

DEFENSE INDUSTRY FRAUD AND WHISTLE-BLOWING:
A STUDY OF THE RELATIONSHIP BETWEEN
PERCEPTIONS OF FRAUD AND
WHISTLE-BLOWING

by

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ABSTRACT

DEFENSE INDUSTRY FRAUD AND WHISTLE-BLOWING:
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The purpose of this study is to explore the relationship between perception of fraud occurring in the defense industry and likelihood of engaging in whistle-blowing behaviors. To accomplish this, college students attending the University of Texas at Arlington were selected (n=281) to respond to surveys on the topic of defense industry fraud and whistle-blowing. This study used statistical analyses such as T-tests (Independent Sample T-test and ANOVAs) to determine significant differences between variables. The variables of gender, race, major, political party and defense industry associations were found to have statistically significant differences. Scales were also created for perception of defense industry fraud ($\alpha = .718$) and willingness to whistle-blow ($\alpha = .885$). The relationship between these scales were tested using Pearson's R correlations and was found to have a small positive correlation ($r = 0.259$). Findings of this study have implications on business organizations and government agencies. Due to the exploratory nature of this topic, the researcher believes that the findings of this study provide a foundation for future research on the topics of defense fraud and whistle-blowing.

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CHAPTER 1

INTRODUCTION

1.1 The Negative Effects of Fraud on the Global Economy

In October of 2008, the United States was suddenly stricken with one of the worst economic crises since the Great Depression. Many of the major financial institutions in the United States began to collapse after confidence fell in a then booming housing market which was later found to be riddled with fraudulent lending and spending (Reavis, 2009). Days after the housing bubble had burst the Dow Jones industrial average dropped a whopping 21% in a matter of days. The reaction to the stock market crash sent the American public's confidence in the economy plummeting downward at a rate alarming enough to enter the nation into a full blown recession not seen since the late 1970s (Reavis, 2009). In the years since the world wide economic crisis that began in 2008 we have seen the United States economy slowly but surely strengthen and grow to more manageable levels, but nonetheless we undoubtedly continue to face many grave economic issues in the coming years (Kollewe, 2011).

One such issue has to do with the ever growing size of the United States federal budget and its effect on our national debt. These issues came to the forefront of the public's attention when in April of 2011 the budget crisis loomed long enough to risk having to shut down the entire federal government (Riley, 2011). This shutdown risked all non-essential employees of the federal government to be forced to stay home without pay while all deemed essential employees would have to continue working without pay (Riley, 2011). Fortunately the Government shutdown was averted as a deal was passed by the United States Congress just hours before the shutdown was to be put into effect. Ever since this economic crisis began in 2008, the public's attention has greatly increased towards issues plaguing the US economy (Pew Research Center, 2008). With constant news of wasteful government spending, corruption

in the corporate world and fraud in the financial sectors during this economic turmoil, all of the public's attention has quickly turned to outrage and anger towards government, the major financial institutions and large corporations. And now with the risk of future government shutdowns and a looming debt ceiling crisis that could result in the United States to default on its loans, the debate and scrutiny over the massive amount of spending by the federal government will only become more heated (Arnall,2011). In this hotly controversial United States economic climate there is one issue that often tends to be overlooked by many both in the government and the public: the amount of money and resources that are lost every year due to the various types of fraud committed by business organizations and individuals working with and for the federal government.

While it is impossible to know the actual extent of money and resources lost each year to fraud and wasteful spending in the federal government, the Association of Certified Fraud Examiners (2010) report that it is estimated that hundreds of billions of dollars are lost each year in the United States alone due to fraudulent economic behaviors. According to global estimates made by the Association of Certified Fraud Examiners (2010), the average organization loses upwards of 5% of its annual revenue each year due to fraud. When applied to the estimated 2009 Gross World Product (GWP), this figure translates to a potential worldwide loss of more than \$2.9 trillion each year due to fraudulent economic behaviors (Association of Certified Fraud Examiners, 2010). Furthermore the Association of Certified Fraud Examiners reports that (2010) 60% of all fraud cases in the world occur within the United States. While fraud is undoubtedly a global phenomenon, these results show that the United States of America is disproportionately affected by fraud more than any other country in the world. Therefore the researcher believes that fraud should be considered an extremely serious issue within the United States that warrants an enhanced focus from researchers in the future. It is reported by Reiman (2006) that consumer fraud costs Americans about \$190 billion per year, insurance fraud costs more than \$85 billion per year, securities theft and fraud \$40 billion per

year, credit card and check fraud at least \$13 billion per year and cellular phone fraud about \$1 billion per year. Furthermore, Friedrichs (2006) claims that health care fraud costs Americans as much as \$100 billion per year, which ends up accounting for more than 10 percent of the total health care costs in the country. When one sees these statistics, it quickly becomes apparent that there is currently a large crisis concerning economic fraud in the United States that is largely going unnoticed by the public.

1.1.1 Fraud in the Defense Industry

Within the United States, industries most commonly victimized by fraud are financial services, manufacturing, and government funded industries such as the defense industry (Association of Certified Fraud Examiners, 2010). Based on 6,199 investigations conducted by the US Department of Justice Civil Division from the years 1987 to 2008, the United States Government received 13.6 billion dollars in total settlements and judgments resulting from the prosecution of fraud committed against the federal government (US Department of Justice Civil Division, 2008). The figure of 13.6 billion dollars over 22 years comes out to less than \$1 billion per year, which is a miniscule return considering how much is lost to fraud each year. We must take into consideration that there is still much fraud occurring within the US government that is going unnoticed, unreported and uninvestigated (Association of Certified Fraud Examiners, 2010). According to the US Department of Justice (2008), the US Government received 4 billion dollars in settlements and judgments in regards to fraud prosecuted within the Department of Defense from 1986 to 2009. While this number may not seem significant in comparison to the yearly budget of the Department of Defense that typically totals in the hundreds of billions of dollars, one must keep in mind that the US Department of Justice Civil Division is not the only federal agency investigating and prosecuting fraud in the government. Each department of the executive branch in the federal government has their own Office of the Inspector General that is designed specifically to supply oversight and investigate fraud in their respective agencies. From the years of 2008 to 2011, the Department of Defense Office of the Inspector General

(DoD IG) convicted a total number of 903 individuals and organizations while returning over 6.15 billion dollars to the US Department of Defense (Department of Defense Office of the Inspector General, 2011). Based on the number of convictions by the DoD IG and dollar amount returned to the federal government, the average amount returned was about 6.8 million dollars per convicted individual or organization. Even though the amount of dollars returned to the US government through successful fraud investigations is a significant accomplishment which should be applauded, it is obvious that these successful investigations only return a small fraction of the total dollars lost to fraud each year.

Even more troublesome are the recent reports involving fraud in the Department of Defense mission for reconstruction in the now liberated country of Iraq. In June of 2011, it was reported that nearly 6.6 billion dollars intended for Iraqi reconstruction projects cannot be located or accounted for (Richter, 2011). According to Stuart Brown, the acting Special Inspector General for Iraqi Reconstruction (SIGIR), the missing 6.6 billion dollars may be “the largest theft of funds in national history” (Richter, 2011, p.2). While the exact details of what may have happened to the missing 6.6 billion dollars are unknown and still under investigation, US officials say that there is substantial evidence indicating “substantial waste, fraud and abuse in the actual spending and disbursement of the Iraqi reconstruction funds” that are currently unaccounted for in Iraq (Richter, 2011, p.2).

With so much money entering the Middle East to support military missions and reconstruction processes, the potential for fraud continues to loom larger every day. But the problem goes beyond just the war effort in the Middle East. The potential for fraud also exists in the United States with hundreds of billions of dollars being spent by the United States Department of Defense every year in order to fund research and development projects, service military bases, as well as build and maintain equipment used by our military (Lansing & Burkard, 1998). Procurement of military services and goods by the United States government constitutes a considerably large portion of the United States economy with 1.43% of the gross national

product being consumed by U.S. Department of Defense spending from 1981 to 1995 (Karpoff et al, 1999). Due to the wars in Iraq and Afghanistan, we have seen the Department of Defense budget balloon from 304 billion dollars in the fiscal year 2000 to almost 700 billion in fiscal year 2008 (Burton & McLean, 2009). There have also been substantial increases to the “goods and services” contracting, with more than 315 billion dollars awarded in the fiscal year of 2007 alone (Burton & McLean, 2009). Goods and services are typically procured through the use of Government contracts, with a contract most often being awarded to the lowest bidder or to a sole-source provider of a specific service or item from an organization in the private sector (Lander, Kimball & Martyn, 2008). Obtaining goods and services from the private sector through the use of government contracts by employing deceit or false statements is typically known as procurement fraud (Lander et al, 2009). Procurement fraud accounts for the majority of all fraud occurring within the defense industry and Department of Defense (Department of Defense Office of the Inspector General, 2011).

While procurement fraud may be the major form of fraud perpetrated, it is only one of the many types of fraud found within the defense industry today. Fraud in the defense industry is a very important issue that needs to be further examined, investigated and researched by the scientific community for the following reasons: 1) Federal spending is funded entirely by United States tax payer dollars, which means that every US citizen is directly affected by the waste and abuse of those who commit fraud in the defense industry 2) Fraud can lead to substandard parts and services that can lead to malfunction putting military members and the public at increased risk of harm or even death (Lander et al, 2008; Burton & McLean, 2009) 3) Reducing fraud will also help reduce the expenditures currently lost in the US federal budget and can alleviate major economic issues facing our country such as reducing the size of the federal budget. If researchers were able to obtain data that measures the public perceptions of fraud occurring within the defense industry, we would then be able to make assumptions about the levels of knowledge and understanding surrounding defense industry fraud.

Another issue that is in need of evaluation by the scientific community is the issue of whistle-blowing. At this time, whistle-blowing is how a majority of illegal and unethical behaviors are detected by law enforcement agencies and is considered the most important tool for detecting fraud in the military industry (Department of Defense Office of the Inspector General, 2011) Due to the serious nature of fraud in the defense industry, it is very important to examine the relationship between whistle-blowing and fraud in hopes to obtain some insight into the general effectiveness of whistle-blowing. While much scientific literature exists on whistle-blowing behavior within various other government agencies and private sector, there is little research that exists specifically to individuals working within the defense industry. If we are able to obtain data in regards to the perceptions of whistle-blowing behaviors amongst the public, we can make some assumptions on the likelihood that individuals would engage in whistle-blowing.

The purpose of this study is to examine the possible relationship between perceptions of fraud occurring within the defense industry and the likelihood of participating in whistle-blowing programs amongst students attending the University of Texas at Arlington in the year of 2012. The researcher hypothesizes that this study will indicate that individuals with higher perceived levels of fraud occurring within the defense industry will be less likely to participate in whistle-blowing programs. This hypothesis is based upon theories of crime that assert that white collar crimes such as fraud are motivated by cultural pressures such as competition and success (Coleman, 1994; Messner & Rosenfeld, 2001). Due to these assertions, the researcher believes that individuals whom believe that fraud occurs often will be less likely to engage in whistle-blowing due to a perceived normalization of fraud as a tool to curb competition and achieve success in the defense industry. The researcher believes that the defense industry will hold particularly true to this normalization of fraud due to the widespread use of competitive low bid contracting as a means to obtaining work. If this hypothesis holds true, then it could also have serious implications on the effectiveness of whistle-blowing as a means of bringing instances of fraud to light for federal investigators. This study will also examine the possible

gender differences in regards to perception of fraud and whistle-blowing behaviors based upon issues found in prior research on whistle-blowing (Carli & Eagly, 1999; Rehg, Miceli, Near & Van Scotter, 2008).

For the purpose of this study, the researcher will define the concept of fraud as, "Any intentional deception designed to deprive the United States of something of value or secure from the United States a benefit, privilege, allowance, or consideration to which he or she is not entitled." (DoD Instruction 5505.2 as cited by Burton & McLean, 2009, p.38). The concept of whistle-blowing will be defined as, "The disclosure by organization members (former or current) of illegal, immoral and illegitimate practices under the control of their employers to persons and organizations that may be able to effect action" (Near & Micelli, 1985; as cited by Dasgupta & Keshawani, 2010 p57).

At this time, there exists a large gap in the research pertaining to fraud in the defense industry that is being committed against the federal government and the U.S. Department of Defense. While there is no real lack in research involving the concept of whistle-blowing, there is a gap in research involving whistle-blowing specific to the defense industry. The researcher is hopeful that results from this study will help to fill these gaps currently found in the research literature regarding the concepts of fraud and whistle-blowing as they occur in the defense industry.

CHAPTER 2
LITERATURE REVIEW

2.1 Defining Fraud

One of the most widely quoted definitions for the concept of fraud is found in Black's Law Dictionary: "A false representation of a material fact, whether by words or by conduct, by false or misleading allegations, or by concealment of that which should have been disclosed, which deceives another so that he acts, or fails to act, to his detriment" (Burton & McLean, 2009 pp38). This definition is very broad so that it can include fraud across all levels of society, including scenarios that differ in seriousness such as defrauding a neighbor to defrauding a nation of people. There also exist definitions of fraud which are not as broad in scope, such as defining fraud as: "intentional deception by concealing or misrepresenting information that harms the financial interest of another person(s) and benefits the financial interest of the perpetrator" (Rossouw, 2000, p.887) While this definition is much less general and less convoluted, it is still lacking in specificity to this research topic. There also exist many definitions for fraud that are much narrower in breadth and better suited to one specific organization or agency. Such is the case for the Department of Defense (DoD) definition for fraud found within the DoD Instruction 5505.2 section labeled, 'Criminal Investigations of Fraud Offenses' which defines fraud as: "Any intentional deception designed to deprive the United States of something of value or secure from the United States a benefit, privilege, allowance, or consideration to which he or she is not entitled. Such practices include:

- Offering payment or accepting bribes or gratuities
- Making false statements
- Using false weights or measures
- Evading or corrupting inspectors or other official

- Deceiving either by suppressing the truth or misrepresenting a material fact
- Adulterating or substituting materials
- Falsifying records and books of accounts
- Arranging for secret profits, kickbacks, or commissions
- Conflict of interest cases, criminal irregularities, and the unauthorized disclosure of official information relating to procurement and disposal matters" (as cited by Burton & McLean, 2009 p38)

It is apparent that this definition is very specific to fraud concerning the US federal government and Department of Defense. For the purpose of this study, the researcher will refer to the Department of Defense's DoD Instruction 5505.2 definition of fraud due to its thoroughness, narrow scope and its designed relevancy to the specific industry being examined within this study.

2.1.1 Understanding Fraud in the Federal Procurement Process

Federal procurement occurs when a federal government agrees to a contract of business with a corporation, company or individual within the private sector in order to obtain items or services (Lander et al, 2008). Typically these contracts are awarded based on a competitive bidding process. These bidding processes involve groups of contractors that each proposes a bid to the government that includes a price and timeframe for delivering on certain goods or services. Once all bids are in place the government then reviews the bids and subsequently awards a contract to an organization fit to carry out the work being proposed. Most often the government awards the contract to the organization with the lowest bid put forth in the contracting process to promote efficiency and cost savings (Lander et al, 2008). Government agencies generally choose contractors through the use of the competitive bidding process methods, but been known to use non-competitive or sole-source methods to select a

contractor if the item or service is made exclusively by only a small number of contractors (Lander et al, 2008).

Procurement fraud occurs when a business under contract to do work for the government commits one of the following acts: product substitution, cost mischarging, defective pricing, anti-trust violations, making false statements, offering bribes or kickbacks, or falsifying records (Lander et al, 2008). One of the most common types of procurement fraud that occurs is the act of making false statements to the federal government (Burton & McLean, 2009). Making false statements occurs when a company or individual falsifies any information it may provide to the government, whether during the process of contractual business or during an inquiry of investigation (Burton & McLean, 2009). Product substitution occurs when a contract calls for a specific item with certain specifications but instead is deceptively replaced by another similar item or product that appear to have the specifications called for in the contract (Burton & McLean, 2009). Cost mischarging occurs when a contractor inflates the prices of an item during the contract bidding process in order to increase profit, similarly defective pricing occurs when a contractor intentionally uses old or inaccurate cost data to inflate costs (Lander et al, 2008). Anti-trust violations can occur when a group of contractors use price fixing to mask intentional inflation for profits or by using any other kind of conspiracy in order to win contracts (Lander et al, 2008). In the realm of competitive government contracts, bid rigging is the most common anti-trust violation, this occurs when a group of different contracting companies work together to falsify bid information to appear they are competitively bidding when in actuality they are allowing each other to win contracts (Cullen, 2009). Contracting officers are military officers who are given the task of awarding out contracts, and these individuals are also subject to fraud behaviors by using the power of their position to award contracts to contractors who offer bribes or kickbacks (Lansing & Burkard, 1991). All of these are issues that currently plague the bidding process and lead to procurement fraud within the defense industry.

2.2 Defining Whistle-blowing

In this analysis of the literature the researcher encountered many different and varying definitions for the concept of whistle-blowing. We will examine these many different definitions that range from those found in law, public policy and research. First we must point out that whistle-blowing has a widely used synonym known as “Public Interest Disclosure” (Griffith & Tengah, 2011). While knowing that multiple terms exist for this concept will be beneficial to this study, it should be noted that the term Public Interest Disclosure is more widely used within the international community rather than the in United States where “whistle-blowing” appears to be the concept of the collective conscious (Griffith & Tengah, 2011). For this reason, we will rely on the use of the term whistle-blowing as the primary conceptual term of this study.

During the 1970s, many scandals erupted both within the US federal government and in the private sector involving fraud and corruption (Kaiser & Smith, 1991; Rocha & Kleiner, 2005). Many of these scandals came to light through individuals working within each of these federal agencies and business organizations coming forward to report wrongdoing they had witnessed during their time as an employee. The word “whistle-blower” was developed directly to describe individuals making allegations against a company or agency they work for rather than an individual who reports allegations from working outside the agency or company (Rocha & Kleiner, 2005). As cited by Dasgupta & Keshawani (2010, p.57), the most standard definition of whistle-blowing found within the current research literature is defined as “The disclosure by organization members (former or current) of illegal, immoral and illegitimate practices under the control of their employers to persons and organizations that may be able to effect action” (Near & Micelli, 1985). According to Johnson (2003), whistle-blowing must contain four key components: “1) A person acts with the intention of making information public; 2) The information is transmitted to people outside the organization who make it public and a part of the public record; 3) The information has to do with possible or actual nontrivial wrongdoing in a company and; 4) The individual exposing the organization is not a journalist or ordinary citizen,

but an employee or former employee of the organization (as cited in Rocha & Kleiner, 2005, p.3-4).

The concept of whistle-blowing can also be broken down into two different types known as internal and external whistle-blowing. Whether or not whistle-blowing is considered external or internal is dependent upon the party to whom the complaint is made (Dasgupta & Keshawani, 2010). According to the literature, an internal whistle-blower is considered when the complaint of the wrongdoing is made by the whistle-blower to persons within the organization they are currently or have been employed by, while external whistle-blowing is a complaint made by a current or former employee to an external body outside of the employing organization, such as the government or a law enforcement agency (Near & Miceli, 1996; Bouville, 2007; Ponnu, Naidu & Zamri, 2008 as cited by Dasgupta & Kesharwani, 2010). For the purpose of this study, we will consider both external and internal whistle-blowing inclusive to our concept of whistle-blowing by not differentiating between the two types.

While for our conceptualization for fraud we were looking for a more narrow definition that would apply only fraud within the government and military industry, we hope our definition of whistle-blowing to be more general in nature. In the Whistle-blower Protection Act of 1989 the US Congress defined whistle-blowing as “making a disclosure of illegal or improper government activities” (Whitaker, 2007). Unfortunately this definition is very specific and applicable only to whistle-blowing involving government employees. This makes this particular definition of whistle-blowing incompatible with our study since the individuals set to participate within the study will be students that may not be federal or government employees. For the purpose of this study we will conceptualize the term whistle-blowing by referring to the definition of whistle-blowing provided by Near & Miceli (1985), which defines whistle-blowing as, “The disclosure by organization members (former or current) of illegal, immoral and illegitimate practices under the control of their employers to persons and organizations that may be able to effect action”.

