

# THE EFFECT OF AUDIT TENURE AND TIME BUDGET PRESSURE AGAINST AUDIT QUALITY WITH MODERATION OF PUBLIC ACCOUNTING OFFICES SIZE

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**Submission date:** 01-Apr-2020 11:49AM (UTC-0500)

**Submission ID:** 1287067092

**File name:** 3642-Article\_Text-5789-2-10-20200125.pdf (449.98K)

**Word count:** 10332

**Character count:** 55042

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**THE EFFECT OF AUDIT TENURE AND TIME BUDGET PRESSURE  
AGAINST AUDIT QUALITY WITH MODERATION OF PUBLIC  
ACCOUNTING OFFICES SIZE**

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**ABSTRACT**

*This study aims to determine whether audit tenure and time budget pressure affect audit quality, and examines whether auditors of public accounting firms in Big Ten and Non Big Ten ranks have different perceptions and levels of compliance in structural models. The target population in this study is the Indonesian public accounting firm that works with professional business services firms of foreign public accounting firms (KAPA) or foreign audit organizations (OAA). The sampling technique uses purposive sampling method. The unit of analysis in this study is independent auditors or individuals who work in public accounting firms ranked Big Ten and Non Big Ten at all levels of the organizational hierarchy, namely junior, senior, supervisor, manager, and partner auditors. Sample criteria are independent auditors involved in carrying out general audit services for the company's financial statements with audit experience of at least 5 (five) years.*

*The method of data collection is through a survey while the method of data analysis uses the structural equation model (Structural Equation Modeling) with a Multi-Group approach (Sub-Group). The results of hypothesis testing in the overall first stage model estimation can be confirmed or accepted. The results of testing the effects of moderating variables indicate that there are differences in the strength of the relationships in the three structural models. The difference in strength of the relationship between the structural model can be interpreted that the size of the public accounting firm ranked Big Ten and Non Big Ten as a moderating variable has a moderating influence on relationships in the structural model.*

**Keywords:** Audit Quality, Audit Tenure, Time Budget Pressure, KAP Size, and Structural Equation Modeling

**INTRODUCTION**

Various financial scandal cases have been recorded in recent years, for example the case of the public accounting firm 'Ernst & Young'. They were convicted of failing to audit the financial statements of Indosat Indonesia's Head of Corporate Communications Group financial statements in 2011, and had to pay a fine of US\$1 million to US regulators. The KPMG International public accounting firm was fined more than US\$6.2 million by the Securities and Exchanges Commission (SEC) for significantly increasing the value of Miller Energy Resources' energy company assets in its 2011 financial statements. There were cases of accounting fraud scandals at British Telecom in 2017 which had been going on for a long time since it was privatized 33 years ago. Accounting fraud at British Telecom was failed to be detected by PricewaterhouseCoopers public accounting firm auditors. It was successfully revealed by whistleblowers.

The financial scandals above prove that not all auditors are independent even though it is a large public accounting firm that produces high quality audits (Nindita and Siregar, 2012). This is what underlies more and more studies reviewing the relationship between the size of public accounting firms and audit quality by using various dimensions and proxies to measure audit quality.

Research conducted by Francis and Yu (2009) found evidence that the greater the size of public accounting firms, the higher the quality of audits produced. Choi et al. (2010) also found consistent results. Lin and Hwang's (2010) research (2010) found evidence that there is a positive and significant relationship between the Big Four public accounting firms and earnings management, which in turn can improve the quality of audits produced. Other research on the relationship between the size of public accounting firms and audit quality seen through auditor industry specialization was conducted by Aronmwan (2013) in his study. He found evidence that the size of the Big Four public accounting firms would result in high audit quality. Meanwhile Wibowo and Rossieta (2010), who measured audit quality through earning surprise benchmarks, got evidence that the larger the size of a public accounting firm (Big Four), the better the audit quality produced.

DeAngelo (1981a) in his study used the Big Six public accounting firm's approach as a measure of audit quality. It can be concluded from his research that a large size public accounting firm (Big Six) can produce higher quality audits compared to a small size public accounting firm (Non Big Six). Meanwhile, Francis and Yu (2009) concluded that independent auditors working at Big Four public accounting firms can produce better audit quality than auditors working at Non Big Four public accounting firms. Likewise, the research of Choi et al. (2010) obtained similar results. On another occasion Dong Yu (2007) concluded that audits that have high quality will be produced by large accounting firms. This opinion is, in the first place, based on the facts that independent auditors in large accounting firms are highly reputable, are independent in audit assignments, have quite a lot of professionals, have audit experience with various clients and do not have economic dependence with clients. These things make them able to produce quality audits. Second, independent auditors are more objective and independent in carrying out audit assignments, and there is no economic dependence on clients.

Like this, this study uses a public accounting firm's size approach to examine the structural relationships between independent and dependent variables. Are there differences in perceptions and compliance levels of Big Ten and Non Big Ten public accounting firms as moderating variables in the relationship of audit tenure and time budget pressure to audit quality?

One of the factors that influence audit quality is Audit tenure. Audit tenure shows a condition in which the auditor can audit the client's financial statements for up to 5 (five) consecutive years. The issue of audit tenure raises debates in a variety of academic literature and the public accounting profession about the relationship between auditor engagement, auditor rotation and audit quality (Jenkins and Vermeer, 2013; Blandon and Bosch, 2015). Regulation of the Minister of Finance Number 17/KMK.01/2008—updated with Government Regulation Number 5/2015—specifies that the provision of audit services on financial statements by a public accountant applies for a maximum of 5 (five) consecutive fiscal years. The government regulation requires public audit rotation for an accounting firm that has received successive audit assignments from the same client with the aim of maintaining auditors' independence and, ultimately, producing quality audits (Nurdiono et al., 2016). Although legally the matters regarding the engagement period between the auditor and the client have been regulated, the phenomenon of apparent rotation occurs in Indonesia. Conceptually, pseudorotation shows a condition that there has been a change of auditors. However, substantively, the relationship between the auditor and the client continues (Junaidi et al., 2014).

