

# The Effect of Auditor's Work Stress on Audit Quality of Listed Companies in Indonesia

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## ABSTRACT

*Audit failure practices have been the headlines in the past decade. At the same time, auditing is associated with high stress and over-timed work. However, a concern regarding the importance of audit quality rises nowadays. This research aims to find the effect of auditor's work stress to audit quality. Additionally, it is intended to find how the presence of certain condition, such as such as initial audit partner engagement, audit firm size, and client litigation risk, impact the effect of auditor work stress to audit quality. This research utilizes data of listed Indonesian companies during 2014 – 2016. The methodology used is multiple linear regression. This research finds that auditor's work stress affect audit quality significantly and negatively. This finding enhances Interaction Theory, where generally in Indonesian audit profession; the increased job-demand is not balanced by good job-control and social support. However, initial audit partner engagement and big audit firm size can mitigate the effect of such stress. While client litigation risk does not affect the impact of auditor's work stress to audit quality. This study suggests that public accounting firms pay attention to job demand, low job control, and low social support, which are elements of work stress, to improve audit quality.*

## ABSTRAK

*Praktik kegagalan audit telah menjadi berita utama dalam dekade terakhir. Pada saat yang sama, audit dikaitkan dengan stres tinggi dan kerja lembur. Oleh karena itu, kekhawatiran tentang pentingnya kualitas audit muncul saat ini. Penelitian ini bertujuan untuk mengetahui pengaruh stres kerja auditor terhadap kualitas audit. Selain itu, penelitian ini dimaksudkan untuk mengetahui bagaimana kehadiran suatu kondisi tertentu, seperti keterlibatan mitra audit awal, ukuran firma audit, dan risiko litigasi klien, dapat mempengaruhi pengaruh stres kerja auditor terhadap kualitas audit. Penelitian ini menggunakan data perusahaan yang terdaftar di Bursa Efek Indonesia selama tahun 2014 - 2016. Metodologi yang digunakan adalah regresi linier berganda. Penelitian ini menemukan bahwa stres kerja auditor mempengaruhi kualitas audit secara signifikan dan negatif. Temuan ini memperkuat Teori Interaksi, dimana secara umum dalam profesi audit Indonesia, peningkatan permintaan pekerjaan tidak diimbangi dengan kontrol kerja yang baik dan dukungan sosial. Namun, keterlibatan mitra audit awal dan ukuran perusahaan audit yang besar dapat mengurangi pengaruh stres tersebut. Sedangkan risiko litigasi klien tidak mempengaruhi dampak stres kerja auditor terhadap kualitas audit. Penelitian ini menyarankan agar Kantor Akuntan Publik memperhatikan tuntutan pekerjaan, kontrol pekerjaan yang rendah, dan dukungan sosial yang rendah yang merupakan elemen stres kerja, untuk meningkatkan kualitas audit.*

## 1. INTRODUCTION

Stress occurs as a psychological response to demands, fulfilling certain criteria that exceeds one's capacity (Griffin & Moorhead, 2014). Meanwhile, work stress is a more specific concept. Work stress is experienced as a harmful reaction to undue pressures and demands at work (Bhui et al., 2016).

The image built upon the auditing profession, along with the desperation news of how detrimental auditor's work stress could affect physical and psychological stability of human being, raises questions on whether work stress could impair the quality of work performed or not. Even auditing profession is associated with stress, auditors are

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deemed to be the critical sentry in the financial reporting process while also plays an essential role in the effective functioning of capital markets around the world (DeAngelo, 1981). However, with the degree of stress burdened by auditors, they could make certain pivotal mistakes that impaired their work quality, reputation, and the financial report itself. Therefore, businesses and the auditing profession grow bigger concern towards audit quality (Sitorus, Hendratono & Fransisca, 2020).

Persellin *et al.* (2018) pointed out that audit quality tends to deteriorate during busy season due to lengthy working hours and overwhelming number of tasks to complete. In average, auditors are claimed to work for more than 10 hours a day or equivalent to at least 50 hours a week. *Pusat Pembinaan Akuntan dan Jasa Penilai* (PPAJP) examined 94 Indonesian public accountant offices and found that Indonesian auditors had committed dysfunctional auditing behavior that reduced audit quality, including 66% of audit work violated SA 326 about adequate account testing, 50% of audit work violated SA 339 about adequate documentation and 21% did not plan audit samples (Kurnia, 2011). Moreover, the number of audit fraud cases grows in numbers and had made several national headlines in the past few years. Garuda Indonesia, an Indonesian state-owned airline materially misstated its revenue on 2018 and did not comply to PSAK 23 (Hendartyo, 2019). Lately, Jiwasraya, an Indonesia state-owned insurance company, also encountered corruption and accounting fraud scandal (Manurung, 2020).

