

# Determinants of Tax Audit Quality with Audit Process as the Mediator in Ethiopia: The Case of The Ministry of Revenues

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## ABSTRACT

This study analyzed the determinants of tax audit quality with the audit process as the mediator in Ethiopia with special reference to the Ministry of Revenues. A mixed research approach with concurrent triangulation was used in the study. The conceptual model was developed based on the Agency Theory, Contingency Theory, Inspired Confidence Theory, Stakeholder Theory, and an empirical literature review. The data was collected from tax auditors including tax directors, supervisors, process owners, and team leaders using a questionnaire survey and key informant interviews. Thematic analysis and PLS-SEM using the ADANCO were used to analyze the qualitative and quantitative data respectively. The findings revealed that audit input factors, audit process, and contextual factors had a positive significant effect on tax audit quality. In addition, the audit process had a mediation effect on the relationship between explanatory variables in this study and tax audit quality.

**Keywords:** Tax Audit, Audit Quality, Audit Process

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## INTRODUCTION

According to Eilifsen and Messier (2000) the demand for audit service arises due to the role of auditors in the principal and agent relationship to ensure that financial reports are free of material misstatements. An audit is a systematic and scientific process to obtain objective evidence and examination of several books of accounts by independent auditors. It aims to ascertain the accuracy of financial statements provided by an organization based on established criteria and reports the result to interested users (Rick et al., 2005). In the 19<sup>th</sup> century, an independent and objective assessment of financial management was required because of the growth and complexity of public sector activities (Shafritz et al., 2016).

Currently, auditors are expected to provide value-audit services to stakeholders who are involved in the supply chain of the financial statements in addition to enhancing the credibility of financial statements because of the constant changing of both the audit objectives and the role of auditors (Teck-Heang & Ali, 2008). Therefore, the ultimate aim of the audit assignment given to auditors is to produce a quality audit report. Hence, an auditor's major role is the issuance of audit opinion to the standards based on established criteria as per the principles of audit quality (Enofe et al., 2013).

DeAngelo (1981) defined audit quality in general from two perspectives: first, an auditor discovers a breach from the client's accounting report and system and second, an auditor should report independently the discovered breach to the users of the information. This definition is supported by Chadegani (2011) who noted that audit quality is a function of the auditor's ability to detect material misstatements, i.e., technical capabilities, and reporting errors, i.e., auditor independence.

The study on the determinants of audit quality has been the major area of research interest for regulators, practitioners, and academicians for enhancing audit quality (Sulaiman et al., 2018). In the analysis of audit quality, the issues of definition and measurement of quality are major concerns where there is little agreement on the unified definition as well as quality measurement. Different academic researchers have measured the factors affecting audit quality in numerous ways. Some of the factors affecting audit quality are audit tenure, client size, prior experience and

auditor size (Pitkanen, 2016), audit team-related factors, audit environment, and audit office-related factors (Bashir, 2013). Nevertheless, there is little attention given to tax audit quality.

Tax audit is a systematic examination process to assess whether the reported tax liability in the financial statement of taxpayer's complies with tax laws, regulations and other obligations. To achieve a balanced program of tax audits such as audit coverage, audit quality, and deterrent are the aim of revenue authority (Organization for Economic Co-Operation and Development [OECD], 2006). The Ministry of Revenue (MOR) in Ethiopia has the following powers and duties as per the Proclamation numbered 587/2008:

Inspect and seize documents under the possession of any person that are required for the enforcement of customs and tax laws; organize and operate modern laboratory inspection of goods and documents and to cause taxpayers voluntarily discharge their tax obligations are the ministry duties and responsibilities (Article 6/11).

According to the Proclamation number 587/2008 article 6/3, the Ethiopian tax policy is based on taxpayers' voluntary compliance. In this regard, according to Articles 22 and 23 of the Federal Democratic Republic of Ethiopia (FDRE) tax administration Proclamation number 983 of 2016, a taxpayer shall sign a tax declaration filed by their internal accountants, authorized accountants, or licensed tax agents. Thus, tax filing, assessing of tax return and determining tax liabilities are taxpayers' responsibilities. Consequently, the role of tax auditors is to detect and report the errors and frauds of material misstatements in the financial statements of the taxpayers, i.e., an indicator of audit quality. However, the Diagnostic Report of the Ethiopian Revenues and Customs Authority (ERCA) Tax Transformation Office (2018) on Tax Audit indicated that a significant number of cases audited are appealed to Ethiopian Ministry of Revenues, and 57% of completed audit cases received at the appeals office were concluded in favor of the taxpayers. In addition, 86% of the planned numbers of files were audited in 2020 in the large taxpayer office (MOR, 2020). These facts are indicators of poor tax audit quality in Ethiopia.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Siti (2017) stated that tax audit quality can be affected by the ability, quantity and quality of tax auditors as well as tax audit preparation, implementation and reporting stages (as cited in Dharmawan & Rahayu, 2019). According to Abyazi et al. (2021) tax auditors examine taxpayers' financial statement to determine the government's share of profit (tax liability). Therefore, audit input factors like tax auditors' professional ethics, knowledge in the field of taxation, accounting, and finance is required in the context of tax audit quality (Supriyatin et al., 2019).

