

Loughborough University Institutional Repository

The new fraud triangle model

This item was submitted to Loughborough University's Institutional Repository by the/an author.

Citation: KASSEM, R. and HIGSON, A.W., 2012. The new fraud triangle model. *Journal of Emerging Trends in Economics and Management Sciences*, 3 (3), pp. 191 - 195

Additional Information:

- This article was published in the serial *Journal of Emerging Trends in Economics and Management Sciences* [© Scholarlink Research Institute Journals].

Metadata Record: <https://dspace.lboro.ac.uk/2134/10100>

Version: Published

Publisher: © Scholarlink Research Institute Journals

Rights: This work is made available according to the conditions of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) licence. Full details of this licence are available at: <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Please cite the published version.

This item was submitted to Loughborough's Institutional Repository (<https://dspace.lboro.ac.uk/>) by the author and is made available under the following Creative Commons Licence conditions.



CC creative commons
COMMONS DEED

Attribution-NonCommercial-NoDerivs 2.5

You are free:

- to copy, distribute, display, and perform the work

Under the following conditions:

BY: **Attribution.** You must attribute the work in the manner specified by the author or licensor.

Noncommercial. You may not use this work for commercial purposes.

No Derivative Works. You may not alter, transform, or build upon this work.

- For any reuse or distribution, you must make clear to others the license terms of this work.
- Any of these conditions can be waived if you get permission from the copyright holder.

Your fair use and other rights are in no way affected by the above.

This is a human-readable summary of the [Legal Code \(the full license\)](#).

[Disclaimer](#) 

For the full text of this licence, please go to:
<http://creativecommons.org/licenses/by-nc-nd/2.5/>

The New Fraud Triangle Model

¹Rasha Kassem and ²Andrew Higson

¹British University in Egypt

Cairo-Suez Desert Road, El Sherouk City

²School of Business and Economics, Loughborough University,

Loughborough, LE11 3TU, UK

Corresponding Author: Rasha Kassem

Abstract

Fraud in corporations is a topic that receives significant and growing attention from regulators, auditors, and the public. Increasingly external auditors are being asked to play an important role in helping organizations prevent and detect fraud. Detecting fraud is not an easy task and requires thorough knowledge about the nature of fraud, how it can be committed and concealed. This paper aims at broadening external auditors' knowledge about fraud and why it occurs. It explains Cressey's fraud theory and shows its significance, presents the other fraud models and relates them to Cressey's model, and proposes a new fraud triangle model that external auditors could consider when assessing the risk of fraud.

Keywords: fraud, fraud triangle, cressey's fraud theory, fraud models, fraud detection

INTRODUCTION

Corporate fraud is a topic that has received significant and growing attention from regulators, auditors, and the public. External auditors are increasingly being asked to play an important role in helping organizations prevent and detect fraud. Detecting fraud is not an easy task and requires thorough knowledge about the nature of fraud, why it is committed, and how it can be committed and concealed. Cressey's fraud theory explained why trust violators commit fraud and was widely used by regulators, professionals, and academics. This work has been conceptualised as "the fraud triangle". However, critics of the fraud triangle argued that it cannot help alone in explaining fraud because two factors cannot be observed (rationalisation and pressure), and other important factors, like capabilities of the fraudsters, are ignored.

Hence, in the current paper, Cressey's fraud theory is explained and its significance is highlighted. The paper also assesses the fraud triangle in light of other fraud models, and proposes a new fraud triangle model that should be considered by external auditors in assessing fraud risk.

LITERATURE REVIEW

Why people commit fraud was first examined by Donald Cressey, a criminologist, in 1950. His research was about what drives people to violate trust. He interviewed 250 criminals over a period of 5 months whose behaviour met two criteria: (1) the person must have accepted a position of trust in good faith, and (2) he must have violated the trust. He found that three factors must be present for a person to violate trust and was able to conclude that:

"Trust violators when they conceive of themselves as having a financial problem which is non-shareable, have knowledge or awareness that this problem can be secretly resolved by violation of the position of financial trust, and are able to apply to their own conduct in that situation verbalisations 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" (page 742). The three factors were non-shareable financial problem, opportunity to commit the trust violation, and rationalisation by the trust violator. When it comes to non-shareable financial problem, Cressey stated "[p]ersons become trust violators when they conceive of themselves as having incurred financial obligations which are considered as non-socially-sanctionable and which, consequently, must be satisfied by a private or secret means" (page 741).