2.2.1 Understanding the Process of Whistle-blowing

According to Dasgupta & Kesharwani (2010), there exist three important parties that are critical to explaining the process of whistle-blowing: the whistle-blower, the perpetrator of the wrongdoing and the party to whom the complaint of wrong doing is being reported to. Furthermore, Near & Miceli (1985) explains that in general whistle-blowing is comprised of four steps. The whistle-blower must first decide whether the observed activity is actually a form of wrongdoing that would be considered illegal, immoral or illegitimate (Near & Miceli, 1985). This tells us that the whistle-blowing process is dependent upon the perception of what the potential whistle-blower believes constitutes “wrong doing”. This is one of the many issues that this study hopes to address by attempting to examine possible issues that affect this perception of wrongdoing and how that can ultimately affect the decision to whistle-blow. For this reason, we plan to ask questions in our survey instrument that deal with how potential whistle-blowers perceive fraud and its seriousness.

In the second step the whistle-blower must weigh several alternatives in mind while taking such a decision such as “weighing the seriousness of the wrongdoing and whether without blowing the whistle it is possible to stop such an activity” and whether the whistleblower knows whom they should report the wrongdoing to (Near & Miceli, 1985 as cited by Dasgupta & Kesharwani, 2010, p.59). The issue of believing that wrongdoing can be fixed without whistle-blowing occurring and whether or not potential whistle-blowers know whom they should report wrongdoing to will be addressed within this studies survey instrument. According to Near & Miceli (1985), the personal situations that the whistleblower is currently in or are facing will also determine their decision to whistle-blow. This will involve issues such as whether or not a potential whistle-blower “will be able to endure the financial and emotional costs associated with disclosure” and “what kind of support emotionally and financially can they gather at the event of a public disclosure” (Dasgupta & Kesharwani, 2010, p.59).

Once the potential whistle-blower makes the decision to blow the whistle upon the wrongdoing they have witnessed, it is then time for the organization to react to the issue that has been reported (Dasgupta & Kesharwani, 2010). Reaction to whistle-blowing is dependent upon many factors such as the reliability of the complaint, seriousness of the wrongdoing and motivations of the complainant (Dasgupta & Kesharwani, 2010). But the reaction is likely dependent on the type of organization who receives the complaint. For example if the whistle-blowing takes place within the private sector and happens to be reported internally, this private organization may decide to take no action in response to the complaint (Near, J.P., Rehg, M.T., Van Scotter, J.R., & Miceli, M.P., 2004; Dasgupta & Kesharwani, 2010). Conversely, when the government receives an external or internal report of whistle-blowing, government investigators will conduct a preliminary investigation concerning the wrongdoing no matter the circumstances of whether the whistle-blower is considered to be unreliable or not (Near, J.P. et al, 2010; Whitaker, 2007). Since private companies and organizations can rightfully turn a blind eye towards possible wrongdoing brought to light through whistle-blowing, government investigations have become a very important tool into uncovering fraud since there exists a legal obligation to investigate any claims of wrongdoing.

In the final step of the whistle-blowing process the organization or agency must decide how to respond to the individual who has made the formal complaint (Near & Miceli, 1985). This can lead the organization to either ignore the whistle-blower entirely or cause the organization to attempt to silence any whistle-blowers by discrediting any individuals who make charges against the organization (Dasgupta & Kesharwani, 2010). There also lies the possibility that the organization may attempt to retaliate against the individual who has decided to whistle-blow by “imposing professional sanctions against” them (Dasgupta & Kesharwani, 2010, p.60). According to Dasgupta & Kesharwani (2010, p.60), “the process of whistle-blowing may undergo some modifications from case to case” for example, “if an employee after blowing the whistle internally does not feel satisfied by the actions of the organization, they can choose to

repeat this process this time by making the disclosure to external agencies". These external agencies most often are represented by federal investigation agencies whose main purpose is to investigate illegal or unethical business practices in order to better protect the United States citizen. In regards to the Defense industry, there is an entire agency known as the Department of Defense Hotline (DoD Hotline) which is set up specifically to hear and investigate anonymous whistle-blower claims. The DoD Hotline is maintained by the Department of Defense Office of the Inspector General (DoD OIG) and is considered one of the most important tools to combating fraud in the defense industry (Department of Defense Office of the Inspector General, 2011).

2.3 Significant Historical Moments Concerning Fraud and Whistle-blowing

In order to better ground our understanding of fraud and whistle-blowing, we should also examine some of the significant historical moments concerning the concepts of fraud and whistle-blowing. The art of deception and fraudulent behaviors have existed for hundreds if not thousands of years. For many ages fraud was seen as an unethical and immoral act, but not until the Federal False Claims Act of 1863 did the act of making a fraudulent statement against the US government become a wholly illegal act (Lahman, 2005). Today this act is still the primary legal tool used to prosecute the crimes of fraud committed against the United States federal government.

2.3.1 The False Claims Act

In 1863, the United States of America in the midst of a civil war between the Northern Union and the Southern Confederate Armies. Just like during any war effort of the modern era, the Civil War necessitated certain supplies that must be procured by the government in order to keep the war effort going and moving towards a successful military campaign. The procurement process during the Civil War era would include the purchase of anything from rifles, ammunition, rations, general provisions and transportation through the use of horses and mules (Lahman, 2005). According to Lahman (2005), during the Civil War the northern armies were sold

unscrupulous amounts of “decrepit horses and mules in ill health, faulty rifles and ammunition, and rancid rations and provisions among other unscrupulous actions” (p.1). In one instance, the union armies were shipped boxes of sawdust instead of guns and were swindled into purchasing the same group of cavalry horses multiple times (Phillips & Cohen, 2010). This fraudulent behavior conducted by the early day defense contractors led President Abraham Lincoln to urge congress to pass what was then known as the “Informers Law” or “Lincoln Law” (Lahman, 2005). In March of 1863, the United States Congress would pass “Lincolns law” into what is now known today as the “Federal False Claims Act of 1863” (Lahman, 2005). This act would make it “illegal for someone (claimants) to present false statement in writing or claims to the United States government to improperly obtain more money from the government than actually owed by the government” (Lahman, 2005, p.3). The False Claims Act also authorized private citizens in acting to bring charges against an individual or organization whom may be believed to be defrauding the government. If a private citizen were to file a suit against a private organization on behalf of the government it was to be known as a “qui tam”, which comes from English common law and can be roughly translated into “one who sues for the king” (Lahman, 2005). Individuals who filed qui tam actions were allowed by the government to be awarded a portion of up to 50% of the amount the courts decided to return to the government as a result of fraud being successfully prosecuted. These individuals who filed “qui tam” lawsuits are now known today as what we call “whistle-blowers”.

As many years passed, the issue of fraud in the government became increasingly complex with the industrial revolution and rise of modern capitalism in America. The False Claims Act would be revisited by Congress in 1943 by adding amendments that significantly lowered the monetary awards given to individuals who file qui tam actions while also eliminating qui tam lawsuits under circumstances where the government was aware of illegal behavior prior to the qui tam being filed (Lahman, 2005; Phillips & Cohen, 2010). These 1943 amendments

severely crippled the use of qui tam cases and as a result fraud against the government increased (Lahman, 2005; Phillips & Cohen, 2010).

During the 1980s, there was a massive defense buildup in the United States as a result of the threat of a possible Cold War between the Soviet Union and the United States. As a result of this military industry boom, there were many instances of fraud, waste and abuse that were discovered by government officials. As a result, the Federal False Claims act was once again amended in the year of 1986 that provided significant qui tam reward increases, extended statute of limitations, a lowering of the standard of proof for fraud and much needed whistleblower protections (Lahman, 2005). The Federal False Claims Act continues to be one of the most important legislative tools that federal investigators, government officials and even average citizens have to help combat fraud in our society. But even with these landmark legislative tools, fraud continues to be an issue that continues to threaten the foundation of our economy and society. No better example of massive government fraud, waste and abuse can be used than those found in certain federal government agencies in the late 1970s.

2.3.2 The Rise of Modern Federal Procurement Fraud

One of the first large procurement fraud scandals to consume the interest of the public occurred in the late 1970s within the Government Services Administration (GSA), a federal government agency which procures and distributes resources and materials in order to support other federal government agencies (Kaiser & Smith, 1991). The public as well as fellow government employees were alarmed to find that employees working for the GSA were using fraudulent procurement methods to not only benefit themselves but also the private companies they were rewarding contracts to (Kaiser & Smith, 1991). Fraud is not only a one way street in regards to the private sector defrauding the government, this case proved that government employees are just as likely to benefit themselves and others by employing fraudulent procurement schemes. This GSA fraud scandal represented the largest monetary scandals of its time resulting in over 100 guilty pleas and convictions of GSA employees, contractors and

individuals in the private sector. According to Kaiser & Smith (1991), the GSA procurement fraud scandal revealed serious systemic issues such as a “lack of effective audit and investigative operations, lack of policies that protected whistleblowers, lack of quality control measures and even procedures that permitted collusion between GSA contractors and private firms” (Kaiser & Smith, 1991, p.3). These issues were found to be compounded by a long history of political patronage and favoritism in GSA hiring that contributed to mismanagement, incompetence and a culture of corruption. The magnitude of government scandals involving fraud such as the one that occurred in the GSA would eventually lead to the United States Congress creating of the Inspector General Act of 1978.

2.3.3 The Inspector General Act of 1978

The concept of the Inspector General can be traced from as far back as 200 years ago in American history. During the period of the Revolutionary War, the United States Continental Army used an Inspector General to give an independent review of combat readiness of the Army’s troops (Council of the Inspectors General, 2003). This was one of the prime examples of the use of independent agents for oversight in early United States history. The Inspector General would continue to be used under certain capacities in government agencies into the 20th century, but it was not until the 1960s that the United States federal government began to consider creating a mandate for the use of the Inspector General in all executive agencies of the government (Council of the Inspectors General, 2003). This movement to create independent statutory Inspector General began in a house subcommittee chaired by Congressman Fountain. This subcommittee would later reveal in 1974 that the Department of Health, Education and Welfare “lacked effective processes for investigating program fraud and abuse” (Council of the Inspectors General, 2003). This alarming news along with other public outrage towards events such as the aforementioned GSA corruption scandal, would lead to a spearheaded effort by Senators John Glenn and Tom Eagleton to develop the bill that would become the “Inspector General Act of 1978”. Senators Glenn and Eagleton would be

instrumental to its enacting as well as overseeing the implementation of the Inspector General Act of 1976 (Council of the Inspectors General, 2003).

The Inspector General Act featured the implementation of many new ideas into government by increasing the overall oversight and investigative power of the executive agencies within the federal government. The Inspector General Act of 1978 stated its mission with the following five main objectives: 1) *To conduct independent and objective audits, investigations and inspections* 2) *to prevent and detect waste, fraud and abuse* 3) *Promote economy, effectiveness and efficiency* 4) *Review pending legislation and regulation* 5) *Keep the agency head and Congress fully and currently informed* (The Inspector General Act of 1978). Billions of tax payer dollars are spent and invested into the major departments of the executive branch every year, so the efficient and effective spending are paramount concepts to having a well working government that effectively and efficiently serves its citizens. In order to achieve the mission of the Inspector General Act, the United States Congress knew that a very well organized implementation must occur. At the time of the passage of the Inspector General Act of 1978, the act established the creation of 12 different Offices of the Inspector General, one for each Department of the executive branch (The Inspector General Act of 1978). This created a very difficult issue for Congress, as they had to find a way to be able to allow the Inspector General to be independent of each agency, while simultaneously being under the general supervision of that agency's Secretarial executive (IG Net: Federal Inspectors General, 2009). In order to achieve this, the Inspector General would be given absolute investigative power over the agency they are headed by. According to the Inspector General Act of 1978 the Inspector General is authorized to: 1) *have direct access to all records and information of the agency;* 2) *have ready access to the agency head* 3) *conduct such investigations and issue such reports as the IG thinks appropriate* 4) *issue subpoenas for information and documents outside the agency* 5) *administer oaths for taking testimony* 6) *hire and control their own staff and contract resources* (Inspector General Act of 1978). These powers are essential to making the Inspector

General wholly independent entities as well as give the power to thoroughly and effectively investigate an agency for wrongdoing.

The Inspector General's role is mainly seen as protecting from wasteful spending and fraud, but they are also expected to advise the heads of each federal agency. Each Inspector General must report directly to the head of each agency to suggest and advise ways that enable the agency to enact more effective strategies and policies (The Inspector General Act of 1978). The Inspector General Act has been seen as a major success to eliminating waste, fraud and abuse within the federal government and there is a belief that with more resources, even more public tax dollars could be rightfully returned to the United States and its citizens as a result of the Inspector General's work in oversight (Council of the Inspectors General, 2003).

2.3.4 The Packard Commission

During the 1980s the United States saw a massive expansion in military spending as a result of the Cold War driven arms race against the Soviet Union. With such a large amount of money now flowing into a historically problematic defense industry, the risk of fraud, waste and abuse loomed even larger than before. As a response to these growing concerns, President Ronald Reagan established the "President's Blue Ribbon Commission on Defense Management", better known as the "The Packard Commission".

The Packard Commission was officially created in 1986 in an attempt to reduce inefficiencies in the defense industry procurement system (Kurland, 1993; Christensen, Searle & Vickery, 1999). While the Packard Commission set out to examine the defense industries management practices in general, it focused more narrowly on the acquisition process which was long considered to be the most problematic area in which fraud occurred (Christensen, Searle & Vickery, 1999). The Packard Commission reported that "the primary problems with the acquisition process were the same ones identified in previous decades: cost growth, schedule delays [and] performance shortfalls" (Christensen, Searle & Vickery, 1999, p.252). The Commission recommended that there should be a goal of "streamlining the acquisition process,

increase tests and prototyping, changing the organizational culture, improving planning, and adopting the competitive firm model where appropriate” (Christensen, Searle & Vickery, 1999 p.251). Many of these recommendations were a considered a mere continuation of past reform efforts concerning fraud, waste and abuse in the defense industry (Dews, Giles, Barbour, Harris & Hesse, 1979; Gates, 1989). The Defense Industry Initiative (DII) was subsequently created from these recommendations put forth by the Packard Commission (Kurland, 1993). The DII was created to promote ethical self-regulation of the defense industry in order to attempt to control levels of fraud, waste, abuse and other unethical behaviors (Kurland, 1993).

Much attention was paid to the Packard Commissions recommendations due to largely reported defense industry scandals came to light of the public during the time of the Packard Commissions investigation (Thomas, Seaman & Van Voorst, 1986; Fairhall, 1987). One case in particular that made headlines was the case of the “\$435 hammer” (Fairhall, 1987). It was found that simple Claw Hammers, which could be purchased at a local hardware store between \$7-\$10, were being billed to the Department of Defense for \$435 a piece (Fairhall, 1987). The American taxpayer was outraged by the \$435 claw hammer scandal and as a result public pressure mounted on Congress and the President to attempt to curb this behavior that had led to such irrational costs for the American tax payer. Due to such outrage, the Packard Commission’s recommendations were taken very seriously and implemented as quickly as possible (Christensen, Searle & Vickery, 1999). In the years following the recommendations made by the Packard Commission there has been much debate over the effectiveness of the commissions implemented policies (Kurland, 1993; Mayer-Sommer & Roshwalb, 1996; Chwastiak, 1998; Christensen, Searle & Vickery, 1999)

2.3.5 The Whistleblower Protection Act of 1989

After the many scandals involving fraud within the federal government, there was legislation introduced by the United States Congress that would further protect those who choose to blow the whistle on unethical or illegal behavior involving government officials. This

legislation would be known as “The Whistleblower Protection Act of 1989” and would set out to protect all individuals who would choose to report misconduct by limiting the chance of retaliation amongst those they were reporting against (Whitaker, 2007). The Whistleblower Protection Act of 1989 initially only applied these rights to employees within the federal government, while private citizens would receive little to no protections through other various laws passed by Congress that related to whistle-blowing (Whitaker, 2007). For example, qui tam disclosures found within the False Claims Act as well as Inspector General policies both provide limited protections to private citizens who choose to become whistle-blowers (Lahman, 2005; Phillips & Cohen, 2010; Department of Defense Office of the Inspector General, 2010). In 2007, the 110th US Congress expanded the protections of the whistle-blower act to certain individuals working within the federal government that specialize in national security issues (Whitaker, 2007). Furthermore, one of the most important aspects of the 2007 amendments added to the whistleblower protection act was section 11, which extended whistleblower protections to all employees of companies whom hold contracts with the government (Whitaker, 2007). This allowed for all employees and workers within the defense industry to receive the same whistle-blowing protections that federal employees receive. These added amendments should have significant impacts on the amount of whistle-blowing now seen within the defense industry.

2.3.6 The National Procurement Fraud Task Force

In October 2006 the Bush administration created the National Procurement Fraud Task Force (NPFTF) with the mission of promoting the detection, prevention, and prosecution of procurement and grant fraud by targeting government contractors in criminal and civil cases for engaging in procurement fraud (Latham & Watkins, 2010). The NPFTF has recovered monetary payments exceeding \$2 billion and secured prison sentences longer than one year in over a quarter of its reported criminal cases since the task force’s inception (Latham & Watkins, 2010). After the financial crisis of 2008-2009, there were many worries that wide spread and systemic fraud may have played a factor in the collapse of the economy and major financial institutions

(Reavis, 2009). Due to these worries, the Obama administration began to funnel additional resources to fraud investigators by establishing the Financial Fraud Enforcement Task Force (FFETF) (Latham & Watkins, 2010). The objective of the FFETF would supplement efforts already underway to “combat mortgage, securities and corporate fraud in the financial system” in order to respond to the recent financial meltdown as well as attempt to “prevent another financial meltdown from happening in the future” (Latham & Watkins, 2009, p.1). In an attempt to recover from the dire economic conditions of the 2008-2009 economic collapse, the Bush administration funneled massive amounts of money into the financial credit institutions with a bailout program known as the Troubled Asset Relief Program of 2008 (TARP) while the Obama administration would additionally pass a stimulus bill known as the American Recovery and Reinvestment Act of 2009 in an attempt to create jobs and economic growth (Latham & Watkins, 2010). The cost associated with these two programs is upwards of 1.5 trillion dollars, and with that amount of government funds entering into the US economy, the risk of fraud is extremely high (Latham & Watkins, 2010). In order to minimize any fraud associated with these two massive government economic programs, the National Procurement Fraud Task Force has begun work as the main oversight over the American Recovery and Reinvestment Act while the Financial Fraud Enforcement Task Force will act as oversight on the Troubled Asset Relief Program (Latham & Watkins, 2010). The National Procurement Fraud Task Force and Financial Fraud Enforcement Task Force represent the United States government’s response to the growing and very serious threat of fraud to this nation’s future economic growth and security.

2.4 Theories of White Collar Crime and Fraud

In this section we will examine the theoretical perspectives and implications of fraud currently found within the scientific literature. Unfortunately, there is not much current theoretical research that exists solely in regards to explaining the concept of fraud. Although, there exists theoretical research that focuses more on the concept of white-collar crime, which is inclusive of describing all types of economic crimes including fraud. For this reason, the researcher believes

that these theoretical perspectives concerning the concept of white collar crime should allow us to better understand how to examine the concept of fraud in this study.

2.4.1 The Concept of White-Collar Crime

The term white-collar crime was first termed by the well known social scientist Edwin H. Sutherland during his presidential address to the American Sociological Association in 1939 (Geis, Meier & Salinger, 1995). In his now famous book "White-collar Crime" Sutherland would define White-collar crime as "a crime committed by a person of respectability and high social status in the course of his occupation" (Sutherland, 1949, p.7). Sutherland's white-collar crime concept captured the attention of many in the scholarly community and lead to a new found interest in research in crime in the upper class of America (Geis, Meier & Salinger, 1995). Even though Sutherland is credited with terming the concept of white-collar crime as well as popularizing it amongst social scientists, many other social scientists had discussed topics similar to that of white collar crime prior to the work of Sutherland (Braithwaite, 1985). This is due to the fact that white-collar crime has existed under a number of different criminological terms and identities including "upperworld crime, crimes of the powerful, avocational crime, economic crime and abuse of power" (Geis, Meier & Salinger, 1995, p.2).