Myers (2013) argued that the purpose of auditor rotation is to prevent the auditor and client from having excessive closeness as it may have an impact on independence and can reduce audit quality. Velte and Stiglbauer Research (2012); Siregar et al. (2012) concluded that the auditor's rotation rules from the government impacted both the auditor and the client where the auditor would act more independent and objective in carrying out audit assignments.

Time budget pressure is an estimate of the time required in an assignment, estimated audit costs, and the allocation of personal audits on specific tasks. Time budget pressure is related to dysfunctional behavior. Dysfunctional Behavior Reduced Audit Quality Practices (RAQPs) are behaviors that are considered to reduce audit quality that are directly carried out with the following actions: premature termination of audit procedures, shallow review of client documents, shying away

from investigating the appropriateness of accounting treatment applied by clients with accounting principles, acceptance of inadequate client explanations, failure in completing audit work, and condensing the scope of auditing when a transaction or questionable post is detected (Pierce and Sweeney, 2004). This means that time budget pressure can reduce audit quality. Research by Gundry and Liyanarachchi (2007); Broken stock. (2016) found that time budget pressure negatively affected audit quality.

## LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESE

Stewardship theory is a theory that describes situations where managers are not motivated by individual goals but rather their main outcome goals for the benefit of the organization. The success of the organization illustrates the maximization of the wealth of the shareholders (owners). Organizational success will also maximize the utility of the management group. Escalating the utility of this group will ultimately maximize the interests of the individuals within the group. Stewardship theory is designed to explain situations where managers are stewards and act in the interests of both the public and stakeholders (Donaldson and Davis, 1991; Helena and Therése, 2005; Kaihatu, 2006).

### Agency Theory

Agency theory (Jensen and Meckling, 1976) is a concept that explains the relationship between shareholders (principal) and managers (agents). The manager (agent)—having more information—will not give all the information to the shareholders (principal). Conversely, shareholders have very limited information, causing information asymmetry, which is a condition of the imbalance in information acquisition between management (agents) as providers of information (preparers) with the shareholders (principal) as users of information (Godfrey et al., 2010).

### Audit Quality

Audit is a process to provide accurate information about a company's economic activities. Auditors have a very important role to produce quality audits. De Angelo (1981b) defined audit quality as a condition in which an auditor will (1) find violations in the client's accounting system, and (2) report the violations. Meanwhile, according to the Professional Standards of Public Accountants (IAP, 2011) audits are said to be of quality if they meet auditing standards and auditor compliance with the ethical standards of the public accountant profession. Financial Services Authority Regulation Number 13 / POJK.03 / 2017 concerning the use of public accountant services and public accounting firms in financial services activities in article 13 paragraph (6) specifies that audits can be said to be of quality if they meet the elements of (1) independence of auditors and offices of public accountants; (2) audit scope; (3) service fees; (4) expertise, auditor experience, and audit team; (5) methodology, techniques and means of auditing, and (6) potential consecutive audit service risk for a long period of time. The potential for professional assignments in the long term can reduce auditor independence.

### Size of the Public Accounting Firm

Regulation of the Minister of Finance Number 17/PMK.01/2008 specifies that public accounting firms are business entities that have obtained permits and fulfilled the regulatory requirements as referred to Regulation of the Minister of Finance of the Republic of Indonesia Number 154/PMK.01/2017. Local public accounting firms can work with foreign public accounting firms. In conducting audits, accountants or public accountants must know the profile of the use of public accounting firm services in accordance with the Regulation of the Minister of Finance of the Republic of Indonesia Number 155/PMK.01/2017.

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Arens et al. (2014) distinguished the size of public accounting firms into Big Four and Non Big Four based on the number of professionals they have, branch offices, and annual fee income. The Financial Professional Development Center-Secretariat General of the Ministry of Finance of the Republic of Indonesia ranked the size of the Big Ten public accounting firms in Indonesia in 2016 based on (1) the number of professionals; and (2) annual audit revenue.

#### Audit Tenure

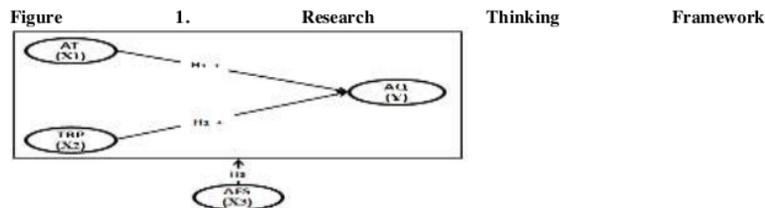
Regulation of the Minister of Finance Number 17/PMK.01/2008, updated with Government Regulation Number 20/2015 in Article 11 paragraph (1) explained that the provision of audit services on historical financial information as referred to in article 10 paragraph (1) letter 'a' to an entity by a public accountant is limited to up to 5 (five) consecutive financial years and a public accountant's office is limited to a maximum of 6 (six) consecutive financial years for the same client.

Azizkhani et al. (2006) suggested three main reasons which may decrease audit quality in terms of auditor independence, namely (1) economic dependency; (2) excessive trust in clients; and (3) psychological dependence, which may result in the emergence of loyalty, trust or emotional ties with clients. Research conducted by Chen et al. (2008) found that audit quality improves with the increase in audit tenure. Meanwhile Mai et al. (2008); Gul et al. (2009); Al-Thuneibat (2011) found evidence that audit quality has declined with increasing audit tenure in both industry-specific auditors and auditors who do not have industry specialization.

