

2016-01-01

Mapping Decisions Of Reporting Asset Misappropriation Within An Accounting Department Using Behavioral, Cognitive, And Cultural Traits

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MAPPING DECISIONS OF REPORTING ASSET MISAPPROPRIATION WITHIN
AN ACCOUNTING DEPARTMENT USING BEHAVIORAL, COGNITIVE, AND
CULTURAL TRAITS

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By

Nora Alaniz-Bouqayes

2016

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AN ACCOUNTING DEPARTMENT USING BEHAVIORAL, COGNITIVE, AND
CULTURAL TRAITS

By

NORA ALANIZ-BOUQAYES, BBA, MAcc

DISSERTATION

Presented to the Faculty of the Graduate School of
The University of Texas at El Paso
in Partial Fulfillment
of the Requirements
for the Degree of

DOCTOR OF PHILOSOPHY

Department of Accounting and Information Systems

THE UNIVERSITY OF TEXAS AT EL PASO

December 2016

ACKNOWLEDGEMENTS

I would like to thank the chair of my dissertation, Dr. Waymond Rodgers, and my committee members Dr. Gary Braun, Dr. Nathan Ashby and Dr. Karl Putnam.

ABSTRACT

The problem of global fraud continues to be pandemic with the cost to organizations exceeding \$3.9 trillion of lost revenues every year. Accounting research is slowly embracing the behavioral science research and has expanded limited literature addressing the traits of fraud perpetrators. This study begins to examine behavioral, cognitive, and cultural traits of reporters of fraud in accounting departments. This study narrows the area of interest to asset misappropriation as part of the Occupational Fraud and Abuse Classification System created by the Association of Fraud Examiners. An initial instrument to measure traits is developed and used to map decision paths that yield greater instances of reporting fraudulent behavior. Three hundred six responses from four national origins completed a survey instrument that measure the traits of Skepticism, Experience, and Judgement. After exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) a four factor model was deemed a good fit for the data. Using structural equation modeling analysis to replicate the decision making process the results indicate that all three traits are influential in an increase of reporting fraud. The Judgment trait had the strongest influence on the decision to report fraudulent behavior. Secondary analysis to test for variance of trust paths, as discussed by Rogers (2010), resulted in finding differences based on national culture. On the Rational-choice trust path, Low Secrecy Index participants had a stronger influence on the decision to report fraudulent behavior than High Secrecy Index participants.

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CHAPTER 1

INTRODUCTION

This study begins to examine the relationships between behavioral, cognitive and cultural traits and the decision to report fraudulent behavior. The area of interest is dictated by the Occupational Fraud and Abuse Classification System (OFACS) as created by Association of Certified Fraud Examiners (ACFE). This classification system indicates that fraud has three main categories 1) Corruption (C), 2) Asset Misappropriation (MA), and 3) Financial Statement Fraud (FSF). Reports from ACFE, 2016 indicate that Asset Misappropriation is the area with the highest number of cases. Asset Misappropriation is further classified into 1) Cash and 2) Inventory and all other Assets. This study further narrows the area of interest to Cash and specifically examines Fraudulent Disbursements. The median loss in this category is less, (\$130,000) compared to Corruption (\$200,000), and Financial Statement Fraud (\$1,000,000), but the highest number of cases originate in this area (>85%). Making AM an area of interest because of the large number of cases; this may be the “gateway” of initial accounting crimes that may lead to gaining confidence to perpetrate much costlier frauds in the future. This study is the first to use the OFACS to examine fraudulent activity reporting.

Behavioral trait research has been extensively investigated in the social sciences and recently it has made its way into business literature, mainly in the organizational and occupational management fields. Calls from Brody, (2011); AICPA, PCOAB, and Joseph Wells, stress the importance of expanding behavioral research into the accounting field. Traits of perpetrators have begun to appear in the accounting literature, but research on who reports (tipsters) is greatly lacking in accounting academia. The traits of interest in this study are 1)

Cognitive, 2) Behavioral, and 3) Cultural. Cognitive traits represent experience. Experience is usually slow to develop. As people age, they gain more experience. The more education a person has also increase the amount of experience and the experience practicing a subject also enhance it. These three factors combined may give indications of who will be more likely to report the crime. Behavioral traits are vague and try to determine patterns of thought, feelings, and behavior. Social Psychology research has a long history of studying behavior. Recently accounting studies have embraced this type of the investigation to examine skepticism. Skepticism is an important trait to possess as an auditor, but may also play a major role in developing accounting personnel's actions of reporting the crime. Another behavioral trait is attitude. Attitude about a subject is determined by asking how a person views a topic. Ajzen & Fishbein (1980) using their theory of planned behavior (TPB) found that a person's attitude led to a greater likelihood of action. In this study, questions ask how the participant feels about reporting fraudulent behavior. For example question I-B4, in the Appendix, asks participants to rate the following comment, "Reporting fraudulent behavior is the right thing to do." To respond, they use a 7 point, Likert scale to (1) Strongly Agree to (7) Strongly Disagree with the comment. According to TPB the more they Strongly Agree the more likely they will be to report the crime. An attitude factor called Judgment is created using question regarding a respondent's attitude about reporting fraudulent behavior.

Case studies adapted from Schultz et al. (1993) determine a participant's likelihood (7-point Likert scale) of reporting unethical behavior (Decision). This study then uses Exploratory and Confirmatory Factor Analysis to create a four-factor model. The model uses Rodgers (2010) Throughput model (TP) to examine the relationship between the traits

Skepticism, Experience, and Judgment to reporting unethical behavior (Decision). Structural Equation Modeling tests the model simultaneously looking for the strongest factor (trait) that results in reporting fraud.

The third trait is culture. Cultural topics have become important in international business research. Culture is defined by Hofstede (1983) as “a collective programming of the mind that distinguishes the members of one group or category of people from another.” Business fields in marketing, management, managerial performance, business ethics, and corruption have used Hofstede’s (1983) work on cultural traits to expand literature in their areas. Using cultural traits Uncertainty Avoidance (UA), Individualism/Collectivism (I/C), and Power Distance (PD) from Hofstede (1983) cultural traits, Hope et al. (2003) develop a Secrecy Index which influences management decisions based on national culture. A lower secrecy index resulted from more Individualistic, lower UA and lower PD cultures.

The survey in this study was administered in the United States (US), Taiwan (TAI), and India (IND) to university accounting majors. Additional surveys were administered to Mexican (MEX) students who attended a US university. The four countries are significantly different; this adds to the desired effect of getting a broad set of secrecy index scores. To examine if cultural traits influence the likelihood of reporting the crime the sample was divided into two groups, Low Secrecy Index (LSI) and High Secrecy Index (HIS). The secrecy index allows for examination of reporting unethical behavior based on cultural traits.

The findings of this study can serve as guidelines for organizations both domestically and internationally as evaluators of their personnel’s cognitive, behavioral, and cultural

tendencies that can enhance fraud prevention. Understanding traits may also enhance fraud prevention training within an accounting department setting.

CHAPTER 2- LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Fraud Research in Accounting

Forensic and fraud topics in accounting research are relatively new and growing. Forensic accounting involves using accounting for investigative or other legal applications, such as corporate acquisition, divorces, insurance settlements, or other legal purposes (Brody, 2011) (Brody, Melendy, and Perri 513-531). Fraud involves the prevention, detection, investigation, and prosecution of white-collar crime (Brody, 2011). This study examines fraud in the area of cash misappropriation and the behavioral and cultural factors that may lead to the likelihood of reporting fraudulent behavior within an accounting department.

Research is beginning to reveal that behavioral traits can be used to heighten professional skepticism about behavioral fraud offender risk factors (Brody, 2011). Bernard Madoff (Investment Securities Ponzi scheme), CEO Kenneth Lay and CFO Andrew Fastow (Enron off-balance-sheet special purpose entities), and Bernard Ebbers (WorldCom accounting misstatements) all displayed their core behavior by belittling those who asked pointed questions about their company's operations. White-collar criminals cannot always hide their true behavioral tendencies. The organization that studies and reports on fraud is the Association of Certified Fraud Examiners (ACFE). The ACFE's 2016 report to the nations indicates that more than 82 percent of the studied fraud offenders have never been charged or convicted of a fraudulent offense (ACFE, 2014). Studies such as Weisburd et al. (2001),

and Walters and Geyer (2004) indicate that fraud offenders can have prior criminal histories that mirror those of non-fraud offenders while the extent of criminal deviancy is no different (Weisburd, D., E. Waring, and E.F. Chayet.) (Walters and Geyer 263-281). The reports usually reveal descriptive statistics about criminals, but now the industry is beginning to look at the behavioral traits of fraudsters to provide data about traits as a red flag to detection of crime. The focus of future research continues to examine what behavioral traits increase the probability of fraud or the characters a potential fraudster uses to recruit others to collude to commit fraud. Once these traits become isolated, accounting personnel training can include information about traits that may lead to better fraud detection and hopefully more reporting of fraudulent behavior. KPMG's (2011, 14) report "Who Is the Typical Fraudster?" states, "The fraudster is deemed a very smart, hardworking, and honest employee..." (KPMG) Dhimi (2007) study finds that fraud offenders do not even perceive their actions as criminal or harmful and admit that sometimes it is admirable to commit fraud. (Dhimi and Al-Nowaihi 171-192) The authors outlined how behavioral traits act as a warning that the offender will commit fraud and enjoy the act of defrauding an individual or organization. Scholars in behavioral sciences have a long history of studying the behavioral aspects of fraud, but the accounting profession has been slow about embracing behavioral research in this area. Joseph Wells, the founder, and chair of ACFE stated, "...the majority of CPAs are still ignorant about fraud...untrained accounting graduates have been drafted to wage war against sophisticated liars and thieves. Moreover, as multi-billion dollar accounting failures have shown, it has not been much of a fight." The ACFE report recommends that training on behavioral traits may be beneficial in detecting and deterring fraud (ACFE).

Accounting research is beginning to expand studies about behavioral traits of perpetrators but the study of examining behavioral traits to deter fraud is lacking. Some research on deterrence of fraud is in the organizational and occupational and management fields. Accounting research lacks any significant studies regarding examining traits of whistleblowers as a deterrent to fraud.

ACFE, Institute of Internal Auditors (IIA) and AICPA classify fraud into three main areas. Corruption, asset misappropriation, and financial statement fraud (ACFE). Figure 1 illustrates The Occupational Fraud and Abuse Classification System (OFACS).

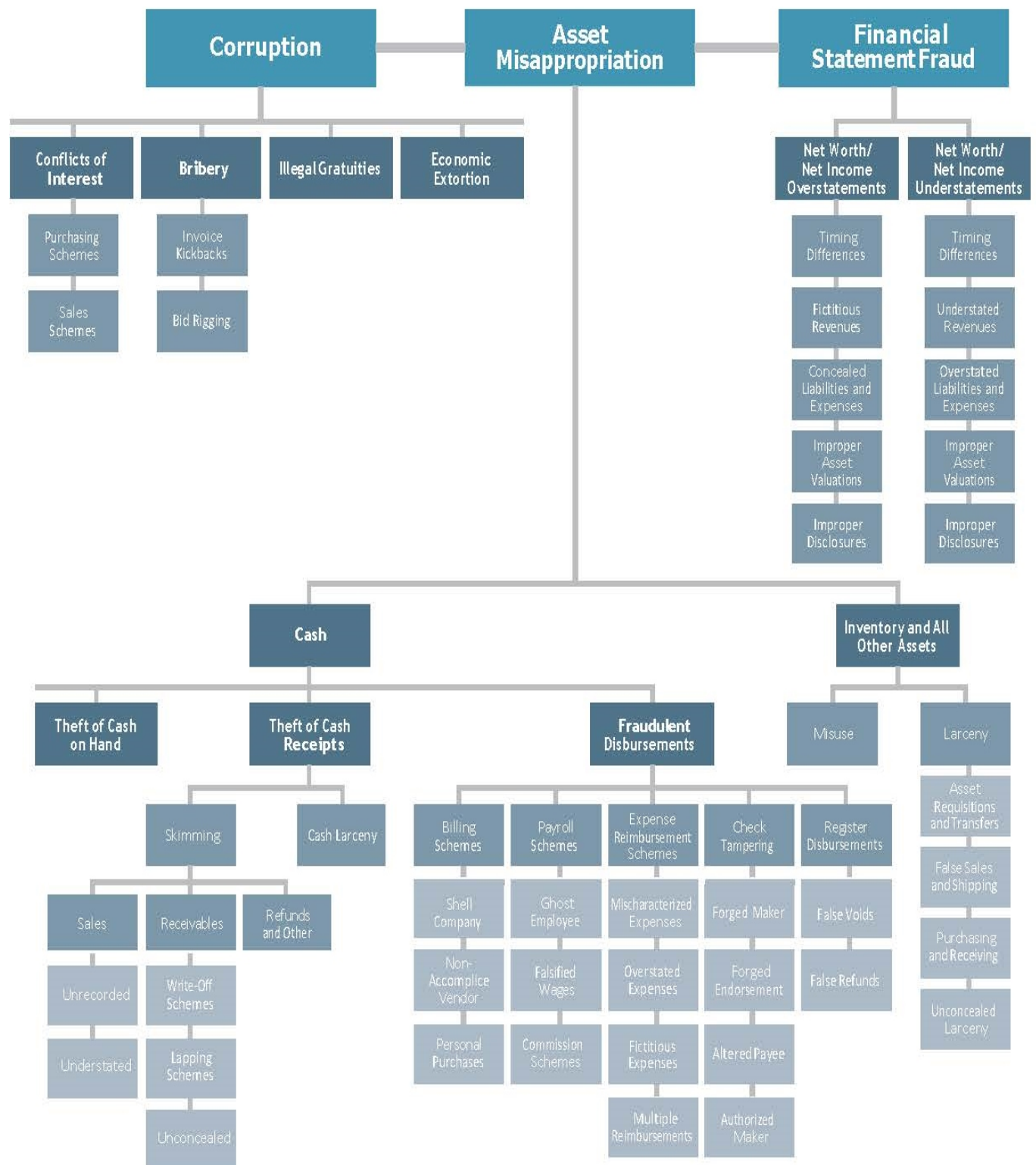


Figure 1-The Table of Occupational Abuse Table (ACFE)

Asset misappropriation is the most frequently abused (figure 2). Cash misappropriation or inventory and all other assets all are part of asset misappropriation. No study in accounting fraud has specifically targeted a specific area of fraud within the OFACS. According to ACFE's Report to the Nations (2016) over 88% of fraud involves asset misappropriation, a combination of asset (figure 3) misappropriation and financial statement fraud or corruption (ACFE). Fraud involving cash misappropriations is the most frequent type of fraud but research is lacking in this area. This study is the first to investigate fraud based on OFACS and its classification of asset misappropriation.