Much of the early literature concerning Sutherland's concept of white-collar crime focused on asking whether or not white-collar crime should even be considered a crime (Sutherland, 1945; Tappan, 1947). Sutherland (1945) points out that much of the focus of the public and the scientific community is on what he called "low class crimes". For this reason, it leads Sutherland to question whether or not white-collar crime should even be considered a crime. Sutherland (1949) went on to state that "the public does not think of the businessman as criminal, because the businessman does not fit the stereotype of criminal" (p.224). Public reactions to white-collar crime have been seen as indifferent to white-collar offenders and in some cases led the public to actually feel sympathetic towards white-collar offenders (Meier & Short, 1983). Sutherland (1945) & Tappan (1947) both determined that even with the lack of

public attention and animosity towards white-collar crime as compared to “low class crime”, there is no doubt that white-collar crime should be labeled as crime due to the long held belief that anyone who violates laws of any nature should be labeled as criminal.

In more recent literature there have been discussions and debate surrounding the definition of white-collar crime that was developed by Sutherland (Meier & Short Jr, 1983; Braithwaite, 1985). Braithwaite has perhaps been the most vocally opposed to the work of Sutherland as well as most critical of the concept of white-collar crime as a whole. Braithwaite (1985) stated that many of the scholarly findings on white-collar crime have been modest at best and their impacts on mainstream sociological theory have been ultimately unimportant. Braithwaite (1985) has also been highly critical of Sutherland’s definition of white-collar crime by focusing his criticisms on the inclusion of class (specifically the upper class) as a criterion of its definition and because of the definitions lack of accounting for crimes such as welfare fraud. Braithwaite (1985) believed this to be a very serious issue due to the fact that Sutherland’s flawed conceptual definition of white-collar crime has been highly influential towards public policies over the past several decades. Braithwaite (1985) ultimately recommended that crime not be defined by an occupational role, but rather by specifically focusing on and defining each criminal behavior typically associated with the general term of “white-collar crime”. Another similar recommendation for white-collar crime was established by Clinard & Quinney (1970) in which they asserted that white-collar crime should be divided into two groups: occupational crime and corporate crime. By their definition occupational crime consists of “offenses committed by individuals for themselves in the course of their occupations against their employers” and corporate crime consists of “offenses committed by corporate officials for the corporation itself” (Clinard & Quinney, 1970, as cited by Braithwaite, 1985, p.18). Braithwaite (1985) concluded that while the definition of Clinard & Quinney is a step in the right direction, there is still further need to attempt to study specific types of white-collar crimes rather than the general theme of White-collar crime. This study attempts to ground itself in this recommendation

made by Braithwaite by focusing the scope of this study specifically on the crime of fraud rather than white-collar crime in general.

2.4.2 Understanding the Motivations of White-Collar Criminality

In this section the researcher will review the various theoretical perspectives found within the literature that attempt to determine the motivations and possible causations of white-collar criminality. The first theory of white-collar criminality we will discuss was developed by Hirschi and Gottfredson (1987). Hirschi & Gottfredson outlined a general theory of crime that would be “capable of organizing the facts about white-collar crime at the same time it is capable of organizing the facts about all forms of crime” (Hirschi & Gottfredson, 1987, p.949). Hirschi and Gottfredson (1987) believed that white-collar crime, along with all other types of crime, could be explained by one general criminological theory based on the idea of social controls, pressures and their effects on self-control. According to Hirschi and Gottfredson (1987) the natural process of socialization builds self-controls that reduce the likelihood of engaging in antisocial behaviors such as crime. This proposes that those who engage in antisocial or criminal behavior exhibit a lack of self-control (Hirschi & Gottfredson, 1987). It is the belief of Hirschi and Gottfredson that a lack of self control is generally true amongst those engage in criminal behavior and could be the unifying factor in explaining not only white-collar crimes, but all types of crime in our society (Hirschi & Gottfredson, 1987).

According to Steffensmeir (1989), there are two major issues concerning the Hirschi and Gottfredson's general theory of crime as it applies to white-collar crime. The first issue concerns the fact that Hirschi and Gottfredson claim that the demographic distribution (ie race, sex and age) of white-collar crime is the same for ordinary crime (Steffensmeir, 1989). The second issue is that Hirschi and Gottfredson claim that white-collar crime is a “relatively rare phenomenon” according to crime statistics (Steffensmeir, 1989). Steffensmeir (1989) believes that both of these assumptions are incorrect based on that Hirschi and Gottfredson drew their conclusions from UCR data, which Steffensmeir believes is flawed and limited due to their only

representing reported crimes. This general theory of crime that Hirschi & Gottfredson propose has very interesting and compelling implications on the causes of white-collar crime. While this study will not be able to measure the concept of self-control, the researcher suggests that future research should attempt to address this theory of white-collar crime.

One of the largest issues that exist within theoretical literature surrounding the topic of white-collar crimes is how society should react to the criminal acts of corporations versus those of individuals. Cressey (1988) asserts that corporations cannot commit criminal acts due to their lack of intent actions and the fact that these actions cannot be explained by any behavioral theory. Cressey (1988) expanded on this idea by stating that, "corporations and organizations, being inanimate, cannot formulate criminal intent" (p.356). Cressey (1988) concluded that an "emphasis must be placed on explaining the criminality of biological persons because corporations cannot commit crimes" (p.357). Conversely, Braithwaite & Fisse (1990) argue that corporations should be considered criminal because they 1) can act and have intentions, 2) have legal and ethical responsibilities and 3) can suffer from punishment. Braithwaite & Fisse (1990) believe that because corporations can experience these three things, criminal theory should be applied to corporations just as it would be with individuals. Braithwaite & Fisse (1990) contend that it may be of more value and effectiveness to target and punish the corporations rather the individuals. Geis (1994) however believes that both Cressey and Braithwaite & Fisse make valid points about the possible role of corporations in criminal theory. Geis (1994) agrees with Cressey that we too often "anthropomorphize" corporations by treating them as human beings. Geis (1994) furthers this argument by adding that "corporations cannot act" and ultimately "their actions are those of people" (p.413). But Geis (1994) also agrees with Braithwaite & Fisse that the corporation is an important and essential factor to understanding what the law declares to be "corporate crime". For the purpose of this study, the researcher will attempt to test ideas from these theories by measuring the views and perceptions of fraud

occurring within the defense industry of students see if fraud is believed to be an issue that is viewed as an organizational or an individual issue.

In their book "Crime and the American Dream", Messner & Rosenfeld (2001) propose a theory that attempts to explain crime through an in depth examination of the concept of the "American Dream". According to Messner & Rosenfeld (2001 p 62), the American Dream "exerts pressures toward crime by encouraging an anomic cultural environment, an environment in which people are encouraged to adopt an 'anything goes' mentality in the pursuit of personal goals" (p.61). Messner & Rosenfeld (2001) also argue that "the anomic pressures inherent in the American Dream are nourished and sustained by a distinctive *institutional balance of power* dominated by the economy" (p.61). This general theory of crime is believed to be able to explain the causes of both white-collar crime as well as all other types of crime by focusing on the social pressures inherent in attempting to achieve the American Dream. Messner and Rosenfeld (2001) base their theory on ideas laid out by Robert Merton in his essay "Social Structure and Anomie", which describes the United States as being different from all other modern industrial nations due to its "cultural ethos of the American Dream" (p.60). Messner and Rosenfeld (2001) accept Merton's belief that the American Dream is an idea that is unique to American society, and they attempt to use this idea to explain America's uniquely high crime rates found within American society. Although Merton never formally defines the American Dream in his works, Messner and Rosenfeld (2001) propose to define the American Dream as "a commitment to the goal of material success, to be pursued by everyone in society, under conditions of open, individual competition" (p.62). Messner and Rosenfeld (2001) believe the American Dream to be a powerful force in society because of its commitment to the following values: achievement orientation, individualism, universalism and material obsession they refer to as the "fetishism of money" (p.62). It is believed that each of these values contribute greatly to the anomic repercussions necessary to lead individuals to engage in crime and deviancy (Messner & Rosenfeld, 2001). Just like with any general theory of crime, there are various issues that arise

in explaining specific types of criminal behavior and deviancy. While Messner and Rosenfeld's theory could be a great tool for explaining white-collar crime, it seems that this theory may lack some explanation in attempting to account for crimes that center around violent behaviors. Messner and Rosenfeld (2001) do attempt to account for this by explaining that the American Dream can result in anomic forces for individuals that can drive them to violence, especially if that individual has perceived themselves to have failed at achieving the American Dream. Nonetheless, this theory of crime proposes a very relevant explanation to white-collar crime that could greatly benefit the scientific community in future studies involving both white-collar crime and fraud specifically.

Unlike Messner & Rosenfeld's (2001) general theory of crime, Coleman (1994) attempted to develop a theory specific to explaining and understanding the causes of White-collar crime. According to Coleman (1994) there are two factors needed in order for white-collar crime to occur: motivation and opportunity. Coleman (1994) asserts that white-collar crime is driven by the culture of industry by stating that "individual motivations for white-collar crime can be traced directly to the culture and structure of industrial societies" (p.15). Furthermore, Coleman (1994) states that in most cases the motivation of white-collar crime is "the desire for financial gain, the wish to be seen as successful, or the fear of losing what one currently possesses" (p.16). This explanation for motivations of white-collar crime greatly aligns itself with the ideas put forth by Messner and Rosenfeld (2001) in their theory concerning crime and the American Dream. Coleman (1994) asserts that these motivations are brought about by the competitive culture that is promoted by the economic system capitalism by stating that it is, "the political economy of industrial society, with its enormous economic surplus and reliance on a system of market exchange, has given rise to a culture of competition that foster these motivations" (p.19). Coleman (1994) believes that there has been a "neutralization of society's ethical restraints" through a process in which individuals learn to rationalize and justify unethical behaviors through cultural learning. Ultimately, Coleman (1994) believes that these justifications

and rationalizations are often times learned in the workplace. Motivation is a very important topic in the literature when in regards to understanding white-collar crime and fraud. Due to this importance, we will attempt to measure and examine the beliefs of students to see what they believe motivates individuals to commit fraud in the defense industry.

But along with motivation there must also be opportunity in order to commit white-collar crime. In regards to opportunity, Coleman (1994) states that at the time of his writing, current research literature indicates opportunity varies amongst different occupations, organizations, industries, and the genders. While white-collar crime has historically been associated with crime occurring within the workplace, it is interesting that there may be some indication of a difference in opportunity between the genders in association with committing white-collar crimes. In a study conducted by Kathleen Daly (1989), it was found that almost all fraud committed by women was considered to be “petty” in nature, with mostly charges of embezzlement and forgery most likely to be associated with women. Daly (1989) theorizes that the reason women tend to commit more petty types of white-collar crime is due to the fact that men typically work higher powered managerial jobs with more access to resources while women are more likely to work lower level clerical jobs. The term “pink-collar crime” has been used to describe the crimes of embezzlement and forgery due to the high levels of offending by women in relation to these crimes (Daly, 1989). With differences existing between the genders in regards to white-collar crime opportunity and types of crime being committed, there could be some interesting implications for gender found within this study in regards to perception of fraud between men and women. For this reason, the researcher plans to use gender as a controlling variable in regards to both perceptions of fraud and of whistle-blowing.

2.5 Fraud in the Defense Industry

This study will attempt to measure the perceptions and beliefs amongst students in regards to fraud occurring within the defense industry. In order to better understand the issue of fraud in the defense industry and its implications on this study, this section will review the

current literature that is specific to the issue of fraud in the defense industry. Unfortunately, there is currently a limited amount of literature on this topic. Much of the literature that does exist is primarily descriptive in nature, focusing on bringing awareness to the issues directly concerning fraud occurring within the defense industry. Currently little to no literature exists that examines fraud in the military industry from a criminological perspective, rather much of the literature takes on economic and business perspectives focusing on topics such as business ethics, accounting techniques and methods for improving government contracting systems. Nonetheless these business ethic studies can be used to provide necessary and vital information with theoretical implications toward future criminological theories concerning fraud (Lansing & Burkard, 1991; Mayer-Sommer & Roshwalb, 1996; Kurland, 1993).

2.5.1 Ethics, Self-Regulation and Defense Fraud

In 1986, President Ronald Reagan created The Packard Commission to investigate defense contracting procurement fraud due to the massive increases in both spending and levels of fraud found in the defense industry (Kurland, 1993). The Packard Commission's recommendation focused upon the implementation and adoption of ethics programs by contractors within the defense industry. Out of this recommendation, the Defense Industry Initiative (DII) was created and subsequently this initiative was created to promote self-regulation of the defense industry in order to control fraud and other unethical behaviors (Kurland, 1993). Although self-regulation is believed to be effective in curtailing fraud in some industries, researchers argue that there is little relationship between levels of fraud and ethical programs in the defense industry (Kurland, 1993; Chwastiak, 1998). Due to this, there have been many calls by researchers to increase government regulation of the defense industry in order to help curtail illegal and unethical behaviors occurring in the defense industry (Lansing & Burkard, 1991; Kurland 1993).

One such suggestion for government regulation is to incorporate a stronger sense of ethics by using probations for any businesses that act unethically, as well as increase

investigative resources and techniques in order to root out any fraud existing in the system (Lansing & Burkard, 1991). Other researchers have suggested that regardless of what ethical principles are used to combat procurement fraud, there are systemic issues that exist in the defense industry that create an environment that makes using procurement fraud necessary for businesses to succeed (Kurland, 1993). This is said to be due to the competitive nature of the bidding process in the defense industry (Kurland, 1993; Chwastiak, 1998). In order for a business entity in the defense industry to remain in business it must win bids on contracts, and due to this system of competitive bidding, these businesses may become pressured into feeling that they must resort to forms of fraud in order to win contracts and stay in business (Kurland, 1993; Chwastiak, 1998). Some authors have used this theory in order to remove contractors from any blame for committing forms of procurement fraud by rationalizing the use of fraud as a survival mechanism in a system where the government acts as the lone dominant buyer (Chwastiak, 1998). In explaining some of these unethical behaviors, Chwastiak quoted one Pentagon investigator saying "To a large degree, the pentagon's own rules implicitly encouraged wrong doing, and its unique culture spawned many of the worst abuses," adding that contractors "In their hearts know they're taking us to the cleaners. But they say that's not stealing, that's just being smart" (Chwastiak, 1998, p. 356). In his findings, Chwastiak (1998) went on to blame the government for failure in accounting and auditing measures to keep them from being ripped off by contractors using cost mischarging and defective pricing. Ultimately, Chwastiak (1998) theorized that the government must have served to rationalize such behaviors such as paying "\$436.00 for a hammer that cost \$8 in direct material" as a form of corporate welfare for businesses working within the defense industry (p. 356). Due to the massive spending increase in the 1980s by the Reagan administration, there could in fact be some basis to the fact that the Defense Department was serving to fraud as a form of corporate welfare. Although it could be argued that this wasteful spending simply occurred on the basis that the

money was there to spend, added with the fact that there lacked effective oversight and investigation into these blatant and gross uses of fraud against the United States.

Another ethics study was conducted by Mayer-Sommer & Roshwalb (1996) that set out to find the relationship between ethical behavior and financial performance for businesses within the defense industry from 1988 to 1992. This study set out to test two hypotheses: 1) whether ethics were good for profits and 2) whether ethics and profits are joint outcomes of good management. Ethical behaviors were defined and measured as number and dollar cost of convictions of civil or criminal violations and were compared with profitability, measured by marginal increases in profits and stock pricing (Mayer-Sommer & Roshwalb, 1996). This study concluded there was a lack of an association between ethical behavior and profitability, making researchers come to the conclusion that “the incentives to adhere to the standards of integrity outlined in federal law and regulations were not properly developed in the 1988 to 1992 period” (Mayer-Sommer & Roshwalb, 1996, p. 1268). The methodology used in this study was unclear, the authors selected companies from a list of top 100 contractors based upon three criteria: 1) data availability 2) number of years on top 100 contractors list 3) awarded amount between 1988 through 1992 (Mayer-Sommer & Roshwalb, 1996, pp. 1254). This study has limitations in regards to validity, reliability and generalization due to its selection methods, as well as having serious issues for study replication due to its unclear sampling methodology.

The literature concerning fraud in the defense industry is currently filled with many gaps in knowledge that need to be addressed and appropriately filled. Much of the literature concerning defense industry fraud was written during the early 1990s in response to the increased military buildup of the 1980s. Due to this massive increase in spending during the 1980s, there was enough money entering the military industry to cause increased concern among lawmakers worried that increasing amounts of fraud would be committed by military contractors (Chwastiak, 1998). With increases in spending due to the Global War on Terrorism and two wars in Iraq and Afghanistan, military procurement is at an all time high and as a result

so is the opportunity for procurement fraud to occur (Cullen, 2009). It is hopeful that a new surge in research will be conducted that focuses on fraud in the defense industry due to this recent military buildup that will help to fill gaps in the current literature. The researcher believes that the findings of this study could potentially help to create a foundation for future research in the subject of fraud in the defense industry.

2.6 Issues in Whistle-blowing

The second variable examined in this study is likelihood to whistle-blow for an individual working within the defense industry. Unlike fraud in the defense industry, the literature on whistle-blowing is much more expansive and comprehensive. Reviews of whistle-blowing research have found that this research is typically focused on two different topics: the identification of the conditions under which whistle-blowing intentions are formed and how action is taken, and how retaliation against whistle-blowers occurs (Ellis & Arieli, 1999; Miceli & Near, 2002; as cited by Mesmer-Magnus & Viswesvaran, 2005). Research exploring the variables found in the whistle-blowing process are typically explored through either “conducting surveys of actual whistle-blowers or by using scenarios, interviews or survey-based methods to ascertain when an observer of organizational wrongdoing will be likely to blow the whistle or will report the intention to make a claim” (Mesmer-Magnus & Viswesvaran, 2005, p.278). According to Mesmer-Magnus & Viswesvaran (2005) researchers have justified using data gained from intended rather than actual whistleblowers by:

“1) citing the difficult of carrying out investigations into unethical conduct in actual organization; 2) suggesting that actual whistleblowers censor the information they provide to investigators due to the perception that data gathered in actual organizations precludes their confidentiality or anonymity; 3) illuminating the difficulty of locating actual whistle-blowers for questioning or 4) citing the inherently flawed nature of such data” (p.279-280).

With these issues in mind, the researcher intends to primarily sample individuals who have not yet engaged in whistle-blowing behaviors. Due to the sampling methodology used with in this study it is possible for some individuals who have previously engaged in whistle-blowing to participate in this study. Now that we have reviewed how whistle-blowing research methodologies are typically carried out and the issues that surround them, the researcher will now discuss research concerning how whistle-blowing intentions are typically formed and how they are carried out.

Currently there are three perspectives that exist on what motivates individuals to become whistle-blowers: the altruistic perspective, the motivational and psychological perspective and the prospective of reward perspective (Dasgupta & Kesharwani, 2010). The altruistic perspective of whistle-blowing states that the main force driving an individual to report wrongdoing is an unselfish concern for the well-being of others through “the desire to correct the wrongdoing which is harming the interests of the organization itself, the consumers, the co-workers and the society at large” (Arnold & Ponemon, 1991; Vinten, 2000; Vandekerckhove & Commers, 2004 as cited by Dasgupta & Kesharwani, 2010, p.62). Additionally, the Motivational and Psychological perspective of whistle-blowing states that more than just altruism is responsible for individuals to be motivated to whistle-blow, citing that other possible benefits are considered by prospective whistle-blowers (Heyes & Kapur, 2008). While the Prospective of Reward perspective states that the prime motivator for whistle-blowing are financial rewards that are typically offered by organizations when an act of wrongdoing is reported and successfully exposed (Paul & Townsend, 1996; Carson, Verdu, & Wokutch, 2007).

