AUDITORS' PERCEPTIONS OF AUDIT FIRM ROTATION IMPACT ON AUDIT QUALITY IN EGYPT

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ABSTRACT

This study aims to explore professional auditors' perceptions of the impact of audit firm rotation on audit quality. It also investigates the possible benefits and determining factors of mandatory auditor rotation. A sample of 83 auditors was drawn from a group of large firms and another of smaller firms in Egypt. Data were analyzed using one sample t-test; the findings indicate that auditors' perceived mandatory rotation of auditors to have a positive effect on audit quality, a negative effect on client-specific knowledge, and a positive impact on auditors' independence. The impact from the auditors' perspective of industry specialization and fee dependence on the relationship between mandatory auditor rotation and audit quality was also determined.

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Keywords: Mandatory Auditor Rotation; Audit Quality; Auditor's Independence; Egypt

INTRODUCTION

The effect of auditor tenure on auditor independence and audit quality has a long and controversial history. The controversy has largely been fueled by financial scandals, such as the Enron scandal 2001, which raised concerns about whether auditor tenure reduces auditor independence and audit quality. This has raised regulatory interest in using mandatory auditor rotation regulations to enhance auditor independence and reduce the likelihood of audit failure. Therefore, legislative authorities in the United States, for example, issued the Sarbanes-Oxley Act in 2002. The Sarbanes-Oxley (SOX) Act defines mandatory audit firm rotation as *"the imposition of a limit on the period of years during which an accounting firm may be the auditor of record"* (Harris, 2012, p.1). Specifically, it mandates the lead auditor, or coordinating partner and the reviewing partner to rotate off the audit every five years so that the engagement can be viewed with fresh and skeptical eyes (SOX, 2002). The U.S. Congress noted in passing the Sarbanes-Oxley Act the potential benefits of audit tenure to shareholders and various stakeholders (U.S. Senate [2002], Title II, C). It indicated that audit tenure is a means of improving audit quality and therefore it increases the quality of general-purpose financial statements (Carey and Simnett, 2006). In something of a compromise to the parties on each side of the issue, Section 203 of SOX requires a registered public accounting firm to rotate its lead or coordinating audit partner and the reviewing partner so that neither role is performed by the same auditor for the same issuer for more than five consecutive years (Manry, 2003).Many countries such as those in the European Union, the United Kingdom, Hong Kong, China, Japan, Australia, Canada, and Mexico have also passed acts requiring mandatory audit partner rotation (Tafara, 2006).

In contrast to audit partner rotation, however, mandatory audit firm rotation is still debatable. The Conference Board supports the use of audit firm rotation even when audit partner rotation is in use to improve auditor independence (Conference Board, 2005). Many countries such as Brazil, Italy, and Singapore have adopted mandatory audit firm rotation rather than mandatory audit partner rotation (Carey and Simnett, 2006, Tafara, 2006).

Nevertheless, the U.S. General Accounting Office (GAO) pointed out that it would be more prudent to wait for a few years before assessing the effectiveness of implementing the Sarbanes-Oxley Act (SOX)

reform (Ghosh and Moon, 2005). Therefore, the GAO recommends that the Securities and Exchange Commission (SEC) and the Public Company Accounting Oversight Board (PCAOB) monitor and evaluate the effectiveness of the mandatory auditor rotation requirements of SOX in enhancing auditor independence and audit quality (GAO, 2003).

These reforms have attracted the attention of several researchers (e.g., Carey and Simnett, 2006; Tafara, 2006; Manry, 2003; Chen et al., 2008) to examine the impact of audit partner or audit firm rotation on audit quality or earnings quality. However, the results of these studies are fragmented and inconsistent (Chen et al., 2008). In addition, the literature so far seems to have looked into audit rotation in the Western context, while some preliminary results in other contexts suggest that different contexts may cause different effects of audit rotation on audit quality (Lim and Tan, 2010).Moreover, existing research has concentrated on examining the effects on audit quality of audit firm rotation rather than audit partner rotation, with the exception of a few studies, such as Carey and Simnett (2006) and Chen et al. (2008). Against this background, the limitations of existing research may limit generalization of the findings in other contexts, e.g., other countries or reforms. Therefore, this study set out to explore the perceptions of auditors and users of financial statements on the effects of audit firm rotation on audit quality in Egypt.

The outline of the present paper is as follows. The next section reviews related studies and develops the research hypotheses. Section three describes the research design and sample selection and section four discusses the empirical results. The final section discusses the results and presents their implications, suggesting directions for future research.

LITERATURE REVIEW

Based on the in-depth interviews (described below) and previous literature, the research framework was developed (see Figure 1). The model displays the direct and indirect effects of auditor tenure on audit quality due to increased client-specific knowledge and reduced independence, and the potential joint effects of auditor tenure and auditor specialization and fee dependence. The study hypotheses are based on the key links in this model.