Neri and Russo (2014) specified that after the financial crisis audit quality is a much-discussed topic and significant efforts have been made in recent years to make audit firms and their services more transparent and to provide tools with which to evaluate auditors. Francis (2011) and Knechel et al. (2013) presented in their studies a framework for audit quality that came from the literature review on audit quality. They revealed that academic studies that focused on many input and output factors have failed to find decisive evidence of a direct positive relationship with audit quality (Neri & Russo, 2014). According to the International Auditing and Assurance Standards Board (IAASB, 2014) the drivers of audit quality are (1) input factors; (2) process factor; (3) output factors, (4) contextual; and (5) key interaction factors. Financial Reporting Council (FRC, 2008) identified six elements or drivers of audit quality with indicators for each construct, like the culture within an audit firm; the skills and personal qualities of audit partners and staff; the effectiveness of the audit process; the reliability and usefulness of audit reporting; and factors outside the control of auditors. The Public Company Accounting Oversight Board (PCAOB, 2013) also developed three drivers of audit quality, namely audit inputs, processes, and results. In addition, Francis (2011) argued that audit quality is influenced by six constructs, such as audit inputs; audit process; accounting firms; audit industry and audit markets; institutions; and economic consequences of audit outcomes.

## Theories of Audit Quality

According to Bik (2017), four perspectives should be taken into account when talking about audit quality. The first is public interest quality; working in the public interest entails more than simply adhering to the rules; it necessitates an auditor's presence and action on signals that are meaningful to society as a whole. The second is value-added quality, which requires auditors to share their knowledge and experience. The third factor is compliance quality, which refers to adherence to auditing norms and regulations established by legislators and external regulators. The fourth factor is process quality, which refers to how audit teams and firms conduct their work.

According to Russell (2000) three key participants may interrelate in numerous ways to bring a quality audit. These participants are the client, auditors, and the auditee. Several theories may explain the demand for audit services. However, a few of them were considered for this study such as the Agency Theory (AT), Theory of Inspired Confidence (TIC), Stakeholder Theory (ST), and the Contingency Theory (CT) in addition to an empirical review.

### ***Audit input factors***

The AT is one of the most essential theories in the field of finance and economic literature (Panda & Leepsa, 2017). Thus, to enhance audit quality technically capable (knowledge, education, specialization in the industry) and independent auditors are required (DeAngelo, 1981). The most prominent and widely used audit theory is the AT. The demand for audit quality arises from the role of auditors in the principal-agent relationship (Eilifsen & Messier, 2000) and to reduce asymmetry of information between key interactions (Lanati, 2018). According to Jensen and Meckling (1976), an agency relationship is a contract in which one or more principals hire an agent or manager to do tasks on their behalf and delegate some decision-making authority to the agent. However, if the agent's area unit disagrees with the principal, the agent may not act in the principal's best interests. Thus, the principal can establish a monitoring system to avoid or minimize disagreements from the agent. Furthermore, the audit inputs factors mainly represent the experience and composition of the engagement team, averaged across all engagements of a firm (Francis, 2011). Amahalu

et al. (2018) ascertained the determinants of audit quality. The result of this study revealed that audit independence and audit firm size had a positive significant relationship with the audit quality of healthcare firms in Nigeria.

Besides, the agency problems between principal and agent demand independent auditors due to the size and complexity of business for reducing agency cost (Evans, 2003). In this study the principal-agent relationship is between the government (House of People Representative in Ethiopian context) and taxpayers. As a result, audit quality refers to how well audits discover and report substantial financial statement misstatements, as well as how well they avoid or mitigate information asymmetry between agents and principals or stockholders (Dang, 2004). Education and training are also audit team factors to enhance audit quality (Bashir, 2013). Moreover, Al-Khaddashet al. (2013) used proficiency and specialty of auditors as a proxy of audit input factors to analyze the perceptions of external and internal auditors as well as financial managers on factors affecting audit quality in Jordanian commercial banks. The results indicated that there was a positive significant effect of input factors on audit quality. Thus, in line with the AT and empirical literature review the following research hypotheses were proposed:

**H<sub>1</sub>:** Audit input factors have a significant positive effect on tax audit quality.

### ***Contextual factors***

According to the TIC the demand for audit services is the direct consequence of the participation of stakeholders within the company and the need for audit services which is derived from the requirement of the third parties (Limperg, 1985). In exchange for their contributions to the company, these stakeholders expect that management takes on more obligations and accountability. An audit of related information is required because the information provided by management may be prejudiced due to a probable conflict of interest between management and an outside stakeholder. Thus, auditors should do everything to meet reasonable public expectations by maintaining their integrity and independence (Hayes et al., 2005). Additionally, auditing is to be developed to meet the expectations and needs of a changing and evolving society (Limperg, 1985). This argument shows that contextual factors or environmental factors are related to audit quality.