But there are other also other factors that have been found to affect the motivations of individual whistle-blowers. Near et al. (2004) conducted a study in which employees of a large military base were surveyed to find if the type of wrongdoing observed had any effect on the whistle-blowing process. The results of this study showed that employees “who perceived wrongdoing involving mismanagement, sexual harassment, or unspecified legal violations were

significantly more likely to report it than were employees who observed stealing, waste, safety problems or discrimination” (Near et al, 2004, p.219). The results of this study are very compelling in that they show that the likelihood of whistle-blowing can be dependent on the type of wrongdoing witnessed. Unfortunately the study conducted by Near et al (2009) does not use the concept of fraud specifically as one of the types of wrongdoings that were being examined, albeit some aspects of fraud are presented in the study through concepts such as “stealing” and “waste”. The research believes this studies results will help build upon this topic of research that has been examined by Near et al (2004) by measuring individual perceptions of fraud explicitly.

According to Miceli & Near (1992), most employees who observe wrongdoing will not end up reporting it. Miceli, Van Scotter, Near & Rehg (2001) sought to explain why most employees do not report wrongdoing by examining the relationships between personality, perceptions, organizational conditions and whistle-blowing. This study found that personality variables do affect whistle-blowing behaviors by concluding that individuals with a “proactive personality” are most likely to whistle-blow (Miceli et al, 2001). It was also found that witnessing wrongdoing in an organization has a signaling effect and a demoralizing effect that have important implications on whether or not an individual decides to whistle-blow (Miceli et al, 2001). This study adds a new element to the already growing literature concerning what motivates people to whistle-blow by showing that the personality of the individual is important to predicting if an individual is willing to engage in whistle-blowing.

According to Taylor & Curtis (2009), there are various workplace influences that can motivate whistle-blowing behaviors such as professional identity, locus of commitment and moral intensity. These three influences were tested in a study conducted by Taylor & Curtis (2010) which found that: 1) the professional identity of an individual can increase the likelihood that an individual will report an observed violation or wrongdoing 2) the locus of commitment of an individual to their organization or to colleagues drives a person’s perseverance in reporting observed violations and 3) the moral intensity of an individual relates to an increased likelihood

to reporting wrongdoing (p.21).The idea that employee loyalty to an organization drives perseverance in reporting wrong doing was further analyzed by in a study conducted by Varelius (2008). Varelius (2008) found that employee loyalty to the organization is not threatened by the reporting of wrongdoing, but rather it shows an even greater loyalty to the organization when they do not report. This is based on the idea that loyal employees will not want their companies to face hardships and scrutiny because of their decision to whistle-blow (Varelius, 2008). These findings that those with higher levels of loyalty to an organization may or may not be more likely to report wrongdoing through whistle-blowing has implications on this study and the researcher plans to include questions in the survey instrument that attempt to address organizational loyalty versus co-worker loyalty.

Within the whistle-blowing literature there currently exist some controversial debates regarding what actually motivates individuals to whistle-blow. Some people may view whistle-blowers as courageous or honorable while others may be viewed as disgruntled, retaliatory or selfish trouble makers seeking revenge against an organization they felt have wronged them in the past (Gundlach, Martinko & Douglas, 2008). A study conducted by Gundlach, Martinko & Douglass (2008) attempted to examine whether or not whistle-blowing can be motivated by anger and retaliation. Gundlach, Martinko & Douglass (2008) were able to conclude that anger can indeed play a significant role in the motivation and decision to whistle-blow. This is an issue that the researcher will attempt to take into consideration within the survey instrument being used in this study. An interesting point to consider is that retaliation can go both ways in terms of whistle-blowing and its effects on both the individual and the organization. Gundlach, Martinko & Douglas (2008) asserted that anger and retaliation can be a motivating factor in driving an individual to report wrongdoing, conversely research has also found that fear of retaliation from an organization can motivate an individual to not engage in whistle-blowing (Near & Miceli, 1996; Mesmer-Magnus & Viwesvaran, 2005; Rehg et al, 2008).

The topic of retaliation against whistle-blowers was first examined by Parmerlee, Near & Jensen in their 1982 qualitative study that focused on attempting to measure the types of retaliation used by multiple organizations on individuals who blew the whistle after witnessing wrongdoing. This study asked whistle-blowers if they had experienced any form of retaliation as a result of their blowing of the whistle and found that there were many forms of retaliation that whistle-blowers may typically face (Parmerlee et al, 1982). Following the research of Parmerlee et al (1982) many researchers attempted to count the number of types of retaliation reported by each respondent (Rehg et al, 2008). Cortina & Magley (2003) found that there are two factors that whistle-blowers face: social retaliation and work-related retaliation. Social retaliation usually manifests itself as name-calling and ostracism while work-related retaliation typically manifests through involuntary transfers or demotion or poor performance appraisal (Cortina & Magley, 2003). Miceli, Rehg, Near & Ryan (1999) reported that reprisal and retaliation are commonplace by finding that 17%-38% of whistle-blowers have faced reprisal from stratified random samples of federal employees. According to Miceli & Near (1989), the two strongest predictors of retaliation upon whistle-blowers are the power relationships they have with others and a lack of support from middle and top managers. When wrongdoing is more serious, costly, frequent or long term it has been found it is more likely that top managers are aware of the wrong doing and most likely allow it to continue because they value its continuation (Miceli & Near, 1994). The topic of retaliation against workers is one that could have some bearing on the results of this study. If individuals working within the defense industry perceive that retaliation is a real possibility, it could certainly impact whether or not an individual is likely to whistle-blow. With research showing that having relationships with other individuals within an organization is important to understanding whistle-blower retaliation, it led researchers to believe that gender may also play an important role in how retaliation effects whistle-blowing (Rehg et al, 2008).

The role of gender in the whistle-blowing process may be explained by the social role theory which predicts that gender based divisions of labor reduce the influence of women in the

workplace regardless of their status and that any women who may violate traditionalized gender roles and expectations will be sanctioned within the workplace (Carli & Eagly, 1999). According to Kiddler and Parks (2001), society assigns traditional gender roles through a socialization process that tends to also carry over into the workplace. The traditional gender roles for women tend to demand that they do not act assertively but rather act indifferently towards issues in the workplace, even if by doing so leads to ineffective job performance. This leads Rehg et al (2008) to believe that because whistle-blowing can be construed as an assertive behavior, social role theory would therefore imply that women may experience greater retaliation than men because whistle-blowing violates the role expectations that women have in the workplace. Rehg et al (2008) conducted a study that attempted to test the social role theory. The findings of this study suggested that women perceive that they will be retaliated against for whistle-blowing more than men and that women were more significantly associated with retaliation in regards to the issues of lacking support from others, types of serious wrongdoing and the wrongdoings direct effect on the whistleblower (Rehg et al, 2008). For these reasons, the effects that gender has on the whistle-blowing process will also be considered within this study.

The literature and research concerning whistle-blowing have increased over the past few decades but the literature is still lacking in some areas. With most of the literature concerning only what motivates whistle-blowing behaviors and how retaliation affects whistleblowers, there are still many topics that need to be addressed such as whether or not whistle-blowing is effective or how the process can be improved. This study hopes to fill a gap in the whistle-blowing literature concerning individuals' likelihood to whistle-blow in relation to their own views and perceptions of fraud in the industry in which they work. Understanding such an issue can have serious implications on investigations of wrongdoing within the defense industry. The results of this study may find that individuals could be unwilling to whistle-blow due to their perceptions of fraud. This could bring whistle-blowing effectiveness into question and lead to the creation of new tools to identify fraud that is more proactive in nature.

CHAPTER 3

METHODOLOGY

3.1 Design and Population

This study explores the possible relationship between perceptions of fraud occurring in the defense industry and the perceived likelihood of becoming a whistle-blower amongst students attending the University of Texas at Arlington (UTA). This study is considered exploratory in nature due to the lack of research concerning the topic of perceptions of fraud occurring in the defense industry as well as the lack of research concerning the topic of measuring the likelihood of whistle-blowing amongst college students. This study will take a cross-section of the student population at UTA through the use of a survey instrument and quantitative statistical analyses of gathered data. This survey instrument consists of 40 close ended questions that attempt to measure the perceptions fraud and whistle-blowing as well as demographic information of students attending classes at UTA.

The researcher attempted to focus this study on students seeking to major in Criminology and Criminal Justice (CRCJ) and Business at UTA. These student populations were selected due to their expected knowledge of fraud and potential to work in either business or law enforcement careers. A total of 9 classes (5 CRCJ and 4 Business) were sampled with the possibility of approximately 614 students being selected for survey distribution. After distributing the survey, the researcher received a return rate of 43.81%. A total of 281 undergraduate students responded to this studies survey (n=281).

3.2 Survey Instrument

The survey instrument for this study was comprised of 40 questions that attempt to measure the perceptions of fraud in the defense industry and whistle-blowing amongst students

at the University of Texas at Arlington. Some of the questions on this survey instrument were influenced by topics that have been discussed in prior research on fraud and whistle-blowing. The researcher developed some questions for this survey that attempt to explore topics and ideas that have not yet been discussed in prior research on fraud and whistle-blowing. The survey consists mainly of dichotomous 5 point and 10 point Likert scales but also featured questions with nominal responses designed to measure demographic information for each participant.

The survey consists of three different sections: a fraud section, a whistle-blowing section and a demographics section. The first section features a series of statements that measures the beliefs and perceptions of survey participants regarding the issue of fraud in the defense industry. These statements are set up on a 10 point Likert scale that ranges from strongly disagrees to strongly agree. This section consists of questions and statements that attempt to measure an individual's knowledge of fraud in the defense industry, feelings toward individuals versus organizations committing fraud and perception of defense industry fraud in the media. This survey instrument will also explore topics such as the perceived normalization of fraudulent behaviors in the defense industry and whether or not fraud is necessary to be successful as a business entity.

The second section of the survey presented questions that measure the knowledge, perceptions and beliefs on the topic of whistle-blowing. This will be achieved by presenting hypothetical situations in which whistle-blowing could occur. This sections statements are also set up on a 10 point Likert scale that ranges from strongly disagree to strongly agree. Both the defense industry fraud section and whistle-blowing sections were set up into scales that were compared to one another to explore whether or not a relationship exists between perception of defense industry fraud and the whistle-blowing behaviors of an individual.

The third section of this survey is a demographics section that will be used as control variables for the studies data analysis. Demographics such as race, age, gender, college major,

religiosity, and political ideology are featured on this studies survey instrument. This survey instrument was administered to students attending the University of Texas at Arlington and will use self report methods to gather survey data. The survey instrument can be viewed in Appendix A of this document.

3.3 Procedure

The population of this study was focused on students attending CRCJ and Business classes at the University of Texas at Arlington. In order to access these particular populations, it was decided that the survey should be distributed in upper level (3000/4000 level) CRCJ and business courses. Nine classes were selected by reviewing the university's online course catalog. Courses were selected based on class size, professor, class level and time of class. Four of the nine courses were business courses (3 accounting and 1 business management) and five of the nine courses were CRCJ courses (American Judicial Systems, Statistics, Terrorism and 2 ethics courses). Based on enrollment statistics found in the UTA course catalog, approximately 600 students were eligible for participation in this study. Once a list of courses had been selected, each professor had to be contacted via e-mail to request permission to allow the survey to be distributed during the course of their class. If the professor agreed, they then had to sign a consent document for the UTA Institutional Review Board (IRB). Once all professor signatures had been obtained by the researcher, the study was submitted to IRB for review of research ethics and approval.

After IRB approval had been obtained, the researcher then contacted the professors to arrange a time for survey distribution. Some professors asked that the researcher conduct the survey distribution themselves while others opted to distribute the surveys themselves. Prior to surveys being distributed to a classroom of students, consent instructions were to be read aloud to the students to inform them of consent procedures, anonymity, confidentiality, planned use of research results, benefits of research, and contact information for both the researcher and the UTA IRB in case they had any further questions about the research being conducted. Once the

students had taken the survey, the researcher and professor would gather all surveys and thank the class for their participation in the study.

Once the researcher had received the results of all taken surveys, the survey results were coded for quantitative statistical analysis using the Statistical Package for the Social Sciences (SPSS) computer software. Once the data was coded and input into the SPSS computer software, the researcher will use SPSS to run a series of statistical tests on the data. The results of such statistical testing allowed the researcher to develop findings and conclusions relevant to the research questions proposed within this study.

3.4 Research Ethics

This study was reviewed by the Institutional Review Board (IRB) at the University of Texas at Arlington (UTA) prior to any research being conducted. The UTA IRB concluded that this study was eligible for exempt status and deemed as ethical research that would not pose risk or harm to any individuals participating in the study. Prior to survey distribution all participating professors signed a consent waiver for use of their classroom to conduct in classroom research. Prior to any in classroom distribution of surveys, consent instructions were read aloud to the class that informed them of the voluntariness, anonymity and potential risks and benefits involved in being a research participant.

3.5 Reliability

This study attempted to add a new population to the literature of fraud and whistle-blowing by examining the perceptions and beliefs of students. While there has been prior research on the topic of whistle-blowing, very little research has been conducted on fraud occurring in the defense industry. This study is considered exploratory in nature and intends to find new concepts and ideas that should be examined in future research. The survey instrument for this study takes no influence from past tested surveys or studies. It was instead developed based on ideas found within the literature on fraud and whistle-blowing. For this reason, this study must be replicated to test the reliability of the survey instrument used. Also, due to the

study's population being limited to a student population, the results should not be considered generalizable to the general public. This research was conducted at the University of Texas at Arlington which is considered a very large commuter school amongst individuals living in the Dallas-Fort Worth metroplex. The school also has a very large community of international students and thus results of this study may not accurately represent the views of individuals from one particular region or place.

3.6 Statistical Tests Used

This study used descriptive and inferential statistical analysis of the data obtained from surveying students on their perceptions of defense fraud and whistle-blowing. First demographic data was compiled using frequency distributions, descriptive measures and cross tabulations. Once descriptive data had been compiled and analyzed, demographic variables were re-coded into new control variables. These re-coded control variables were used in order to better organize groups for statistical analyses such as means comparison using T-tests.

A bulk of the statistical analysis used in this study was through the use of T-tests (Independent Samples T-test and ANOVAs), which will be used to compare the means for fraud and whistle-blowing perceptions of groups such as gender, race, political affiliation, defense industry associations and major. By comparing the means of these groups, we can make conclusions about the statistically significant differences that exist for each group. These statistically significant differences will be important to describing and defining concepts that should be focused upon in future research on the topics of whistle-blowing and fraud.

This study will also be constructing two scales by combining the scores of a series of questions asked on this studies survey instrument. The first scale will be known as the "fraud scale" (Cronbach Alpha = .718) and is comprised of 14 items (Q1, Q2, Q3, Q4, Q5, Q7, Q9, Q10, Q11, Q12, Q13, Q14, Q15 and Q17). The second scale will be known as the "whistle-blowing scale" (Cronbach Alpha = .885) and is comprised of 11 items (Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28). Both scales were created in SPSS by formulating each

of the scales comprised items into one average that was re-coded into a single variable. These scales are to be compared using scatter plots to visually examine the relationship of the two scales. Histograms are also used to view the skewness of each scale. These scales means are also compared to the re-coded control groups through the use of T-tests.

CHAPTER 4

FINDINGS

4.1 Introduction

This study is intended to explore and describe the possible relationship between perception of fraud occurring in the defense industry and likelihood of engaging in whistleblowing behaviors. The sample for this study was obtained from 281 students attending Criminal Justice and Business courses at the University of Texas at Arlington.

4.2 Demographics

Upon analyzing the demographic data, there was only a slight difference in percentage of males (50.9%) to females (49.1%) participating in this study. A majority of the sample fit the age category of 21-23 years of age (41.0%) followed by the age groups of 24-26 years of age (21.4%) and 18-20 years of age (16.2%). For race/ethnicity, Whites represented the largest group at 38% of the sample followed by Hispanic (28.1%), Asian (17.4%) and African American (12.5%). When looking at whether the student was a Criminology and Criminal Justice (CRCJ) or Business student, CRCJ students made up 40.7% of the sample and Business students made up 59.3%. Business students comprised of 9 different groups of business major specializations such as Accounting (30.9%), Economics (2.5%), Finance (6.1%), Management (6.5%), Marketing (4.3%), Operations Management (0.4%), Business (0.4%), Information Systems (1.4%) and International Business (0.4%) which all together accounted for 59.3% of the total sample for this study. When asked what political party the participant most identified with, Democrats were the largest group with 38.0% of the sample followed by Republicans (33.9%), Independents (12.2%) and those who listed that they are affiliated with no political party (8.9%). The demographics for the sample are listed below in Table 4.1.

Table 4.1 Demographics

Description	Group	N	Percentage
<i>Gender</i>	Male	143	50.9%
	Female	138	49.1%
<i>Age</i>	18-20	44	16.2%
	21-23	111	41.0%
	24-26	58	21.4%
	27-29	16	5.9%
	30-32	13	4.8%
	30 and over	29	10.7%
<i>Race/Ethnicity</i>	Asian	49	17.4%
	American Indian or Alaska Native	1	0.4%
	African American	35	12.5%
	Hispanic	79	28.1%
	Native Hawaiian or Other Pacific Islander	3	1.1%
	White	99	35.2%
	Multiracial	8	2.8%
	Other	3	1.1%
<i>Major</i>	Accounting	86	30.9%
	Economics	7	2.5%
	Finance	17	6.1%
	Management	18	6.5%
	Marketing	12	4.3%
	CRCJ	101	36.3%
	Other	37	13.4%
<i>Business/CRCJ</i>	Business	147	59.3%
	CRCJ	101	40.7%
<i>Political Party</i>	Republican	92	33.9%
	Democrat	103	38.0%
	Independent	33	12.2%
	Libertarian	13	4.8%
	Tea	1	0.4%
	Green	2	0.7%
	None	24	8.9%
	Other	3	1.1%

* CRCJ stands for Criminology and Criminal Justice

Participants in this study were asked to disclose their associations with both the defense industry and the military. Questions were asked whether or not the participant has any friends or family currently serving in the military as well as if they have any friends or family members currently working in the defense industry. Results showed that a majority of the sample had friends or family currently serving in the military (58.1%). In regards to friends or family working in the defense industry, 29.7% of the sample said that they do know someone working in the defense industry while 39.7% responded that they did not. Respondents were also asked whether or not they have personally served in the military or worked in the defense industry. Only 9.2% of the sample responded that they have served in the military and only 2.6% of the sample responded that they have worked in the defense industry.

Table 4.2 Defense Industry and Military Associations

Description	Group	N	Percentage
<i>Family Members or Friends in Military</i>	Yes	158	58.1%
	No	108	39.7%
	I don't know	6	2.2%
<i>Family Members or Friends in Defense Industry</i>	Yes	81	29.7%
	No	170	62.3%
	I don't know	22	8.1%
<i>Served in Military</i>	Yes	25	9.2%
	No	245	89.7%
	I don't know	3	1.1%
<i>Worked in Defense Industry</i>	Yes	7	2.6%
	No	262	96.0%
	I don't know	4	1.5%

Participants were also asked whether they had taken a college course that focused on the topic of ethics. A majority of the sample said they have taken a college course that focused on the topic of ethics (66.8%).

Table 4.3 Ethics Course

Description	Group	N	Percentage
<i>Has taken an ethics course</i>	Yes	185	66.8%
	No	80	28.9%
	I don't know	12	4.3%

4.3 Sample Means

First we will examine the mean scores of the entire sample to determine this samples overall perceptions on defense fraud and whistle-blowing. All of the following variables were on scales from 0 to 10 with 0 being labeled as “Strongly Disagree” and 10 being “Strongly Agree”. Variables concerning defense industry knowledge and fraud knowledge were both on scales from 1 to 5 with 1 being labeled as “No knowledge”, 3 being labeled as “somewhat knowledgeable” and 5 being labeled as “Very Knowledgeable”. The sample means for fraud perceptions can be located in Table 4.4. Overall the sample believed that they were “somewhat knowledgeable” of both the defense industry and fraud based crimes. The sample agreed (mean = 8.21) with the statement that fraud is a very serious crime that should result in prison time. Overall there was a consistency in response between most of the statements concerning fraud perceptions (mean scores between 5 and 8). The only statements in which the sample did not agree with concerned the statement that small businesses are more likely to commit fraud than large businesses (mean = 3.88) and fraud being necessary to be successful in the defense industry (mean = 2.33). The sample slightly disagreed that there is an adequate amount of media coverage on defense fraud (mean = 4.00). The sample also slightly disagreed with the statement that fraud occurs more often in the defense industry than in other industries in the United States (mean = 4.50). The fraud scale resulted in a mean of 5.91, which indicates that there is mostly neutrality when it comes to the samples perceptions of defense industry fraud.