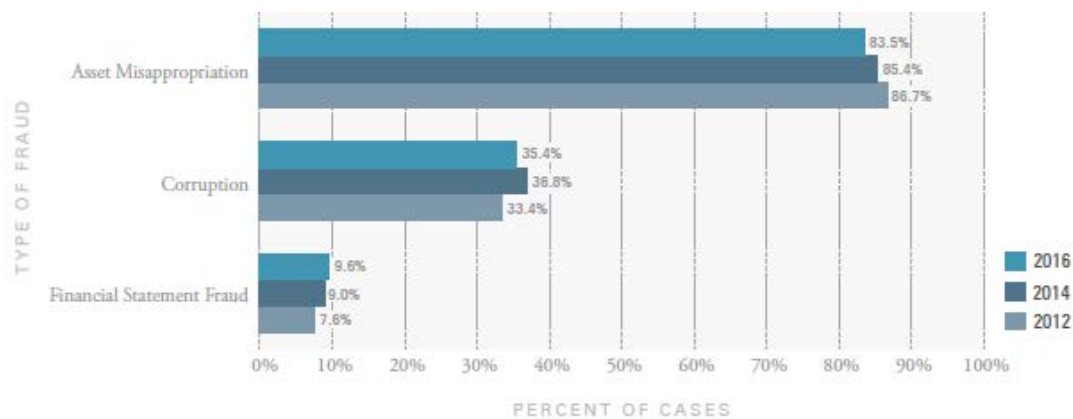


Figure 2-Three Main Areas of OCAS (ACFE)

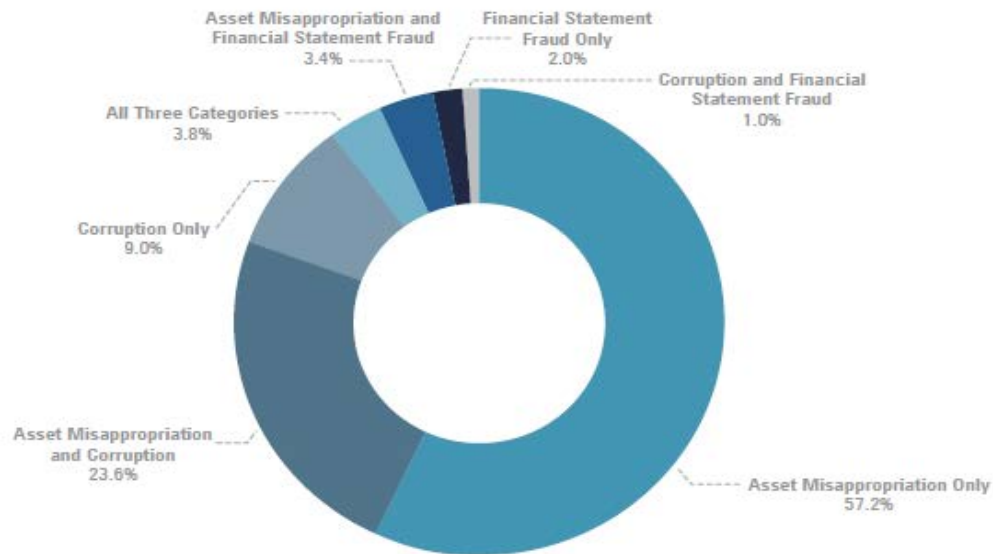


Figure 3 Percentage of Abuse by Area (ACFE)

Many of the studies in accounting fraud have targeted auditing departments, both internal and external. The primary function of auditing departments is to give an opinion on the fairness of financial statements it is not a primary role of auditors to specifically look for fraud. Auditing departments are also not where the majority of fraud is detected or perpetrated. Internal audit detected 16.5% of fraud and external auditors detected 3.8% (ACFE). The department with the most frequent perpetrators of fraud throughout the different regions is the accounting department. The most common method of initial detection of fraud was a tip see figure 4 (ACFE).

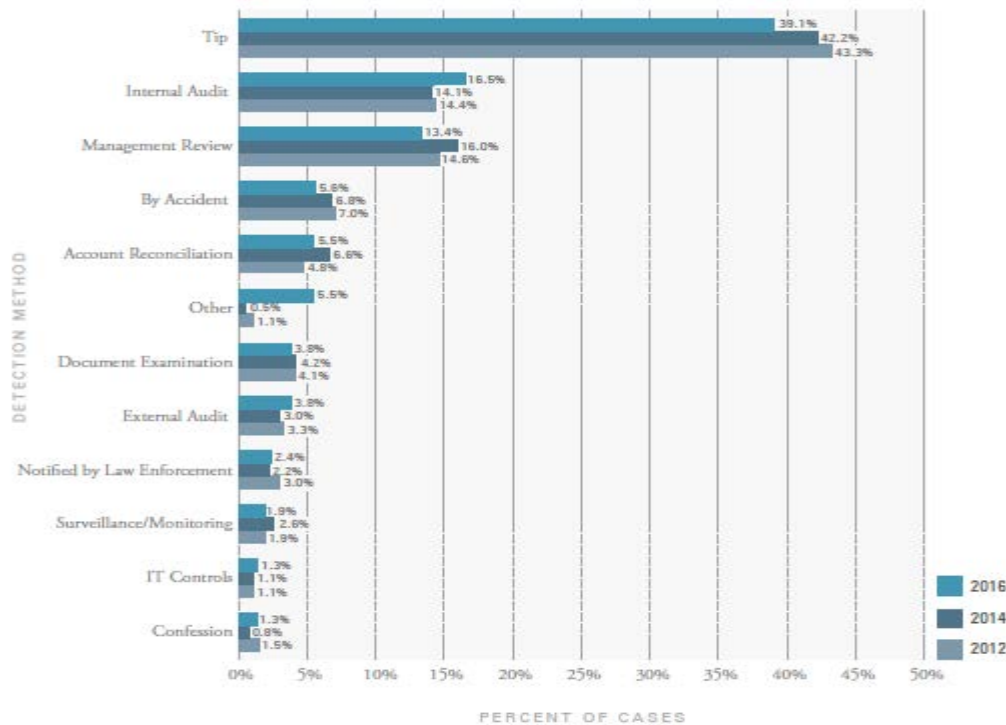


Figure 4-Disclosures of Abuse (ACFE)

The total financial cost of white-collar crime exceeds that of street crime (Brody, Melendy, and Perri 513-531). The 2016 “Report to the Nations,” from the ACFE conservatively estimates the cost of global fraud to the economies as \$3.7 *trillion* in 2014 (ACFE). The research on global fraud and behavioral traits of tipsters from different nations is very limited. This study adds to the limited research on global accounting fraud. Targeting specific classifications and departments within the accounting area to find traits that may deter fraud by accounting personnel. This study narrows the focus of fraud to asset misappropriation within the accounting department of an organization and will examine the behavioral factors that encourage the reporting (tips) of fraudulent behavior.

2.2 Traits

2.2.1 Cognitive Traits

Cognition is the act or process of knowing. Cognitive traits are indicative of intelligence and develop over time. As defined by the American Psychological Association it is the ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought (Neisser et al. 77). There is evidence that cognitive ability is a predictor of economic and social outcomes, Gottfredson (2002), Herrnstein and Murray (1994), and Heckman, Urzua, and Stixrud (2006) (Gottfredson, Jones, and Gore 43-56; Herrnstein and Murray ; Heckman, Stixrud, and Urzua). It is intuitive that cognition is essential in processing information, learning, and in decision making (Borghans et al. 972-1059). Accounting research is lacking studies using cognitive factors as a deterrent to fraudulent activities. This study will adapt some of the experience from social psychology to utilize cognitive ability in accounting research. The use of cognitive factors in business research is scarce. Age, experience, and education are cognitive factors. Studies examine these factors individually to examine ethical decision-making.

Studies in ethical decision-making have mixed results. Callan (1992) found no significance between experience and ethical values. Kidwell et al. (1987) find that individuals with more experience tended to exhibit responses that are more ethical. Kidwell et al. (1987) find that greater work experience leads to more ethical decision making. (Callan 761-769; Kidwell, Stevens, and Bethke 489-493)

Years of education studies also yield mixed results. Browning and Zabriskie (1997) find managers with higher education view gifts as unethical. Stevens (1984) found executives more ethical than students. Laczniak et al. (1987) found education has no effect on ethical decision-making (Browning and Zabriskie 219-224) (Stevens 6-11) (Laczniak and Inderrieden 297-307).

Age and ethical decision-making also have mixed results. Stevens (1984) found no significant differences between students and older executives in ethical decision-making. Ruegger and King (1992) find older students more ethical.(Ruegger and King 179-186)

This paper generates a cognitive factor composed of a participant's age, education, and experience. It measures cognitive ability or Experience; a higher score represents an older, more experienced and better-educated respondent. A higher value indicates a more positive attitude that reporting fraud is the right thing to do.

H1: Higher levels of Experience will positively affect a participant's Judgment that reporting fraudulent activity is the right thing to do.

2.2.2 Behavioral Traits-Skepticism

Neither social scientists nor accounting research has identified distinct behavioral or psychological characteristics of successful whistleblowers in the prevention of fraudulent actions. Accounting standards call for high ethical conduct and the use of skepticism when examining organizational data, but these behavioral characteristics are not clearly defined. Fraud continues to be a serious problem and data only shows the problem growing

domestically and globally. The need to delve into not only the cause but also the prevention of accounting fraud is of paramount importance. We must begin to look at the core reasons as to why some people report unethical behavior while others stand by and do nothing.

The focus of this analysis defines personality traits as patterns of thought, feelings, and behavior. There will be no discussion of the motivation, values, or interests that form personality traits. This study looks at individual differences in how people actually think, feel, and act and not on how they want to think, feel, or act. It will focus on measurable traits. For an overview of literature regarding this aspect of personality, readers can review McAdams and Pals (2007), McAdams (2006), and Roberts et al. (2006) (McAdams and Pals 3-20) (McAdams 81-100) (Roberts, Walton, and Viechtbauer). Accounting has produced work that examines personality traits in the area of professional skepticism see Hurtt, (2010) and Guiral (2011). (Hurtt 149-171) (Guiral, Ruiz, and Rodgers 173-190) Professional skepticism is considered to be an essential component of accounting, and the profession begins to define the expectation of a professional's set of characteristics (Rodgers and Housel 523-540). (Rodgers and Housel 523-540) Various sources have defined professional skepticism as a set of traits that includes a questioning mind and a critical assessment of evidence (Public Company Oversight Accounting Board (PCOAB))(Public Company Oversight Accounting Board (PCOAB)). The ability to detect fraud (Choo and Tan 72-87), opposite of trust (Shaub, 1996) and a conservative attitude in judgment (McMillan and White 443-465) have been used to simulate skepticism. Skepticism has been used as a surrogate to independence (Kadous 327-341) and as presumptive doubt (Nelson 1-34) (Kadous 327-341; Nelson 1-34) (Choo and Tan 72-87; McMillan and White 443-465; Shaub 154-174). SAS No. 1 (American Institute of Certified Public Accountants) mandates the use of professional

skepticism, stating, “Due professional care requires the auditor to exercise professional skepticism.” The Public Company Accounting Oversight Board (Public Company Oversight Accounting Board (PCOAB)) also asserts the importance of professional skepticism. This study utilizes the definition by (Hurtt 149-171), professional skepticism as a multi-dimensional set of individual personal characteristics. Studies have used a variety of traits to try to measure skepticism levels. Kerler and Killough, 2009, Cohen et al, 2007, and Cianci and Bierstaker, 2009 have used trust, fairness, incentives to test for dependent variables such as risk of management fraud as incentives to manipulate ethical judgement (Kerler III and Killough 109-136; Cohen, Janicki-Deverts, and Miller 1685-1687; Cianci and Bierstaker 119-144).

