

Contemporary trends in external auditing and its role in reducing audit risks-A field study of external auditing offices in Sudan



Anass Hamad Elneel Adow ^{1,*}, Assad Mubarak Hussien ²

¹College of Business Administration, Prince Sattam Bin Abdulaziz University, Alkharj, Saudi Arabia

²College of Business Administration, Prince Sattam Bin Abdulaziz University, Hotat Bani Tamim, Saudi Arabia

ARTICLE INFO

Article history:

Received 7 January 2020

Received in revised form

18 April 2020

Accepted 26 April 2020

Keywords:

Industrial specialization

External auditor

Analytical review

Continuous review

ABSTRACT

This study aims to evaluate the impact of industrial specialization of the external auditors, analytical review, and continuous review process on the underlying audit risks. The external audit firms placed in Khartoum city of Sudan were taken as the population of the research, and from this, a sample of 40 external auditors was selected randomly. A questionnaire was floated to all selected samples and was returned 100% valid to be incorporated in the research. SPSS software was used to evaluate the measures by using simple linear regression analysis. Scale reliability was tested by using Cronbach alpha test and found its value as 0.806 for the overall scale. The findings indicated that all the independent variables, such as industrial specialization of the external auditors, analytical review, and continuous review, help to reduce the audit risk by 10%, 23%, and 13%, respectively. In view of these findings, it is recommended that external auditors must take part in training and development activities in order to abreast of these requirements. Likewise, the clients are also advised to emphasize the industrial specialization of the external auditor while focusing on analytical review as well as continuous review.

© 2020 The Authors. Published by IASE. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Auditing risks pose threats to the auditor's standing, the community's confidence in his credibility in the audit, analyzing the financial statements, and expressing a substantive technical opinion on it. Studying the risks related to this work and accepting the degree of these risks and planning to do the audit so that it reduces these risks to the lowest possible extent. To meet the expectations of the users of the financial statements and the extent of the fairness of these lists and the sincerity of their expression of the result of the activity and the financial position of the enterprise, and since the auditor's role is to reach the reality of the financial statements and their fairness, and the auditor also operates under a kind of count M sure, so that he must reduce the uncertainty that leads to a degree of certainty, and with regard to his opinion on the reliability and fairness of the financial statements.

The problem of the study is the lack of clarity about the impact of the trends that appeared in the external audit and aimed to improve the performance of the external auditor, thereby reducing the risk of the audit. Precisely, the study problem can be formulated in the following questions:

- a. Is there a relationship between the industrial specialization of the external auditor and the audit risk?
- b. Is there a relationship between the analytical review and the audit risk?
- c. Is there a relationship between the continuous review and audit risk?

This study evaluates to test the validity of the following hypotheses:

- a. There is a statistically significant relationship between the industrial specialization of the external auditor and the audit risks?
- b. There is a statistically significant relationship between the analytical review and the audit risks.
- c. There is a statistically significant relationship between the continuous review and audit risk.

* Corresponding Author.

Email Address: a.adow@psau.edu.sa (A. H. E. Adow)

<https://doi.org/10.21833/ijaas.2020.07.015>

Corresponding author's ORCID profile:

<https://orcid.org/0000-0002-0280-3726>

2313-626X/© 2020 The Authors. Published by IASE.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

This study analyzes the contemporary trends of external auditing and their impacts on audit risks. This area of research is a sort of neglected one, and the researchers have not given due attention, specifically in the Sudanese business environment. Such contemporary trends of external auditing play an effective role in judging the effectiveness of professional performance. The Sudanese business environment needs to have a developed professional level for effective audit practices as well as laying the foundations to reduce the risks of external audits.

2. The study methodology

The study followed the deductive approach in formulating the problem, hypotheses, and study dimensions. The inductive approach was applied in testing the hypotheses of the study, whereas the descriptive analytical approach was applied in the field study, and the historical approach was taken into consideration to apply previous relevant studies. Primary data were collected through the questionnaire form various audit offices placed in Khartoum city during the year 2018, while the secondary data sources were books, references, periodicals, and university theses.