Sample means for Whistle-blowing perceptions can be found in Table 4.5. The sample reported a mean score of 6.35 for self perceived knowledge of protocols for reporting illegal or unethical behaviors, which indicates that they agree with the statement. When asked about

Table 4.4 Sample Means for Fraud Perceptions

Variable	N	Mean
<i>Knowledge of the defense industry</i>	281	2.58
<i>Knowledge of fraud based crimes</i>	281	2.86
<i>Fraud is a very serious crime that should result in prison time</i>	280	8.21
<i>Fraud results for a significant amount of monetary loss to the US Government</i>	281	7.12
<i>Fraud occurs often in the defense industry</i>	279	6.25
<i>Small businesses are more likely than large businesses to commit fraud</i>	281	3.88
<i>Fraud committed by defense contractors is a very serious issue that needs to be investigated more vigorously</i>	281	7.16
<i>Only individuals who knew about fraud or were directly involved should be held responsible</i>	281	5.11
<i>Businesses in the defense industry use fraud to be more competitive in winning Department of Defense contracts</i>	280	5.71
<i>Individuals works in the defense industry use fraud to benefit themselves financially</i>	280	6.71
<i>Company executives aware of fraud occurring within their company should be held criminally responsible</i>	281	8.67
<i>Defense Industry Fraud directly impacts the safety of military personnel</i>	280	7.03
<i>Businesses in the defense industry use fraud to benefit themselves financially</i>	278	7.23
<i>Fraud in the defense industry receives adequate amount coverage from the media</i>	281	4.00
<i>Fraud occurs more often in the defense industry than other industries in the US</i>	280	4.50
<i>Fraud is often necessary in order for a business to be successful in the defense industry</i>	280	2.33
<i>Amount of money lost yearly by the US government due to fraud</i>	272	4.63
Fraud Scale	266	5.91

their willingness to report illegal or unethical behaviors in the workplace, the sample reported that they agreed that they would be willing to report with a mean of 8.05. The sample was also asked if they were willing to report illegal or unethical behaviors under certain conditions such as reporting to the US government, their employer, reporting close employees and employees working at another company. The sample reported that they consistently agreed on many of these statements regarding willingness to whistle-blow. The only variances occurred when the sample was asked if they would be willing to report an employee which whom they have a close relationship with, they reported that they agreed they would be willing to with a mean of 6.75 which was the lowest mean score for whistle-blowing willingness. The highest reported mean for whistle-blowing came when asked if they would be more willing to report claims if they were made anonymously, which had a mean of 8.62. Overall, the sample mean reported a mean score of 7.53 for the whistle-blowing scale, which indicates that the sample agrees to report illegal or unethical behavior.

Table 4.5 Sample Means for Whistle-blowing

Variable	N	Mean
<i>Knowledge of proper protocols for reporting illegal or unethical behavior</i>	281	6.35
<i>Willingness to report any illegal or unethical behavior in the work place</i>	281	8.05
<i>Willingness to report any illegal or unethical behavior to employer</i>	280	7.54
<i>Willingness to report an employee with a close relationship</i>	277	6.75
<i>Willingness to report any illegal or unethical behavior to US Government</i>	278	7.35
<i>Willingness to report a manager</i>	279	7.91
<i>Willingness to report an individual from another department or office</i>	279	7.99
<i>Willingness to report an individual from another company</i>	279	7.99
<i>Common for whistle-blowers to be retaliated against</i>	279	7.23
<i>More willing to report if claims made anonymously</i>	279	8.62
<i>Willingness to report fellow students</i>	278	7.28
Whistle-blowing Scale	274	7.53

4.4 Effects of Gender

Now we will examine the possible effects of gender on perceptions of defense industry fraud and whistle-blowing behaviors. Prior research literature has stated that possible gender differences exist on the topic of fraud (Daly, 1989). Prior research has also shown gender differences for the topic of whistle-blowing, especially for topics such as perceptions for whistle-blower retaliation (Carli & Eagly, 1999; Rehg et al, 2008).

4.4.1 Comparison of Means for Fraud Perceptions Controlling for Gender

T-tests were run to determine if any statistically significant differences existed between males and females concerning perceptions of defense fraud. There were 17 questions asked concerning the topic of fraud, out of the 17 questions 6 were determined to have statistically significant differences in means. Significantly different means were found on questions concerning defense industry knowledge (Q1), general fraud knowledge (Q2), seriousness of fraud (Q3), the criminal liability of individuals concerning fraud (Q8), using fraud to be competitive (Q9) and fraud being necessary to be successful in the defense industry (Q16). Of the 6 questions determined to be significantly different, two were found to be significant findings at the .01 level, meaning that there is 99% certainty that this significance was not caused by chance. The other 4 statistically significant findings were found to be significant at the .05 level, meaning that there is a 95% certainty that this significance was not caused by chance. Results of this means comparison are available in Table 4.6.

When comparing the means between male (2.78) and females (2.37) as pertaining to knowledge of the defense industry a p-value of 0.001 was found. This indicates that there is a statistically significant difference between males and females concerning self perceived knowledge of the defense industry. On average, males perceived themselves as more knowledgeable than females regarding the defense industry. The comparison of means between males (2.99) and females (2.74) concerning fraud knowledge resulted in a p-value of 0.019. This indicates that there is a statistically significant difference between males and

Table 4.6 Comparison of Means on Fraud Perceptions Controlling for Gender

Variable	Male (Mean)	Female (Mean)	Significance
<i>Knowledge of the defense industry</i>	2.78	2.37	0.001**
<i>Knowledge of fraud based crimes</i>	2.99	2.74	0.019*
<i>Fraud is a very serious crime that should result in prison time</i>	7.87	8.75	0.013*
<i>Fraud results for a significant amount of monetary loss to the US Government</i>	6.86	7.4	0.058
<i>Fraud occurs often in the defense industry</i>	6.29	6.2	0.735
<i>Small businesses are more likely than large businesses to commit fraud</i>	4.06	3.7	0.305
<i>Fraud committed by defense contractors is a very serious issue that needs to be investigated more vigorously</i>	7.16	7.17	0.983
<i>Only individuals who knew about fraud or were directly involved should be held responsible</i>	4.67	5.56	0.027*
<i>Businesses in the defense industry use fraud to be more competitive in winning Department of Defense contracts</i>	6.1	5.3	0.002**
<i>Individuals works in the defense industry use fraud to benefit themselves financially</i>	6.99	6.42	0.450
<i>Company executives aware of fraud occurring within their company should be held criminally responsible</i>	8.48	8.86	0.106
<i>Defense Industry Fraud directly impacts the safety of military personnel</i>	7.25	6.8	0.145
<i>Businesses in the defense industry use fraud to benefit themselves financially</i>	7.39	7.05	0.233
<i>Fraud in the defense industry receives adequate amount coverage from the media</i>	3.9	4.1	0.569
<i>Fraud occurs more often in the defense industry than other industries in the US</i>	4.45	4.55	0.718
<i>Fraud is often necessary in order for a business to be successful in the defense industry</i>	2.8	1.83	0.002**
<i>Amount of money lost yearly by the US government due to fraud</i>	4.77	4.47	0.118

** Significant at the .01 level

* Significant at the .05 level

females in their self perceived knowledge of fraud based crimes. On average, males rated their knowledge of fraud based crimes higher than women. With regards to the variable of seriousness of defense industry fraud, comparing the means between males (7.87) and females (8.75) resulted in a p-value of 0.0013. This p-value indicates that there is a statistically significant difference between males and females concerning seriousness of defense fraud. On average, females believed that defense fraud was more serious than males. When comparing the means between males (4.67) and females (5.56) concerning the criminal liability of individuals in relation to committing fraud, a p-value of 0.027 was found. This indicates that there is a statistically significant difference between males and females regarding the criminal liability of individuals in relation to committing fraud. On average, females believed that individuals should be held more liable for fraud than males did. The comparison of means between males (6.1) and females (5.3) for the variable of using fraud to be more competitive in winning contracts resulted in a p-value of 0.002. This indicates that a statistically significant difference exists between males and females in regards to belief that fraud is used to be more competitive in winning defense contracts. On average, males believed that fraud is used to be more competitive in winning contracts than females. With regards to belief that fraud is necessary for a business in the defense industry to be successful, comparing the means between males (2.80) and females (1.83) resulted in a p-value of 0.002. This indicates that a statistically significant difference exists between males and females in belief that fraud is necessary for a business in the defense industry to be successful. On average, males were more likely to believe that defense fraud is necessary than females.

4.4.2 Comparison of Means Using a Fraud Scale While Controlling for Gender

T-tests were run by comparing each genders fraud scale mean score. The results of this T-test are available in table 4.7. When comparing the fraud scale means of Males (5.96) and Females (5.80) a p-value of 0.436 is found. This p-value indicates that there are no

statistically significant differences between males and females when comparing the means of genders using this studies developed fraud scale.

Table 4.7 Comparison of Means Using a Fraud Scale while Controlling for Gender

Variable	Male (Mean)	Female (Mean)	Significance
<i>Fraud Scale</i>	5.96	5.80	0.436

4.4.3 Comparison of Means for Whistle-blowing While Controlling for Gender

T-tests were run to determine if any statistically significant differences existed between males and females concerning whistle-blowing behaviors. Results of these T-tests are available in table 4.8.

Table 4.8 Comparison of Means on Whistle-blowing Controlling for Gender

Variable	Male (Mean)	Female (Mean)	Significance
<i>Knowledge of proper protocols for reporting illegal or unethical behavior</i>	6.48	6.22	0.498
<i>Willingness to report any illegal or unethical behavior in the work place</i>	7.87	8.22	0.203
<i>Willingness to report any illegal or unethical behavior to employer</i>	7.47	7.6	0.674
<i>Willingness to report an employee with a close relationship</i>	6.5	7.01	0.118
<i>Willingness to report any illegal or unethical behavior to US Government</i>	7.21	7.48	0.385
<i>Willingness to report a manager</i>	7.8	8.04	0.393
<i>Willingness to report an individual from another department or office</i>	7.87	8.12	0.359
<i>Willingness to report an individual from another company</i>	7.84	8.14	0.288
<i>Common for whistle-blowers to be retaliated against</i>	7.13	7.34	0.490
<i>More willing to report if claims made anonymously</i>	8.38	8.86	0.060
<i>Willingness to report fellow students</i>	7.04	7.54	0.115

Prior literature indicated that there exists a gender difference in males and females perception of retaliation against whistle-blowers. This studies result indicated that a comparison of the means between males (7.13) and females (7.34) in regards to views of whistle-blower retaliation resulted in a p-value of .490. This indicates that there is no statistically significant

difference between males and females that participated in this study. However, females did on average report a slightly higher mean than males in relation to whistle-blower retaliation.

4.4.4 Comparison of Means Using Whistle-blowing Scale while controlling for Gender

T-tests were run by comparing each genders whistle-blowing scale mean score. The results of this T-test are available in table 4.9. When comparing the whistle-blowing scale means of Males (7.38) and Females (7.68) a p-value of 0.148 is found. This p-value indicates that there are no statistically significant differences between males and females when comparing the means of genders using this studies developed whistle-blowing scale.

Table 4.9 Comparison of Means Using Whistle-blowing Scale While Controlling for Gender

Variable	Male (Mean)	Female (Mean)	Significance
<i>Whistle-blowing Scale</i>	7.38	7.68	0.148

4.5 Effects of Political Affiliation

This study attempts to explore any possible statistically significant relationships concerning fraud and whistle-blowing. Political affiliation has not been a topic explored in prior research literature in regards to the topics of either fraud or whistle-blowing. This study will attempt to find any statistically significant relationships for political affiliation by comparing means between the two groups of Democrats and Republicans.

4.5.1 Comparison of Means for Fraud Perceptions Controlling for Political Party

T-tests were run to determine if any statistically significant differences existed between Republicans and Democrats concerning perceptions of defense fraud. Results of these t-tests are available in Table 4.10. There were 17 questions asked concerning the topic of fraud, out of the 17 questions 3 were determined to have statistically significant differences in means. Statistically significant different means were found on questions concerning defense industry knowledge (Q1), amount of news media covering fraud (Q14) and fraud occurring more often the defense industry than other industries (Q15). Of the 3 questions determined to be significantly different, two were found to be significant findings at the .01 level, meaning that

Table 4.10 Comparison of Means on Fraud Perceptions Controlling for Political Party

Variable	Republican (Mean)	Democrat (Mean)	Significance
<i>Knowledge of the defense industry</i>	2.80	2.49	0.032*
<i>Knowledge of fraud based crimes</i>	2.96	2.84	0.380
<i>Fraud is a very serious crime that should result in prison time</i>	8.43	8.49	0.859
<i>Fraud results for a significant amount of monetary loss to the US Government</i>	7.18	7.24	0.860
<i>Fraud occurs often in the defense industry</i>	6.32	6.12	0.550
<i>Small businesses are more likely than large businesses to commit fraud</i>	3.50	3.97	0.264
<i>Fraud committed by defense contractors is a very serious issue that needs to be investigated more vigorously</i>	7.16	7.24	0.813
<i>Only individuals who knew about fraud or were directly involved should be held responsible</i>	5.08	5.05	0.955
<i>Businesses in the defense industry use fraud to be more competitive in winning Department of Defense contracts</i>	5.53	5.77	0.459
<i>Individuals works in the defense industry use fraud to benefit themselves financially</i>	6.62	6.68	0.864
<i>Company executives aware of fraud occurring within their company should be held criminally responsible</i>	8.52	8.89	0.157
<i>Defense Industry Fraud directly impacts the safety of military personnel</i>	7.01	7.76	0.505
<i>Businesses in the defense industry use fraud to benefit themselves financially</i>	7.24	7.10	0.684
<i>Fraud in the defense industry receives adequate amount coverage from the media</i>	3.68	4.77	0.008**
<i>Fraud occurs more often in the defense industry than other industries in the US</i>	3.95	4.95	0.003**
<i>Fraud is often necessary in order for a business to be successful in the defense industry</i>	2.11	1.89	0.537
<i>Amount of money lost yearly by the US government due to fraud</i>	4.51	4.48	0.890

** Significant at the .01 level

* Significant at the .05 level

there is 99% certainty that this significance was not caused by chance. Only one question was statistically significant findings at the .05 level, meaning that there is a 95% certainty that this significance was not caused by chance.

When comparing the means between Republicans (2.80) and Democrats (2.49) as pertaining to self perceived knowledge of the defense industry, a p-value 0.032 was found. This indicates that a statistically significant difference exists between Republicans and Democrats in regards to self perceived knowledge of the defense industry. On average, Republicans believed that they had a greater knowledge of the defense industry as compared to Democrats. The comparison of means between Republicans (3.68) and Democrats (4.77) regarding adequate media coverage of defense fraud, a p-value of 0.008 was found. This indicates that there is a statistically significant difference between Democrats and Republicans when it comes to adequate levels of media coverage concerning defense fraud. On average, Democrats believed that there were more adequate levels of media coverage than Republicans. With regards to the question that fraud occurs more often in the defense industry than other industries, when comparing the means between Republicans (3.95) and Democrats (4.95) a p-value of 0.003 is found. This p-value indicates that a statistically significant difference exists between Republicans and Democrats in relation to views on higher levels of fraud occurring in the defense industry compared to other industries. On average, Democrats believed that more fraud occurs in the defense industry than Republicans did.

4.5.2 Comparison of Means Using a Fraud Scale While Controlling for Political Party

T-tests were run by comparing each Republicans and Democrats fraud scale mean score. The results of this T-test are available in table 4.11. When comparing the fraud scale means of Republican (5.84) and Democrats (5.99) a p-value of 0.306 is found. This p-value indicates that there are no statistically significant differences between Republicans and Democrats when comparing the means of these political parties using this studies developed fraud scale.

Table 4.11 Comparison of Means Using a Fraud Scale While Controlling for Political Party

Variable	Republican (Mean)	Democrat (Mean)	Significance
<i>Fraud Scale</i>	5.84	5.99	0.306

4.5.3 Comparison of Means for Whistle-blowing while Controlling for Political Party

T-tests were run to determine if any statistically significant differences existed between Democrats and Republicans concerning whistle-blowing behaviors. Results of these t-tests are available in table 4.12. It was determined after running these t-tests that no statistically significant differences exist between the means of Republicans and Democrats in regards to the issue of whistle-blowing.

Table 4.12 Comparison of Means on Whistle-blowing Behaviors Controlling for Political Party

Variable	Republican (Mean)	Democrat (Mean)	Significance
<i>Knowledge of proper protocols for reporting illegal or unethical behavior</i>	6.34	6.65	0.478
<i>Willingness to report any illegal or unethical behavior in the work place</i>	8.13	8.13	0.990
<i>Willingness to report any illegal or unethical behavior to employer</i>	7.61	7.63	0.951
<i>Willingness to report an employee with a close relationship</i>	6.79	6.82	0.955
<i>Willingness to report any illegal or unethical behavior to US Government</i>	7.33	7.34	0.963
<i>Willingness to report a manager</i>	7.88	8.00	0.719
<i>Willingness to report an individual from another department or office</i>	8.17	8.17	0.982
<i>Willingness to report an individual from another company</i>	8.30	8.00	0.355
<i>Common for whistle-blowers to be retaliated against</i>	7.30	7.20	0.752
<i>More willing to report if claims made anonymously</i>	8.53	8.71	0.575
<i>Willingness to report fellow students</i>	7.57	7.18	0.310

4.5.4 Comparison of Means Using Whistle-blowing Scale While Controlling for Political Party

T-Tests were run by comparing each Republicans and Democrats whistle-blowing scale mean score. The results of this t-test are available in table 4.13. When comparing the fraud scale means of Republican (7.63) and Democrats (7.59) a p-value of 0.886 is found. This p-value indicates that there are no statistically significant differences between Republicans and Democrats when comparing the means of these political parties using this studies developed fraud scale.

Table 4.13 Comparison of Means Using a Whistle-blowing Scale While Controlling for Political Party

Variable	Republican (Mean)	Democrat (Mean)	Significance
<i>Whistle-blowing Scale</i>	7.63	7.59	0.886

4.6 Effects of Race

This study attempts to explore any possible statistically significant relationships concerning fraud and whistle-blowing. Race has not been a topic explored in prior research literature in regards to the topics of either fraud or whistle-blowing. This study will attempt to find any statistically significant relationships for race/ethnicity by comparing means between the two racial groups of White and Non-white. The Non-white group will consist of the following racial groups: Asian, African American, Hispanic, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, Multiracial and Other.

4.6.1 Comparison of Means for Fraud Perceptions Controlling for Race

T-tests were run to determine if any statistically significant differences existed between Whites and Non-whites concerning perceptions of defense fraud. There were 17 questions asked concerning the topic of fraud, out of the 17 questions 6 were determined to have statistically significant differences in means. Statistically significant different means were found on questions concerning significance of defense frauds monetary loss to the US government (Q4), small businesses being more likely to commit defense fraud (Q6), defense fraud needing

to be investigated more vigorously (Q7), the criminal liability of individuals concerning fraud (Q8), amount of news media covering fraud (Q14) and defense industry fraud occurring more often than in other industries (Q15). Of the 6 questions determined to be significantly different, four were found to be significant findings at the .01 level, meaning that there is 99% certainty that this significance was not caused by chance. The other two questions were statistically significant findings at the .05 level, meaning that there is a 95% certainty that this significance was not caused by chance. Results of these T-tests are available in Table 4.14.