This research aims to examine the impact of work stress on audit quality based on Interaction Theory. In order to examine audit quality, this research used absolute value of discretionary accruals as a proxy to audit quality. Discretionary accruals represent the estimated level of earnings management within client's financial statement. Alzoubi (2018) explained that the higher number of discretionary accruals means larger magnitude of earnings management. Auditor's inability to detect earnings management leads to lower audit quality. Thus, there is an inverse relationship between discretionary accruals and audit quality. Absolute value is appropriate for this research as it does not inflict direction or sign of earnings management. This research only focused on the presence of earnings management as a proxy to audit quality as opposed to the direction of the earnings management. Absolute discretionary accrual is calculated using Modified Jones Model. This calculation method has been widely used in many

researches (Yan & Xie, 2016; Alzoubi, 2018; Cho, Kwon & Krishnan, 2020; and Xiao, Geng & Yuan, 2020).

Despite the unpopular issues about auditor's work stress, there are only a few researches that focus specifically to its impact on audit quality. One of them is Yan & Xie (2016) who conducted a research to determine the effect of work stress to audit quality and found that there is no significant relationship among them. Others also studied the effect of work stress on quality of work in general or audit quality specifically such as Agoglia *et al.* (2010), Lu *et al.* (2010), Zadegan & Aqa'i (2018), and Dashti & Saedi (2020).

To enrich previous studies, the present study also examines the effect of work stress to audit quality when moderated into three additional conditions, which could either exacerbate, mitigate or do not affect the effect of work stress on audit quality. The three conditions used in this research are audit in initial audit partner engagement, audit conducted by Big 4 audit firm, and audit for client in litigation. Each condition has been numerously tested to audit quality which produced varying results, but not many researches factored in the work stress aspect of auditors into the equation. It would be imperative to understand each conditions' effects towards audit quality when work stress occurs so that there will be clearer understanding regarding the issue.

Most previous studies only focused on the effect of initial audit partner engagement on audit quality, yet the findings are still inconclusive. Fargher, Lee, and Mande (2008) stated that new audit partner would enhance the audit quality as the new audit partner carries a fresh perspective to the engagement. Lennox also found that audit quality improved during the time around the initial audit engagement period. Kalanjati *et al.* (2019) found positive association between audit partner rotation and audit quality. Meanwhile, some researchers found lower audit quality during initial audit partner engagement (Daugherty *et al.*, 2012; Daugherty *et al.*, 2013; and Litt *et al.*, 2014). This result is also consistent with Yan & Xie (2016) and Zadegan & Aqa'i (2018) who examined the impact of work stress on audit quality during initial audit partner engagement. Both researchers found that initial audit partner engagement strengthen the impact of auditor's work stress on audit quality. Lastly, another group of researchers argued that initial audit partner engagement did not affect audit quality (Chi *et al.*, 2009; Firth, Rui, & Wu, 2012; Aronmwan, Ashafoke, & Mgbame, 2013; Mohamed

& Habib, 2013; Fitriany *et al.*, 2015; and Aguilar, López, & Barbadillo, 2018).

The effect of audit firm size on audit quality is also a debatable topic. Choi *et al.* (2010) stated that big audit firms are more likely to provide uniform quality while smaller ones tend to compromise their quality. Francis & Yu (2009); Wibowo & Rossieta (2009); and Sawan & Alsaqqa (2013) found similar results. Hartadi (2012) and Nindita & Siregar (2012) opposed that audit firm size does not affect audit quality significantly. However, there is no research that considers the effect of audit firm size on the effect of work stress towards audit quality.

Finally, the effect of litigation cases on audit quality has not been widely examined. Litigation is a source of major risk (Arena & Ferris, 2017). The concept of risk in auditing is highly related to the extent of audit procedures required to be completed by auditors. The complication of extra factors involved in client with litigation imposes further needs to investigate its impact on the effect of work stress to audit quality.

## 2. THEORETICAL FRAMEWORK AND HYPOTHESES

### Interaction Theory

Karasek (1979) introduced the Interaction Theory using Job Demand-Control (JDC) Model or Job Strain Model which is widely accepted in the field of psychology and management science. It is one of the most influential theories regarding work stress. This model suggested that work stress composed of two significant factors, which are job demand and job control. Job demand refers to the difficulty and workload, including coping strategies and relief mechanisms. Osca & López-Araújo (2020) explained that job demand refers to physical, social, and organizational aspects to a job. Meanwhile, job control is related to individual's autonomy on their own work. The level of work stress depends on the interaction between the two aspects. This theory is later enhanced by Karasek & Theorell (1990) who added another factor to the model, which is social support. Social support can be from anyone and is not bounded to be from office-related people. However, co-worker and supervisor support is deemed to be the most effective (Love *et al.*, 2007). This theory implied that individual responses to work stress might affect physical health, mental health, work quality, and performance (Lu *et al.*, 2010).

The independent variable of this research represents the level of work stress as explained above. Initial audit partner engagement and client

litigation serve as additional job demand that might affect work stress and later audit quality. Meanwhile, audit firm size is a component of job control and social supports.

