Abstract

This study aims to test the effectiveness of the HU-Model used in corruption detection efforts. The increasing number of corruption cases shows that the tools to detect corruption are not yet available. With the mode of corruption that is increasingly developing and complex, the existence of a corruption detection tool is a must. The focus of this research is on the causes of fraud star corruption which shows that the cause is due to abuse of power or the authority being exercised is not by the mandate. The characteristics of corruption in Indonesia are very complex, involving various elements from the government / private sector, State / Regional Owned Enterprises (BUMN / D) as well as public officials from the center to the regions. This article discusses the corruption detection model as one of the contributions to fight corruption in Indonesia. As one of the efforts to make Indonesia free from corruption outbreaks, the HU model consists of the variable lack of integrity (lack of integrity), opportunity (opportunity), pressure (pressure), rationalization (rationalization), and the ability (capability) to provide hope and answers. The HU-Model proves that despite the amount of pressure, the number of opportunities, the ease of justification, and the high position and authority will not encourage acts of corruption if there is still strong integrity. The results show that the indications of corruption are divided into three clusters, namely those with indications of corruption (red), gray (gray), and no indications of corruption (green).

I. Introduction

Corruption is categorized as a special crime regulated by Law Number 31 of 1999 concerning Corruption Crimes in conjunction with Law Number 20 of 2001. Furthermore, Law 30 of 2002 was also issued which was amended by Law Number 19 of 2019 concerning the Corruption Eradication Commission (KPK), CCP). Corruption has penetrated many aspects, starting from the central government, local government, provisional, city districts, sub-districts, even to villages. Likewise in the industrial sector ranging from BUMN/BUMD (service companies, public companies, Persero) to the private sector.

The management of public services, especially basic services, namely education, and health is also not free from corruption cases. The number of corruption cases that occur throughout Indonesia has stigmatized as a corrupt country. The predicate as a corrupt country becomes a heavy burden for economic and business growth which will certainly
have an impact on the welfare of the community. Corruption cases continue to grow increasingly complex and sophisticated, including those related to the management of state and regional finances in the implementation of government procurement of goods or services. More than 70 percent of corruption cases have been handled by law enforcement officers, such as the KPK, the Attorney General's Office, and the Police in recent years. However, there is still no significant reduction in quantity, even now it is starting to reach villages with village funds disbursed by the Government of Indonesia (Umar, et al, 2017). Corruption cases continue to grow increasingly complex and sophisticated, including those related to the management of state and regional finances in the implementation of government procurement of goods or services. More than 70 percent of corruption cases have been handled by law enforcement officers, such as the KPK, the Attorney General's Office, and the Police in recent years.

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As an act that violates the laws and regulations, corruption is a "closed business" that adheres to its secrecy. Corruption activities can almost be likened to drug transactions and other illegal drugs. Corruption practices rely on secrecy, collusion, and little trust that the illicit transactions will not leak to parties outside their environment. Corruption is carried out by a person or group of people while maintaining an appearance that is in favor of the environment. Like a virus that reproduces in a comfortable, warm, and dark environment, this is how corruption operates and reproduces. Corruption crimes are often found in developing countries, which have aggregate supervision that is still relatively weak and ineffective which is used by officials to facilitate the practices of criminal acts of corruption. The status quo situation will be maintained by the connoisseurs of corruption because in this condition the supervisory duties and examination institutions will not be able to function. Another thing is to be maintained by not following up on the reported findings so those audit findings are repeated every year.

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The limited human resources available to law enforcement officers is one of the causes of the slow handling of corruption cases in Indonesia. The burden of law enforcement officers in efforts to eradicate corruption must be comprehensive at various levels, both in the private, executive, legislative, and community circles. The fight against corruption must be carried out in a total football manner, which means that all components of the country together fight corruption according to their respective functions and duties. Likewise, the supervisory function carried out by the auditor must be an important role in
detecting and preventing corruption. Given the importance of the role of auditors in every agency, in January 2007 BPK-RI issued the State Financial Audit Standard (SPKN) as a benchmark in conducting audits of state financial management. SPKN mentions the importance of detecting corruption.