Audit Tenure and Audit Quality

Audit quality can be defined in a number of ways and from different perspectives. DeAngelo (1981) defines audit quality as the market-assessed probability that certain financial statements contain material errors and that the auditor will both discover and report them. This definition reflects two main aspects that are related to the phenomena under investigation, i.e. the level of competence of the audit firm (or auditor expertise and experience) and the level of independence.

The main argument of mandatory audit firm rotation is based on the notion that auditors are more likely to compromise on audit quality as the length of the auditor-client relationship (i.e., audit tenure) increases. This is perhaps because auditing a firm for a long time may make auditors over-familiar with the client, complacent, and prone to blind spots (Harris, 2012).In contrast, opponents of mandatory audit firm rotation argue that, with periodic rotation, the lack of client-specific knowledge and experience among new auditors impairs audit quality (Kwon, 2010).

As noted above, there are two forms of mandatory audit rotation: at the audit firm level and at the audit partner level. However, despite the fact that audit partner rotation has been suggested for many years, most studies have focused on investigating the effect on audit quality of audit firm tenure rather than audit partner tenure. This is perhaps due to the lack of data on partner tenure. Many countries do not disclose the audit partner’s name. Moreover, in countries where audit partner rotation is mandatory, there can be

no case of long partner tenure, and hence we cannot investigate whether long partner tenure would lead to low audit quality.

There are mixed and varied findings in this regard, but findings are generally inconsistent with the argument that earnings/audit quality deteriorates with extended audit firm tenure. For example, some studies have found that audit quality improves with auditor tenure (Geiger and Raghunandan, 2002; Mansi et al. 2004; Ghosh and Moon, 2005; Mansi et al., 2004; Chen et al., 2008). In particular, the investigation can be cited by Myers et al. (2003) of the relation between audit firm tenure and two measures of accruals: discretionary accruals and current accruals. Myers et al. (2003) investigate the relation between audit firm tenure and two measures of accruals: discretionary accruals and current accruals. They find a negative relationship between accruals and audit firm tenure, which suggests that longer tenure by an audit firm puts greater limits on earnings management.

Moreover, Myers et al. (2004), using restatements as a proxy for financial reporting quality, find that audit firm tenure is not associated with the probability of restating annual financial statements. They also find no relationship between audit firm rotation and the likelihood that the auditor will identify the need for a restatement. In the same vein, Carcello and Nagy (2004) use cited fraudulent financial reporting as a proxy for audit quality and find that fraudulent financial reporting is more likely to occur in the first three years of audit firm tenure. However, they do not find any evidence that fraudulent financial reporting is more likely to increase with increasing tenure by the audit firm.

Nevertheless, there are other studies that show some conflicting results. Davis et al. (2002) provide evidence that extended audit firm tenure is associated with both positive and negative effects on audit quality. Moreover, Carey and Simnett (2006) using working capital accruals as a proxy for audit quality, find no relationship in the Australian audit market between audit partner tenure and audit quality. However, when using the incidence of going concern opinions and the proclivity to beat earnings benchmarks as proxies for audit quality, they find that audit quality declines when audit partner tenure increases (Carey and Simnett, 2006).

From a different perspective, Johnson et al. (2002) argue that the relationship between audit quality and audit partner tenure depends on the length of the tenure. They argue that audit tenure can be classified into three categories: short (two to three years), medium (four to eight years), and long (nine or more years).They find that short tenure is associated with larger absolute discretionary accruals but long tenure is not, which suggests that long audit firm tenures are not associated with a decline in earnings quality. In addition, Manry et al. (2008) find that, when partner tenure exceeds seven years, audit quality improves for small clients only.

In light of this, whether or not longer audit firm tenure impairs audit quality is still an unresolved question. To address it, the first hypothesis is formulated as follows:

H1. The longer the audit tenure, the lower the audit quality

The opposite and conflicting predictions and findings in prior studies on to the relation between audit tenure and audit quality may be attributable to the failure to jointly examine moderating factors such as auditors' specialization, fees dependence, and auditors' incentives (Doyle and Ge, 2007; Daugherty et al., 2012).Therefore, the following sections focus on identifying the important factors that may moderate the relationship between auditor rotation and audit quality.

Client-specific Knowledge

Arguments in favor of extended auditor–client relations rest primarily on an expertise argument. Previous research has consistently indicated that auditor experience has a positive influence on audit quality (Dougherty et al., 2012). For example, Brazel et al. (2010) find that client-specific knowledge, a proxy for auditor experience, increases auditors' ability to detect fraud indicators.

On a related note, some studies (e.g., Lenox, 1999) argue that non-audit activities performed by the audit firms tends to lead to increasing the auditor's experience and knowledge of the client's operations and environment, and hence increase the ability to detect misstatement in the financial statements. Therefore, providing non-audit activities to the client can have a positive rather than a negative impact on audit quality.

