

## **The Relationship Between Organization Size and Occupational Fraud**

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### **Abstract**

Occupational fraud is an international problem affecting all sizes of businesses. Small businesses, those with fewer than 100 employees, lack the financial resources to protect themselves against this crime. The purpose of this quantitative non-experimental correlational study was to determine if a relationship exists between organization size and the frequency of occurrence, as well as the severity of occupational fraud. The participants were eleven Certified Fraud Examiners (CFEs) from 16 states. The sample included 40 fraud cases from clients of the CFEs. The results of this study determined there is a relationship between organization size and the frequency of occurrence, and severity of, occupational fraud. The findings implied that smaller businesses are disproportionately more affected by occupational fraud than larger businesses. Recommendations for further research include conducting a study with information from organizations outside the United States. A study including other countries would remove the geographical limitations of this study.

**Keywords:** Occupational Fraud, Asset Misappropriation, Corruption, Financial Statement Fraud

### **I. Introduction**

Over the last two decades, a series of high-profile occupational fraud cases, including those at Enron, Tyco, WorldCom, and HealthSouth, have led to a heightened awareness of this devastating crime (Andre, Pennington, & Smith, 2014). Occupational fraud is a type of fraud committed against an organization by an employee or a group of employees (Singleton & Atkinson, 2011). In this crime, the perpetrator attempts to gain from the intentional misuse or misappropriation of the organization's financial resources (Andre et al., 2014). Occupational fraud is a significant and growing problem in the United States and around the world (Singleton & Atkinson, 2011).

In addition to several other accounting scandals in the early 2000s, the accounting scandal that ultimately destroyed Enron was a catalyst that led to the creation of the Sarbanes-Oxley Act of 2002, also known as SOX (Hays & Ariail, 2013). A disadvantage of the Sarbanes-Oxley Act is that it only applies to publicly traded corporations (Hrncir & Metts, 2012). Private organizations, including many small businesses with fewer than 100 employees, are not subject to the anti-fraud rules and regulations of this legislation (Hrncir & Metts, 2012). Consequently, small organizations are often at greater risk of occupational fraud because they tend to have few or no anti-fraud internal controls (Gagliardi, 2014).

Anti-fraud measures, such as implementing strong internal controls, are costly, which makes it harder for small businesses to protect themselves against fraudulent crimes (Singleton & Atkinson, 2011). Small businesses often lack the financial resources necessary to implement an appropriate internal control system, leaving them vulnerable to occupational fraud (Kapp & Heslop, 2011). Many times, these small businesses do not have the financial means to remain viable after falling victim to just one instance of occupational fraud (ACFE, 2014). With the average loss being greater than \$150,000 per case, one incident can put a small company out of business (Bhasin, 2013). In fact, approximately 30-50 percent of all business failures are attributable to cases of occupational fraud (Hrncir & Metts, 2012).

There are varying motives for committing this type of crime (Singleton & Atkinson, 2011).

Each occupational fraud case is unique, limited only by the mind of the fraudster. However, Dellaportas (2013) suggests that there are several common motivators of fraudulent behavior, which include financial pressures, vices, work-related pressures, and a desire for material possessions. A feeling of inequity can push individuals to feel entitled to more; planting a seed for them to engage in deviant behaviors, such as stealing from their employer (Galletta, 2015).

The opportunity to commit occupational fraud must present itself for an individual or group of individuals to commit this crime (Dellaportas, 2013). An opportunity exists when an employee can commit fraud without the perception of being caught (Schaper & Weber, 2012). In many instances, small businesses only have one individual responsible for all the financial duties within the organization (Hrncir & Metts, 2012). The absence of segregation of duties provides an opportunity for occupational fraud to take place (Hrncir & Metts, 2012). Large corporations have the financial resources to implement strong internal controls to help minimize these opportunities (Dellaportas, 2013). Conversely, smaller companies often lack adequate funds to set-up a control system to protect themselves against this crime (Singleton & Atkinson, 2011).

## **II. Literature Review**

### **A. History of Fraud Theory**

Occupational fraud can be traced back to the beginning of financial commerce (Kassem & Higson, 2012). In the early twentieth century, sociologists developed the Anomie Theory to understand crime, specifically crimes associated with poverty (Cliff & Desilets, 2014). The Anomie Theory is a deviant behavior theory that suggests some members of society, especially those who lack certain tools to achieve success, will resort to crime to rectify their perceived injustice (Cliff & Desilets, 2014). Pressure to obtain specific goals, such as being financially wealthy, can lead individuals to alternative ways of achieving these goals, including crime (Cliff & Desilets, 2014).

In 1939, a year after the Anomie Theory was first introduced, Edwin Sutherland coined the term “white-collar crime” (Dorminey, Fleming, Kranaher, & Riley, 2012). Sutherland defined white-collar crime as a crime by respected individuals who possess a high social status in their occupation (Cliff & Desilets, 2014). Additionally, Sutherland argued white-collar crime is a violation of delegated trust within the organization (Morales, Gendron, & Guenin-Paracini, 2014).

Before the introduction of the concept of white-collar crime, the study of criminology focused mainly on the broad topic of crime, including street and violent crime (Dorminey et al., 2012). Three ways in which Sutherland differentiates street or violent criminals from white-collar criminals include professional status with admiration and intimidation, lesser penalties, and varying consequences borne by society (Dorminey et al., 2012). Sociologists use the term white- collar crime to describe crimes committed by successful and respectable individuals with access to societal resources (Cliff & Desilets, 2014). Occupational fraud is a type of white-collar crime committed by employees against their employers (Alleyne & Amaria, 2013).

### **B. The Fraud Triangle**

In the late 1940’s, Donald Cressey, a student of Edwin Sutherland, was working on his Ph.D. in criminology, focusing on embezzlement behavior (Dorminey et. al., 2012). His research participants were inmates in the Illinois State Penitentiary whom he identified as white-collar

criminals (Dorminey et. al., 2012). Over a five-month period, Cressey interviewed 250 criminals who had violated a position of trust at their former place of employment (Kassem & Higson, 2012). He argued that three specific criteria must be present for these types of criminal acts to take place – (a) an opportunity to violate a position of trust within the workplace, (b) a non-shareable financial problem, and (c) the ability to change one's self-perception to rationalize criminal behavior (Dorminey et al., 2012).

Donald Cressey was the first documented person to study why people commit fraud (Kassem & Higson, 2012). His 1953 book, *Other People's Money: A Study in the Social Psychology of Embezzlement*, Cressey lays a foundation for the study of occupational fraud (Boyle, Boyle, & Mahoney, 2015). Based on the results of his research, he developed the Fraud Triangle to explain why people commit fraud (Kassem & Higson, 2012). Eventually, the three criteria were classified as opportunity, pressure, and rationalization (Trompeter, Carpenter, Desai, Jones, & Riley, 2012). According to Cressey, the Fraud Triangle has three sides, opportunity, pressure, and rationalization, and when all three are present, the chance of occupational fraud increases (Andre et al., 2014). The Fraud Theory is a theoretical framework focusing on a pre-fraud state of nature from a fraudster's perspective (Trompeter et al., 2012).

**Opportunity.** An opportunity to engage in occupational fraud is the first leg of the Fraud Triangle. An opportunity exists when an employee can commit occupational fraud without the perception of any possible repercussions (Kapp & Heslop, 2011). The potential perpetrator must have an opportunity to commit the fraud, cover it up, and avoid punishment (Dellaportas, 2012). Without this opportunity, the crime cannot take place (Boyle et al., 2015). Opportunity presents itself when an employee is in a position of trust and power, internal controls are lacking, and the perpetrator has a clear understanding of the business processes within the organization (Singleton & Atkinson, 2011). Without an opportunity and inside knowledge of the organization, the business is protected, and the employee cannot steal from the company (Boyle et al., 2015).

All three sections of the Fraud Triangle are important to the subject of occupational fraud. However, opportunity is the leg of the triangle this study hopes to extend and build on. The absence of internal controls or ineffective internal controls creates the opportunity for an employee to commit occupational fraud (Boyle et al., 2015). Rationalization and pressure can have similar occurrences at both small and large organizations. It is the opportunity, specifically accounting internal controls, that vary based on the size and financial resources of the organization (ACFE, 2014).

Examples of opportunity include weak internal controls and other working conditions that allow employees to commit occupational fraud (Brazel, 2009). Strong internal controls can deter and detect occupational fraud committed by individuals within the organization (Brazel, 2009). In some cases, internal controls can prevent the occurrence of this crime altogether (Bhasin, 2013). However, accounting internal controls do not work when collusion, fraud by two or more individuals, is present (Trompeter et al., 2012).