He also mentioned that perceived opportunity arises when the fraudster sees a way to use their position of trust to solve the financial problem, knowing they are unlikely to be caught. As for rationalisation, Cressey believed that most fraudsters are first-time offenders with no criminal record. They see themselves as ordinary, honest people who are caught in a bad situation. This enables them justify the crime to themselves in a way that makes it acceptable or justifiable.

Cressey found that:

"In the interviews, many trust violators expressed the idea that they knew the behaviour to be illegal and wrong at all times and that they merely kidded themselves into thinking that it was not illegal" (page 741).

Over the years, Cressey's hypothesis has become well known as "the fraud triangle" as shown in Figure 1 below. The first side of the fraud triangle represents a pressure or motive to commit the fraudulent act, the second side represents a perceived opportunity, and the third side stands for rationalisation (Wells 2011).

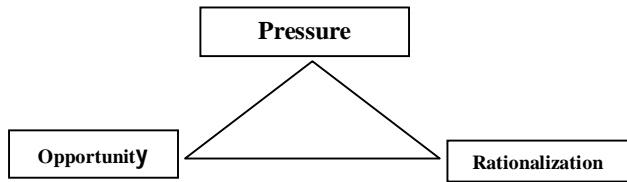


Figure 1: Fraud Triangle

Source: Wells, J. T., 2005. Principles of fraud examination. Hoboken, New York: John Wiley and Sons

In 1953, Cressey published his research in a book called "Other People's Money". He divided the non-sharable financial problems into six categories: difficulty in paying back debts, problems resulting from personal failure, business reversals (uncontrollable business failures such as inflation or recession), physical isolation (trust violator is isolated from people who can help him), status gaining (living beyond one's means, and employer-employee relations (employer's unfair treatment).

Researchers in the audit literature defined differently the components of the fraud triangle and gave different examples for each. For instance, Lister (2007, p.63) defined the pressure/motive to commit fraud as "the source of heat for the fire" but he believed the presence of these pressures in someone's life does not mean he or she will commit fraud. He also added there are three types of motivation or pressure: Personal pressure to pay for lifestyle, employment pressure from continuous compensation structures, or management's financial interest, and external pressure such as threats to the business financial stability, financier covenants, and market expectations. Lister saw opportunity, which is the second side of the fraud triangle, as "the fuel that keeps the fire going" and he believed even if a person has a motive, he or she cannot perpetrate a fraud without being given an opportunity. He also gave some examples of opportunities that can lead to fraud like high turnover of management in key roles, lack of segregation of duties, and complex transactions or organizational structures. As for the third component of the fraud triangle, rationalization, Lister defined it as "the oxygen that keeps the fire burning". He mentioned that although auditors may not be able to assess the personal value systems of each individual in the organization, they can assess the corporate culture.

On the other hand, Vona (2008) believed the motive to commit fraud is often associated with personal

pressures or corporate pressures on the individual. The motive to commit fraud may be driven by the pressures influencing the individual, by rationalization, or by sheer opportunity. He believed a person's position in the organisation contribute to the opportunity to commit fraud. He also believed there is a direct correlation between opportunity to commit fraud and the ability to conceal the fraud. Thus, understanding the opportunity for fraud to occur allows auditors to identify, which fraud schemes an individual can commit, and how fraud risks occur when the controls do not operate as intended by management.

Albrecht et al. (2008, 2010), however, mentioned pressure/motive can be financial or non-financial and they gave examples of perceived financial pressures that can motivate fraud like; personal financial losses, falling sales, inability to compete with other companies, greed, living beyond one's means, personal debt, poor credit, the need to meet short-term credit crises, inability to meet financial forecasts, and unexpected financial needs. They also gave examples of non-financial pressure, such as; the need to report results better than actual performance, frustration with work, or even a challenge to beat the system. They believed that even with very strong perceived pressures, executives who believe they will be caught and punished rarely commit fraud. They also mentioned some examples of rationalizations that executives can use to commit fraud, like; "we need to keep the stock price high", all companies use aggressive accounting practices, or it is for the good of the company. As for perceived opportunities to commit fraud examples include; a weak board of directors, a lack of or circumvention of controls that prevent/detect fraudulent behavior, failure to discipline fraud perpetrators, lack of access to information, and the lack of an audit trail.

Murdock (2008) also argued that pressure can be a financial pressure, non financial, or political and social pressure. Non-financial pressure can be derived from a lack of personal discipline or other weaknesses such as gambling habit, drug addiction. While, political and social pressure occurs when people feel they cannot appear to fail due to their status or reputation. However, Rae and Subramaniam (2008), saw pressure relates to employees motivation to commit fraud as a result of greed or personal financial pressure, and opportunity refers to a weakness in the system where the employee has the power or ability to exploit, making fraud possible, while rationalisation as a justification of fraudulent behavior as a result of an employee's lack of personal integrity, or other moral reasoning.