Therefore, mandatory audit firm or audit partner rotation, in particular when there are no effective knowledge-transfer strategies, may lead to the loss of both explicit and tacit client- specific knowledge, and hence to reduced audit quality. Accordingly, it is hypothesized that:

H2: Auditors perceive auditor rotation to have a negative impact on auditor client-specific knowledge, and hence to reduce audit quality

Auditors' Independence

Auditor independence is the cornerstone of the auditing profession. Auditor independence refers to the probability that auditors will report the misstatement in financial statements (Colbert and Murray, 1998) and the ability of auditors to resist pressure from a client (Goldman and Barlev, 1974). Therefore, auditors who have a high degree of independence will have a high probability of detecting and reporting errors or financial misstatements, and hence will be able to determine the true status of the audited firm, i.e. make a high quality audit (DeAngelo, 1981; Colbert and Murray, 1998).

One of the debated factors that affect auditor independence is auditor tenure. It is argued that longer associations between audit partners and their clients can create personal relationships that make it more difficult for the auditor to act independently of the preferences of the client (DeAngelo, 1981). This is further aggravated by the fear of auditors of losing a steady stream of future audit revenues, in particular from important clients who pay the auditor significant audit fees. Accordingly, this may lead auditors to comply with the client's demands (Lim and Tan, 2010). Thus, mandatory partner rotation mitigates the closeness of the relationship between audit partners and their clients, and enhances the auditor's ability to resist pressure from management. The results of this stream of research (e.g., Hattifield et al., 2011) suggest that there is a positive association between audit firm/or audit partner rotation and the magnitude of proposed audit adjustments. Simnett and Carey (2006) also find a negative relationship between auditor independence and the likelihood of issuing a going concern opinion as a proxy of audit quality.

Hence it may be argued that auditor rotation can enhance auditor independence and therefore increase the probability of detecting and reporting financial misstatements. This elicits the hypothesis that:

H3: Auditors perceive auditor rotation to have a positive impact on auditors' independence, and hence on audit quality.

Auditors' Specialization

Auditors' specialization refers to auditors' being specialized in auditing specific industries. This is usually determined by the ratio of the number of clients from a specific industry to the total number of clients of

the auditor (Lim and Tan, 2010). Prior research results indicated that there is a positive association between the level of the auditors' industry specialization and audit quality (Hogan and Jeter, 1999). This is probably because audit firms which are industry specialized invest time and financial resources in developing personnel and technology in specific industries, which should lead to better understanding of the clients' business, operations, and risks, and hence to improved audit quality(Lim and Tan, 2010). As a result, auditors working in audit firms which are industry specialists have more opportunities to develop expertise than those working in non-specialist firms (Bell et al. 2005), and are also less likely to be misled by management representations (Lim and Tan, 2010).

Auditor industry specialization is also a proxy for the incentives for auditors to protect their reputation and minimize litigation risk (Krishnan, et al., 2007).Auditors who are industry specialists probably have incentives to protect their reputation because they have more to lose from poor audit quality in terms of losing future revenue streams and fee premiums. Thus, they have greater incentives than have non specialists to make high quality audits, be more independent, so as to avoid damaging this reputation (Shu, 2000). In light of this, auditor industry specialization can be considered to be proxy for both expertise and the incentive to protect this expertise.

In terms of the relation between auditor tenure and industry specialization, one of the arguments against mandatory auditor rotation is the alleged loss of auditor expertise. Nevertheless, auditors who are industry specialists begin the audit of a new client with superior knowledge of the industry, which facilitates their understanding of the client relative to non specialists (Lim and Tan, 2010), and offsets the negative effect of mandatory auditor rotation on auditor expertise.

Some studies examine the interaction between auditor tenure and auditor specialization, but results differ depending on the measure used for audit quality. Myers et al. (2003) find no such interaction with discretionary accruals. In contrast, using discretionary accruals and restatements as measures for audit quality, other studies document this interaction (Stanley and Dezoort 2007; Gul et al. 2009).

From a different perspective, as auditor tenure increases, auditors tend to develop more blind spots in terms of detecting problems and errors in the client's financial statements. This probably arises because of reduced vigilance through over familiarity with the client, or because the auditor has not kept sufficiently abreast of changes in the client and in the industry (Manry et al., 2008). Nevertheless, the personal and technological resources of audit firms specializing in particular industries is likely to enable their auditors to be more responsive to changes in the client's business or industry. To the extent that the environment is dynamic over time, these arguments suggest that audit quality is more likely to increase with tenure for specialist auditors than for non specialist auditors (Lim and Tan, 2010). Accordingly, we posit that greater clarity on the auditor tenure–performance relationship requires the joint consideration of the auditor's industry specialization and hypothesize the following:

H4: As auditor tenure increases, audit quality increases with auditors' industry specialization

Fee Dependence

Proponents for auditor rotation argue that, with extended auditor tenure, the auditor becomes less independent and audit quality goes down, resulting from fee dependence between auditor and client. However, with mandatory auditor rotation, auditors will be more independent because the audit engagement will not be perceived as permanent and hence, they will not be risking a stream of revenues that they believed would continue uninterruptedly (Dao et al., 2008; Ye et al., 2011). In particular, this suggests that audit quality will be lower with longer auditor tenure, the effect being magnified by high fee dependence, because an auditor will be reluctant to lose a client who contributes significantly to the audit firm's income (Lim and Tan, 2010).

