

# Perspective of Internal and External Auditors of Supply Chain Management Effects in Opportunities, Pressure and Capabilities for Fraud Risk Assessment

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**Abstract-** The supply chain has major impact on the company's business strategy directly affecting its operational costs. Supply chain performances within the organization have a significant impact on the company's ability to provide services to their customers and create added value. Internal and external audit of the supply chain is one of the most powerful and fastest ways to reduce operational costs and provide the company competitive advantages in the global market in times of economic crisis. The purpose of this study is to identify the effect of opportunity, pressure, type of auditor and ability on fraud risk assessment in the perspective of internal auditors and external auditors at State Universities in Banten and Jakarta provinces, and to determine differences in perception Internal auditor with external auditor in fraud risk assessment at State Universities in Banten and Jakarta provinces. The population in this study is the internal auditor and external auditor of State Universities in Banten and Jakarta provinces. The research sample are 1) internal auditors of State Universities consisting of Internal Supervisory Unit auditors and auditors 2) external auditors of State Universities namely Auditors of Public Accountant Firms who have been auditors at State Universities in the provinces of Banten and Jakarta. The technique of determining the sample in this study was using purposive sampling technique. There are three colleges in Banten province that meet the criteria as a sample and three state universities in Jakarta 4. For internal auditors at universities it is assumed that the number of internal auditors at universities is assumed 15 auditors, thus the number of questionnaires distributed for internal auditor at State University in Banten and Jakarta provinces as many as 105 questionnaires (15 auditors x 7 state universities). Moreover, external auditors who have audited at the State University in Banten province 105 questionnaires follow the number of respondents in state university's internal auditors. So that the number of questionnaires distributed in this study amounted to 210 questionnaires. The questionnaire was delivered directly to the respondent. The hypothesis testing using multiple linear regression and different tests with non-parametric test approach Mann-Whitney test. The results of this study are (1) there is a significant influence on opportunity, pressure, type of auditor and

ability to assess fraud risk, (2) there is a difference in perception between internal auditors and external auditors in fraud risk assessment at State Universities in Jakarta and Banten.

**Keywords-** Opportunity, supply chain management, type of auditor, ability, fraud risk assessment.

## 1. Introduction

The definition of SCM given by The Global Supply Chain Forum is the following: »Supply chain management is the integration of key business processes from end-user through original suppliers that provides products, services, and information that add value for customers and other stakeholders. Financial Inspection Board of Indonesia found fraud and legal violations that are often found in state-owned banks by making reports as if the company suffered heavy losses. Again, the role of public accountants is not going well. Banking companies are considered to have violated the law, while public accountants do not open it. Cases of fraud in the banking sector in SOEs were only discovered when IBRA (Indonesian Bank Restructuring Agency) mobilized foreign accountants. [1].

The fraud cases that occurred in SOEs, and the banking sector, which was considered the most fraud perpetrators, were highlighted in this research based on the phenomena that have been found above. Risk assessment for fraud makes the auditor as the center of attention as a party that can detect fraud. The risk of fraud is caused by many factors assessing the occurrence of fraud becomes difficult to know. The complexity of the nature of fraud and various risk factors makes it not easy to detect even though the audit process has been carried out in accordance with applicable standards. In addition in making judgments, auditors may face various situations and conditions arising from audits assigned to them [1]-[3]. The issue of fraud is very important for internal and external auditors because of requests from clients that the auditor must have the skills and abilities in assessing fraud risk to detect adequate financial fraud with an effective statement.

In a well-known theory, [4] revealed the fraud triangle, which is three factors that are always present when financial statements are fraudulent. These

three factors are pressure, opportunity, and rationalization. Various studies have been conducted to assess the theory of fraud triangle in assessing the risk of fraud. Research conducted by [5-20], using the concept of a fraud triangle that is opportunity, pressure and rationalization. However, it only focuses on opportunity and pressure. Although rationalization is part of the factors that influence individuals to commit fraud, it is considered a gray area of the fraud triangle [4],[5]. This is because rationalization is closely related to individuals and the circumstances they face. Therefore, this factor will not be discussed in this study. Research conducted by [20] also develops the type of auditor (internal and external) as a factor that can assess fraud risk. This is because internal and external auditors face different audits, motivations, pressures and responses in relation to fraud risk assessments [6].

This study intends to develop previous research conducted by [20]. In [21] used the fraud triangle theory by [6] and this study replaced it by applying a new perspective on the phenomena of fraud proposed by [7] namely fraud diamond. Fraud diamond is a refinement of the fraud triangle theory. Fraud Diamond adds one element that is believed to have a significant influence on fraud, namely capability.

This research was conducted with two main objectives. The first objective is to assess the effects of fraud risk factors, namely: pressure, opportunity, type of auditor (internal and external auditors), and the ability of the auditor's perception in assessing fraud risk. The second objective of this study is to examine the effect of different interactions of opportunity, pressure, type of auditor and ability to assess the risk of fraud by auditors. This study focuses on the perspectives of internal auditors and external auditors at universities in the province of Banten regarding the influence of pressure, opportunity, type of auditor (internal and external) and the ability to assess fraud risk.

## 2 Theory Framework and Development of Hypotheses

### 2.1 Internal Audit and Reasons for Its Implementation in the Supply Chain Process

Travis Hirchi as a pioneer of social control theory, said that criminal behavior is the failure of social groups such as families, schools, peers tied to individuals. This means that the individual is not seen as someone who is intrinsically compliant with the law, but adheres to the antithetical perspective in which people must learn not to commit a crime. This argument is based that we are all born with a natural tendency to break the rule of law. In this case social control, viewing delinquency as "a logical consequence of one's failure to develop inward restrictions on unlawful behavior", Humans in social control theory are seen as being who have pure morals; therefore humans have the freedom to do things.

Fraud is an inseparable part of criminology. If deviant behavior is negative such as fraud and

corruption is considered as a deviation and a crime / criminality, then surely a branch of science is needed to prevent such actions. Criminology is a field of study that studies the nature of crime, the causes of crime, the typology of crime, the results of crime and efforts to prevent crime. By understanding criminology, one can find out why there are people who commit acts of crime while there are people who do not even if they are faced with the same situation.

Psychology has a connection with criminology, where with the science of psychology, we can find out and explain the personality and mentality of criminal offenders. Criminology is also related to deviant behavior because criminal acts that are the object of criminology are the same as deviant behavior (criminality = deviant behavior).

