

Analysis of Strategies, Methods, and Tools in Detecting Fraud after Covid 19 Pandemic

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Abstract

This study aims to analyze and compare the strategies, methods and tools used by various institutions in the world and different countries in detecting fraud. Currently, Fraud has become a common thing in the world of economics and business. As one of the preventive measures, robust detection is required. Methods and ways of detecting fraud are constantly changing and improving. Where every country certainly has a strategy in dealing with fraud cases to protect the country's economy. Without an appropriate strategy, it will facilitate further crime. This research will also explain fraud detection methods that have been applied by various institutions. The data before and after the Covid period did not show a very significant difference, so it can be concluded that whether external influences from outside the company did not significantly influence the occurrence of fraud in the company. Therefore, if we do not aware about the strategies, methods, and tools for detecting cases of fraud in companies, we will never know whether the company is in good condition or not.

Keywords Strategies, Methods, Tools, Fraud, Detect

INTRODUCTION

Fraud or cheating is an act that is carried out intentionally by one or more individuals in management or those responsible for governance, employees and third parties to gain an unfair advantage or violate the law. Organizations need to establish effective fraud prevention and detection methods because they can reduce opportunities for fraud to occur (Riadi, 2019). According to Christian and Ricardo (2022), The corporation must take measures to lower the fraud crime rate. The applicable Standard Operational Procedure (SOP) must be known by all participants within an organization. Possible methods consist of managerial communication regarding intolerance to fraudulent activity, implementing performance schemes, and pre-employment and ongoing screening (Budiarmaja & Ramadhan, 2022).

The increasing incidence of fraud makes companies must make careful efforts to prevent and anticipate it. Because this can cause losses for companies, not only in financial terms but also in time and energy. Therefore, company management needs the right way to prevent accounting fraud that will occur in the company (Othman et al., 2015).

Fraud can occur if those who commit fraud receive greater benefits than the punishment received for the fraud that occurs. There are various types of fraud that can be committed by fraudsters that depend on the benefits obtained to the detriment of the company (Budiarmaja & Ramadhan, 2022).



METHOD

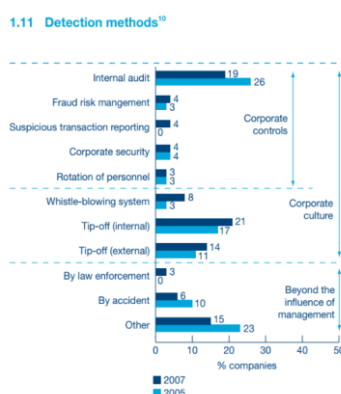
The method used in this research is qualitative research, by collecting research data from various reports issued by the four firms that are used as research objects. The qualitative analysis research method is the process of systematically searching for and compiling data obtained from literacy to obtain easy-to-understand conclusions. The research object is a firm authorized in fraud detection, namely PricewaterhouseCoopers (PwC), Indonesia Corruption Watch (ICW), Komisi Pemberantasan Korupsi (KPK) and Association of Certified Fraud Examiners (ACFE). The data taken is data on strategies, methods, and tools for detecting fraud. This study describes a comparison of fraud detection methods between the four firms.

RESULTS AND DISCUSSION

There are many distinct types of fraud that are committed by scammers, each with a unique benefit that increases losses for the business and, of course, affects all stakeholders (Christian et al., 2022). Fraud has effects that go far beyond monetary loss. Fraud affects individuals, businesses, organizations, services, and surroundings (Christian & Veronica, 2022). As a result, many different companies use a variety of techniques and methods to investigate long-running situations. Several differences regarding fraud detection are carried out by the four research objects, namely PwC, ICW, KPK and ACFE. In this study, the differences in the methods, strategies and tools used by each firm are analyzed to detect fraud.

PricewaterhouseCoopers (PwC)

PricewaterhouseCoopers (PwC) is one of the largest professional networks and is included in Big4 (the largest accounting firm in the world). According to PwC report (2003), Large companies most often detect fraud through their control and risk management systems. However, the detected cases are also accompanied by findings from the internal or external audit function or from tip-offs. Tip-off is a report from a third-party regarding fraud that has occurred. Meanwhile, small companies tend to detect fraud through the audit process compared to other ways. Small companies may not pay much attention to control systems and internal management, so fraud detection is most likely to be carried out by external auditors.