### Auditor's Work Stress and Audit Quality

Increasing work stress might triggers employee negative behavior and performance. For example, employee's interpersonal conflict, absenteeism, turnover and extreme behavior like retaliation. Considering how most companies' financial year ended on December, auditors might be flooded with work during the same exact time window for most clients. At times of stress, auditors might also compromise unacceptable level of quality in order to finish more tasks quicker, hence audit quality is hypothesized to be compromised.

The previous experimental and survey study indicates that auditor's burnout and time constraints in busy seasons could reduce audit quality at the individual auditor level (Agoglia *et al.*, 2010). The workload pressures of busy season result from the tension between limited audit resources and the need to complete the audit within a limited time window. Zadeqan & Aqa'i (2018) tested companies in Tehran Stock Exchange and concluded that auditor's stress contributed to a sharp drop in audit quality. Dashti & Saedi (2020) found that stress, social pressure, and time pressure reduced audit quality significantly. Lu *et al.* (2010) stated that individual responses to work stress could affect physical and mental health, work quality and even organizational performance through the stimulus and response system. Therefore, the previous studies lead the present researchers to predict as to the following:

H<sub>1</sub> Auditor's work stress weakens the audit quality.

### Initial Audit Partner Engagement, Auditor's Work Stress, and Audit Quality

Initial audit partner engagement is stipulated to ensure independency between auditors and clients. However, at the same time, auditing standard required abundant preliminary works for initial engagement. Auditors are expected by the standard to understand not only the accounting aspects, but also the business nature of clients. Thus, theoretically, initial audit partner engagement might increase the number of procedures and tasks to be completed by auditors. Based on Interaction Theory, increase in job demand will be followed by increase in work stress. Hence, it is expected that the effect of auditor work stress on audit quality will be

strengthened during initial audit partner engagement.

Previous studies also supported that initial audit partner engagement can lead to lower audit quality. United States Department of Treasury's Advisory Committee on the Auditing Profession (2008) in Daugherty *et al.* (2013) documented reduced audit quality due to frequent partner rotation for small-practice offices. Additionally, ISA required auditors to implement risk-based auditing, in which it requires auditors to understand the nature of clients' business and industry. Daugherty *et al.* (2012) claimed that partner rotation removes specific client knowledge that is required to increase audit quality. Similarly, Litt *et al.* (2014) found evidence of lower financial report quality after a partner rotation, especially if the first two years of new audit partner's result is compared to the last two years of outgoing's partner. Lately some researchers tried to reveal the impact of work stress on audit quality during initial audit partner engagement. Yan & Xie (2016) conducted a research to determine the effect of auditor's work stress to audit quality for Chinese A-share listed companies from 2009 to 2013. They found that there is significant negative effect on auditor's work stress to audit quality in initial audit firm engagement. Zadeqan & Aqa'i (2018) found consistent result that there is significant magnification of the impact of auditor's work stress to audit quality during initial audit partner engagement. Therefore, work stress is expected to be more harmful towards audit quality during initial audit partner engagement. As such, the following hypothesis is proposed:

**H<sub>2</sub>** Initial audit partner engagement strengthens the effect of auditor's work stress towards audit quality.

### **Audit Firm Size, Auditor's Work Stress, and Audit Quality**

Big 4 audit firms are known to be stressful and full of pressure, yet are deemed more reputable with better quality. Big 4 audit firms are expected to have better resources, both based on financial capabilities and resources owned, to control each factor of the work stress components better. Hence, audit quality of Big 4 audit firms are expected to be better and consistent.

Previous studies have proven that Big 4 audit firms provide reliable outcome. Francis & Yu (2009) and Wibowo & Rossietta (2009) found that bigger audit firms result in better audit quality. Choi *et al.* (2010) introduced the economic dependence

perspective. They chose that local audit firm to be more concerned with economic importance and are more likely to compromise reduced audit quality behavior. Yet, for the big audit firms, such as Big 4 audit firm, they are more likely to conform with uniform quality perspective. It means that bigger audit firm is more likely to provide similar audit quality for every engagement. Sawan & Alsaqqa (2013) added that bigger audit firm are more likely to be more independent and result in higher audit quality. Audit firm size can also indicate different firm control and quality control procedures applied that can contribute to auditor's work stress. The arguments above lead the researchers to hypothesize as the following:

**H<sub>3</sub>** Audit Firm Size weakens the effect of auditor's work stress on audit quality.

### **Client's Litigation Risk, Auditor's Work Stress, and Audit Quality**

Litigation cases experienced by client surely have the potential direct costs that the client should pay. In addition to the direct costs, Khurana & Raman (2004) identified that the entity sued will also be entailed by indirect costs, such as: loss of reputation, loss of time, and the stress associated. Thus, with a lot at stake, litigation claims against client become a major source of risk (Arena & Ferris, 2017). On the same note, Burnside (2004) emphasized the danger of contingent liability and its impact to the bigger economy. Khurana & Raman (2004) claimed that audit quality generally becomes an issue for client facing financial difficulties, of those could be indicated from litigations faced by client.