3. Literature review

Dunn and Mayhew (2004) hypothesized research to explore industry specialization of the auditor and quality of disclosures. They found that in a highly regulated work environment, industrial specialization is not significant than in a less regulated work environment. Romanus et al. (2018) indicated that industrial specialization improved the quality of financial disclosures and emphasized upon the clients to stress upon engaging auditors who qualify sufficient industry specialization. Low (2004) found that auditor knowledge of industry under audit provided better risk assessment and quality of financial disclosures as compared to the auditors who belonged to the different industries. Stein (2019) similarly found a significant auditor industrial specialization and quality of financial disclosures. Minutti-Meza (2013) claimed that industry specialization of the auditor improves audit quality and provide with quality audit disclosures. Habib and Bhuiyan (2011) identified the impact of the sectoral specialization of the external auditor on reducing the review risk and assessing the extent to which the parties in the review process accept the direction of the specific specialization of the external auditor. This study indicated that a comparison of the client's performance indicators with standard activity levels helps reduced review risk and great accuracy. Dao and Pham (2014) aimed a study to propose an integrated framework that includes a model for measuring actual risks in the review process by analyzing the internal control structure, effectiveness of analytical review procedures, and test verifications. The study suggested basic parameters to evaluate eventual risk in the review

process and proposed that effective review must cover four types of risks to overcome by issuing a professional opinion based on objective evidence. Ali et al. (2007) aimed at assessing the theoretical framework of the risks of the external audit, studying and analyzing the different patterns of external audit risks, and determining the role of the longevity of the contractual relationship of the audit offices with companies. The study concluded that the length of the contractual relationship with the client is the period during which the audit office examines and reviews the company's business. The audit clients are among the important factors that the external auditor takes into account when planning the external process. Al Bhoor and Khamees (2016) analyzed the audit criteria, its role in reducing audit risks, and the relationship between the low level of the auditor performance and the audit risks. The study indicated a positive relationship between the auditor's performance and the audit risks and suggested that the effective application of international auditing standards contribute to reducing control risks. Lowensohn et al. (2007) tested the role of the contemporary trends of internal audit and the factors affecting the quality of internal audit work performance in order to support corporate governance, risk management, and enhancing performance efficiency of an audit to reduce audit risks. The study concluded that providing an internal review of services and consulting to different departments by the internal audit in order to verify the implementation of operations and performance of activities in accordance with the regulations and policies established as well as carrying out a continuous and periodic review of risk control processes, and active interaction of the internal audit department with the parties to governance significantly reduce risks reviews.

4. Theoretical framework

4.1. Industrial specialization of the external auditor

The industrial specialty was defined as "the auditor's performance to provide with auditing services to clients belonging to a single industrial sector, including the similar nature of operations carried out by the organization in the same sector and the possibility of obtaining knowledge and expertise related to the nature of those operations" (Sun and Liu, 2013). It was also defined as "having a broad area of scientific knowledge and skills in a particular field that the reviewer acquires as a result of specialization in auditing clients of a particular industry or performing specific tasks in a particular economic activity" (Lowensohn et al., 2007). The external auditor was also defined as the professional if he or she had a significant share of the auditing market, vis-à-vis the finest of the external auditors working in the same industry (Elder et al., 2015). It was also defined as the ability of the audit office to

acquire a substantial share in the market for a specific industry along with a group of reviewers with specialized experience in the particular industry (Bedard and Graham, 1994). The researchers believe that the sectoral specialization of the external auditor means the focus of the audit offices in reviewing a specific economic activity rather than in reviewing many other economic activities. The external auditor has the experience and acquires competence in reviewing this activity repeatedly for the audit clients and therefore earns a good reputation for reviewing this activity (Bills et al., 2015). The importance of the sector-specific external auditor stems from its role in strengthening the independence and professional capabilities of the external auditor in the face of cases of financial fraud and providing with an appropriate degree of quality accounting or financial disclosures in a manner that increases the quality of the professional performance of the external auditor in the audit services market and restricting practices that management follows in manipulating accounting earnings (Ali et al., 2007).