A critical step in conducting research involving professional skepticism is a means of identifying skeptical individuals. Hurtt (2010) developed a psychological scale that measures the degree of skepticism possessed by an individual. Also, a model linking an auditor's degree of skepticism and certain behaviors has been proposed (Hurtt, Eining, and Plumlee). The instrument was developed from surveys of professional accountants and thoroughly reviews literature from philosophy and psychology. It predicts that four behaviors will be associated positively with increasing levels of skepticism: (1) expanded information search, (2) increased identification of contradictions, (3) increased generation of alternatives and (4) increased examination of information from and about people. This study uses the assertion that accounting professionals with high levels of skepticism will exhibit these behaviors when they encounter unethical behavioral situations, and they will influence their decision to report the unethical conduct. The AICPA accepts the position that professional skepticism results in behavioral differences. SAS 53 (American Institute of

Certified Public Accountants), one of the pronouncements intended to reduce the "expectation gap" between the general public and public accountants, re-emphasized the necessity for accounting professionals to have an attitude of professional skepticism and described actions that a skeptical professional would take. (American Institute of Certified Public Accountants) An even stronger position on professional skepticism and one with more behavioral implications is SAS 82 state that "Due professional care requires the exercise of professional skepticism - that is, *an attitude that includes a questioning mind and a critical assessment of audit evidence*" (American Institute of Certified Public Accountants). Popova (2012) and Quadackers et al. (2014) use the Hurtt skepticism scale to measure trait skepticism (Popova 140-160; Quadackers, Groot, and Wright 639-657).

This paper uses Hurtt's (2010) Skepticism scale to measure personality traits, which positively increase level of Judgment that reporting fraud is the right thing to do. A higher skepticism score indicates a more positive Judgement that reporting fraud is the right thing to do.

H2: Higher Skepticism score will positively affect a participant's Judgment that reporting fraudulent activity is the right thing to do.

2.2.2 Behavioral Traits-Judgment

The theoretical framework for this study derives from Ajzen and Fishbein's (1980, 1975) theory of reasoned action and from its extension to the theory of planned behavior

(TPB).(Ajzen and Fishbein ; Ajzen and Fishbein) The central factor in the TPB is the intention to perform a behavior. The model includes three independent determinants of intention, attitude, subjective norm, and perceived behavioral control. Attitude refers to the favorable or unfavorable opinion about the behavior. Subjective norm refers to the social pressure to perform or not perform the behavior. Perceived behavioral control is how the participant perceives the ease or difficulty in performing the behavior. In general, the more favorable the attitude, the more likely the behavior will be conducted. The TPB views intention as an immediate predictor of actual behavior (Beck and Ajzen, 1991) (Beck and Ajzen 285-301). The predictors in the TPB are used to account sufficiently for intentions and actions, but they are not all necessary for any given model (Beck and Ajzen, 1991). Empirical studies provide evidence in support of the theory (Ajzen & Fishbein, 1980; Ajzen, Timko, & White, 1982; Bentler and Speckart, 1979). (Ajzen, Timko, and White 426; Bentler and Speckart 452) The theory of planned behavior is open to the inclusion of additional predictor variables (Ajzen & Fishbein, 1980, p. 247).

Personality and social psychology rely on verbal self-reports about thoughts, feelings, and actions. This practice is often criticized (Jones and Sigall 349; Nisbett and Wilson 231; Ross 341) but limited alternatives can provide interesting and detailed information about subjects. Therefore, the use of self-reports is likely to continue. Studies have found that the participants may bias these reports with the desire to provide socially desirable responses and to withhold undesirable behaviors (Edwards). Evidence exists that in many situations, self-reports of dishonest behavior can be quite accurate (Beck and Ajzen 285-301; Himmelfarb and Lickteig 710). Attitude that reporting fraudulent behavior is the right thing to do is measured by the Judgment factor. If the level is high then the likelihood to reporting

the fraud will be stronger. Studies by Chang, 1998 and Buchan, 2005 both find evidence that attitude (judgment) affects ethical intentions, therefore (Buchan 165-181; Chang 1825-1834).

H3: Higher Judgment score will positively affect a participant's decision to report fraudulent behavior.

2.3.1 Expectations of Ethical Conduct

As part of their degree plan, most accounting graduates are required to complete an ethics course. Most state CPA exams require ethics courses. To maintain a CPA license also requires continuing education courses that include ethics. As for employees within accounting departments, many organizations also require regular ethics training. International Federation of Accountants (IFAC) outline detailed ethical expectations, including the following.

“Certain safeguards may increase the likelihood of identifying or deterring unethical behavior. Such safeguards, which may be created by the accounting profession, legislation, regulation or an employing organization, include, but are not restricted to:

- Effective, well-publicized complaints systems operated by the employing organization, the profession or a regulator, which enable colleagues, employers, and members of the public to draw attention to unprofessional or unethical behavior.
- An explicitly stated duty to report breaches of ethical requirements, personal have a professional obligation to report fraudulent behavior (“International Federation of

Accounting (IFAC)."; "International Federation of Accounting (IFAC)."; IFAC)."

Accounting professionals have considerable volitional control to report unethical conduct.

H4: A high level of skepticism will positively influence the decision to report fraudulent behavior regardless of Judgment.

2.4 Throughput Model

The *Throughput Model* (TP) is a theoretical model that captures different pathways influencing decision-making it has been used to observe trust levels where certain pathways may be weighted heavier or may dominate other paths (Rodgers 83-93). Benefiting decision makers who can observe what other options may need improving before making a decision. The factors in the model are perception, information, judgment, and decision.

Perception is the process of framing an individual's view of the world (Sitkin and Weingart 1573-1592). *Information* includes the set of financial or non-financial information available to a decision-maker for problem solving (Rodgers, 2010). *Judgment* is the process individual's use to analyze incoming information and any influence the perception stage may have. The *Decision* is the final choice to take the action or not. Information can change, influence or alter the Perception of a problem this will make information and perception interdependent (Rodgers , 2010). Table 1 illustrates the six pathways.

Table 1 Throughput Model General Pathways, (Rodgers, 1997)

General Pathways	
1	P → D
2	P → J → D
3	I → J → D
4	I → P → D
5	P → I → J → D
6	I → P → J → D

Where P=Perception, I=Information, J=Judgment, and D=Decision

This model (see Figure 5) assumes a parallel processing method. Parallel processing is important because decisions are not serial or isolated but happen simultaneously using a variety of factors.

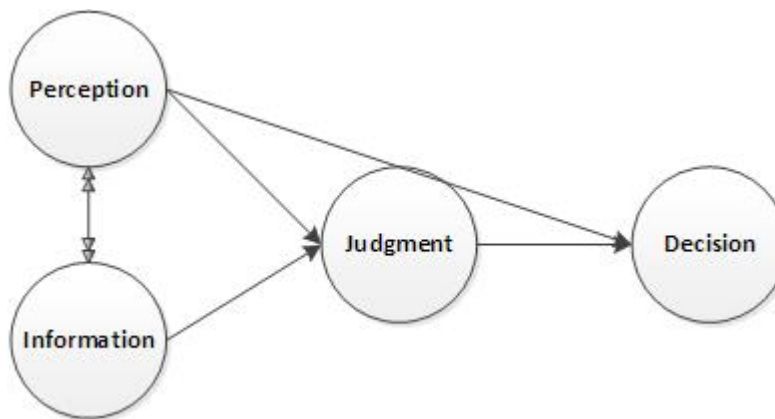


Figure 5 Throughput Model Rodgers 1997

2.5 Proposed Model

The proposed model (Figure 6) uses structural equation modeling to analyze each of the hypotheses simultaneously. This study uses Skepticism to represent perception, Experience represents information, and The Judgment and Decision names remain the same.

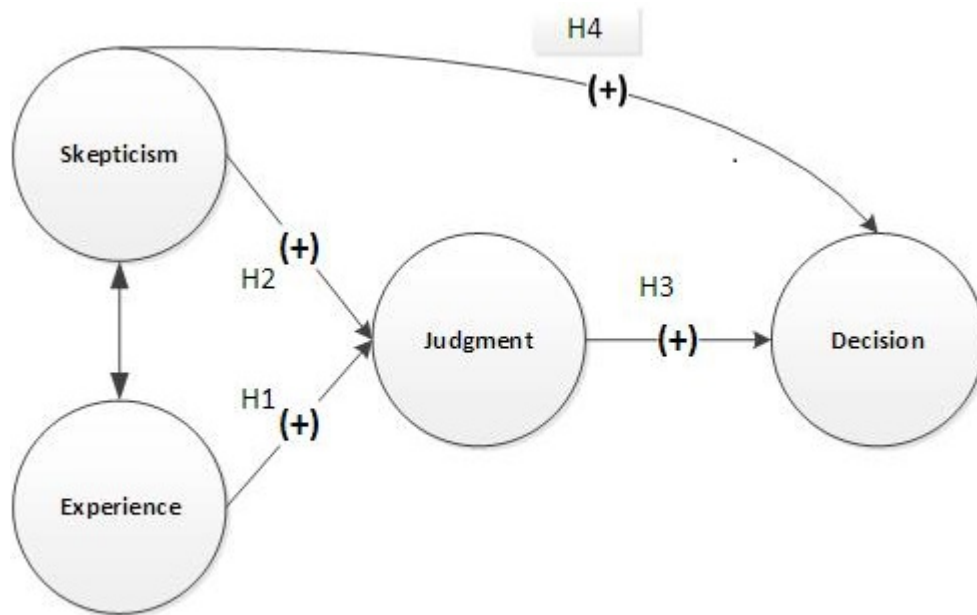


Figure 6 Proposed Model

2.6 International Accounting

The global financial crises of 2008-2009 brought concerns from international regulatory organizations about auditor judgment (Hurtt et al. 45-97). The European Commission (EC) proposed that organizational rotations, joint audits, prohibition of non-audit services, and stricter rules on auditor assignments might assure independence and professional skepticism. They also encourage to challenge management actively and to be diligent of the possibility of material misstatement. The International Federation of Accountants (IFAC) indicates

“professional education is critical in giving auditors the skills needed to exercise professional skepticism and called for further research to assess the extent to which there is a lack of

professional skepticism and explore the behavioral elements that may compromise professional skepticism”(IFAC).

In general, audit professionals acknowledge that professional behavior is affected by cultural differences (Bik)(Bik). Skeptical judgment and decision differences are influenced by national culture and tend to be significant due to the ability to challenge clients, ask tough questions and to have an independent mindset (Bik). Most of the skepticism research on cultural differences draws on the work of Hofstede’s work on national cultures and its related cultural dimensions (Hurtt et al. 45-97)(Hurtt et al. 45-97).

2.7 National Culture Traits

With the increase of the global economy, cultural topics have become an important factor in a variety of international business research. Culture has a direct effect on individuals’ perceptions of ethical problems, decision alternatives, and decision consequences. Knowing how people from different cultures respond when faced with the same ethical choices can have immense implications for global businesses (Whitcomb, Erdener, and Li 839-852). The work by Hofstede on cultural factors is the framework that is used most in academic business research.

Culture is “a collective programming of the mind that distinguishes the members of one group or category of people from another”(Hofstede pp. 75-89). Hofstede’s research utilized employees of IBM as the base for his research. Following 116,000 employees from

branches in over 50 countries over six years starting in 1967, he observed four dimensions on which people from different countries differ regarding culture (Hofstede pp. 75-89). The dimensions include (1) individualism/collectivism, (2) power distance, (3) uncertainty avoidance, and (4) masculinity/femininity. Later studies results in a fifth dimension: (5) long/short-term orientation (Hofstede and Bond 5-21).

The data set collected in this research is exhaustive; no other study has compared this many cultures with such detail (Garfield and Watson 313-337). Since the publication of “Culture’s Consequences” in 1980 Hofstede’s cultural dimensions is cited in a variety of business research. Including marketing, managerial performance, business ethics, corruption, and accounting (e.g.(Lu, Rose, and Blodgett 91-105; Neelankavil, Mathur, and Zhang 121-140; Tsui and Windsor 143-150; Husted 339-359; Cohen, Pant, and Sharp 1)). (Barkema et al. 426-442) database, spanning three decades, corroborate the assumption of Hofstede’s work; cultural values remain stable over time and is credited with being the most dominant in explaining behavior differences between nations (Williamson 1373-1395). The following is a review of the literature on the five dimensions of Hofstede’s cultural theory for business and ethical academic research.

2.7.1 Hofstede’s Five Dimensions of Culture

Individualism/Collectivism:

“Individualism is reflected in the way people live together (for example, in nuclear families, extended families, or tribes)” (Hofstede and Hofstede). In highly individualistic cultures,

individuals are expected to take care of themselves and their immediate families primarily (Hofstede, 2001). In these societies, loyalty is calculative since members are loyal only when it suits their interests (Garfield, 1998).