In response to the issue, Arens, Elder, & Beasley (2017) suggest that auditor for client with litigation should do inquiry towards client's attorney and other independent legal counsel since auditor did not have sufficient competence on the field. Client's attorney could not be the primary source of information because they are the advocates for client, which mean there is potential bias in the information provided. However, attorneys in recent years are less willing to provide certain information. Arens *et al.* (2017) notes that client's attorney might expose themselves toward legal liability for disclosing incorrect and confidential information. In addition, Hennes (2014) points out that revelation of legal information will provide opponents an upper-hand of information and will result in change of legal strategy. Thus, several attorneys along with management opts not to fully disclose litigation transparently. Another major source of problem is

the categorization of the likelihood, whether it should be classified as probable, possible or remote. This issue includes client management’s judgment and could potentially hamper the comparability of contingent liabilities.

In this case, the factors described above show that litigation is prone to be materially misstated. As consequence, litigation also increases the complexity faced by auditor which might be affecting auditor’s work stress and audit quality. With the extra works required and risk bore by auditors, it is expected to increase the impact of auditor’s work stress on audit quality. Therefore, the researcher develops the following hypothesis:

**H<sub>4</sub>** Client’s litigation risk strengthens the effect of auditor’s work stress on audit quality.

### 3. RESEARCH METHOD

#### Population and Sample

The population of this research is all Indonesian listed companies, registered in Indonesian Stock Exchange (IDX) during 2014 to 2016. This period represents ordinary economic condition in which there is no economic turbulence. The data were taken from [www.idx.co.id](http://www.idx.co.id) and for certain data is

taken from the corresponding company’s website. The amount of sample taken each year could be varied, depending on the amount companies listed on the pertinent year. The sample includes firms in all sectors except finance sector publishing their annual financial statements ended on 31<sup>st</sup> December in Rupiah. The annual report states the auditor that audits the financial statement;

#### The Dependent Variable

This study has its dependent variable that is audit quality (AQ) It is the likelihood of auditor to detect breach from client’s accounting system and its probability to report uncompliance (DeAngelo, 1981). This research measures audit quality using proxy of earning management that is calculated by the absolute value of discretionary accruals (ABSDA) using the Modified Jones Model. The model separated accruals into discretionary and non-discretionary accruals. Alzoubi (2018) explained that elevated magnitude of discretionary accruals signals earning management practices. Auditor’s inability to detect earnings management indicates lower audit quality. Hence, absolute value of discretionary accruals has inverse relationship to audit quality. There are several steps to calculate:

Calculate total accruals (TA) using the following formula:

$$\frac{TA_t}{A_{t-1}} = \beta_1 \frac{1}{A_{t-1}} + \beta_2 \frac{\Delta REV_t}{A_{t-1}} + \beta_3 \frac{PPE_t}{A_{t-1}} + \varepsilon_t \quad (1)$$

$TA_t$  = Total accruals, defined as the earnings before extraordinary items (NI) - operating cash flows (CFO);

$\Delta REV$  = Change in sales revenue between the year t and year t-1;

$PPE_t$  = Gross amount of property, plant and equipment at the end of the first half of year t;

$A_{t-1}$  = Total assets at the end of year t-1.

Calculate non-discretionary accruals (NDA) using the following formula:

$$NDA_t = \beta_0 \frac{1}{A_{t-1}} + \beta_1 \frac{(\Delta REV_t - \Delta REC_t)}{A_{t-1}} + \beta_2 \frac{PPE_t}{A_{t-1}} + \varepsilon_t \quad (2)$$

$\Delta REC$  = Change in account receivable between the year t and year t-1.

Calculate discretionary accruals (DA) by subtracting TA by NDA.

Compute absolute value of DA (ABSDA).

#### Independent Variable

The independent variable is auditor’s work stress (WS), which according to Yan & Xie (2016) is the pressure burdened by auditor to do audit work properly. Our formula is modified from Yan & Xie (2016) because Indonesia’s standard only required

one signing audit partner, while China requires more than one signing partner. Each audit partner’s work stress is calculated by the sum of all clients’ total assets natural logarithm during corresponding year, as shown in the formula below:

$$WS = \sum_{j=1}^n T A_{ij} \quad (3)$$

where:

- WS* = Work stress;
- T<sub>Aij</sub>* = Natural logarithm of company *j* total assets audited by auditor *i*;
- n* = Total number of listed companies audited by auditor *i* in the fiscal year.

**Control Variables**

Control variables in this research are divided into firm-level control and auditor-level control. Firm-level control variables consisted of client's financial situation (DEBT), client's size (SIZE), client's cash flow (CASHFLOW), client's revenue (LOSS), client's commissioner size (COM), and client's audit committee size (AUDITCOM). Meanwhile, auditor-level control variables consisted of auditor's gender (GENDER), auditor's client dependence

(CLIENTDEP), and auditor's specialization (SPEC). Control variables are added to gain better understanding on the impact independent variable to dependent variable, also when moderated by moderating variables.