When comparing the means between Whites (6.63) and Non-Whites (7.42) regarding the question whether fraud results in a significant monetary loss to the US government, a p-value of 0.008 is found. This p-value indicates that a statistically significant difference exists between whites and non-whites in regards to perceived monetary losses to the US government due to defense fraud. On average, Non-whites believed that fraud results in a more significant amount of monetary loss as compared to whites. The comparison of the means between whites (3.45) and non-whites (4.16) for the variable small businesses are more likely than large businesses to commit fraud results in a p-value of 0.04. This p-value indicates that a statistically significant difference exists between whites and non-whites for the perceptions of small businesses and large businesses committing fraud. On average, non-whites believed that small businesses were more likely to commit fraud than whites did. With regards to the statement that fraud committed by defense contractors is a very serious issue that needs to be investigated more vigorously, when comparing the means of whites (6.59) and non-whites (7.52), a p-value of 0.001 was found. This p-value indicates that a statistically significant difference exists between whites and non-whites in relation to the perception that defense fraud is a serious issue that needs to be investigated more vigorously. On average, non-whites perceived fraud as a more serious issue that needs to be investigated more vigorously as compared to whites. When comparing the means between whites (4.38) and non-whites (5.56) responses to the statement that only an individual who knew about fraud or were responsible for fraud should be

Table 4.14 Comparison of Means on Fraud Perceptions Controlling for Race

Variable	White (Mean)	Non-White (Mean)	Significance
<i>Knowledge of the defense industry</i>	2.71	2.51	0.112
<i>Knowledge of fraud based crimes</i>	2.89	2.87	0.831
<i>Fraud is a very serious crime that should result in prison time</i>	8.24	8.21	0.911
<i>Fraud results for a significant amount of monetary loss to the US Government</i>	6.63	7.42	0.008**
<i>Fraud occurs often in the defense industry</i>	6.40	6.18	0.454
<i>Small businesses are more likely than large businesses to commit fraud</i>	3.45	4.16	0.04*
<i>Fraud committed by defense contractors is a very serious issue that needs to be investigated more vigorously</i>	6.59	7.52	0.001**
<i>Only individuals who knew about fraud or were directly involved should be held responsible</i>	4.38	5.56	0.005**
<i>Businesses in the defense industry use fraud to be more competitive in winning Department of Defense contracts</i>	5.49	5.85	0.183
<i>Individuals works in the defense industry use fraud to benefit themselves financially</i>	6.57	6.79	0.469
<i>Company executives aware of fraud occurring within their company should be held criminally responsible</i>	8.86	8.55	0.205
<i>Defense Industry Fraud directly impacts the safety of military personnel</i>	7.03	7.02	0.981
<i>Businesses in the defense industry use fraud to benefit themselves financially</i>	7.14	7.29	0.594
<i>Fraud in the defense industry receives adequate amount coverage from the media</i>	3.59	4.29	0.044*
<i>Fraud occurs more often in the defense industry than other industries in the US</i>	3.76	4.90	0.000**
<i>Fraud is often necessary in order for a business to be successful in the defense industry</i>	2.49	2.29	0.539
<i>Amount of money lost yearly by the US government due to fraud</i>	4.71	4.57	0.495

** Significant at the .01 level

* Significant at the .05 level

held responsible, a p-value of 0.005 was found. This p-value indicates that a statistically significant difference exists between whites and non-whites in regards to perception of an individual's criminal liability when committing fraud. On average, non-whites were more likely to believe that only individuals directly involved with fraud should be held responsible as compared to whites. The comparison of the means of responses between whites (3.59) and non-whites (4.90) regarding whether or not the media gives adequate coverage of fraud occurring in the defense industry, a p-value of 0.044 was found. This p-value indicated that a statistically significant difference exists between whites and non-whites in regards to amount of news media defense industry fraud receives. On average, non-whites believed that defense fraud receives a more adequate amount news media than whites did. With regards to the statement that fraud is often necessary in order for a business to be successful in the defense industry when comparing the means between whites (3.76) and non-whites (4.90) a p-value of 0.000 was found. This p-value indicates that a statistically significant relationship exists between whites and non-whites in regards to perceptions of fraud being necessary for businesses to succeed in the defense industry.

4.6.2 Comparison of Means for a Fraud Scale Controlling for Race

T-tests were run by comparing Whites and Non-Whites fraud scale mean score. The results of this t-test are available in table 4.15. When comparing the fraud scale means of Whites (5.77) and Non-Whites (6.00) a p-value of 0.082 is found. This p-value indicates that there are no statistically significant differences between Whites and Non-whites when comparing the means of these racial groups using this studies developed fraud scale.

Table 4.15 Comparison of Means Using a Fraud Scale While Controlling for Race

Variable	White (Mean)	Non-White (Mean)	Significance
<i>Fraud Scale</i>	5.77	6.00	0.082

4.6.3 Comparison of Means for Whistle-blowing While Controlling for Race

T-tests were run to determine if any statistically significant differences existed between Races (whites and non-whites) concerning whistle-blowing behaviors. There were 10 questions asked concerning the topic of fraud, out of the 10 questions only one was determined to have statistically significant differences in means. The statistically significant different mean occurred on the question regarding whistle-blower retaliation (Q26). The question that was determined to be significantly different was found to be significant at the .01 level, meaning that there is 99% certainty that this significance was not caused by chance. Results of these t-tests are available in Table 4.16.

Table 4.16 Comparison of Means on Whistle-blowing Behaviors Controlling for Race

Variable	White (Mean)	Non-White (Mean)	Significance
<i>Knowledge of proper protocols for reporting illegal or unethical behavior</i>	6.30	6.40	0.799
<i>Willingness to report any illegal or unethical behavior in the work place</i>	8.10	8.01	0.743
<i>Willingness to report any illegal or unethical behavior to employer</i>	7.74	7.43	0.337
<i>Willingness to report an employee with a close relationship</i>	6.97	6.61	0.286
<i>Willingness to report any illegal or unethical behavior to US Government</i>	7.48	7.28	0.533
<i>Willingness to report a manager</i>	8.02	7.86	0.587
<i>Willingness to report an individual from another department or office</i>	8.08	7.94	0.632
<i>Willingness to report an individual from another company</i>	8.16	7.90	0.374
<i>Common for whistle-blowers to be retaliated against</i>	6.70	7.52	0.008**
<i>More willing to report if claims made anonymously</i>	8.79	8.51	0.318
<i>Willingness to report fellow students</i>	7.52	7.16	0.291

** Significant at the .01 level

When comparing the means between Whites (6.70) and Non-Whites (7.52) regarding the question whether it is common for whistle-blowers to be retaliated against, a p-value of 0.008 is found. This p-value indicates that a statistically significant difference exists between

whites and non-whites perception of whether it is common for whistle-blowers to be retaliated against. On average, Non-whites believed it is more common for whistle-blowers to be retaliated against as compared to whites.

4.6.4 Comparison of Means for a Whistle-blowing Scale Controlling for Race

T-tests were run by comparing Whites and Non-Whites whistle-blowing scale mean scores. The results of this t-test are available in table 4.17. When comparing the whistle-blowing scale means of Whites (7.62) and Non-Whites (7.48) a p-value of 0.520 is found. This p-value indicates that there are no statistically significant differences between Whites and Non-whites when comparing the means of whites and non-whites using this studies developed whistle-blowing scale.

Table 4.17 Comparison of Means Using Whistle-blowing Scale While Controlling for Race

Variable	White (Mean)	Non-White (Mean)	Significance
<i>Whistle-blowing Scale</i>	7.62	7.48	0.520

4.6.5 Comparison of Means for Scales Using ANOVA Controlling for Race

Since the racial group of non-white is actually comprised of many races, an ANOVA test was run to compare the means of Whites, Asians, African Americans and Hispanics. Table 4.18 shows the ANOVA results for the fraud scale and Table 4.19 shows the results for ANOVA on the whistle-blowing scale. For the Fraud scale, the only statistically significant difference came between White (5.77) and Asians (6.72) at a significance level of 0.034. The whistle-blowing scale showed no statistically significant differences between Whites, Asians, African Americans and Hispanics.

Table 4.18 ANOVA Table for Fraud Scale Controlling for Race

Variable	Race1 (Mean)	Race2 (Mean)	Significance
<i>Fraud Scale</i>	Asian (6.72)	African American (5.99)	0.609
		Hispanic (5.96)	0.358
		White (5.77)	0.034*
	African American (5.99)	Asian (6.72)	0.609
		Hispanic (5.96)	0.999
		White (5.77)	0.170
	Hispanic (5.96)	Asian (6.72)	0.358
		African American (5.99)	0.999
		White (5.77)	0.639
	White (5.77)	Asian (6.72)	0.034*
		African American (5.99)	0.710
		Hispanic (5.96)	0.639

* Significant at the .05 level

Table 4.19 ANOVA Table for Whistle-blowing Scale Controlling for Race

Variable	Race1 (Mean)	Race2 (Mean)	Significance
<i>Whistle-blowing Scale</i>	Asian (7.28)	African American (7.38)	0.994
		Hispanic (7.72)	0.484
		White (7.62)	0.650
	African American (7.38)	Asian (7.28)	0.994
		Hispanic (7.72)	0.755
		White (7.62)	0.882
	Hispanic (7.72)	Asian (7.28)	0.484
		African American (7.38)	0.755
		White (7.62)	0.982
	White (7.62)	Asian (7.28)	0.650
		African American (7.38)	0.882
		Hispanic (7.72)	0.982

4.7 Effects of Defense Industry Associations

This study attempts to explore any possible statistically significant relationships concerning fraud and whistle-blowing. Examining an individual's relationship to those working in the defense industry has not been a topic explored in prior research literature in regards to the topics of either fraud or whistle-blowing. This study will attempt to find any statistically significant relationships for an individual's defense industry associations by comparing means between those who know individuals working in the defense industry and those who do not know individuals working in the defense industry.

4.7.1 Comparison of Means on Fraud Perceptions controlling for Defense Industry Associations

T-tests were run to determine if any statistically significant differences existed between those who know individuals working in the defense industry and those who do not know individuals working in the defense industry concerning perceptions of defense fraud. There were 17 questions asked concerning the topic of fraud, out of the 17 questions only 2 were determined to have statistically significant differences in means. Statistically significant different means were found on questions concerning how often fraud occurs in the defense industry (Q5) and frauds impact on the safety of military personnel (Q12). Both questions were statistically significant findings at the .05 level, meaning that there is a 95% certainty that this significance was not caused by chance. Results of these T-tests are available in Table 4.20.

When comparing the means between those with defense industry associations (6.62) and those without defense industry associations (5.92) regarding the question whether fraud occurs often in the defense industry, a p-value of 0.027 is found. This p-value indicates that a statistically significant difference exists between those with defense industry associations and those without defense industry associations in regards to perception of how often fraud occurs in the defense industry. On average, those with defense industry associations believed that fraud occurs more often in the defense industry as compared to those without defense industry associations. The comparison of the means between those with defense industry associations

Table 4.20 Comparison of Means on Fraud Perceptions Controlling for Defense Industry Associations

Variable	Defense Industry Association (Mean)	No Defense Industry Association (Mean)	Significance
<i>Knowledge of the defense industry</i>	2.73	2.47	0.055
<i>Knowledge of fraud based crimes</i>	2.96	2.81	0.197
<i>Fraud is a very serious crime that should result in prison time</i>	8.09	8.27	0.564
<i>Fraud results for a significant amount of monetary loss to the US Government</i>	7.28	7.04	0.445
<i>Fraud occurs often in the defense industry</i>	6.62	5.92	0.027*
<i>Small businesses are more likely than large businesses to commit fraud</i>	3.59	4.02	0.295
<i>Fraud committed by defense contractors is a very serious issue that needs to be investigated more vigorously</i>	7.17	7.11	0.848
<i>Only individuals who knew about fraud or were directly involved should be held responsible</i>	4.94	5.18	0.594
<i>Businesses in the defense industry use fraud to be more competitive in winning Department of Defense contracts</i>	5.64	5.68	0.883
<i>Individuals works in the defense industry use fraud to benefit themselves financially</i>	6.79	6.68	0.718
<i>Company executives aware of fraud occurring within their company should be held criminally responsible</i>	8.69	8.60	0.731
<i>Defense Industry Fraud directly impacts the safety of military personnel</i>	7.48	6.76	0.028*
<i>Businesses in the defense industry use fraud to benefit themselves financially</i>	7.60	7.10	0.117
<i>Fraud in the defense industry receives adequate amount coverage from the media</i>	3.65	4.02	0.346
<i>Fraud occurs more often in the defense industry than other industries in the US</i>	4.23	4.48	0.424
<i>Fraud is often necessary in order for a business to be successful in the defense industry</i>	2.58	2.11	0.170
<i>Amount of money lost yearly by the US government due to fraud</i>	4.62	4.63	0.981

* Significant at the .05 level

(7.48) and those without defense industry associations (6.76) for the question of whether or not fraud directly impacts the safety of military personnel resulted in a p-value of 0.04. This p-value indicates that a statistically significant difference exists between those with defense industry associations and those without defense industry associations for the perception that defense fraud directly impacts the safety of military personnel. On average, those with defense industry associations believed that defense fraud directly impacts the safety of military personnel than those without defense industry associations did.

4.7.2 Comparison of Means for a Fraud Scale Controlling for Defense Industry Associations

T-tests were run by comparing the fraud scale mean score of those with defense industry associations and those without defense industry associations. The results of this T-test are available in Table 4.21. When comparing the fraud scale means of those with defense industry associations (5.98) and those without defense associations (5.84), a p-value of 0.308 is found. This p-value indicates that there are no statistically significant differences between those with defense industry associations and those without defense industry associations when comparing the means of these two groups using this studies developed fraud scale.

Table 4.21 Comparison of Means for a Fraud Scale Controlling for Defense Industry Associations

Variable	Defense Association (Mean)	No Defense Association (Mean)	Significance
<i>Fraud Scale</i>	5.98	5.84	0.308

4.7.3 Comparison of Means for Whistle-blowing controlling for Defense Industry Associations

T-tests were run to determine if any statistically significant differences existed between those with defense industry associations and those without defense industry associations concerning whistle-blowing behaviors. Results of these t-tests are available in table 4.22. It was determined after running these t-tests that no statistically significant differences exist between the means of those with defense industry associations and those without defense industry associations in regards to the issue of whistle-blowing.

Table 4.22 Comparison of Means on Whistle-blowing Behaviors Controlling for Defense Industry Associations

Variable	Defense Association (Mean)	No Defense Association (Mean)	Significance
<i>Knowledge of proper protocols for reporting illegal or unethical behavior</i>	6.36	6.25	0.808
<i>Willingness to report any illegal or unethical behavior in the work place</i>	8.04	8.02	0.965
<i>Willingness to report any illegal or unethical behavior to employer</i>	7.58	7.55	0.924
<i>Willingness to report an employee with a close relationship</i>	6.57	6.72	0.682
<i>Willingness to report any illegal or unethical behavior to US Government</i>	7.48	7.38	0.779
<i>Willingness to report a manager</i>	7.90	7.83	0.836
<i>Willingness to report an individual from another department or office</i>	7.90	7.83	0.989
<i>Willingness to report an individual from another company</i>	7.96	7.96	0.169
<i>Common for whistle-blowers to be retaliated against</i>	7.32	7.25	0.838
<i>More willing to report if claims made anonymously</i>	8.67	8.63	0.889
<i>Willingness to report fellow students</i>	7.42	7.22	0.573

4.7.4 Comparison of Means for Whistle-blowing Scale Controlling for Defense Associations

T-tests were run by comparing the whistle-blowing scale mean score of those with defense industry associations and those without defense industry associations. The results of this T-test are available in Table 4.23. When comparing the whistle-blowing scale means of those with defense industry associations (7.59) and those without defense associations (7.50), a p-value of 0.702 is found. This p-value indicates that there are no statistically significant differences between those with defense industry associations and those without defense industry associations when comparing the means of these two groups using this studies developed whistle-blowing scale.

Table 4.23 Comparison of Means for a Whistle-blowing Scale Controlling for Defense Industry Associations

Variable	Defense Association (Mean)	No Defense Association (Mean)	Significance
<i>Whistle-blowing Scale</i>	7.59	7.50	0.702

4.8 Effects of College Major

One of the purposes of this study is to compare Criminal Justice students and Business student's perceptions of fraud and whistle-blowing. Comparing CRCJ to Business students has not been a topic explored in prior research literature in regards to the topics of either fraud or whistle-blowing. This study attempts to find any statistically significant differences between CRCJ and Business students concerning fraud and whistle-blowing.

4.8.1 Comparison of Means on Fraud Perceptions Controlling for Major

T-tests were run to determine if any statistically significant differences existed between those CRCJ and Business students concerning perceptions of defense fraud. There were 17 questions asked concerning the topic of fraud, out of the 17 questions there were 3 questions that were determined to have statistically significant differences in means. Statistically significant different means were found on questions concerning knowledge of the defense industry (Q1), knowledge of fraud based crimes (Q2) and businesses using fraud to be more competitive in winning contracts (Q9). Of the 3 questions determined to be significantly different, only one was found to be significant findings at the .01 level, meaning that there is 99% certainty that this significance was not caused by chance. The other two questions were statistically significant findings at the .05 level, meaning that there is a 95% certainty that this significance was not caused by chance. Results of these T-tests are available in Table 4.24.

When comparing the means between Business (2.26) and CRCJ (2.92) students on the variable of self perceived knowledge of the defense industry, a p-value of 0.000 if found. This p-value indicates that there is a statistically significant difference between Business and CRCJ students on knowledge of the defense industry. On average, CRCJ students perceived

Table 4.24 Comparison of Means on Fraud Perceptions Controlling for Major

Variable	Business (Mean)	CRCJ (Mean)	Significance
<i>Knowledge of the defense industry</i>	2.26	2.92	0.000**
<i>Knowledge of fraud based crimes</i>	2.76	3.02	0.020*
<i>Fraud is a very serious crime that should result in prison time</i>	8.45	8.23	0.458
<i>Fraud results for a significant amount of monetary loss to the US Government</i>	7.36	6.82	0.088
<i>Fraud occurs often in the defense industry</i>	6.37	6.06	0.297
<i>Small businesses are more likely than large businesses to commit fraud</i>	4.05	3.70	0.374
<i>Fraud committed by defense contractors is a very serious issue that needs to be investigated more vigorously</i>	7.32	7.25	0.803
<i>Only individuals who knew about fraud or were directly involved should be held responsible</i>	4.83	5.28	0.304
<i>Businesses in the defense industry use fraud to be more competitive in winning Department of Defense contracts</i>	5.91	5.28	0.028*
<i>Individuals works in the defense industry use fraud to benefit themselves financially</i>	6.91	6.35	0.066
<i>Company executives aware of fraud occurring within their company should be held criminally responsible</i>	8.77	8.57	0.421
<i>Defense Industry Fraud directly impacts the safety of military personnel</i>	6.88	7.08	0.544
<i>Businesses in the defense industry use fraud to benefit themselves financially</i>	7.21	7.25	0.886
<i>Fraud in the defense industry receives adequate amount coverage from the media</i>	3.83	4.42	0.130
<i>Fraud occurs more often in the defense industry than other industries in the US</i>	4.44	4.74	0.302
<i>Fraud is often necessary in order for a business to be successful in the defense industry</i>	2.27	2.28	0.971
<i>Amount of money lost yearly by the US government due to fraud</i>	4.80	4.41	0.058

** Significant at the .01 level

* Significant at the .05 level

themselves to know more about the defense industry than business students. The comparisons of the means between Business (2.76) and CRCJ (3.02) students concerning self perceived knowledge of fraud resulted in a p-value of 0.020. This p-value indicates that a statistically significant difference exists between Business and CRCJ students concerning self perceived knowledge of fraud based crimes. On average, CRCJ students reported that they had a greater knowledge of fraud based crimes than business students. With regards to the variable businesses in the defense industry use fraud to be more competitive in winning department of defense contracts, a comparison of the means of business (5.91) and CRCJ (5.28) students resulted in a p-value of 0.028. This p-value indicates that there is a statistically significant difference between the means of business and CRCJ students concerning the variable of businesses using fraud to be more competitive in winning contracts. On average, business students believed that businesses in the defense industry use fraud to be more competitive in winning contracts than CRCJ students.