#### Time Budget Pressure

Audit time budget pressure is an important problem often faced by auditors with regard to audit assignments. Liyanarachchi (2007) argued that there are four factors that affect the ability of auditors to achieve a predetermined time budget, namely client fees, audit programs, last year actual time spent on audits, and auditors' participation in budget time settings. Audit time budget pressures can also occur due to regulations that must be adhered to by public accounting firms or the nature of audit work that is generally carried out after the company has finished compiling financial statements (Robertson, 2007).

The relationship between variables in this study can be seen in the picture of the research framework as follows:



#### 1. Effect of Audit Tenure on Audit Quality

The engagement period between the auditor and the client should be able to accommodate optimal audit quality. The engagement period is too short to make the auditor less optimal in obtaining information and understanding the client company's environment so that audit quality is low. Evidence from Al-Thuneibat study (2011) showed that audit tenure length between auditors and

clients has a negative influence on audit quality. Davis et al. (2009); Mai et al. (2008); Blandon and Bosch (2015) found that a long audit assignment period can reduce audit quality.

In the perspective of agency theory, the relationship between the principal and the agent will be optimal if there are clear regulations to control the behavior of the agent in such a way that is in accordance with the mandate given by the regulatory body as the principal. Particularly in Indonesia, the relationship between the auditor and the client has been regulated by the Minister of Finance as outlined in the Regulation of the Minister of Finance Number 17/PMK.01/2008 which includes limitation to the provision of general audit services to the financial statements of an entity performed by an accounting firm the public for a maximum of 6 (six) consecutive years and by a public accountant for a maximum of 3 (three) consecutive years.

Based on the description above, the research hypothesis is formulated as following (H1) Audit Tenure has a positive effect on audit quality.

## 2. Effect of Time Budget Pressure on Audit Quality

Time budget pressure is a condition showing where the auditor is required to make efficient the time has been arranged. A professional auditor, in carrying out his audit work in accordance with a predetermined time, shows that the auditor's performance is efficient. This situation in which they must be able to complete their tasks in accordance with the specified time often creates pressure on the auditors. Therefore, it has a direct impact on the implementation of the audit. It can also reduce the auditor's compliance to follow established audit procedures so that it affects audit quality. This is consistent with the opinion of Wagooner et al. (1991) which stated that the allocated time in audit assignment is insufficient so that the auditor tends to work quickly and complete the audit procedures that are important so as to produce ineffective performance. Several studies conducted by Soobaroyan and Chengabroyan (2005); Kelley et al. (2005); Gundry and Liyanarachchi (2007); Broberg et al. (2016) found empirical evidence that time budget pressure affects audit quality negatively.

Based on the description above, the research hypothesis is formulated as following (H2) Time Budget Pressure has a negative effect on audit quality.

## 3. The Size of the Public Accounting Firm Moderates the Relationship of the Audit Tenure and Time Budget Pressure to the Audit Quality in the Structural Model (*Structural Model's Relationships*).

Large public accounting firms are believed to conduct higher quality audits compared to small public accounting firms. Dong Yu (2007) found that high quality audits are produced by large accounting firms. DeAngelo (1981); Behn et al. (1997); Francis and Yu (2009); Aronmwan (2013); used a public accounting firm size approach as a measure of audit quality in their study. Their research concluded that large public accounting firms can produce higher quality audits compared to small public accounting firms. A different opinion was expressed by Al-Thuneibat (2011) who stated that the Big Four public accounting firms did not affect audit quality. The results of the Canadian Public Accountability Board (CPAB) inspection have different (contradictory) conclusions about the audit quality of all companies audited by the Big Four public accounting firms (<http://www.cpab-cerc.ca>).

In this study, stewardship theory, in which managers act as stewards and auditors act as independent parties, is assumed to have the same interests so as to produce quality financial reports in accordance with the interests of both the public and stakeholders.

Based on the description above, the research hypothesis can be formulated as following (H3) Auditors of Public Accounting Firms ranked Big Ten and Non Big Ten Moderating the Relationship of Audit Tenure and Time Budget Pressure on Audit Quality have Different Perceptions and Compliance Levels on Structural Models (*Structural Model's Relationships*).

## RESEARCH METHOD

### Population and Sample

The target population in this study is the Indonesian public accounting firm in collaboration with the foreign public accounting firm (KAPA) or the foreign audit organization (OAA). The Financial Professional Development Center (FPDK) in 2016 gave a Big Ten rating to Indonesian public accounting firms in cooperation with foreign public accounting firms (KAPA) or foreign audit organizations (OAA), while those outside the Big Ten rank are called Non Big Ten. The unit of analysis in this study is independent auditors or individuals who work in public accounting firms ranked Big Ten and Non Big Ten at all levels of the organizational hierarchy, namely junior, senior, supervisor, partner, and managing partner auditors. The sample selection is done by purposive sampling method with the following considerations. Firstly, data relating to the profile and position of auditors working at each public accounting firm are not available, so random sample selection cannot be compiled. Secondly, public accounting firms ranked Big Ten and Non Big Ten in Indonesia are concentrated in certain cities. Thirdly, this study aims to obtain information relating to the perceptions and levels of auditor compliance with the Government of the Republic of Indonesia regulations, Financial Accounting Standards (SAK), and Professional Standards for Public Accountants (SPAP) at all hierarchical levels of the organization of public accounting firms working in accounting firms public in both the Big Ten and Non Big Ten ranks.