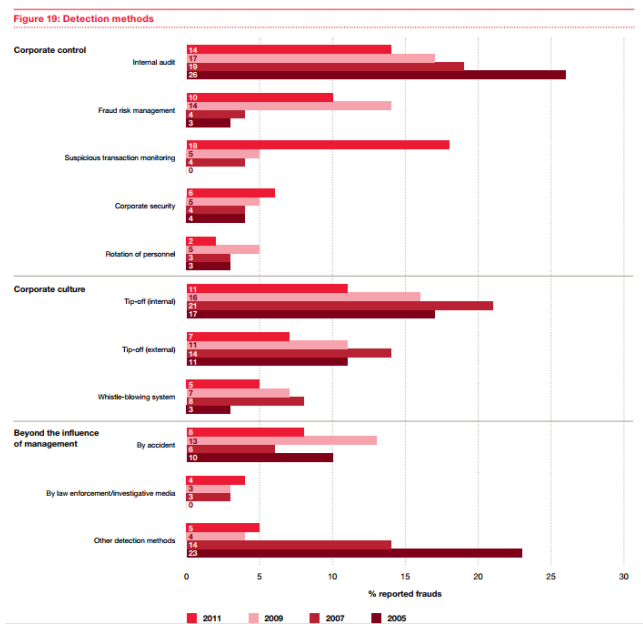


Source: (PwC, 2007)

Figure 1 Detection method 2007

The most frequent detections using internal and external tip-off methods occurred in 2007. As can be seen in Figure 1, a high response rate from companies indicating detection was via a whistleblowing hotline (8%) or tip-off (from internal sources within 21 % and external sources at 14%). This whistle-blowing system is a mechanism for submitting complaints of certain criminal acts that have occurred or will occur involving employees and other people committed within the organization where they work, where the reporter is not part of the perpetrators of the crime he is reporting (LKPP, 2016). Indonesia also has a whistleblowing system (WISE) in 2011 by the Ministry of Finance (Anggariyani et al., 2017).

According to PwC report (2011), Fraud detection methods are divided into 3 types, namely corporate control, corporate culture, and beyond the influence of management.



Source: (PwC, 2011)

Figure 2 Detection Method 2011

Corporate controls are matters that can be controlled by the company internally. From Figure 2 fraud detection methods, namely internal audit, fraud risk management, monitoring of suspicious activities, company security, and personnel rotation are included in the type of corporate control. From the data, external and internal tip-off has fallen sharply from its peak in 2007 and the only detection method that has increased in effectiveness is monitoring suspicious transactions which has increased from 5% in 2009 to 18% in 2011. Corporate culture is corporate culture, according to the data in Figure 2 there are external and internal tip-offs and a whistle-blowing system. These activities are not necessarily implemented by all companies. Beyond the influence of management means methods that are not under the company's control. Examples include accidental detection of fraud, by law enforcement, and so on.

In 2018, To obtain effective internal control, PwC (2018) designed fraud detection on the first line in the three lines of defense. The first three lines of defense are carried out by the company's operations, the second line is carried out by structured risk and compliance



management and the third is carried out by internal and external auditors. Of course, these things are intended to obtain effective internal control.

According to PwC report on 2020 dan 2022 (2020; 2022) which is after the pandemic, there are two tools used in preventing and detecting fraud. The first is the Anti-Fraud Program, this program is software that prevents fraudulent transactions from occurring. In this program, users can design rules to limit cyber fraud opportunities. The rules that are generally used are limiting the number of transactions per specified period, limiting the nominal payment, and so on. The second is Artificial Intelligence Technology, this technology allows machines to learn from experience, then adapt to new inputs to carry out tasks. This technology has been used by the Grab company and is said to be the only way to keep up with the number of fraudulent practices that are currently occurring. The Grab company uses AI technology to understand the behavior of real customers and customers who use fake accounts to commit fraud (Wardani, 2020).

According to The Performance Institute (2021), during covid-19 pandemic the data was collected online that consumer behavior is unpredictable. Therefore, after the pandemic, data collected in the past might be lacking accuracy that could affect the overall performance of fraud detection.