Factors outside the control of auditors or contextual factors such as corporate governance, laws and regulations have a direct or an indirect impact on audit quality (IAASB, 2014; FRC, 2008). Eluyela and Ilogho (2016) found that audit standards in general had a positive relation with auditors' performance in the Nigerian banking industry. The Motubatse et al. (2018) study found that financial management, leadership, risk management, and governance jointly had a significant relationship with clean audit outcomes by using panel data and regression analysis. In line with the TIC and empirical literature, the following research hypothesis was proposed:

**H<sub>2</sub>:** Contextual factors have a significant positive effect on tax audit quality.

### ***Interaction factors***

The ST evolved from the AT. The Theory holds that every entity involves the interactions of more than the principals and their agents. Such relationships will also involve the interaction of everyone with a stake in the affairs of the entity: the host community, creditors, bankers, government, and others. This means that there are greater information demands on the entity; therefore, it places greater demands on auditors to ensure the representativeness of the financial statements (Amahalu et al., 2018; Donaldson & Preston, 1995). Organizations have stakeholders, that is, groups, individuals, and institutions who benefit from or are debilitated by, and whose rights are dishonored or respected by organizational actions. Therefore, tax auditors maintain effective communication and interaction with the different management levels of the Federal Democratic Republic of Ethiopia (FDRE) Ministry of Revenues, taxpayers' (clients), regulators, and financial statement users. In line with the ST and the empirical literature, the following research hypothesis was proposed:

**H<sub>3</sub>:** The interaction between auditors and stakeholders has a significant positive effect on tax audit quality. Motubatse

### ***Audit process effectiveness***

The concepts of CT were applied in this study. Woodward (1958) proposed this Behavioral Theory, which says that there is no better method to manage a specific setting. Hence, something is only true under a specific setting or environment (Chenhall, 2003). The CT refers to the situation that the effect of one variable on the other variable depends

on the mediating effect of the third variable (Donaldson, 2001). Audit quality has been influenced by the level of inputs into the audit process. Furthermore, contextual factors have a significant interactive effect on the audit process that ultimately influences audit quality (Knechel et al., 2013). The International Auditing and Assurance Standards Board (IAASB, 2014) also states that the usage of expert skills or inputs during the audit process can be influenced by formal and informal communication between auditors and stakeholders. In this study the stakeholders include client (taxpayers), regulatory (Accounting and Auditing Board of Ethiopia; Federal Office of Audit General), and users of financial statements. Thus, in line with the above discussion, the following research hypotheses were proposed:

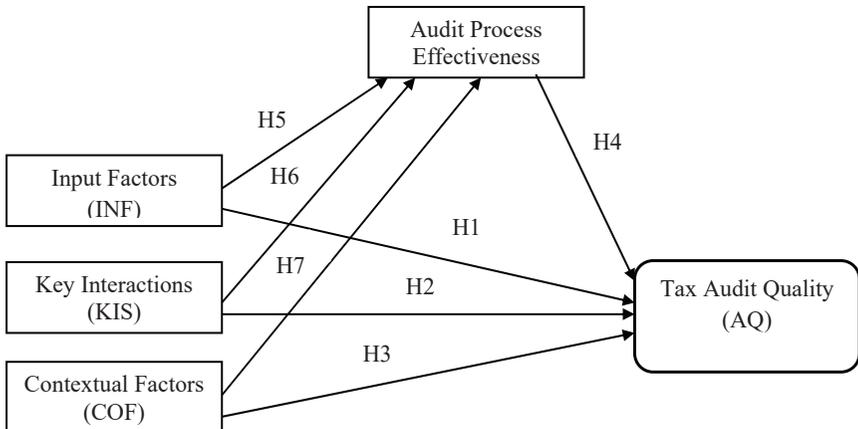
- H<sub>4</sub>:** Audit process effectiveness has a positive significant effect on tax audit quality.
- H<sub>5</sub>:** The audit process has a mediating effect between audit input factors, contextual factors or key interactions and tax audit quality.

### ***Tax audit quality***

There are two main schools of thought to measure the dependent variable (tax audit quality). The first one is the level of compliance with standards which means the level of compliance with auditing standards reflecting the level of audit quality (Krishnan and Schauer, 2001). The second type of audit quality measurement is a level of assurance on financial statements- audit quality. In this sense, it means how well the auditor can prevent and report discretionary accruals in the financial statement (DeAngelo, 1981; Knechel, 2009). Thus, the auditors' ability to detect and report materiality misstatement in the accounting report of taxpayers is the measurement or indicators of tax audit quality in this study. Few studies conducted on the issue of tax audit quality. Nugrahanto and Alhadi (2021) have found that information technology and tax auditor's competencies have a positive association with tax audit quality but factors such as time pressure have negative consequences on tax audit quality by using Partial Least Squares Structural Equation Modeling (PLS-SEM).

## Conceptual Framework

In this study, the independent variables included were audit input factors (such as values, ethics and attitudes; knowledge, experience and time; and education and training), Key interactions (the interactions between tax auditors' and stakeholders (such as taxpayer, regulatory, financial statement users who were involved in the accounting reports), contextual factors (such as laws and regulations; recognized standards; and professional body), and audit process; affect the dependent variables (tax audit quality). Furthermore, the audit process was used as a mediation variable to see the relationship between audit inputs, key interaction factors, or contextual factors and tax audit quality.