Small businesses often lack the financial resources necessary to implement adequate internal controls, leaving the opportunity for this economic crime to take place (Alleyne & Amaria, 2013). Organizational behavior theory is not appropriate for this study because individual occupational fraud can be controlled or reduced by implementing a working internal control

system (Gagliardi, 2014). When internal controls are lacking, the organization is vulnerable to occupational fraud (Singleton & Atkinson, 2011)

Accounting internal controls are designed to prevent a single act of occupational fraud committed by one individual (Trompeter et al., 2012). When there is collusion between two or more employees who have access to various parts of the accounting system, internal controls will not protect the organization (Bhasin, 2013). By combining the access of the two employees, collusion efforts can lead to an opportunity for the employees to commit this crime (Trompeter et al., 2012). Additionally, management override of the internal controls' process opens an opportunity for managers to steal from the organization (Trompeter et al., 2012).

This research study hopes to extend the opportunity leg of the Fraud Triangle. While the other two legs of the triangle, rationalization and pressure, are important, they are common factors in both small and large organizations (Bhasin, 2013). This study hopes to explore the relationship between firm size, as defined by the number of employees, and the frequency and severity of occupational fraud. Larger organizations tend to have more stringent internal controls than small organizations (ACFE, 2014). Therefore, when internal controls are lacking, the opportunity for occupational fraud is greater in smaller businesses (Gagliardi, 2014).

**Rationalization.** Rationalization is the second leg of the Fraud Triangle. Rationalization is an employee's internal justification for committing occupational fraud (Boyle et al., 2015). A common reaction from white-collar criminals is a feeling of indifference, or a lack of feelings, regarding their crimes (Dellaportas, 2013). After the crime, they tend to make excuses or rationalize their behavior (Dellaportas, 2013). A fraudster may use rationalization to suppress discomfort when they choose to act in an unethical manner (Trompeter et al., 2012). When a conflict between their behavior and societal norms arises, rationalization can help alleviate feelings of guilt or remorse (Trompeter et al., 2012).

Rationalization can occur when an employee feels their employer is treating them unfairly (Dellaportas, 2013). Inequity exists when an individual feels that another person is being treated more fairly (Adams, 1963). Inequities, including monetary and status inequity, can create tension and discord among employees (Adams, 1963). Problems can also arise between the employee and the employer. An employee may feel entitled to a promotion; with accompanying pay increases and job status upgrades (Adams, 1963). The employee might become disgruntled and resentful if they did not receive a promotion (Dellaportas, 2013).

If employees feel they are inequitably treated, compared to other employees, they may turn to deviant behaviors, such as occupational fraud, to rectify the perceived inequity (Adams, 1963). Employees rationalize their deviant behavior because they feel their employer owes them something (Adams, 1963). Additionally, individuals often rationalize and make excuses for their deviant behavior to rid themselves of feelings of guilt (Dellaportas, 2013). Pay inequity can lead to resentment and foster an environment where employees feel justified in stealing from their employers (Dellaportas, 2013). An employee passed over for a promotion may feel justified in stealing from their employer (Dellaportas, 2013).

Rationalization occurs when an employee feels the need to carry out fraud against their

employer (Kapp & Heslop, 2011). The problem of rationalization is an individual reaction that can occur in both small and large organizations; therefore, rationalization will not be included as a factor of occupational fraud in this research study (Adams, 1963). Employees in all sizes of businesses are susceptible to using rationalization to justify their deviant behavior (Kapp & Heslop, (2011)). While this study will not specifically address rationalization, it is the least studied part of the Fraud Triangle, and there is room for future research in this area (Trompeter et al., 2012).

**Pressure.** Pressure is the third leg of the Fraud Triangle. Pressures, or incentives, are common motivators of occupational fraud (Boyle et al., 2015). Various pressures can motivate an employee to behave in an unethical manner and commit an illegal act (Dellaportas, 2013). Employees feel several types of pressure, including financial pressure (Kapp & Heslop, 2011). There are times when employees resort to fraud in hopes of a temporary fix for their current financial problems (Kapp & Heslop, 2011).

Financial pressure is present at every type and size of organization, and there are many reasons why someone may feel financial pressure (Kapp & Heslop, 2011). Employees may feel financial pressure because they are not making enough money to support themselves and their families (Kapp & Heslop, 2011). They may lack the education and experience necessary to advance to a higher level, or the economy may lend itself to lower salaries (Dellaportas, 2013). Additionally, top-level management may feel pressure to achieve certain financial performance goals or meet earnings targets to receive bonuses (Boyle et al., 2015).

Additional pressures include vices, work-related pressures, the pressure to fit in with other employees, and a desire to acquire material possessions (Delaportas, 2013). Monetary incentives, including company performance bonuses, can create pressure for a top-level executive to inflate company earnings, which is a type of occupational fraud (Dellaportas, 2013). Financial pressure can be actual or merely perceived by the employee (Kapp & Heslop, 2011). Employees at both small and large organizations feel each of these types of pressures; therefore, pressures will not be included as a factor of occupational fraud in this research study (Boyle et al., 2015).

Three important occupational fraud phenomena not specifically addressed in the Fraud Triangle are (1) knowledge of various fraud schemes, (2) concealment techniques, and (3) the conversion process (Trompeter et al., 2012). The fraudster must know how to commit the crime to attempt it, and they must consider how the fraud will be covered-up once it is completed (Singleton & Atkinson, 2011). The conversion process takes place when the criminal can gain an actual benefit from the crime, including stock options and performance bonuses (Trompeter et al., 2012).

### **C. Opposition to the Fraud Triangle**

As with most theories, there is opposition to the Fraud Triangle. There are researchers who believe the Fraud Triangle is not an adequate tool for preventing and detecting occupational fraud (Soltani, 2014). The Fraud Triangle is the convergence of opportunity, rationalization, and pressure used to explain the occurrence of occupational fraud (Lokanan, 2015). The Fraud Triangle focuses on fraudsters having a non-shareable financial pressure (Morales et al., 2014). A non-shareable financial pressure is the most criticized section of the Fraud Triangle (Morales et al., 2014). Soltani (2014) argues fraud perpetrators do not all feel non-shareable financial pressure, and some of them do not need the rationalization to commit the crime.

Additionally, Soltani (2014) suggest the Fraud Triangle should not be used as a lone source when trying to understand the reason for the occurrence of fraud. Lokanan (2015) does not believe the Fraud Triangle explains all incidences of occupational fraud. For example, opportunity does not address collusion, including management overrides (Lokanan, 2015). The specific type of pressure addressed in the Fraud Triangle is financial pressure (Kassem & Higson, 2012). Financial pressure is not the only type of pressure that can be a catalyst for fraudulent behavior (Lokanan, 2015). When millionaires devise corporate fraud schemes, financial pressure is not one of their motives to commit the crime (Lokanan, 2015). Additionally, not all fraudsters find morally justifiable reasons to commit this crime (Lokanan, 2015). There are amoral individuals who commit fraud; therefore, they would not fit the type of fraudster presented in the Fraud Triangle (Morales et al., 2014).

While these are all valid points made by Lokanan (2015), the findings of the study are based on a few case studies used to generalize the occurrence of occupational fraud to a much larger population. A single theory cannot encompass all the possible elements of such a complicated subject (Kassem & Higson, 2012). The Fraud Triangle attempts to encompass most of occupational fraud cases, and there will always be exceptions to the rule (Kassem & Higson, 2012).

#### **D. Occupational Fraud**

Occupational fraud is a type of financial fraud committed by an employee or a group of employees (Singleton & Atkinson, 2011). In this crime, an employee attempts to gain from the intentional misuse or misappropriation of the organization's assets or financial resources (Andre et al., 2014). Occupational fraud is an inherent risk to all organizations, and this crime has been around since the beginning of commerce (Alleyne & Amaria, 2013). Occupational fraud is an international problem that can go undetected for years (Hulsart et al., 2012).

Occupational fraud, by its nature, is a concealed crime and not easily detected (Hulsart et al., 2012). Because concealment accompanies most fraud cases, many companies do not report the crime to law enforcement (ACFE, 2014). In addition to monetary losses, there are indirect costs associated with this crime. Indirect costs include reputational damage, lost productivity, and the related loss of business (Lokanan, 2015). Additionally, costs associated with investigation and remediation can be extremely expensive (ACFE, 2014).

#### **E. Types of Occupational Fraud**

Occupational fraud can occur in any organization, including publicly traded corporations, privately owned businesses, not-for-profit organizations, and governmental agencies (Andre et al., 2014). Additionally, occupational fraud can occur in all sizes of entities by employees at all levels of the organization (Andre et al., 2014). It is not appropriate to assume that fraud only occurs at top-level management positions. Lower level employees also commit this crime when the opportunity presents itself (ACFE, 2014).

There are many different forms of occupational fraud, and there are varying ways an employee can commit this crime. Some common fraud schemes are credit card fraud, money laundering, e-commerce fraud, and insurance fraud (Wei & Kapoor, 2011). There are clear and consistent patterns of the various forms of fraud schemes (ACFE, 2014). Asset misappropriation, corruption, and financial statement fraud are the main three categories of occupational fraud. Each category is further broken down into several subcategories.