**Hypothesis Testing Design**

To test the hypothesis, a regression model was formulated as follows:

$$ABSDA = \beta_0 + \beta_1WS + \beta_2FST + \beta_3BIG4 + \beta_4LEGAL + \beta_5WS * FST + \beta_6WS * BIG4 + \beta_7WS * LEGAL + \beta_8DEBT + \beta_9SIZE + \beta_{10}CASHFLOW + \beta_{11}LOSS + \beta_{12}COM + \beta_{13}AUDITCOM + \beta_{14}GENDER + \beta_{15}CLIENTDEP + \beta_{16}SPEC \quad (4)$$

- ABSDA : absolute discretionary accrual;
- WS : auditor's work stress;
- FST : initial audit partner engagement, 1 for first year of audit, 0 otherwise;
- BIG4 : audit firm size, 1 for Big 4 audit firm, 0 otherwise;
- LEGAL : client's litigation risk, 1 for client with pending litigation, 0 otherwise;
- WS\*FST : initial audit partner engagement moderated with auditor's workstress;
- WS\*BIG4 : audit firm size moderated with auditor's work stress;
- WS\*LEGAL : client's litigation risk moderated with auditor's work stress;
- DEBT : client's financial situation, calculated using asset-liability ratio;
- SIZE : client's size, calculated using natural logarithm of total assets;
- CASHFLOW : client's cash flow, 1 for negative cash flow, 0 otherwise;
- LOSS : client's revenue, 1 for negative revenue, 0 otherwise;
- COM : client's commissioner size;
- AUDITCOM : client's audit committee size;
- GENDER : auditor's gender, 1 for female auditor, 0 otherwise;
- CLIENTDEP : auditor's client dependence, calculated using average of specific divided by overall auditor's client assets;
- SPEC : auditor's specialization, 1 for specialized auditor, 0 otherwise.

**4. DATA ANALYSIS AND DISCUSSION**

**Descriptive Statistics**

The sample of this research composed of 307 firms or equals to 921 firm-years. Table 1 and Table 2 show the results of descriptive statistics and frequencies

statistics of the dependent variable, independent variable, moderating variables, and control variables for the hypothesis with the following explanation:

Table 1. Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Standard Deviation
ABSDA	921	0.0001	3.7944	0.0821	0.1712
WS	921	22.9305	346.2897	99.1438	75.7136
DEBT	921	0.1034	4,029.0896	8.2221	132.8852
SIZE	921	22.6575	33.1988	28.3890	1.7006
COMMISSIONER	921	2.0000	22.0000	4.2510	1.9795
AUDITCOM	921	0.0000	6.0000	3.0500	0.4690
CLIENTDEP	921	0.0009	1.0000	0.4723	0.3766

Absolute value of discretionary accruals (ABSDA) is the proxy for the dependent variable of this research, which is audit quality (AQ). Absolute value of discretionary accruals has inverse relationship to audit quality. Absolute value of discretionary accruals is calculated using Modified Jones Model. From the descriptive statistics result, the minimum audit quality score is 0.0001. It is performed by Arief Somantri from KAP Purwanto, Sungkoro & Surja for PT *Enseval Putera Megatrading* Tbk. (EPMT) in 2015. The minimum audit quality The maximum audit quality score is 3.7944 which is performed by

Riki Afrianof from KAP Aryanto, Amir Jusuf, Mawar & Saptoto for PT Bayu Buana Tbk. (BAYU) in 2014. The minimum value indicates that the company's financial statements have the least amount of earnings management or the highest audit quality, while the maximum value shows that the company's financial statements do the most earnings management and the lowest audit quality. The mean of audit quality score is 0.0821, reflecting that on average the sample firms do not do much earnings management.

Table 2. Frequencies Statistics (Dummy Variable)

Variables	N	Frequencies		Proportion	
		0	1	0	1
FST	921	425	496	46.1455	53.8545
BIG4	921	623	298	67.6439	32.3561
LEGAL	921	652	269	70.7926	29.2074
CASHFLOW	921	456	465	49.5114	50.4886
LOSS	921	920	1	99.8914	0.1086
GENDER	921	770	151	83.6048	16.3952
SPEC	921	562	359	61.0206	38.9794

Work stress (WS) is the independent variable of this research, which is measured by adding natural logarithm of total asset of companies with the same auditor in the same year. From the descriptive statistics result, the minimum work stress score is 22.9305 which is the score of Suganda Akna Suhri from KAP Suganda Akna Suhri & Rekan in 2014. The maximum work stress score is 346.2897 which is the score of Didik Wahyudiyanto from KAP Aryanto, Amir Jusuf, Mawar & Saptoto in 2014. The mean of work stress score is 99.1438 and the standard deviation is 75.7136.

Initial audit partner engagement (FST) is a moderating variable of this research. This variable uses dummy variable, where the minimum value is 0 and maximum value is 1. 0 represents recurring audit partner engagement and 1 represents initial audit partner engagement. There are 425 data with the value of 0 and 496 data with the value of 1. The proportion of recurring audit engagement is lower than initial audit engagement, where recurring audit engagement frequencies proportion is 46.1455 percent and initial audit engagement frequencies proportion is 53.8545 percent.