**Figure 1: Conceptual Diagrams of a Direct and Mediation Model**

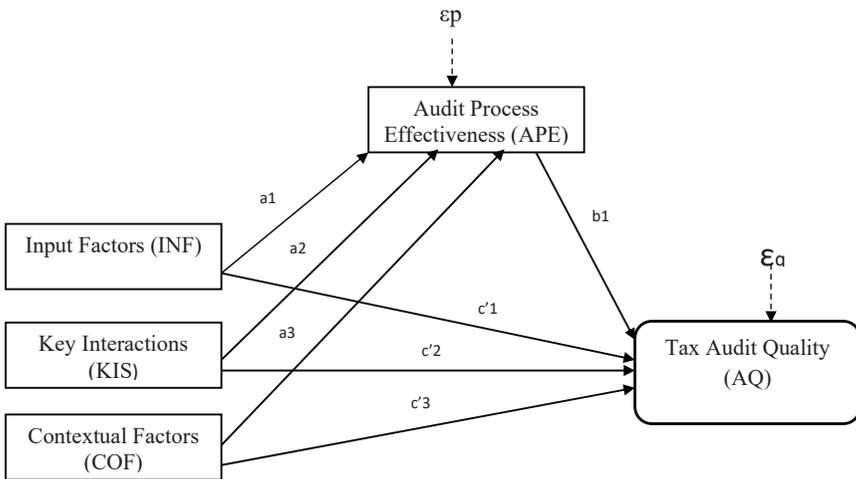
*Source: Developed by Author, 2020*

## RESEARCH METHODOLOGY

Pragmatism as a research philosophy was found to be a suitable approach for this study since this study involved the study of a social phenomenon as well as laws, determinants of audit quality, taking into consideration the influence of human beings and nature on this phenomenon (Saunders et al., 2016). In this study a mixed research approach and concurrent triangulation mixed research design was used.

The target population of this study was 472 tax auditors including team leaders, audit supervisors, director, tax audit quality assurance team, and process owners under the Ethiopian Federal Ministry of Revenues Offices. To get 217 samples from the target population of tax auditors, Slovin’s (1967) sample size determination formula ( $n=N/1+Ne^2$ ) was used (as cited in Yemane, 1967). Furthermore, the purposive sampling technique for interviews and the proportional stratified random sampling technique with the MS-excel RAND formula were used for analyzing the questionnaire.

The data were obtained through a questionnaire using a 7-point Likert scale (1= strongly disagree, 7= strongly agree) which was adapted from (IAASB, 2014), Bashir (2013), and Duff (2009; 2004) and interviews. Consequently, to test the determinants of tax audit quality, this study considered the following model path and specification:



**Figure 2: A Statistical Diagram of the Model Path**  
 Source: Developed by Author, 2020

Models:

$$\begin{aligned}
 APE &= \beta_p + a_1INF + a_2KIS + a_3COF + \epsilon_p \dots\dots\dots \text{Model 1} \\
 AQ &= \beta_q + c'1INF + c'2KIS + c'3COF + b1APE + \epsilon_q \dots\dots\dots \text{Model 2} \\
 C &= C' + ab \dots\dots\dots \text{Model 3}
 \end{aligned}$$

Where:

AQ = Tax Audit quality; INF = Input factors; KIS = Key interaction factors;

COF = Contextual factors; APE = Audit process effectiveness and mediator variable;

$\beta_p$  and  $\beta_q$  = regression constant;  $a_1, a_2, a_3, b_1, b_2, c'1, c'2, c'3$  = regression coefficients

$\varepsilon_p$  and  $\varepsilon_q$  = errors in the estimation of AQ and APE; C= Total effect

The quantitative data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) to produce various measures of the mediating variables (Hayes, 2018). Additionally, ADANCO (Advanced Analysis of Composites) software was used to analyze the relationships between construct and indicator variables. Thus, measurement and structural theories were required to develop path models in the PLS-SEM. The measurement theory shows how the constructs or latent variables (unobservable variables) are measured either through a reflective or confirmative measurement model. The Structural Theory specifies how the construct or latent variables are related to each other in the structural model (Hair et al., 2017). The qualitative data was analyzed via a thematic analysis approach, and triangulated along with a quantitative data source.