Indonesia Corruption Watch (ICW)

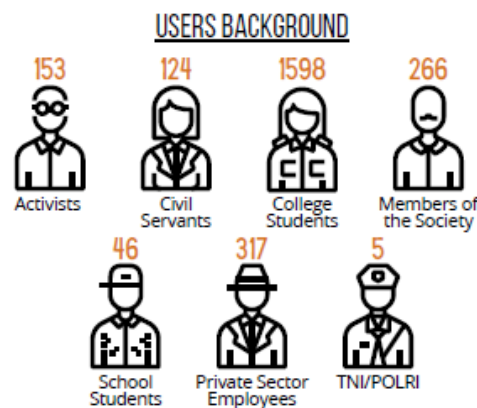
Indonesia Corruption Watch (ICW) is an independent organization that works together with the public to fight corruption. There are three main strategies that ICW uses in building an anti-corruption strategy, consisting of Organizational Strengthening, anti-corruption network strengthening and expansion, and public policy advocacy strategies.

The first strategy used is organizational Strengthening. A strong organization will be required to achieve the goal. With an increase in organization, the ability to prevent fraud cases will increase. ICW organizes activities to improve its human resources with various training programs according to the specific needs of the division. There are three sections of the training program, consisting of junior staff, senior Non-Structural staff, and managers. Junior staff are given training in the introduction of the Law on Corruption and Tracing Business Documents on the Process of Handling Public Complaints. Senior staff are given training in dissecting corporate crime, business judgment rules, corruption crimes, campaign strategies and organizing communication and advocacy strategies. Managers are given technical training in proposal writing.

One of the tools used by ICW for fraud detection is the development of Opentender.net as an instrument for monitoring public contracts. Opentender.net is useful for the activities of CSOs and journalists and is also used by the government, so ICW often provides training for local journalists on how to use Opentender.net (ICW, 2021).

The second strategy used is strengthening the anti-corruption network. According to ICW, with increased participation from citizens, the effectiveness of eradicating corruption will increase. One of ICW's efforts to increase citizen participation is SAKTI. SAKTI is an anti-corruption education program with the aim of creating a new generation of anti-corruption activists in Indonesia. In 2021, there are 2,509 people registered as participating

in the SAKTI program with various positions, such as activists, civil servants, students, private employees, and other community members.



Source: (ICW, 2021)

Figure 3 SAKTI User Data 2021

The third strategy used is public policy advocacy strategies. Corruption is born from wrong policies and can be legalized by policy corruptors. Therefore, it is important to use this strategy so that public policy can be directed at creating an ecosystem to fight corruption and strengthening the role of citizens in eradicating corruption.

During 2020 and 2022 after the pandemic ICW has held a discussion with the concept of knowledge sharing with the inspector of the ministry about a tool called opentender.net. The discussion was attended by 20 participants from Inspectorate I, Inspectorate II, Inspectorate III, Inspectorate IV, and Special Inspectorate. Opentender.net is a monitoring tool created by ICW to detect potential fraud in the goods/services procurement process. ICW is working with the Government Goods/Services Procurement Policy Agency (LKPP) to obtain procurement data throughout Indonesia and analyze it using seven indicators that produce a potential fraud score (ICW, 2022).

ICW's goal of holding a knowledge sharing forum with the Inspectorate of the Ministry of Home Affairs is to introduce Opentender.net to auditors as an instrument that can assist them in carrying out the audit process. In Opentender.net there are several variables that can be used to sort the procurement to be audited, such as: potential risk score; the amount of the contract value; company track record. With the help of the tool, it is hoped that it can speed up the auditor's process in finding procurement packages that have a risk of fraud (ICW, 2022).

Komisi Pemberantasan Korupsi Republik Indonesia (KPK)

Playing the role of a special institution set up by the state to handle corruption cases in Indonesia, the KPK certainly has a specific strategy in place to detect and prevent corruption and fraud in Indonesia. At present the strategy carried out by the KPK is known as the Trisula (Three Main Strategies) for Corruption Eradication which consists of Action, Prevention and Education.



DATA PENANGANAN PERKARA	2020	2021	2022
Penyelidikan	114	128	113
Penyidikan	91	107	120
Penuntutan	81	122	121
Inkracht	109	95	121

Source: (KPK, 2021)

Figure 4 Case Handling Data for 2020 – 2022

Sula enforcement is a repressive strategy for the KPK in the form of investigations, investigations, prosecutions, and the execution of perpetrators as a form of punishment for perpetrators who commit acts of corruption. In this strategy, in 2022 the process of investigation, investigation, prosecution will increase compared to 2020 and 2021. And in 2022 we could see that from investigation, prosecutions have increased much from the past.