In collectivistic cultures, people are part of strong, cohesive in-groups (Tsui & Windsor, 2001). Members of these groups work and identify with each other (Triandis et al. 323). Loyalty in these groups is paramount; group members are expected to sacrifice their well-being for the benefit of the group (Goodwin and Goodwin 267-281).

Several studies that show how Individualism/Collectivism has an influence on values and behavior. For example, a multi-country survey of consumer attitudes about domestic versus international retailers finds that individualism is negatively correlated with the loyalty of domestic retailers, indicating members of a collectivist culture are more loyal to in-groups (Straughan and Albers-Miller 521-541).

(Chow, Deng, and Ho 65-95) compare the effect of Americans highly individualistic society with Chinese highly collectivistic society on employees' willingness to share knowledge with their co-workers. Results indicate that Chinese managers were not willing to share knowledge with members not belonging to their in-group as compared to their American counterparts (Chow et al., 2000).

(Cohen and Pant 37) studies responses of Japanese, American, and Latin American auditors to eight cases with unethical scenarios about public accounting practice. Results are consistent with Hofstede's dimensions among the countries, with the strongest difference belonging to the Latin-U.S. comparison. These cultural groups differ the most on the individualism/collectivism dimension. The most significant disagreements over the questions indicated that the collectivistic Latin auditors viewed the case scenarios as less

ethical than the individualistic American auditors, suggesting that within the accounting profession, higher ethical standards are associated with more collectivistic cultures (Cohen et al., 1995). Members of collectivistic cultures tend to have Collectivism is associated with concern for the overall social in-group and give more importance to them than the interest of the individual.

The Individualism/Collectivism dimension refers to the value the person places on the group versus the individual. Collectivists are more loyal to the team and have a lower tendency to share knowledge with an out-group. Additionally, accountants from more collectivistic cultures tend to have higher ethical standards than those from more individualistic cultures ((Black 121-137); Straughan & Miller, 2001; Chow et al., 2000; Cohen et al., 1995).

Power Distance:

Power distance refers to the extent to which less powerful members of societies, organizations, and institutions accept and expect that power that power is distributed unequally(Hofstede pp. 75-89; Hofstede 46-74). Societies with low power distance look for justification of power distance and strive for a more equitable arrangement. In low power distance cultures, the belief is that there should be fewer inequalities within an organization. In a society, with large power distance, the belief is that inequality should exist within an organization. Superiors are considered inaccessible and entitled to privileges. Manager's decisions are more important and their actions are subject to less scrutiny (Hofstede, 2001).

(Husted 339-359) finds the perceived level of corruption is different based on culture. Corruption and power distance are correlated, the higher the power distance, the greater degree of corruption in the country. Tsui and Windsor's (2001) research of Australia and China found an association between power distance and ethical reasoning. They find that higher ethical reasoning scores are consistent with low power distance scores due the expectations of social equality and the culture's focus on social justice (Tsui & Windsor, 2001).

Low power distance societies have less difficulty withstanding pressures from wealthy and powerful clients, where high power distance countries may show fear of wealthy customers and does not display independence from the paying client (Cohen, Pant, and Sharp 1). High power distance countries appear to tolerate corrupt practices and are more likely to view an unethical business practice as ethical, than people from a low power distance culture (Tsui & Windsor, 2001; Cohen et al., 1993; & Husted, 1999).

Uncertainty Avoidance:

(Hofstede 46-74) defines uncertainty avoidance as "the extent to which members of the society felt threatened by the uncertain or unknown situation." In weak uncertainty avoidance organizations, employees are more secure, willing to take more risks, and comfortable with uncertainty (Moon and Franke 51-65). In strong uncertainty avoidance organizations, employees are less secure with higher anxiety with unstructured or risky environments (Moon & Franke, 2000). Strong uncertainty avoidance cultures have a greater psychological need for control and security (Barkema & Vermeulen, 1997).

(Salter, Guffey, and McMillan 37-50) studied attitudes of cheating of accounting students in the United Kingdom (UK) and the United States (US). Results demonstrate that higher uncertainty avoidance US students have a higher likelihood to cheat and are more sensitive to external stimuli than lower uncertainty avoidance students from the UK. The results of this study indicate that individuals in higher uncertainty avoidance countries might experience low ethical standards.

Masculinity/Femininity:

The Masculinity/Femininity dimension refers to the distribution of roles between the genders. “Men are supposed to be assertive, tough, and focused on material success; whereas, women are expected to be more modest, tender, and concerned with the quality of life” (Hofstede pp. 75-89). Ethical research finds that advertising executives from masculine cultures, such as the US, are less sensitive to ethical issues in advertising than advertising executives from feminine cultures, such as South Korea (Moon et al., 2000)

Long/Short-term orientation:

Long/Short-term orientation is also known as Confucian Dynamism; it measures to what extent a culture emphasizes on the future rather than focusing on the present (Barkema & Vermeulen, 1997). A small sample survey of academic experts in cross-cultural management research showed that long-term orientation is associated with a lower tolerance for unethical business activities (Cohen, Pant, and Sharp 55-66). However, another study by (Robertson 253-268) finds that long-term orientation societies exhibit high

uncertainty avoidance scores, which tend to show low ethical standards of individuals (Salter et al., 2001). No studies have been done to investigate the effectiveness of long-term orientation on ethical judgment.

2.8 Secrecy Index:

Past research has shown that national cultural values can influence managers decisions e.g. (Hofstede 46-74; Gray 1-15; Salter and Niswander 379-397; Hope 235-272). Gray's (1988) framework has been used to examine the role of national culture and decisions in accounting settings. Gray's framework has linked the Hofstede's cultural dimensions to accounting values. Gray (1988) defines accounting values adapted from Hofstede's (1983) societal values. The accounting values are professionalism, uniformity, conservatism, and secrecy (Gray, 1988). The secrecy versus the transparency values is the preference for confidentiality and restriction of information about the business only to those people who are intimately involved with the company's management and financing. The secrecy hypothesis found individualism positively associated with disclosure and uncertainty avoidance and power distance negatively associated with disclosure (Gray and Vint 33-43). The construct of the secrecy index as proposed by (Hope et al. 357-373) is:

$$\text{Sec} = \text{UA} + \text{PD} - \text{IND}$$

Where Sec is the secrecy composite score and uncertainty avoidance (UA), power distance (PD) and individualism (IND) are all cultural dimensions from Hofstede (1980). Hope et al. (2008) find that cultural differences do affect decision-making. This study uses a convenience sample that includes the secrecy index differences needed to compare

individuals with different national origins (see Table 2). The dimensions reviewed have shown that national culture provides numerous implications for understanding individual values and behavior.

Table 2 Secrecy Index Calculation

Country	Uncertainty	Power Distance	Individualism	Secrecy Index	SI HIS/LIS
United States	46	40	91	-5	LSI
India	40	77	48	69	LSI
Taiwan	69	58	17	110	HSI
Mexico	82	81	30	133	HSI
(Mean = 76.7) SI>Mean=High Secrecy Index (HSI) SI<Mean=Low Secrecy Index (LSI). (Hope et al. 2003a, Hofstede, 1983)					

Per Gray's (1988) framework, UA societies tend to be more secretive to avoid conflict with outsiders. Large PD encourages less transparency and discourages information sharing. Individualistic groups are less secretive than collectivistic societies. (Rodgers and Gago 355-367) assert that trust is a basis for information exchange and problem framing that assist in ethical decision-making. Thus, we assume that HSI groups will have more obstacles in ethical decision-making than LSI groups.

Since the United States, India, Taiwan, and Mexico differ in these dimension scores, individuals are expected to behave differently about reporting fraudulent acts in the same work-related area. The sample was grouped into a Low Secrecy Index (LSI) group and a High Secrecy Index Group (HSI) by taking the mean of the four individual secrecy indexes. The calculated mean is 76.6, any score below this is LSI and score above is a HSI. Dividing the

sample into two groups was necessary because this model uses Structural Equation Modeling (SEM), which is sensitive to sample size. By doing this, we could still keep sample sizes sufficient for analysis with SEM.

2.8.1 Trust Pathways

Rodgers(2010) use this model to discuss trust issues within organizations. They propose six decision-making pathways of trust as shown below in Table 3. This model is utilized in an initial study to examine trust decision paths based on national culture to report fraudulent behavior. This model proposes that there are different paths to ethical decision making. The model's distinct levels of trust are trust, no trust or distrust. They are measures from (+1) to (-1). A coefficient greater than or equal to |0.5| is supportive to high levels of trust. If less than |0.5| it implies a weak degree of trust. Where (+1) signifies the highest level of trust and (-1) the highest level of distrust and zero indicates no trust (Rodgers 83-93). A decision-maker may benefit from identified paths to study alternatives not considered that may aid in a better decision outcome. This study will test primary trust pathways. The instrument was not sufficient to determine the influence of secondary party trust paths. The study instrument is not designed to identify questions regarding the group or interactions of the group. To review detailed work of the entire use of this model see Rodgers, (2010).

Table 3 Trust Pathways (Rodgers, 2010)

Trust Perspectives	Paths	Explanation of Trust Levels
	<i>Primary Trust Pathways</i>	
1 Trust as a rational choice	$P \rightarrow D$	In a time-pressured environment with incomplete information the level of expertise will determine the degree of trust.
2 Rules-based trust	$P \rightarrow J \rightarrow D$	Relationship trust levels are based on the confidence of responsible, accountable, transparent, and enforceable standards.
3 Category-based trust	$I \rightarrow J \rightarrow D$	The completeness of information determines the social networks levels of trust.
	<i>Secondary Trust Pathways</i>	
4 Third parties as conduits of trust	$I \rightarrow P \rightarrow D$	Reliable and relevant third-party information about expertise level of the parties will determine the trust levels.
5 Role-based trust	$P \rightarrow I \rightarrow J \rightarrow D$	An expert's influence on the social group determine the level of trustworthiness to outside groups.
6 History-based trust/Dispositional-based trust	$I \rightarrow P \rightarrow J \rightarrow D$	Information determines the level of trustworthy relationships over and above the minimum rules or laws.

Primary Trust Pathways

Trust as a Rational Choice is the shortest path to making a decision. Even though Information and Perception are interdependent, information plays a secondary role. This choice could happen because of time pressures, difficult information, or rapidly changing environmental condition (Rodgers, 2010). Another reason for utilizing this route may involve the level of risk. Low-risk perception may be the reason to follow this path. The perceived level of expertise can also influence this path. Low secrecy index countries tend to be more individualistic, have weaker (low) uncertainty avoidance, and low power distance. Perception of low risk along with added time pressures to make a decision quickly may greater influence low secrecy index individuals into taking this path.

H5: Low secrecy index individuals will score higher than high secrecy individuals on the trust as a rational choice path.

Rules-based trust emphasizes the rules used by individuals when making a choice. These rules include how people structure problems and the interpersonal behavior of the decision makers. The threat of punishment for breaking rules drives the decision. The use of particular contracts is an example of making sure the decision is compliant with the group (Cristiano Castelfranchi 55-70). Individuals can form a perception without using any information, and individuals all receive equal respect. This path functions on the consistency of behavior that a person will do what they say they will do. Threats of losing a business relationship can enhance consistency. In this path, the decision is influenced by following the rules because noncompliance may bring serious consequences, for example, the use of contracts or the threat of losing valued business relationships (Rodgers 83-93). The low secrecy index group's tendency to have lower uncertainty (more comfortable with more rules) and the low power distance (less fear of authority figures) may influence choosing this path before a high secrecy index group member.

H6: Low secrecy index individuals will score higher than high secrecy individuals on the rule-based decision path.

Category-based trust is rooted in social similarity. It assumes that a person can or cannot be trusted based on age, ethnicity, family background, education, experience, financial positions and so forth (Rodgers 83-93). This type of trust develops slowly and incrementally over time (Brass, Butterfield, and Skaggs 14-31). This path emphasizes social

networks relating to groups of people that share common experiences, customs, or culture (Rodgers 83-93). HSI groups have similar traits the category based trust, including collectivistic tendencies, high uncertainty avoidance, and high power distance.

H7: High secrecy index individuals will score higher than Low secrecy individuals on the category-based decision path.

CHAPTER 3

RESEARCH METHOD

3.1 Participants

The sample surveys intermediate to senior level accounting students attending public universities in the United States (US), Taiwan (TAI), India (IND), and Mexico (MEX). They must have completed the equivalent of their first two years of accounting courses. The Mexican students attend a public university from the United States. The university from the United States is on the Texas/Mexico border and has a significant Mexican student representation. These four countries are a good representation of different levels of the secrecy index, as previously discussed. See Table 2. Individual factors have an important role on whistleblowing (Keenan 17-32; Mclain and Keenan 255-271; MacNab et al. 5-28) this instrument focuses on capturing these factors. The participants are appropriate for this study because accounting majors have the skills needed to work in a typical accounting department.