Overlapping of fraud types is very common. While there are three distinct categories, a fraud scheme often involves a combination of more than one type of fraud (ACFE, 2014). Of the 1,483 cases analyzed in the 2014 ACFE report, 30% of them involved multiple types of occupational fraud (ACFE, 2014). Corruption is the type of fraud that is most compatible with the other types and seems to be occurring more frequently in combination with either asset misappropriation, financial statement fraud, or both (ACFE, 2014).

**Asset Misappropriation.** Asset misappropriation is a type of occupational fraud where an employee or group of employees takes money or other assets from their employer (Klein, 2015). Asset misappropriation is the most common type of occupational fraud, and it is the easiest type to detect (Andre et al., 2014). The ACFE has identified nine sub-categories of asset misappropriation schemes (ACFE, 2014). Examples include theft of cash on hand, theft of cash receipts, fraudulent disbursements, fictitious vendors, fictitious bank accounts, and theft and misuse of inventory and supplies (ACFE, 2014). Theft and misuse of inventory and supplies are the easiest and most overlooked type of occupational fraud to commit (Klein, 2015). While many small cases go unreported, the median asset misappropriation scheme results in \$80,000 in losses (Singleton, King, Messina, & Turpen, 2003).

**Corruption.** The next most common type of occupational fraud is corruption (Andre et al., 2014). Corruption is a violation of a duty to gain a benefit, including bribery or conflicts of interest (Andre et al., 2014). Extortion is a form of corruption. Extortion takes place when an employee is coerced, either by a threat of punishment or a promise of a future benefit, into performing an action they would not normally do (Andre et al., 2014). Coercion is typically carried out by a higher-level manager (Andre et al., 2014). Additionally, receiving or giving illegal gratuities fall into the occupational fraud category of corruption (ACFE, 2014).

**Financial Statement Fraud.** Financial statement fraud is a scheme where an employee intentionally causes a misstatement or omission of material information in the organization's financial statements (e.g., understating expenses, reporting fictitious revenue, or inflating reported assets) (ACFE, 2014). Reporting fraudulent financial results can mislead investors and deceive creditors (Fung, 2015). In addition to affecting investors and creditors, financial statement fraud affects the overall stability of global economics (Wei & Kapoor, 2011). Reporting fraudulent financial statements is a result of certain institutional or environmental forces and opportunities (Kassem & Higson, 2012). All types of occupational fraud, including financial statement fraud, involve pressure or incentives, perceived opportunity, and some sort of rationalization (Kassem & Higson, 2012).

Financial statement fraud is a potentially disastrous practice that typically occurs at the senior management level (ACFE, 2014). Managers have incentives to maximize their financial success, sometimes at the expense of the shareholders (Bhasin, 2013). The occurrence of financial statement fraud is associated with a manager's willingness to take risks (Fung, 2015). Risking everything, a manager decides to take the risk and make the financial statements look better than they are (Fung, 2015). An informed CEO, who wants to commit this crime, can outwit even a seemingly secure accounting system (Wei & Kapoor, 2011). While financial statement fraud usually only accounts for approximately 8% of fraud cases, it is the costliest to the organization with the median loss of \$1 million per case (Tysiak, 2012).

## **F. Motivations**

Current understanding of why people commit fraud can be explained by using the Fraud Triangle, which is a theoretical model developed by Donald Cressey (Dellaportas, 2013). Occupational fraud is a multifaceted white-collar crime that does not discriminate on the type or size of an organization (Lokanan, 2015). Although individuals who commit fraud sometimes do so because of greed or personal gain, the reality of their motivations is more complex than most people realize (Hulsart et al., 2012).

Motivations to commit fraud can vary from one person to the next, and fraud schemes can range from simple to complex (Hulsart et al., 2012). A common motivation for someone to participate in an occupational fraud scheme is a sense of inequity (Lokanan, 2015). A feeling of inequity can push individuals to feel entitled to more; planting a seed for them to engage in deviant behaviors, such as stealing from their employers (Galletta, 2015).

Surprisingly, most people who commit occupational fraud are first-time offenders with a clean employment history (Galletta, 2015). Perpetrators of occupational fraud typically have varying motives for committing this type of crime (Singleton & Atkinson, 2011). Each occupational fraud case is unique. However, Dellaportas (2013) suggests that there are several common motivators of fraudulent behavior, which include financial pressures, vices, work-related pressures, and a desire for material possessions. Many perpetrators find themselves trying to keep up their lavish lifestyles, even in tough economic times (Hulsart et al., 2012).

Someone can be motivated to participate in a fraud scheme, but if the opportunity is not present, the crime cannot take place (Dellaportas, 2013). The opportunity to commit occupational fraud must present itself for an individual or group of individuals to commit this crime (Dellaportas, 2013). Large corporations have the financial resources to implement strong internal controls to help minimize these opportunities (Dellaportas, 2013). Conversely, smaller companies lack adequate funds to set-up a control system to help reduce the opportunity for their employees to commit occupational fraud (Singleton & Atkinson, 2011).

**Fraud Perpetrators.** Preventing and detecting fraud can be problematic for all types and sizes of organizations (Hulsart et al., 2012). It is helpful to identify demographic information on people who have committed occupational fraud in the past to help with prevention and detection methods (Daniels et al., 2015). While the media portrays fraud perpetrators as evil villains, they are typically real people who can rationalize their deviant behavior (Boyle et al., 2015).

Many fraud perpetrators are first-time offenders who have been at their place of employment for five years or longer (ACFE, 2014). They are typically in a position of trust at their place of employment (Singleton & Atkinson, 2011). A fraudster's tenure seems to be correlated with the size of the loss due to the fraud, and the median loss increases as tenure with the organization increases (ACFE, 2014). The median losses caused by individuals with a college degree are twice as high as perpetrators with only a high school diploma (Hulsart et al., 2012). The department with the highest risk of being affected by an occupational fraud scheme is the accounting department, as there is a greater opportunity for a fraudster to commit this crime in this section of the organization (ACFE, 2014).

Many small businesses choose to employ their family members, creating a false sense of trust

(Hrncir & Metts, 2012). One incident of fraud could destroy the business and the relationships of the family members (Gagliardi, 2014). There are countless examples of embezzlement fraud cases in small family-owned businesses (Alleyne & Amaria, 2013). Hrncir and Metts (2012) provide a small business fraud case where this trust was violated. In this case, an employee who is also the son of the business owner embezzled over \$60,000 from the company (Hrncir & Metts, 2012). His dad entrusted him to handle all the finances of the business. He had access to all areas of the accounting system, including cash disbursements (Hrncir & Metts, 2012). When the son experienced financial problems, he took advantage of this trust and carried out an elaborate fraud scheme (Hrncir & Metts). The father never questioned his son's actions until it was too late, and the damage was already done (Hrncir & Metts).

#### **G. Sarbanes – Oxley Act (SOX)**

Over the last two decades, a series of high-profile occupational fraud cases have led to a heightened awareness of this problem (Andre et al., 2014). In 2001, there was an unprecedented number of accounting scandals leading to a devastating financial crisis in the United States (Lokanan, 2015). Top executives from some of America's largest corporations, including ImClone, Enron, Quest, WorldCom, and Adelphia - were convicted of a myriad of occupational fraud crimes (Lokanan, 2015). The results of these massive frauds forced the United States Congress to adopt new laws, rules, and regulations (Alleyne & Amaria, 2013).

The accounting scandal that ultimately destroyed Enron was a catalyst that led to the creation of the Sarbanes-Oxley Act, also known as SOX (Hays & Ariail, 2013). After the announcement of the upcoming bankruptcy of WorldCom, congress rushed to pass SOX (Willits & Nicholls, 2014). Lawmakers took drastic measures to prevent and detect future accounting scandals when they created the Sarbanes-Oxley Act (Boyle et al., 2015).

There is an ongoing debate as to the effectiveness of SOX. In fact, Hays and Ariail (2013) argue that “fraudulent activity is ‘alive and well’ – despite the efforts of the SEC and the costly regulations imposed by SOX” (p. 139). Occupational fraud remains a significant and growing problem in the United States and around the world (Singleton & Atkinson, 2011). The intent of legislatures who created the Sarbanes-Oxley Act was to reduce the occurrence of fraud in corporations (Hulsart et al., 2012). According to Boyle et al. (2015), fraud continues to be unabated, even with the costly legislation and requirements of SOX.

Most of the sections of the Sarbanes-Oxley Act only apply to publicly traded corporations (Hulsart et al., 2012). As a result, private corporations, including many small businesses, are not subject to the anti-fraud rules and regulations of this legislation (Hulsart et al., 2012). Consequently, they are often at greater risk of occupational fraud because they tend to have few or no anti-fraud controls (Gagliardi, 2014). Anti-fraud measures, such as implementing strong internal controls, are costly, which makes it harder for small businesses to protect themselves adequately (Boyle et al., 2015). Many times, small businesses do not have the financial means to remain viable after falling victim to just one instance of occupational fraud (ACFE, 2014).