According to Singleton et al., (2006) and SAS No.9, audits are directed to detect fraud. But unfortunately, auditors often fail to detect fraud as indicated by the existence of several financial scandals involving public accountants such as Deloitte Indonesia which failed to prove fraud at PT. Sunprima Nusantara Pemfundan (PT. SNP) Finance for fiscal years 2012 to 2016 (CNN Indonesia, 2018), Ernst & Young Indonesia which presents an opinion based on insufficient evidence on the audit results of the financial statements of the telecommunications operator company, PT Indosat Tbk (Tempo Jakarta, 2017) and the auditor's failure to detect earnings management in the 2018 financial statements of PT Garuda Indonesia (CNN Indonesia, 2019). Likewise, international cases involving large public accounting firms (big four).

II. Review of Literature

2.1 Case Intro

As a big country and very much cared for in world relations, Indonesia should indeed be a developed country, growing, resilient, and prosperous, and happy. The national goals contained in the constitution of the 1945 Constitution seem rather difficult to fulfill optimally. One of the concrete and significant causes that interfere with the achievement of these national goals is rampant corruption. In this regard, Indonesia has determined that corruption is an extraordinary crime, so it must be handled in extraordinary ways. Therefore, Law No. 31 of 1999 was issued in conjunction with Law No. 20 of 2001 concerning Corruption Crimes and followed by Law No. 30 of 2003 concerning the Corruption Eradication Commission (KPK) which was then amended by Law No. 19 of 2003. 2019 concerning the KPK, this shows a high commitment to release.

Indonesia from the stigma of a corrupt state. Since the establishment of the KPK, many corruption cases have been handled involving many parties, including the DPR/DPRD, Ministers, Governors, Regents, Mayors, Law Enforcers, Directors of BUMN/BUMD, and many others. Almost all professions have been successfully handled by the KPK and other law enforcers, but there are still many new cases of corruption that come and go. For example, the case of social assistance, lobster, Jiwasraya, Asabri, the Hambalang Athlete House, The bribery case of the former chairman of SKK Migas, the bribery case of the former chairman of the Constitutional Court and a judge of the Constitutional Court, the bribery case of the former chairman of the DPD, the case of E-KTP. These big cases have dragged many high-ranking officials who made people shake their heads. The perpetrators have been known to be good people, highly educated, have prestigious positions, with very respectable positions but have not been able to escape the trap of corruption.

Corruption is a legal problem related to abuse of authority, embezzlement, theft, fraudulent financial statements, or other forms of fraud that can harm many people and can provide personal benefits for the perpetrator. Corruption is an act or deed that deviates from the stipulated legal regulations, with a deliberate intention, and wants to gain profit for himself, and can harm others. The benefits obtained can be direct or indirect. Direct profits can be in the form of money and goods taken individually or in groups, with or without going through banking facilities, while indirect profits can be in the form of
promotions or facilities where these facilities will also generate money or goods, (Umar, (2016:82).

The corruption eradication strategy mentioned in Law number 19 of 2019 includes enforcement (repressive), prevention (preventive), monitoring, supervision, and coordination. In practice, more enforcement activities seem to be carried out aggressively. However, the efforts to eradicate corruption did not reduce the level of corruption and also did not cause a deterrent effect for corruptors and potential corruptors. A survey from LSI (Kompas.com, 08/08/2021) states that in the last two years corruption has continued to increase. Corruption continues to grow from the center to the regions, from cities to villages, from local to transnational scales (H. Umar, Usman, & Purba, 2018). Corruption is increasingly widespread, ranging from abuse of official travel, budget abuse, procurement of goods and services, licensing, use of village funds, to buying and selling positions in regional government, central government, BUMN/BUMD even to positions in schools and universities. Therefore, it is necessary to make other more comprehensive and effective efforts to prevent the recurrence of corruption.

