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## Fraud Triangle Theory and Fraud Diamond Theory. Understanding the Convergent and Divergent For Future Research

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### Abstract

Many of the world's most prominent organizations have experienced large-scale frauds. These frauds have had disturbing effects on our world's economy in addition to contributing unnecessary suffering and increased unemployment for the low and middle class. With the aim of further understanding the fundamental motivations of fraud, this paper takes an in-depth look at the convergent and divergent of two classical fraud theories which are: (i) fraud triangle theory; and (ii) fraud diamond theory. This comparison is important to assist anti-graft bodies and organizations in formulating a practical strategy to prevent and investigate organizational frauds. The paper takes a conceptual approach by first examining the concept of fraud, then discussing the convergence of the two classical theories, and finally differentiating them. By doing so, the similarities and differences between them are highlighted and appreciated for fraud prevention purposes. The study uses secondary sources of information obtained from journal articles, textbooks and the internet. The discussion of the two theories contributes to the understanding of frauds especially by forensic accountants, auditors, fraud examiners and other anti-fraud bodies. The study also serves as guidance for further fraud related research.

**Keywords:** Fraud, Fraud Diamond Theory, Fraud Triangle Theory, Forensic Accounting

### Introduction

In recent years, corporate financial accounting scandals no longer become unexpected news of the day. Cases such as Enron, WorldCom, Global Crossing and Tyco are among the most prominent ones who had suffered from the devastating impact of fraud. These costly scandals have increased global concerns about fraud, wiping out billions of dollars of shareholder value, and led to the erosion of investors and public confidence in the financial markets (see, Peterson and Buckhoff, 2004; Rezaee et al., 2004; Bierstaker et al., 2006). Many studies have discussed fraud-related issues, and the general view is that fraud prevention should be the main focus. It is less expensive and more effective to prevent fraud from happening than to detect it after the occurrence. Usually, by the time the fraud is discovered, the money is unrecoverable or the chance to recover the full amount of the loss is very slim. Furthermore, it is costly and time consuming to investigate frauds especially involving large-

scale multinational operations. However, if the focus is on fraud prevention all the monetary losses, time and effort to reconstruct fraudulent transactions, track down the perpetrator, and reclaim missing funds can be saved. Thanasak (2013:1) states that before making any efforts to reduce fraud and manage the risks proactively, it is important for the business organizations to identify the factors leading to fraudulent behaviour by understanding who are the fraudsters, when and why frauds are committed. Various theories have attempted to explain the causes of fraud and the two most cited theories are the Fraud Triangle Theory (FTT) of Cressey (1950) and Fraud Diamond Theory (FDT) of (Wolfe and Hermanson, 2004). Both of them identify the elements that lead perpetrators to commit fraud. According to Dorminey et al (2010), the origin of the FTT dates to the works of Sutherland (1939) who coined the term white-collar crime, and Cressey was one of Sutherland's former students. Cressey (1950) focused his research on the factors that lead individuals to engage in fraudulent and unethical activity. His research later became known as the FTT. This theory consists of three elements that are necessary for fraud to occur: (i) perceived pressure, (ii) opportunity, and (iii) rationalization. David T. Wolfe and Dana R. Hermanson believed that the former FTT has to be enhancing to improve both fraud prevention and detection by considering an additional element above the three, mentioned elements of FTT. They considered four sided FDT thereby adding capability as the fourth element. Wolfe and Hermanson (2004, p. 38) state that fraud cannot successfully conceal unless the fraudster has the capability to have all personal traits and abilities even in the presence of the other three elements. In their separate works, Wolfe and Hermanson (2004); Thanasak (2013); Norman and Faizal (2010); Florenz (2012); Gbegi and Adebisi (2013) examined and discussed the FDT. Their main conclusion was that the FDT is an extended or improved version of the FTT with an addition of "capability" added to the three basic elements of fraud in the FTT. Therefore, this paper aims to explain further the convergent and divergent between the FTT and FDT.