The purpose of the Sarbanes-Oxley Act was to improve transparency and accountability of publicly traded corporations (Kaserer et al., 2011). Section 404 of SOX requires public companies to disclose internal control risk and report on disclosure controls and procedures (Kaserer et al., 2011). This piece of legislation requires stronger internal controls for public organizations, but non-public companies do not have to follow these guidelines (Singleton &

Atkinson, 2011). Therefore, most large organizations have structured their internal control system in a way that was necessary to comply with this law (Gagliardi, 2014).

The Sarbanes-Oxley Act has been described as the most sweeping federal legislation affecting the accounting profession since the Securities Exchange Act of 1934 (Willits & Nicholls, 2014). SOX created the Public Company Accounting Oversight Board (PCAOB) to create new levels accountability for preventing and detecting fraud (Andre et al., 2014). The PCAOB was charged with regulating the auditing profession and creating auditing standards for auditors of public companies (Willits & Nicholls, 2014). However, the PCAOB does not regulate non-publicly traded organization, including many small businesses with less than 100 employees (Andre et al., 2014). Many small organizations cannot afford to have an annual audit, so regulating the auditing profession does not provide any protections for them (Lokanan, 2015).

#### **H. Internal Controls**

The purpose of an effective internal controls system is to prevent, deter, and detect occupational fraud in organizations (Kapp & Heslop, 2011). Internal controls are organizational structures designed to provide reasonable assurance that the organization will reach their business goals (Gramling et al., 2010). The purpose of implementing an internal control system is to prevent or detect and correct fraud promptly (Singleton, 2002). An example of a specific internal control is segregation of accounting duties. Authorization, approval, and verification of accounting responsibilities are segregated to more than one person, reducing the opportunity for an individual to manipulate the system and commit occupational fraud (Gramling et al., 2010). Management oversight is also a type of internal control that requires lower-level employees be accountable for their actions (Kapp & Heslop, 2011).

The accounting scandals over the last several decades have led to a heightened awareness of the importance of accounting internal controls (Andre et al., 2014). Some argue the savings and loans fraud scandals in the early 1980s were a catalyst that led organizations to focus more on their internal control systems to protect themselves from occupational fraud (Singleton, 2008). In 1985, the National Commission on Fraudulent Reporting was created to study the causes of fraud within organizations, and the outcome of their study was the best way to prevent fraud was to improve internal controls (Singleton, 2008).

Weak internal controls are a major factor attributable to occupational fraud, both in the U.S. and internationally (Lokanan, 2015). In fact, it is estimated that victim organizations lacked appropriate internal controls in one-third of all fraud cases included in the ACFE's study (ACFE, 2014). A lack of adequate internal controls plays a bigger role in small business occupational fraud cases (ACFE, 2014). In organizations with fewer than 100 employees, 41% of fraud cases have internal control weaknesses (Kapp & Heslop, 2011). Providing fraud prevention resources for employees report the crime anonymously, such as a whistleblower hotline, can reduce this opportunity (Trompeter et al., 2012).

Opportunity increases when an organization's internal control structure is weakened (Lokanan, 2015). Strong internal controls limit a person's opportunity to commit this crime. An effective internal control system deters a potential fraudster from committing occupational fraud by limiting the opportunity for the fraud to be committed and concealed (Dorminey et al., 2012). In addition to prevention, internal controls increase the likelihood of catching the thief, therefore deterring them from taking action (Dorminey et al., 2012).

Internal controls are designed to influence the fraudster's decision on whether or not to commit the crime (Trompeter et al., 2012). A fundamental component of an effective internal control system is segregation of duties, meaning accounting responsibilities are divided among more than one person (Gramling et al., 2010). Segregation of duties is prevalent in large corporations, but it is harder for smaller organizations to afford the necessary staff to segregate accounting duties (Gramling et al., 2010). Some organizations only have one person performing all their accounting duties (Kapp & Heslop, 2011). Organizations with less than 100 employees often find it problematic to implement appropriate internal controls (Williams & Kollar, 2013). Hiring additional employees might be ideal, but it can be too expensive for a small organization (Gramling et al., 2010).

When the ability to segregate duties is challenging, small organizations can be creative when designing their internal control systems (Gramling et al., 2010). For example, job duty rotation, mandatory vacations, and more management oversight are internal controls that do not require adding additional accounting staff (Gagliardi, 2014). There are inexpensive internal controls, such as those just mentioned, that will reduce an organization's risk of falling victim to fraud (Gramling et al., 2010). Fraud is often an unspoken topic of business owners. Many of them spend their lives building their businesses, and fraud risk and proper internal control design should be an ongoing focus (Gagliardi, 2014).

### **I. Organizational Culture & Ethics**

According to Alleyne and Amaria (2013), a strong corporate culture is crucial to maintaining a competitive advantage, particularly in small firms. Values, beliefs, and behaviors can shape the culture of an organization in either a positive or a negative way (Alleyne & Amaria, 2013). Members of organizational leadership are responsible for setting an ethical standard (tone) for all employees to follow (Craft, 2013). An ethical organizational culture and tone at the top by management are very important attributes to minimizing accounting fraud (Laufer, 2011).

There is an increasing demand for more ethical behavior by managers (Perryer & Scott-Ladd, 2014). Managers set the tone for the organizations, and lower-level employees follow their lead – good or bad (Schaper & Weber, 2012). The Sarbanes-Oxley Act made it a requirement for management of public companies to be held accountable for their actions within the organization (Willits & Nicholls, 2014). However, all organizations, including private ones, would benefit from creating an organizational culture where management sets an appropriate tone for the rest of the organization (Laufer, 2011).

In the 2014 ACFE Fraud study, only 50% of small organizations had a formal code of conduct in place for their employees, compared to 90% of large organizations (Tysiak, 2012). Businesses who provide fraud education to all their employees, not just those working in finance and accounting, have fewer losses and discover fraud schemes sooner (Andre et al., 2014). Having a formal code of conduct and providing fraud training to employees are cost-effective ways to reduce the risk of occupational fraud (Tysiak, 2012).

Ethics and core values of all members of the organization can strengthen an organization's defense against occupational fraud (Craft, 2013). Perryer and Scott-Ladd (2014) argue there is a blurred distinction between what is ethical and formal laws. There are consequences, both personal and professional, to unethical decision-making (Craft, 2013). Many failed organizations lacked an ethical management philosophy requiring all employees to behave with integrity (Perryer & Scott-Ladd, 2014). Employees look to their employers and

managers as role models who will guide them in their decision-making process (Craft, 2013). A strong organization protected from occupational fraud begins with an ethical management team (Tysiack, 2012).

#### **J. Societal Effects of Occupational Fraud**

Occupational fraud is deliberate, intentional, and non-random acts against an organization (Williams & Raschke, 2015). In a study by the Association of Certified Fraud Examiners, businesses with less than 100 employees made up 32% of all fraud cases, which was the largest percentage of victim organizations (Gagliardi, 2014). The average fraud loss is \$150,000 per incident (Trompeter et al., 2013). For the past several years, this number has steadily increased, suggesting the problem of fraud continues to grow in both frequency and dollar amount (Enoch, 2009). While larger organizations may not be affected by a \$150,000 loss, it could send a small company into bankruptcy (Trompeter et al., 2013). Small organizations, specifically those with fewer than 100 employees, often lack financial resources to protect themselves from this devastation (Gagliardi, 2014).

Many people do not realize the impact the crime of financial fraud has on everyone in our society (Kapp & Heslop, 2011). “Financial fraud can have serious ramifications for the long-term sustainability of an organization, as well as adverse effects on its employees and investors, and on the economy as a whole” (Abbasi et al., 2012, p. 1293). Due to the high cost to individuals, corporations, and the public, research on the motivation and prevention of financial fraud should be at the forefront of accounting research.

Some research theory on financial fraud suggests that anyone can succumb to this type of crime (Mesly, 2013). Motivations range from greed to feelings of entitlement (Hulsart et al., 2012). Mesly (2013) argues there are inherent drives for human aggressive behavior in any business venture. Therefore, some argue that every individual has the potential to commit occupational fraud based on the aggressive side of human nature (Mesly, 2013).

There are additional factors that can contribute to an individual committing occupational fraud (Hulsart et al., 2012). Anderson and Tirrell (2009) suggest that top executives commit this type of white-collar crime to save their reputation when the organization is not performing as expected. This is another example of motivation for someone to commit occupational fraud (Bhasin, 2013). The varying types of occupational fraud schemes are only limited by the imagination of the person trying to get away with this type of crime (Hulsart et al., 2012). Some occupational frauds take the form of elaborate schemes while others are simple elementary level crimes (Bhasin, 2013).

Regardless of the type of occupational fraud, whether it is the misappropriation of assets or financial statement fraud, there are certain motivations behind this crime (Dellaportas, 2013). Most employees are not inherently determined to steal money from their employer (Buchholz, 2012). Typically, it is the rule, not the exception, that employees take a job to earn an honest living for themselves and their family members (Hrcic & Metts, 2012). Employees have to develop a motivation to commit this crime first (Dellaportas, 2013). Motivations to commit financial fraud include greed, perceived injustice, and necessity (Buchholz, 2012). “Greed has become a motivation [for financial fraud] causing many scandals to have been perpetrated in corporate America over the past several years” (Buchholz, 2012, p. 109).