## RESULTS AND DISCUSSION

### Analysis of the Measurement Model

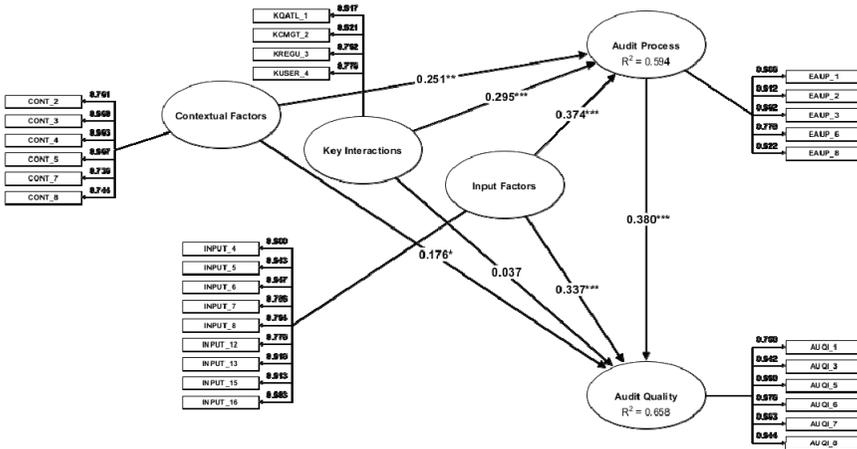
For the ADANCO, the construct validity was measured using the Dijkstra-Henseler's rho ( $\rho_A$ ) coefficient. When the value is greater than 0.70 then a method measure in this study is reliable. Thus, for the PLS path modeling  $\rho_A$  is the consistent estimate of the reliability of construct scores (Henseler & Dijkstra, 2015). Consequently, the result indicated that the Dijkstra-Henseler's rho ( $\rho_A$ ) coefficient in this study was above 0.8 which implied that the constructs were reliable. Additionally, the indicators of outer loading and the average variance of extracted (AVE) were used to evaluate convergent validity. The value of AVE of 0.50 or above is acceptable because on average the construct explains above 50% of the variance of its indicators. The AVE result was above 0.50 (see Table 1).

**Table 1: Analysis of Measurement Model**

Latent Variables	Convergent validity		Construct reliability	
	AVE >0.50	$\rho_A$ reliability >0.70	$\rho_C$ reliability >0.70	Cronbach's alpha( $\alpha$ ) >0.70
Input factors	0.6549	0.9356	0.9447	0.9341
Interaction factors	0.6384	0.8127	0.8759	0.8111
Contextual factors	0.6518	0.8950	0.9179	0.8918
Audit process effectiveness	0.6670	0.8791	0.9091	0.8750
Tax audit quality	0.7118	0.9209	0.9366	0.9184

Source: ADANCO result, 2020

Regarding outer loading, the value 0.708 or above is recommended for standardized outer loading (Hair et al., 2017). Thus, in this study the indicator variables were used and their outer loading values were above 0.7, see figure 3.



**Figure 3: The Model Path**

Source: ADANCO results, 2020

### Analysis of Structural Model

Measuring the structural or model outcomes is the next step after the measurement model was confirmed to be valid and reliable. The first procedure in the structural model is to examine the collinearity issues via VIF values of all indicators in the structural model. However, the values below the threshold of 5 shows that collinearity is not an issue (Sarstedt

et al., 2017). Besides, the structural model included the measure of the coefficient of determination ( $R^2$ ), path coefficient ( $\beta$  value) and T-statistic value or p-value and Effect size ( $f^2$ ). There was no multicollinearity problem in any of the constructs and it was not an issue for the estimation of the PLS path model in this study.

**Table 2: Determinants of Tax Audit Quality**

Effect	Original coefficient (beta values)	Standard bootstrap results			Cohen's $f^2$	
		Mean value	Standard error	t-value		p-value (2-sided)
Input Factors -> Tax Audit Quality	0.3373	0.3405	0.0844	3.9968	0.0001	0.1509
Key Interactions ->Tax Audit Quality	0.0366	0.0376	0.0654	0.5587	0.5764	0.0023
Contextual Factors ->Tax Audit Quality	0.1760	0.1785	0.0830	2.1206	0.0340	0.0509
Audit Process ->Tax Audit Quality	0.3802	0.3744	0.0767	4.1056	0.0000	0.1714

Source: ADANCO results based on survey data, 2020

Furthermore, the coefficient of  $R^2$  for tax audit quality was 0.658. This result suggested that the independent variables such as audit input factors, audit process, interaction factors, and contextual factors together explained the dependent variables (tax audit quality) by 65.8% (see Figure 3).

As can be seen in Table 2, the effect size ( $f^2$ ) assesses the strength of the relationship between the latent variables and helps the researcher to show the contribution of a research study (Wong, 2013). According to Hair et al. (2017), the  $f^2$  values of 0.02 are considered as a small effect, values of 0.15 indicate a medium effect, and  $f^2$  values, 0.35 indicate a large effect. As can be seen in Table 2, the effect view result shows that medium effect of audit inputs, and audit process on tax audit quality ( $f^2 = 0.1509$  and 0.1714 respectively), a small effect of contextual factors on tax audit quality ( $f^2 = 0.0509$ ), and there was n unsubstantial effect of interaction on tax audit quality ( $f^2 = 0.0023$ ).