4.8.2 Comparison of Means using a Fraud Scale Controlling for Major

T-tests were run by comparing the fraud scale mean score of Business and CRCJ students. The results of this t-test are available in Table 4.25. When comparing the fraud scale means of Business (5.94) and CRCJ (5.91) students, a p-value of 0.215 are found. This p-value indicates that there are no statistically significant differences between Business and CRCJ students when comparing the means of these two groups using this studies developed fraud scale.

Table 4.25 Comparison of Means using a Fraud Scale Controlling for Major

Variable	Business (Mean)	CRCJ (Mean)	Significance
<i>Fraud Scale</i>	5.94	5.91	0.215

4.8.3 Comparison of Means on Whistle-blowing Perceptions Controlling for Major

T-tests were run to determine if any statistically significant differences existed between those CRCJ and Business students concerning perceptions of whistle-blowing behaviors.

There were 11 questions asked concerning the topic of fraud, out of the 11 questions there were 3 questions that were determined to have statistically significant differences in means. Statistically significant different means were found on questions concerning knowledge of the proper protocols of reporting illegal behavior (Q18), willingness to report illegal behavior to their employer (Q20) and willingness to report illegal behavior to the US government (Q22). All three questions were statistically significant findings at the .05 level, meaning that there is a 95% certainty that this significance was not caused by chance. Results of these T-tests are available in Table 4.26.

When comparing the means between business (6.01) and CRCJ (6.92) students' regarding knowledge of proper protocols for reporting illegal and unethical behaviors, a p-value of 0.023 is found. This p-value indicates that a statistically significant difference exists between business and CRCJ students regarding knowledge of proper protocols in reporting illegal behaviors. On average, CRCJ students reported that they were more knowledgeable than business students on the proper protocols for reporting illegal behaviors. The comparison of the means between business (7.88) and CRCJ (7.24) students regarding willingness to report illegal behavior to their employer, resulted in a p-value of 0.048. This p-value indicates that there is a statistically significant difference between business and CRCJ students regarding willingness to report illegal behavior to their employer. On average, business students showed that they are more willing to report illegal behavior to their employers than CRCJ students. When comparing the means between business (7.73) and CRCJ (7.00) students' regarding willingness to report illegal behavior to the US government, a p-value of 0.023 was found. This p-value indicates that a statistically significant difference exists between business and CRCJ students regarding willingness to report illegal behavior to the US Government. On average, business students reported that they would be more willing to report illegal behavior to the US government than CRCJ students.

Table 4.26 Comparison of Means on Whistle-blowing Behaviors Controlling for Major

Variable	Business (Mean)	CRCJ (Mean)	Significance
<i>Knowledge of proper protocols for reporting illegal or unethical behavior</i>	6.01	6.92	0.023*
<i>Willingness to report any illegal or unethical behavior in the work place</i>	8.29	8.07	0.412
<i>Willingness to report any illegal or unethical behavior to employer</i>	7.88	7.24	0.048*
<i>Willingness to report an employee with a close relationship</i>	7.06	6.63	0.217
<i>Willingness to report any illegal or unethical behavior to US Government</i>	7.73	7.00	0.023*
<i>Willingness to report a manager</i>	8.07	7.87	0.504
<i>Willingness to report an individual from another department or office</i>	8.27	7.86	0.137
<i>Willingness to report an individual from another company</i>	8.14	8.00	0.637
<i>Common for whistle-blowers to be retaliated against</i>	7.17	7.05	0.709
<i>More willing to report if claims made anonymously</i>	8.82	8.40	0.120
<i>Willingness to report fellow students</i>	7.56	7.19	0.254

** Significant at the .01 level

* Significant at the .05 level

4.8.4 Comparison of Means using a Whistle-blowing Scale Controlling for Major

T-tests were run by comparing the whistle-blowing scale mean score of Business and CRCJ students. The results of this t-test are available in Table 4.27. When comparing the whistle-blowing scale means of Business (7.71) and CRCJ (7.45) students, a p-value of 0.215 are found. This p-value indicates that there are no statistically significant differences between Business and CRCJ students when comparing the means of these two groups using this studies developed whistle-blowing scale.

Table 4.27 Comparison of Means using a Whistle-blowing Scale Controlling for Major

Variable	Business (Mean)	CRCJ (Mean)	Significance
<i>Whistle-blowing Scale</i>	7.71	7.45	0.215

4.9 Comparing Fraud and Whistle-blowing Scales

This study attempted to find a relationship between fraud and whistle-blowing by comparing two scales based on collected survey data. The scales were created by averaging the scores of participants on certain questions regarding the topics of fraud and whistle-blowing. Once the scales were created, they were examined for skewness and strength of relationship.

A frequency distribution was run for each scale and was plotted into a histogram with a normal distribution line added to view the skewness of each scale. The histograms can be viewed in Figure 4.1 and Figure 4.2.

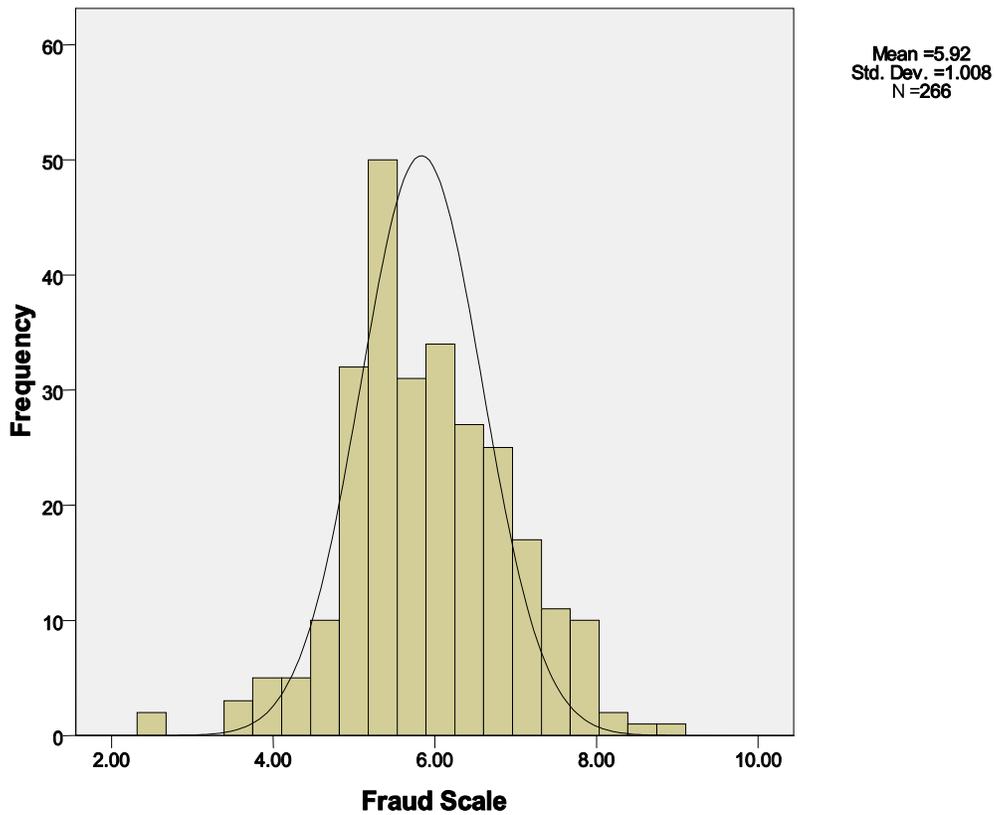


Figure 4.1 Fraud Scale

The histogram shows that the distribution of the fraud scale is for the most part normal, but slightly skewed to the left.

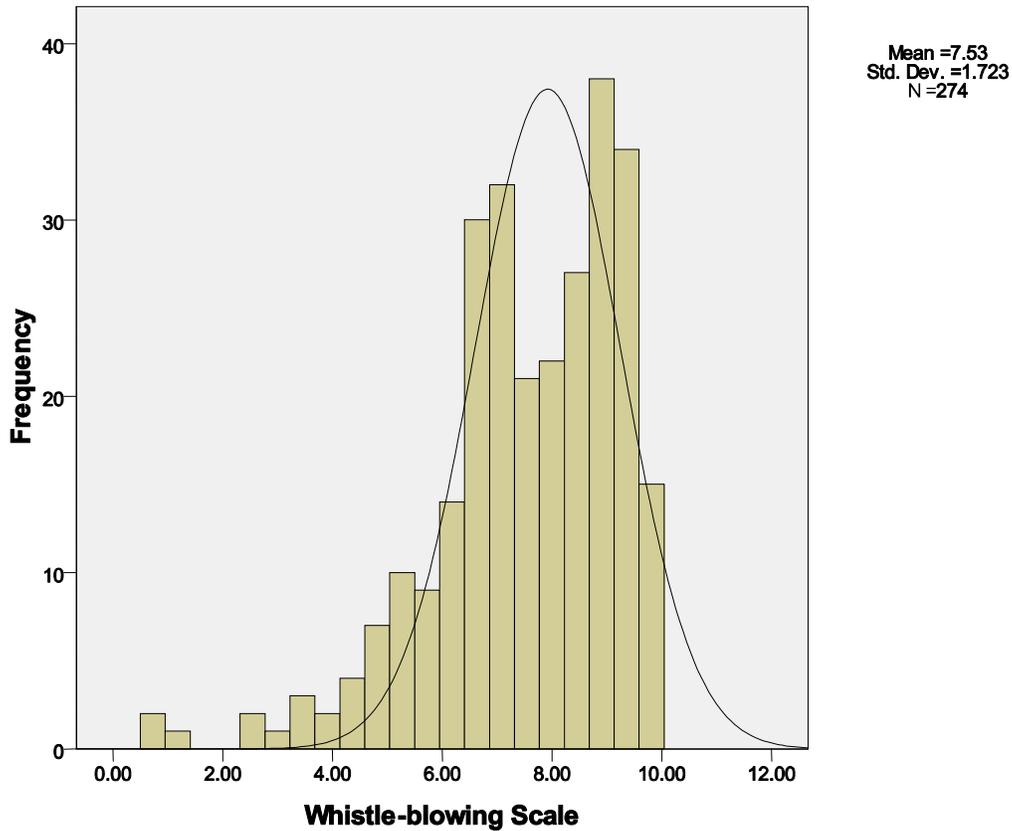


Figure 4.2 Whistle-blowing Scale

The histogram shows that the distribution of the fraud scale follows much of the normal curve, but is skewed to the left and right of the mean.

Two scatter plots were created to visualize the relationship between the fraud and whistle-blowing scales. The first scatter plot shows the whistle-blowing scale on the x-axis and the fraud scale on the y-axis which can be viewed in Figure 4.3. The second scatter plot shows the fraud scale on the x-axis and the whistle-blowing scale on the y-axis which can be viewed in Figure 4.4. By examining these two scatter plots we can see that there is a slight positive correlation but non-linear relationship between fraud and whistle-blowing. There are many outliers found when comparing these scales. The shape of this plot shows a lack of homoscedasticity, the shape instead shows heteroscedascity.

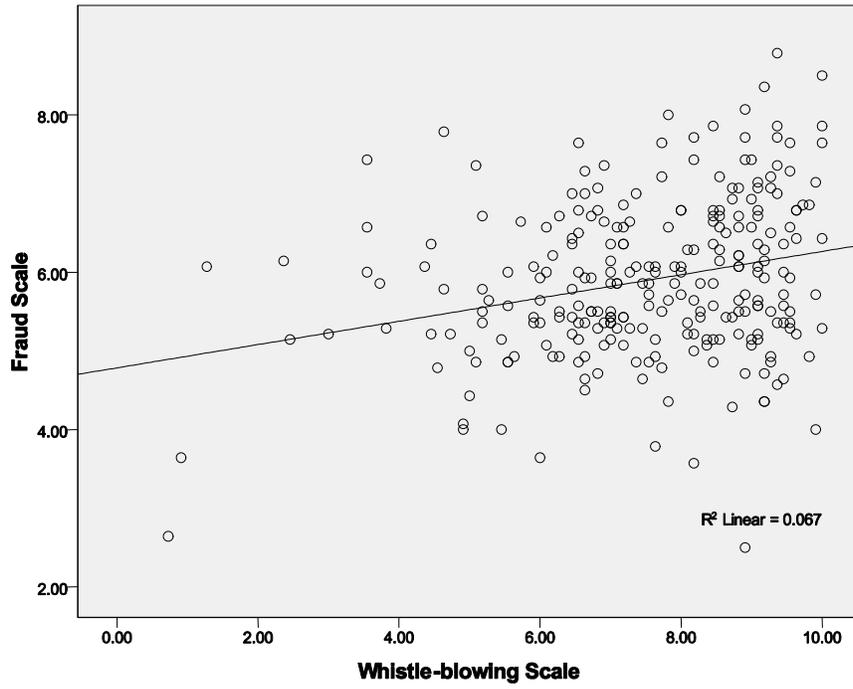


Figure 4.3 Fraud and Whistle-blowing Scatter Plot

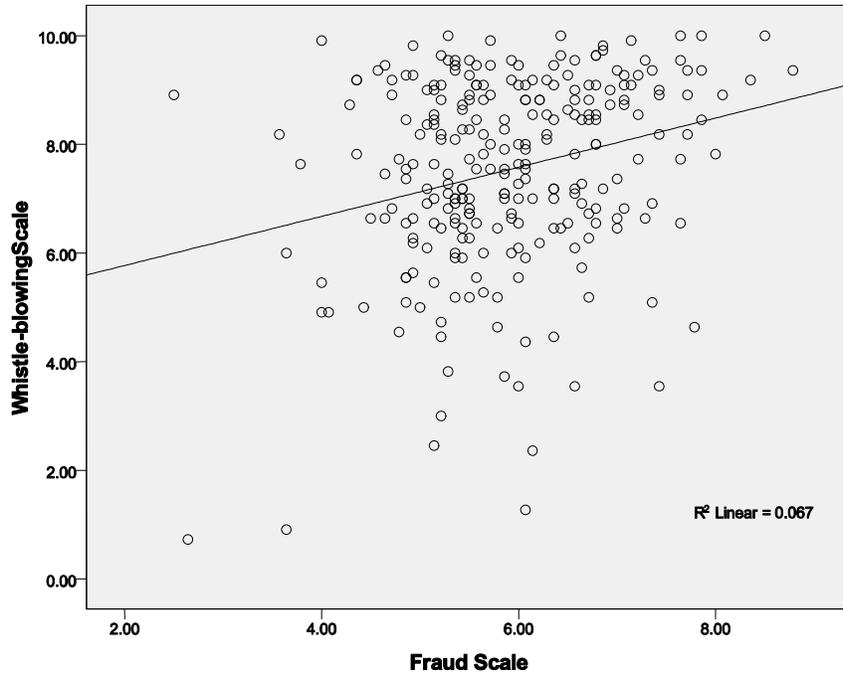


Figure 4.4 Whistle-blowing and Fraud Scatter Plot

By running a Pearson R correlation we can determine the strength of the relationship that exists between these two scales. Results of the Pearson R can be viewed in Table 4.28.

Table 4.28 - Pearson R for Fraud and Whistle-blowing Scales

		<i>Whistle-blowing Scale</i>
<i>Fraud Scale</i>	Pearson Correlation	0.259**
	Sig (2-tailed)	0.000023
	N	261

** Correlation is significant at the 0.01 level (2-tailed)

This Pearson product-moment correlation was run to determine the relationship between an individual's perception of defense fraud and their willingness to whistle-blow. Based on the results, a small positive association between perception of defense fraud and willingness to whistle-blow, which was statistically significant ($r = .259$, $n = 261$, $P < .0005$).

While this Pearson product-moment correlation test showed statistical significance, there are a few statistical conditions that must be considered before accepting these results. There are four assumptions that should be made with respect to Pearson's correlation tests. First, the variables must be either interval or ratio in measurements, which is true for both of the scales being tested. Second, the variables must be approximately normally distributed. Based upon the Illustration 4.1 and 4.2, these two scales appear to be approximately normally distributed. Third, there needs to be a linear relationship between the two variables. Based upon the scatter plots of these two scales (Illustration 4.3 and 4.4), while there appears to be a positive correlation visually present, it is difficult to describe this relationship as a linear one. With this relationship appearing as a non-linear one, it brings into question the validity of the Pearson correlation significance. Fourth, statistical outliers need to be kept to a minimum as they can easily skew the results of a Pearson correlation. Unfortunately, these scales have a large number of outliers and for that reason the Pearson correlation significance could be called into question.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

5.1 Purpose

The purpose of this study was to explore the relationship between perception of fraud occurring in the defense industry and likelihood of engaging in whistle-blowing behaviors. To accomplish this, college students were selected to respond to surveys on the topic of defense industry fraud and whistle-blowing. The expected outcome of this survey was to determine if a relationship exists between perceptions of defense industry fraud and reactions to whistle-blowing behaviors. Due to this study's exploratory nature, this study also set out to determine new concepts and ideas that could be beneficial to spurring future research on these topics. Demographic variables such as race, gender, college major and political ideology were also examined in this study to determine if any statistically significant data exists that should be focused on in future research. Measuring the perceptions of individuals on a particular issue is often criticized for not measuring the reality an issue. The researcher believes that perception studies offer important results due to the fact that an individual's perceptions are reality to them. Thus the perceptions measured in this study present the reality for the issues of defense fraud and whistle-blowing that could have implications for policy for government and private industry.

5.2 Discussion

When examining the samples means scores for the fraud and whistle-blowing sections of this studies survey data, there are many interesting findings that warrant discussion. First, this sample reported that they believed that they were somewhat knowledgeable of both the defense industry (2.58) and fraud based crimes (2.86). This studies survey asked two questions that attempted to measure an individual's knowledge of defense industry fraud so that we could

better determine the samples actual knowledge of the impact of defense fraud. The first question was whether or not “defense industry fraud directly impacts the safety of military personnel” which the sample responded with a mean score of 7.03. This response shows that this sample agreed that defense industry fraud directly impacts the safety of military personnel. This result lines up with the realities of defense industry fraud as fraud in the defense industry often results in substandard items, parts and services that put military service members in greater risk of being injured or harmed during the course of their missions (Department of Defense Office of the Inspector General, 2011). Another knowledge question was asked to determine each participant’s perceptions of how much money the US government loses every year due to fraud in the defense industry. The sample mean for this particular question resulted in a score of 4.63 which lies between the responses of “\$100-999 million” and “\$1-9billion”. While there is currently no way of knowing the actual dollar amount lost each year due to defense fraud, estimates show that the dollars lost to fraud lies somewhere between \$1-9 billion per year (Department of Defense Office of the Inspector General, 2011). This sample’s perception of the amount of dollars lost per year due to defense fraud was slightly lower than (0.37) from what would be considered the reality of dollars lost to the US Government. Based on these two questions, this sample’s perception of defense fraud appears to line up rather closely with the realities of defense industry fraud.

The researcher came across multiple issues in the research literature concerning both fraud and whistle-blowing. Research questions were created for these issues that were tested in this studies survey instrument. Prior literature on the issue of fraud showed that there is currently an issue that exists concerning whether fraud should be considered an individual or organizational issue in terms of criminal responsibility. This sample responded to the statement “a company should not be held responsible for acts of fraud or if only individuals involved should be held responsible” with a mean of 5.11. The respondent’s neutral response to the statement falls into line with prior literature in that there seems to be no real consensus towards only

blaming individuals or organizations for instances of fraud. For the issue of whistle-blowing, prior literature shows that issues exist concerning whistle-blower anonymity and perceptions of whistle-blower retaliation. This sample was asked if they would be more willing to engage in whistle-blowing if they were able to make their claims anonymously. The sample agreed that they would be more likely to engage in whistle-blowing if they were able to make their claims anonymously. This response lines up with prior literatures findings that individuals are more likely to make whistle-blowing claims if offered to make their claims anonymously (Dasgupta & Kesharwani, 2010). When asked if it is common for those who have engaged in whistle-blowing to be retaliated against, the sample agreed with the statement by reporting a mean of 7.23. This response also lines up with findings in prior literature that individuals perceive that whistle-blower retaliation occurs often (Dasgupta & Kesharwani, 2010). For this studies sample, it appears that there may be a link between making anonymous whistle-blowing claims and perception of commonality for whistle-blower retaliation that is also apparent in broader whistle-blowing literature.