### **Fundamental Concept of Fraud**

Fraud has grown rapidly over the last few years, and there is a growing trend for large organizations to consider hiring professionals such as forensic accountants to reduce the pressure and potential of occupational, financial frauds. ACFE (2010); Sutherland (1943) occupational fraud is the process of using one's occupation or responsibility to satisfy his personal interest by enriching himself through the deliberate abuse of power. Abuse of power by the fraud perpetrators includes deliberate mismanagement, and misrepresentation of organizational resources (fixed and current assets). Regardless of the type or nature of the sectors, various category of financial crime and other types of occupational are taking place such as swindles and employee trust violations (ACFE, 2010; Duffield and Grabosky, 2001; Levi, 2008; Kiragu et al., 2013). Merriam Webster's Dictionary of Law (1996) as quoted in Manurung and Hadian (2013, p. 4), fraud can be defined as: *"Any act, expression, omission, or concealment calculated to deceive another to his or her disadvantage, specifically, a misrepresentation or concealment with reference to some fact material to a transaction that is made with knowledge of its falsity. And or in reckless disregard of its truth or falsity and worth the intent to deceive another and that is reasonably relied on by the other who is injured thereby."* Ernst and Young (2009) defines fraud as an act of deliberate action made by an entity, knowing that such action can result in a possession of unlawful benefits. Adeneji (2004) and Institute of Chartered Accountants of Nigeria (ICAN) (2006), state that fraud is an intentional act of individuals among management, employees or third parties who produce errors in financial reporting in favour of their personal desires. Fraud can also be considered

as any deliberate misrepresentation, concealing and negligence of a truth to manipulating the financial statement to at the expenses of the firm.

### ***The Fraud Triangle Theory***

To appreciate the similarities and differences between FTT and FDT, it is important to begin with Cressey's FTT (1950). In 1950, Donald Cressey, a criminologist, started the study of fraud by arguing that there must be a reason behind everything people do. Questions such as why people commit fraud led him to focus his research on what drives people to violate trust? He interviewed 250 criminals in a period of 5 months whose behaviour met two criteria: (i) initially, people are accepting responsibilities of trust in good faith, and (ii) circumstances make them violate the trust. He relates that three factors (pressure, opportunity, and rationalization) must be present for an offense to take place. Cressey further states the following: *"Trust violators, when they conceive of themselves as having a financial problem that is non-shareable and have knowledge or awareness that this problem can be secretly resolved by a violation of the position of financial trust. Also they are able to apply to their own conduct in that situation verbalizations which enable them to adjust their conceptions of themselves as trusted persons with their conceptions of themselves as users of the entrusted funds or property"* (Cressey, 1953, p. 742).

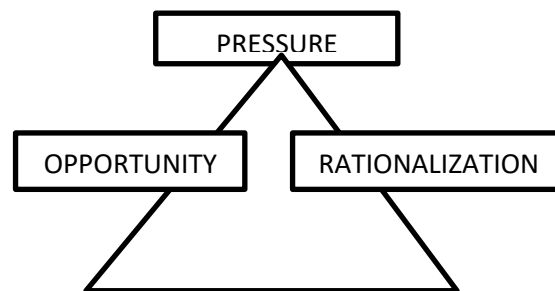


Figure 1. Fraud Triangle

Source: Cressey (1953)

The three elements of fraud summarized by Cressey (1953) are commonly presented in a diagram shown in Figure 1. The top element of the diagram represents the pressure or motive to commit the fraudulent act while the two elements at the bottom are perceived opportunity and rationalization (Wells, 2011; Rasha and Andrew, 2012). Over the years, the fraud proposition has become well-known as the FTT.

### ***Perceived Pressure/Incentive/Motive***

Perceived pressure refers to the factors that lead to unethical behaviors. Every fraud perpetrator faces some pressure to commit unethical behavior (Abdullahi and Mansor, 2015a). These pressures can either be financial or non-financial pressures. Albrecht et al. (2006) pointed out that, since the pressure to commit fraud may not be real it is important to use the word perceived. If the perpetrators believed that they were pressurized, this belief could lead to fraud. Perceived pressure can exist in various ways, especially in non-shareable financial need. Financial pressure is recognized as the most common factor that lead an entity to engage in an evil action. Specifically, about 95% of all fraud cases have been perpetrated due to the fraudster's financial pressures (Albrecht et al., 2006). Lister (2007) states that pressure is a significant factor to commit fraud. He determines three types of pressure which are personal, employment stress, and external pressure. Vona (2008) further examines

personal and corporate forces as motivations' proxies for fraud commitment. Examples of perceived pressure include greed, living beyond one's means, large expenses or personal debt, family financial problem or health, drug addiction and gambling.

