



TAX AUDIT QUALITY: AN EMPIRICAL ANALYSIS OF THE USE OF INFORMATION TECHNOLOGY, COMPETENCE, TASK COMPLEXITY AND TIME PRESSURE

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INFORMASI ARTIKEL

Diterima Pertama
[18102021]

Dinyatakan Diterima
[04112021]

KATA KUNCI:

Auditor's Competencies, Information Technology, PLS-SEM, Task Complexity, Tax Audit Quality, Time Pressure

KLASIFIKASI JEL:

H20

ABSTRAK

One of strategies conducted by tax authority to meet its tax revenue target is improving audit quality. To do s this research was designed to analyze the empirical evidence related to factors in the use of information technology, tax auditor's competencies, task complexity, and time pressure that could potentially affect the quality of tax audit. The research was carried out by using an online survey followed by 96 tax auditors in Tax Offices in the Special Jakarta Region, with fifteen years of tax audit experience on average. The research data were analyzed by using Partial Least Square-Structural Equation Modeling procedures. The results indicate that the factors of information technology in terms of usefulness, ease of use of technology, and support of technological resources are positively associated with tax audit quality. Tax auditor's competencies in the aspects of knowledge and skills also indicate positive relations. Meanwhile, the factors in time pressure that could deter the evaluation of evidence, implementing procedures, and detection of tax non-compliance have negative consequences on tax audit quality. The implications of these findings for tax authorities are the urgency in improving information technology that keeps pace with the latest business process to support tax audit, improving tax auditors' competencies continuously, and managing tax audit time.

Salah satu strategi otoritas perpajakan untuk memenuhi penerimaan pajak adalah dengan meningkatkan kualitas pemeriksaan. Penelitian ini bertujuan untuk menganalisis faktor-faktor yang berpotensi mempengaruhi kualitas pemeriksaan pajak. Penelitian dilakukan dengan metode survei kepada 96 pemeriksa pajak di kantor pajak wilayah Jakarta Khusus. Analisis data penelitian dilakukan dengan metode statistik *Partial Least Square-Structural Equation Modeling*. Hasil penelitian mengindikasikan bahwa peningkatan kualitas pemeriksaan pajak dapat dipengaruhi oleh faktor penggunaan teknologi informasi dan kompetensi pemeriksa. Lebih lanjut kualitas pemeriksaan pajak juga dapat menurun disebabkan oleh faktor tekanan waktu. Hasil analisis efek moderasi dengan pendekatan *two-stage* menunjukkan bahwa penggunaan teknologi informasi tidak dapat memoderasi hubungan kompetensi pemeriksa, kompleksitas tugas, dan tekanan waktu terhadap peningkatan/penurunan kualitas pemeriksaan pajak. Implikasi dari penelitian ini adalah otoritas pajak perlu memutakhirkan teknologi informasi untuk mendukung kegiatan pemeriksaan pajak, meningkatkan kompetensi pemeriksa pajak secara berkelanjutan, dan melakukan pengelolaan manajemen waktu pemeriksaan.

1. INTRODUCTION

1.1. Background

Taxes are the main source of income for Indonesia in funding various public needs and government. According to the statistical data published by the Ministry of Finance of the Republic of Indonesia, the contribution of taxes is significant in the State Budget (APBN) structure, that is around 68,06% of total state revenue on average (MoF, 2019). Regardless of the large percentage of tax contribution, Indonesian tax authorities have faced challenges in collecting tax revenue for over the past decade. Statistical data published in the DGT Annual Report 2009-2019 shows that the realization of tax revenues did not reach the target set in the APBN, which the average achievement was only around 90,40% (Direktorat Jenderal Pajak, 2020). Various studies in several countries such as the United States (Niu, 2011), Nigeria (Modugu & Anyaduba, 2014), Ethiopia (Mebratu, 2016), and Ekiti State (Olaoye & Ekundayo, 2019) show that there are associations between tax audit, taxpayer compliance, and increased state income.

The high results from tax audit are expected to be realized when the quality of tax audit indicators achieved. According to the Tax Audit Policy in SE-15/PJ/2018, indicators of the quality in tax audits include timely completion, minimal tax disputes, and sustainable taxpayer compliance. However, the OECD data indicates that the indicators as mentioned in Tax Audit Policy were not fully accomplished. According to OECD (2019), the percentage of contribution from the results of tax audits to Indonesian tax income was only 8,8% from the total tax income in 2016. From that portion, only 2,8% were successfully collected. That percentage was relatively low compared to other countries such as Malaysia that had 9,4% contribution from tax audits and 7,9% were successfully collected (OECD, 2019). Another phenomenon as an indication of suboptimal quality of tax audits was shown from the increase of tax audits dispute by 28,14% in 2019 (MoF, 2019). Furthermore, the average successfulness rate of the Indonesian tax authorities against taxpayers in appeals tax disputes from 2015 to 2018 was only 37%. Statistical data published by Indonesian tax authorities also indicate that 32,61% of audit reports were not completed on time. As for the compliance aspects of taxpayers, the percentage of corporate taxpayers and individual taxpayer compliance was only around 62,08% in 2019 (Direktorat Jenderal Pajak, 2020).

Based on previous research, there are various variables that may affect the quality of audit, namely the use of information technology (Nurebo et al., 2019), the competence of auditors (Supriyatin et al., 2019), task complexity (Adnyana & Mimba, 2019), and time pressure in completing the audit (Al-qatamin, 2020). Moon et al. (2014) states that the use of information technology in public sector organizations will increase the time efficiency in obtaining

information, making decisions, and job effectiveness. In the context of audit work, information technology is useful in supporting the implementation of audit procedures (Pham et al., 2018; Bierstaker et al., 2001). The quality of audit can also be influenced by internal factors in the form of auditor qualifications, such as competence (Hien et al., 2019). Auditors must have competence in terms of skills, knowledge, and experience, so that the audit task can be completed and the objectives of the audit can be achieved (Lee & Stone, 1995). In other words, competence is essential for improving the audit quality. In addition, according to O'driscoll & Cooper (2002) stress factors experienced by the auditors can affect the quality of the work. The complexity of work and working under time pressure are common stress factors that generally affect the quality of work results to be lower (O'driscoll & Cooper, 2002).

However, there are various inconsistencies in the results of previous studies. Research conducted by Nurebo et al. (2019), Azene (2016), Drogalas et al. (2015), and Meihami et al. (2013) showed that the use of information technology could improve the performance of auditors and thus had an impact on improving the quality of audits. In contrast, the finding of Supriadi et al. (2019) showed that the use of information technology did not have a significant effect. Another study also concluded that information technology had a negative effect on the audit review process when it could not accommodate conventional audit procedures (Al-qudah et al., 2013). Meanwhile, the competence factors of auditors in several studies showed a statistically positive effect to improve the quality and effectiveness of audits (Hardiningsih et al., 2019; Kartika & Pramuka, 2019; Kertarajasa et al., 2019). In contrast to these results, research conducted by Arfiansyah (2020) indicated that the competence of auditors proxied by Continuing Professional Education credit score (number of year for training and education during the professional period) had no significant effect on the audit quality, and statistically had a negative impact. Research conducted by Susanto et al. (2020) also showed that the competence of the auditor reflected by knowledge and skills, also had no significant effect on the audit quality.