So that we can find out what factors cause someone to behave in a deviant manner so that they commit criminal practices such as fraud, we need to understand various kinds of criminological theories. Listed below are various criminological theories related to deviant behavior:

1. Classical criminology theory pioneered by Cesare Bonesana Beccaria and Jeremy Bentham. This theory is based on the principle of utilitarianism, which prioritizes rationality. In this theory, it is stated that everyone has the opportunity to choose to act criminally if the benefits obtained are greater than the losses suffered.
2. Routine activity theory explains that criminal behavior is influenced by three elements namely the availability of suitable targets (in the form of people or organizations), no good officers or supervisors (internal auditors, surveillance cameras and security guards) and motivational motivations (financial problems and dislike with the organization where he works).
3. Response stimulus theory. According to this theory, deviant actions (responses) are the result of an impulse or an event (stimulus) that requires a person to commit deviations. According to sociologists and psychologists, the combination of stimulus and response will create a certain behavior.
4. Social process theory. According to this theory, crime is the result of a person's psychological interaction with social processes and various kinds of organizations in society. Criminal behavior that occurs is the impact of information and ways of thinking received by someone from others. Someone who lives among criminals will have a greater tendency to commit fraud.
5. Association differential theory created by Edwin Sutherland. This theory explains that criminal behavior is learned from the environment. When a person interacts in a group that has a tendency to commit crimes, he will learn the values, technical behavior and motives needed to commit a crime. In other

words, according to this theory criminal behavior is something that is learned.

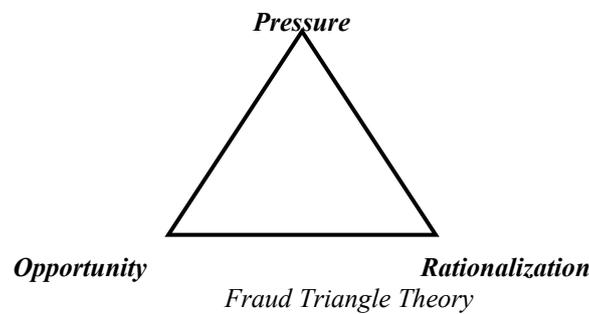
6. Social Structure Theory. This theory states that environmental and residential factors will influence the level of crime in certain areas. According to this theory, crime rates in social strata and low-income levels tend to be higher compared to regions with social strata with higher income levels. In this theory group, there is Theory of Anomie / Strain Theory, which explains that a crime is a direct result of the frustration and anger of someone who is not able to get the success, both socially and financially as he hoped.
7. Social control theory. This theory explains that a person will refrain from committing fraud if the act of fraud he does will make others who are important to him become ashamed of his actions.

8. Differential reinforcement compiled by Ronald Akers explains that fraud behavior can occur because of the learning process and because of the stimulus given by others.

## 2.2 Fraud Triangle

One of the basic concepts of Fraud prevention and detection is the Fraud triangle. This concept is also called Cressey's Theory because indeed this term emerged because of research conducted by Donald R. Cressey in 1953. Cressey's research was published under the title *Other's People Money: A Study in the Social Psychology of Embezzlement*. Cressey's research in general explains the reasons why people do Fraud. There are three elements of the Fraud triangle, among others: Opportunity (opportunity), Rationalization (rationalization), and Pressure (pressure).

The following Fraud Triangle is visualized in Figure 1:



**Figure 1.** Fraud Triangle Theory

### 2.2.2 Pressure

One condition that is always present when financial statements are fraudulent is pressure [8]. Pressure can occur when management is in need of money to meet personal needs such as pressure for medical expenses, pressure from families who demand economic success, and luxury living patterns [9]. The year-end bonus will be a great source of income so that management will deliberately manipulate its profits to get income. Pressure can also arise when company performance is at a point below the industry's average performance [10]. Such conditions indicate that the company is in an unstable condition because it is unable to maximize its assets and cannot use its investment fund resources efficiently. Poor company performance will have an impact on the lack of cash flow into the company, especially funds obtained from potential investors. Nevertheless, the more flow of funds that enter the company, of course, the more burden is borne by management to pay off the company's debt.

According to [22] the pressure felt by perpetrators of fraud is seen as a financial need that cannot be shared with others (perceived non-shareable financial need). The following are factors that can cause stress:

- a. The level of strong competition or market saturation (market saturation) is accompanied by a decrease in profit margins.

### 2.2.1 Opportunity

Understanding the opportunity of the concept of the Triangle Fraud (Fraud Triangle) according to [21] is an opportunity to commit fraud as perceived perpetrators of fraud. Opportunities will arise when the company's internal control system is weak [7]. Companies with weak internal control will have many gaps that make opportunities for management to manipulate transactions. The information asymmetry that occurs between the owner of the company as the principal and management as an agent can also be an opportunity to cheat financial statements. The principal experiences asymmetric information when no actions taken by management can be directly monitored. Realizing the opportunities arising from this condition provides an opportunity for management to commit financial statements. Business practitioners are increasingly putting the concept of Good Corporate Governance (GCG) forward as a tool to prevent cases of fraud. One component that plays an important role in the process of implementing good corporate governance is the audit committee. The role of the audit committee in ensuring the quality of corporate financial reporting has been in the spotlight since the accounting scandal occurred to the public's attention

- b. High vulnerability due to rapid changes, for example in technology, product obsolescence, or interest rates.
- c. Demand (for products or services sold) plummets and business failures increase in the industry or overall accounting.
- d. Operational losses that threaten bankruptcy, confiscation of assets pledged to the bank, or hostile takeover (takeover of shares through an offer to buy shares from non-controlling shareholders)
- d. Negative cash flow or inability to generate cash flow from business activities, even though the entity reports earnings and earnings growth.
- e. Massive growth or unusual profit levels especially compared to other companies in the same industry.
- f. Accounting terms and conditions, statutory provisions, or new regulatory rules.

In addition to the above matters, management experiences strong pressure to meet the expectations of third parties regarding the following:

- a. Expectations about profit levels or trend levels from investment analysts, institutional investors, key creditors, or other parties. Management, such as press releases or messages in optimistic annual reports, can cause these expectations.
- b. The need to spend with additional debt or capital to remain competitive, including spending on research and development or the

purchase of fixed assets (capital expenditures) on a large scale.

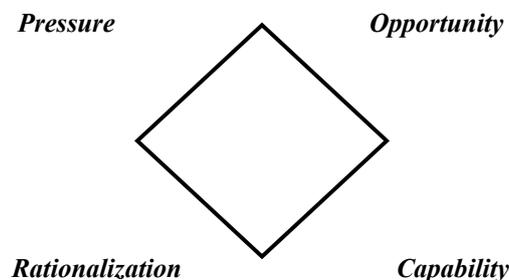
- c. Limited ability to meet the registration requirements in the capital market (exchange listing requirements) or repay debt or other conditions in going to credit (debt covenant).

