.46	1.1413	0.000	7	2.74	1.2861	0.024
2	Non-audit services more than 25% of audit fees	5	2.51	1.1753	0.000	5	2.59	1.2173	0.000
7	Risk of disciplinary action by government	6	2.54	1.0102	0.000	6	2.69	1.0948	0.002
8	Risk of litigation against the auditor	7	2.63	1.3604	0.018	8	2.79[2]	1.3891	0.085
9	Risk of disciplinary action by association	8	2.63	1.1229	0.004	3	2.39	0.9958	0.000
10	Board of Directors controls appointment of auditors	9	2.70[1]	1.8491	0.148	9	2.80[1]	1.7290	0.184
11	Audit committee that is independent of directors or owners	10	2.89	1.2402	0.041	10	2.93[1]	1.2162	0.512
12	More than 50 percent of auditors revenues from one client	11	3.10[1]	1.6687	0.591	11	3.20[1]	1.6573	0.183
13	Client giving significant gifts to auditors	12	3.14[1]	1.8098	0.496	12	3.26[2]	1.7120	0.088
5	Client is a large company	13	3.38	1.4349	0.021	15	3.42	1.4716	0.001
17	Rotation of auditors every 3 years	14	3.44	1.6927	0.022	14	3.40	1.5999	0.005
19	Auditors desire not to lose key client	15	3.48	1.8457	0.023	13	3.36	1.7397	0.020
20	Competition for clients is high	16	3.95	1.1424	0.000	18	3.87	1.2598	0.000
15	Client is important to the auditors overall portfolio	17	4.01	1.1107	0.000	17	3.81	1.3016	0.000
16	Auditing client more than 5 years	18	4.23	0.8466	0.000	19	3.91	1.1685	0.000
3	Auditor performs non-audit services for client	19	4.33	0.9703	0.000	16	3.72	1.3505	0.000
14	Auditors income depends on retention of a specific client	20	4.52	1.0605	0.000	20	4.18	1.2688	0.000

[1] Not significant at the .05 level. [2] Not significant at the .10 level.

Table 6: ANOVA (Factor is Specialization)

		Sum of Squares	df	Mean Square	F	Sig.
Audit fee is low compared to other auditors	Between Groups	.078	1	.078	.041	.839
	Within Groups	382.244	203	1.883		
	Total	382.322	204			
Auditor performs non-audit services for client	Between Groups	18.355	1	18.355	12.291	.001
	Within Groups	303.157	203	1.493		
	Total	321.512	204			
auditing client more than 5 years	Between Groups	4.823	1	4.823	4.295	.039
	Within Groups	227.938	203	1.123		
	Total	232.761	204			
Auditor is a Big4 firm	Between Groups	3.449	1	3.449	2.297	.131
	Within Groups	304.873	203	1.502		
	Total	308.322	204			
Auditors desire not to lose key client	Between Groups	.653	1	.653	.205	.651
	Within Groups	646.928	203	3.187		
	Total	647.580	204			
Auditors income depends on retention of a specific client	Between Groups	5.240	1	5.240	3.679	.057
	Within Groups	289.150	203	1.424		
	Total	294.390	204			
Client giving significant gifts to auditors	Between Groups	.573	1	.573	.187	.666
	Within Groups	618.780	202	3.063		
	Total	619.353	203			
Client is important to the auditors overall portfolio	Between Groups	1.839	1	1.839	1.207	.273
	Within Groups	307.789	202	1.524		
	Total	309.627	203			
Competition for clients is high	Between Groups	.178	1	.178	.121	.728
	Within Groups	298.242	203	1.469		
	Total	298.420	204			
Board of Directors controls appointment of auditors	Between Groups	.539	1	.539	.170	.680
	Within Groups	642.749	203	3.166		
	Total	643.288	204			
More than 50 percent of auditors revenues from one client	Between Groups	.386	1	.386	.139	.709
	Within Groups	562.618	203	2.772		
	Total	563.005	204			

Table 6: ANOVA (Factor is Specialization)

Non-audit services more than 25% of audit fees	Between Groups	.318	1	.318	.220	.640
	Within Groups	294.287	203	1.450		
	Total	294.605	204			
Non-audit services more than 50% of audit fees	Between Groups	.347	1	.347	.267	.606
	Within Groups	264.014	203	1.301		
	Total	264.361	204			
Audit committee that is independent of directors or owners	Between Groups	.165	1	.165	.111	.739
	Within Groups	302.586	203	1.491		
	Total	302.751	204			
Risk of damage to auditors reputation from public scandal	Between Groups	.860	1	.860	.656	.419
	Within Groups	266.359	203	1.312		
	Total	267.220	204			
Risk of litigation against the auditor	Between Groups	.991	1	.991	.521	.471
	Within Groups	384.082	202	1.901		
	Total	385.074	203			
Risk of disciplinary action by government	Between Groups	1.037	1	1.037	.914	.340
	Within Groups	230.524	203	1.136		
	Total	231.561	204			
Risk of disciplinary action by association	Between Groups	2.809	1	2.809	2.555	.112
	Within Groups	222.146	202	1.100		
	Total	224.956	203			
Rotation of auditors every 3 years	Between Groups	.104	1	.104	.039	.844
	Within Groups	545.652	203	2.688		
	Total	545.756	204			
Client is a large company	Between Groups	.053	1	.053	.025	.875
	Within Groups	433.147	203	2.134		
	Total	433.200	204			