The stress factors also showed inconsistent conclusions. The complexity of the task in several studies showed a negative effect on the effectiveness and the quality of audits (Adnyana & Mimba, 2019; Oktavianto & Suryandari, 2018; Umar et al., 2017). Different findings are shown in the research conducted by Wijaya and Yulyona (2017) which indicated that task complexity as measured by the degree of diversity and the level of audit difficulty could not make the quality of audits lower, and had a positive effect to improve the quality of audits. Meanwhile, research conducted by Susanto et al. (2020) showed that task complexity had no significant effect. As for the time pressure, several studies indicated a negative effect that could reduce the quality of the audit (Broberg et al., 2017; Halim et al.,

2014). Meanwhile, researches conducted by Johari et al. (2019) and Rustianawati et al. (2017) showed that time pressure had a positive effect on improving audit performance and quality. Meanwhile, research by Wijaya and Yulyona (2017) showed that time pressure had no significant effect.

The inconsistencies of the results from previous studies create research gaps. Therefore, this study aims to analyze empirical evidence related to factors in the use of information technology, auditors' competencies, task complexity, and time pressure that could potentially affect the quality of tax audits in Indonesia, especially for special Jakarta region. This study raises the theme of auditing in the context of tax audits because the majority of the previous literature focuses on the context of audits conducted by public accountants. Meanwhile, research topics in the context of (government) tax audits are still limited. This research can be a reference for the development of research related to tax audit management. The results of this study also can be used as consideration for the Indonesian tax authorities to develop policies based on the factors analyzed in this study, in order to achieve a higher quality tax audit.

This study consists of five sections. The first section is an introduction that presents the phenomena, problems, research objectives, and differences in this study from previous studies and the benefits that can be obtained. The second section is a literature review and hypotheses development. The third section discusses the research methods, including indicators used to measure the variables and statistical methods. The fourth section describes the research results, including descriptive statistics and hypotheses testing as well as an explanation of the research findings. The fifth section contains the conclusions, limitations, and implications of the research results from both managerial and academic perspectives for the development of further research.

1.2. Literature Review

Tax Audit and Audit Quality

Tax can be interpreted into two characteristics, i.e. the contribution that the taxpayer must pay to the government, while the taxpayer does not receive direct compensation (unrequited) from the government for that contribution. The unrequited compensation means that the benefits received from the government are usually not proportional to the amount of the tax paid (OECD iLibrary, 2020). In self-assessment, which is a system that requires taxpayers to disclose the basis for calculating taxes (such as taxable income), report the calculation of taxes owed, and usually accompany the calculation with the payment of the due taxes, a monitoring mechanism is needed to make sure the system work effectively. Therefore, tax authorities play a role in monitoring, conducting tax audits, and law enforcement actions to ensure that taxpayers have fulfilled their obligations in

accordance with applicable regulations (Hutauruk et al., 2019).

Tax audit is defined by the OECD (2006) as a form of assessment whether the taxpayer has calculated and reported their tax obligations correctly or not, as well as fulfilling various other obligations. Azene (2016) states that tax audit is a process to assess whether taxpayers have reported their tax obligations in accordance with regulations. Meanwhile, Ayalew (2014) and Abera (2016) emphasize that a tax audit is an examination to ensure taxpayer compliance with tax regulations. So, it can be concluded that the tax audit is a form of compliance audit conducted by the tax authority regarding the fulfillment of the taxpayer's obligations.

A general explanation regarding the definition of quality in the context of work can be interpreted as the degree to which the process or work results can achieve a perfection, or the expected goals (Bernadin & Russel, 1999). As for the definition of quality in the specific audit context, DeAngelo (1981) describes audit quality into two main characteristics, namely the possibility of the auditor detecting misstatements, and the auditor acting appropriately to report any misstatements that have been found. Coram et al. (2003) argued that audit quality can be determined by tracing back each stage of the audit, that is, if the audit is carried out in accordance with the audit program that has been prepared. Meanwhile, Francis (2011) states that audit is high quality when the auditor can determine the auditee's compliance with regulations.

Knechel et al. (2013) have built a framework for the concept of audit quality in general into four dimensions, namely indicators of input, process, outcome, and context. The input indicators relate to the allocation of audit resources, including the knowledge and expertise of auditors, or in other words, the competence of auditors. The process indicators relate to the implementation of procedures and stages of the audit, including factors influenced by task complexity and time pressure. The outcome indicators relate to the impact of the audit results, such as whether there are lawsuits against the auditors and the quality of the audit reports supported by competent evidence. Meanwhile, the context indicators can be in the form of technology and audit methodology used by the auditors.

In the context of tax audit in Indonesia specifically, the concept of tax audit quality has been formulated by the Indonesian tax authorities through the policy in SE-15/PJ/2018 concerning Tax Audit Policy. The concept of the quality of tax audits is described into indicators of effective audit implementation in achieving organizational goals. This concept is closely related to the outcome dimension in the audit quality framework described by Knechel et al. (2013). The criteria for the quality of tax audits in the Tax Audit Policy include tax audits completion on time and optimal tax payments, minimal tax disputes filed by taxpayers, controlled restitution in accordance with the rights or obligations of taxpayers, and

sustainable tax compliance. Meanwhile, the other three dimensions of the audit quality framework, namely indicators of input, process, and context, serve as predictors of the quality of audit outcomes. Indicators in the dimensions of input, process, and context contain other independent variables examined in this study, namely competence as input indicators, task complexity and time pressure as process indicators, and the use of information technology as context indicators.

Work-related Theory of Competence

Competence is theoretically defined by Spencer and Spencer (1993) as the fundamental characteristics of individuals that have a cause-and-effect relationship in achieving effective and/or superior performance in a particular job context or situation. There are three main keys to the concept of competence according to Spencer and Spencer (1993). The first is an underlying characteristic, which means that competence is the fundamental of personality that can predict how a person acts and thinks in various situations, tasks, or jobs, which include: motives, traits, self-concept, knowledge, and skills. The second is a causal relationship to performance, which means that competence will be able to determine the results or outcomes of the work. The third is the reference criteria in predicting the quality of good or bad work results based on certain standard measures.

In various studies with the theme of audit research, such as conducted by Asmara (2016), Hardiningsih et al. (2019), Lee and Stone (1995), Mansouri et al. (2009), Nadiah et al. (2017), and Supriyatin et al. (2019), auditor competence is specifically defined by referring to the aspects of knowledge, skills, experience, and expertise required to be able to complete the audit in order to achieve the audit objectives. Tax auditors must possess the required competence so that they can collect and evaluate audit evidence accurately in order to produce appropriate tax audit reports in assessing taxpayer compliance. Thus, competence is related to the achievement of tax audit quality indicators.