It can be concluded from the above definitions of motives/pressures that motives were classified differently. Some researchers classified them as

personal, employment, or external pressure, while others classified them as financial and non-financial pressures. However, it can be noticed that both classifications are some-how related. For instance, personal pressure can come from both financial and non-financial pressure. A personal financial pressure in this case could be gambling addiction or a sudden

financial need, while a personal non-financial pressure can be lack of personal discipline or greed. By the same token, employment pressure and external pressure can come from either financial or non-financial pressure. This link can be illustrated as shown in Figure 2 below.

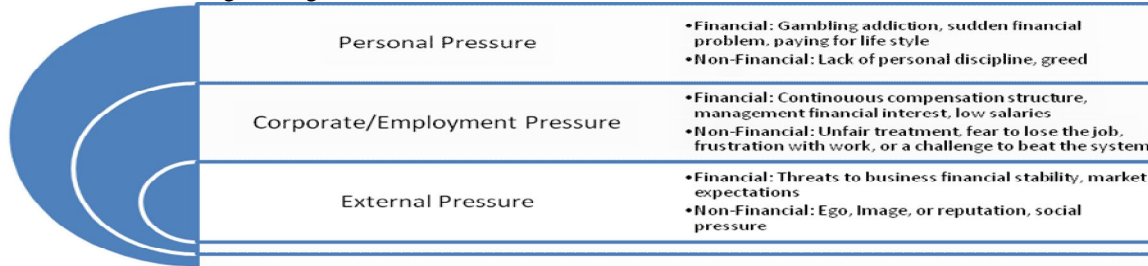


Figure 2: Classifications of Pressure/Motive

Cressey's fraud theory, normally known as the fraud triangle theory, was widely supported and used by audit professionals and standards' setters as a tool for detecting fraud. For instance, in 1987, the Commission of the Treadway Committee reviewed both alleged and proven instances of fraudulent financial reporting and issued a report that supports Cressey's findings. Results revealed that:

"Fraudulent financial reporting usually occurs as the result of certain environmental, institutional, or individual forces and opportunities. These forces and opportunities add pressures and incentives that encourage individuals and companies to engage in fraudulent financial reporting and are present to some degree in all companies. If the right, combustible mixture of forces and opportunities is present, financial reporting may occur" (1987, p.23). In 2002, SAS No. 99 supported the use of Cressey's fraud triangle by mentioning that:

"Three conditions generally are present when fraud occurs. First, management or other employees have an *incentive* or are under *pressure*, which provides a reason to commit fraud. Second, circumstances exist—for example, the absence of controls, ineffective controls, or the ability of management to override controls—that provide an *opportunity* for a fraud to be perpetrated. Third, those involved are able to *rationalize* committing a fraudulent act. Some individuals possess an *attitude*, character, or set of ethical values that allow them to knowingly and intentionally commit a dishonest act. However, even otherwise honest individuals can commit fraud in an environment that imposes sufficient pressure on them. The greater the incentive or pressure, the more likely an individual will be able to rationalize the acceptability of committing fraud" (AU316.06, Paragraph .07). The standard required the audit team members to discuss the susceptibility of the entity's financial statements to material misstatement due to fraud, and urged them to consider both internal and external factors affecting the entity that might create

pressures for management and others to commit fraud, provide the opportunity for fraud to be committed, and indicate an environment that enables management to rationalize committing fraud (AU316.13, Paragraph 15).

In addition, in 2009, the International Auditing Standards Board issued a revised version of International Standard on Auditing 240 (ISA 240): *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements* which stated that "Fraud, whether fraudulent financial reporting or misappropriation of assets, involves incentive or pressure to commit fraud, a perceived opportunity to do so and some rationalization of the act" (Ref: Para. 3). The standard also provided examples for the three fraud risk factors. For example, Incentive or pressure to commit fraudulent financial reporting may exist when management is under pressure, from sources outside or inside the entity, to achieve an expected (and perhaps unrealistic) earnings target or financial outcome. A perceived opportunity to commit fraud may exist when the trust violator is in a position of trust or has knowledge of specific deficiencies in internal control. The standard also mentioned that individuals may be able to rationalise committing a fraudulent act.