For this study, two scales were created that attempted to measure an individual's perception of fraud and their willingness to whistle-blow. The first scale combines questions regarding defense fraud seriousness, commonality and other defense fraud issues to measure an individual's overall perception of defense industry fraud. A whistle-blowing scale was also created by combining questions regarding whistle-blowing willingness. These questions provided different scenarios of reporting illegal or unethical behaviors to determine an individual's overall likeliness to engage in whistle-blowing. This sample reported a mean of 5.91 for the fraud scale and a mean of 7.53 for the whistle-blowing scale. This shows that this study's sample were overall neutral in their perceptions of defense industry fraud and were overall willing to engage in whistle-blowing behaviors. These two scales were compared to see if any relationship existed between perception of defense fraud and willingness to engage in whistle-blowing. Results of this comparison show that there is a small positive relationship between

these two variables. The researcher hypothesized that the higher an individual's levels of perception regarding fraud occurring in the defense industry would result in a lower willingness to engage in whistle-blowing behaviors. Based on the results of comparing these two scales, the researcher's hypothesis is rejected. There appears to be a slight positive relationship between an individual's perception of fraud and willingness to whistle-blow rather than a negative relationship. The researcher believes that this relationship may exist because this sample believes more in reporting illegal or unethical behavior based on the social undesirability of claiming that you are not willing to report negative behaviors. Future research should be conducted to assess whether or not individuals actually follow through on their willingness to report illegal and unethical behaviors that they encounter in their workplace.

This study also focused on exploring new concepts for the perception of defense fraud and whistle-blowing by determining if any statistically significant differences existed between demographic groups that participated in this study. The researcher found many gaps in the research literature regarding both defense fraud and whistle-blowing. For this reason, the researcher focused on the control variables of gender, race, political party, major and defense industry associations in order to determine if any statistically significant differences exist between these groups. The researcher believes that these findings should act as a foundation for future research on fraud and whistle-blowing.

The first variable examined for statistically significant differences was gender (male and female). Prior research literature has stated that possible gender differences exist on the topic of fraud (Daly, 1989). Currently no research exists on the topic of defense industry fraud in relation to gender. Prior literature on whistle-blowing states that gender differences exist, especially for the concept of whistle-blower retaliation (Carli & Eagly, 1999; Rehg et al, 2008). This sample reported no statistically significant differences between males and females for willingness to whistle-blow. However, this sample did report many statistically significant differences for perceptions of defense fraud. Females reported significantly higher means than

males for the belief that defense fraud is a serious issue. Males reported significantly higher means than females for self perceived knowledge of fraud and the defense industry. Males also reported significantly higher means than females for questions regarding whether fraud was necessary to be successful success in the defense industry. Some assumptions could be made for these differences, such as that males may inflate their self perceived knowledge of topics in order to feel competitively advantaged, as well as that males feel that cheating (such as using fraud) is simply a part of competition. Females however may view fairness as paramount in competition while males may view winning (by any means necessary) as paramount. Future research is necessary to test such assumptions. Although this sample showed no significant differences between males and females for whistle-blowing, gender should be considered a significant topic going forward for future research on fraud and whistle-blowing.

The second variable examined for statistically significant differences was political party affiliation (Republican/Democrat). The researcher decided to compare only republicans and democrats due to each group making up a majority of the responses in the survey. A total of 92 republicans and 103 democrats participated in the study (n = 195). No literature was found that considers political party affiliation and its effects on the topic of defense fraud and whistle-blowing. Results of this study showed that republicans rated themselves significantly more knowledgeable of the defense industry than democrats. Democrats believed more significantly that defense fraud receives adequate amounts of media coverage than Republicans believed. Democrats also rated that fraud occurs more in the defense industry than other industries than Republicans. It is possible that adequate media coverage and belief that fraud occurs more in the defense industry may be linked because such increased media coverage may be driving the belief that fraud occurs more in the defense industry than other industries. Other than for those two variables, it appears that Republicans and Democrats differ very little in their views of defense industry fraud. Republicans and democrats did not present any statistically significant differences on whistle-blowing topics. While there were not many significant differences

between republicans and democrats in this sample, future research should look at political party affiliation and political ideology with some focus on media coverage and perceptions of fraud occurring in other industries.

One of the primary objectives of this study was to compare business students and Criminology and Criminal Justice (CRCJ) students to find out if any statistically significant differences exist between these two college majors. These two groups were chosen due to both possibly having a greater knowledge of fraud and whistle-blowing as compared to other majors. No prior research literature exists on college majors views on defense fraud and whistle-blowing. Results showed that criminal justice majors rated themselves as having significantly more knowledge of both fraud in the defense industry and fraud based crimes. This greater knowledge of fraud for CRCJ students is most likely based on the groups core focus on the studying of crime for their major. Business majors believed more significantly that businesses in the defense industry used fraud to be more competitive in winning defense contracts. The researcher believes that this difference could be due to the possibility that business student's have a greater knowledge of competitive bidding processes from their studies of business. On the issue of whistle-blowing, CRCJ majors reported a significantly higher knowledge of the proper protocols for reporting illegal behaviors than business students. However, business majors reported significantly higher willingness to report illegal behaviors to their employer as well as to the US government than CRCJ majors. This difference in willingness to whistle-blow could be explained by CRCJ majors reporting a higher knowledge of whistle-blowing. CRCJ majors may better understand some of the many issues and negative aspects surrounding becoming a whistle-blower. This knowledge of the issues surrounding whistle-blowing may make them more hesitant to whistle-blow. Based on these findings, education differences such as major should be a major focus of future research on both fraud and whistle-blowing.

Upon review, Race was found to be another variable in which a lack of research literature was found for the topics of fraud and whistle-blowing. In this particular sample, race

(whites/non-whites) accounted for the highest number of statistically significant different items as compared to other control variables used in this study. Non-whites reported significantly higher scores regarding the statement that it is common for whistle-blowers to be retaliated against. These results appear to show that racial minorities perceive that whistle-blower retaliation is common. However this reported belief does not appear to lower their willingness to whistle-blow as whites and non-whites do not differ significantly in whistle-blower willingness. Whites and racial minorities differed greatly in their perceptions of defense fraud issues. Non-whites reported significantly higher means than whites for the belief that fraud resulted in a significant amount of monetary loss to the United States. It was found that Whites believed more significantly than non-whites that large businesses were more likely than small businesses to commit fraud. Non-whites reported more significantly that fraud is a serious issue that needs to be investigated more vigorously. Non-whites also reported significantly higher than whites on belief that only individuals who knew about or were directly involved in fraud should be held responsible. Non-whites reported significantly higher means on the belief that defense industry fraud receives adequate media coverage as well as that fraud occurs more often in the defense industry than other industries. These last two items line up very closely to what was reported in the political affiliation comparisons, in which Democrats and non-whites both believe that the defense industry receives adequate media coverage and that fraud occurs more often in the defense industry than other industries. Based on the results of this samples data, it appears that Non-whites (Asians, African Americans, and Hispanics) believe that fraud is a more serious issue than whites reported. There seems to be an interesting difference in opinion amongst whites and non-whites on the topic of criminal responsibility of individuals versus organizations committing fraud. Whites lean more to disagreeing with the idea that only individuals are responsible for fraud occurring (making fraud an organizational/business issue), while non-whites lean more to belief that only individuals can be responsible for fraud rather than the business or organization as a whole.

Based on the number of differences between whites and non-whites for the fraud perceptions, the researcher decided to compare Whites, Asians, African Americans and Hispanics to see if differences existed with each group's fraud scales. Results showed that only Asians and Whites had statistically significant different means for fraud scales. According to the results, Asians have a higher perception of fraud occurring in the defense industry than Whites. A crosstab between major and race was run which found that Asian in this sample were overwhelmingly business students (42 business, 5 CRCJ) while whites were split more evenly between business and CRCJ students (53 business, 33 CRCJ). Asians being overwhelmingly skewed towards being business students could be largely the reason statistically significant differences exist between Whites and Asians in this sample. Race appears to be an important variable when it comes to perceptions of fraud occurring in the defense industry and fraud issues in general. From the results of this study, Race and Gender appear to be the most important variables that need to be examined in future research on defense industry fraud and whistle-blowing.

The final variable examined in this study was a comparison between those who have friends or family working in the defense industry (defense associations) to those who do not have friends or family working in the defense industry (no defense associations). No prior research has been conducted on these two groups' perceptions of defense industry fraud and whistle-blowing. The researcher decided to examine these two groups due to the possible socialization implications on perceptions of the defense industry by growing up with or knowing someone working in the defense industry. There were no statistically significant differences found between those with defense industry associations and those without defense industry associations for whistle-blowing willingness. Findings suggest that those with defense industry associations reported significantly higher means when asked if fraud occurred often in the defense industry. However, those with defense industry associations reported significantly higher means for belief that defense fraud directly impacts the safety of military personnel.

These findings suggest that knowing someone in the defense industry may impact how an individual views the defense industry. This could be explained by the level of familiarity with the defense industry that an individual might have by knowing someone working in the defense industry that could raise the awareness and knowledge of fraud occurring within the defense industry. Even though defense industry associations produced a small amount of significant data in this sample, future research should still be considered on fraud and whistle-blowing that takes defense industry associations into consideration.

5.3 Implications

While fraud is often overlooked as a serious issue in comparison to other crimes in our society (such as violent crimes), it is nonetheless a very serious in our society. Based solely on the amount of dollars lost and wasted due to fraud, research that focuses on the topic of fraud should be considered important to the interests of the United States taxpayer. Research on both fraud and whistle-blowing are also important to the interests of both private businesses and law enforcement agencies. Ultimately fraud research can help us understand how and why fraud occurs, which could be beneficial to both private enterprises and law enforcements ability to identify and combat fraud in our society. Examining public perception of an issue such as fraud could have a large amount of influence on how seriously law enforcement and businesses treat the problem of fraud going in the future. The results of this research study indicates that this sample believes that defense industry fraud is an issue in our society that needs to be taken more seriously by private enterprise and law enforcement agencies. Differences existed between groups such as gender, race and education that seem to affect how an individual views fraud as an issue in our society. Such differences between groups should be considered by businesses, law enforcement and future research to better understand fraud in our society. This research has implications on research studies on the topic of both defense fraud and fraud in general as it provides a foundation for future research.

Whistle-blower willingness is also a very important topic due to how important whistle-blowing is as a tool for identifying instances of illegal or unethical behavior occurring in our society. Currently, whistle-blowing is one of the primary tools that both private enterprise and law enforcement use to identify instances of fraud that occurs in the work place. Results of this study could have implications on how law enforcement views whistle-blowing as an effective means for combating fraud. Overall the findings of this study indicated that students would be willing to engage in whistle-blowing behaviors. However there were also issues that were found with whistle-blowing that some variables (such as gender, education and race) may cause differences in willingness to engage in whistle-blowing behaviors. Law enforcement agencies and businesses should take into consideration these differences in gender, education and race by creating whistle-blowing programs that consider the needs of informing individuals about the realities of whistle-blower retaliation to dispel current misconceptions as well as offer anonymous whistle-blowing programs for those who would feel more comfortable reporting illegal or unethical behaviors anonymously. Addressing issues such as these will increase an individual's willingness to engage in whistle-blowing in the future.

5.4 Limitations

There were several limitations to this study that should be considered in future research on the topics of fraud and whistle-blowing. First, the sample size of this study is relatively small (n=281) and thus the findings of this research will encounter more statistical error than a larger sample size would. Also due to the narrow population this study encountered (college students at one university attending Criminal Justice and Business courses), this study should not be considered generalizable to the general public.

Another issue in this study is the participant's knowledge of the topic of fraud in the defense industry. The population of this study consisted of Business and Criminal Justice students, two populations that should generally be more knowledgeable about fraud and whistle-blowing than the general public. This study found that participants were most likely to

believe that they were “somewhat knowledgeable” about both the defense industry and fraud. This samples views of the defense industry may also be somewhat skewed due to the large amount of individuals employed by the defense industry in the Dallas-Fort Worth metroplex and thus have much different views than many others in the population.

One issue in particular that effects research involving white-collar crimes such as fraud is the broad and general scope of the concept of both white-collar crime and fraud. Both concepts are so broad that they encompass many different types and forms of crimes. This can lead to many issues when trying to measure the perceptions of individuals concerning white-collar crimes and fraud. This study focused on defense fraud in particular, but based on the many types of fraud that can occur, it could lead to many issues with participant’s ability to understand and respond to questions regarding the topic of fraud.

This study was conducted during a time of economic instability in which much media attention was paid to economic crimes. For this reason, the results of this study may be somewhat biased by the large amount of attention paid to the current economic instability and large influx of high profile economic crimes reported in the media. Future studies on this topic should also take into consideration the impact of perceptions of the federal government. An individual having positive or negative perceptions of the federal government may impact how they view fraud occurring in the defense industry.

Other limitations include the way that the study was developed and organized. Due to the lack of prior research and literature on this topic, the survey instrument was designed to be exploratory in nature. Many of the questions on the survey instrument were not taken or inspired from prior used surveys, but were rather developed based on ideas found in the literature (mostly theoretical in nature) on the topics of white-collar crime, fraud and whistle-blowing. Due to the design and scope of this survey instrument, the findings in this study may lack the muster for accepted scientific reliability. For this reason, this survey instrument used in this study should be replicated for an increased understanding of its reliability. Another issue concerns the

reliability of self-report questionnaires or surveys, which in this case asked that the participants react to certain statements regarding issues in defense industry fraud and whistle-blowing. The responses to these statements may not accurately reflect the beliefs and perceptions of the participants due to a lack of understanding or miscomprehension of the statements or questions, or a lack of knowledge of the subjects in general.

5.5 Future Research

Currently there are major gaps in the research literature concerning defense industry fraud and whistle-blowing. This study set out fill gaps in the research literature by creating a foundation for future research studies on fraud and whistle-blowing by exploring new concepts and variables that should be considered in future research. Currently there is a need for research in many areas going forward, such as examining workers in the defense industry and the actual effectiveness of whistle-blowing.

There is a very serious need to study individuals working within the defense industry to examine whether or not they believe that defense industry fraud is a serious issue and whether or not they would be willing to engage in whistle-blowing behaviors. Such results could allow for us to examine whether or not defense industry fraud is a cultural issue in the defense industry. Results of such a study could have extraordinary benefits on the effectiveness of defense contractors and law enforcements agencies ability to combat fraud in the future. Whistle-blowing studies of workers in the defense industry would also have enormous benefit as they could help us develop more effective whistle-blowing programs based on the specific needs of individuals.

With fraud being such a serious issue in our society combined with the fact that whistle-blowing is the main tool to identify and combat fraud, we must continue research on these two topics so that we can better understand, investigate and combat fraud in our society.

APPENDIX A

SURVEY INSTRUMENT

8. A company should not be held responsible for acts of fraud, only the individuals who had knowledge of or were directly involved in committing fraud should be held responsible.

Strongly Disagree Strongly Agree

9. Businesses in the defense industry use fraud in order to be more competitive in winning Department of Defense contracts.

Strongly Disagree Strongly Agree

10. Individuals working within the defense industry use fraud to benefit themselves financially.

Strongly Disagree Strongly Agree

11. Company executives aware of fraud occurring within their company should be held criminally responsible.

Strongly Disagree Strongly Agree

12. Defense industry fraud directly impacts the safety of military personnel.

Strongly Disagree Strongly Agree

13. Businesses in the defense industry use fraud to benefit financially.

Strongly Disagree Strongly Agree

14. Fraud occurring in the defense industry receives an adequate amount of coverage from the news media.

Strongly Disagree Strongly Agree

15. More fraud occurs in the defense industry than in other industries in the United States.

Strongly Disagree Strongly Agree

16. Fraud is often necessary in order for a business to be successful in the defense industry.

Strongly Disagree Strongly Agree

17. How much money does the US government lose yearly due to fraud in the defense industry?

- \$999,000 or less
- \$1-9 million
- \$10-99 million
- \$100 – 999 million
- \$1 – 9 billion
- \$10 – 99 billion
- \$100 – 999 billion
- \$ 1 trillion or more

18. I am knowledgeable of the proper protocols used in reporting illegal or unethical behavior at my school or my place of work.

Strongly Disagree Strongly Agree

19. I would be willing to report any illegal or unethical behavior that I encounter at my place of work.

Strongly Disagree Strongly Agree

20. If I was aware of unethical or illegal behavior, I would be willing to participate in a whistle-blowing program offered by my employer.

Strongly Disagree Strongly Agree

21. I would report a fellow employee that I have a close relationship with if I witnessed them engaging in illegal or unethical behavior.

Strongly Disagree Strongly Agree

22. If I was aware of unethical or illegal behavior, I would be willing to participate in a whistle-blowing program offered by the US government.

Strongly Disagree Strongly Agree

23. I would report one of my managers if I witnessed them engaging in illegal or unethical behavior.

Strongly Disagree Strongly Agree

24. I would report an individual from another department or office within my workplace if I witnessed them engaging in illegal or unethical behavior.

Strongly Disagree Strongly Agree

25. I would report an individual working for another company if I witnessed them engaging in illegal or unethical behavior.

Strongly Disagree Strongly Agree

26. It is common for those who have reported illegal or unethical behavior to be retaliated against after choosing to report wrong doing.

Strongly Disagree Strongly Agree

27. I would be more willing to report unethical or illegal behavior if I was able to make my claims anonymously.

Strongly Disagree Strongly Agree

28. I would be willing to report a fellow student to the university if I had knowledge of them engaging in unethical or illegal behaviors.

Strongly Disagree Strongly Agree

29. I have taken a college course that focuses on the subject of ethics.

- Yes
- No
- I don't know

30. Please specify your gender:

- Female
- Male

31. Please specify your race:

- Asian
- American Indian or Alaska Native
- African American
- Hispanic
- Native Hawaiian or Other Pacific Islander
- White
- Other (please specify)

32. What is your current age?

Please specify:

33. What is your major? (Choose whichever best applies to you)

- Accounting
- Economics
- Finance
- Management
- Criminal Justice & Criminology
- Other (please specify)

34. What political party do you most identify with?

- Republican
- Democrat
- Independent
- Libertarian
- Tea
- Green
- Other (please specify)

35. How religious do you consider yourself?

Not at all Religious Very Religious

36. My political ideology would best be described as:

Very Liberal Moderate Very Conservative

37. Have you had family members or close friends serve in the military in the past 10 years?

- Yes
- No
- I don't know

38. Do you have family members or close friends working in the defense industry? (IE: Lockheed Martin, Bell Helicopter, General Dynamics, Boeing, or any other defense contractors)

- Yes
- No
- I don't know

39. I have served or am currently serving in the United States Military.

- Yes
- No
- I don't know

40. I have worked or am currently working in the defense industry.

- Yes
- No
- I don't know

Thank you for your participation in this survey!

If you have any questions or research-related problems, you may call Ryan Bradbury at 682-351-2556 or Dr. Rhonda R. Dobbs at 817-272-9398. You may call the Chairman of the Institutional Review Board at 817-272-3723 for any questions you may have about your rights as a research subject.

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BIOGRAPHICAL INFORMATION

Ryan Bradbury graduated from the University of Texas at Arlington with a Bachelor of Arts degree in Criminology and Criminal Justice in the spring of 2009. He has interest in the subject of white collar crime and currently works in the law enforcement community investigating fraud and other forms of financial crimes. He hopes to conduct future research on the topic of white collar crime while pursuing a future in academia. Ryan has interest in obtaining future degrees in sociology and philosophy in his pursuit of being a lifelong student.