### Data Analysis Method

This research is confirmatory and will empirically examine the structural relationships between independent and dependent variables including moderation variables. The moderating variables in this study have different treatments, namely Big Ten and Non Big Ten so that the approach used is a multiple-group approach model. Jöreskog and Sörbom (1993) explained that the multiple-group approach is an analysis model on the basis of more than one sample. The aim is to find out whether the structural model components are the same (invariant) for the two sample groups. The values of GFI, AGFI, and other fit index for the overall estimation of the model absolutely meet the model suitability requirements (Hair et al., 2010). Next is to build a baseline model to compare  $\chi^2$  (Chi-Square) and RMSEA values. Chi-square value and overall RMSEA estimation of structural models differ significantly so it can be concluded that the models of the two groups are different (Byrne, 2010). The moderating effect of the two samples is significantly different so it will be known whether the size of the Big Ten and Non Big Ten public accounting firms has a moderating effect on relationships in the structural model (Matzler et al., 2006; Talaja, 2010; Bou and Satorra, 2010; GuandWu, 2011; Septiawati et al., 2015; Moretti, 2015).

## RESEARCH RESULT AND DISCUSSION

### Data Collection

The number of questionnaires distributed to respondents via public accounting firm e-mails is 380 copies with the following details: 182 copies to independent auditors working in the Big Ten public accounting firms and 198 copies to Non Big Ten public accounting firms. The total number of returned questionnaires that were complete and feasible to be followed up was 224 copies. This is in accordance with the minimum number of samples needed to estimate the maximum likelihood, which is between 200 to 400 (Kline, 2005; Foster et al., 2006; Hair et al., 2010).

### Asumptions and Data Analysis Model

Based on univariate normality tests, the Z-Score is in the range of  $\pm 2.58$  and the p-value Skewness and Kurtosis  $> 0.05$ . Thus, it can be concluded that, univariately, the entire data follows normal or near normal distribution functions, is free of outliers, and there is no multicollinearity required for the estimation of maximum likelihood. Whereas the multivariate normality test, it shows that the data are not normally distributed. Therefore, the estimation method used to test the model in

this study is the robust maximum likelihood method. The data analysis model in this study is divided into two stages, namely the estimation of the measurement model and the estimation of the structural equation model.

#### Confirmatory Factor Analysis

Confirmatory Factor Analysis aims to obtain whether the construct model or latent variables that have been built based on the theory are really fit or feasible after being confirmed with empirical data. Confirmatory Factor Analysis is also called unidimensionality analysis of the indicators and dimensions of latent variable formation. The purpose of the Confirmatory Factor Analysis is to evaluate whether an indicator or dimension used together theoretically can explain a construct of latent variables. The test results show that all construct parameters of the latent variable of audit tenure, time budget pressure, the size of the public accountant's office and audit quality are declared fit with the data (valid and reliable), where the SLF values are 0.50,  $CR \geq 0.70$  and  $VE \geq 0.50$ . This means that all parameters of the latent variable indicators on the measurement model to be built are valid and reliable.

#### Structural Model Estimation

Structural equation model is a statistical technique used to construct and test structural models using a combination of statistical data and qualitative causality assumptions. Analysis of the first stage (2<sup>nd</sup> CFA) has produced unidimensionality forming constructs of latent variables that are fit. The next step is the estimation of the structural model through full model analysis, which is to see the suitability of each model and the causal relationship built in the model.

#### 1. Estimated Structural Models Without Moderation Variables

The first stage procedure is to evaluate the measurement model of the latent variable construct dimension including the model goodness of fit and inferential statistical tests through the second level CFA without entering the moderating variables of the Big Ten and Non Big Ten groups. The test results show that all construct dimensions of latent variable of audit tenure, time budget pressure, public accounting firm size, and audit quality show SLF value > 0.5, which is between 0.52-0.83,  $CR > 0.7$  which is quite high between 0.78-0.88 and  $VE > 0.5$  ie between 0.55-0.74. This means that all the dimensional parameters of the latent variable construct in the structural model to be built are valid and reliable.

The next procedure is to test the suitability of the structural model to be built including absolute fit measure, incremental fit measure, and parsimonious fit measure to verify the model fit according to the data (Hair et al., 2010; Moretti, 2015). Goodness of fit structural models (overall models) that will be built can be seen in the following table.

**Table 1. Goodness of Fit Index (GOF) Structural Model (overall model)**

Size of GOF	Result Value	Standard Value	Conclusion
<b>Absolute Fit Measure</b>			
		4	
<i>p-value</i>	0.66	<i>p-value</i> > 0.05	Good Match
<i>RMSEA</i>	0.00	<i>RMSEA</i> < 0.08	Good Match
<i>GFI</i>	0.99	<i>GFI</i> > 0.90	Good Match
<b>Incremental Fit Measure</b>			
<i>NFI</i>	0.99	<i>NFI</i> > 0.90	Good Match
<i>NNFI</i>	1.00	<i>NNFI</i> > 0.90	Good Match
<i>AGFI</i>	0.96	<i>AGFI</i> > 0.90	Good Match
<b>Parsimonious Fit Measure</b>			
<i>PGFI</i>	0.30		Good Match
<i>PNFI</i>	0.36		Good Match
<b>Other Goodness of Fit Index</b>			

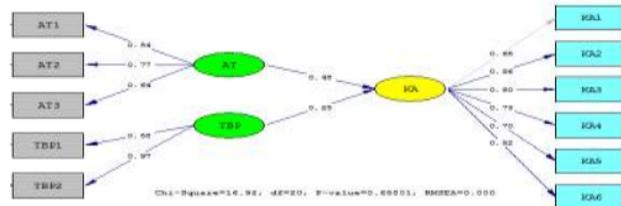
Critical N (CN)	502.62	Critikan N (CN) > 200	Good Match
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Source: Processed Data, 2018.

Based on table 1 of the structural model suitability test (overall model), this study showed satisfactory results, namely all goodness of fit (GOF) values used to construct structural models at this stage showed good compatibility.

The next procedure is to build a model of the main effects of the influence of independent variables on the dependent, as in Figure 2 below.