3.2 Instrument Development:

The Instrument is a combination of three different scales. The first scale is the Skepticism scale, represents the perception of the individual. It is used in its original form as created by Hurtt, (2010). The survey is comprised of 30 questions that capture six personality characteristics. The first three traits include a questioning mind, suspension of judgment, and search for knowledge and indicate the willingness to search and fully examine sufficient evidence before making a decision. Interpersonal understanding is the fourth trait,

identifies the need for the human aspects when evaluating evidence. The last two are self-esteem and autonomy; they address the ability of the individual to act on the information obtained (Hurt 149-171). The responses are totaled to obtain a skepticism score, the higher the score, the higher the level of skepticism. Skepticism associates with trust (Shaub and Lawrence 124); Choo and Tan 2000) and ethical decision-making (Fullerton and Durtschi). These characteristics may help decision-makers better frame problems, which may lead to ethical decisions.

The second scale derives its framework from the Theory of Planned Behavior as developed from Ajzen and Fishbein's (1980, 1975) and the theory of reasoned action. The central factor in the TPB is the intention to perform a behavior. The model includes three independent determinants of intention attitude, subjective norm, and perceived behavioral control. Attitude refers to the favorable or unfavorable opinion about the behavior. Subjective norm refers to the social pressure to perform or not perform the behavior. Perceived behavioral control is how the participant perceives the ease or difficulty in performing the behavior. In general, the more favorable the attitude, the more likely the behavior will be conducted. The TPB views intention as an immediate predictor of actual behavior (Beck and Ajzen, 1991). The predictors in the TPB are used to account sufficiently for intentions and actions, but they are not all necessary for any given model (Beck and Ajzen, 1991). Questions to measure attitude about reporting fraud were developed using the recommendations by Icek Ajzen, 2006. Attitude will represent the Judgment factor in the model.

The Experience factor is developed using demographic information about age, accounting education, and accounting experience. Cognitive traits represent experience, which is obtained and enhanced by a person's age, schooling and work experience.

The Decision construct is measured by adapting case studies by (Schultz et al. 75-103). These cases were made to be more cultural neutral so that the cases did not reveal any one culture. For example, names may have been changed from Mr. Smith to Mr. S. Table 4 summarizes the factors.

Table 4 Factor Descriptions

Factor	Type	Description	Source
Skepticism	Reflective	The subject's level of skepticism. The higher the skepticism score the more ethical decision they will make.	Hurt (2010)
Experience	Reflective	The level of cognitive ability or knowledge/experience. The older, more educated and more experienced subject will make more ethical decisions.	Borghans et al. (2008)
Judgment	Reflective	Having an attitude that reporting fraudulent behavior is the right thing to do. The higher the attitude results in a more ethical decision.	Ajzen and Fishbein (1980, 1975)
Decision	Reflective	Case studies within an accounting department regarding ethical dilemmas whether to report suspected fraudulent acts to a superior.	Schultz et al. (1993)

Reflective constructs are latent or unobservable factors. Cronbach's alpha measures the reliability of reflective constructs. Multicollinearity is desirable with reflective constructs (Petter, Straub, and Rai 623-656). This model is a reflective model.

The questionnaire included demographic information and a research consent form. The scale including descriptive anchors uses the Likert scale. The instrument was developed in English for US, Indian, and Mexican participants and in Chinese for Taiwanese participants. Ph.D. students, CPA's, and professors from the countries of interest reviewed

the surveys for context. Ph.D. students from India examined the English instrument and determined it is understandable by the Indian university student population. The Mexican students surveyed all attended an American university and were fluent English speakers. English is the language of teaching at the university and students must meet minimum standards of proficiency before being admitted. For the Chinese version, the instrument was translated by a professor in the Chinese university who also had it back translated as suggested by Brislin (1986). A sample of community college students sampled the English version. Appendix A includes both instruments (merged).

3.3 Pretests

The instrument was developed using a two-phase process. In phase one, Ph.D. Colleagues from the same national cultures of interest were consulted. Professors from the countries of, Mexico, China, and India, also gave input. Based on input, adjustments were made to the instrument. Phase two validity test took place using a holdout sample of students from El Paso Community College ($n = 40$), not used for the final analysis. In the first phase of testing, the instrument indicated confounding relationships between the attitude, subjective norm and perceived control. For parsimony, the factor that measures judgment was constructed using only the attitude questions

Phase two examined the development of the socio-behavioral scales to measure skepticism, experience, judgment, and decision. The latent construct for variable skepticism is a second order variable that originated from an accepted scale of 30 manifest variables. The experience construct has three manifest variables which include education, age, and experience. This construct has acceptable Cronbach's alphas. The endogenous variable

judgment has four manifest variables with acceptable factor loadings. The decision construct has three manifest variables that also had acceptable fit statistics.

3.4 Instrument Administration and Data Collection

The survey is designed for current or future potential employees in an accounting department of an organization. Participants from the college of business of three public universities participated in the study. These type of students are likely future employees in accounting departments. The student is accounting majors and is in their second year of completing an accounting degree. The universities are in the US, India, and Taiwan. A PhD. colleague, from India, administered the instrument to students in India. A professor from the Taiwan university administered the survey in Taiwan. US students had instruction from a Ph.D. Colleague in the US. All administrators were instructed to inform the participants about the study and the voluntary basis of participating with the option to opt out. Instructions on answering questions advised the subjects not to spend too much time on any one question and that there were no right or wrong answers. The survey did not collect any identifying information. The instrument was a hard copy and took approximately 15 to 20 minutes to complete. EXCEL is used to compile the results.

3.5 Sample Description

A total of 317 responses were received. There are 70 samples from the United States, 107 from India, 107 from Taiwan, and 24 from Mexico. Nine surveys were from

nonparticipating countries they do not appear in the sample. Seven responses did not indicate a decision and eight had incomplete information. A total of 24 samples were deleted and are not included in the sample leaving a net of 293 valid responses. Table 5 presents an overview of the overall sample with the number of items (N), mean, standard deviation, and gender. Items represent the total sample and a breakdown of the samples by country.

The average age for the overall model was 24.23 years with a standard deviation of 6.644. The mean age for the US is 25.85 with a standard deviation of 6.04. India's mean was the smallest with the mean age of 21.79 with a standard deviation of 1.18. Taiwan's mean age is 24.81 with a standard deviation of 8.904. Mexico has the highest mean age of 27.41 with a standard deviation of 7.294.

The overall average of accounting work experience is 6.98 months with a standard deviation of 19.346. The variance in accounting experience between some of the countries regarding experience is relevant to the study. The differences vary significantly from a mean of 28 months for Mexico to an average of 1.64 in India.

The standard deviation for education, the number of accounting courses taken, for India (2.2) and Taiwan (3.3), may be problematic. These countries do not vary as much as the United States and Mexico and together make up about 70% of the sample.

Table 5 Descriptive Statistics

Item	All Data			United States			India			Taiwan			Mexico		
	N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev
Age*	293	24.23	6.644	68	25.85	6.04	99	21.79	1.18	104	24.81	8.904	22	27.41	7.294
Education**	293	6.86	7.815	68	11.15	14.398	99	4.56	2.191	104	5.89	3.291	22	8.5	4.512
Experience***	293	6.98	19.346	68	15.65	26.924	99	1.64	5.715	104	1.97	4.974	22	28	40.648

	Males	Females	% M/F	Males	Females	% M/F	Males	Females	% M/F	Males	Females	% M/F	Males	Females	% M/F
Gender	150	143	51.22/48.8	33	35	48.5/51.5	57	42	57.6/42.4	53	51	51/49	13	9	59/41

*-measured in years, **-measured in number of accounting course taken, ***-measured in months

3.6 Common Method Bias

Common method bias (CMB) is the systematic error variance shared among variables measured and introduced as a function of the same approach and/or source (Richardson, Simmering, and Sturman). CMB is of concern because data collection can potentially influence the participant's responses. CMB can be reduced by collecting data during at least two time periods, collecting data using more than one method, and/or collecting the independent and dependent variable separately (Straub, Boudreau, and Gefen 63). The data was collected by three separate administrators and on four different days and times.

To empirically assess CMB Harman's single factor test (Harman) is run on Statistical Package for the Social Sciences (SPSS) during the exploratory factor analysis (EFA). The results indicate that the single factor only explains 21.5% of the variance, which falls within the acceptable range of 50% (Harman, 1960). Further, empirical testing is done during the confirmatory factor analysis (CFA). A common latent factor test results with the factor

explaining 15.8% of the variance, which is within the acceptable range of less than 50% (Gaskin). The results of these tests give an indication of the lack of CMB.

3.7 Social Desirability Bias

Social desirability bias occurs when survey items are perceptual. This bias occurs when people answer questions in a way to make themselves seem more appealing. They may tend to over-report positive behavior and under-report negative qualities). Social desirability bias is reduced by letting participants know that no identifying information is collected (Arnold, Feldman, and Purbhoo 955-966).

CHAPTER 4

ANALYSIS AND RESULTS

4.1 Structural Equation Modeling (SEM)

Structural Equation Modeling (SEM) is a second-generation data analysis technique (Bagozzi and Fornell 5-23)(Bagozzi and Fornell 5-23). SEM enables the study of interrelated questions in a single, systematic, and comprehensive analysis by modeling independent (IV) and dependent constructs (DV) simultaneously (Anderson and Gerbing 411). This type of analysis is not possible using linear regression, which can analyze single layers of IVs and a single DV at a time (Gefen, Straub, and Boudreau 7). SEM assesses both the structural and measurement model. The structural model is the assumed causation between the DVs and IVs in the same analysis. The measurement model is the loadings of observed items (measurements) on their expected latent variables (constructs) (Gefen, Straub, and Boudreau 7). The combined analysis of both models allows for the measurement errors and factor to be analyzed as part of the model. This technique allows for simultaneous testing SEM, factor analysis, and hypotheses.

The analysis includes a preliminary EFA for the first order constructs of interest: Experience, Judgment, and Decision. EFA will also analyze the six character traits that make up Skepticism. The EFA analysis is done in SPSS. Skepticism is a second order construct, which will be analyzed during the CFA using IBM SPSS Amos (Amos). Figure 7 displays the measurement model that will be analyzed.

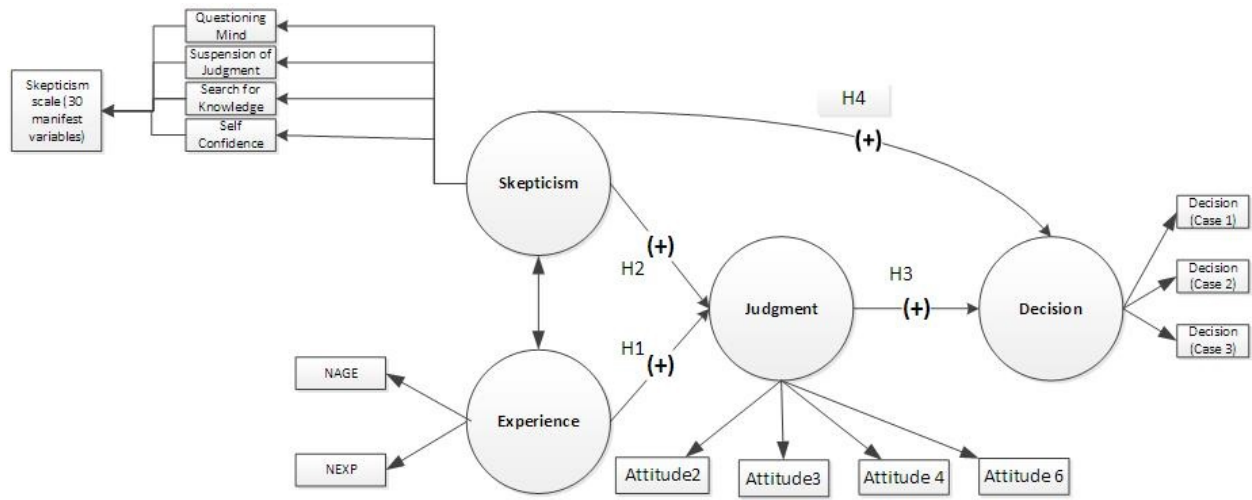


Figure 7 Measurement Model

4.2 Exploratory Factor Analysis (EFA)

SPSS uses a two step process for analysis of EFA. The first step is to determine factor loading for the first order constructs of Experience, Judgment, and Decision. The second step determines the six primary constructs that make up Skepticism, a second level construct. The final construct for Skepticism will be derived using IBM Amos. The secondary constructs include, a Questioning Mind (QM), Suspension of Judgment (SJ), Search for Knowledge (SK), Interpersonal Understanding, (IU) Autonomy (A), and Self-Confidence(SC). The results for the first order constructs are presented in Table 6. Results for the skepticism secondary constructs are on Table 7. The fit indices of the primary constructs includes the Goodness of Fit test, the KMO and Bartlett's Test, and Cronbach's alpha(Gefen, Straub, and Boudreau 7). The secondary construct indices include the KMO and Bartlett's test and Crohnsbach alpha. EFA makes an initial detemination of the

underlying factor structures. The results of the EFA analysis is further refined using IBM SPSS Amos to run a CFA. The initial indices fit indicates that the observed variables are associated with each latent variable, except Skepticism. Skepticism is constructed during the CFA analysis.