Lister (2007:63) defined the pressure to commit fraud as "the source of heat for the fire." But having this pressure does not become a reason for someone to commit fraud. Murdock (2008) also argued that the pressure could be related to financial, non-financial, political and social. Political and social pressure occurs in a situation whereby a person feels and believes that they cannot afford to fail due to their status or reputation. According to Rae and Subramanian (2008) pressure relates to employees' motivation to commit fraud because of greed or personal financial pressure. Along the same line, Vona (2008); Rasha and Andrew (2012) believed that personal and corporate pressures are the key motive to commit fraud. The interaction of the elements above causes an individual to commit fraud (Rosefield, 1988; Vona, 2008; Okezie, 2012; Rasha and Andrew, 2012). Chen and Elder (2007) recognized six basic categories for pressure as a transgression of obligations, personal problems, corporate inversion, position achievement and relationship between employees. Albrecht *et al.* (2008) categorized pressure in four groups including economic, vice, job-related and other pressures. Hooper and Pornelli (2010) opine that pressure can be either a positive or negative force.

### ***Perceived Opportunity***

The second necessary element of fraud to occur is perceived opportunity. Opportunity is created by ineffective control or governance system that allows an individual to commit organizational fraud. In the field of accounting, this is termed as internal control weaknesses. The concept of perceived opportunity suggests that people will take advantage of circumstances available to them (Kelly and Hartley, 2010). The nature of perceived opportunity is like perceived pressure in the sense that the opportunity does not have to be real too. However, the opportunity exists in the perception and belief of the perpetrator. In most cases, the lower the risk of being caught, the more likely it is that fraud will take place (Cressey 1953). Several factors lead to the existence of an opportunity to commit fraudulent activities in an organization such as negligence of employee's breach of policies and lack of disciplinary action (Sausser, 2007). Wilson (2004) explains "opportunity" as the ability to override fraud controls. Rae and Subramanian (2008) alarm that opportunity refers to the ability and power of an employee to realize the weaknesses of the organizational system and taking advantage of it by making fraud possible. Furthermore, Srivastava *et al* (2005); Hooper *et, al* (2010) argue that, even when the pressure is extreme, financial fraud cannot occur unless an opportunity is present. An opportunity has two aspects: (i) the inherent susceptibility of the organization to manipulation, and (ii) the organizational conditions that may warrant a fraud to occur. For example, if there is an inadequate job division, weak internal control, irregular audit, and the like, then the conditions will be favorable for the employee to commits fraud. Chen and Elder (2007); Fazli *et al* (2014) used three proxies based on the Thailand Statement of Audit Standard No. 43 to measure an opportunity to commit fraud. The proxies used including related party transactions, CEO duality and the difference between control and cash flow rights. Moyes *et al* (2005) report that the presence of related party transactions ranks the second amongst the most frequently encountered opportunity. In a study by Wilks and Zimbelman (2004), the related party transactions were placed the third amongst the most common of opportunity to the fraudster. Similarly, Ming and Wong (2003) also used related party transactions as a proxy to measure the opportunity. Vance (1983) state that another proxy for opportunity was ineffective monitoring that was



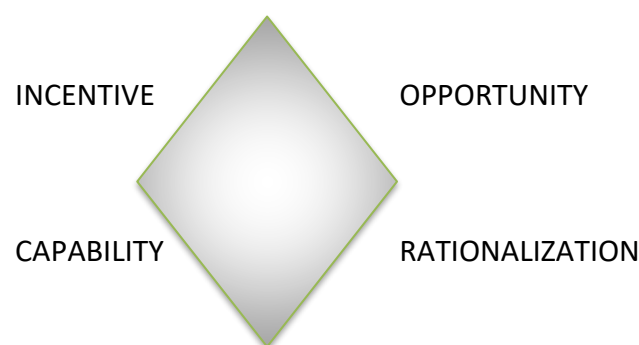
attributed to the weak directorship in the public sector. Vance (1983) suggested that the effectiveness of the organizational board of directors in ensuring accurate control over management activities can be weakened by the domination of the CEO. Kenyon and Tilton (2006) lament that weak internal controls, lack of supervision, inadequate segregation of duties may create an opportunity to commit fraud. Lindquist and Singleton (2006), stated that Association of Certified Fraud Examiners revealed that irregular job rotation is contributing to the employees and managers exploit organizational failure to commit fraud, Ewa and Udoayang (2012) successfully without fear and stress.