Then in the prevention principle it is carried out by continuing to improve and develop the system in Indonesia so that acts of corruption will be reduced because they are easily detected. One example that has been implemented is for example public services that are starting to be online based to facilitate detection and monitoring.

DATA PENANGANAN PERKARA	2020	2021	2022
Pengaduan Masyarakat	4,151.00	4,040.00	4,623.00

Source: (KPK, 2021)

Figure 5 Public complaints regarding acts of corruption

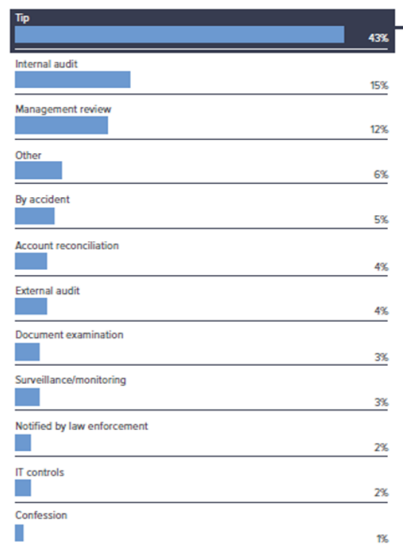
And from this table we could see that we achieved more participation from our society, that means the Trisula Strategy had an impact on the year. Because from 2022 we had increased more than 600 issues that complaint from our public, and their also show their support to reducing corruption in Indonesia.

Finally, education with the aim of raising awareness and community involvement in corruption eradication cases. One form of implementation is the issuance of Permenristekdikti Number 33 of 2019 concerning Obligations to Implement Anti-Corruption Education (PAK) in Higher Education. In this case, the involvement of all levels of society is very important because without the help of the community eradicating corruption will be very difficult for the KPK to reach because the vast territory of Indonesia (KPK, 2021) can be seen from the number of complaints from the public from 2020-2021 providing a lot of information to the KPK.

With the main goal of the KPK, namely reducing corruption cases, the KPK continues to collaborate with various institutions in Indonesia, as in 2016 the KPK officially collaborated with the Financial Services Authority in the hope that further detection of corruption cases will be easier. In addition, the KPK has also implemented a system of

disclosure of beneficial owners (beneficiaries) to make it easier to track and prevent abuse such as money laundering, terrorism financing, bribery, corruption, concealment of assets, and others. Beneficial Owner appears for the first time in English Trust Law, which means a party that meets the criteria as an owner without having to acknowledge ownership from a legal perspective (Suryana, 2022). As a special institution for handling corruption cases, it is hoped that the KPK will be able to suppress and continue to reduce criminal acts in Indonesia (Badjuri A., 2011).

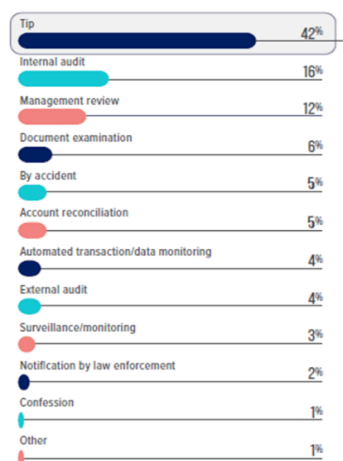
Association of Certified Fraud Examiners (ACFE)



Source: (ACFE Global, 2020)

Figure 6 Detection Method 2020

Based on the graph above, the most frequently used fraud detection method by ACFE Global in 2020 is the tip off method. At the second level it is followed using internal audit and then management review in the company. Apart from these methods, there are other methods used in fraud detection, namely accidental detection, account reconciliation, use of external audit services, data monitoring, surveillance/monitoring detection methods, notified by law enforcement, IT controls and the least used is confessions. Confession is in the final position for sure because most people will not admit mistakes that have been made to the company. When compared between post-covid ACFE reports, namely 2020 – 2022, the three most frequently used fraud detection methods are tip off, internal audit and management review.



Source: (ACFE, 2022)

Figure 7 Detection Method 2022

Based on the graph above, the most frequently used fraud detection method by ACFE Global in 2022 is the tip off method. At the second level it is followed using internal audit and then management review in the company. Apart from these methods, there are other methods used in fraud detection, namely by checking documents within the company, detecting accidental discoveries, reconciling accounts, monitoring data, and using external audit services. The company's surveillance/monitoring detection method shows the lowest ranking in the table, followed by the least used detection methods, namely notified by law enforcement and confession. That is, perpetrators of fraud rarely want to admit the crimes they have committed. In fraud detection, there are several parties who report or tip off. The following is a graph of parties reporting fraud.