With the condition of corruption that continues to increase, it is necessary to apply new strategies in addition to the actions and prevention that have been carried out so far. The new strategy is to increase the participation of all parties to jointly declare war on corruption. The party who is most easily aware of the occurrence of corruption in an agency is the auditor (internal and external). Therefore, it is necessary to improve the capability and competence of auditors in detecting corruption.

Valery G Kumaat (2011: 156) states that "Detecting corruption is an effort to get sufficient early indications of fraud, as well as narrowing the space for fraud perpetrators to move (that is, when the perpetrator realizes the practice has been known, it is too late to dodge)". Meanwhile, Simon in Umar (2016) states that according to Simmons (2004), fraud occurs, among others, through the presentation of unqualified information (reports), namely irrelevant, invalid, inaccurate, not timely, or incomplete (full disclosure). Therefore, auditors need to be equipped with tools to detect corruption, namely the HU-Model. With the implementation of the HU-Model, acts of corruption that were previously pitch black will be exposed so that they are brightly lit.

Two factors will affect corruption detection including:

The perpetrator (the perpetrator), namely the ability to break through the security system (internal control) by colluding with other parties to get around the system, engineering, manipulating, and hiding the evil act so that it is difficult for parties outside their group to reveal. In the case involving Malinda Dee, it is clear that this act was done after he provided an opportunity to facilitate the execution of their evil intentions of breaking into City Bank customer funds.

Detector (The auditor). An audit is a test activity (attest function) carried out by a person who has the competence as an auditor to compare the suitability between conditions and criteria. Auditing (Arens 2012): is the process of collecting and evaluating evidence about measurable information about an economic entity by a competent and independent person to be able to determine the suitability of the information referred to with predetermined criteria. Various activities must be carried out by the auditor to support litigation support in resolving ongoing or pending cases. This activity is particularly related to calculating and determining state financial losses. They are indispensable for analyzing, interpreting, summarizing, and presenting important financial and business information.
And what should not be forgotten, the information is understandable and appropriate to support the resolution of factors determined by the auditor's capacity, namely his ability to develop a risk-based audit and build an Informant Network (Audit Intelligence) while remaining cautious.

The activity of detecting corruption is not an easy thing considering that corruption is usually very secretive. The perpetrators of corruption acts will try to cover up each other through nepotism and collusion so that it becomes pitch black. To be able to detect corruption effectively, it is necessary to know the causes of corruption. The first driver of corruption is the Fraud Triangle introduced by Cressey in 1950, which consists of three elements, namely pressure, opportunity, and rationalization. Furthermore, Wolfe and Hermanson (2004) introduced four drivers of people committing corruption known as the “Fraud Diamond Model”. There were several frauds in a company with a very large loss value, this happens because someone has a special ability in the company, making it easier for fraud to run smoothly. Furthermore, Umar (2016) introduced a new model of driving corruption known as the Fraud Star. There are five causes or drivers of corruption, namely opportunity, pressures, rationalization justification, capability, and lack of integrity.

Fraud Star is a model of the cause of corruption by paying attention to the loss of integrity as the main cause of corruption (lack of integrity). Siahaan et.al (2019) stated that the elements of the fraud star (opportunity, pressures, rationalization, capability, and integrity) have an impact on the occurrence of fraud (misappropriation of assets). As explained earlier, corruption occurs because power is abused or the authority exercised is not by its mandate. The abuse of power is carried out for personal or group gain and will usually be followed by a violation of the law. This inappropriate practice is carried out by parties who no longer pay attention to good and right standards and only prioritize their interests or their groups. In this condition, the perpetrators of corruption and other violations have lost the values of integrity (lack of integrity) which should be enforced as well as possible under any conditions, anytime, and anywhere.