**Figure 2. Structural Model without Moderation Variables (overall model)**



Based on the structural model estimation (overall model) contained in Figure 2, the following hypothesis test results are obtained:

**Table 2. Direct Effects on Structural Models (Overall Models)**

Hypothesis	Path Analysis	Direct Effect	t-value	Hypothesis Decision
H <sub>1</sub>	AT → KA	0.48	4.18	supported
H <sub>2</sub>	TBP → KA	0.25	2.48	unsupported

Source: Processed Data, 2018.

Based on table 2 of the direct effects above, it can be explained as follows: (1) The audit tenure variable (AT) on audit quality (KA) has a positive direct effect value of 0.48 and t-value 4.18. This means that audit tenure has a positive and significant effect on quality audit (H1 confirmed or supported); (2) The variable time budget pressure (TBP) on audit quality (KA) has a positive direct effect value of 0.25 and a t-value of 2.48. This means that time budget pressure has a positive and significant effect on audit quality (H2 not confirmed or unsupported); and (3) the coefficient of determination (R<sup>2</sup>) of 0.43. This means that the audit tenure (AT) and time budget pressure (TBP) variables can explain the audit quality variable (KA) by 43%. The rest is influenced by other factors not included in the model by 57%.

**2. Estimation of Structural Models with Moderation Variables**

In testing the effects of moderating variables (stage-3), we develop the Baron and Kenny (1986) model using a multi-group model approach. Multi-group models are used when moderating variables use descriptive variables or categories; for example gender, age (young and old), type of company (manufacturing and services), etc. (Matzler et al., 2006; Moretti, 2015).

The first procedure in a multi-group approach is to divide the sample into two sub-samples (multiple-sample approach) that are identified according to the number of samples available (multiple samples with the same or different parameters set). Then the sample was divided or separated based on categories of moderating variables, namely the Big Ten and Non Big Ten groups in the study sample (Matzler et al. 2006; Moretti, 2015). The moderating variable size of the Big Ten and Non Big Ten public accounting firms in this study is separated by group category into 2 sub-samples, namely sub-group 1 (Big Ten) and sub-group 2 (Non Big Ten).

The second procedure is to make a measurement model which is done by validity and reliability tests (SLF, CR, and VE) in group 1 and group 2. This is done to evaluate the relationship between indicators and latent variables at the first level and as dimensions at the second level in each sub-sample (group). The 2<sup>nd</sup> CFA test results on all variables and dimensions in each sub-sample (group 1 and group 2) showed the value of each SLF > 0.5 ie between 0.51-0.94 and 0.51-0.95, CR > 0.7 which was quite high between 0.79-0.89 and 0.86-0.87, VE > 0.5, which is between 0.57-0.68 and 0.54-0.77. This means that all variables and dimensions are valid and reliable. This means that the structural model that is built is valid and reliable.

The third procedure is to estimate the goodness of fit index for each sub-sample by using all sample data, so that the research model with the best level of matching is obtained from the two sub-samples of the structural model estimation (Byrne, 1998; Hair et al. , 2010) as contained in table 3 below.

**Table 3.** Goodness of Fit Index (GOF) of the Structural Group Model

Size of GOF	Result Value		Standard Value	Conclusion	
	Group			Group	
	1	2		1	2
<b>Absolute Fit Measure</b>					
<i>-value</i>	0.34	0.24	p-value > 0.05	Good Match	Good Match
<i>MSEA</i>	0.03	0.04	RMSEA < 0.08	Good Match	Good Match
<i>IFI</i>	0.97	0.96	GFI > 0.90	Good Match	Good Match
<b>Incremental Fit Measure</b>					
<i>NFI</i>	0.98	0.98	NFI > 0.90	Good Match	Good Match
<i>NNFI</i>	1.00	0.99	NNFI > 0.90	Good Match	Good Match
<i>AGFI</i>	0.89	0.87	AGFI > 0.90	Marginal	Marginal
<b>Parsimonious Fit Measure</b>					
<i>PGFI</i>	0.29	0.29	Kecocokan Baik	Good Match	
<i>PNFI</i>	0.35	0.35	Kecocokan Baik	Good Match	
<b>Other Goodness of Fit Index</b>					
<i>Critical N (CN)</i>	205.45	202.56	Critikan N (CN) > 200	Good Match	Good Match

Source: Processed Data, 2019.

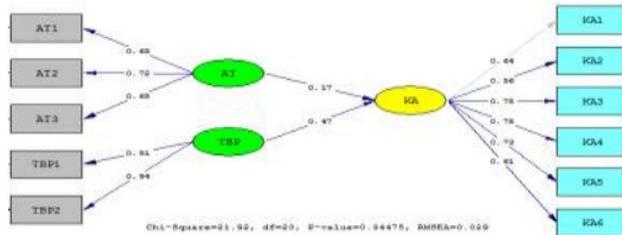
Based on the summary of the structural model goodness of fit (GOF) index for the two sub-groups of table 3 above, the samples have a good fit overall. Hair et al. (2010) argued that if there are one or two goodness of fit criteria have been met then the model is said to be fit.

The fourth procedure is to estimate the structural model separately using each input data from each sub-group with the degree of freedom parameter set equally on the whole structural equation model (Byrne, 1998; Moretti, 2015). Because the results of the validity, reliability and compatibility tests are good, the structural model estimates generated for the two sub-groups can be described as follows:

**Figure 3.** Sub-Group Structural Models 1 Big Ten Moderation Variables

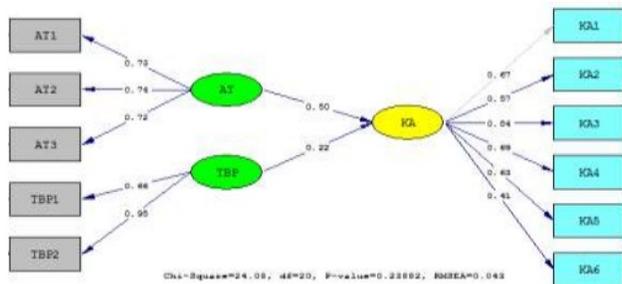
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Based on Figure 3 above, in the structural equation model sub-group 1 (Big Ten), the coefficient of determination ( $R^2$ ) value of 0.35 is obtained. This means that audit tenure (AT) and time budget pressure (TBP) variables with moderation in the size of public accounting firms (Big Ten) are able to explain audit quality variables (KA) by 35% while the rest are influenced by other factors not included in the model by 65%. Furthermore, the structural equation model sub-group 2 (Non Big Ten) is as shown in the following figure.