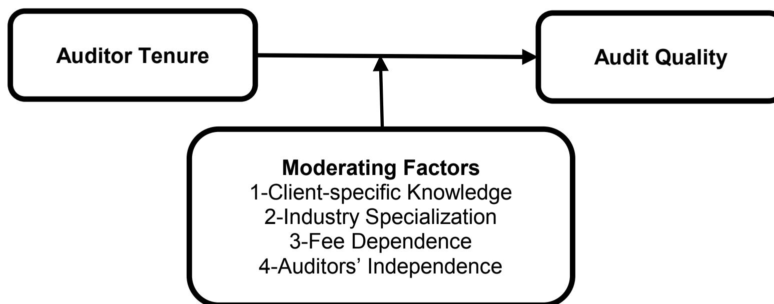
Nevertheless, studies which examine the relationship between auditor tenure and fee dependence reach varied and mixed conclusions. On the one hand, some studies examine the interaction between auditor tenure and audit fees. For example, Gul et al. (2007) find that non-audit fees (but not audit fees) are associated with poorer audit quality, in terms of higher discretionary current accruals for firms with short auditor tenure. On the other, Stanley and DeZoort (2007) find that, with short auditor tenure, audit fees are associated with improved audit quality, in terms of lower likelihood of restatement for firms. Thus, the joint consideration of fee dependence and auditor tenure on audit quality does not indicate a clear direction; with greater economic incentives to side with the client with higher fee dependence, audit quality may suffer with extended tenure. Accordingly, it is hypothesized that:

*H5**:** As auditor tenure increases, audit quality decreases with high fee dependence*

Exploratory Study

In order to better understand the effect of mandatory rotation on audit quality, nine semi-structured interviews with professional auditors from auditing firms' different sizes were conducted. Each interview lasted about two hours. Data from these interviews were used to develop the framework shown in Figure 1. In each interview, the participant was asked about his/her perceptions of the possible influence of mandatory auditor rotation on audit quality in general and on client-specific knowledge and auditor independence in specific. Participants were also asked about the role of industry specialization and fee dependence in the relationship between auditor rotation and audit quality. The results show that there is no mandatory auditor rotation in Egypt; however, some international companies and big national companies have a specific condition to change the auditor every three to five years. They tend to change either the audit partner or the whole audit firm. Moreover, some big audit firms have internal policies to change the audit partner every seven years. Furthermore, auditors have indicated many challenges that might affect the application of mandatory auditor rotation in Egypt, and hence, it is argued, impact on audit quality such as the significant gap between the audit quality of big auditing firms and that of other auditing firms; the lack of a wide pool of qualified auditors to choose from when changing auditors; and the significant variation in audit fees between big auditing firms and other auditing firms in Egypt.
The foregoing review of the literature, along with the results of the in-depth interviews, shows debated relationships between mandatory auditor rotation and factors such as client-specific knowledge and auditor independence, which in turn affect audit quality. In addition, there is also the debated joint effect of auditor mandatory rotation, industry specialization and fee dependence on audit quality. Figure 1 show these expected relationships.

Figure 1: The Research Framework



This figure shows the research framework that identifies the proposed independent and moderating variables that impact audit quality.

DATA AND METHODOLOGY

Research Setting: The Egyptian Accounting and Auditing Environment

All registered companies in Egypt are required to keep proper accounting records and prepare audited financial statements annually. The Company Law 159/1981 and its amendments require that external audits should be carried out in compliance with the Accounting Practice Law133/1951. In addition, the Capital Market Law 95/1992 and its amendments in 1997 requires all listed companies in the Egyptian stock exchange to prepare financial statements in compliance with the Egyptian Accounting Standards; in the absence of Egyptian Accounting Standards regarding the accounting treatment, the requirements set by the International Accounting Standards (IAS) will be applied (Wahdan et al., 2012). In the case of bank audits, the Central Bank of Egypt reviews the auditor's report and annual financial statements before the shareholders' meeting, according to the Banking Law 163/1967 (Wahdan et al., 2012). Finally, in the case of state-owned firms, the Central Auditing Organization, which is an independent public organization reporting directly to the Parliament, is responsible for auditing the state-owned firms (CAO, 2012).

According to the Accounting Practice Law 133/1951 and its amendments, public accountants must register with the General Register for the Accountants and Auditors, a unit in the Ministry of Finance, and does not require a qualifying examination for entry (CAO, 2012). In 2009, an Auditors Oversight Board (AOB) was established to monitor, inspect and review auditors' work and to assess auditors' independence and compliance with auditing standards (EFSA, 2012).

In Egypt, neither audit firm rotation nor audit partner rotation is mandatory or even a policy. However, there are signs of currently increasing concern by various stakeholders in Egypt to adopt mandatory audit firm rotation, in particular after recent political and administrative changes and demands for more transparency, to attract foreign investments and thus enhance economic growth and people's lives.