### **Rationalization**

The rationalization is the third element of the FTT. This concept indicates that the perpetrator must formulate some morally acceptable idea to him before engaging in unethical behavior. Rationalization refers to the justification and excuses that the immoral conduct different from criminal activity. If an individual cannot justify dishonest actions, it is unlikely that he or she will engage in fraud. Some examples of rationalizations of fraudulent behavior include "I was only borrowing the money", "I was entitled to the money because my employer is cheating me." Additionally, some fraudster excuses their action as "I had to steal to provide for my family", "some people did it why not me too" (Cressey, 1953). Rationalization is difficult to notice, as it is impossible to read the mind of the fraud perpetrator. Individuals who commit fraud possess a particular mind-set that allows them to justify or excuse their fraudulent actions (Hooper and Pornelli, 2010). Rationalization is a justification of fraudulent behavior because of an employee's lack of personal integrity, or moral reasoning (Rae and Subramanian, 2008). The propensity to commit fraud depends on ethical values as well as on their personal attitudes of individuals (Kenyon and Tilton, 2006). Howe and Malgwi (2006) concluded that a bridge between incentive/pressure and opportunity is created when an individual can rationalize the fraudulent behavior.

### **The Fraud Diamond Theory**

The FDT was first presented by Wolfe and Hermanson in the CPA Journal in December 2004. It is viewed as an expanded version of the FTT. Figure 2 shows the diagram for FDT. In this theory, an element named capability has been added to the three initial fraud components of the FTT. Wolfe and Hermanson (2004) argued that although perceived pressure might coexist with an opportunity and a rationalization, it is unlikely for fraud to take place unless the fourth element (i.e., capability) is also present. In other words, the potential perpetrator must have the skills and ability to commit fraud.



Source: Wolfe and Hermanson (2004)

Figure 2. The fraud diamond

Wolfe and Hermanson (2004) maintained that opportunity opens the doorway to fraud, and incentive (i.e. pressure) and rationalization lead a person toward the door. However, capability enables the person to recognize the open doorway as an opportunity and to take advantage of it by walking through repeatedly.

### **Capability**

This is the situation of having the necessary traits or skills and abilities for the person to commit fraud. It is where the fraudster recognized the particular fraud opportunity and ability to turn it into reality. Position, intelligence, ego, coercion, deceit, and stress, are the supporting elements of capability (Wolfe and Hermanson, 2004). Mackevicius and Giriunas (2013), not every person who possessed motivation, opportunities, and realization may commit fraud due to the lack of the capability to carry it out or to conceal it. Albrecht, Williams, and Wernz (1995) opine that this element is of particular importance when it concerns a large-scale or long-term fraud. Furthermore, Albrecht *et al* (1995) believe that only the person who has an extremely high capacity will be able to understand the existing internal control, to identify its weaknesses and to use them in planning the implementation of fraud. Similarly, Wilson (2004) discloses that rationalization and capability are all inter-related, and the strength of each element influences the others.

### **Position/Function**

The initial factor to enable the fraudster to have the capability to commit fraud is the function or position holding in an organization. Wolfe and Hermanson (2004) state that position and role owned by the employee may perfect his way to breach the organizational trust. They further explain the findings of the analysis of public companies carried out by Beasley *et al.* in 1999 that over 70% of the fraud cases CEOs of that companies were found must of the fraud CEOs were implicated in over 70 percent of publicly company's accounting frauds. They also report that many organizations do not implement sufficient checks and balances to mitigate their CEO's capabilities to influence and perpetuate frauds.

### **Intelligence/Creativity and Ego**

The fraudster is someone who understands and capable of exploiting internal control weaknesses and using the position; function or authorized access to the greatest advantage (Abdullahi and Mansor, 2015b). Intelligent, experienced, creative people with a solid grasp of controls and vulnerabilities, commit many of today's largest frauds. This knowledge is used to influence the individual's concern for authorize access to systems or assets (Wolfe and Hermanson, 2004:40). According to the Association of Certified Fraud Examiners (2003), 51% of the criminals of occupational fraud had at least a bachelor's degree, and 49% of the fraudsters were over 40 years old. Also, managers or executives committed 46% of the frauds based on the Association's recent study.

The fraudster has a strong ego and great confidence that he will not be detected, or believes that he could easily take himself out of trouble if caught. Such confidence or arrogance can affect one's cost-benefit analysis of engaging in fraud. The more confident the person, the lower the estimated cost of fraud will be (Wolfe and Hermanson, 2004:40). In an article entitled, "The Human Face of Fraud" it is noted that one of the common personality types among fraudsters is the ego. An egoistic person refers to someone who is "driven to succeed at all costs, self-absorbed, self-confident and narcissistic" (Duffield and Grabosky, 2001). "The Psychology of Fraud" notes that, in addition to financial strain, an aspect of aspect