Just as important is the ability of specialized auditing institutions to establish a structure of knowledge and experience specific to that industry and thus provide services of high quality in performance, obtaining accurate knowledge of accounting standards and reporting requirements in the industry and assisting the auditors in uncovering profit management cases. Specialization aims to provide high-quality services compared to non-specialized auditors, and this leads to raising the quality content for the financial statements, reports, and adding credibility, thereby increasing the quality of the audit process. It also aims to increase the degree of market focus by increasing the market share of the audit institution from clients and workers in the same industry in order to develop audit technology applied and implementing advanced auditing total quality management concepts.

4.2. Analytical review

The analytical review is defined as “an approach taken by the auditor to obtain sufficient evidence, enabling him to study the relationships between financial data and non-financial data and to verify the logical extent of relationships as well as finding out any unusual fluctuations in them in addition to ensuring the reasonableness of the book relationships.” It is also defined as “a study of the relationships between financial and non-financial data in order to compare recorded versus expected values observed by the auditor.” Or it is the comparison of current financial information with expected financial information reached through budgets or forecasts.

The analytical review aims to assist the auditor in determining the nature of the organization, duration of work accomplishments as well as identification of important elements, deviations, and weaknesses that

require special professional attention during the performance of the audit process and it also provide a good basis for submitting proposals to management. Analytical procedures are used in assessing risks by obtaining an understanding of the enterprise and its environment and assessing the risks of errors by understanding internal control systems, their relative importance, and the probability of errors in the relevant items and the nature of evidence when determining whether the procedures are substantively fit analytically.

4.3. Continuous review

The continuous review is defined as “a methodology that enables independent auditors to provide assurance to the management in the form of the audit report for matters immediately after their occurrence that is basically the direct responsibility of the management to take care of.” It is the method that the auditor uses to perform activities related to the audit process on a continuous basis, which includes a series of activities to ensure continuous evaluation of risk control (Rikhardsson et al., 2019). It is also defined as a process of collecting and evaluating audit evidence to determine the efficiency and effectiveness of accounting systems in order to help protect assets, maintain the integrity of data and prepare reliable financial statements. It is “an approach that enables accountants to submit written assurances on the subject of the audit, not an opinion, that falls under the responsibility of the management through various audit reports to shareholders, management and potential clients immediately or shortly after the events related to the audit occur” (Bedard and Graham, 1994).

The continuous review aims to give honesty to the concurrent disclosure of companies via the internet and to help the company's stakeholders, especially shareholders and the Capital Market Authority, and all visitors by practicing continuous immediate control of the company. It determines the extent of efficiency and effectiveness of immediate accounting systems in protecting assets and maintaining objectivity, data, and production of reliable financial information on the company's website as well as the external auditor's report. The continuous review is characterized as the best approach to planning and implementing continuous review programs for companies' websites as it is the most important information technology tool used in the delivery of immediate accounting information and as it fits with large economic units.

4.4. The concepts of audit risks

The risk of the audit was known to be the possibility that the auditor issued an inappropriate opinion on the financial statements after reviewing it. He was giving an unqualified opinion on the financial statements which were distorted substantially due to his failure to discover the material errors included in the information

appearing in the financial statements or to issue a conservative opinion on the financial statements that may not be conceded as fundamentally misrepresented (Røyksund and Flage, 2019). It was also known as “the risks resulting from the auditor's unintended failure to adequately amend his opinion on financial statements that include material misrepresentations, and he is unaware of this.” Or it is “the possibility that auditing procedure fails to reveal important (fundamental) errors which occurred and remained undetected.”

It was also defined as “the risk of damage to the audit office as a result of expressing a partially incorrect technical opinion on the financial statements that are subject to audit and the damage to the audit office is in the form of material losses due to compensation fines paid to the third party by the audit office as a result of neglecting the professional process” and intangible losses such as reputation loss. The researchers believe that the audit risks are the auditor's expressing his technical opinion on the audit report with an inherent risk represented in the presence of substantial errors that cause material or moral damages. The audit risks are divided component-wise as under;

4.4.1. The inherent risks (latent, implicit, subjective or inevitable)

It was defined as “the extent of the susceptibility of the balance of an account or a group of operations to a misrepresentation which can be substantial either alone or if it is combined with misrepresentation in other accounts or groups of operations assuming there are no effective procedures and policies for the internal control structure.”