The tax authorities in Indonesia have formulated the characteristics of the basic competencies that tax auditors must have, which are described in PER-23/PJ/2013 concerning Audit Standards. The competencies of a tax auditor include aspects of knowledge and skills as well as their application in every stage of the audit process. The competence aspects of auditors as described in Article 3 Paragraph 3 of the Audit Standards include knowledge and expertise in taxation, accounting and auditing; general knowledge of the taxpayer's business processes and environment, including the ability to apply applicable accounting principles; and have effective communication skills.

General Model of Information Technology Acceptance and Use

Technology is defined as a tool used to assist users in carrying out various tasks (Goodhue & Thompson, 1995), and has the potential to substantially improve user performance (Davis, 1989). Information technology can be defined as a tool used to capture, manipulate, process, communicate, and present information that is useful in work for decision making (Bassellier et al., 2001).

There are several theoretical models for the use of information technology, including the Technology Acceptance Model (TAM) by Davis (1989), the Task-Technology Fit Model (TTF) by Goodhue and Thompson (1995), and the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003). According to Davis (1989) in the TAM model, the use of information technology can be explained into two concepts, namely perceived usefulness and perceived ease of use. Perceived usefulness is defined as the degree to which users believe that their performance will improve when using information technology. This perception is closely related to the perception of an increase in the quality of work results. The perceived ease of use is the degree to which information technology can make work easier. Meanwhile, Goodhue and Thompson (1995) in the TTF model explained that there is a relationship between the use of information technology in accordance with the task on the perception of individual performance improvement, and thus it is related to the quality of the work results.

Furthermore, Venkatesh et al. (2003) in the UTAUT model explain that the use of information technology is based on four factors, namely performance expectancy, effort expectancy, social influence, and facilitating conditions. Performance expectancy is the degree of belief that the use of information technology will be able to assist users in achieving good or quality work results. Effort expectancy is the perception of the degree of ease of use of information technology in assisting the work process, so that the work results achieved are optimal. Social influence is the user's perception of the extent to which other people, such as superiors or coworkers, have influence in supporting the use of information technology at work. Facilitating conditions are the perception of the extent to which individuals believe that information technology resources are adequate to support work activities.

Based on the factors in the TAM, TTF, and UTAUT models, it can be explained that theoretically there is a relationship between the use of information technology on improving the quality of work results. The indicators in the three models are generally the same, including expectations of the use of information technology on performance, expectations of ease of use of information technology, as well as adequate information technology resource facilities. The three indicators are theoretically used to measure tax auditors' perceptions regarding the relationship between the use of information technology and the quality of tax audits from the aspects of performance

improvement, ease of use, and conditions that facilitate information technology resources.

Work-related Theory of Stress

Yerkes and Dodson (1908) explain the relationship between stress and behavior in their research, which is then called the inverted U-shaped law relationship between stress and performance. This law shows that stress at a low level will lead to sleepiness or fatigue, resulting in the lower quality of work results. At the moderate level, stress will encourage individuals to work harder so that they can achieve a more optimal quality of work. When the stress level is very strong or high, individual performance will continue to decline, causing the quality of work to be lower. O'driscoll and Cooper (2002) describe the general conditions that can cause stress in working, including task characteristics such as the level of work complexity, various types of work, and time pressure in completing the work. In the audit environment, these stress factors can be in the form of task complexity and also time pressure in solving audit cases (Choo, 1995).

Campbell (1988) explains that task complexity can be experienced by individuals in their interactions with tasks, such as the difficulty level of the task, cognitive abilities, unclear task procedures, and individual capacity to complete the task. Huey and Wickens (1993) explain that complex tasks will make individual performance relatively lower compared to simple tasks. At higher workloads, complex tasks can create dramatic performance drops. Thus, the complexity of the task tends to lower the quality of the work.

Task complexity in the context of auditing according to Abdolmohammadi and Wright (1987), they explain that complex tasks are closely related to the structure of the audit task, which in turn can affect the auditor's judgment in resolving audit cases. In structured tasks with clear procedures, auditors need a little judgement in solving audit cases, because problems are clearly defined. When the task is complex (unstructured), auditors need more judgement. Bonner (1994) divides task complexity into three dimensions, namely the input dimension relating to the amount and clarity of information, the process dimension related to the difficulty and clarity of the process, and the output dimension related to the clarity of objectives. Several studies indicate that task complexity will have an impact on the decline in auditor performance (Adnyana & Mimba, 2019), make auditors fail to detect fraud (Umar et al., 2017), and in the end will reduce the quality of audit results (Bowrin & King, 2010; Susanto et al., 2020).

DeZoort and Lord (1997, in Bowrin & King, 2010) define time pressure in the context of an audit as the auditor's perception of his ability to complete tasks within a limited deadline. Time limitations can create pressure in terms of time allocation and deadline pressure in completing the audit task. Time pressure in many empirical studies shows negative results that can lead to dysfunctional auditor behavior (Azad,

1994; Margheim et al., 2005; Otley & Pierce, 1996; Svanström, 2016; Umar et al., 2017). Several studies concluded that time pressure can cause a decrease in the audit quality (Amalia et al., 2019; Broberg et al., 2017; Halim et al., 2014; Svanberg & Öhman, 2013).

2. RESEARCH FRAMEWORK AND HYPOTHESES

The use of information technology is closely related to user expectations of increased performance that can help users in their work and can have an impact on job performance (Davis, 1989; Goodhue & Thompson, 1995; Venkatesh et al., 2003). Mustapha and Lai (2017) explain that the use of information technology can shorten work time and make work more efficient. Tarek et al. (2017) in their research concluded that the use of information technology can increase the productivity of auditors in carrying out each stage of the audit task. Thus, there is a relationship between the use of information technology and the quality of audit results. For full picture of the framework, see illustration in Figure 1

In general, it can be hypothesized that the use of information technology has the potential to affect the tax audit quality. Therefore, the hypothesis proposed is:

H₁: Information technology is correlated with the tax audit quality.

According to Spencer and Spencer (1993), theoretically, competency is an underlying characteristic of an individual that has a cause-and-effect relationship to work results. Thus, auditor's competencies may be related to the tax audit quality. Several studies have indicated that there is a positive relationship between auditor's competencies and audit quality (Asmara, 2016; Furiady & Kurnia, 2015; Halim et al., 2014; Hardiningsih et al., 2019; Kartika & Pramuka, 2019; Kertarajasa et al., 2019; Mansouri et al., 2009; Pandoyo, 2016; Puspitasari et al., 2019; Supriyatin et al., 2019; Zahmatkesh & Rezazadeh, 2017). Based on previous studies, it can be hypothesized that the competence of auditors has a relationship with the tax audit quality. Therefore, the hypothesis proposed is:

H₂: Auditor's competence is associated with the tax audit quality.