of motivation that may apply to some or all types of fraud is ego/power. Wolfe and Hermanson (2004) quoting Sutherland (1977) "Theory of White Collar Criminals" state that, "As fraudsters found themselves successful at this crime, they began to gain some secondary delight in the knowledge that they are fooling world, that they are showing their superiority to others". The individuals committing fraud must have a strong ego and great confidence that they will not be detected. The common personality types include someone who is driven to succeed at all costs, self-absorbed, self-confident, and often-narcissistic (Rudewicz, 2011). According to the Diagnostic and Statistical Manual of Mental Disorders (DSMMD), as cited by Rudewicz (2011) narcissistic personality disorder is a pervasive pattern of grandiosity, a need for admiration and a lack of empathy for others. Individuals with this disorder believe they are superior or unique, and they are likely to have inflated views of their own accomplishments and abilities.

### ***Coercion, Deceit and Stress***

A successful fraudster can coerce others to commit or conceal fraud (Rudewicz, 2011). A person with a very persuasive personality may be able to convince others to go along with a fraud or to simply look the other way. In addition it is noted that, a common personality type among fraudsters is the "bully," who "makes unusual and significant demands of those who work for him or her, cultivates fear rather than respect and consequently avoids being subject to the same rules and procedures as others" (Wolfe and Hermanson, 2004:41). Many financial reporting frauds are committed by subordinates reacting to an edict from above to "make your numbers at all costs, or else" (Wolfe and Hermanson 2004:40).

According to Wolfe and Hermanson (2004); Rudewicz (2011) a successful fraudster must also lie effectively and consistently. To avoid detection, the fraudster must look at the auditors, investors, and others right in the eye and convincingly tell them lies. Thus, the fraudster should also possess the skill to keep track of the lies, so that the overall story remains consistent. In the Phai-Mor fraud, the auditors claimed that Phar-Mor had formed a team of fraudsters made-up of executives and former auditors whose function is to ensure they are working continuously to hide evidence of frauds. Among other, the auditors claimed that the fraud team not only lying but also forged documents and 'scrubbed' everything the auditors saw to hide any indications of malfeasance (Cottrell and Glover, 1997 in Wolfe and Hermanson 2004). Another strong characteristic of fraudsters is their ability to handle stress (Wolfe and Hermanson, 2004). Committing frauds require and managing the frauds over a long period of time and can be stressful. There is the risk of detection, with its personal ramifications, as well as the constant need to conceal the fraud on a daily basis. The individual must be able to control their stress, as committing the fraudulent act and keeping it concealed can be extremely stressful (Rudewicz, 2011).

### **Future Fraud Research**

Further research can be conducted based on the use of the classical fraud theory especially FDT being a new version of FTT. Moreover, both the two theories converged on the three of the elements as pressure to commit fraud; Opportunity to exploit the organizational weaknesses as well as the rationalization which is a way to justified the course of action by the fraudster. Considering the diverged element 'capability' which is an addition over the three mentioned elements, this makes it quite clear to page a way or sources for further research to be conducted, such as the influence of capability towards committing fraud.



### Contribution to the Knowledge

The study will contribute to the body of existing knowledge through the following ways: The study contributes to the existing knowledge by expressing the views of different academic scholars with the regards to the two theories (fraud triangle theory and fraud diamond theory) as such the study may serve as a source of academic literature. The study will help the forensic accountants, auditors, fraud examiners and other anti-fraud bodies to understand the two fraud theories thoroughly and clearly choose the one, which will assist them in identifying and investigating the remote cause of fraud concealment and effective assessment of fraud risk. The study may serve as guidance for further research to be carried out on the subject matter in areas that the study did not address.

### Conclusions

This article reviews the existing literature on frauds for the purpose of discussing the similarities and differences between the FTT and FDT. The level of fraud concealed and its cost is expected to rise over time. In order to proactively address the fraud risk factors, the anti-graft bodies have to clearly understand the fundamental elements which contribute to fraudulent acts. Violations of trust are motivated by one's perceived risk of the surrounding and the temptations to benefit from the situation. The fundamental factors that contribute to fraud are based on the well-known FTT of (Cressey, 1950). However, several new fraud theories were subsequently developed to mitigate the shortcomings of this theory. FDT of Wolfe and Hermanson (2004) was one of the new fraud theories developed, which stand to be an extended version of fraud triangle having an additional element "capacity" beside the three elements identified by Cressey's fraud triangle as perceived pressure, perceived opportunity, and rationalization. The argument was Wolfe and Hermanson believed that although the fraudster may have the pressure, opportunity to commit the fraud and rationalise the ideology of betraying the trust. Yet, he cannot conceal unless he has the capability to do so.

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