However, some features of the legal environment in Egypt which may affect the relationship between audit firm rotation and audit quality is that almost no lawsuits have ever been brought against audit firms in the past. In addition, the enforcement of the laws is typically weaker in Egypt than in other, Western, countries. Therefore, the auditor liability structure and the strength of law enforcement may affect the auditors' incentives to maintain audit quality. Moreover, audit firms face higher levels of potential liability than do auditors in countries where audit firms can be formed as entities with limited liability (e.g., the United States or the United Kingdom). Prior research has demonstrated the conditions under which audit quality is lower if auditors have limited liability, as opposed to unlimited liability (Dye, 1995). Finally, there is generally no separation between owners and management in public companies and communication with shareholders is markedly weak (Wahdan et al., 2012).

Population and Sample

The population includes all professional auditors working in all audit firms during the time of the study. There are 621 chartered accountants who are currently registered at the Egyptian Society of Accountants and Auditors, Cairo (Egyptian Society of Accountants and Auditors, 2012). In addition, there are more than 30,000 registered accountants at the Registration Committee for Accountants and Auditors in the Ministry of Finance list (Wahdan et al., 2012). However, no comprehensive list includes all the names and contact information of the working auditors at the time of the study. Accordingly, the study used a non-probability sample to select the participants of the study.

Most of the non-big audit firms are small firms which have one or more auditors, one of whom is usually the owner, with a trivial market share of the industry's clients. Therefore, the study used a quota sample

so as to be able to select the appropriate audit firms from the non-Big auditing firms which meet the criteria for testing the study hypotheses, such as having a significant market share, relevant auditing experience, and a considerable number of auditors and managerial levels.

The survey was distributed to 150 auditors from 9 different-sized auditing firms: 6 from the group of bigger auditing firms, and 3 from the remainder. Data were collected from September 2012 to January 2013. Of the surveys distributed, 86 were returned, a response rate of 55.3%. However, 3 surveys were discarded because of incompleteness. Therefore, only 83 surveys were used, comprising 51 from the partners in the group of bigger firms, and 32 from those in the remaining firms. Table 1 presents the sample description.

Table 1: Sample Description

Type of Auditing Firms Items	Big-sized firms	Non Big-sized firms
- No. of auditors in the sup-sample (Percentage)	51(61.4%)	32 (38.6)
- Auditors Experience (years)*	25 (1.28)	17 (1.56)
- Expert industries Auditors (years)*	5.2 (1.17)	3.4 (1.45)

*This table shows the characteristics of the sample; the 83 auditors in Egypt. * Numbers indicate means (standard deviation)*

Survey Instrument and Data Collection

The purpose of the study was explained to the Office Managing Partner, and his/her assistants among the professional staff. The number of surveys to be distributed in the firm was agreed and the surveys were sent to the Office Managing Partner for distribution to those partners willing to participate in the study. Each survey was prefaced by a covering letter, thanking the participant and requesting the participant not to consult with anyone while responding to the questions.

The measurement items used to operationalize the research constructs were derived from previous studies and the wording of the items was adjusted to match the present context. New items were added when necessary. The survey instrument included 17 statements, and participants were asked to rate their level of agreement with each statement on a 5-pointLikert scale ranging from ‘strongly disagree’ to ‘strongly agree’. In addition, there were two demographic questions to determine the partner’s experience and industry expertise. The measurement scales intended to represent the research variables were developed and tested to ensure the validity and reliability of the measurement scales.

Exploratory Factor Analysis (EFA) and Cronbach α were used to test the validity and reliability of the measurement scales. The results of EFA indicate that six factors were extracted from the data: auditor tenure, audit quality, client-specific knowledge, industry specialization, auditor independence, and fee dependence. Variables which loaded significantly > 0.5 on any factor and not > 0.3 on any other factor were considered to belong to the factor (Field, 2010). Therefore, some statements were excluded because they did not meet this criterion. In addition, the eigenvalues and cumulative variance results (4.73, 42,936% respectively) indicate that the construct validity of the instrument was satisfactory. Finally, with respect to the reliability test, all the Cronbach α results indicate that the reliability of these factors was always over 0.7.

RESULTS AND DISCUSSION

Results

With regard to the perceptions of audit engagement partners about the appropriate length of the audit tenure needed to become fully effective on a new audit assignment, the results show that partners reported an average (SD) of 3.8 (1.6) years to be able to achieve acceptable audit quality levels, as indicated in Table 2. Further analysis of the responses of partners shows that 26% of them believe they need more than 5 years to perform effective audit assignment, while only 16% claimed that they needed at least two years to effectively perform an audit assignment. Most of the auditors indicated that they needed between 3 and 5 years to understand the client and hence effectively perform an audit assignment. The results do not significantly differ by audit firm size, whether bigger or smaller, using the t-test statistical test as shown in Table 2.