As can be seen in Table 2, the Hypothesis test of H1 indicated that the path between the audit input factor and tax audit quality results had a beta coefficient value of 0.3373, a t-statistic value of 3.9968 (t-value > t-table values, i.e., 1.96) and p-values of <0.05. Thus, audit input factor had a positive significant effect on tax audit quality and the result showed that hypothesis H1 was supported. The result is consistent with research

conducted in Indonesian tax offices by Supriyatin et al. (2019) which indicated that the competence of auditors positively affects the quality of the tax audit process and results. Likewise, the research of Dickins et al. (2018), IAASB (2014), Bashir (2013), Al-Khaddashet al. (2013) and DeAngelo (1981) showed similar results. In addition to that, the attitude and ethical behavior of auditors had an impact in providing auditing and assurance service (Zarefar & Zarefar, 2016; Hayes et al., 2014; Jelic, 2012). The interviewees suggested that:

*As a professional, I believe that auditors are performing their work by professional and ethical principles. That plays an important role to strengthen the tax audit quality. I think now a day the majority of auditors are responsible for citizenship, caring, and respect for the taxpayers. Nevertheless, the tax auditors are not independent due to fear because the head office pre-planned the audit findings based on a risk-based approach, i.e., most of the time they are belonging to the government rather than to the wide public interest including taxpayers.*

(Male, Tax Audit Quality Assurance Team).

Concerning the effect of key interaction on tax audit quality ( $H_2$ ): the survey results showed that the interaction factors did not have a direct effect on tax audit quality ( $\beta = 0.0366$ ,  $p = 0.5764$ ,  $> 0.05$ ). Hence, the results rejected the  $H_2$  (see Table 2). The interview questions also covered the interaction factors because it is one important variable in the model as an influencing variable of tax audit quality. When the researcher asked question about interactions, one of the tax audit team leader explained:

*Yes, I confirm that currently there is limited communication between auditors, stakeholders, representative committee. However, relatively we have interactions with taxpayers' accountants.*

(Male, Team Leader).

Furthermore, Martin (2013) explored the importance of stakeholder's interactions to the audit process and indirectly affects audit quality. Therefore, this result is consistent with Hypothesis Ha2, i.e., the interaction factors did not have a direct effect on tax audit quality and the interaction

factors had an indirect effect on tax audit at t-values of 2.9180 and p-values of 0.0035, < 0.05 (see Table 3).

The finding regarding H3 indicated that the contextual factors had a positive and significant effect on tax audit quality ( $\beta = 0.1760$ ,  $p < 0.05$ ). Hence, the results supported the H3 (see Table 2). Furthermore, the result also confirms earlier studies related to audit quality by Masood et al. (2016) who explored if there is a positive and statistically significant effect of work environment on audit quality in the public sector entities of Pakistan. Similarly, Favere-Marchesi (2000) showed similar results. Likewise, the research of Eluyela and Ilogho (2016), Khalifa (2012) and Al-Qahtani (2005) showed similar results. In addition, one interviewee believed that:

*Yes. We are strong on recognized standards, laws, and regulations through auditors who do not have similar understanding and explanations. I think we do not have a constant standard of tax audit procedures and control policies.*

(Team Leader, Tax audit engagement team).

Regarding H4: the audit process effectiveness factors had a positive and significant effect on tax audit quality ( $\beta = 0.3802$ ,  $p < 0.05$ ). Hence, the study results supported the H4 (see Table 2). The result is was consistent with the research of Sulaiman et al. (2018), IAASB (2014), PCAOB (2013), Manita and Elommal (2010) which specified that an effective audit process has an effect on audit quality.

**Table 3: The Mediating Effects of Audit Process on Tax Audit Quality**

Effect	Original coefficient	Standard bootstrap results			
		Mean value	Standard error	t-value	p-value (2-sided)
Input Factors -> Tax Audit Quality	0.1422	0.1396	0.0467	3.0474	0.0023
Key Interactions -> Tax Audit Quality	0.1120	0.1119	0.0384	2.9180	0.0035
Contextual Factors -> Tax Audit Quality	0.0955	0.0944	0.0310	3.0787	0.0021

Source: ADANCO results based on survey data, 2020

As can be seen in Table 3, the finding regarding H5 indicated that the audit input, key interactions and contextual factors had a positive and significant indirect effect on tax audit quality ( $\beta = 0.1422$ , 0.112, and

0.0955 with  $p < 0.05$  respectively). The result is consistent with Knechel et al. (2013).

**Table 4: Determinants of total effects inference**

Effect	Original coefficient (beta values)	Standard bootstrap results			
		Mean value	Standard error	t-value	p-value (2-sided)
Input Factors -> Tax Audit Quality	0.4796	0.4801	0.0865	5.5412	0.0000
Key Interactions -> Tax Audit Quality	0.1485	0.1496	0.0745	1.9931	0.0463
Contextual Factors -> Tax Audit Quality	0.2715	0.2729	0.0895	3.0348	0.0024

Source: ADANCO results based on survey data, 2020

As can be seen in Table 4, the total effect of audit input, contextual, and interactions on tax audit quality through audit process effectiveness was 0.4796, 0.2715, and 0.1485 respectively. This showed that the total audit input factors had more effect than the other constructs on tax audit quality. Nevertheless, the audit process’s direct effect on tax audit quality was beyond other constructs in the model. This result is also supported by Knechel et al. (2013).