### 2.2.3 Rationalization

Nearly all Fraud is motivated by Rationalization. Rationalization makes someone who initially did not want to do Fraud eventually did it. Rationalization is a personal reason (because there are other factors) can justify an action even though the action was actually wrong. In [1] suggested that the rationalization that often occurs when doing Fraud include: (1) The asset is actually mine (perpetrator's Fraud); (2) I only borrowed and will pay it back; (3) No party is harmed; (4) This is done for something urgent; (5) We will fix bookkeeping after financial problems it's finished; (6) I am willing to sacrifice my reputation and integrity as long as it can improve my standard of living

### 2.3 Diamond Fraud

Fraud diamond is a new view of the Fraud phenomenon proposed by [12]. Fraud diamond is a refinement of the Fraud triangle theory by [1]. Fraud diamond adds a qualitative element that is believed to have a significant influence on Fraud namely Capability.



**Figure 2.** Diamond Theory Fraud

Overall, the Diamond Fraud is a refinement of the Fraud Model proposed by Cressey. The elements of Fraud diamond theory include:

1. Incentive / Pressure
2. Opportunity
3. Rationalization
4. Capability

In [6] argue that there is a renewal of the Fraud triangle to improve the ability to detect and prevent Fraud by adding a fourth element, Capability. "Many Frauds, especially some of the multibillion-dollar ones, would not have occurred without the right person with the right capabilities in place. Opportunity opens the doorway to Fraud, and incentive and Rationalization can draw the person toward it. However, the person must have the Capability to

recognize the open doorway as an Opportunity and to take advantage of it by walking through, not just once, but repeatedly. Accordingly, the critical question is; who could turn an Opportunity for Fraud into reality?"

In [4] argue that in designing a detection system, it is very important to consider the personnel in the company who have the capability to conduct fraud or cause an investigation by an internal auditor as stated in his research journal: "When designing detection systems, it is important to consider who within the organization has the Capability to quash a red flag, or to cause a potential inquiry by internal auditors to be redirected. A key to mitigating Fraud is to focus particular attention on situations offering, in addition to incentive and Rationalization the combination of Opportunity and Capability."

This theory explains that the key in mitigating Fraud is to focus on specific situations that

occur besides Pressure and Rationalization as well as a combination of Opportunity and Capability. In [8] argues that social cognitive theory, developed by Albert Bandura, is based on the proposition that both social processes and cognitive processes are central to understanding human motivation, emotions, and actions. According to [12] cognitive theory views learning as a process that provides the function of cognitive elements, especially the mind to recognize and understand stimuli that come from outside. A distinct feature of social learning theory is the prominent role it places on the capacity of self-regulation. By compiling impulses related to the environment, bringing up cognitive support and producing consequences for actions, people are able to implement a measure of control over behavior [11]-[15].

Individuals who have high self-efficacy seem to respond to negative feedback with higher effort and motivation, while individuals with low self-efficacy tend to reduce effort when given negative feedback [16]. Whereas if the ability of the self is applied into the world of work, according to [13] the ability of the self is one's belief about his ability to exert motivation, cognitive resources and actions needed to successfully carry out and in certain contexts.

#### **2.4 Effect of Opportunity on Fraud Risk Assessment**

Opportunities will arise when the company's internal control system is weak [17]. Auditors as third parties are needed to prove the client's internal control works with effectiveness to minimize the possibility of fraud in the organization [18]. Therefore, the assessment of internal control must be part of conducting the audit. Opportunities in the context of weak internal control in organizations that have contributed as a major factor in fraud [19]. A study conducted by [4], found that the occurrence of cases of fraud in organizations is due to the low internal control system. The same thing has also been found in a study conducted by [18] on 14 companies that were subjected to an investigation because of financial statement fraud, that companies that have poor internal control cause fraud. In [12] found that the use of appropriate audit techniques could help in identifying weaknesses in internal control and minimizing the possibility of fraud. Based on the theory, frame of mind and research results stated above, and then the following hypotheses can be formulated:

**H1: There is a significant influence of opportunity on fraud risk assessment**

#### **2.5 Effects of Pressure on Fraud Risk Assessment**

Pressure or incentives are one of the important factors that motivate someone to behave in violation of rules / illegal [21]. A study by [11] revealed that due to pressure to achieve the desired expectations, various entities tend to commit fraud in

financial reporting. In a study conducted by [4] about factors that can increase the likelihood of fraud, he found that excessive pressure from management to meet expectations became the main reason for the actors involved in fraud. From the above findings, the pressure becomes significant to do the violation. As such, audit standards require auditors to consider client pressure in assessing risk at their audit planning stage. Based on the theory, frame of mind and research results stated above, and then the following hypotheses can be formulated:

**H2: There is a significant effect of pressure on fraud risk assessment**

#### **2.6 Effect of Auditor Type on Fraud Risk Assessment**

External auditors are said to be more concerned with "fraudulent financial reporting" or "management fraud", while internal auditors tend to be more concerned with fraud in the misuse of assets committed by employees [22]. Research by them showed that most fraud is discovered through an audit process carried out by internal auditors.

Internal and external auditors have a deep understanding in assessing the possibility of fraud in conducting audit work. A study by [16], found significant results about the responsibility for detecting fraud between internal and external auditors, for which they were allocated 19.13% and 10.36% respectively. Research conducted by [18] shows that internal auditors feel that it is their primary role and responsibility to detect fraud compared to external auditors. Meanwhile, according to external auditors, internal auditors will face more significant pressure from management, and on the other hand, internal auditors must assess the possibility of management involved in fraudulent activities. The two types of auditors face different audits, motivations, pressures and responses in relation to fraud risk assessments. Based on the theory, frame of mind and research results stated above, and then the following hypotheses can be formulated:

**H3: There is a significant effect, type of auditor on fraud risk assessment**

#### **2.7 Effect of Capability on Fraud Risk Assessment**

In [16] argue that a lot of fraud will not occur if someone does not have the ability (capability) about the fraud. Therefore, the capability factor (capability) is an improvement of the fraud model proposed by Cressey. In [17] also explain the characteristics related to the ability elements that are very important in the perpetrators of fraud such as fraud perpetrators have the ability to understand and utilize internal control weaknesses to commit fraud, perpetrators of fraud have high ego and self-confidence that their actions will not be detected, the perpetrators of fraud can influence others to participate in fraud, and the perpetrators of fraud can control stress well. Based on the theory, frame of mind and research

results stated above, and then the following hypotheses can be formulated:

**H4: There is a significant effect, capability (capability) on fraud risk assessment**

## 2.7 Effects of Internal and External Auditor Interactions on Fraud Risk Assessment

Fraud risk factors are needed but not for fraud to occur, thus fraud risk assessments must consider the interaction of each factor [22]. Research conducted by [11] shows that internal auditors feel that it is their primary role and responsibility to detect fraud compared to external auditors. Meanwhile, according to external auditors, internal auditors will face more significant pressure from management, and on the other hand, internal auditors must assess the possibility of management involved in fraudulent activities. The

two types of auditors face different audits, motivations, pressures and responses in relation to fraud risk assessments. Therefore, the type of auditor (internal and external) must be able to understand the possible combination of various factors of fraud (opportunity, pressure, and ability) and identify all elements during the process of assessing fraud risk. Based on the discussion above, the hypotheses developed are as follows:

**H5: There are differences in perceptions between types of auditors (internal and external) regarding the assessment of fraud risk**

The research model in this study can be seen in Figure 3 below:

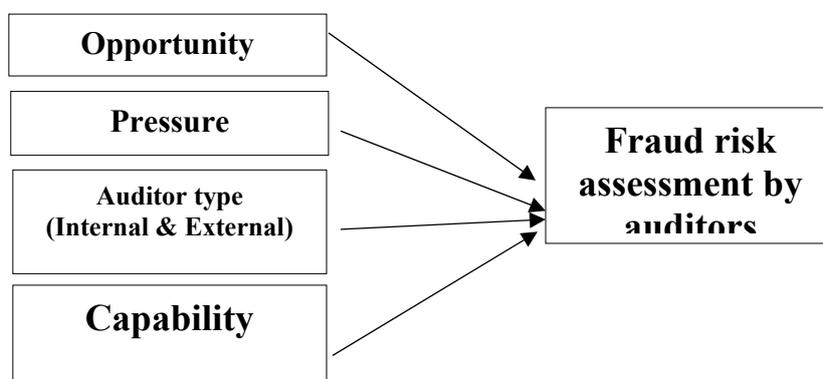


Figure 3. Research Model

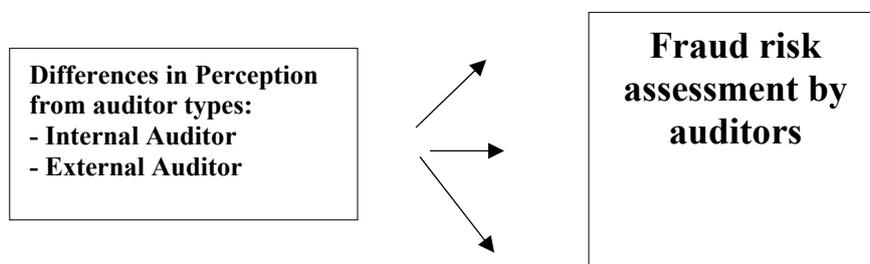


Figure 4. Differences in Perception between Internal and External Auditors Regarding Fraud Risk Assessment

## 3. Research Method

### 3.1 Population, Samples, and Sampling Techniques

The population in this study is the internal auditor and external auditor of State Universities in Banten and Jakarta provinces. The research sample are 1) internal auditors of State Universities consisting of Internal Supervisory Unit (SPI) auditors and auditors 2) external auditors of State Universities namely Auditors of Public Accountant Firms (KAP) who have been auditors at State Universities the in the provinces of Banten and Jakarta. The sampling technique in this study used a purposive sampling technique. The purposive sampling method is a sample selection method that is in line with this research because

internal and external auditors in the government environment in carrying out their duties always consider professionalism and uphold the code of ethics as an auditor, this research focuses on the performance of internal and external auditors at State Universities in Banten and Jakarta provinces. There are three State Universities in Banten province that meet the criteria as a sample and three State Universities in Jakarta 4. For internal auditors at the State University it is assumed that the number of internal auditors at the University is assumed 15 auditors so the number of questionnaires distributed to internal auditor at the State University in Banten and Jakarta provinces was 105 questionnaires (15 auditors x 7 state universities). Moreover, external auditors who have audited at the State University in Banten province 105 questionnaires follow the number of respondents in state university's internal auditors. So that the number of questionnaires distributed in this

study amounted to 210 questionnaires. The questionnaire was delivered directly to the respondent.

In accordance with the identification of the problem to be studied and the model compiled, the operational variables used are as follows:

### 3.2 Research Variables and Measurement Variables

**Table 1.** Operational Definition and Variable Measurement

No	Variable	Variable Definition	Indicator	Scale
1.	Pressure (X1)	Pressure is one important factor that motivates someone to behave in violation of the rules. (Dellaportas, 2013). Cox & Weirich (2002) revealed that under pressure to achieve the desired expectations, various entities tend to commit fraud. A study conducted by Rezaee (2005) on factors that increase the likelihood of fraud, found that excessive pressure from management was the main reason for fraud.	<ol style="list-style-type: none"> <li>1. Demands to achieve the entity's expectations</li> <li>2. Demands for the benefit of management / clients</li> <li>3. Demands for personal</li> </ol>	Likert 1-7
2.	Opportunity (X2)	Opportunities will arise when the company's internal control system is weak (Gagola, 2011). Mulyadi said that the internal control system includes the organizational structure, methods and measures that are coordinated to maintain the organization's wealth check the accuracy and reliability of accounting data encourage efficiency and encourage compliance with management policies.	<ol style="list-style-type: none"> <li>1. Organizational structure</li> <li>2. Coordinated measures to safeguard the organization's wealth</li> <li>3. Checking the accuracy and reliability of accounting data</li> </ol>	Likert 1-7
3.	Auditor type (X3)	An auditor is someone who expresses an opinion on reasonableness in all material respects, the financial position of the results of operations and cash flows in accordance with generally accepted accounting principles in Indonesia (Arens, 1995). There are 2 types of auditors, namely: <ol style="list-style-type: none"> <li>1. Internal Auditor</li> <li>2. External Auditors</li> </ol>	<ol style="list-style-type: none"> <li>1) The role of internal auditors</li> <li>2) The role of the external auditor</li> </ol>	Likert 1-7
4.	Capability	Wolfe and Hermansson (2004) argued that Fraud, which generally has a large amount of capital, would not be possible if there were no specific people with special capabilities in the company. Opportunity opens up opportunities or entry points for Fraud and Pressure and Rationalization that encourage someone to do Fraud. However, according to Wolfe and Hermanson (2004), people who do the Fraud must have the capability to realize that the door is open as an excellent opportunity and to exploit it not just once but many times.	<ol style="list-style-type: none"> <li>1. Education</li> <li>2. Skill</li> <li>3. Experience</li> </ol>	Likert 1-7
5.	Fraud Risk Assessment (Y)	Fraud risk assessment is a form of way conducted by the auditor to assess and obtain adequate audit evidence and later is used as a reference to find out what parts have a high level of fraud risk (Arens: 2012)	<ol style="list-style-type: none"> <li>1. Communication between audit team</li> <li>2. Submitting questions to management</li> <li>3. Risk factors</li> <li>4. Analytical procedures</li> <li>5. Auditor's consideration of all information</li> </ol>	Likert 1-7