Table 2: Partners' Responses about Appropriate Length of Audit Tenure

	Overall Sample	Big-sized Firms	Non Big-sized Firms	t-statistic
Length of audit tenure (Mean & SD)	3.8 (1.6)	3.9 (1.3)	3.6 (1.5)	1.12
≤ 2 years	13 (16%)	6(12%)	7 (23%)	1.06
> 2 years to ≤ 5 years	48 (58%)	33 (65%)	15 (47%)	1.11
> 5 years	22 (26%)	11(23%)	11 (30%)	0.99

*This table describes the overall sample, and the difference between groups of auditors in terms of audit tenure and auditors' experience. *, **, *** indicate significance at ≤ 0.05, 0.01, and 0.001 levels, respectively (two-tailed).*

The research framework that identifies the proposed independent and moderating variables that impact audit quality has been examined on two-levels: the overall sample level indicated in Table 3, and on the sub-samples level; i.e., the Big-sized auditing firms and Non Big-sized auditing firms indicated in Table 4. With respect to the implications of auditor rotation on audit quality, auditors were asked about their perceptions of the mandatory auditor rotation requirement on audit quality and the expected benefits, such as enhancing auditor independence along with the inevitable costs, such as the loss of client-specific knowledge. Their perceptions were also identified of the role of industry specialization in offsetting the negative impact on the relationship between mandatory auditor rotation and audit quality, in addition to the impact of fee dependence on magnifying the negative effect of extended auditor tenure on audit quality. One sample t-test was used to test the research hypotheses. Auditors' perceptions were determined according to the extent of their agreement on a 5-point scale (ranging from 1 'strongly disagree' to 5 'strongly agree') with a statement about the effects of mandatory partner rotation. Then, the difference of these answers from neutral was calculated as the difference between the mean of auditors' answers of the statements and the neutral. The t-test was used to examine whether the auditors' answers significantly differ from the neutral (i.e., Midpoint '3' on the Lickert scale) (Daugherty et al., 2012; Field, 2010).

Consistent with H1, auditors agree with the statement that mandatory auditor rotation will result in higher audit effort and hence improve audit quality. Further, they perceive that longer auditor tenure will make audit partners less skeptical or more complacent, as indicated by the means and p-values in Table 3.

Hypotheses 2, 3, 4 and 5 were supported. Consistent with H2, mandatory audit partner rotation reduces client-specific knowledge (Mean = 4.23, $p < 0.05$). In addition, audit engagement auditors believe that audit quality is greatly affected by the loss of client-specific knowledge due to mandatory partner rotation (Mean =4.01, $p < 0.01$). In support of H3, auditors' responses show that they believe mandatory partner rotation to positively affect auditors' independence, either their attitude of independence or their

impression of the partner's independence, as indicated in Table 3 (Mean = 4.24, $p < 0.01$, and 4.11, $p < 0.05$ respectively). Further, mandatory auditor rotation was also seen as reducing the likelihood of inappropriate attachment between auditor and client, i.e., reducing the likelihood of developing a mutual reciprocity of commercial or other privileges between the audit engagement partner and the client's management that would affect the auditors' independence and hence their ability to report financial misstatements (Mean = 3.95, $p< 0.05$).

Table 3: Perceptions of auditors of the effect of partner rotation on audit quality

Hypotheses	Statements		Mean (SD)	Diff. From Neutral[1]	t-statistic
H1: audit tenure & audit quality	1-	Mandatory partner rotation will result in higher audit effort	3.10 (1.23)	0.10	1.04
	2-	The longer the partner tenure, the more complacent s/he will be	3.45(1.42)	0.45	1.20
	3-	The longer the partner tenure, the less skeptical s/he will become	3.56 (1.20)	0.56	1.88
H2:audit tenure, client-specific knowledge, & audit quality	1-	Client-specific knowledge is lost due to partner rotation	4.23 (0.8)	1.23	2.03*
	2-	When audit partners are required to gain new client-specific knowledge, audit quality declines	4.01 (1.2)	1.01	2.10*
H3: audit tenure, independence, & audit quality	1-	Partner rotation improves the independence of the partner's attitude	4.24 (1.28)	1.24	2.36**
	2-	Partner rotation improves the impression of independence given by the	4.11 (1.40)		
		partner	3.95 (1.50)	1.11	2.81*
	3-	Partner rotation reduces the likelihood of inappropriate client attachment			
				1.95	3.14 ***
H4: audit tenure, industry specialization, and audit quality	1-	when audit partners are required to gain new industry expertise, audit quality declines	4.46 (0.86)	1.46	3.05***
	2-	mandatory partner rotation will not reduce audit quality if the partner has industry expertise	3.92 (1.3)	0.92	2.04*
	3-	partners' industry specialization offsets the negative impact of mandatory partner rotation on audit quality	3.45 (0.92)	0.45	1.98*
H5: audit tenure, fee dependence, & audit quality	1-	the higher the fee dependence, the lower the audit quality	4.11 (1.34)	1.11	2.34**
	2-	the higher the fee dependence, the lower the audit quality, even if there is a mandatory partner rotation requirement	4.23 (1.62)	1.23	2.44**

1. Difference from Neutral: The difference between the mean of auditors' answers to the statements and the Neutral (Midpoint of the scale '3').
*This table shows the results for hypotheses testing. *, **, *** indicate significance at ≤ 0.05, 0.01, and 0.001 levels, respectively (two-tailed).*
The T-test examine whether the answers significantly differ from the neutral (Midpoint "3" on the Lickert scale ranging from 1 = totally disagree to 5 = totally agree).