Additionally, Hrncir and Metts (2012) believe employees may feel entitled to additional compensation as a reward for their hard work. When employees begin to feel entitled, they begin to make small unethical decisions that can lead to larger financially fraudulent actions (Hrncir & Metts, 2012). For example, if an employee is passed over for a promotion, they may feel robbed of an opportunity that they worked so hard to achieve actions (Hrncir & Metts, 2012). Being passed over for a promotion may become a breeding ground for resentment toward the company and lead to a feeling of needing to get what they feel they are entitled to (ACFE, 2014). In this instance, employees may justify their behavior, causing them to make unethical decisions (Well, 2011). These would include committing any numerous types of occupational fraud such as misappropriation of assets (Murphy, 2011).

Wells (2011) argues while occupational fraud occurs at lower levels, top-level executives typically commit it more frequently. The percentage of occupational fraud cases committed by top-level managers is disproportionately larger than frauds committed by lower-level employees (ACFE, 2014). Top-level managers have the knowledge of the accounting systems and the access to commit fraud (Murphy, 2011). Money is a big motivation for committing occupational fraud because it would be very hard to extract large amounts of money from the organization in a lower-level position (Hrncir & Metts, 2012). Additionally, most top-level executives have access to secure assets and are in a position to override internal controls if they choose to do so (Kapp & Heslop, 2011).

Organizations lose billions of dollars a year from occupational fraud (Hrncir & Metts, 2012). “In recent years, increasing attention is being devoted to examining fraud in organizational settings” (Murphy, 2011, p. 601). While the motivation to commit occupational fraud varies from one person to the next, there is no doubt this crime has been a problem from the beginning of financial commerce (Gagliardi, 2014). While theories have been developed to attempt to provide answers to why people commit occupational fraud, there is a gap in the research that currently exists. Additional research in this area of accounting, including building upon the Fraud Triangle, should be conducted to help fill these gaps.

Fraud, especially occupational fraud, is a growing problem that affects all members of society (Hrncir & Metts, 2012). This crime causes a business to suffer financial losses; it can also put employees out of work and cost stockholders substantial decreases in the value of their stock actions (Hrncir & Metts, 2012). Fraud and Forensic Accounting is growing extremely fast as an area of specialization in the accounting profession (Andre et al., 2014). The recent accounting scandals that occurred over the last decade have brought this problem to the forefront of the minds of many business owners (Willits & Nicholls, 2014). The accounting scandals that took place in the early 2000s have had a ripple effect and affected us all in one way or another. The price of occupational fraud is passed down to consumers in the form of higher prices for goods and services (Kranacher et al., 2008). Federal legislation, including the Sarbanes-Oxley Act, has not provided fraud protection for small business owners (Willits & Nicholls, 2014).

There should be more focus on fraud prevention measures in all businesses, and remediation procedures are crucial to effectively addressing this growing problem in our society (Kranacher et al., 2008). One way to help prevent occupational fraud is to understand the motivation behind the crime. According to individual motivation theory, individuals must perceive the outcome of their actions as a positive one to commit financial fraud. Otherwise, they would not take the drastic steps necessary to try to get away with this crime. It is not enough to implement internal controls in accounting to protect against fraud. Understanding

what motivates employees to commit this crime is the first step to protecting the organization's assets. Understanding employee motivation can help alert managers to red flags that are often present in these types of situations.

Internal controls systems are designed to reduce the opportunity for an individual to commit occupational fraud, and detect the fraud when it occurs (Kapp & Heslop, 2011). Internal controls are organizational structures designed to provide reasonable assurance that the organization will reach their business goals (Singleton, 2002). The purpose of implementing an effective internal control system is to prevent, detect, and correct occupational fraud promptly (Singleton, 2002). Internal controls cannot prevent all types of occupational fraud, but they can influence a fraudster's assessment of committing the crime (Trompeter et al., 2012). Large organizations typically have elaborate internal control systems that deter, prevent, and detect fraud before a substantial loss can occur (Kapp & Heslop, 2011).

Internal controls, including segregation of accounting duties, can be expensive to implement. Segregation of accounting duties requires hiring additional staff members to meet the requirements. The challenge of segregating accounting duties in small businesses lies within their limited personnel and financial resources (Gramling & Hermanson, 2010). It is unfortunate that many small businesses simply cannot afford to hire additional accounting personnel. They run the risk of becoming a victim organization, and their businesses are in jeopardy of becoming another business affected by occupational fraud.

### **K. Gap in Literature**

Until recently, the study of occupational fraud in accounting research has been limited to mostly large organizations (Free & Murphy, 2015). Considering recent accounting scandals costing investors, creditors, and employees millions of dollars, this subject has started to emerge in accounting literature (Free & Murphrey, 2015). The biggest gap in current accounting literature is the study of organization size when it comes to the subject of occupational fraud. Most of the current accounting research focuses on how large businesses can protect themselves against this crime (Singleton & Atkinson, 2011). A greater understanding is needed to determine the impact of organization size on the likelihood of becoming a victim organization (Schaper & Weber, 2012).

Fraud is an inherent risk in all businesses, regardless of size (Hrncir & Metts, 2012). However, many small businesses are especially vulnerable because they often lack the in-house skills and financial resources needed to detect and prevent occupational fraud (Schaper & Weber, 2012). Most of the accounting research focuses on how businesses can implement an effective internal control system to prevent this devastating crime (Free & Murphy, 2015). An effective internal control system may not be available to small businesses due to their limited financial resources (Singleton & Atkinson, 2011). Because small businesses are disproportionately more often affected by occupational fraud, a pressing need for additional accounting research exists (ACFE, 2014). There is limited research on how vulnerable small businesses are to occupational fraud (Schaper & Weber, 2012).

### **III. Research Method**

The purpose of this quantitative non-experimental correlational study was to determine if a relationship exists between organization size and the frequency of occurrence, and the severity of, occupational fraud. The study population was 11 members of the Association of Certified Fraud Examiners (ACFE) who are currently practicing Certified Fraud Examiners (CFEs) throughout the United States. The population included Fraud Examiners, Fraud

Investigators, and Forensic Accountants from 16 states, including Maine, Minnesota, Tennessee, Colorado, Washington, South Carolina, North Carolina, New Jersey, Georgia, Florida, New York, Virginia, Michigan, California, Nevada, and Rhode Island. The researcher distributed the surveys to the CFEs via electronic and regular mail. Each CFE was asked to select randomly five of their current or past fraud cases and answer questions regarding those cases. The survey instrument was created using similar questions from a research study by Alleyne and Amaria (2013) and the ACFE 2013 Global Fraud Study (ACFE, 2014). The questions focused on organization size, occurrence of occupational fraud, the amount of annual revenues, and the amount of loss incurred.

Once the data was collected, one-way ANOVA was performed, and Pearson Bivariate Correlation tests were conducted to determine whether the relationship between the dependent variable, number of employees, and the independent variables, frequency and severity of occupational fraud, was linear. In a linear relationship, as one variable increases, the other variable increases, or as one variable increases, the other variable decreases (Weichao, Rubao, Yanzhou, Shiguo, & Yunhe, 2016). The Pearson Bivariate Correlation test was appropriate for this study because its purpose is to determine the relationship between two variables.

Victim organizations are organizations that have been victims of occupational fraud (ACFE, 2014). The ratio of the number of small business victim organizations to the total number of victim organizations selected by the CFEs served as a measure of frequency. The ratio of the dollar value of the loss divided by total annual revenues served as a measure of severity. The ACFE's definition of small businesses, those with fewer than 100 employees, was used in this study (ACFE, 2014).

This research study of victim organizations analyzed the relationship between organization size and occupational fraud. Organization size was measured using the number of employees within the organization, and occupational fraud was studied from two perspectives, frequency and severity. The following research questions were addressed in this study.

**Q1.** What is the relationship between the number of employees and the frequency of occurrence of occupational fraud?

**Q2.** What is the relationship between the number of employees and the severity of occupational fraud when it occurs?

### **Hypotheses**

**H1<sub>0</sub>** There is not a statistically significant relationship between the number of employees and the frequency of occurrence of occupational fraud.

**H1<sub>a</sub>** There is a statistically significant relationship between the number of employees and the frequency of occurrence of occupational fraud.

**H2<sub>0</sub>** There is not a statistically significant relationship between the number of employees and the severity of occupational fraud when it occurs.

**H2<sub>a</sub>** There is a statistically significant relationship between the number of employees and the severity of occupational fraud when it occurs.

The research method chosen for this study was quantitative, and the design was a non-experimental correlational design. Treatment variables were not manipulated; therefore, this study was neither experimental nor quasi-experimental. Correlational research involves collecting data to determine whether, and to what degree, a relationship exists between two or

more quantifiable variables (Martin & Brigmon, 2012). Correlational research aims to explore multiple relationships, bivariate relationships, and predictions among variables (Martin & Brigmon, 2012). The quantitative method was appropriate for this research study because it is the most efficient way to obtain demographic information of victim organizations.