Source: (Umar, 2016)

**Figure 1. Fraud Star**

Those who commit acts of corruption are not only caused by open opportunities, pressure, accompanied by a justification, and by the power they have (Cressey, 1964; Yusof, Khair, & Simon, 2013) also because they have lost the main grip in thinking and acting, namely integrity. Thus, the cause of this corruption can be called a fraud star. Perhaps we can also mention that those who commit corruption have experienced mental problems.

**2.2 Role of Auditor**

Before 1900, auditing focused on meeting the need for independent checks on 'balance sheet audits'. Auditors carry out various audit tasks, including observations on
physical inspection of goods, verification, and inspection of documentation that supports
the figures in the balance sheet, confirmation to third parties, and others. To fulfill this
audit, the auditor must understand the bookkeeping methods and recording procedures. At
the end of the 19th century, accounting and auditing underwent quite a radical change, as
western society moved from an agricultural system to an industrial system. This change
also affects accounting and auditing at this time, especially in terms of decision-making by
management based on financial statement information.

The economic condition of the population is a condition that describes human life
that has economic score (Shah et al, 2020). Economic growth is still an important goal in a
country's economy, especially for developing countries like Indonesia (Magdalena and
Suhatman, 2020). Organization must have a goal to be achieved by the organizational
members (Niati et al., 2021).

Furthermore, to maintain the relationship between the community members of the
organization and management, the creation of an audit function is seen as the most
economical and practical approach or solution (Wallace, 1987). The function intended here
is expected to be an extension of the community's hands and eyes to assess with special
competence the actions and reports submitted by management. Therefore, nowadays it is
difficult to find social and economic organizations that are oriented towards the democratic
rights of their members that exist without an audit institution. Thus, the audit is a very
instrumental function in the realization of management that can operate with good
corporate governance.

About acts of corruption, auditors must detect and find practices that violate this law.
Statement on Auditing Standard (SAS) no 53, The Auditor's Responsibility to Defeat and
Report Errors and Irregularities, asks the auditor to assess the risk of errors and
irregularities that could materially affect the financial statements. And most importantly,
SAS No. 53 requires the auditor to sign the audit engagement so that he or she provides
reasonable assurance in detecting any material fraud. About audits of acts of corruption,
auditors may carry out a type of forensic audit. Fraud is one of the objects of examination
that is targeted by a forensic auditor by the assignment from the supervisory agency's
office or assisting other institutions. For example, lawyers, police, insurance companies,
governments, banks, courts, and business companies, prosecutors, judiciary, police, or
other investigative institutions. Vice versa, to solve a case, he often has to coordinate with
the experts.

Role The auditor's role is to contribute to fraud prevention and detection efforts
including the following:

a. Directing, namely providing information about the future security prospects of the
   industry that is more transparent and accountable based on valid data both related to the
   past and the future.

b. Encouraging, namely assuring management regarding the business strategy (low cost,
   differentiation, and focus) that must be taken to achieve organizational goals based on
   the fulfillment of the interests of the owners (stakeholders).

c. Preventing, namely conveying the risk aspects that will be faced by the business,
   developing risk management, and important efforts to inhibit or even eliminate the
   factors that will trigger the occurrence of these risks (especially the risk of corruption).

d. Stopping, the supervisor must be able and professional to convey the facts in full to the
top management-things that interfere with the achievement of organizational goals,
especially if this indicates the occurrence of fraud. For this reason, supervisors in the
financial services sector must have competencies (knowledge, skills, and attitudes)
related to these main tasks and functions so that they are truly able to provide benefits to organizations, industry, and nationally.