ISA 240 also required audit team members to discuss the susceptibility of the entity to fraud and urged them to consider external and internal factors affecting the entity that may create an incentive or pressure for management or others to commit fraud, provide the opportunity for fraud to be perpetrated, and indicate a culture or environment that enables management or others to rationalize committing fraud (A11). Although Cressey's fraud triangle was supported by audit regulators, critics (Albrecht et al. 1984, Wolfe and Hermanson 2004, Kranacher, et al. in 2010, Dorminey et al.2010) argued that the model alone is an inadequate tool for deterring, preventing, and detecting fraud. Albrecht et al (1984) introduced the "Fraud Scale Model" as an alternative for the

fraud triangle model. The fraud scale includes personal integrity instead of rationalisation and it is particularly applicable to financial reporting fraud where sources of pressure (e.g. analysts' forecasts, managements' earnings guidance, a history of sales and earnings growth) are more observable. They defined personal integrity as "the personal code of ethical behaviour each person adopts" (page 18). Personal integrity can be an observable through observing both a person's decisions as well as the decision making process. That person's commitment to ethical decision making can be observed and this can help in assessing integrity and thus the likelihood of an individual committing fraud. Their research was conducted by performing an analysis of 212 frauds in the early 1980s to determine the motivations of the perpetrators of occupational frauds and abuses. They also collected demographics and background information on the frauds through questionnaires that were distributed to 212 internal auditors of companies that had experienced frauds and classified motivations to commit financial reporting fraud into nine different types which are similar to those of Cressey's non-sharable financial problems: living beyond their means, an overwhelming desire for personal gain, high personal debt, a close association with customers, feeling pay was not commensurate with responsibility, a wheeler-dealer attitude, strong challenge to beat the system, excessive gambling habits, and undue family or peer's pressure. They also examined comprehensive data sources to assemble a complete list of pressure, opportunity, and integrity variables, resulting in a collection of 82 possible red flags of occupational fraud and abuse.

In 2004, Wolfe and Hermanson introduced the "Fraud Diamond Model" as shown in figure 3 below, where they presented another side that extends the fraud triangle which is "the fraudster's capabilities".

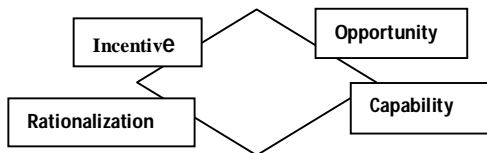


Figure 3: The Fraud Diamond

Source: Wolfe, D. T. and Hermanson, D. R. (2004). "The fraud diamond: Considering the four elements of fraud", *The CPA Journal*, December, p.4

Wolfe and Hermanson believed many frauds would not have occurred without the right person with the right capabilities implementing the details of the fraud. They also suggested four observable traits for committing fraud; (1) Authoritative position or function within the organization, (2) capacity to understand and exploit accounting systems and internal control weaknesses, (3) confidence that she/he will not be detected or if caught she/he will get

out of it easily, and (4) capability to deal with the stress created within an otherwise good person when she commits bad acts. Another model called "MICE" was suggested by Kranacher, et al. in 2010 (as cited in Dorminey et al., 2010). In this model they suggested that motivation of fraud perpetrators, which is one of the sides in the fraud triangle, may be more appropriately expanded and identified with the acronym: MICE that stands for: Money, ideology, coercion, and ego. Ideological motivators justify the means where they can steal money or participate in a fraud act to achieve some perceived greater good that is consistent with their beliefs (ideology). Coercion occurs when individuals may be unwillingly pulled into a fraud scheme, but those individuals can turn into whistleblowers. Ego can also be a motive for fraud, where sometimes people don't like to lose their reputation or position of power in front of their society or families. This social pressure can be a motive to commit fraudulent act just to keep their ego. In addition, Dorminey, et al. (2010) argued that the model cannot solve the fraud problem alone because two sides of the fraud triangle, pressure and rationalization, cannot be easily observed.

In fact, it is important for auditors to consider all fraud models to better understand why fraud is committed. Hence, the above models should all be regarded as an extension to Cressey's fraud triangle model and should be integrated in one model that includes motivation, opportunity, integrity, and fraudster's capabilities as shown in figure 4 below.

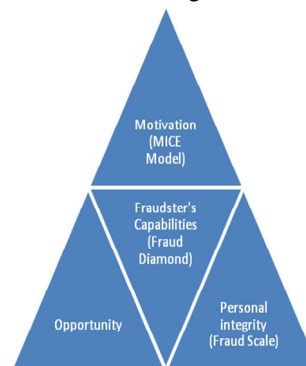


Figure 4: The New Fraud Triangle Model

CONCLUSION

The current paper aims at broadening external auditors' knowledge about fraud and why it occurs. It explains Cressey's fraud triangle model and shows its significance, presents the other fraud models and relates it to Cressey's model, and proposes a new fraud triangle model that external auditors should consider when assessing the risk of fraud. A thorough literature review was undertaken to achieve the paper's aim. The secondary data used in this paper was obtained from different databases like Ebscohost, Business Search Premier, Academic Search Premier, Emerlad, Sciencedirect, and Jstor.