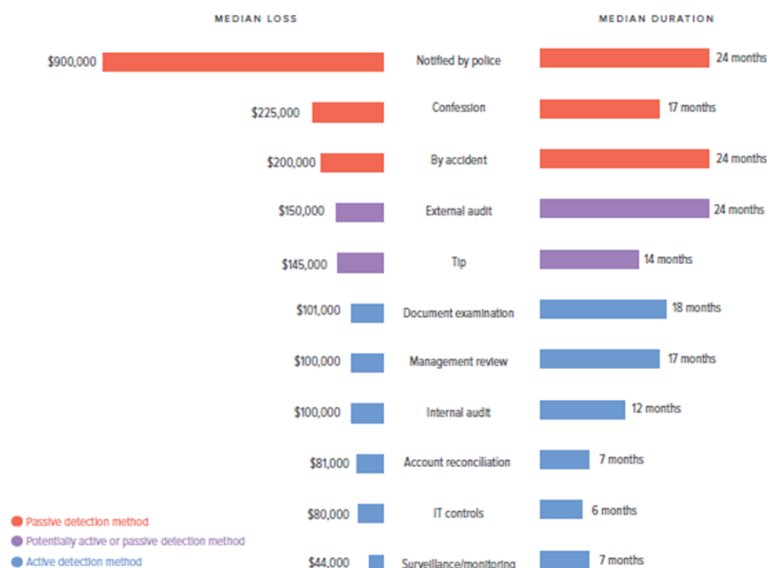
Source: (ACFE Global, 2020)

Figure 8 Party conducting fraud reporting

Based on Figure 8, the parties that reported the most acts of fraud in 2020 were company employees. Followed by customer in second position and anonymous reporting in third. Furthermore, there are reports from vendors, other competitors and the last rank is occupied by the shareholder/owner.

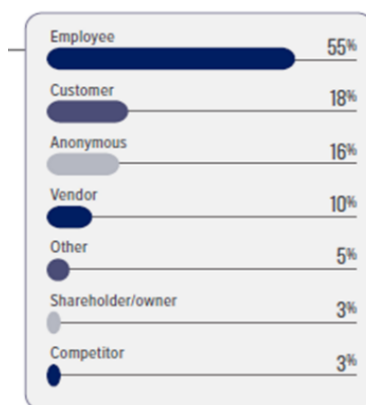
Based on the Association of Certified Fraud Examiners Global (2020), the grouping of methods is divided into three based on the median loss and duration, namely, the active group, the passive group, and the group that is between active and passive. The active group is a group of detection methods that involve processes or efforts designed to proactively detect fraud with low loss impact and fast detection duration, consisting of document examination, management review, internal audit, account reconciliation, IT controls and surveillance/monitoring. Meanwhile, the passive group is a group of detection methods which means that fraud is known to victims without their own efforts and has the highest relative average loss among other detection methods, consisting of notified by police, confession and by accident. And the group that is in between these two groups is a group that has a loss impact that is not too big and not too small, and the detection duration is not long and not fast, consisting of external audits and tips. Anti-fraud controls such as account reconciliation, internal auditing, management review and active tipping are all tools that can lead to a more effective job fraud detection.

The table below describes the amount of loss and the length of the procedure for detecting fraud for each method.



Source: (ACFE Global, 2020)

Figure 9 Average Loss and Duration



Source: (ACFE, 2022)

Figure 10 Party conducting fraud reporting

Based on Figure 10, the parties that report the most acts of fraud in 2022 are company employees. Followed by customer in second position and anonymous reporting in third. The reporter has the right to remain anonymous in reporting cases for the sake of his own privacy. Furthermore, there are reports from vendors and other reporting parties that fluctuate every year. In the last position, there are company owners and competitors, the company owner is in the second last place because of course the owner does not want reporting on bad news in his company.

According to ACFE (2022), grouping methods are divided into three based on the median loss and duration, namely, the active group, the passive group, and the group that is between active and passive. The active group is a group of detection methods with low impact and fast detection duration, consisting of document examination, internal audit, management review, account reconciliation, surveillance/monitoring and automated transaction/data monitoring. Meanwhile, the passive group is a group of detection methods with the greatest loss impact and long detection duration, consisting of by accident, notification by law enforcement and confession. And the group that is in between these two groups is a group that has a loss impact that is not too big and not too small, and the duration of detection is not long and not fast, consisting of external audits and tip offs. The table below describes the amount of loss and the length of the procedure for detecting fraud for each method.