Referring to the law of the inverted U-shaped relationship between stress and performance (Yerkes & Dodson, 1908), the shape indicates a relationship between stress and job achievement. Task complexity is one of the stress factors that can affect work outcomes (O'driscoll & Cooper, 2002). Byström and Järvelin (1995) explain that the complexity of the task can make the auditor fail to obtain sufficient audit evidence. This will cause a decrease in the quality of the audit results. The complexity of the task in several studies was indicated to lead to a decrease in the audit quality (Bowrin & King, 2010; Susanto et al., 2020). Based on the findings of previous studies, it can

be hypothesized that there is a relationship between task complexity and the tax audit quality. Therefore, the hypothesis proposed is:

H₃: Task complexity is associated with the tax audit quality.

Time pressure experienced by individuals at work can generally reduce the quality of decision making (Ahituv et al., 1998). The time pressure experienced by auditors can lead to dysfunctional behavior (Gundry & Liyanarachchi, 2007; Liyanarachchi & McNamara, 2007). Several studies have concluded that there is a relationship between time pressure and a decrease in audit quality (Svanberg & Öhman, 2013; Halim et al., 2014; Broberg et al., 2017; Amalia et al., 2019). However, several studies have found that time pressure can improve auditor performance because audit time is used more efficiently (Johari et al., 2019; Rustianawati et al., 2017), so that the quality of audit results can be improved. Based on previous studies, it can be hypothesized that there is a relationship between time pressure and the tax audit quality. Therefore, the hypothesis proposed is:

H₄: Time pressure is associated with the tax audit quality.

3. RESEARCH METHODS

Research hypotheses will be tested with a quantitative approach, by analyzing the relationship of the constructed variables processed by statistical methods (Sekaran & Bougie, 2017). The statistical analysis method used in this study is Partial Least Square-Structural Equation Modeling (PLS-SEM). The use of the PLS-SEM analysis technique is preferred with justifications that the research data tends to be non normal in social research, PLS-SEM can be used to predict the relationship of latent variables, and the number of research samples obtained is relatively small (Hair et al., 2014).

The research data used in this study are primary data. The data is obtained by conducting a survey to tax auditors at Tax Offices in the Special Jakarta Region, namely Public Listed Company Tax Office (KPP PMB), Oil & Gas Sector Tax Office (KPP Migas), Permanent Establishment & Expatriate Tax Office (KPP Badora), and Foreign Investment I to VI Tax Offices (KPP PMA 1, PMA 2, PMA 3, PMA 4, PMA 5, and PMA 6). The Special Jakarta Region is chosen because it has most strategic contribution to the national tax revenue. The research sample is selected by using convenience sampling technique, that is, every tax auditor who is willing to voluntarily fill out the survey sent will be selected as the research sample (Sekaran & Bougie, 2017).

Online questionnaire is used in this study to obtain the data. The questionnaire is developed by adapting various indicators based on theories, policies made by the Indonesian tax authorities, as well as relevant previous research. The questionnaire is designed using a Likert scale type with intervals of 1-6. The 6-point interval scale is used to minimize bias in

the tendency of respondents to choose a neutral or midpoint scale (Garland, 1991). Measurement indicators for research variables are presented in Table 1.

To test the validity and reliability of the questionnaires, we conducted a preliminary study to tax auditors who have at least 1-2 years of audit experience (Coram et al., 2003; McDaniel, 1990). Valid and reliable questionnaires were distributed online to respondents via bit.ly/surveiFPPkhusus from November to December 2020, and there were 96 respondents. Demographic data of respondents are presented in Table 2.

Data analysis was processed using SmartPLS version 3.3.3. The confidence level was determined at 95% (two-tailed). Research variables include exogenous latent variables, namely Information Technology (IT), Auditors' Competencies (AC), Task Complexity (TC), and Time Pressure (TP). The endogenous latent variable as a dependent variable is Tax Audit Quality (TAQ). The research variables in this study are constructed in reflective form, so the stages of the analysis in PLS-SEM are evaluating the measurement model and evaluating the structural model (Garson, 2016).

4. RESULTS AND DISCUSSIONS

The total population in this study is 242 tax auditors. Descriptive statistics of research data obtained from 96 respondents are presented in Table 3. Table 3 displays the mean and median, as well as the distribution of data which includes standard deviation, minimum value, and maximum value. Values above 3,5 indicate that respondents' perceptions tend to agree with the statements on the questionnaires, while values below 3,5 indicate that respondents tend to disagree.

We conducted a Common Method Bias (CMB) test to ensure that this study was statistically free from the phenomenon of bias caused by the instrument used (Kock, 2015). We use a full collinearity approach by evaluating the Inner Variance Inflation Factor (VIF) with a tolerance limit of 3,30 (Kock, 2015). The results in Table 4 show that the inner VIFs are less than 3,30, so it can be concluded that this study is statistically free from CMB.

Furthermore, evaluation of the measurement model is carried out by assessing convergent validity, construct reliability, and discriminant validity. Convergent validity is evaluated by outer loading on each indicator with an acceptable loading factor value limit of 0,50 – 0,60 or more (Chin, 1998). The construct reliability is evaluated from the average extracted variance (AVE), which is 0,50 or higher (Hair et al., 2014) and can also be evaluated from the values of Cronbach's Alpha (α), ρ_A , and Composite Reliability (CR) with a value of 0,70 or higher (Garson, 2016). The results of the measurement model are presented in Figure 2.

A more detailed analysis is presented in Table 5. In Table 5, the results of the path factor analysis are presented to evaluate the convergent validity and construct reliability. The loading factors value on each indicator show a number greater than 0,50-0,60. The AVE value of the measurement model in each variable is greater than 0,50. The values of Cronbach's Alpha (α), ρA , and CR are greater than 0,70. From the results evaluation presented in Table 5, it can be concluded that the measurement model is statistically convergent and reliable.

Discriminant validity can be evaluated by the Heterotrait-Monotrait (HTMT) ratio, which is valid if the ratio is less than 0,90 (Garson, 2016). In addition, it can also be assessed based on the Fornell-Larcker criterion, by evaluating if a construct has a greater variance in its indicator than other constructs (Hair et al., 2017). Discriminant validity can also be evaluated with a cross loading value which is valid if the loading factor value of the indicator in the intended construct is greater than the other constructs, with a rule of thumb greater than 0,60 – 0,70 (Garson, 2016). Table 6 shows the results of the evaluation of discriminant validity. The HTMT ratio is smaller than 0,90, the Fornell-Larcker criterion shows a greater variance in the construct as measured by its indicator, and the cross loading value of the measured construct is greater than the other constructs with values greater than 0,60 - 0,70. Thus, it can be concluded that the measurement model fulfills the discriminant validity.

After we confirmed that the measurement model was valid and reliable, then an evaluation of the structural model was carried out. The evaluation of the structural model is presented in Figure 3. The calculation results of the structural model show that the R-square value (R^2) is 0,406. This means that at the sample level, variations in the quality of tax audits can be explained by information technology, auditors' competencies, task complexity, and time pressure by 40,6%, while 59,4% is explained by other variables outside the variables studied. The R^2 value in this research model is in the moderate category, which is greater than 0,33 (Chin, 1998).