Reviewing the literature showed that researchers classified the motive side of the fraud triangle differently. Some researchers classified them as personal, employment, or external pressure, while others classified them as financial and non-financial pressures. However, it can be noticed that both classifications are some-how related. For instance, personal pressure can come from both financial and non-financial pressure. A personal financial pressure in this case could be gambling addiction or a sudden financial need, while a personal non-financial pressure can be lack of personal discipline or greed. By the same token, employment pressure and external pressure can come from either financial or non-financial pressure. Thus, external auditors have to keep in mind that pressure/motive to commit fraud can be either a personal pressure, employment pressure, or external pressure, and each of these types of pressures can also happen because of a financial pressure or a non financial pressure. They also need to understand the opportunity for fraud to help them in identifying which fraud schemes an individual can commit and how fraud risks occur when there is an ineffective or missing internal control.

Although Cressey's fraud triangle was supported and used by audit regulators (ASB and IAASB), critics argued that the model alone is an inadequate tool for deterring, preventing, and detecting fraud. This is because two sides of the fraud triangle (pressure and rationalization) cannot be observed, and some important factors, like fraudsters' capabilities are ignored. Thus, some researchers suggested the rationalization side should be replaced by personal integrity because it can be more observable, others suggested the motive side needs to be expanded to include non-financial factors like ego and coercion, while others suggested a fourth side to be added to the fraud triangle which is "fraudster's personal capabilities". The current paper believes it is important for external auditors to consider all the fraud models to better understand why fraud occurs. The paper also suggests that all other fraud models should be regarded as an extension to Cressey's fraud triangle model and should be integrated in one model that includes motivation, opportunity, integrity, and fraudster's capabilities. This model should be called "the New Fraud Triangle Model". Hence, with the new fraud triangle model, external auditors will consider all the necessary factors contributing to the occurrence of fraud. This should help them in effectively assessing fraud risk.

REFERENCES

Albrecht, S, Howe, K and Romney, M. (1984). *Deterring fraud: the internal auditor's perspective*. Institute of Internal Auditors Research Foundation, pp.1-42

Albrecht, W. S., Albrecht, C., and Albrecht, C. C. (2008). "Current trends in fraud and its detection", *Information Security Journal: A global perspective*, Vol.17, pp.1-32 Retrieved from www.ebscohost.com

Albrecht, C., Turnbull, C., Zhang, Y. and Skousen, C. J. (2010). "The relationship between South Korean chaebols and fraud". *Managerial Auditing Journal*, 33(3), pp.1-25. Retrieved from www.emerald.com

Auditing Standards Board. (2002). *Statement on Auditing Standards No.99: Consideration of Fraud in a Financial Statement Audit*.

Cressey, D. R. (1950). "The criminal violation of financial trust". *American Sociological Review*, 15 (6), pp.738-743, December, pp.1-15. Retrieved from www.JSTOR.org

Cressey, D. R. (1953). *Other People's Money*. Montclair, NJ: Patterson Smith, pp.1-300

Dorminey, J., Fleming, S., Kranacher, M., and Riley, R. (2011). "The evolution of fraud theory". *American Accounting Association Annual Meeting*, Denver, August, pp.1-58.

International Auditing Standards Board. (2009). *International Standard on Auditing No.240: the Auditor's responsibilities relating to fraud in an audit of financial statements*.

Lister, L. M. (2007). "A practical approach to fraud risk", *Internal Auditor*, December, pp.1-30

Murdock, H. (2008). "The three dimensions of fraud". *Internal Auditor*, pp.1-14, August.

Rae, K. and Subramaniam, N. (2008). *Quality of internal control procedures: Antecedents and moderating effect on organizational justice and employee fraud*. *Managerial Auditing Journal*. 23 (2), pp.1-43. Retrieved from: www.emerald.com

Vona, L. W. (2008). *Fraud risk assessment: Building a fraud audit program*. Hoboken New Jersey: John Wiley and Sons, pp.1-250

Wells, J.T. (2011). *Corporate Fraud Handbook: Prevention and Detection*. 3rd edition, Hoboken, New Jersey, John Wiley & Sons, Inc., pp.1-400

Wolfe, D. T. and Hermanson, D. R. (2004). "The fraud diamond: Considering the four elements of fraud". *The CPA Journal*, December, pp.1-5