## CONCLUSIONS AND CONTRIBUTION OF THE STUDY

This study model validated that the determinants of tax audit quality are based on various constructs that are necessary to understand and improve the tax audit quality. This study also aimed to present and introduce new dimensions to analyse the separate factors of audit quality as input, process, output, interactions, and contextual factors to confirm the applicability of the IAASB and FRC audit quality frameworks. The effective audit process and input factors were observed to be the most dominant constructs. In comparison, the result showed that the effect of the audit process effectiveness for tax audit quality is more than audit input factors. Contextual factors also have a strong and positive effect on tax audit quality. However, the interaction factors had an indirect positive significant effect on tax audit quality through the audit process rather than the direct effect. In addition, the result also showed that the audit process mediates the relationship between input factors and tax audit quality; contextual factors and tax audit quality; and interactions factors and tax audit quality. This study concluded that the engagement teams, team leaders, supervisors, process owners, directors, branch managers, professional bodies, and regulators should be given more

attention for audit process effectiveness and audit input factors to enhance tax audit quality.

This paper contributes to theory as well as practice. Regarding theory, the contribution is that the independent variables such as audit input factor, interaction factors, contextual factors, and audit process need to work together to enhance tax audit quality. In addition to that, the study also examined the mediating effect of the audit process between input, interaction, or contextual factors and tax audit quality. Hence, further research should replicate the model developed in this study to examine and verify the results in different contexts.

## REFERENCES

- Abyazi, E., Mohammadzadeh Salteh, H., Aghdam Mazraeh, Y., & Nonahal Nahr, A. A. (2021). Developing a model for improving tax auditing quality in Iran. *Iranian Journal of Accounting, Auditing and Finance*, 5(4), 101-118.
- Al-Khaddash, H., Al Nawas, R. and Ramadan, A. (2013). Factors affecting the quality of auditing: The case of Jordanian commercial banks, *International Journal of Business and Social Science*, 4(11).
- Al-Qahtani, A. K. (2005). The development of accounting regulation in the GCC: Western hegemony or recognition of peculiarity?. *Managerial Auditing Journal*.
- Amahalu, N., Okeke, M.N. and Chinyere, O. (2018). Audit quality determinants: Evidence from quoted health care firms in Nigeria, *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(4), pp.216-231.
- Bashir, F. E. H. (2013). *Audit quality in Libya: Perceptions of external auditors*. Universiti Sains Islam Malaysia
- Bik, O. (2017). The future of audit quality-A multi-stakeholder perspective. *Maandblad Voor Accountancy en Bedrijfseconomie*, 91, 258.

- Chadegani, A. (2011). Review of studies on audit quality. Available at SSRN 2227359.
- Chenhall, R. H. (2003). Management control systems design within its organizational context: findings from contingency-based research and directions for the future. *Accounting, organizations and society*, 28(2-3), 127-168.
- Dang, L. (2004). *Assessing actual audit quality*, Drexel University.
- DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of accounting and economics*, 3(3), 183-199.
- Dharmawan & Rahayu (2019). Effect of tax audit quality on corporate taxpayer compliance (case study at Medium Tax Office in Bandung).
- Dickins, D., Johnson-Snyder, A. J., & Reisch, J. T. (2018). Selecting an auditor for Bradco using indicators of audit quality. *Journal of Accounting Education*, 45, 32-44. doi:10.1016/j.jaccedu.2018.07.001
- Donaldson, L. (2001). *The contingency theory of organizations*. Sage.
- Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of management Review*, 20(1), 65-91.
- Duff, A. (2004). *Auditqual: Dimensions of audit quality*. Edinburgh: Institute of Chartered Accountants of Scotland.
- Duff, A. (2009). Measuring audit quality in an era of change. *Managerial Auditing Journal*.
- Eilifsen, A. and Messier Jr, W.F. (2000). A review and integration of archival research, *Journal of Accounting Literature*, 19, pp.1-43.
- Eluyela, D. F., & Ilogho, S. O. (2016). Audit standards and performance of auditors': Evidence from nigerian banking industry.

- Enofe, A. O., Mgbame, C., Aderin, A., & Ehi-Oshio, O. U. (2013). Determinants of audit quality in the Nigerian business environment. *Research Journal of Finance and Accounting*, 4(4), 36-43.
- ERCA (2018). Diagnostics Report on Tax Audit, Tax Transformation Office, Ethiopia
- Evans, L. (2003). Auditing and audit firms in Germany before 1931, *Accounting Historians Journal*, 30(2), pp.29-65.
- Favere-Marchesi, M. (2000). Audit quality in ASEAN, *The International Journal of Accounting*, 35(1), pp.121-149.
- Financial Reporting Council (FRC) (2008). The Audit Quality Framework (February 2008).
- Francis, J. R. (2011). A framework for understanding and researching audit quality. *Auditing: A journal of practice theory*, 30(2), 125-152.
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*: Sage publications.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*: Guilford publications.
- Hayes, R., Dassen, R., Schilder, A., & Wallage, P. (2005). *Principles of Auditing: An Introduction to International Standards on Auditing*. Person Education Limited (UK).
- Hayes, R., Wallage, P., & Gortemaker, H. (2014). *Principles of auditing: an introduction to international standards on auditing*: Pearson Higher Ed.
- Henseler, J., & Dijkstra, T. (2015), ADANCO 2.0. Kleve, Germany: Composite Modeling.
- International Auditing and Assurance Standards Board (IAASB) (2014). A framework for audit quality: Key elements that create an environment for audit quality.