Consistent with H4, auditors believe that industry specialization plays a major role in offsetting the negative impact of mandatory partner rotation on audit quality (Mean = 3.45, $p< 0.05$). Auditors believe that audit quality will not be reduced due to mandatory partner rotation if the auditor has industry expertise (Mean = 3.92, $p< 0.01$). However, as indicated in Table 3, if audit partners are required to gain new industry expertise, audit quality declines (Mean = 4.46, $p< 0.001$). A noteworthy observation here is that a significant difference between sub-samples (bigger and smaller audit firms) on the effect of industry specialization on the relationship between mandatory partner rotation and audit quality. The perceptions of auditors about the role of industry specialization on the relationship between mandatory partner rotation and audit quality is more apparent on the level of the bigger audit firms than on the level of the smaller audit firms as indicated in Table 4.

Finally, in support of H5, audit engagement partners agree that higher fee dependence will reduce audit quality (Mean = 4.11, $p< 0.05$). It has also been found that auditors believe that fee dependence will have a negative effect on audit quality even if partner rotation is mandatory (Mean = 4.23, $p< 0.01$). However, this differs significantly between the sub-samples (big-sized audit firm vs. non-big audit firms). More auditors from non-big audit firms think that mandatory partner rotation will not have a great effect on audit quality for important clients than auditors from big-sized audit firms as indicated in Table 4.

Discussion

This research aimed to shed further light on the relation between mandatory auditor rotation and audit quality. The research explores the perceptions of professional auditors in Egypt about the implications of mandatory auditor rotation on audit quality, at the same time identifying their perceptions of the expected benefits from and disadvantages of a partner rotation requirement. The auditors' perceptions indicate that there is a negative relation between long auditor tenure and audit quality. There is a negative relation between client-specific knowledge and mandatory auditor rotation. There is a positive relation between auditors' independence and mandatory auditor rotation. Industry specialization can offset the negative effect of mandatory rotation on audit quality. Finally, high fee dependence will negatively impact the argued positive impact of mandatory rotation on audit quality.

Table 4: Comparison between Perceptions of Auditors in Big-Sized and Non Big-Sized Auditing Firms about The Effect of Partner Rotation on Audit Quality

Hypotheses	Statements	Big-sized	Non Big-sized	t-statistic
H1: audit tenure & audit quality	1- Mandatory partner rotation will result in higher audit effort	3.12	3.10	1.12
	2- The longer the partner tenure, the more complacent s/he will be	3.11	3.12	1.09
	3- The longer the partner tenure, the less skeptical s/he will become	3.09	3.10	0.97
H2:audit tenure, client-specific knowledge, & audit quality	1- Client-specific knowledge is lost due to partner rotation	3.12	3.14	0.67
	2- When audit partners are required to gain new client-specific knowledge, audit quality declines	3.09	3.10	0.87
H3: audit tenure, independence, & audit quality	1- Partner rotation improves the independence of the partner's attitude	3.18	3.14	1.24
	2- Partner rotation improves the impression of independence given by the partner	3.15	3.20	1.08
	3- Partner rotation reduces the likelihood of inappropriate client attachment	3.09	3.12	0.98
H4: audit tenure, industry specialization, and audit quality	1- when audit partners are required to gain new industry expertise, audit quality declines	4.12	3.45	2.98*
	2- mandatory partner rotation will not reduce audit quality if the partner has industry expertise	4.22	3.24	2.11**
	3- partners' industry specialization offsets the negative impact of mandatory partner rotation on audit quality	4.23	4.02	2.98*
H5: audit tenure, fee dependence, & audit quality	1- the higher the fee dependence, the lower the audit quality	4.24	3.12	3.11*
	2- the higher the fee dependence, the lower the audit quality, even if there is a mandatory partner rotation requirement	3.65	3.05	3.45*

*This table shows the significance difference between perceptions of auditors about impact of audit rotation on audit quality using T-test Statistic. *, **, *** indicate significance at ≤ 0.05, 0.01, and 0.001 levels, respectively (two-tailed).*

Auditors' perceive longer audit tenure to have a negative effect on audit quality. This is perhaps because most of the auditors in our sample reported that they need at least two years to perform audits effectively. This result is consistent with the findings of Carey and Simnett (2006). Moreover, the in-depth interviews with auditors showed that partners need from three to five years to be able to understand client-specific operations and business, along with corporate governance mechanisms and internal auditing structure. Therefore, some auditors say that the five-year mandatory rotation requirement may in fact lead to effective audits rather than ineffective audits. This is because extended audit tenure leads to savings in audit effort and hence reduced the cost of the auditing process. It also leads to an increase in audit quality due to increasing the ability to find errors in the financial statements. In addition, some auditors commented that the negative impacts of extended auditor rotation, such as becoming complacent or losing the advantages of a fresh look, as indicated in the Sarbens-Oxley Act, are expected to become apparent after 5 years or more of an audit engagement relationship.