The research hypothesis was tested by comparing the t-statistics value of the variables with the rule of thumb of the t-table value for two-tailed testing is 1,960 at the level of confidence 95% (Garson, 2016). The hypotheses testing presented in Table 7.

The Association between Information Technology and Tax Audit Quality

The result of hypothesis testing indicates that the use of information technology has a positive effect on improving tax audit quality, thus H_1 is supported. This result is in line with Nurebo et al. (2019), Azene (2016), and Drogalas et al. (2015) which emphasizes that the use of information technology can improve an effectivity of tax audit. Based on the dimensions of perceived usefulness/performance expectancy of the information technology use model, it can be explained that work productivity in tax audit can be increased with the use of information technology. The use of

information technology in tax audits can assist tax auditors in obtaining more complete data/information of taxpayers so that the implementation of tax audits will be better. Furthermore, the use of technology can also assist tax auditors in better analyzing taxpayers' data/information. With the use of information technology, the results of data/information analysis can help detect non-compliance of taxpayers in a shorter time, because all the data needed to conduct audit tests are organized. Another important factor in the use of information technology is its usefulness in implementing all tax audit procedures in order to fulfill the complete standard stages in the audit program. Thus, the completion of all audit procedures will be more efficient. When preparing the tax audit report, it is likely that the audit findings will be supported based on competent and sufficient audit evidence because it has been accommodated by the use of information technology. Thus, all audit documentation can be compiled completely in order to produce a higher quality of tax audit report. In general, it can be interpreted that information technology can increase the productivity of tax auditors in all audit activities so that the work results are more optimal.

In the facilitating conditions from the dimension of acceptance and use of technology model, it can be explained that the achievement of quality in tax audit results will be realized through the support of information technology facilities and qualified knowledge in operating information technology in tax audits. As for the dimension of ease of use or effort expectancy, the achievement of quality in tax audit results will be supported by the ease of operating information technology in accordance with the business processes in audit activities. In general, it can be interpreted that organizational support in facilitating reliable IT applications for tax audits, as well as the ease of use of these applications, will lead to the achievement of quality indicators in tax audit.

Based on the factors analysis, it can be summarized that the achievement of tax audit quality based on indicators of information technology includes: (1) the function of information technology in collecting competent data/information/evidence; (2) the function of information technology in helping to analyze data to accurately determine taxpayer non-compliance; (3) the function of information technology in assisting the implementation of audit activities to be more efficient, effective, and in a shorter time; and (4) the function of information technology in assisting auditors to implement correct and fully documented tax audit procedures so as to produce quality tax audit reports.

The Correlation between Auditor's Competence and Tax Audit Quality

The result of hypothesis testing indicates that auditor's competence affects the tax audit quality positively. The greater the auditor's competence, the achievement of quality indicators in tax audit are likely to be optimal. Thus, the findings of this study support

H₂ that the auditors' competence is associated with the quality of tax audits. This result is in line with the majority of research conclusions which indicate that auditor competence is positively related to audit quality, with interpretation that it can support the improvement of audit quality (Supriyatin et al., 2019; Hardiningsih et al., 2019; Kartika & Pramuka, 2019; Kertarajasa et al., 2019; Puspitasari et al., 2019; Zahmatkesh & Rezazadeh, 2017; Asmara, 2016; Azene, 2016; Pandoyo, 2016; Furiady & Kurnia, 2015; Halim et al., 2014; Mansouri et al., 2009). This finding confirms that the higher the competence of tax auditors from the aspect of knowledge and skills, the higher the quality of the tax audit results. In accordance with the concept of competence, knowledge and skills will be able to lead to a more optimal tax auditor performance. Thus, an indicator of the quality of the audit results will be achieved if the tax auditor has the competencies required in the Tax Audit Standard.

In accordance with the concept of competence by Spencer and Spencer (1993), the outer or surface dimensions of competence in the form of knowledge and skills are the easiest to measure and develop. Some of the determinants of these competencies are in terms of knowledge and skills that are implemented in each stage of the tax audit. The ability of tax auditors to make an audit plan, such as collecting data/information, analyzing financial statements by applying their knowledge, and identifying problems will be able to make the implementation of tax audits more effective. Tax auditors who have the ability to perform audit data processing, such as determining the data, books, notes, or documents required and the ability to process them based on appropriate audit methods, will be able to lead to the adequacy of audit evidence. Thus, the results of possible audit findings will be more precise. The ability of the tax auditors to conduct tax audit tests, such as applying appropriate audit methods and techniques and being able to determine evidence, legal basis for tax corrections, and compiling competent audit findings, will be able to lead to competent audit results. Competence in the aspect of communication skills in audit discussions, such as being able to explain findings with effective communication is also useful in order to defend audit findings. The competence of tax auditors is also needed from the aspect of ability in audit reporting, namely compiling reports that are concise, clear, and contain conclusions that are supported by strong findings so that they will produce quality tax reports. Thus, if there is a dispute over the results of the tax audit, it can be defended because they have been supported by valid and reliable evidence.

The Correlation between Task Complexity and Tax Audit Quality

The result of hypothesis testing indicates that task complexity has no significant effect on the tax audit quality. This result cannot support H₃ which states that there is an association between task complexity and tax audit quality. This result of this

study is in line with the research conducted by Susanto et al. (2020) which concludes that task complexity does not affect the quality of the audit. The complexity of the tax audit task which is measured by the indicators of difficulties in obtaining audit evidence, determining audit methods and techniques appropriate to the audit case, determining taxpayer non-compliance, and unclear tax audit procedures, based on tax auditor's perceptions, has no statistically significant effect on the quality of tax audits.

The absence of the effect of task complexity on the quality of tax audits can be explained by referring to experimental research conducted by Tan et al. (2002) regarding the relationship between auditor competence, work performance, and the level of task complexity. Tan et al. (2002) in their experimental research proved that auditors who have competence in the form of high knowledge will tend to be able to maintain optimal audit work results in various levels of task complexity. Competence plays a role in maintaining auditor performance and thus the quality of audit results will not be affected by increasingly complex tasks. This is in line with the answers of respondents in this study, that the majority of tax auditors have a high competency perception from the technical aspects of knowledge and skills. High competence can be a factor that keeps the tax auditor's performance from decreasing even though it is faced with a complex condition, and thus the complexity of the task in the form of difficulties in audit procedures does not affect the quality of the tax audit results.

The Correlation between Time Pressure and Tax Audit Quality

The result of hypothesis testing indicates that time pressure has a negative effect on the quality of tax audit. Thus, this result can support H₄ which states that time pressure is associated with the quality of tax audit. The result is in line with the majority of previous research findings which show that time pressure can reduce audit quality, such as skipping several audit procedures and evaluating audit evidence inaccurately (Broberg et al., 2017; Umar et al., 2017; Halim et al., 2014; Bowrin & King, 2009; Gundry & Liyanarachchi, 2007; Margheim et al., 2005; and Coram et al., 2003). The negative consequences of time pressure prove that the insufficient time allocation for audit completion can become a stressor that hinders the performance of auditors in achieving the quality in tax audit.