- Jelic, M. (2012). The impact of ethics on quality audit results. *International Journal for Quality Research*, 6(4).
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.
- Khalifa, R. (2012). Towards a policy model for strengthening the accounting and auditing profession in a fragmented regulatory context. *Journal of EconomicAdministrative Sciences*.
- Knechel, W. R. (2009). *Audit lessons from the economic crisis: Rethinking audit quality*. Maastricht, The Netherlands: Maastricht University.
- Knechel, W. R., Krishnan, G. V., Pevzner, M., Shefchik, L. B., & Velury, U. K. (2013). Audit Quality: Insights from the Academic Literature. *Auditing: A Journal of Practice & Theory*, 32(Supplement 1), 385-421. doi:10.2308/ajpt-50350
- Krishnan, J., & Schauer, P. C. (2001). Differences in Quality among Audit Firms. *Journal of Accountancy*, 192(1), 85.
- Lanati, A. (2018). *Quality Management in Scientific Research: Challenging Irreproducibility of Scientific Results*. Springer.
- Limperg, T. (1985). *The Social Responsibility of the Auditor: A Basic Theory of the Auditors' Function with Research Comments*. New York.
- Manita, R., and Elommal, N. (2010). The Quality of Audit Process: An Empirical Study with Audit Committees, *International Journal of Business and Management*, 15(1).
- Martin, R. D. (2013). Audit Quality Indicators: Audit Practice Meets Audit Research, *Current Issues in Auditing*, 7(2), A17-A23. doi:10.2308/ciia-50581
- Masood, A., Afzal, M., and Management, T. (2016). Determinants of Audit Quality in Pakistan, *Journal of Quality*, 13(II), 25-49.

MOR (2020). Audit Quality Assurance Report of 2019/20, Tax Audit Directorate, Ethiopia

Motubatse, K. N., Ngwakwe, C. C., Sebola, M. p., & Management. (2018). Drivers of Audit Quality in South African Public Sector. *Journal of Accounting*, 8(2), 153-166.

Neri, L., and Russo, A. (2014). A Framework For Audit Quality: Critical Analysis, *Business and Management Review*, 3(9), 25-30.

Nugrahanto, A., & Alhadi, I. (2021). A Tax Audit Quality: An Empirical Analysis of the Use of Information Technology, Competence, Task Complexity And Time Pressure. *INFO ARTHA*, 5(2), 75-92.

OECD (2006). General Principles and Approaches. In Prepared by Forum on Tax Administration's Compliance Sub-group of OECD, Ekim.

Panda, B., and Leepsa, N. (2017). Agency theory: Review of theory and evidence on problems and perspectives, *Indian Journal of Corporate Governance*, 10(1), 74-95.

Pitkanen, J. (2016). Audit quality: the effect of prior experience.

Proclamation No. 587/2008 Ethiopian Revenues and Customs Authority Establishment Proclamation Page4123

Proclamation No. 983/2016, the Federal Democratic Republic of Ethiopia Federal Tax Administration Proclamation

PCAOB (2013). Standing Advisory Group Meeting Discussion—Audit Quality Indicators. In: PCAOB Washington, DC

Rick, H., Dassen, R., Schilder, A., & Wallage, P. (2005). Principles of Auditing: An Introduction to International Standards on Auditing. Person Education Limited (UK).

Russell, J.P. (2000). The Quality Audit Handbook, 2nd edition. American Society for Quality press publications, United State of America

- Sarstedt, M., Ringle, C.M. and Hair, J.F. (2017). Partial least squares structural equation modeling, *Handbook of market research*, 26(1), pp.1-40.
- Saunders, M., Lewis, P., and Thornhill, A. (2016). *Research methods for business students* (Seventh). Nueva York: Pearson Education
- Shafritz, J., Russell, E. W., Borick, C., & Hyde, A. (2016). *Introducing public administration*. Routledge.
- Sulaiman, N. A., Yasin, F. M., & Muhamad, R. (2018). Perspectives of Audit Quality: An Analysis, *Asian Journal of Accounting Perspectives*, 11(1), 1-27.
- Supriyatin, E., Iqbal, M. A., & Indradewa, R. (2019). Analysis of auditor competencies and job satisfaction on tax audit quality moderated by time pressure (Case Study of Indonesian Tax Offices), *International Journal of Business Excellence*, 19(1), 119-136.
- Teck-Heang, L., & Ali, A. M. (2008). The evolution of auditing: An analysis of the historical development. *Journal of Modern Accounting AUDITING: A Journal of Practice & Theory*, 4(12), 1.
- Wong, K. K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1-32.
- Woodward, J. (1958). *Management and technology* (No. 3). HM Stationery Office.
- Yemane, M. (1967). *Elementary Sampling Theory*, Printice-Hall Inc. *Englewood Cliffs, New Jersey, USA*.
- Zarefar, A., & Zarefar, A. (2016). The Influence of Ethics, experience and competency toward the quality of auditing with professional auditor scepticism as a Moderating Variable. *Procedia-Social and Behavioral Sciences*, 219, 828-832.