Audit firm size (BIG4) is a control moderating of this research. This variable uses dummy variable, where the minimum value is 0 and maximum value is 1. 0 represents non-big 4 audit firm and 1 represents big 4 audit firm. There are 623 data with the value of

0 and 295 data with the value of 1. The proportion of non-big 4 audit firm is higher than big 4 audit firm, where non-big 4 audit firm frequencies proportion is 67.6439 percent and big 4 audit firm frequencies proportion is 32.3561 percent.

Client litigation risk (LEGAL) is a moderating variable of this research. This variable uses dummy variable, where the minimum value is 0 and maximum value is 1. 0 represents company without any contingent legal case and 1 represents company with contingent legal case. There are 652 data with the value of 0 and 269 data with the value of 1. The proportion of company without any contingent legal case is higher than company with contingent legal case, where company without any contingent legal case is 70.7926 percent and company with contingent legal case is 29.2074 percent.

**Hypothesis Testing Results and Discussion**

Table 4 shows the multiple regression test result of this research. The first hypothesis is accepted. There is significant impact of auditor’s work stress to audit quality. Auditor’s work stress significantly and positively impacts absolute value of discretionary accruals. Alzoubi (2018) explained that increase in discretionary accruals means more earnings management practices employed. Ultimately it also means lower audit quality. Thus, when absolute value of discretionary accruals increases means that

audit quality decreases. Since, there is an inverse relationship between absolute value of discretionary accruals and audit quality, and then there is a significant and negative impact between auditor's work stresses to audit quality.

In time of stress, auditor faces a lot of pressure that might despair their concentration at work. The inability to concentrate mitigates auditors from doing high-quality work throughout the audit process. Work performance depends on the job control or

decision latitude (Karasek, 1979). The regression result indicates low control of audit partners to manage their work. The higher stress bore by audit partner shows higher workload which consume more time and leave audit partners with less time option to do their job. It can be categorized as high-strain job, in which this type of job could lead to psychological strain and physical illness. Output-wise, it reduces the quality of the work.

Table 4. Multiple Regression Test Result

Variables	Coefficients	t	Sig.
(Constant)	0.56680	4.647	0.000
WS	0.00065	4.075	0.000***
FST	0.02800	1.518	0.129
BIG4	0.04036	1.691	0.091*
LEGAL	0.01161	0.556	0.578
WS*FST	-0.00039	-2.647	0.008***
WS*BIG4	-0.00039	-2.371	0.018**
WS*LEGAL	-0.00001	-0.069	0.945
DEBT	-0.00001	-0.187	0.852
SIZE	-0.02059	-4.393	0.000***
CASHFLOW	-0.02526	-2.252	0.025**
LOSS	0.13345	0.787	0.431
COM	0.00226	0.660	0.510
AUDITCOM	0.00571	0.459	0.646
GENDER	-0.00136	-0.089	0.929
CLIENTDEP	0.04558	2.131	0.033**
SPEC	0.01281	0.989	0.323

Notes: \*\*\*, \*\*, and \* denote significance level at the 1%, 5%, and 10% respectively

Tuanakotta (2015) mentioned the factors involved in achieving certain point of audit quality, which are: input, process, output, communication, and contextual factors. In terms of input, audit firm generally applies strict formal control as a part of its management control system (Pierce & Sweeney, 2005). Strict formal control takes away decision latitude from auditor. Apparently, the reduction of decision latitude will result on lower audit quality. Previous researches have also proven that high level of formal control system creates pressure that apparently results in dysfunctional behavior.

Additionally, one important concept on auditing is professional skepticism, which helps auditor to obtain sufficient and appropriate evidence on

suspected areas to assure high quality assurance on the financial reporting. The regression result indicates that higher auditor's work stress result in an impaired professional skepticism, that is a key in doing high quality audit process. Auditor's work stress mainly creates incentive to increase efficiency while disregarding effectiveness. It means that auditors are focusing on getting the job done in less amount of time, but reducing the achievement level of audit overall objective. Thus, auditors do not maintain a questioning mind to gather sufficient and appropriate evidence and tend to take evidence given as granted (McDaniel, 1990). Persellin *et al.* (2017) summed up the effect on auditor's work stress, which increases job strain and contributes to lower job satisfaction.



Decreased job satisfaction reduces organizational commitment and result in quality threatening behavior.

As a result, auditors with impaired professional skepticism tend to accept more aggressive accounting reporting tactics by management. It is shown from the result, where audit quality is measured using earning management as proxy which is calculated using Modified Jones formula. Peecher & Piercey (2008) stated that low audit effort combines with aggressive management reporting will result in audit failure.

Under ISQC 1, audit partners are obliged to oversee the audit planning, supervise throughout audit fieldwork, and review the overall work of the audit team upon completion of audit manager review. However, due to high work stress, audit partners ability to adequately oversee, supervise, and review is diminishing (Hermanson & Houston, 2008). Thus, the quality control mechanism requested by the standard may not be properly implemented during the audit process.