Qualitative research is an inquiry process of attempting to understand a human or social problem in a natural setting (Creswell, 1994). Building on a holistic picture, qualitative research is formed using words and viewpoints from the study participants (Creswell, 1994). Most organizations who have been victims of occupational fraud would be unwilling to disclose any information about the crime; therefore, the qualitative research method was not feasible.

In this research study, data was collected using the survey method. The purpose of using the survey method was to generalize from a sample of participant responses to a population (Creswell, 1994). A survey instrument allowed the researcher to gather large-scale data from various types of businesses for analysis on this research topic (Creswell, 1994). The survey method was chosen because it was the most economical, appropriate, and efficient way to obtain demographic information of victim organizations.

Surveys were sent to 530 Certified Fraud Examiners (CFEs), and their contact information was obtained using the ACFE's membership directory. The researcher is a current member of the ACFE, and therefore was granted access to their membership directory, which was used to identify the study participants. Only ACFE members who are practicing CFEs were contacted via email by the researcher. Through an email screening process, each CFE was asked (a) for their willingness to be a respondent and (b) if they have clients who experienced occupational fraud within the last ten years. The surveys were distributed to the CFEs via electronic and regular mail. The questions focused on organization size, occurrence of occupational fraud, the amount of annual revenues, and the amount of loss incurred.

The ratio of the number of small business victim organizations to the total number of victim organizations selected by the CFEs served as a measure of frequency. The ratio of the dollar value of the loss divided by total annual revenues served as a measure of severity. The ACFE's definition of small businesses, those with fewer than 100 employees, was used in this study (ACFE, 2014).

Once the data was collected, one-way ANOVA was performed to determine if a relationship exists between organization size and frequency and severity of occupational fraud. Pearson Bivariate Correlation tests were performed to assess the relationship between the dependent and independent variables, and to determine if the relationship was statistically significant. There is one independent variable in this study – number of employees  $X_1$ . There are two dependent variables in this study: the frequency of occurrence of occupational fraud  $Y_1$  and the severity of occupational fraud  $Y_2$ . The independent variable, number of employees, is a dichotomous variable denoted by a number 1 for small businesses (fewer than 100 employees) and a number 2 for large businesses (100 or more employees). Pearson r correlation is a bivariate measure of the strength of the relationship between the dependent and independent variables (Weichao et al, 2016).

### **A. Population**

The study population was 11 members of the Association of Certified Fraud Examiners (ACFE) who are currently practicing Certified Fraud Examiners (CFEs) in the United States. The population included Fraud Examiners, Fraud Investigators, and Forensic Accountants. The CFEs have recent experience with fraud cases, which allowed data collection from a large number of victim organizations. The CFEs were able to provide demographical information on multiple organizations with documented cases of occupational fraud.

### **B. Sample**

Simple random sampling was used in this research study. Simple random sampling allowed the opportunity for the researcher to gather information on both large and small businesses while minimizing biases and simplifying the analysis of results. The sample originally included 43 clients of practicing CFEs who have been victims of occupational fraud. Each of the 11 CFEs were asked to select randomly five fraud cases from their current or past clients, increasing the probability of an adequate sample size. Five of the 11 CFEs included information for fewer than the requested five fraud cases. In the statistical analysis, data from 40 of the 43 fraud cases were used. Three of the fraud cases did not contain sufficient information to be included in the study. Therefore, the sample size was 40 fraud cases.

This sample size in this study is comparable to several sample sizes in other research studies pertaining to accounting fraud cases. For example, in a quantitative research study by Chhabra & Pattanahak (2014), 52 fraud cases were analyzed. The focus of the study was accounting practices in small businesses. In a study published in the *Accounting Forum Journal* in 2012 by Dellaportas, 10 fraud cases were examined, focusing on the Fraud Triangle. In 2015, Free & Murphy published a study of 37 fraud cases focusing on co-offenders in occupational fraud cases. Alleyne & Amaria (2013) completed a fraud case analysis using 71 fraud cases, and Soltani (2014) published a study using six fraud cases. Both of those cases focused on the role organizational culture plays in occupational fraud cases.

### **C. Materials/Instruments**

The measurable construct in this quantitative non-experimental correlational research study was the relationship between organization size and occupational fraud. Data for this study was collected using the survey method of data collection. The questions on the survey instrument were derived from similar questions used in a previous research study by Alleyne and Amaria (2013) and the ACFE's 2013 Global Fraud Study.

The measures taken from any research instrument must be sufficiently reliable resulting in a measurement that provides dependable and consistent responses by the research participants (Creswell, 2004). In the study by Alleyne and Amaria (2013), a pilot study was administered to test for validity and reliability of the survey questionnaire. Each survey questionnaire was validated for content to ensure the questions measured the importance of each one of the factors (Alleyne & Amaria, 2013). Content validity was performed through a survey instrument review by knowledgeable individuals (Alleyne & Amaria, 2013). Additionally, the researchers conducted an internal consistency test of the survey responses and found there was reasonably good reliability of the survey questions (Alleyne & Amaria, 2013).

The ACFE has completed a new fraud study every few years for over a decade, and many of the recent fraud research studies contains references to these studies. The ACFE's 2013 Global Fraud Study was an online survey opened to 34,615 Certified Fraud Examiners from

October 2013 to December 2013 (ACFE, 2014). There were 1,483 occupational fraud cases identified in the study, and the results of the survey were published in the ACFE's *Report to the Nations on Occupational Fraud and Abuse* in 2014 (ACFE, 2014). An email granting permission from the ACFE for the researcher to use their survey in this study is included in Appendix C. The actual survey questions from the ACFE's 2013 Global Fraud Study are included in Appendix D.

Like the research study by Alleyne and Amaria (2013) and the ACFE's 2013 Global Fraud Study, the survey respondents in this study were asked demographic questions regarding their current fraud cases. Survey questions included information on the size of the organization, annual revenues, geographic location, and the amount of loss due to fraud, type of fraud, date of occurrence, and the industry type. Surveys were emailed to 530 practicing Certified Fraud Examiners who are members of the ACFE currently working in the field of Forensic Accounting. The purpose of the survey was to gain an understanding of how organization size is related to the frequency and severity of occupational fraud.

#### **D. Operational Definition of Variables**

In this quantitative research study, there was one independent variable, number of employees, and there were two dependent variables, the frequency of occurrence and the severity of occupational fraud. There were also two known covariates, type of occupational fraud and industry type, and there was one controllable variable, geographical location.

**Number of employees.** The independent variable in this study was the number of employees within the organization. This variable was operationalized by using a head count of employees.

**Frequency of occurrence.** The first dependent variable in this study was the frequency of occurrence of occupational fraud. This variable was operationalized by using a ratio of the number of small business victim organizations to the total number of victim organizations selected by the Certified Fraud Examiners.

**Severity of occupational fraud.** The second dependent variable in this study was the severity of occupational fraud when it has occurred. This variable was operationalized by using the ratio of the dollar value of the loss divided by the total annual revenues of the victim organization.

**Industry type.** The first covariate in this study was industry type. Industry type was operationalized by using binary variables, manufacturing businesses and service businesses.

**Type of occupational fraud.** The second covariate in this study was the type of occupational fraud. This covariate was operationalized by using the ACFE's three main categories of occupational fraud – asset misappropriation, corruption, and financial statement fraud (ACFE, 2014).

**Geographical location.** Geographical location was a controllable variable in this study. The participants in the study were practicing CFEs in the United States, and only businesses within the United States were included in the data collection process. The geographical location was a known limitation of the study because occupational fraud is an international problem.

#### **E. Data Collection, Processing, and Analysis**

Data collection began after the researcher gained approval from the Northcentral University Graduate School and the Institutional Review Board (IRB) of Northcentral University. Five hundred and thirty Certified Fraud Examiners, currently practicing in Forensic Accounting, were asked to participate in this study. The researcher contacted each CFE via email to

explain the research study and ask their permission to participate. A survey, along with an informed consent form, was distributed to the ACFE members who met the stated criteria. Each CFE was asked to select randomly five of their current clients, who are victim organizations, and answer questions regarding these clients. The survey remained open for 10 weeks with two reminder e-mails sent to encourage participation.

Once the surveys were completed, the results were exported to Microsoft Excel for data cleaning and coding prior to loading into the Software Package for the Social Sciences (SPSS, Version 23). SPSS was used to complete the statistical analysis. One-way ANOVA was performed, and the specific test was the Pearson Bivariate Correlation test. Organization size was measured using the number of employees in the organization. Victim organizations where fraud has occurred was the focus of the study. The ratio of the number of small business victim organizations to the total number of victim organizations selected by the CFEs served as a measure of frequency. The ratio of the dollar value of the loss divided by the total annual revenues served as a measure of severity. The ACFE's definition of small businesses, those with fewer than 100 employees, was used in this study (ACFE, 2014).