Table 6 EFA for First Order Factors

	Factor		
	Judgment	Decision	Experience
Cronbach Alpha	0.84	0.67	0.58
<u>Variables</u>			
Attitude 2	0.552		
Attitude 3	0.859		
Attitude 4	0.907		
Attitude 6	0.683		
Decision 1		0.488	
Decision 2		0.725	
Decision 3		0.634	
N* Age			0.744
N* Education			0.507
N* Experience			0.685

*Items were non normal so a log transformation of the data was performed using SPSS. Gaskin, 2012

Goodness-of-fit Test		
Chi-Square	df	Sig.
21.26	18	0.266

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.814
Bartlett's Test of Sphericity	Approx. Chi-Square	903.26
	df	45
	Sig.	0.000

Table 7 EFA Factor Loading for Skepticism Constructs¹

	A	SJ	QM	SC	SK	IU
Crohnbsbach Alpha	0.654	0.735	0.715	0.866	0.871	0.726
<u>Variables</u>						
A10	0.588					
A16	0.657					
A19	0.454					
A25	0.608					
SJ3		0.576				
SJ9		0.484				
SJ22		0.838				
SJ27		0.651				
QM13			1.052			
QM24			0.45			
SC2				0.913		
SC12				0.712		
SC21				0.833		
SK4					0.743	
SK15					0.898	
SK29					0.865	
IU5						0.667
IU14						0.627
IU30						0.753
Extraction Method: Maximum Likelihood Where A=Autonomy, SJ=Suspension of Judgment, QM=Questioning Mind, SC=Self-Confidence, SK=Search for Knowledge, and IU=Interpersonal Understanding.						

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.827
Bartlett's Test of Sphericity	Approx. Chi-Square	2143.283
	df	171
	Sig.	0.000

¹ According to Joreskog 1999, a factor loading can have a magnitude greater than 1 (QM13-1.052). Classical EFA traditionally have factor loadings that are correlations, a correlation matrix is analyzed and the factors are standardized and uncorrelated. With SEM if the factors are correlated, the factor loadings are regression coefficients and not correlations and thus can have a value greater than one Karl G. Jöreskog. "How large can a standardized coefficient be." *Unpublished Technical Report*. Retrieved from: <http://www.ssicentral.com/lisrel/techdocs/HowLargeCanAStandardizedCoefficientbe.pdf> (1999) Web. 10/13/2016 10:04:53 PM..

4.3 Measurement Model (CFA)

EFA explores the initial factor structure (how the variables relate and group based on inter-variable correlations); in the CFA we confirm the factor structure we extracted in the EFA. The results are presented in Table 8.

Table 8 CFA Factor Loadings

CFA Factor Loadings ¹				
	Skepticism	Experience	Judgment	Decision
SJ	0.715***			
QM	0.63***			
SC	0.742***			
SK	0.879***			
NEXP		0.426***		
NAGE		0.977***		
AT6			0.666***	
AT4			0.852***	
AT3			0.84***	
AT2			0.663***	
D1				0.828***
D2				0.874***
D3				0.636***
***=significant at the .01 level				
Composite Reliability ²				
CR	0.798	0.695	0.844	0.827
Convergent Validity ³				
AVE	0.573	0.568	0.579	0.618
Discriminant Validity ⁴				
MSV	0.12	0.12	0.191	0.191
ASV	0.055	0.346	0.093	0.195
Model Fit Indices ⁵				
CMIN	336.369			
DF	181			
CMIN/DF	1.858			
GFI	0.9			
CFI	0.936			
RMSEA	0.054			
SRMR	0.0136			

Construct validity and reliability indexes are listed on the same table. Determining construct validity with convergent and discriminant validity test. Convergent validity establishes the relationships of the measured variables within each construct. Discriminant validity looks at the constructs and their independence to each other. The

convergent validity index common in CFA is the use of the Average Variance Extracted (AVE). As per guidelines by Gefen et al. (2000) the minimum guideline are met.

Discriminant validity is evaluated using the Average Shared Squared Variance (ASV) and the Maximum Shared Variance (MSV). As per (Hair, Ringle, and Sarstedt 139-152) both were lower than the AVE for all of the constructs.

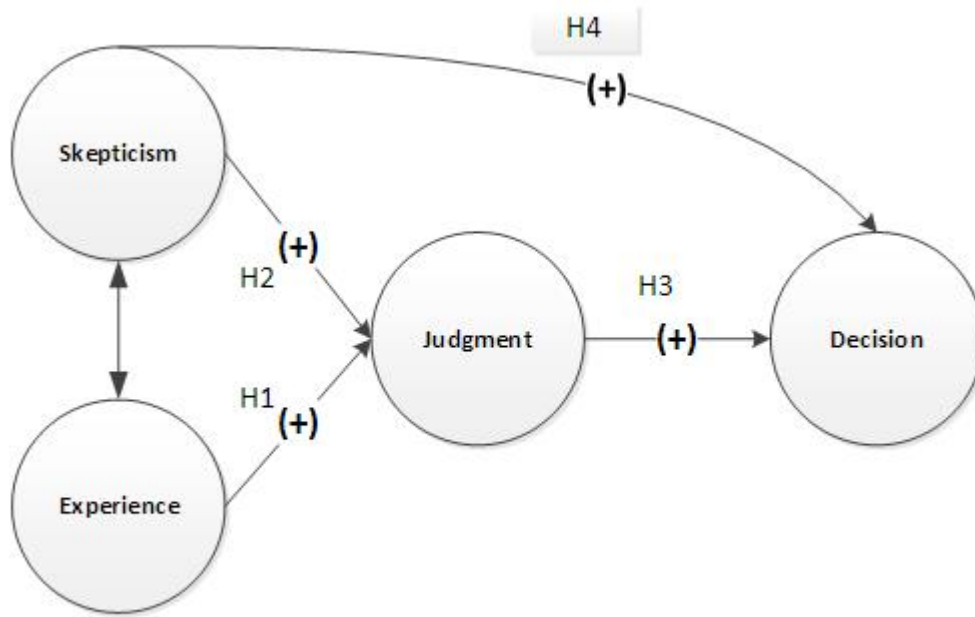
Composite reliability (CR) is a measure of the overall reliability of diverse but similar items. CR recommendation is met for all of the constructs (Fornell et al. 1981). The 0.695 score is justified in the same literature and acceptable because this construct includes only two variables.

Common method bias (CMB) is evaluated using Harman's (1960) single factor test. It determines if the majority of the variance is explained by only one factor. Common method bias occurs if there is a systematic source of measurement error (Podsakoff et al. 879). In this model, the single factor was 22.327% indicating a lack of CMB.

The model fit indices are within range of a good model. The next section 4.4 reviews the indices in detail.

4.4 SEM Results

A structural model was constructed from the results of the CFA analysis. A test of model fit reveals a good fit for the structural model. Figure 8 outlines the structural model.



□

Figure 8 Structural Model

There are three main categories of model fit 1) Absolute Fit, 2) Incremental Fit, and 3) Parsimonious Fit as recommended by Hair et al. (2011) and (Holmes-Smith). The literature is still mixed on the fit indexes and levels to report but Hair et al. (2011) and Holmes-Smith (2006) recommend to report at minimum one from each category. Table 9 summarizes each category, name of the index, and levels of acceptance. These recommendations are only recommendations as the current literature is still mixed on not only what indexes to report but also what levels are acceptable.

Table 9 Fit Indices Summary

Name of Category	Name of index	Index full name	Level of acceptance	Literature
1) Absolute Fit	Chi-Square	Discrepancy Chi Square	P-value > 0.05	Wheaton et al. (1977)
	RMSEA	Root Mean Square of Error Approximation	< 0.08	Browne and Cudeck (1993)
	GFE	Goodness of Fit Index	> 0.90	Joreskog and Sorbom (1984)
2) Incremental Fit	AGFI	Adjusted Goodness of Fit	> 0.90	Tanaka and Huba (1985)
	CFI	Comparative Fit Index	> 0.90	Bentler (1990)
	TLI	Tucker-Lewis Index	> 0.90	Bentler and Bonett (1980)
	NFI	Normed Fit Index	> 0.90	Bollen (1989b)
3) Parsimonious fit	Chi-Square/df	Chi-Square/Degrees of Freedom	< 3.0	Marsh and Hocevar (1985)

Zainudin "A Handbook of SEM 2nd edition," 2016.

The fit statistic results from this analysis are in table 10. They are within the ranges recommended by Hair et al. (2011) and Holmes-Smith (2006).

Table 10 Structural Model Fit Statistics

SEM Model	Testing for Model Fit						Model Fit
	χ^2	p	χ^2/df	CFI	GFI	RMSEA	
Final Model	31.14	0.187	1.743	0.995	0.997	0.05	good

χ^2 =chi square, p=p-value, df=degrees of freedom, GFI=Goodness of Fit Index, CFI=Comparative Fit Index, RMSEA=Root Mean Error of Approximation

Table 11 outlines the results of Amos structural model analysis. The results provide empirical support for Hypotheses 1, 3, and 5. Hypothesis 2 is not supported.

Table 11 SEM Analysis Results

Results for Original Model				
			p	SRW
H1	E	--> J	***	0.317
H2	S	--> J	0.88	0.009
H3	J	--> D	***	0.443
H4	S	--> D	***	0.179
Squared Multiple Correlations (R^2)				
	Judgment		0.103	
	Decision		0.25	
*** = p-value < 0.001				
p=p-value, SRW=Standardized Regression Weight, S=Skepticism, D=Decision, E=Experience, J=Judgment				

Hypotheses and results are summarized in table 12.

Table 12 Summary of Hypotheses 1 to 4 with Results

Original Path Model		
Description		Supported?
H1 Higher levels of level of experience will positively affect a participant's judgment that reporting fraudulent activity is the right thing to do		Yes
H2 Higher skepticism score will positively affect a participant's judgment that reporting fraudulent activity is the right thing to do.		No
H3 Higher judgment score will positively affect a participant's decision to report fraudulent behavior		Yes
H4 A high level of skepticism will positively influence the decision to report fraudulent behavior regardless of judgment.		Yes

4.5 Multi-group Analysis (LSI versus HSI)

Multi-group Invariant Test (MIT) comparisons are special form of analysis in which a dataset is split along values of a grouping variable (such as secrecy index (SI) level), and tested with data from each set. Using the SI, the model is tested comparing the Low Secrecy Index group and a High Secrecy Index group separately. The use of multi-group comparisons is to determine if relationships hypothesized in the model will differ and the relative strength of any differences. A chi-square differences test is built into AMOS's to test for multi-group model and path invariance. If the Chi-square test is invariant (p is not significant), then individual paths can then be tested. The results of the chi-square and paths invariance tests are in Table 13.

Table 13 Chi-Square Invariance Test Results

Multigroup Invariant Test (MIT)										
		χ^2	p							
Test SIL and SIH groups		9.004	0.061	ns	p>0.05 groups are invariant					
Path Model Fit Testing										
Paths	Free Parameters	MIT		Model Fit						
		χ^2	p	χ^2	p	χ^2/df	CFI	GFI	RMSEA	Model Fit
Unconstrained	All	see MIT above		9.343	0.009	4.67	0.962	0.985	0.112	Moderate
Structural Model	None	see MIT above		18.35	0.005	3.06	0.936	0.971	0.084	Good
Rational Choice Path	S --> D	5.227	0.022	s ¹	14.57	0.002	4.86	0.94	0.976	0.115 Moderate
Rules Based Path	S --> J --> D	1.595	0.451	ns ²	n/a					
Category Based Path	E --> J --> D	1.645	0.439	ns	n/a					
1=paths are significantly different at p<0.05 model for H/L groups 2= paths are not significantly different for H/L at p>0.05										
SIL=Secrecy Index Low, SIH=Secrecy Index High, χ^2 =Chi squared, p=p-value, ns=not significant, χ^2/df = chi square/degrees of freedom, CFI=Comparative Fit Index, GFI=Goodness of Fit Index, RMSEA=Root Mean Square of Error Approximation, S=Skepticism, D=Decision, J=Judgment, E=Experience, n/a=not applicable										

The results indicate that that the groups of interest (LSI and HSI) are invariant or not significantly different. To examine hypotheses 5 to 7 Amos group analysis software tests individual paths.

To test individual paths the model constrains all paths except the path of interest. Table 13 shows the paths tested and which parameters were estimated freely, all other paths are constrained. The entire model is tested as no paths constrained (unconstrained) and as each path as constrained (structural) models. The model fit for the unconstrained model indicates as moderate and the structural model indicates as good.

4.6 Secrecy Index Group Results

As Table 13 indicates, only the Rational Choice Path has significant differences between the LSI and HSI, MIT show a Chi-Square of 5.227 and p-value of 0.022. The MIT requires a not significant result to test for invariance, but when testing for path differences the object is to look for variance between groups. Therefore, a significant p-value is required to test for parameter differences between groups. Table 14 shows results for the only path (Rational Choice) that had a significant difference.