### 3.3 Data analysis

Data analysis techniques in this study can simultaneously analyze research variables with descriptive statistics, test data quality, test classic assumptions and test hypotheses.

- To test H1 through H4 using Multiple Linear Regression with the formula:

$$Y = \alpha + \beta_1 OP + \beta_2 PR + \beta_3 AT + \beta_4 AB + e$$

**Note:** Y = Fraud Risk Assessment (FRA);  $\alpha$  = Intercept Model; OP = Opportunity; PR = Pressure; AT = Auditor type; AB = Ability; e = error term (residual variable)

- To test H5 using Non-Parametric with Mann-Whitney Test approach, namely testing the comparative hypothesis of two independent samples that do not assume a normal distribution.

$$H_0: \mu_1 = \mu_2 = \mu_3 = \dots = \mu_n$$

There is no significant difference between the mean counts of the n groups

$$H_1: \mu_1 \neq \mu_2 \neq \mu_3 \neq \dots \neq \mu_n$$

There is a significant difference between the mean counts of the n groups

## 4. Results and Discussion

Internal audit can be used for improving supply chain process in terms of efficiency and effectiveness, by providing insight and recommendations based on analyses and assessments of available data from the company. Supply chain management is a very complex structure of activities with cross-functional processes, and it presents one of the most important functions in the company since it is directly linked to all functions of the company. Supply chain problems

### 4.1. Data Analysis Results

Calculations between the number of questionnaires distributed and those successfully collected are in table 2

**Table 2.** Distribution of Questionnaires to State Universities in Banten and Jakarta

No.	Name of State University	Number of questionnaires			Number of questionnaires that were not returned			Number of returned questionnaires		
		IA	EA	Total	IA	EA	Total	IA	EA	Total
1.	Universitas Sultan Ageng Tirtayasa	15	15	30	4	5	9	11	10	21
2.	IAIN Sultan Maulana Hasanuddin	15	15	30	6	10	16	9	5	14
3.	Universitas Terbuka	15	15	30	2	3	5	13	12	25
4.	Universitas Indonesia	15	15	30	1	2	3	14	13	27
5.	UIN Syarif Hidayatullah	15	15	30	5	6	11	10	9	19
6.	Universitas Negeri Jakarta	15	15	30	4	3	7	11	12	23
7.	Politeknik Negeri Jakarta	15	15	30	6	6	12	9	9	18
Total of questionnaires		105	105	210	28	35	63	77	70	147
Total of questionnaires processed								77	70	147

**Note:** \*IA: Internal Auditor \*\*EA: External Auditor

The distribution of questionnaires in this study was distributed to internal auditors and external auditors at State Universities in Banten as many as 210 questionnaires, which were distributed to internal auditors at in Banten and Jakarta as many as 105 questionnaires (internal auditors at state University in Banten as many as 45 questionnaires and internal auditors at State University in Jakarta totaling 165 questionnaires). While those distributed to external auditors at State University in Banten and Jakarta were 105 questionnaires (external auditors at State University in Banten were 45 questionnaires and external auditors at State University in Jakarta were 165 questionnaires).

Of these, the questionnaires returned were 147 questionnaires, or only 70% consisted of 77 questionnaires from internal auditor respondents and 70 questionnaires from external auditor respondents. The questionnaires that did not return amounted to 63 questionnaires or 30% from internal auditors were 28 questionnaires and those from external auditors were 35 questionnaires. Questionnaires that were not returned were caused by internal auditors and external auditors found in State University in Banten and Jakarta having a number of auditors that were not the same as the number of questionnaires distributed as many as 15 questionnaires for each State University in Banten and Jakarta in the sense of the number of internal auditors and external auditors at State University both in Banten and in Jakarta have different

proportions. While 63 questionnaires could not be processed or 30% this was due to the questionnaire not being filled in by the respondents and the number of internal auditors showed the number of less than 15 people in each State University in Banten and Jakarta and also because the internal auditor was a lecturer

who have to carry out their duties on University while external auditors are bound to their work as external auditors in carrying out their respective work as limited to completing their contracts as external auditors at State University in Banten and Jakarta.

**Table 3.** Descriptive Statistical Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
OP	147	26	41	33.81	2.468
PR	147	7	22	13.95	1.137
AT	147	15	21	18.86	1.997
AB	147	13	21	17.98	1.675
FRA	147	27	42	36.91	2.721
Valid N (listwise)	147				

From table 3 above shows that the minimum opportunity variable value (OP) is 26, the maximum value is 41, the standard deviation is 2.468 and the mean is 33.81 so it can be concluded that internal auditors and external auditors at state university in Banten own the opportunity as an auditor and Jakarta is very good. For the pressure variable (PR) shows a minimum value of 7, a maximum value of 22, a standard deviation of 1.137 and a mean of 13.95, it can be concluded that the pressure experienced by SPI internal auditors and external auditors at state university in Banten and Jakarta in the face of state university in Banten and Jakarta, they felt very depressed. For auditor type variable (AT) showing a minimum value of 15, a maximum value of 21, a standard deviation of 1,997 and a mean of 18.86, it can be concluded that both internal auditors and external

auditors at state university in Banten and Jakarta are urgently needed. For the ability variable (AB) shows a minimum value of 13, a maximum value of 21, a standard deviation of 1,675 and a mean of 17.98, it can be concluded that the capabilities possessed by internal auditors and external auditors at state university in Banten and Jakarta are very good. As for the fraud risk assessment (FRA) variable showing a minimum value of 27, a maximum value of 42, a standard deviation of 2.721 and a mean of 36.91, it can be concluded that internal auditors (SPI) and external auditors at state university in Banten and Jakarta are very good in preparing fraud risk assessments at state university in Banten and Jakarta as audites.