Unfortunately, auditors are often unable to detect or find such fraudulent practices. In several audit activities, it is known that the auditor then issued an unqualified opinion, but later it turned out that law enforcers investigated allegations of fraud or corruption in the organization. Detecting corruption is an attempt to find any early indications that are suspected to be related to a criminal act of corruption. With this initial information, the organization can make the right decisions to narrow the space for the perpetrators of fraud and prevent a worse impact. Detection of corruption can be done if the detectors have sufficient competence for the task. In many cases, the auditor will issue an opinion WTP, but then law enforcement officials took repressive measures ranging from investigations, investigations, and prosecutions to interacting with several government agencies, regional heads, BUMN/BUMD, and others. Examples of the failure of auditors to detect corruption are several financial scandals involving public accountants such as Deloitte Indonesia related to fraud at SNP Finance (CNN Indonesia), E&Y Indonesia which presented an opinion based on insufficient evidence on the audit results of the financial statements of PT Indosat Tbk (Tempo Jakarta), as well as the auditor's failure to detect earnings management in the 2018 financial statements of PT Garuda Indonesia.

Facing a crime of corruption, the auditor must have adequate competence including knowledge, skills, and integrity related to the assignment. The knowledge that must be possessed by auditors is not only related to accounting and auditing. Auditors are required to continuously improve their knowledge (continuous improvement) by enriching them with knowledge related to business processes and law (related to economic and financial crimes). Meanwhile, the skills that must be possessed by auditors are related to the ability to collect evidence (evidencing matters). The evidence that must be collected is not only evidence that has been known by the auditor in general. Of course, the evidence that must be collected will support law enforcement efforts by making an alleged fraud clear. Therefore, the auditor must be able to collect evidence as stipulated in the Criminal Procedure Code, namely evidence and evidence. Auditors must be able to understand how the process of evidence in court. According to the Criminal Procedure Code article 184 paragraph (1), it is explained that the evidence that can be used in a criminal proof process includes: a. Statements of witnesses; b. Expert testimony; c. Letters or documents; d. Instruction; and e. Defendant's statement. The five pieces of evidence are legal evidence according to the law so that they can be used in the process of proof in court (still negative wettelijk).

The most important thing is how the auditor maintains his independence and integrity (attitude) by remaining professional and proportional in every activity of collecting evidence. Furthermore, after finding the facts of a criminal incident, the task that is felt to be quite heavy and is a critical point for an auditor is when he has to communicate and submit evidence of his findings at trial. The auditor is obliged to respond and submit evidence on financial information in a correct, concise, complete, and understandable manner by an audience who is relatively unfamiliar with accounting in the courtroom.

III. Research Method

The research was conducted by collecting primary data in the form of questionnaires sent to units of government agencies within the Ministry of Education and Culture, Research and Technology, both at the central and regional levels. The government agencies that were sampled in the study included echelon one unit at the center, echelon 2,
and third units at the center and regions. In addition, the research sample is State Universities throughout Indonesia. Secondary data collection was also carried out using an application (HU-Model) which was built by the research team to facilitate the data collection process considering that the secondary data that had to be collected consisted of 104 data with 52 formulas.

Data analysis was carried out using Classification and Regression Tree (CART) method program assistance to form a prediction model for corruption detection classification. The data analysis model used is an econometric model with the analysis technique using the least-squares model. The software used in conducting data analysis is STATCAL. The STATCAL software provides various data visualization features and the Classification and Regression Tree (CART) method.

IV. Results and Discussion

Fraud Star Components That Drive Corruption

The hallmark of an act of corruption is that it violates the law which is carried out together, in secret and causes losses to the state and benefits the perpetrators, other people, and corporations. Given the complexity, auditors need extra efforts to detect any indication of corruption. For detection efforts to be carried out effectively and efficiently, auditors need a detection tool that we have attached to the HU-Model.

\[ Y = -2.106 + 0.089\text{Op} + 0.177\text{Pr} + 0.038 \text{Rat} + 0.017\text{Cap} + 0.821\text{LoI} \]

Where:

\[ Y \] = Corruption Detection (Corruption Detection)
\[ \text{Op} \] = chance (Opportunity)
\[ \text{Pr} \] = pressure (Pressure)
\[ \text{Rat} \] = justification (Rationalization)
\[ \text{Stamp} \] = Ability (Capability)
\[ \text{LoI} \] = Loss of Integrity (Lack Of Integrity)