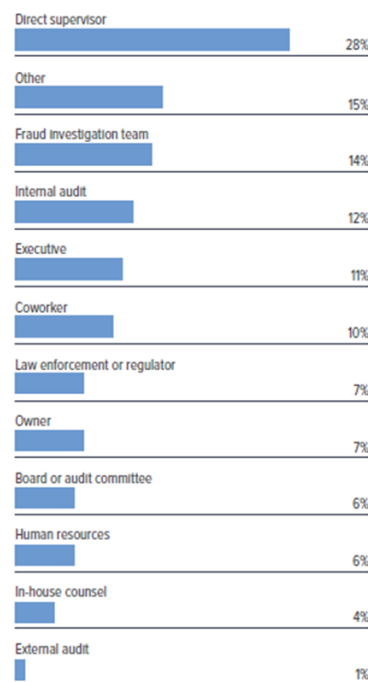
Source: (ACFE, 2022)

Figure 11 Average Loss and Duration

As explained earlier, in Figure 11, the active groups are document examination, internal audit, management review, account reconciliation, surveillance/monitoring and automated transaction/data monitoring. The biggest loss is in the document examination method while the smallest loss is in the automated transaction/data monitoring method. The duration of fraud detection is in the Surveillance/monitoring and Automated transaction/data monitoring methods, while those that are late are in the document examination, internal audit, and management review methods. Passive groups namely by accident, notification by law enforcement and Confession have the biggest losses compared to other groups. The biggest loss is in the notification by law enforcement method and the smallest loss is in the by accident method. Meanwhile, the fastest duration is the confession method, and the longest duration is the by accident method.

According to ACFE (2022), many organizations fail to implement fraud reporting systems. Therefore, there is a need for a system where employees can report fraud "anonymously" via telephone or web-based portal. The ability to report fraud anonymously is key because some employees are afraid to make a report where there is a threat from superiors or there is a negative reaction from other colleagues. In accordance with Johansson and Carey (2016), low-ranking employees are more likely to report fraud when an external hotline is available because the risk of retaliation is lower. The fraud detection tools used will of course develop over time, one of which is in 2022 the use of increasingly modern technology.

FIG. 13 To whom did whistleblowers initially report?



Source: (ACFE Global, 2020)

Figure 12 Subject of Fraud Reporting by whistleblowers



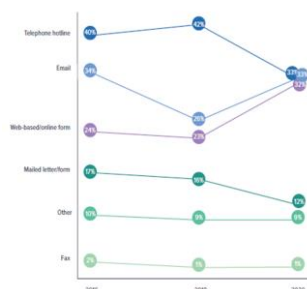
In about 33% of cases where a tip reporting method existed, the complainant did not use a formal reporting mechanism. Instead, they report their suspicions directly to supervisors, investigators, or other interested persons. Based on data from the ACFE (2020), whistleblowers can submit reports regarding fraud cases in companies to many parties, namely direct supervisors, others, fraud investigation team, internal audit, executive, coworker, law enforcement, owner, board or audit committee, human resources, in-house counsel and external audit.



Source: (ACFE, 2022)

Figure 13 Subject of Fraud Reporting by whistleblowers

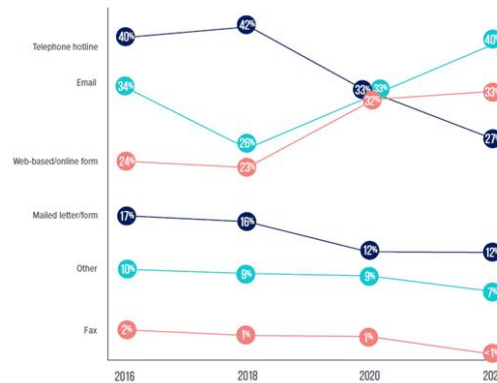
Based on the table data above, there are also whistleblowers whose job is to report fraud cases in accordance with data protection and EU privacy regulations (Abazi, 2020). By the data from ACFE (2022), there are twelve parties selected by whistleblowers to submit reports regarding fraud cases in the company, namely those with the three highest ratings are direct supervisors at 30%, executive teams at 15%, and internal audit at 12%. And what is in the last ranking is the external audit, the external audit party is in this position because the external auditor does not have the right to decide the future of the company. Then, there are several formal reporting mechanisms used by whistleblowers.