**Table 4.** Validity Test Results

Variabel	Item	Corrected Item- Total Correlation	Note
Opportunity	OP1	0,642	Valid
	OP2	0,457	Valid
	OP3	0,826	Valid
	OP4	0,351	Valid
	OP5	0,473	Valid
	OP6	0,310	Valid
Pressure	PR1	0,691	Valid
	PR2	0,718	Valid
	PR3	0,545	Valid
	PR4	0,525	Valid
	PR5	0,447	Valid
	PR6	0,504	Valid
Auditor Type	AT1	0,372	Valid
	AT2	0,716	Valid
	AT3	0,723	Valid
Fraud Risk Assessment	FRA1	0,451	Valid
	PRF2	0,556	Valid
	FRA3	0,634	Valid
	FRA4	0,493	Valid
	FRA5	0,632	Valid
	FRA6	0,302	Valid

Based on the calculation results shown in the table above, the Corrected Item-Total Correlation for each indicator / question item for the opportunity, pressure, type of auditor, ability and risk assessment for fraud

has  $r$  count values  $> r$  table (0.1362 ) so it can be concluded that all questions in this questionnaire were declared valid.

**Table 5.** Reliability Test Results

Variabel	Cronbach's Alpha	Batas Reliabilitas	Keterangan
Opportunity	0,852	>0,70	Reliabel
Pressure	0,811	>0,70	Reliabel
Auditor Type	0,805	>0,70	Reliabel
Capability	0,823	>0,70	Reliabel
Fraud Risk Assessment	0,865	>0,70	Reliabel

Based on the table above the Cronbach alpha value > 0.70 so that it can be concluded that the question items on the opportunity, pressure, and type of auditor, ability and fraud risk assessment are declared reliable. The results of the normality test using the Kolmogorov Smirnov Test one sample statistical test showed a significance value of 0.317 greater than 0.05. This shows that the residual data from the regression model is normally distributed and meets the normality assumption because the significance level exceeds  $\alpha = 0.05$ . Based on the multicollinearity test results above the table shows that the Tolerance value of each variable is greater than 0.10 and has a VIF value below 10. From the table above it can be concluded that the regression model is free of multicollinearity, because

all variables have tolerance values below one and the value VIF is far from the number 10. The heteroscedasticity test results shown in the table above with the Park test provide parameter coefficients for the independent variables are not significant, it can be concluded that the regression model does not occur heteroscedasticity. This can be seen from the significant probability of  $0.892 > 0.05$  being above the 5% confidence level for the chance variable  $0.586 > 0.05$  above the 5% confidence level, for the pressure variable  $0.764 > 0.05$  being above the 5% confidence level, for the type of auditor variable  $0.431 > 0.05$  is above the 5% confidence level and for the ability variable  $0.883 > 0.005$  is above the 5% confidence level.

**Table 6.** Determination Coefficient Test Results ( $R^2$ )**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,864 <sup>a</sup>	,683	,627	1,391

a. Predictors: (Constant), OP, PR, AT, AB

b. Dependent Variable: FRA

Based on the results of multiple linear regression shown in the table above, the result obtained Adjusted R square of 0.627. Thus, it can be concluded that the independent variables (opportunity, pressure, type of auditor and ability) can explain as much as 62.70% to the dependent variable, namely the

assessment of fraud risk, while the remaining 37.30% can be explained by other factors outside the model studied.

**Table 7.** Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11,754	2,962		4,306	,000
	OP	,267	,094	,396	2,897	,019
	PR	,010	,113	,025	2,098	,043
	AT	,341	,231	,167	2,173	,039
	AB	,246	,124	,299	2,286	,025

a. Dependent Variable: FRA

Based on the results of hypothesis testing in table 7 above it can be seen that:

1. Chance variable (KS) has a positive direction with a coefficient value of 0.267 with a significance of less than 0.05 ( $0.019 < 0.05$ ) and has a t-count of 2.897, because  $t_{\text{arithmetic}} > t_{\text{table}}$  for df (147) ( $2,897 > 1.6553$ ) it can be concluded that opportunity has a significant effect on fraud risk assessment (PRF). Thus, it can be said that H1 was accepted.
2. The pressure variable (TK) has a positive direction with a coefficient value of 0.010 with a significance of less than 0.043 ( $0.043 < 0.05$ ) and has a t-test of 2.098, because  $t_{\text{arithmetic}} > t_{\text{table}}$  for df (147) ( $2.098 > 1.6553$ ) it can be concluded that pressure (TK) has a significant effect on fraud risk assessment (PRF). Thus, it can be said that H2 is accepted.
3. The auditor type variable (JA) has a positive direction with a coefficient value of 0.341 with a significance of less than 0.05 ( $0.039 < 0.05$ ) and has a t-count of 2.173, because  $t_{\text{arithmetic}} > t_{\text{table}}$  for df (147) ( $2.173 > 1.6553$ ) it can be concluded that the type of auditor (JA) has a significant effect on fraud risk assessment (PRF). Thus, it can be said that H3 is accepted.
4. The ability variable (KM) has a positive direction with a coefficient value of 0.246 with a significance of less than 0.05 ( $0.025 < 0.05$ ) and has a t-test of 2.228, because  $t_{\text{arithmetic}} > t_{\text{table}}$  for df (147) ( $2,286 > 1.6553$ ) it can be concluded that ability (KM) has a significant effect on fraud risk assessment (PRF). Thus, it can be said that H4 is accepted.

**Table 8.** Mann-Whitney Internal Auditor and External Auditor Test  
Test Statistics<sup>a</sup>

	NILAI
Mann-Whitney U	964,000
Wilcoxon W	2382,000
Z	-3,251
Asymp. Sig. (2-tailed)	,006

a. Grouping Variable: Jenis Auditor

From the data in Table 8 it has been explained that there is a significant difference in perception between internal auditors and external auditors  $H5 < 0.05$  which is equal to 0.006. Thus, it can be said that H4 is accepted.

#### 4.2 Impact of Opportunity on Fraud Risk Assessment

Judging from the descriptive statistical analysis shows that the opportunity variable has a mean value of 33.81 it can be concluded that internal auditors own the opportunity as an auditor and external auditors at state university in Banten and Jakarta are very good. In addition, based on respondents' answers, namely internal auditors and external auditors at state university in Banten and Jakarta, many answered that they have the opportunity as auditors in assessing fraud risk very well with an average of 1.81. Of the overall average of 2.33, this means that internal auditors and external auditors at state university in Banten and Jakarta have a very good chance as auditors of fraud risk assessments at state university in Banten and Jakarta.