Inconsistently with previous discussions, the results indicate a positive relationship between client-specific knowledge and audit quality, and a negative relationship between mandatory auditor rotation and client-specific knowledge. Auditors agreed that they need time to develop client-specific knowledge and mandatory five-year partner rotation can harm audit quality due to the lack of client-specific knowledge. In line with this, Daugherty et al. (2012) note the importance of building client relationships. They find that it takes several years to establish relationships with the client's management. These relationships are crucial to identifying risk in order to develop the audit processes appropriate to addressing these risks. Accordingly, audit quality can be negatively affected when a lead partner who has gained this specific knowledge of the client is replaced.

In addition, the findings indicate that auditors in Egypt perceive industry specialization to be a major contribution of the audit firm to audit quality. This is because industry specialization enhances the pace and quality of the audit process, and increase the client's trust in the audit firm. Moreover, auditors agreed that it offsets the negative impact of auditor rotation on audit quality. Nevertheless, some of the auditors' comments in the in-depth interviews indicated that industry specialization augments part (but not all) of the lack of client-specific knowledge in very short-term audit tenure (less than three years). This is because firms working in the same industry are similar in terms of the company by-laws and industry regulations and rules, but there are still differences between them in terms of their business and accounting practices and policies. Furthermore, the results indicate that the perceptions of the auditors in smaller audit firms of the impact of industry specialization on the relationship between auditor rotation and audit quality is lower than the perceptions of auditors in the big audit firms. This is perhaps due to the lack of auditors who are industry experts in non-big audit firms in Egypt. Prior research has shown that industry specialization is a differentiation strategy which is primarily used by the big-sized auditing firms in Egypt, such as PricewaterhouseCoopers (PwC)-Egypt, as a means of differentiating itself from the rest of the market (Abdel-Meguid, 2011).

Another important finding is auditors' perceptions of mandatory partner rotation. It was shown that auditors generally agree that mandatory rotation will improve independence in attitude and the impression of independence. Mandatory partner rotation will also reduce the likelihood of inappropriate client attachment. Finally, with regard to the role of fee dependence, it was shown that auditors are inclined to agree that high fee dependence may make partners reluctant to lose a client who contributes significantly to the audit firm's income, even if the audit firm knows that these audit fees are not permanent, due to mandatory auditor rotation. A possible explanation for this result is that the audit market in Egypt is relatively saturated with weak demand for professional auditing services, the non-big auditing firms in particular, because the big auditing firms have almost 60% of the market share (EFSA, 2012). Therefore, a client once lost maybe very difficult to replace, given especially the limited number of public firms in Egypt (Anis, 2006).

CONCLUSION

The research aimed at exploring the perceptions of professional auditors in Egypt about the implications of mandatory auditor rotation on audit quality, at the same time identifying their perceptions of the expected benefits from and disadvantages of a partner rotation requirement. Using a survey-based approach with 83 auditors in a number of Big-sized and Non Big-sized auditing firms in Egypt, The findings show that the auditors' perceptions indicate that there is a negative relation between long auditor tenure and audit quality. There is a negative relation between client-specific knowledge and mandatory auditor rotation. There is a positive relation between auditors' independence and mandatory auditor rotation. Industry specialization can offset the negative effect of mandatory rotation on audit quality. Finally, high fee dependence will negatively impact the argued positive impact of mandatory rotation on audit quality.

The findings indicate that the auditors in our survey perceive that the length of audit tenure required to make effective audits should be between three and five years. Therefore, public policy legislators such as the Egyptian Financial Supervisory Authority (EFSA) and the Egyptian Society for Accountants and Auditors are advised to take this into consideration when developing the mandatory auditor rotation requirement. Furthermore, the findings indicate the crucial role in audit quality of client-specific knowledge and industry specialization. Thus, audit firms should invest in the information technology required to gather information and assess risks in different industries, and should keep auditors abreast of changes in the markets and industries. Moreover, for industry specialization to be effective, the audit firms should be learning organizations. Audit firm personnel should be committed to continually seeking new in-depth knowledge about clients and their industries (Abdel-Meguid, 2011)

Finally, our surveyed auditors acknowledged the positive impact of mandatory auditor rotation on audit quality and on auditors' independence. Therefore, legislators should issue auditor rotation requirements which take into consideration the appropriate audit tenure length to making effective audits in Egypt. They should also determine the appropriate cooling-off period required before an auditor can return to audit any client again. Moreover, the Auditors Oversight Board (AOB) should take high fee dependence into consideration when reviewing and assessing audit quality.

This research has some limitations that may be seen as possible avenues for future research. This study focused only on auditors' perceptions. Thus, future research can investigate the perceptions of other interested parties, such as clients, auditing profession associations and legislators. Moreover, this research reports only the perceptions of auditors. Hence, the causality implied by the research framework cannot be tested using this data. Future research could use case studies from different auditing firms representing different lengths of audit tenure and extract various indicators of audit quality in order to empirically test the causal relationship between audit tenure and audit quality in Egypt.

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