Source: (ACFE Global, 2020)

Figure 14 Formal reporting mechanisms used by whistleblowers.

Based on the table above, whistleblowers in 2020 will have the same level of telephone hotline, email and web-based/online forms. In contrast to whistleblowers in 2018 where the first rank was occupied by a telephone hotline with a percentage of 42%, followed by email with a percentage of 26% and web-based/online forms with a percentage of 23%.



Source: (ACFE, 2022)

Figure 15 Formal reporting mechanisms used by whistleblowers

Based on the table above, more than half of whistleblowers use internet-based reporting due to the development of the times. Hotline-based reporting is seen declining in 2022 to 27%. And at the top is email-based reporting. Followed by web-based/online form-based reporting with a percentage of 33% in 2022. However, the most widely used reporting mechanism from year to year is the telephone hotline. This shows that whistleblowers also prefer the use of the internet in their reporting because it is more efficient and effective.

The use of this hotline is very important because it is effective and proven to improve the company's ability to detect fraud. It is evident from ACFE Global data for 2022, companies that use a hotline-based reporting mechanism are proven to be faster in detecting fraud, from the data presented if they use hotline-based reporting it takes 12 months while if they do not use hotline-based reporting it takes 18 months to detect fraud. And companies that use hotline-based reporting detect fraud with a proven tip-off method of 47% and 31% of companies that do not use proven hotline-based reporting.

In addition to using the hotline, employees in the company must also receive training on fraud awareness from the start. Cases detected from reporting by employees who received training were 45% and cases detected from reporting by employees who did not receive training were 37% (ACFE, 2022). It can be concluded that reporting is more often submitted by employees at companies with awareness training. In accordance with Wulandari dan Nuryanto (2018), by conducting awareness training, it can increase the awareness of all parties within the organization to prevent fraud.

CONCLUSION

According to ACFE report from 2020 until 2022 the most widely used fraud detection method is tip off. Many frauds were reported by the company's own employees and only



then were customers followed. Then in 2020 the reporting mechanism used by whistleblowers will not differ much between telephone hotlines, email and web-based/online forms.

According to the ACFE report on 2022, most of the fraud is committed by the company's own employees and only then is it followed by customers. And in the last position, the company's competitors disclose the occurrence of fraud. ACFE explained that there are 3 fraud detection methods, namely the active, passive and those in between the two groups, each of which has a different detection method. Different detection methods also provide different durations and impacts. Based on detection tools, there are several types of tools for detection, namely whistleblowers which are often used in almost all institutions in the world. Then there is the use of an efficient and effective hotline because it can increase the company's ability to detect fraud.

ICW has three main strategies used to reduce fraud cases that occur, consisting of Organizational Strengthening, anti-corruption network strengthening and expansion, and public policy advocacy strategies. During the pandemic in 2020, To prevent COVID-19 transmission, the government has put in place various mobility restriction measures, which forced civil activities to rely on digital platforms. One implication is that this further exposes activists and journalists to arbitrary criminalization using the Electronic Information and Transaction Law. The Anti Corruption School has changed to an online program that used to run as an offline program. in 2022, ICW has held a discussion with the concept to share knowledge about a tool called opentender.net. Opentender.net is a tool that ICW uses to monitor or detect potential fraud in goods/service procurement Policy Agency.

KPK in carrying out its mission implements three main strategies that focus on ease of tracking and community involvement, namely strategies for prevention, education, and prosecution. Community involvement plays a very important role in corruption eradication cases so that the Corruption Eradication Commission hopes that by increasing the level of public awareness it can reduce the number of crime cases in Indonesia. And their strategy from 2020-2022 have changed alot, and the present strategy it called Trisula Strategy which is from this strategy want to get more participation from our indonesia citizen. And from the result we could say from 2020-2022 has given an impact which is really increasing many cases that complaints from our citizen, which is really in a way with the purpose of this strategic.

In the PwC report, fraud detection methods are divided into 3 types, namely corporate control, corporate culture, and beyond the influence of management. 3 types of methods have been used since 2011. In 2020 and 2022, PwC uses 2 tools to detect and prevent fraud, namely the Anti-fraud Program and Artificial Intelligence Technology.

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