4.4.2. Internal control risks

These are the risks of the internal control system failing to prevent a fundamental error in the balance of an account or group of operations combined or to discover and correct them in a timely manner. It is a measure that reflects the auditor's assessment of the efficiency and effectiveness of the control system in preventing fraud or detecting errors when they occur subsequently. Or it is possible that there are fundamental errors that internal control procedures could not detect or prevent (Mock and Fukukawa, 2016).

4.4.3. Disclosure risks

It is defined as the probability of auditing procedures failing to detect important errors due to the fact that the audit procedures do not guarantee that all errors will be detected even if there is a detailed review. It is also defined as a measure of auditor's acceptance of a material error in the financial statements and expressing an objective opinion on the financial statements. Reasons for the

risks are failure to detect error or fraud due to the use of an inappropriate sampling method or insufficient sample size or the use of inappropriate audits time or the failure of the audit to reach the correct conclusion through audit evidence and analytical examination.

5. Methods

The study population consists of the external auditing offices located in Khartoum city, Sudan. The research sample 40 in total was chosen using the random sample technique, and a questionnaire was distributed to all selected samples. All respondents completed and returned 40) valid questionnaires. The response rate was 100%.

The SPSS software was used to obtain the results using simple linear regression to know the effect of independent variables on the dependent variable. The Cronbach coefficient was used to test the internal statistical reliability. The reliability test means that the scale gives the same results if it is used repeatedly under similar conditions, whereas the validity test finds out the degree of validity or correctness of the tool/scale used in the research. Cronbach coefficient determines these well and Table 1 highlight the values;

Table 1: Cronbach Alpha test for the hypotheses

Scales Validity	Cronbach alpha value
Overall Scale	0.806
Study Variables	0.854

The results of the reliability test show that the values of the Cronbach alpha for all the study hypotheses are greater than 80%, and these values mean that a very high degree of “internal consistency” existed for questionnaire and hypotheses either for each separately or collectively. It can be said that the measures that this study relied on have internal consistency and gives the confidence to proceed for testing of hypotheses.

6. Hypotheses testing and explanation

6.1. Testing the first hypothesis

The goal of developing this hypothesis is to measure the effect of the industrial specialization of the external auditor on the risks of the audit and to verify the validity of this hypothesis. A simple linear regression method is used in constructing the model where the industrial specialization of the external auditor taken as an independent variable (X1) and the risks of the audit (Y) as a dependent variable, as shown in the following Table 2.

The results of the above Table 2 can be expressed as follows:

- The results showed that there was a weak direct correlation between the industrial specialization of the external auditor as an independent variable and the risks of the audit as a dependent

variable where the value of the simple correlation coefficient is (0.320).

Table 2: Simple linear regression analysis of the first hypothesis

Description	Regression coefficients	t-test	Significance Test	Results
$\hat{\beta}_0$	2.756	4.282	0.000	Accepted
$\hat{\beta}_1$	0.349	2.082	0.044	Accepted
Correlation coefficient (R)	0.320			
Coefficient of determination(R ²)	0.102			
F-test	4.333		Results are significant	
$Y = 0.756 + 0.349X1$				

- The value of the coefficient of determination calculated as 0.102, which indicates that the industrial specialization of the external auditor as an independent variable has a 10% effect on the audit risks (dependent variable).
- The simple regression model was significant as the value of test (F) was (4.333), which is significant at the significance level (0.044).
- $\hat{\beta}_0=2.756$ shows the average risk of an audit when the industrial specialization of the external auditor is zero.
- $\hat{\beta}_1=0.349$ highlights that if the industrial specialization of the external auditor is enhanced by one unit, the resultant risk of the audit increased by 10%.

From the above, we can conclude that the first hypothesis, which stated that: "There is a statistically significant relationship between the industrial specialization of the external auditor and the reduction of audit risks" is true and accepted.

6.2. Testing the second hypothesis

This hypothesis shows the effect of the analytical review on the risks of the audit and to verify the validity of this hypothesis, a simple linear regression method will be used in constructing the model where the analytical review is as an independent variable (x2), and the audit risks (y) as a dependent variable as shown in the following Table 3.