While from the descriptive statistical analysis of fraud risk assessment variables, have a mean value of 36.91 it can be concluded that the internal auditor and external auditor at state university in Banten and Jakarta are very good at preparing fraud risk assessments at state university in Banten and Jakarta as audites. In addition, based on respondents'

answers, namely internal auditors and external auditors at state university who are in Banten and Jakarta, many answered that they have prepared as an auditor in fraud risk assessment very well with an average of 2.73. Of the overall average of 6.15, it means that internal auditors and external auditors at state university that are in Banten and Jakarta have very good preparation as auditors in assessing fraud risk at state university in Banten and Jakarta.

From the respondents' answers, namely internal auditors and external auditors at state university in Banten and Jakarta who have very good opportunities as auditors, it affects the excellent preparation that is owned by the auditor in assessing fraud risk at state university in Banten and Jakarta. The results of this study support (consistent) with research conducted by [22].

#### 4.3 Effect of Pressure on Fraud Risk Assessment

Judging from the descriptive statistical analysis shows that the pressure variable has a mean value of 13.95, it can be concluded that the pressure experienced by the internal auditors and external auditors at state university in Banten and Jakarta really feel not pressured. In addition, based on respondents' answers, namely internal auditors and external auditors at state university in Banten and Jakarta, many answered that they did not have pressure from the auditees as auditors in assessing fraud risk with an average of 1.81. From the overall average of 2.33 which means that internal

auditors and external auditors at state university in Banten and Jakarta have very little pressure from the auditees as auditors in fraud risk assessments.

From the respondent's answers, namely, internal auditors and external auditors at state university in Banten and Jakarta have very little pressure from the auditees as auditors then it affects the very good preparation owned by the auditor in assessing fraud risk at state university in Banten and Jakarta. The results of this study support (consistent) with research conducted by [20].

#### 4.4 Effect of Auditor Type on Fraud Risk Assessment

Judging from the descriptive statistical analysis shows that the pressure variable has a mean value of 18.86, it can be concluded that both internal auditors and external auditors at state university in Banten and Jakarta are needed. In addition, based on respondents' answers, namely internal auditors and external auditors at state university who in Banten and Jakarta, many answered that the role of internal auditors and external auditors is very much needed in fraud risk assessment with an average of 1.81. From the overall average of 6.29, it means that internal auditors and external auditors at state university in Banten and Jakarta have a very large role as auditors in assessing fraud risk at state university in Banten and Jakarta.

From the respondents' answers, namely internal auditors and external auditors at state university in Banten and Jakarta who have a very large role as internal auditors and as external auditors, it has an effect on the excellent preparation owned by the auditor in fraud risk assessment at state university in Banten and Jakarta. The results of this study support (consistent) with research conducted by [21].

#### 4.5 Supply Chain Structure and Internal Audit Tasks Involved

There are different models of supply chain within the company and they are adapted to its complexity and the activity in which it is engaged. There is no ideal

model that will provide the best setting to its results, but common processes are defined to operate inside an organization. The supply chain management processes identified by The Global Supply Chain Forum are [5]:

- Customer Relationship Management;
- Supplier Relationship Management;
- Customer Service Management;
- Demand Management;
- Order Fulfillment;
- Manufacturing Flow Management;
- Product Development and Commercialization;
- Returns Management

#### *Effect of Ability on Fraud Risk Assessment*

Judging from the descriptive statistical analysis shows that the ability variable has a mean value of 17.98, it can be concluded that the capabilities possessed by internal auditors and external auditors at state university in Banten and Jakarta are very good. In addition, based on respondents' answers, namely internal auditors and external auditors at state university in Banten and Jakarta, many responded that the ability as an auditor in fraud risk assessment was very good with an average of 2.83. From the overall average is 5.99, which means that internal auditors and external auditors at state university in Banten and Jakarta have excellent abilities as auditors in assessing fraud risk at state university in Banten and Jakarta.

From the respondents' answers, namely internal auditors and external auditors at state university in Banten and Jakarta who have excellent abilities as auditors, then it influences the very good preparation possessed by the auditor in assessing fraud risk at state university in Banten and Jakarta. The results of this study support (consistent) with research conducted by [8].

#### 4.6 There is a Difference in Perception between Internal Auditors and External Auditors regarding Fraud Risk Assessment

**Table 9.** Comparison of Perception of Internal Auditors and External Auditors regarding Fraud Risk Assessment

Indicator	Internal Auditor				External Auditor				Perception
	Min	Max	Mean	Perception	Min	Max	Mean	Perception	
1. I feel that communication between the audit team is needed in carrying out the examination task	5	7	6.16	Better	5	7	6.17	Better	The same
2. I will ask questions to management if there is anything needed regarding the audit	6	7	6.45	Better	6	7	6.44	Better	The same
3. I feel the need to know the factors that cause fraud	4	7	5.40	Better	5	7	6.34	Better	different

used in fraud risk assessments										
4. Clear analytical procedures are needed in carrying out audits	4	7	6.05	Better	6	7	6.57	The best	different	
5. During this time I as an auditor have made clear analytical procedures in carrying out audit tasks	4	7	5.88	Better	6	7	6.54	The best	different	
6. I feel the need to consider all the information needed in conducting an audit	4	7	5.42	Good	6	7	6.53	The best	different	

### Indicator 3 factors that cause fraud

According to the internal auditor, the factors causing fraud can be known from complaints from internal parties of state university in Banten and Jakarta and from internal audit findings. Whereas according to the external auditor the factors causing the occurrence of fraud can be known from the audit findings that have been carried out by the internal auditor so that the external auditors only need to follow up on the findings of the internal auditor audit and the factors causing the fraud can be known from the audit findings made by the external auditors themselves.

### Indicator 4 makes clear analytical procedures for conducting audits

According to internal auditors, analytical procedures are needed when it is done depending on what the audit will be done because not all analytical procedures are carried out so it depends on the type of audit to be performed. Meanwhile, according to an external auditor, analytical procedures must be carried out because frauds must be measured in money because they cause losses in rupiah.

### Indicator 5 conducts an audit by applying analytical procedures that have been made

According to the internal auditor, the analytical procedures that have been made needed as an audit stage carried out by the auditor depending on the type of performed audit. Whereas according to the external auditor the analytical procedures that have been made must be done as an audit working paper that makes it easy to make an audit report.