Based on inverted U-shaped law, Yerkes and Dodson (1908), it can be interpreted that the time pressure perceived by the tax auditors may have passed the optimum point. High pressure will have an impact on the decline in the performance of tax auditors, which in turn will result in a decline in the quality of tax audits. This is supported by descriptive statistical analysis which shows that on average, tax auditors agree that time pressure can limit them in carrying out audit procedures. Based on the indicator

analysis, the decreased quality of tax audits can be caused by the auditor's perception of stress that can lead to a decline in performance. Limited time and high workload also cause some formal audit procedures to be skipped due to insufficient time. Time pressure can also make the tax auditor perceive insufficient time to gather competent and sufficient audit evidence. The tax auditor perceives insufficient time to evaluate evidence accurately due to time pressure, and as such this can lead to incompetent audit findings. Time pressure is also perceived by tax auditors with insufficient time to detect taxpayer non-compliance. These time pressure factors can lead to the possibility of decreasing the quality of tax audits, because the implementation of audit procedures, evaluation of audit evidence, and audit findings is not optimal. The results of this analysis are in line with the conclusions in the research of Azad, (1994), Otley and Pierce (1996), Margheim et al. (2005), Svanström (2016), and Umar et al. (2017), who confirmed that the negative effect of time pressure can lead to dysfunctional auditors' behavior, such as premature sign-off by ignoring some audit procedures. In addition, time pressure can prevent tax auditor from gathering sufficient audit evidence, so that the relevant data/information may be neglected.

5. CONCLUSIONS, LIMITATIONS, AND IMPLICATIONS

Based on the results of this study, it can be concluded that the use of information technology, auditor competence, and time pressure have an effect on the quality of tax audits, while task complexity does not affect the quality of tax audits. The use of information technology in the aspects of perceived usefulness in increasing work productivity, organizational support in facilitating information technology, as well as the ease of use of information technology will be able to improve the quality of tax audits. The ability of tax auditors in the aspects of knowledge and skills implemented at each stage of the audit process will be able to lead to improving the quality of tax audits. Meanwhile, time pressure has negative consequences on the quality of tax audit that potentially cause tax auditors to fail to trace and evaluate data, evidence, and/or information accurately to determine taxpayer non-compliance. Meanwhile, task complexity does not have a significant effect on tax audit quality, because the competence of qualified tax auditors can be an important factor in maintaining optimum performance.

This study has several limitations. The data obtained from the questionnaire based on the tax auditors' perceptions so that there is the possibility of subjective bias. This research questionnaire has never been used in the context of research related to tax audit. However, bias from the use of the questionnaire was minimized by conducting a preliminary survey to test the validity and reliability of

the questionnaire, and the study sample was tax auditors who were competent in their field. The results from the evaluation of common method bias with the full collinearity approach also indicate that this study is not polluted by the bias of the research instrument used. Another limitation is that the unit of analysis in this study only includes tax auditors at the Tax Offices in the Jakarta Special Region, so it may not reflect the phenomenon in other Tax Offices. Therefore, caution is needed in comparing findings and generalizing conclusions.

The implications of this research are the urgency for tax authorities to ensure that information technology transformation policies, especially those related to the optimization that support tax audit activities, can be realized properly. Tax authorities also need to continuously improve the competence of tax auditors. Auditor competence can be improved, such as through education and training programs that are applicable and adaptive to the latest business processes, regular seminars and discussion forums, and through expertise certification programs. The complexity of the task cannot affect the quality of tax audits if the competence of auditors is always improved. Tax authorities also need to make efficient and effective time management and arrangements for tax auditors, so that limited time does not become a factor that can reduce the quality of tax audits. In future studies, it is necessary to consider analyzing other variables that potentially affect the quality of the tax audit. Future studies also need to consider a larger sample size, including tax offices in various regions in Indonesia.

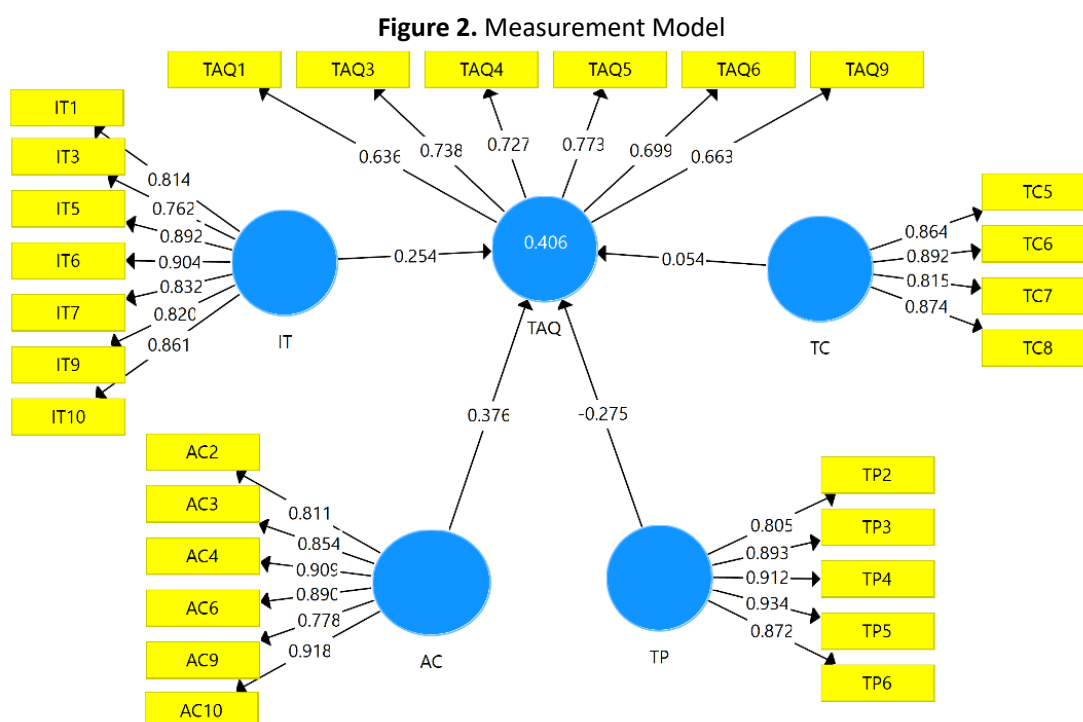
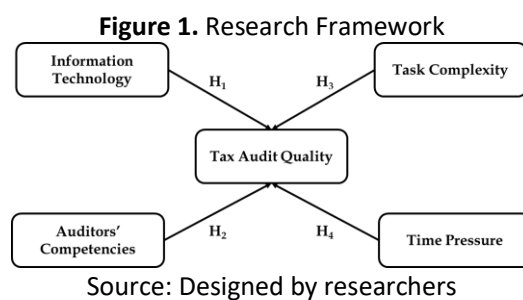
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Source: Processed by using SmartPLS 3.3.3