The results of the study indicate that there are three clusters of agencies related to criminal acts of corruption, namely:

a. Cluster is not indicated for corruption (green) if the value of corruption detection is \( > 3.66 \)
b. Cluster is gray if the corruption detection value is between \( 2.33 > X > 3.66 \)
c. Cluster indicated corruption (red) if the value of corruption detection \( < 2.33 \)

Source: processed from data

Figure 2. Corruption Cluster

Of the 165 respondents who answered the research questionnaire, it was proven that:
1. There are 147 units within the Ministry of Education and Culture, Research and Technology that are not indicated for corruption or included in the green cluster.
2. There are 17 units within the Ministry of Education and Culture, which are gray or included in the gray cluster.
3. There is 1 unit within the Ministry of Education and Culture, Research and Technology which is indicated to be corrupt or included in the red cluster.
The results of the study also show that:
1. The main factor that determines the incidence of corruption is the loss of integrity.
2. The second factor that determines the incidence of corruption detection is pressure and opportunity.
3. The third factor that determines the incidence of corruption detection is ability.
4. The smallest factor is justification.

The factors that cause corruption obtained from the Fraud Star components (Umar, 2016) are shown in Figure 3 below:

![Figure 3. Cause Corruption](image)

V. Conclusion

The Economic Development Institute (EDI) of the World Bank with various parties in the context of efforts to eradicate KKN, especially corruption, has introduced a concept called "Pillars of integrity". (Langseth, Stapenhurst, and Pope, 1997; Dye and Stapenhurst, 1998). The concept of the national integrity system involves at least 8 (eight) institutions called "Pillars of integrity", namely (1) executive institutions, (2) parliamentary institutions, (3) judicial institutions, (4) supervisory institutions ("watchdogs"). agencies), (5) media, (6) private sector, (7) civil society, and (8) law enforcement agencies. Included in the pillars of supervisory institutions are the offices of auditors, anti-corruption agencies, and the ombudsman. Meanwhile, the pillars of the private sector include chambers of commerce, industry associations, and professional associations. social organization, religious institutions, and NGOs are included in the pillars of civil society. These pillars can of course be expanded according to the conditions of each country. In Indonesia, for example, students can certainly be included as one of the pillars of integrity because they have pioneered reform or change. They can even be part of a more stringent "watchdog".

As the eighth pillar, auditors certainly have a very important role in the joint effort to fight against corruption. Given this importance, GAO has published standards that can be used by auditors in detecting corruption. Audits are directed to detect fraud (Bologna and Lindquist, 1995). SAS Number 99 (2002) states “the auditor has a responsibility to plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud.” This confirms the auditor's obligation to convey his considerations regarding fraud in the financial statements. Therefore, auditors (internal and external) must show a high commitment in efforts to eradicate corruption through efforts to detect corruption.
Corruption cases that happen are growing and mutating, making them increasingly difficult to detect. The contribution of this research is the clustering of agencies that are indicated by corruption (red), gray (gray), and not indicated by corruption (green). Detecting corruption from the fraud star component using the HU-Model improves the auditor's ability to carry out his obligations to detect corruption in his audit tasks. The occurrence of ongoing corruption cases is because there are still no available tools to assist management and auditors in detecting corruption so that they cannot carry out effective prevention. To detect very complicated corruption, a tool called the HU-Model is needed. With the application of this model, the auditor can improve the quality of the audit and the quality of the audit results because it can display information related to an indication of corruption that occurred in the auditee. The HU-Model used to detect corruption can not only help auditors but also be useful for management to make prevention efforts efficiently and effectively. Prevention that has been carried out by various efforts such as socialization, supervision, and system development has not focused on the source of the problem (indications and modes of corruption). The implementation of the HU-Model will help all parties to reduce the level of corruption in Indonesia. HU-Model will help government agencies, BUMN/D, and organizations, in general, to build an Integrity Zone to go to a corruption-free area (WBK).

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