Our finding supports Interaction Theory that work stress, as a combination of high job demand, low job control, and low social support, impacts the performance of auditor as measured by audit quality. We found that work stress tends to lower the audit quality significantly. This result is consistent with previous researches (Agoglia *et al.*, 2010; Zadegan & Aqa'i, 2018; Dashti & Saedi, 2020).

The second hypothesis is rejected. Initial audit partner engagement has significant impact on the relationship of auditor's work stress and audit quality. Initial engagement weakens the impact of auditor's work stress to audit quality. It means that work stress is not as detrimental towards audit quality during initial audit partner engagement. Under ISQC 1 and SA 210, audit partners have to decide whether to accept new client or not. One of the criteria required is that the audit team has sufficient resources to be allocated in doing the engagement. Thus, during initial audit engagement, audit partner has higher level of job control, in which there is freedom to accept or decline new client. It is also indicative that audit partner work stress is still bearable during the time, meaning the stress associated with the load might not as high. Consequently, auditor's work stress does not impair audit quality.

Independence is also believed to be higher during initial audit partner engagement. It is due to minimal familiarity to the management team compared to longer tenure engagement. Dopuch, King, & Schwartz (2001) reported positive effect of rotation, where auditors are less willing to issue

biased opinions of financial statements in favor of management. The rotation regulation reduces the incentive of auditor to act too dependent to management and reduces management control over auditors' opinion since auditor cannot expect management to hire them every year. Additionally, Wang & Tuttle (2009) also supported that rotation makes auditors to be less willing to negotiate with managers to report in their favor.

Peecher *et al.* (2010) claimed that auditor has the option to be honesty focus or dishonesty focus. Honesty focus assessment means that auditors take evidences and information as granted because they believe that management is being honest all the time. While dishonesty focus assessment is the opposite, in which auditors do not put their guard down and keep a questioning mind intact. The result of this research supports that initial audit partner engagement induces dishonesty focus assessment. This also suggests that initial engagement could help auditors to restore the previously impaired professional skepticism due to work stress. Bowlin, Hobson, & Piercey (2015) also stated that longer auditor tenure elevates honesty focus behavior.

Audit partner rotation reduces client-specific knowledge that is gain by the time audit partner is involved in the engagement. Although some researchers suggest the loss of such knowledge can damage audit quality, this research show that initial audit partner engagement could restore audit quality. Auditor is believed to be more skeptical at times of initial audit engagement since auditor could not anticipate audit problems that might be faced during the engagement. This is called as presumptive doubt perspective where auditors are more likely to doubt an evidence that an assertion is false, and will tend to collect relatively more evidence as a result (Nelson, 2009). With more evidence gathered, it increases the assurance level that is given by auditor and reduces the likelihood of material misstatement to be accepted. Additionally, the audit partner rotation mandated in *Peraturan Menteri Keuangan No. 17/PMK.01/2008* about Public Accountant Services serves as enhancing contextual factor towards the audit quality. This regulation has been proven to effectively mitigate the risk of low audit quality due to auditor's work stress.

Our finding supports Interaction Theory. Despite an obvious increase in job demand during initial audit partner engagement, we found that the effect on work stress to audit quality can be mitigated significantly. This result indicates firm's ability to balance increase in job demand with higher job control and higher social support. This finding

enhances several previous researches as this research accounted initial audit partner engagement as a moderating variable to the impact of auditor's work stress to audit quality while previous researches only tested the impact of initial audit partner engagement to audit quality (Bandyopadhyay, Chen, & Yu, 2014; Lennox, Wu, & Zhang, 2014; and Kalanjati *et al.*, 2019).

The third hypothesis is accepted. Audit firm size has significant impact on the relationship of auditor's work stress and audit quality. Audit firm size weakens the impact of auditor's work stress to audit quality. It means that work stress is not as detrimental towards audit quality in engagement with larger audit firm. Large audit firm, or can be referred as Big 4, are more standardized than smaller firms (Jeppesen, 2007). Big 4 employees are subject to more standardized routines with extensive length of working hour, sometimes referred to be a bureaucracy machine. It exhausts employees that can lead to dissatisfaction and demonization. However, studies have also proven that certain type of people work better in such condition, including auditors generally. Auditors in general are people that love living a planned and routine work. They have higher routine tolerance threshold compared to other people.

Being standardized at work increases predictability of the schedule, which increases job control over auditor work. As Karasek (1979) states, an increase in job control will also increase in overall performance or output. Currently, Big 4 audit partners tend to apply clan control over their subordinates (Pierce & Sweeney, 2005). Clan control itself involves more interaction, decentralized relationship, and focus on creating personal contact with them. Clan control creates mutual support and trust from audit management and audit team. Thus, it enhances a better working environment to induce high quality outcome. This research supports previous research that claim social support as one of the keys to increase performance quality (Karasek & Theorell, 1990).