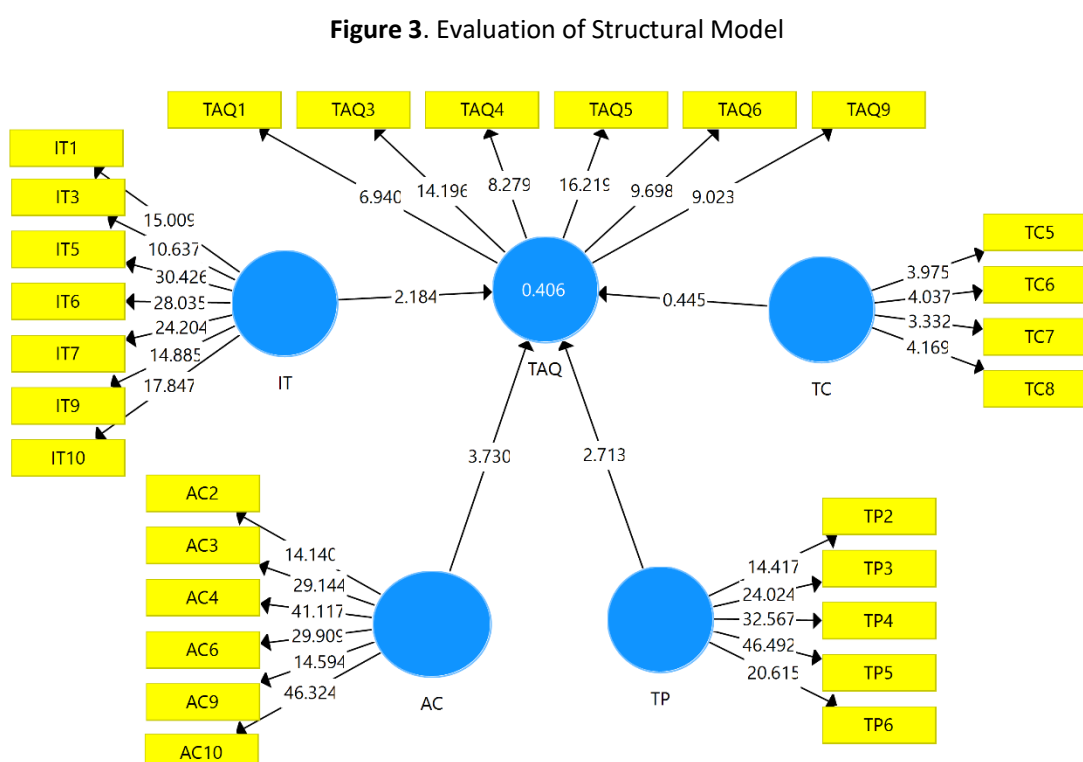


Table 1. Measurement Indicators of Research Variables

Variables	Indicators	Code
Tax Audit Quality (TAQ)	Perceptions of quality in tax audit results or outcome in accordance with the objectives in the Tax Audit Policy indicators. Indicators are developed from the Tax Audit Policy (SE-15/PJ/2018).	
	1. The tax audit is completed on time.	TAQ 1
	2. Significant (optimal) audit findings based on competent audit evidence.	TAQ 3
	3. Tax corrections reflect the rights/obligations of the taxpayers.	TAQ 4
	4. Taxpayers understand the legal basis of tax corrections and agree to it.	TAQ 5
	5. Tax assessment disputes can be defended in the tax court.	TAQ 6
	6. Taxpayers become more compliant with taxes after being audited.	TAQ 9
Information Technology (IT)	Tax auditors' perceptions of the usefulness, ease of use, and conditions that facilitate the use of tax audit IT applications. Developed from the UTAUT, TAM, TTF concepts (Davis, 1989; Goodhue & Thompson, 1995; Venkatesh et al., 2003) and adapted from Mustapha and Lai (2017).	
	1. IT facilitated by the organization is suitable for tax audit tasks.	IT 1
	2. IT provided by the organization is easy to use.	IT 3
	3. IT helps tax auditors better analyze tax-related data of taxpayers.	IT 5
	4. IT helps tax auditors in implementing all of the audit procedures.	IT 6
	5. IT can help tax auditors complete the task in a shorter time.	IT 7
	6. IT can increase the likelihood of competent audit findings.	IT 9
Auditor's Competencies (AC)	7. IT can improve documentation of audit reports.	IT 10
	Tax auditors' perceptions of knowledge and skills that can produce effective and/or superior performance in the context of achieving tax audit results. Developed from the Tax Audit Standard (PER-23/PJ/2013).	
	1. Ability to analyze financial statements by implementing knowledge.	AC 2
	2. Ability to identify problems for tax audit planning.	AC 3
	3. Ability to determine the appropriate documents to conduct an audit.	AC 4
	4. Ability to conduct tax audit testing with appropriate methods.	AC 6
	5. Ability to defend audit findings during the discussion with taxpayers.	AC 9
Task Complexity (TC)	6. Ability to produce complete audit reports with competent evidence.	AC 10
	Tax auditors' perceptions of difficulties in assignments or a certain level of specificity of tasks that requires clarity related to tax audits. Developed from Bonner (1994) and adapted and modified from Umar et al. (2017).	
	1. Difficulty in obtaining competent tax audit evidence.	TC 5
	2. Difficulty in applying appropriate audit methods to the audit case.	TC 6
	3. Tax auditors need more effort in determining taxpayer non-compliance.	TC 7
Time Pressure (TP)	4. The audit program is not detailed/clear on the audit case.	TC 8
	The tax auditor's perception of the ability to complete the task within the audit period within the limited time allocation and the due date for completion of the audit. Adapted and modified from Umar et al. (2017), Bowrin and King (2010), Margheim et al. (2005).	
	1. Tax auditors perceive stress in working at a limited time.	TP 2
	2. Omitting certain audit procedures due to limited time.	TP 3
	3. Perceived of obstacle in collecting audit data due to limited time.	TP 4
	4. Perceived of obstacle in evaluating audit data due to limited time.	TP 5
	5. Obstacle in determining tax non-compliance due to limited time.	TP 6

Source: Designed by researchers

Table 2. Socio-Demographic Characteristics of the Research Sample

Category	Description	N = 96	Percentage
Tax Office	KPP PMB	3	3,13%
	KPP Migas	23	23,96%
	KPP Badora	12	12,50%
	KPP PMA 1	22	22,92%
	KPP PMA 2	12	12,50%
	KPP PMA 3	6	6,25%
	KPP PMA 4	4	4,17%
	KPP PMA 5	5	5,21%
	KPP PMA 6	9	9,38%
Gender	Male	84	87,50%
	Female	12	12,50%