Table 3: Simple linear regression analysis of the second hypothesis

Description	Regression coefficients	t-test	Significance Test	Results
$\hat{\beta}_0$	2.093	3.531	0.001	Accepted
$\hat{\beta}_1$	0.477	3.388	0.002	Accepted
Correlation coefficient (R)	0.482			
Coefficient of determination(R ²)	0.232			
F-test	11.478		Results are significant	
$Y = 2.093 + 0.477X1$				

The results of the above Table 3 can be explained as follows:

- The results showed that there was a weak direct correlation between the analytical review as an independent variable and the audit risks as a dependent variable, where the value of a simple correlation coefficient is found as 0.482.
- The value of the coefficient of determination coefficient calculated as (0.232), and this value indicates the analytical review as an independent variable effects (23%) on the risk of the audit (dependent variable).
- The simple regression model was significant as the (F) test value was (11.478), which is accepted at the significance level (0.002).
- $\hat{\beta}_0=2.093$ indicates the average audit risk when the analytical review is zero.
- $\hat{\beta}_1=0.477$ indicates that a unit increases in analytical review increases the risk reduction of the audit by 23%.

From the above, we can conclude that the second hypothesis is also accepted, which states that "there is a statistically significant relationship between the analytical review and the reduction of the audit risks."

6.3. Testing the third hypothesis

The goal of developing this hypothesis is to evaluate the effect of continuous review on the audit risks and to verify statistically the validity of this hypothesis a simple linear regression analysis is used in constructing the model where the continuous review is taken as an independent variable (x3) and the risk of review (y) as a dependent variable as in Table 4.

The results of Table 4 can be explained as under:

- The results of the estimation showed a weak direct correlation between continuous reviews as an independent variable and the audit risk as a dependent variable due to the fact that the value of the simple correlation coefficient found as (0.365).
- The value of the coefficient of determination coefficient calculated as (0.133), which indicates that continuous review as an independent variable effects (13%) on the audit risks (dependent variable).
- The simple regression model was significant as the value of the F-test was calculated as (5.838), which is accepted at the significance level (0.021).
- $\hat{\beta}_0=2.661$ highlights the average audit risk when the continuous review is zero.

- $\hat{\beta}_1=0.339$ highlights a unit increase in continuous review results in an increase in the audit risk by 13%.

Table 4: Simple linear regression analysis of the third hypothesis

Description	Regression coefficients	t-test	Significance Test	Results
$\hat{\beta}_0$	2.661	4.476	0.000	Accepted
$\hat{\beta}_1$	0.339	2.416	0.021	Accepted
Correlation coefficient (R)	0.365			
Coefficient of determination(R ²)	0.133			
F-test	5.838		Results are significant	
$Y = 2.661 + 0.339X1$				

From the foregoing, we can conclude that the third hypothesis is also acceptable, which explains that “there is a statistically significant relationship between the continuous review and the reduction of audit risks.”

7. Conclusion

Audit risks are the failure of the audit procedures to detect significant errors and have a direct impact on the reputation of the external auditor. The sectoral specialization of the external auditor improves his professional competence, whereas the analytical review also secures the necessary evidence and thus improves the quality of the audit. Furthermore, the process or continuous audit aims at ensuring immediate disclosure of companies' audit via the internet. It is evident from the findings of this research that there is a significant direct relationship between contemporary trends in external auditing and reducing the risks of external auditing. The impact of the analytical review was higher in reducing the risks of external auditing as it reached 23%, followed by a continuous review by 13% and then sectoral specialization of the external auditor by 10%.

It is recommended that awareness among the external auditors may be widely spread about the need and importance of sectoral specialization so as to prepare them to take on specific activities in an audit. Likewise, training opportunities be made available to external auditors to learn and use analytical procedures as a means of collecting evidence in an audit. The companies listed at the Khartoum Stock Exchange must emphasize using the continuous review so that they can promptly disclose financial and non-financial information to the stakeholders.

8. Limitation and future directions

The authors understand that this study is limited to a selective sample-based in one city only. However, in the future, the researchers can take up a sample to be based in the whole of Sudan with a wide selection of industries and auditors. The current study, together with future studies, will help a well-regulated company's business and environments as well as ensuring the best level financial disclosures for the stakeholders.