Figure 4. Sub-Group Structural Model 2 Non Big Ten Moderation Variables



Based on Figure 4 above, in the structural equation model sub-group 2 (Non Big Ten), the coefficient of determination ( $R^2$ ) value of 0.46 is obtained. This means that audit tenure (AT) and time budget pressure (TBP) variables with a moderation in the size of public accounting firms (Non-Big Ten) are able to explain the audit quality variable (KA) by 46% while the rest is influenced by other factors not included in the model by 54%.

The fifth procedure forms the Base Line Model which contains a set of values found in the estimation of the structural model (overall model) in step 1 and the structural model estimation sub-group 1 (Big Ten) and sub-group 2 (Non big ten) in stage 2 (picture 2, picture 3, and picture 4). This is intended to detect differences in the value of  $X^2$  (Chi-Square) with the same degree of freedom (Byrne, 1998; Moretti, 2015). The basic model consisting of  $X^2$  (Chi-Square) value, degree of freedom, and the RMSEA value respectively are as shown in table 4 below.

Table 4. Chi-Square ( $X^2$ ) and Fit Indices on Three Structural Models

Structural Model	$X^2$	df	RMSEA
Structural Models without Moderation Variables	16.92	20	0.00
Structural Model of Moderation Variable on Audit Quality	15.73	20	0.00

Structural Model of Sub-Group 1 Big Ten Moderation Variables	21.92	20	0.03
Structural Model of Sub-Group 2 Non-Big Ten Moderation Variables	24.08	20	0.05

Source: Processed Data, 2019.

The information in table 4 shows that there are significant differences in X2 and Fit Indices in the three structural models that indicate the influence of sub-group 1 (Big Ten) and sub-group 2 (Non-Big Ten) moderation variables on the structural model's relationships. The difference in the matching index value of X2 and RMSEA in each structural model shows a number of differences in the relationship strength and the same Degree of Freedom (df) (Byrne, 1998; Moretti, 2015). Thus, the structural models can be interpreted that the size of public accounting firms (Big Ten and Non Big Ten) as a moderating variable has a moderation effect on the structural model's relationships. This means that hypothesis 3 (H3) in this study was confirmed or accepted.

Test results on the effects of moderation on the structural equation model (Overall Model) obtained a coefficient of determination (R<sup>2</sup>) of 0.43 while the coefficient of determination (R<sup>2</sup>) of sub-group 1 (Big Ten) increased to 0.35. The coefficient of determination (R<sup>2</sup>) of sub-group 2 (Non Big Ten) decreased to 0.53. This shows that the moderating variable of sub-group 1 (Big Ten) and sub-group 2 (Non Big Ten) have a moderation effect on the structural model's relationships.

Further explanation regarding the test results on the moderation effect for sub-group 1 (Big Ten) and sub-group 2 (Non Big Ten) can be seen in table 5 and table 6 below.

**Table 5.** Effects of Moderation on Structural Models of Big Ten Sub-Group 1

Hypothesis	Path Analysis	Direct Effect				Moderation Effect
		overall model	t-value	Big ten	t-value	
H <sub>1</sub>	AT → KA	0.48	4.18	0.17	0.97	weaken
H <sub>2</sub>	TBP → KA	0.25	2.48	0.47	2.36	weaken

Source: Processed Data, 2019.

**Table 6.** Effects of Moderation on Structural Models of Non Big Ten Sub-Group 2

Hypothesis	Path Analysis	Direct Effect				Moderation Effect
		overall model	t-value	Non Big ten	t-value	
H <sub>1</sub>	AT → KA	0.48	4.18	0.50	2.30	weaken
H <sub>2</sub>	TBP → KA	0.25	2.48	0.22	1.13	weaken

Source: Processed Data, 2019.

The moderation effect can also be seen from a significant level. In Table 5 there are some differences in the coefficient and significance, namely the hypothesis (H1) and (H2) sub-group 1 (Big ten) about the effect of audit tenure (AT) and time budget pressure (TBP) on audit quality (KA). Significantly the relationship between these variables becomes weaker, with the value of the direct effect (path coefficient) each (0.17); (0.47); and t-value (0.97); (2.36) compared to the structural model (overall model) with a direct effect value (path coefficient) of (0.48); (0.25); and t-value (4.18); (2.48). The hypothesis (H1) and (H2) subgroup 2 (Non Big Ten) in table 6 significantly influences audit tenure (AT) and time budget pressure (TBP) on audit quality (KA). The relationship between these variables becomes weaker with the value of the direct effect (path coefficient) respectively (0.50), (0.22) and t-value (2.30); (1.13).

Based on the results of the moderation effect test as described above, the moderating variables can be classified as follows.

**Table 7.** Classification of Moderation variables in Sub-Group 1 Big Ten

Hypothesis	Overall Model		UBK → KA		Big Ten		Classification of Moderation Variables
	Direct	t-value	Direct	t-value	Direct	t-value	

	Effect		Effect		Effect		
H <sub>1</sub>	<b>0.48</b>	<b>4.18</b>	<b>0.83</b>	<b>8.03</b>	<b>0.17</b>	<b>0.97</b>	<i>Moderation Predictor</i>
H <sub>2</sub>	<b>0.25</b>	<b>2.48</b>			<b>0.47</b>	<b>2.36</b>	<i>Quasi Moderation</i>

Source: Processed Data, 2019.