Category	Description	N = 96	Percentage
Age	25 – 30 y.o.	2	2,08%
	31 – 35 y.o.	12	12,50%
	36 – 40 y.o.	26	27,08%
	41 – 45 y.o.	24	25,00%
	46 – 50 y.o.	23	23,96%
	Greater than 50 y.o.	9	9,38%
Experience in Tax Audit	1 – 6 years	5	5,21%
	7 – 12 years	47	48,96%
	13 -18 years	16	16,67%
	19 – 23 years	7	7,29%
	24 – 30 years	20	20,83%
	Greater than 30 years	1	1,04%
Formal Education Background	Diploma III	11	11,46%
	Bachelor Degree/Diploma IV	52	54,17%
	Master	33	34,38%
Position	Tax Auditor – Executor, Beginner	5	5,21%
	Tax Auditor – Executor, Intermediate	7	7,29%
	Tax Auditor – Executor, Advanced	5	5,21%
	Tax Auditor – Expert, Beginner	20	20,83%
	Tax Auditor – Expert, Intermediate	37	38,54%
	Tax Auditor – Expert, Advanced	22	22,92%

Source: Processed from field data

Table 3. Descriptive Statistics of Research Variables

Variables	N	Mean	Med	Std. Dev.	Min	Max
IT	96	4,798	5,000	0,899	1,000	6,000
AC	96	5,043	5,000	0,725	2,000	6,000
TC	96	3,911	4,000	1,225	1,000	6,000
TP	96	3,621	4,000	1,477	1,000	6,000
TAQ	96	4,523	5,000	0,976	1,000	6,000

Source: Processed from field data

Table 4. Evaluation of Common Method Bias

Variables	AC	IT	TAQ	TC	TP
IT	1,278				
TAQ	1,367				
TC	1,241				
TP	1,355				
AC		1,366			
TAQ		1,485			
TC		1,304			
TP		1,419			
AC			1,298		
IT			1,315		
TC			1,285		
TP			1,309		
AC				1,510	
IT				1,432	
TAQ				1,585	
TP				1,134	
AC					1,592
IT					1,361
TAQ					1,562
TC					1,027

Source: Processed by using SmartPLS 3.3.3

Table 5. Results of Factors Analysis

Latent Variables	Indicators	Loadings	Error	α	ρ_A	CR	AVE
Information Technology (IT)	IT1	0,814	0,337	0,931	0,934	0,944	0,709
	IT3	0,762	0,419				
	IT5	0,892	0,204				
	IT6	0,904	0,183				
	IT7	0,832	0,308				
	IT9	0,820	0,328				
Auditor's Competencies (AC)	IT10	0,861	0,259	0,930	0,943	0,945	0,742
	AC2	0,811	0,342				
	AC3	0,854	0,271				
	AC4	0,909	0,174				
	AC6	0,890	0,208				
	AC9	0,778	0,395				
Task Complexity (TC)	AC10	0,918	0,157	0,886	0,913	0,920	0,743
	TC5	0,864	0,254				
	TC6	0,892	0,204				
	TC7	0,815	0,336				
Time Pressure (TP)	TC8	0,874	0,236	0,930	0,945	0,947	0,782
	TP2	0,805	0,352				
	TP3	0,893	0,203				
	TP4	0,912	0,168				
Tax Audit Quality (TAQ)	TP5	0,934	0,128	0,800	0,805	0,857	0,501
	TP6	0,872	0,240				
	TAQ1	0,636	0,596				
	TAQ3	0,738	0,455				
	TAQ4	0,727	0,471				
	TAQ5	0,773	0,402				
	TAQ6	0,699	0,511				
	TAQ9	0,663	0,560				

Source: Processed by using SmartPLS 3.3.3

Table 6. Evaluation of Discriminant Validity

Discriminant Validity					
Fornell-Larcker Criterion	AC	IT	TAQ	TC	TP
AC	0,862				
IT	0,476	0,842			
TAQ	0,529	0,474	0,708		
TC	-0,088	-0,118	-0,139	0,862	
TP	-0,133	-0,172	-0,344	0,469	0,884
Heterotrait-Monotrait	AC	IT	TAQ	TC	TP
AC					
IT	0,501				
TAQ	0,590	0,530			
TC	0,139	0,143	0,158		
TP	0,154	0,189	0,392	0,521	
Cross Loadings	AC	IT	TAQ	TC	TP
AC2	0,811	0,302	0,297	0,008	-0,014
AC3	0,854	0,462	0,504	-0,152	-0,142
AC4	0,909	0,467	0,491	-0,020	-0,074
AC6	0,890	0,438	0,359	-0,075	0,021
AC9	0,778	0,325	0,478	-0,034	-0,187
AC10	0,918	0,432	0,517	-0,142	-0,212
IT1	0,216	0,814	0,377	-0,105	-0,168
IT3	0,395	0,762	0,384	-0,205	-0,226
IT5	0,459	0,892	0,374	-0,073	-0,075
IT6	0,496	0,904	0,408	-0,154	-0,155
IT7	0,443	0,832	0,474	0,003	-0,146
IT9	0,386	0,820	0,370	-0,062	-0,086
IT10	0,390	0,861	0,384	-0,120	-0,154
TAQ1	0,287	0,232	0,636	-0,169	-0,290
TAQ3	0,374	0,392	0,738	-0,165	-0,206
TAQ4	0,425	0,141	0,727	-0,020	-0,226
TAQ5	0,412	0,344	0,773	-0,103	-0,342
TAQ6	0,349	0,332	0,699	-0,045	-0,223
TAQ9	0,384	0,516	0,663	-0,089	-0,174
TC5	-0,076	-0,078	-0,070	0,864	0,395
TC6	-0,199	-0,140	-0,136	0,892	0,380
TC7	0,066	-0,054	-0,138	0,815	0,367
TC8	-0,102	-0,131	-0,105	0,874	0,488
TP2	-0,111	-0,145	-0,283	0,372	0,805
TP3	-0,103	-0,147	-0,250	0,437	0,893
TP4	-0,051	-0,093	-0,357	0,404	0,912
TP5	-0,127	-0,180	-0,342	0,451	0,934
TP6	-0,218	-0,214	-0,262	0,415	0,872

Source: Processed by using SmartPLS 3.3.3

Table 7. Hypotheses Testing

Variables			Original Sample	Sample Mean	Std. Dev.	T-Statistics	P-Values	Decisions
IT	→	TAQ	0,254	0,254	0,116	2,184	0,029*	H ₁ is supported
AC	→	TAQ	0,376	0,384	0,101	3,730	0,000**	H ₂ is supported
TC	→	TAQ	0,054	0,034	0,121	0,445	0,657	H ₃ is not supported
TP	→	TAQ	-0,275	-0,269	0,102	2,713	0,007**	H ₄ is supported

*Significance at 5% (T-Table = 1,960); **Significance at 1% (T-Table = 2,580).

Notes: IT = Information Technology; AC = Auditor's Competencies; TC = Task Complexity;

TP = Time Pressure; TAQ = Tax Audit Quality.

Source: Processed by using SmartPLS 3.3.3.