Acknowledgment

This publication was supported by Deanship of Scientific Research, Prince Sattam Bin Abdulaziz University, Alkharj, Saudi Arabia.

Compliance with ethical standards

Conflict of interest

The authors declare that they have no conflict of interest.

References

- Al Bhoor AY and Khamees BA (2016). Audit report lag, audit tenure and auditor industry specialization: Empirical evidence from Jordan. *Jordan Journal of Business Administration*, 12(2): 459-479.
<https://doi.org/10.12816/0033359>
- Ali AM, Sahdan MH and Rasit MHH (2007). Auditor industry specialisation in Malaysia. *Indonesian Management and Accounting Research*, 6(2): 28-44.
- Bedard JC and Graham LE (1994). Auditors' knowledge organization: Observations from audit practice and their implications. *Auditing*, 13(1): 73-83.
- Bills KL, Jeter DC, and Stein SE (2015). Auditor industry specialization and evidence of cost efficiencies in homogenous industries. *The Accounting Review*, 90(5): 1721-1754.
<https://doi.org/10.2308/accr-51003>
- Dao M and Pham T (2014). Audit tenure, auditor specialization and audit report lag. *Managerial Auditing Journal*, 29(6): 490-512.
<https://doi.org/10.1108/MAJ-07-2013-0906>
- Dunn KA, and Mayhew BW (2004). Audit firm industry specialization and client disclosure quality. *Review of Accounting Studies*, 9(1): 35-58.
<https://doi.org/10.1023/B:RAST.0000013628.49401.69>
- Elder RJ, Lowensohn S, and Reck JL (2015). Audit firm rotation, auditor specialization, and audit quality in the municipal audit context. *Journal of Governmental & Nonprofit Accounting*, 4(1): 73-100.
<https://doi.org/10.2308/ogna-51188>
- Habib A and Bhuiyan MBU (2011). Audit firm industry specialization and the audit report lag. *Journal of International Accounting, Auditing and Taxation*, 20(1): 32-44.
<https://doi.org/10.1016/j.intaccudtax.2010.12.004>
- Low KY (2004). The effects of industry specialization on audit risk assessments and audit-planning decisions. *The Accounting Review*, 79(1): 201-219.
<https://doi.org/10.2308/accr.2004.79.1.201>
- Lowensohn S, Johnson LE, Elder RJ, and Davies SP (2007). Auditor specialization, perceived audit quality, and audit fees in the local government audit market. *Journal of Accounting and*

Public Policy, 26(6): 705-732.

<https://doi.org/10.1016/j.jaccpubpol.2007.10.004>

Minutti-Meza M (2013). Does auditor industry specialization improve audit quality? *Journal of Accounting Research*, 51(4): 779-817.

<https://doi.org/10.1111/1475-679X.12017>

Mock TJ and Fukukawa H (2016). Auditors' risk assessments: The effects of elicitation approach and assertion framing. *Behavioral Research in Accounting*, 28(2): 75-84.

<https://doi.org/10.2308/bria-51326>

Rikhardsson P, Singh K and Best P (2019). Exploring continuous auditing solutions and internal auditing: A research note. *Journal of Accounting and Management Information Systems*, 18(4): 614-639.

Romanus RN, Maher JJ, and Fleming DM (2008). Auditor industry specialization, auditor changes, and accounting restatements.

Accounting Horizons, 22(4): 389-413.

<https://doi.org/10.2308/acch.2008.22.4.389>

Røyksund M and Flage R (2019). When is a risk assessment deficient according to an uncertainty-based risk perspective? *Risk Analysis*, 39(4): 761-776.

<https://doi.org/10.1111/risa.13195> PMID:30239018

Stein SE (2019). Auditor industry specialization and accounting estimates: Evidence from asset impairments. *Auditing: A Journal of Practice & Theory*, 38(2): 207-234.

<https://doi.org/10.2308/ajpt-52231>

Sun J and Liu G (2013). Auditor industry specialization, board governance, and earnings management. *Managerial Auditing Journal*, 28(1): 45-64.

<https://doi.org/10.1108/02686901311282498>