**Table 8.** Classification of Moderation variables in Sub-Group 2 Non Big Ten

Hypothesis	Overall Model		UBK KA <sup>*</sup>		Non Big Ten		Classification of Moderation Variables
	Direct Effect	t-value	Direct Effect	t-value	Direct Effect	t-value	
H <sub>1</sub>	<b>0.48</b>	<b>4.18</b>	<b>0.83</b>	<b>8.03</b>	<b>0.50</b>	<b>2.30</b>	<i>Quasi Moderation</i>
H <sub>2</sub>	<b>0.25</b>	<b>2.48</b>			<b>0.22</b>	<b>1.13</b>	<i>Moderation Predictor</i>

Source: Processed Data, 2019

### Discussion

The test results of the model in this study aim to statistically test the relationship of the construct of independent latent variables (audit tenure and time budget pressure to the construct of dependent latent variables (audit quality)) and to prove the role and effect of moderating variables (size of public accounting firm Big Ten ranking and Non Big Ten) on structural model's relationships. Hypothesis test results indicate that the model built is supported by research data. The following is an explanation of the results of hypothesis testing supported by research data.

#### 1. Effect of Audit Tenure on Audit Quality

Testing hypothesis 1 (table 2) shows a positive direct effect (path coefficient) of 0.48 and a t-value of 4.18. This means that audit tenure has a positive and significant effect on audit quality. This shows that the relationship between the auditor and the client becomes important when the relationship can reduce auditor independence. Velte and Stiglbauer Research (2012); Siregar et al. (2012) concluded that the rules limiting the relationship between the auditor and the client had an impact both for the auditor and the client; the auditor will act more independently and objectively in carrying out audit assignments.

The Government through the Minister of Finance issued Regulation Number 17/KMK.01/2008 and updated with Regulation Number 5/2015 which specifies that the provision of audit services on financial statements by a public accountant is no longer than 5 consecutive financial years. However, the results of descriptive statistical analysis show that public accounting firms should have a relationship with the same client no more than 6 years with a score of 62.6% while the relationship of the auditor with the same client (more than 3 years) can influence independence with a score of 64.3%. Almutairi et al. (2009) in his study revealed that the audit engagement period can be classified into 3 parts, namely short term tenure (1-3 years), Medium term tenure (4-10 years), and Long term tenure (more than 10 years). The results of his study found that audit tenure that affects audit quality is neither too short nor too long. Thus, Government Regulation Number 5/2015 which specifies that the provision of audit services on financial statements by a public accountant for a maximum of 5 consecutive fiscal years needs to be evaluated because the results of this study do not find evidence that Regulation Number 17/KMK.01/2008 can reduce audit quality. In addition, Regulation of the Financial Services Authority Number 13/POJK.03/2017 article 16 paragraph (1 and 2) has restricted the use of audit services on annual historical financial information from the same public accountant for the audit period of 3 (three) consecutive fiscal years. This also applies to public accountants who are associated parties.

This finding supports the research of Mai et al. (2008); Davis et al. (2009); Gul et al. (2009); Al-Thuneibat (2011) and Blandon and Bosch (2015) which stated that audit quality decreases with increasing audit tenure both for auditors who have industry specialization and for auditors who do not have industry specialization. This finding is also different from the research of Chen et al. (2008) which stated that audit quality increases with increasing audit tenure.

## 2. Effect of Time Budget Pressure on Audit Quality

Hypothesis 2 testing (table 2) shows a positive direct effect (path coefficient) of 0.25 and a t-value of 2.48. This means that time budget pressure has a positive and significant effect on audit quality. This shows that time budget pressure in conducting audits can affect audit quality. Then the auditor must tighten audit programs so as to be able to adjust to the time agreed with the client.

According to Liyanarachchi (2007), there are four factors that affect the ability of auditors to achieve the specified time budget pressure, namely *client fees, audit programs, last year actual time spent on audits, and auditors' participation in setting time budgets*.

The problem of the time of completion of an audit often creates pressure on the auditors, where they must be able to complete their duties in accordance with a predetermined time. Descriptive statistical analysis results indicate that the existence of time limits in the audit is considered as a burden for the auditor's score of 57.0%. Limited time in auditing makes the auditor obtain evidence of a less than maximum score of 62.2%. This finding is different from the research of Soobaroyen and Chengabroyan (2005); Kelley et al. (2005); Gundry and Liyanarachchi (2007); Broberg et al. (2016) which showed that time budget pressure has a negative effect on audit quality.

## 3. Auditors of Big Ten and Non Big Ten Public Accounting Firms Moderating the Relationship of Audit Tenure and Time Budget Pressure to Audit Quality have Different Perceptions and Compliance Levels in Structural Model's Relationships.

The test results as described above show that there are significant differences in the  $X^2$  and Fit Indices of the three structural models that indicate the influence of sub-group 1 (Big Ten) and sub-group 2 (Non-Big Ten) moderation variables on the structural model's relationships. This means that both large (Big Ten) and small (Non Big Ten) public accounting firms have the same commitment to produce audit quality accordance with Professional Accountant Public Standards. What is different from the two ratings of the public accounting firm is the level of compliance of auditors with the audit regulations and standards that apply during the audit assignment of clients' historical financial statements.

### a. Effects of Moderation on the Relationship of Audit Tenure and Audit Quality

Based on the results of hypothesis testing as presented in table 5 and table 6, there are some differences in the coefficient and significance values. Hypothesis test results (H1) sub-group 1 (Big Ten) states the effect of audit tenure (AT) on audit quality (KA) with a value of (0.17) and t-value (0.97) while hypothesis (H1) sub-group 2 ( Non Big Ten) in table 6 states the effect of audit tenure (AT) on audit quality (KA) with a value of (0.50) and t-value (2.30).