Once the data was collected, one-way ANOVA was performed to determine if a relationship exists between organization size and frequency and severity of occupational fraud. Pearson Bivariate Correlation tests were performed to determine if the relationship was statistically significant. There is one independent variable in this study – number of employees  $X_1$ . There are two dependent variables in this study: the frequency of occurrence of occupational fraud  $Y_1$  and the severity of occupational fraud  $Y_2$ . The independent variable, number of employees, is a dichotomous variable denoted by a number 1 for small businesses (fewer than 100 employees) and a number 2 for large businesses (100 or more employees).

#### **F. Assumptions**

In any research study, valid assumptions must be made to perform the research work and provide a conceptual framework for the study. Several methodological assumptions were made regarding this study. To begin with, it was assumed that participants answered honestly regarding information obtained from their client files. Participants were assured of the anonymous nature of the study to encourage honesty in their responses. Secondly, it was assumed the respondents answering the surveys were the intended recipients. The Certified Fraud Examiner's contact information was obtained directly from the Association of Certified Fraud Examiner's online membership directory. The ACFE's membership directory was sorted to list only the CFEs, who are currently practicing in the United States as Forensic Accountants, Fraud Examiners, or Fraud Investigators. These were the only names included in the study participant list. It was also assumed the target population under this study was the appropriate population to gain useful information regarding victim organizations. Since the CFEs have first-hand knowledge of specific fraud cases, the population was assumed appropriate to this research study. Finally, it was assumed rationalization and pressure were not related to organization size, which are variances that were unaccounted for in the study.

#### **G. Limitations**

Several limitations were identified in this research study. This study explored the relationship between organization size and the frequency of occurrence, and the severity of, occupational fraud in victim organizations within the United States. Geographic location was a known limitation in this study as fraud is an international problem. The survey participants

were given a limited period of time to complete the surveys. Given more time, the response rate may have been higher.

There were also limited sources of data in this study as it was gathered from a small number of fraud cases. Additional data from more fraud cases may have changed the results of this study. In addition, there was only one dependent variable in the study, organization size. Although it was a relevant dependent variable for achieving the purpose of the study, there were other relevant variables, including demographics of the fraud perpetrators. Finally, it was not feasible to gather first-hand information directly from the victim organizations, which was another limitation of the study.

## **H. Delimitations**

In addition to the assumptions and limitations, there were two primary delimitations in this study. This study was delimited by the time available to execute the study from start to finish. The researcher had less than 12 months to complete this study. Therefore, the scope was reduced to create reasonable time limit expectations for this study. Another delimitation is participants were drawn from a specific geographical area, the United States. It was not known if the results from the study would apply internationally.

## **I. Ethical Assurances**

Approval was sought from the Northcentral University Institutional Review Board (IRB) prior to any data collection. Several ethical principles were considered in this study, including confidentiality, privacy, and informed consent. All data were kept in computer files protected by a password or in locked filing cabinets in the researcher's office. Only the researcher has access to the data. Confidentiality and anonymity of all victim organizations was assured. Only organizational demographic information was collected in the survey process, and the specific identity of the victim organizations was unidentifiable.

Gaining informed consent is a well-established practice in behavioral research for both ethical and legal reasons (Dolan, 2014). Informed consent was requested in advance from all research participants. A copy of the informed consent form to be signed by each Certified Fraud Examiner (CFE) on behalf of the victim organizations is included in Appendix A. All necessary and essential information pertaining to the study was disclosed, protecting the survey participants from harm. Informed consent is obtained when the study participant can make a rational decision to participate in the study, free of any coercion or outside influences (Gerring, 2007). The survey participants were informed of the nature and purpose of the research study in advance, allowing them the opportunity to refuse to participate or end their participation at any time during the research process. Additionally, participants were notified they could skip any survey questions they felt were too intrusive or made them feel uncomfortable to answer.

A potential risk to the survey respondents in this study was harm to their professional reputation if their clients deemed their participation a violation of their confidentiality. This risk was minimized by not requesting individually identifiable data from the victim organizations. The data used in this research study did not contain any identifiable data that could link the organizations with the fraud. The Certified Fraud Examiners identity was not disclosed in the dissertation manuscript, and the victim organizations were unidentifiable.

#### **IV. Findings**

Data were gathered from 43 different fraud cases that occurred in 16 different states, including Maine, Minnesota, Tennessee, Colorado, Washington, South Carolina, North Carolina, New Jersey, Georgia, Florida, New York, Virginia, Michigan, California, Nevada, and Rhode Island. Demographical information from these 43 fraud cases was provided by 11 study participants who are practicing Certified Fraud Examiners. There were two fraud cases where fraud occurred in a sole proprietorship. The researcher decided not to include these two cases in the data analysis because internal controls cannot be effectively implemented when the sole employee is also the owner of the business. Additionally, the data included one fraud case where the specific dollar amount of the loss was not included. Therefore, only information from 40 fraud cases was included in this study. Of these 40 fraud cases, 21 (53%) of them occurred at small businesses with fewer than 100 employees, and the other 19 (47%) fraud cases were from large businesses with 100 or more employees. The 40 fraud cases occurred over a 13-year period, 2001 to 2014. The sample included all three main types of occupational fraud – asset misappropriation, corruption, and financial statement fraud.

The researcher sent out 530 surveys via both email and traditional mail over a three-month period of time. Surveys were originally sent to 100 CFEs in the state of Georgia via traditional mail. After a month, only one completed survey was sent back. The other 430 surveys were sent via email to CFEs throughout the United States. Eleven Certified Fraud Examiners completed the surveys. The response rate was approximately 2%. One of the study participants informed the researcher that his experience with obtaining survey responses from Certified Fraud Examiners has been low. He explained CFEs are less willing to respond to surveys sent by unknown individuals because they are acutely aware of the inherent risk associated with disclosing this sensitive information, as well as the risk of obtaining a virus from opening an email attachment. This will be discussed further in Chapter 5.

Descriptive statistical analysis was performed on the data using SPSS (Version 23). Table I. shows the demographic distributions of the fraud cases by organization size.

The focus of this study was organization size. Organization size was categorized by either small or large based on the number of employees within the organization. The mean annual revenues for small businesses was 5,774 ( $SD = 8147$ ), and the mean annual revenues for large businesses was 5,476,026 ( $SD = 7171745$ ). The mean number of employees for small businesses was 22 ( $SD = 25$ ), and the mean number of employees for large businesses was 11,701 ( $SD = 13996$ ).

**Statistical tests: Assumptions.** To assess the relationship between the independent variable, number of employees, and the dependent variables, frequency of occurrence and severity of occupational fraud, Pearson Bivariate Correlation tests were used. There are two underlying assumptions of the Pearson correlation coefficient between two variables.

The first assumption is the variables are bivariately normally distributed. Organization size in this study is represented by the number of employees within the organization. The number of employees is a continuous random variable, which was categorized by using dichotomous variables, large and small. The number of employees variable is coded with a 1 = Small and 2 = Large. The correlation tests were performed on both frequency and severity. The

relationships between the variables in this study are linear. As one variable, number of employees, increases, the other variables, frequency and severity, decrease.

The second assumption is the fraud cases represent a random sample from the population. Each Certified Fraud Examiner was asked to randomly select five of their fraud cases. Therefore, this assumption is valid, and the Pearson Bivariate Correlational test is appropriate for this research (Weichao et al., 2016).

**Research question 1.** What is the relationship between the number of employees and the frequency of occurrence of occupational fraud?

**H1<sub>0</sub>** There is not a statistically significant relationship between the number of employees and the frequency of occurrence of occupational fraud.

**H1<sub>a</sub>** There is a statistically significant relationship between the number of employees and the frequency of occurrence of occupational fraud.

To address research question 1, a one-way ANOVA was performed. A Pearson Bivariate Correlation test was used to test whether the relationship between the dependent variable, number of employees, and the independent variable, frequency of occurrence of financial fraud, was linear. In a linear relationship, as one variable increases, the other variable increases or as one variable increases, the other variable decreases (Weichao et al., 2016). Organization size, as defined by number of employees, was a continuous random variable. To perform the appropriate test, organization size was categorized as a small business, those with fewer than 100 employees, or a large business, those with 100 or more employees. Frequency was calculated using the ratio of small businesses to large businesses within the sample of fraud cases. Graph I. shows the difference in frequency of fraud cases by organization size.

If the Pearson correlation coefficient is less than .05, the correlation is significant (Weichao et al., 2016). This means the researcher can be 95% confident the relationship between two variables is not due to chance (Weichao et al., 2016). The relationship between organization size and the frequency of occurrence of occupational fraud is statistically significant,  $F(1,38) = 4.860E+30$ ,  $p < .01$ . The frequency of occurrence of occupational fraud was negatively correlated to organization size. These results shown in Table II. suggest the larger the organization, the lower the frequency of occurrence of occupational fraud. The null hypothesis H1<sub>0</sub> was rejected, and the results showed support for the alternative hypothesis.