### Indicator 6 considers all information needed in conducting an audit

According to internal auditors must consider all the information needed in conducting an audit of complaints from internal state university parties in Banten and Jakarta and from internal audit findings. Whereas according to the external auditor, they must consider all information needed in carrying out an audit of the audit findings that have been carried out by

internal auditors and audit findings that have been carried out by external auditors themselves.

## 5 Conclusions, Limitations and Suggestions

### 5.1 Conclusion

This study discusses a model that examines the effect of supply chain strategy in opportunity, pressure, type of auditor and ability on fraud risk assessment in the perspective of internal auditors and external auditors and examines differences in perception between internal auditors and external auditors in fraud risk assessment with the conclusion that:

1. Opportunity has a significant effect on fraud risk assessment. The better opportunities for internal auditors and external auditors, the better preparation for fraud risk assessment. In this case the internal auditor and external auditor have the opportunity, among others; 1) opportunity to detect the auditee organizational structure in assessing fraud risk at state university in Banten and Jakarta, 2) opportunity to detect audited wealth in fraud risk assessment at state university in Banten and Jakarta, 3) opportunity as a responsibility The auditor audits the wealth of the auditee in fraud risk assessments at state university in Banten and Jakarta, 4) the opportunity to carry out a thorough, thorough and reliable audit in accounting data inspections of fraud risk assessments at state university in Banten and Jakarta. The results of this study support (consistent) with research conducted by [22].
2. Pressure has a significant effect on fraud risk assessment. From the respondents' answers, namely internal auditors and external auditors at state University in Banten and Jakarta that the auditor does not have pressure from the auditee as an auditor, it affects the excellent preparation owned by the auditor in assessing fraud risk at state university in Banten and Jakarta. In this case, internal auditors and external auditors at

state university in Banten and Jakarta do not get pressure from the auditees, including: 1) the demands to achieve the entity's expectations, 2) the existence of management's guidance, 3) there are demands in meeting the needs personal is a natural thing from the auditee itself. The results of this study support (consistent) with research conducted by [20].

3. The type of auditor has a significant effect on fraud risk assessment. A very large role as an auditor has an effect on the excellent preparation owned by the auditor in fraud risk assessments at state university in Banten and Jakarta, namely; 1) internal auditors are indispensable in assessing fraud risk at state university in Banten and Jakarta, 2) external auditors are needed in fraud risk assessments at state university in Banten and Jakarta, 3) internal and external auditors can help in minimizing fraud in state university in Banten and Jakarta. The results of this study support (consistent) with research conducted by [8, 21].
4. The ability to significantly influence fraud risk assessment has a very good ability as an auditor then influences the very good preparation possessed by the auditor in fraud risk assessments at state university in Banten and Jakarta. In this case, the internal auditor and the external auditor at state university in Banten and Jakarta must have capabilities supported from: 1) education level as an auditor, 2) expertise possessed by the auditor in assessing fraud risk, 3) and experience as an auditor in fraud risk assessments. Auditors in fraud risk assessments at state university in Banten and Jakarta require these three basic capabilities. The results of this study support (consistent) with research conducted by [8].
5. There are differences in perceptions between internal auditors and external auditors in fraud risk assessment, namely: 1) Different perceptions of the factors that cause fraud, according to internal auditors the factors causing fraud can be known from complaints from internal parties. State University in Banten and Jakarta and from the findings of the internal audit. Whereas according to the external auditor the factors causing the occurrence of fraud can be known from the audit findings that have been carried out by the internal auditor so that the external auditors only need to follow up on the findings of the internal auditor audit and the factors causing the fraud can be identified from the audit findings made by the external auditor himself. 2) Differences in perception in making clear analytical procedures in carrying out audits, According to internal auditors analytical procedures are needed when carried out depending on what audits will be carried out because not all analytical procedures are carried out so it depends on the type of audit to be performed. Meanwhile, according to an external

auditor, analytical procedures must be carried out because frauds must be measured in money because they cause losses in rupiah. 3) Differences in perceptions in carrying out audits by applying analytical procedures that have been made. According to the internal auditor, the analytical procedures that have been made needed as an audit stage carried out by the auditor depending on the type of audit to be performed. Whereas according to the external auditor the analytical procedures that have been made must be done as an audit working paper that makes it easy to make an audit report. 4) Different perceptions in considering all the information needed in conducting an audit. According to internal auditors must consider all the information needed in conducting an audit of complaints from internal state university in Banten and Jakarta and from internal audit findings. Whereas according to the external auditor, they must consider all information needed in carrying out an audit of the audit findings that have been carried out by internal auditors and audit findings that have been carried out by external auditors themselves.

## 5.2 Further Research Suggestions

Suggestions that can be given for the follow-up of the research results are as follows:

1. For internal auditors and external auditors it is very important to know competent factors namely opportunity, pressure and competence in fraud risk assessment. Internal auditors and external auditors in assessing fraud risk can use that opportunity, pressure and ability as a standard that must be owned.
2. For auditing lecturers and concurrently as auditors it is important to provide self-development for auditors to get the opportunity, understand the pressure as an auditor and improve their ability in assessing fraud risk.
3. For forensic auditors are required to have competence in increasing opportunities as auditors in assessing fraud risk, avoiding pressure from the auditee during carrying out forensic audits and increasing their ability as forensic auditors in fraud risk assessment.
4. For State Universities to avoid the existence of cheating practices (fraud) that exist in the Higher Education environment which can affect the performance of the Higher Education itself.
5. Becoming an entry and model for organizations, especially State Universities in Indonesia in order to understand good management of universities (University Governance) in which college performance that the role of internal auditors is the auditor of the Internal Supervision Unit and the role of external auditors can prevent and overcome the practice of fraud in university.

### 5.3 Scientific Suggestions

1. Further research can be done more broadly by using the population of internal auditors and external auditors at universities in Indonesia.
2. Future studies are expected to be able to add variables related to audit risk assessment such as audit findings, attitude, friendliness, emotional stability, openness and professional skepticism.

### 5.4 Research Implications

The results of this study provide information, thoughts and evaluation material for further research, as well as input for internal auditors and external auditors, the profession as a forensic auditor in improving the quality of his work, especially in fraud risk assessment. In addition, for State Universities in Indonesia the role of internal auditors and external auditors is highly expected for Higher Education institutions in overcoming and preventing the occurrence of cheating practices (fraud) within the Higher Education itself in order to create good university management (University Governance).

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