The effect of testing moderating variables on the structural model of group 1 in stage 2 and the structural model in group 2 in stage 2 statistically weakened the relationship between audit tenure (AT) and audit quality (KA). This means that auditors of public accounting firms ranked Big Ten and Non Big Ten are suspected to have a close relationship between the auditor and the client due to economic dependency factors.

This finding supports the research of Azizkhani et al. (2006) which suggests three main reasons that can make audit quality decline, namely (1) economic dependence; (2) excessive trust in clients; and (3) psychological dependence resulting in the emergence of loyalty, trust, or emotional ties with clients. The results of the descriptive statistical analysis indicate that professional assignments over a long period of time have the potential to reduce auditors' independence to agree with a score of 50.4%. Change of auditors due to the limitation of professional assignments has the potential to change qu rotation auditors with a score of 50.4%. Then limiting the assignment of a form reduces the close relationship between the auditor and the client with a score of 59.6%.

### b. Effects of Moderation on the Relationship between Time Budget Pressure and Audit Quality

Based on the results of hypothesis testing as presented in table 5 and table 6 there are some differences in the coefficient and significant values, namely the results of hypothesis testing (H2) sub-group 1 (Big Ten) is the effect of time budget pressure (TBP) on audit quality (KA) with a value (0.47); and t-value (2.36) while hypothesis (H2) sub-group 2 (Non Big Ten) in table 6 is the influence of time budget pressure (TBP) on audit quality (KA) with a value of (0.22) and t-value (1.13).

The effect of testing moderating variables on the structural model group 1 statistically weakens the relationship between time budget pressure (TBP) and audit quality (KA). This means that auditors of public accounting firms ranked Big Ten and Non Big Ten are suspected of not carrying out audit steps at each stage of the audit program as stated in Auditing Standard Statement No. 32 (SA Section 150), i.e. standards for carrying out fieldwork, audit planning and supervision, adequate understanding of internal control structures, and sufficient and competent audit evidence so that the auditor and audit team can complete the audit on time in accordance with the contract agreed with the client.

The results of the descriptive statistical analysis—showing that the auditor's expertise and experience affect the size of the audit fee—stated that the agreed score is 67.40% while the audit fee received by the auditor was in accordance with the complexity and audit risk of the client company with a score of 63.5%. Auditors with high audit fees will carry out extensive and in-depth audit procedures on the client's financial statements. In contrast, the audit fee received by the auditor is quite low. There is a tendency for auditors not to carry out a number of fieldwork, for example by not performing certain audit procedures.

This finding supports the research of Hoitash et al. (2007) which says that audit fees paid to auditors that are very large can improve audit quality. On the other hand, a large audit fee will cause the auditor to have economic dependence on the client. Choi et al. (2010) found that in samples with abnormal negative audit fees (below normal audit fees) there is no relationship between abnormal audit fees and audit quality. However, in samples with positive abnormal audit fees (audit fees higher than normal audit fees), there is an influence negative audit fees abnormal from audit quality. Meanwhile the results of the research by Kraub et al. (2015) found a negative relationship between positive abnormal audit fees (too high audit fees) and audit quality. The findings are different from the research by Eshleman and Guo (2013) which showed a positive relationship between abnormal positive audit fees and audit quality. To avoid increasing market competition, the Indonesian Institute of Certified Public Accountants (IAPI) has issued Management Regulation Number 2 of the 2016 Institute of Public Accountants regarding the determination of financial statement audit fees. Guidance is issued for all IAPI members who have or carry out public accounting practices regarding the amount of audit fees that are reasonable and appropriate for the auditor to provide professional services in accordance with applicable public accounting standards.

Commented [ENF4]: phrasing

## CONCLUSIONS, LIMITATIONS AND SUGGESTIONS

### Conclusion

Disclosure of violations in the client's accounting system can be revealed if the auditor has a level of compliance with the applicable audit provisions or standards as referred to in article 2 of Regulation of the Minister of Finance Number 17/PMK.01/2008. Public accountants and/or public accounting firms must comply with (1) SPAP and Professional Ethics determined by IAPI and (2) Legislation in force relating to the service sector provided and the commitment of all interested parties including public accountants and/or public accounting firms with full support from the management (stewardship).

The results of this study indicate that the length of the relationship between the public accountant and/or the public accounting firm with the client greatly affects the level of auditor compliance with applicable audit standards. The regulation of audit tenure issues needs to be an important concern, especially for regulators of public accounting firms. Arrangement of auditor replacements must be able to bind all parties involved in the public accounting profession effectively

so that auditor independence is always maintained during carrying out the audit assignment of the financial statements of the client.

#### Research Limitations

The limitations of this study focus on public accounting firms that have collaborations with professional business services firms in foreign public accounting firms (KAPA) or foreign audit organizations (OAA), namely public accounting firms ranked Big Ten and Non Big Ten. In future research, it is expected that public accounting firms in Indonesia can be used as objects of research to ascertain whether the public accounting firm has the same perception and level of compliance during the audit assignment of historical financial statements. In addition, the moderating variable analysis model with a multiple-group approach can be developed as a reference material for future researchers.

#### Suggestion

Minister of Finance Regulation No.17/KMK.01/2008 needs to be considered again because this study did not find evidence that could reduce audit quality. In addition, Regulation of the Financial Services Authority Number 13/POJK.03/2017 article 16 paragraph (1 and 2) has restricted the use of audit services on annual historical financial information from the same public accountant for the audit period of 3 (three) fiscal years at the latest. This also applies to public accountants who are associated parties. In the next research, we can enter the audit fee variable as one indicator that can affect audit quality and then audit tenure testing can be expanded with a multiple-group approach.

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# THE EFFECT OF AUDIT TENURE AND TIME BUDGET PRESSURE AGAINST AUDIT QUALITY WITH MODERATION OF PUBLIC ACCOUNTING OFFICES SIZE

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