**Research question 2.** What is the relationship between the number of employees and the severity of occupational fraud when it occurs?

**H2<sub>0</sub>** There is not a statistically significant relationship between the number of employees and the severity of occupational fraud when it occurs.

**H2<sub>a</sub>** There is a statistically significant relationship between the number of employees and the severity of occupational fraud when it occurs.

To address research question 2, a one-way ANOVA was performed. A Pearson Bivariate Correlation test was used to test whether the relationship between the dependent variable, number of employees, and the independent variable, severity of occupational fraud, was linear. Organization size, as defined by number of employees, was a continuous random variable. To perform the appropriate test, organization size was categorized as a small business, those with fewer than 100 employees, or a large business, those with 100 or more employees. Severity was calculated using the ratio of the loss due to occupational fraud

divided by the annual revenues of the organization. Graph II. shows the difference in severity of the fraud loss by organization size.

If the Pearson correlation coefficient is less than .05, the correlation is considered to be significant (Weichao et al., 2016). This means the researcher can be 95% confident the relationship between two variables is not due to chance (Weichao et al., 2016). The relationship between organization size and the severity of occupational fraud is statistically significant,  $F(1,38) = 10.141, p = .003$ . The severity of occupational fraud was negatively correlated to organization size. These results shown in Table III. suggest the larger the organization, the less severe the fraud is. The null hypothesis  $H_{20}$  was rejected, and the results showed support for the alternative hypothesis.

The findings of this study indicated a significant correlation between organization size and the frequency of occurrence, and severity of, occupational fraud.

**Research question 1.** Research question 1 was an evaluation of the relationship between organization size, specifically the number of employees, and the frequency of occurrence of occupational fraud. In a study of 1,483 cases by the Association of Certified Fraud Examiners, businesses with fewer than 100 employees had the highest occurrence of occupational fraud (ACFE, 2014). The results of this research study are consistent with the findings in the ACFE study. Based on the statistical analysis of this study, it appears that fraud occurs more frequently within smaller organizations. This can be attributable to inadequate internal controls. Organizations with less than 100 employees often find it problematic to implement appropriate internal controls (Williams & Kollar, 2013). Hiring additional employees might be ideal, but it can often be too expensive for a small organization (Gramling et al., 2010).

**Research question 2.** Research question 2 was an evaluation of the relationship between organization size, specifically the number of employees, and the severity of occupational fraud when it occurs. Occupational fraud is an issue for businesses, particularly small businesses that lack the ability to protect themselves against this financially devastating crime (Singleton & Atkinson, 2011). In organizations with fewer than 100 employees, 41% of fraud cases have internal control weaknesses (Kapp & Heslop, 2011). Many times, small businesses do not have the financial means to remain viable after falling victim to just one instance of occupational fraud (ACFE, 2014). With the average loss being greater than \$150,000 per case, one incident can put a small company out of business (Bhasin, 2013). The results of this research study show that the larger the organization, the lower the amount of loss due to occupational fraud. Many large businesses have adequate internal control systems to help deter the occurrence of occupational fraud (Kapp & Heslop, 2011).

## V. Conclusion

In conclusion, the results of this study suggest there is a relationship between organization size and the frequency and severity of occupational fraud. Fraud is an ongoing problem for all businesses, and this study finds this to be especially true for small businesses with fewer than 100 employees. Larger organizations often have the financial means to implement internal controls; protecting themselves against the devastation caused by this crime. The findings in this study are important to future accounting research on the subject of occupational fraud. There are many ways this study could be replicated and expanded upon.

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Table I. Demographic Distributions of Fraud Cases, by Organization Size

Fraud Cases by Size	N	Percent
Large and small businesses	40	
Businesses by size		
Small	21	53%
Large	19	47%
Revenue	Mean	Std. Dev.
Average for Small Business	5,774	8,147
Average for Large Business	5,476,026	7,171,745
Overall Average	2,604,144	5,602,884
Number of employees	Mean	Std. Dev.
Average for Small Business	22	25
Average for Large Business	11,701	13,996
Overall Average	5,570	11,193

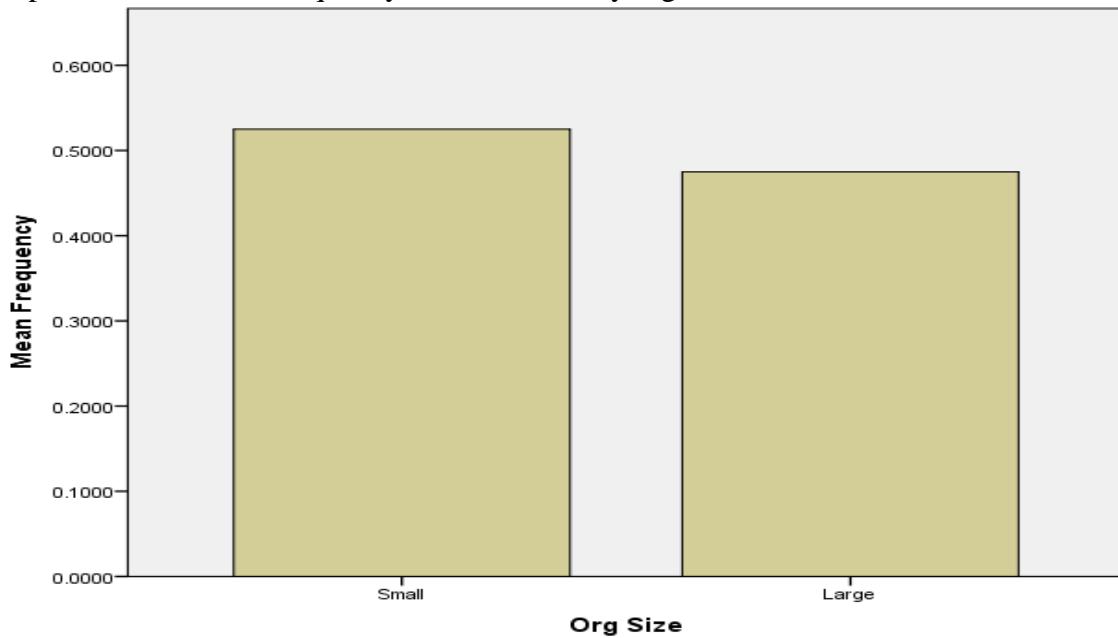
Table II. ANOVA – Frequency of Occurrence

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.025	1	.025	4.860E+30	.000
Within Groups	.000	38	.000		
Total	.025	39			

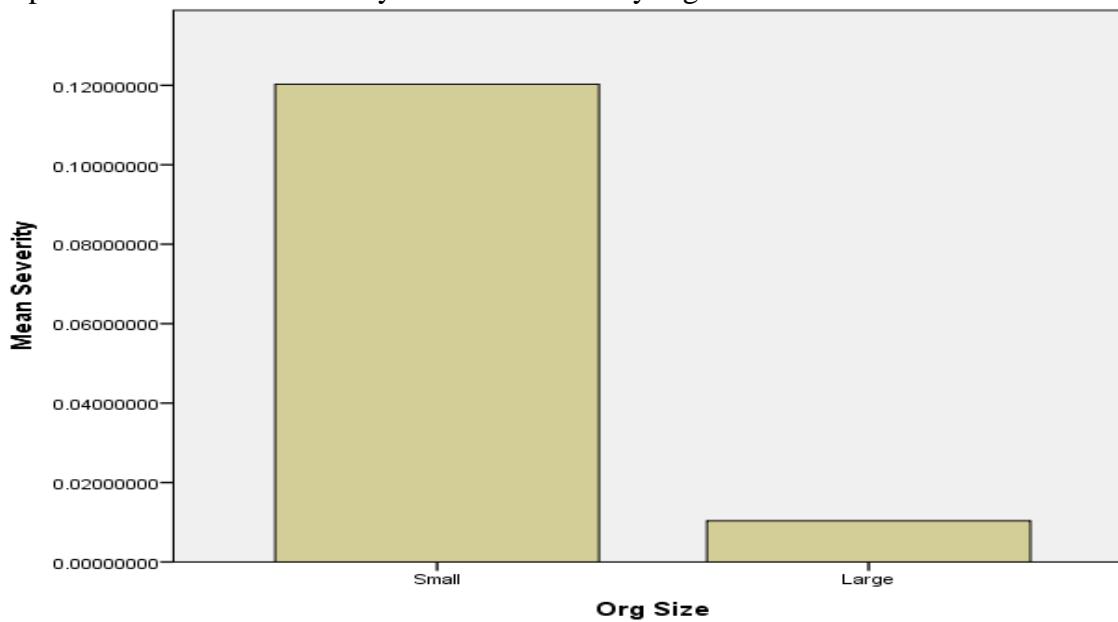
Table III. ANOVA – Severity of Loss

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.120	1	.120	10.141	.003
Within Groups	.452	38	.012		
Total	.572	39			

Graph I. Difference in frequency of fraud cases by organization size.



Graph II. Difference in severity of the fraud loss by organization size.



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