Table 14 Results for Primary Trust Pathways

Results for Trust Pathways						
Significant Paths			SI	p	SRW	SMC (R ²)
Rational Choice Path	S	--> D ¹	SIH	*** ²	0.188	0.169
			SIL	***	0.232	0.264
<hr/>						
1=All paths are constrained except for path S--> D it is allowed to estimate freely,						
2=significance to p<0.001						
<hr/>						
SI= Secrecy Index,p=p-value, SRW=Standardized Regression Weight, SMC=Squared Multiple Correlations,						
S=Skepticim, D=Decision, SIH=Secrecy Index High, SIL=Secrecy Index Low						

Hypothesis 5 is supported but hypotheses 6 and 7 are not. Table 15 summarizes the hypotheses and the results.

Table 15 Hypotheses 5 to 7 Summaries with Results

MultiGroup Primary Paths Model Testing		
	Description	Supported?
H5	Low secrecy index individuals will have a stronger affect than high secrecy individuals on the trust as a rational choice path.	Yes
H6	Low secrecy index individuals will have a stronger affect than high secrecy individuals on the rule-based decision path.	No
H7	High secrecy index individuals will have a stronger affect than Low secrecy individuals on the category-based decision path.	No

CHAPTER 5

DISCUSSION

This study aims to validate behavioral and cognitive research and to extend the Throughput model to assess the reporting of fraudulent behavior by accounting personnel working within the asset misappropriation section of the OFACS. After obtaining 29 items from the EFA, CFA was used to test the validity of the items. Only 20 variables are included in the 4-factor model for the CFA. The nine remaining items did not fit the factor structure. The inclusion of the seven items within the autonomy and interpersonal understanding constructs led to a weaker specification of the Skepticism factor. The item NEDU, a normalized education index, proved to be invariant. The population consisted of at minimum second year accounting majors. This sample may have added to the invariance. The Experience Factor had only two measurement variables, making it a weaker factor. The last item not included was one of the AT (attitude) questions that determined another behavioral measure about reporting fraud. To improve the model this item is dropped, but the remaining question about attitude represented the factor adequately. The structure factor model is a good fit for the data. The four factors were *Experience, Skepticism, Judgment, and Decision*.

The primary goal of this study is to examine the likelihood of personnel to report fraud based on personal behavioral traits (Skepticism and Judgment) and the cognitive attributes (*Experience*). The secondary examination looks to find similarity or differences in trust paths to make a decision. The data was collected included a variety of countries. All of the data was examined together to test the primary objective. The data was then

divided into High or Low Secrecy groups based on cultural behaviors to examine the secondary goal.

Since complicated decisions require complex interactions of both behavioral and cognitive nature, a second-generation analysis (SEM) is chosen to simulate the decision process. The findings suggest that behavioral factors are stronger predictors on the decision to report fraudulent behavior. The secondary test also reveals that behavioral traits are a predictor of reporting fraud, but when examined by cultural groups, further differences emerge. When trust paths from the TP model are tested, the study finds that both groups follow the rational decision path. This path indicates that time pressures and limited information may have a greater influence on a decision. As predicted, the Low Secrecy countries that are more open with information, less intimidated by authority and more rules based tend to have a stronger tendency to report fraudulent behavior. The findings could serve as guidelines for organizations to evaluate that their personnel possess behavioral, cognitive, and possibly cultural tendencies that can better control the prevention of fraudulent activities. Understanding the relationship between these three traits will enhance how fraud is reported and influence how fraud prevention training is conducted.

The responses analyzed in this study were entirely collected from students who do not currently work in an accounting department. The results of the survey might have been different if the sample consisted of current employees (not potential employees) of accounting departments. The findings of the study are not any less valuable as an insight for organizations who look to improve fraud prevention.

This study is an exploratory attempt to examine a variety of methods to stem the enormous cost of fraud to organizations. The accounting literature is beginning to expand research in the area of behavioral traits of fraud perpetrators but studies examining characteristics of fraud tipsters is minimal. Generally Accepted Auditing Standards (GAAS) attempts to address the importance of auditors to maintain professional skepticism. The standards do not give enough clarity as to what makes up professional skepticism. Studies such as this may better uncover specific traits that encourage the reporting of fraud before it occurs. This knowledge may improve employee reporting within an organization or influence the way fraud training is developed.

CHAPTER 6

LIMITATIONS AND FUTURE RESEARCH

Limitations

Since this study combines instruments, there are no set standards to evaluate it. Since this is a new measurement survey the generalizability to the population is also difficult to ascertain. Further studies of behavioral, cognitive, and cultural traits in other populations are needed to validate the survey fully. Caution should be taken interpreting the results since the respondents are not current employees of accounting departments. Another limitation of the study is that it does not address the quality of the experience factor. The sample of countries was also under-represented, it would be beneficial to expand the study to a broader cross-section of national cultures from a variety of different countries.

Future Studies

Future studies may include factors that may make experience more quantifiable. Another area of interest is introducing known tip enhancers such as an anonymous tip hotline, or a reward system for reporting. Do these influence greater reporting regardless of behavioral, cognitive, or cultural traits? The problem of asset misappropriation seriously affects organization's revenue throughout the globe. The AFCE's Reports to the Nation's since its inception have recorded data that this issue continues to increase. The importance of expanding research within the accounting profession in this area of study is needed.

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APPENDIX

University of Texas at El Paso (UTEP) Institutional Review Board Informed Consent Form for Research Involving Human Subjects

Protocol Title: The Role of Professional Skepticism, National Culture, and National Legal Enforcement on Accountant's Intentions to Report Fraudulent Behavior

Principal Investigator: Nora Alaniz-Bouqayes

UTEP: College of Business-Accounting

In this consent form, “you” always means the study subject.

1. Introduction

You are being asked to take part voluntarily in the research project described below. Please ask the study researcher or the study staff to explain any words or information that you do not clearly understand.

2. Why is this study being done?

You have been asked to take part in a research study of accounting behavior and situations.

You are being asked to be in the study because you are a student with two years of accounting classes and you are over the age of 18.

If you decide to enroll in this study, your involvement will last about 30 to 40 minutes.

3. What is involved in the study?

If you agree to take part in this study, the research team will: Have you complete a packet, which includes a survey, demographic questions and case studies.

4. What are the risks and discomforts of the study?

There are no known risks associated with this research

5. Are there benefits to taking part in this study?

There will be no direct benefits to you for taking part in this study. This research may help us to understand accounting behavior in a variety of countries.

6. What other options are there?

You have the option not to take part in this study. There will be no penalties involved if you choose not to take part in this study.

7. What are my costs?

There are no direct costs.

8. Will I be paid to participate in this study?

You will not be paid for taking part in this research study.

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9. What if I want to withdraw, or am asked to withdraw from this study?

Taking part in this study is voluntary. You have the right to choose not to take part in this study. If you do not take part in the study, there will be no penalty.

If you choose to take part, you have the right to stop at any time.

The researcher may decide to stop your participation without your permission.

10. Who do I call if I have questions or problems?

You may ask any questions you have now. If you have questions later, you may contact Nora Alaniz-Bouqayes at nanaliz@utep.edu. If you have questions or concerns about your participation as a research subject, please contact the UTEP Institutional Review Board (IRB) at (915-747-8841) or irb.orsp@utep.edu.

11. What about confidentiality?

Your part in this study is confidential. None of the packet information will identify you by name. All records will be kept in a secured location with the corresponding author.

12. Authorization Statement

I have read each page of this paper about the study (or it was read to me). I know that being in this study is voluntary and I choose to be in this study. I know I can stop being in this study without penalty. I will get a copy of this consent form now and can get information on results of the study later if I wish.

Participant Name: _____ Date: _____

Participant Signature: _____

SURVEY (調查問卷)

PART I- Survey A (第一部份：A 問卷)

Statements that people use to describe themselves are given below. Please circle the response that indicates how you generally feel. There is no right or wrong answer. Do not spend too much time on any one statement. Your responses will be of great assistance in our research.

下列敘述是人們經常用來描述自己的狀態與處事方式，而這些敘述並無所謂的好壞價值判斷。煩請快速瀏覽並依據直覺來圈選自己的現況。而您的參與將有助於本研究之進行。

For each question circle the number that best corresponds to how you feel:

請針對下列每一敘述，圈選適當號碼，以描繪真正的自己或感覺。

	Strongly Disagree (完全不同意)				Strongly Agree (完全同意)	
I often accept other people's explanations without further thought. I-A1我常不經思索，即接受他人的說法與觀點。	1	2	3	4	5	6
I feel good about myself. I-A2我覺得自己很不錯。	1	2	3	4	5	6
I wait to decide on issues until I can get more information I-A3我會等收集到更多的資訊後，才會下決定。	1	2	3	4	5	6
The prospect of learning excites me. I-A4對學習的渴望，讓我覺得興奮。	1	2	3	4	5	6
I am interested in what causes people to behave the way they do. I-A5我對於人們行為背後的動機充滿好奇。	1	2	3	4	5	6
I often reject statements unless I have proof that they are true. I-A6我常否決別人的想法或觀點，除非我已證明這些想法是對的。	1	2	3	4	5	6
I am confident about my abilities. I-A7我對自己的能力很有信心。	1	2	3	4	5	6
Discovering new information is fun. I-A8我覺得發現新的事物或資訊，是件有趣的事情	1	2	3	4	5	6
I take my time making decisions. I-A9我會花點時間才作決定。	1	2	3	4	5	6
I tend to immediately accept what other people tell me. I-A10我容易接受他人告訴我的任何事物與資訊。	1	2	3	4	5	6
Other people's behavior does not interest me. I-A11我對他人的行為並不感興趣。	1	2	3	4	5	6
I am self-assured. I-A12我是個有自信的人。	1	2	3	4	5	6
My friends tell me that I usually question things that I see or hear. I-A13朋友常說：我是個經常對所看到與所聽到事物質疑的人。	1	2	3	4	5	6

Part I Continued-Survey A (第一部份：續A 問卷)

For each question circle the number that best corresponds to how you feel:

請針對下列每一敘述，圈選適當號碼，以描繪真正的自己或感覺。

	Strongly Disagree (完全不同意)				Strongly Agree (完全同意)	
I like to understand the reason for other people's behavior. I-A14我喜歡瞭解別人行為背後的原因。	1	2	3	4	5	6
I think that learning is exciting. I-A15我認為學習是令人興奮的。	1	2	3	4	5	6
I usually accept things I see, read, or hear at face value. I-A16我容易接受自己所看、所讀或所聽到事物的表象。	1	2	3	4	5	6
I do not feel sure of myself. I-A17我對自己感到不確定。	1	2	3	4	5	6
I usually notice inconsistencies in explanations. I-A18我常會注意到解釋的不一致性。	1	2	3	4	5	6
Most often I agree with what the others in my group think. I-A19在群體當中，我經常能夠接受他人的看法。	1	2	3	4	5	6
I dislike having to make decisions quickly. I-A20我不喜歡快速作決定。	1	2	3	4	5	6
I have confidence in myself. I-A21我對自己充滿信心。	1	2	3	4	5	6
I do not like to decide until I've looked at all of the readily available information. I-A22我喜歡蒐集所有可取得的資訊後，才作決定。	1	2	3	4	5	6
I like searching for knowledge. I-A23我喜歡搜尋知識或資訊。	1	2	3	4	5	6
I frequently question things that I see or hear. I-A24我經常對自己的所見所聞產生質疑。	1	2	3	4	5	6
It is easy for other people to convince me. I-A25別人很容易說服我。	1	2	3	4	5	6
I seldom consider why people behave in a certain way. I-A26我很少思考別人所作所為的原因或目的。	1	2	3	4	5	6
I like to ensure that I have considered most available information before making a decision. I-A27我喜歡進行任何決策前，皆已考慮所有可取得的資訊。	1	2	3	4	5	6
I enjoy trying to determine if what I read or hear is true. I-A28我喜歡嘗試判斷所見所聞的事物是否為真。	1	2	3	4	5	6
I enjoy learning. I-A29我享受學習帶來的樂趣。	1	2	3	4	5	6
The actions people take and the reasons for those actions are fascinating. I-A30人們的所行所為與背後原因，是令人關注的。	1	2	3	4	5	6

PART I- Survey B(第一部份：B 問卷)

Statements regarding reporting of fraudulent behavior are given below. Please circle the response that indicates how you generally feel. There is no right or wrong answer. Do not spend too much time on any one statement. 下列敘述是關於舞弊行為的報導(或公開揭露)，而這些敘述並無所謂的好壞價值判斷。煩請快速瀏覽並依據直覺來圈選自己的現況。

For each question circle the number that best corresponds to how you feel:

請針對下列每一敘述，圈選適當號碼，以描繪真正的自己或感覺。

Strongly Agree (非常同意)	Agree 同意	Somewhat Agree 有點同意	Neutral 無意見	Somewhat Disagree 有點不同意	Disagree 不同意	Strongly Disagree 非常不同意
1	2	3	4	5	6	7
Reporting Fraudulent Behavior would help to prevent serious harm to the organization.						
I-B1對組織舞弊行為的揭露報導，有助於防止組織受到更嚴重的傷害。	1	2	3	4	5	6 7
Reporting fraudulent behavior is helpful in preventing corruption.						
I-B2對組織舞弊行為的揭露報導，有助於防止貪污或賄賂情事的發生。	1	2	3	4	5	6 7
Reporting fraudulent behavior is the moral thing to do.						
I-B3對組織舞弊行為的揭露報導，是符合道德的行為。	1	2	3	4	5	6 7
Reporting fraudulent behavior is the right thing to do.						
I-B4對組織舞弊行為的揭露報導，是在做對的事情。	1	2	3	4	5	6 7
Reporting fraudulent behavior is foolish.						
I-B5對組織舞弊行為的揭露報導，是不明智的。	1	2	3	4	5	6 7
Reporting fraudulent behavior is one's ethical duty.						
I-B6對組織舞弊行為的揭露報導，是每個人的職責。	1	2	3	4	5	6 7
Family members would approve of my reporting fraudulent behavior.						
I-B7家人會支持我對組織舞弊行為的揭露報導。	1	2	3	4	5	6 7
Coworkers would approve of my reporting fraudulent behavior.						
I-B8同事會支持我對組織舞弊行為的揭露報導。	1	2	3	4	5	6 7
Friends would approve of my reporting fraudulent behavior.						
I-B9朋友會支持我對組織舞弊行為的揭露報導。	1	2	3	4	5	6 7
Supervisors would approve of my reporting fraudulent behavior.						
I-B10長官會支持我對組織舞弊行為的揭露報導。	1	2	3	4	5	6 7
The general public would approve of my reporting fraudulent behavior.						
I-B11一般社會大眾會支持我對組織舞弊行為的揭露報導。	1	2	3	4	5	6 7
An organization will hinder/ignore my reporting of fraudulent behavior.						
I-B12組織會阻擋/淡化我對組織舞弊行為的揭露報導。	1	2	3	4	5	6 7
The reporting of fraudulent behavior won't make a difference						
I-B13對組織舞弊行為的揭露報導，並不會改變任何現況。	1	2	3	4	5	6 7
A person who reports fraudulent behavior will be subject to retaliation from the organization.						
I-B14對組織舞弊行為的揭露報導，可能會遭受到組織的報復與懲罰。	1	2	3	4	5	6 7

PART II-Demographic Information(第二部份：個人背景資料):

Please answer the following demographics questions so that we may develop a profile of respondents. 煩情提供下列個人背景資料。

In what country were you born(II-1出生國)? _____

State/Province(II-2州/省/城市)? _____

Have you ever lived in another country?(II-3是否曾經居住過其他國家?)

Circle one(圈選): YES(是) NO(否)

If yes, which country did you live(II-4假如有，請問是那個國家?): _____

How long? (II-5多久?) _____ Years(年) _____ Months(月)

What is your age(II-6年齡): _____ Years(歲)

What is your gender(II-7性別): **Circle one(圈選):** MALE(男) FEMALE(女)

How many accounting courses have you completed?(II-8至今已修習幾門會計課程) : _____門In
your university, accounting courses are offered every(II-9在你們學校，會計課程的規劃是依)

Circle One(圈選): SEMESTER(學期) QUARTER(季) YEAR(學年)

How much accounting work experience do you have? (II-10您至今有多少年的會計工作經驗?)

_____ Years(年) _____ Months(月)

What race category that best describes your race?(II-11你是歸於哪一種族?)

Circle One(圈選):

ASIAN(亞洲人)、BLACK(黑人)、HISPANIC(西班牙人)、WHITE(白人)、OTHER(其他)

PART III- CASES ADAPTED FROM (SCHULTZ ET AL., 1993) (第三部份：個案)

Please read each of the three cases below, one at a time and answer the question at the end of each case. 煩情閱讀下列三個個案，在閱讀過一次後，立即回答問題。

CASE 1(個案一):

Mr. S. is an internal auditor and accountant for International Inc., a large multinational drug and chemical company whose stock is publicly traded. After two years, Mr. S. received his transfer to a new Division abroad. One routine part of his job was reviewing expense accounts. When Mr. A.'s expense reimbursement request came to the top of the pile; Mr. S. was intrigued as he knew that as Vice President of Marketing for the new Division, Mr. A. had quite a reputation as a big spender. His interest quickly turned to anxiety as he found reimbursement requests for items such as a moderately expensive necklace, a fur stole, and a bill for Mrs. A.'s personal secretary with no real justification. He knew that these items were not reimbursable according to company policy. He decided to ask Mr. A. about them as his audit supervisor was out of the country. Mr. A. was clearly upset about the inquiry and responded, "See the CEO's signature on those requests. What other documents do you need? He knows I'm responsible for the success we have had in developing the new Division's market, and besides I'm a V.P. here." On the way back to his office, Mr. S. realized that although the CEO also had the title of Vice President for Administration, he also had a reputation as a playboy and was hardly ever at the office.

S 先生任職於一家上市化學藥品跨國公司的內部稽核與會計人員。兩年後，他被指派至國外分公司任職。依照工作常規他須先檢視分公司的費用支出。在檢視過程中，他發現新單位的行銷副總裁A先生的報帳費用相當高，且揮霍行徑眾所皆知的。當他檢視費用內容時，發現包括一些沒有正當理由費用支出，包括給A太太的昂貴項鍊、毛製品披肩、及聘請私人秘書等費用。依據公司會計政策，這些支出都是不被允許的。因此，他決定趁著稽核主管出國準備來分公司時，詢問A先生這些支出的相關細節。

A先生對於這些費用支出的質詢，清楚表現出沮喪且回答說：「你看，這些報帳單都是經過執行長簽字同意的。他知道我肩負著新公司的市場拓展成功與否責任，況且我還是這裡的副總經理，不知你是否還

需要檢查其他文件？」。在回到辦公室途中，S 先生瞭解到雖然A先生掛名副總經理，但他很少出現在辦公室，且是個不折不扣的花花公子。

Assuming that you are Mr. S, please circle the extent to which you intend to report this incident to your audit supervisor?

III-1 假設你是S先生，你是否會跟稽核部門主管報告這件事情？

VERY LOW
LIKELIHOOD

可能性很低

1

2

3

4

5

6

7

VERY HIGH
LIKELIHOOD

非常有可能

CASE 2(個案二):

Mr. M. works as a construction engineer for Bygg Inc., a large publicly traded international construction company. After six years with the company, Mr. M. received overall engineering responsibility for Little-town's new administration building, an important project. After the construction project was nearly half complete, Mr. M. discovered that one of his subordinates had made a computation error, which Mr. M. failed to detect in the initial review. This error resulted in the foundation being too weak to meet building code requirements. Mr. M. explained the error to the Littletown's Project Supervisor, Mr. O.: "Mr. O. it is a costly mistake. To meet building code requirements, the foundation will need to be torn out and redone." Mr. O. knew that the rework would result in a substantial loss instead of a projected profit. After a review of the computational error, Mr. O. called Mr. M. in: "Mr. M., you are correct, this mistake will be extremely costly if we have to correct it. However, after studying the calculations and comparing them to the realistic stress levels, I feel sure that the foundation will not be too weak. After all, with our years of experience we know the code is overly cautious. As to the building inspector, it's times like this I'm glad he's on our payroll, and willing to overlook a minor computation error." Mr. M. is concerned because he is not convinced that the error is minor, and because he is surprised

about the inspector. The next higher level of management is the Construction Division Manager, Ms. S. Ms. S is Mr. O's supervisor and is well known by both.

M先生任職於大型上市Bygg建設公司，並擔任營造工程師。在努力工作六年後，M先生升職擔任一個重要專案(Little-town新管理大樓)的總工程師，而在大樓完工接近一半時，M先生發現一個原應於專案發展初期即應察覺的工程計算偏誤，而這個計算偏誤可能會導致大樓地基脆弱到無法符合建築法規要求。

於是M先生即刻向專案經理O先生報告與解釋此項偏誤：「O先生，這是一個代價昂貴的工程計算偏誤，為符合建築法規要求，此大樓地基必須敲掉重蓋」。因此，O先生瞭解到若地基重蓋，此專案將從預期獲利轉成實質損失的後果。

於是，O先生經過工程計算偏誤的檢視後，告訴M先生說：「M先生，你是對的，若大樓重蓋公司將會蒙受重大損失。然而，經過仔細計算以及比較實際可以承受的大樓壓力程度，我堅信大樓地基並非脆弱到會出狀況。況且，以你多年的經驗也知道，建築法規的要求過於嚴格。還好大樓的營造監工是我們自己雇用的，他也希望忽略這個小小的工程計算偏誤」。

然而，M先生仍很在意，且不認為這是個小小的工程計算偏誤，而令他驚訝的是營造監工的處理方式。營造部門經理S小姐是O先生的主管，且與他們兩個都是熟識。

Assuming that you are Mr. M., please circle the extent to which you intend to report this incident to the next higher level of management, Ms. S., the Construction Division Manager?

III-2 假設你是M先生，你是否會越級向營造部門經理S小姐報告這件事情？

VERY LOW
LIKELIHOOD
可能性很低

1

2

3

4

5

6

7

VERY HIGH
LIKELIHOOD
非常有可能

CASE 3(個案三):

Ms. D. is in her second year as an accountant for DFSCAN, the foreign sales and distribution division of DED Computers Inc., a multinational corporation whose stock is traded. DFSCAN has been successful in penetrating the whole foreign-market through innovative financing arrangements, including liberal return policies on leased equipment. Following accepted accounting practice, DFSCAN has treated the long-term leases as a sale in the initial year of the lease. A problem has arisen, however, because a competitor has brought out a more advanced, modern computer that has distinct cost advantages. Ms. D. has learned from a salesman that one of DED's largest clients intends to exercise the return clause, which will affect current earnings substantially. After discussion with other salesmen, Ms.D. discovers that the return will be widespread and prepares an estimate to remove the profit in accordance with accepted accounting practices. She presents this proposal to her superior, Mr. T., DED's Controller for the past ten years. Mr. T. will not even discuss the issue. After reflecting on the problem, Ms. D. recalls a company rumor that DED needs to conclude a critical merger within the next two months. The merger involves a stock-for stock exchange. She reasons that a sharp reduction in earnings will cause DED's stock price to drop and probably stop the merger. Yet accepted accounting procedures are clear about reducing profit. The next higher level of management is DED's Chief Financial Officer, Mr. R?

D小姐任職於一家上市跨國DED電腦公司，並服務於外銷與通路DFSCAN分公司的會計人員兩年。

DFSCAN透過創新的財務安排，包括租賃設備可隨時解約返還的策略，成功滲透與拓展外銷市場。

依據一般會計實務，DFSCAN在設備長期租賃的第一年以銷貨認列，然而，此項作法逐漸產生問題，此肇因於競爭對手購買更先進、具有成本優勢的電腦設備。首先，D小姐從銷售人員口中知悉公司的最大客戶想要執行返還條款，並解除租賃合約，而這將會重大影響公司今年度獲利。D小姐經過和其他銷售人員聊天後，發現此次的設備返還交易處理，將依據一般會計實務被分年認列與逐年抵銷獲利。

於是D小姐就向她的主管T先生(已擔任十年稽核長)報告此事，然而T先生根本不想討論這個議題。D小姐也從側面聽到一些傳言，在未來2個月內公司將要執行一個重要的換股購併交易。因此，她推論若

依據一般公認會計原則全數於今年認列租賃設備退回損失，將會重大影響公司股價且可能讓購併交易中止。R先生是DED的財務執行長，也是T先生的主管。

Assuming that you are Ms. D., please circle the extent to which you intend to report this incident to the next higher level of management, Mr. R., DED's Chief Financial Officer?

III-3 假設你是D小姐，是否會越級向DED的財務執行長R先生報告這件事情？

VERY LOW
LIKELIHOOD

可能性很低

1

2

3

4

5

6

7

VERY HIGH
LIKELIHOOD

非常有可能

Your questionnaire has concluded at this point. The research team for this study appreciates your efforts in completing this survey. If you have any questions, please contact the corresponding author, Nora Alaniz-Bouqayes', her e-mail is nalaniz@utep.edu.

本問卷回答至此截止，本研究團隊非常感謝您的協助與參與，假如您有任何問題，請與我們的共同作者 Nora Alaniz-Bouqayes聯繫，她的 e-mail是 nalaniz@utep.edu.

Vita

Nora Alaniz-Bouqayes is a Ph.D. candidate in her fifth year of the Ph.D. Program in International Business with an Accounting concentration. She graduated with a bachelor's degree in Business Administration in Accounting in 2008. She also completed her master's degree in Accounting in 2010 from the University of Texas at El Paso. While completing her doctoral studies she had an assignment as an instructor of accounting at Zayed University in Abu Dhabi in the United Arab Emirates. Prior to her doctoral studies she worked in contracting with the United States military and in the banking and mortgage lending industry. Her research interests are in fraud, auditing and accounting education in multicultural settings. She has recently accepted a position of Assistant Professor of Accounting at California State University at Chico as an assistant professor in accounting.

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