One problem that occurs mostly in smaller audit firm is the limited resources. Tuanakotta (2015) has mentioned that input to the audit work will affect the audit quality as an outcome. Smaller audit firms are often under-staffed, thus not having enough option of whom to assign on each engagement. It results in difficulty of smaller audit firm to respond to quality control defects. Comparably, bigger audit firm has more resources and staff to be employed on an engagement. It means the stress associated with an engagement is spread toward more people. Furthermore, Big 4 audit firm also applies better

quality enhancing programs for their employees. Francis & Yu (2009) claims that Big 4 audit firms have national training programs, standardized audit programs, and firm-wide knowledge-sharing practices supported with appropriate technologies. Consequently, bigger audit firm result in better audit quality in times of work stress compared to smaller audit firm.

Another difference of bigger audit firm compared to smaller audit firm is the review procedures in Big 4 audit firm. It is essential to understand that review and consultation conducted during the audit process is far beyond formality and instead is a quality control mechanism to escalate audit outcome. Additionally, Big 4 audit firm requires its audit work to be reviewed not only by peer review, but also by the international affiliates to ensure quality is as standard.

Our finding supports Interaction Theory that big audit firms are able to mitigate the harmful effect of auditor's work stress to audit quality through improving job control social supports. This finding enhances several previous researches as this research accounted big audit firms as a moderating variable to the impact of auditor's work stress to audit quality while previous researches only tested the impact of big audit firms to audit quality (Francis & Yu, 2009; Wibowo & Rossieta, 2009; Choi *et al.*, 2010; Sawan & Alsaqqa, 2013).

The fourth hypothesis is not accepted. Client litigation does not have significant effect on the impact of auditor's work stress and audit quality. It means that the effect of auditor's work stress to audit quality is the same for engagement with or without client litigation. Indonesia is widely known to have collective culture, contrary to individualistic culture, that values relationship. Accordingly, Indonesia does not have litigious culture, which means Indonesian companies, in general, does not have the tendency to sue other companies to settle existing dispute (Mills & Rakhmat, 2012). The claim is aligned with the data gathered, as stated in descriptive statistics, in which only 29.21% of Indonesian listed company faces pending litigation case. Despite, client pending litigation become one of the problems faced by clients, the fact above suggests that auditor does not mind litigation cases too much due to the nature in Indonesian companies based on the common culture.

The disclosure of such cases in the financial report is the concern of auditors. However, to obtain sufficient and appropriate evidence on such disclosure, auditor should use the work of an expert. It is standardized in SA 620 about using the work of an auditor's expert. Auditors are expected to use the

work of expert in times when it is required to obtain information related to other disciplines since the auditor does not have sufficient knowledge and technical competence. In the case of pending litigation cases, the auditor should obtain the likelihood of the outcome to determine the disclosure of the case.

This research suggests that at times clients face pending litigation; there is no effect on the audit process generally. Thus, it implies that the professional skepticism of an auditor is not affected. Auditors only view client pending litigation as a normal condition that is faced by the client and only requires additional audit procedures. Additionally, since the standard requires auditor to use the work of an auditors' expert, auditors overly rely on their work. It means that there is no further audit procedure is conducted to assure the work of auditors' experts as required by SA 620. Thus, regardless of client's pending litigation, auditors' professional skepticism is not affected and eventually does not affect the impact of work stress to audit quality.

##### **5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS**

This research was done to see the effect of auditor's work stress on audit quality whether in general or when moderated in several conditions. The first hypothesis testing finds that auditor's work stress has significant and negative effect on audit quality. At time of stress, auditors have packed schedule, leaving them with lower ability to decide and schedule throughout the engagement. It results in lower job-decision latitude, which also lowers the audit quality. The second hypothesis testing indicates that initial audit partner engagement can mitigate the effect of auditor's work stress to audit quality. It is because of the increasing job-decision latitude during client acceptance phase, where auditor has higher authority and freedom to choose not to accept new client if resources are not sufficient. Meanwhile the third hypothesis testing shows that big audit firm size can mitigate the impact of auditor's work stress towards audit quality. Big audit firm has more scheduled and planned routine thus enables audit partner to decide what to do in between and improve job-decision latitude. Additionally, big audit firm applies client control that creates social support in the working place. Unfortunately, the last hypothesis testing indicates that client's litigation risk neither strengthen nor weaken the effect of auditor's work stress to audit quality.

The result of this research is consistent with the Interaction Theory, in which the interaction between job-demand, job-control, and social support will determine the output of a work. This research shows that a change in one or more component in the Job Demand Control Model will result in either higher or lower audit quality. This research also gives empirical evidence of how work stress affects audit quality in listed Indonesian firms. This research also enhances previous literatures by adding more moderating variables to see which condition could mitigate the effect of work stress on audit quality.

However, this research has several limitations. This research only used 3 years data, spanning from 2014 to 2016. Also, financial sector is taken out from our sample, thus the result might not be reflective for this sector. Additionally, this research only focused on public companies and did not take private firms into account. Hence, this research might not be reflective for the impact of auditor's work stress to audit quality in not listed companies. Furthermore, this research only used absolute value of discretionary accruals as proxy to audit quality. This model does not consider the sign or direction of earnings management. Other audit quality proxies might result in different findings. Lastly, this research only examined three moderating conditions.

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