

**OCCUPATIONAL FRAUD: A STUDY OF ACCREDITED HIGHER
EDUCATIONAL INSTITUTIONS OF THE NORTH CENTRAL
ASSOCIATION OF COLLEGES AND SCHOOLS**

by

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Abstract

This study used the information based on the 42 risk factors of the American Institute of Certified Public Accountants (2008), Statement of Auditing Standard No. 99; Association of Certified Fraud Examiners (1996, 2002, 2004, 2006, 2008) reports; Committee of Sponsoring Organizations of the Treadway Commission (1999) studies; and the Klynveld Peat Marwick Goerdeler (2003) report to develop a list of 24 statements to explore the prevalence of 24 variables. These 24 statements were used in the research study to survey comptrollers, directors of business services, and individuals who performed the tasks of comptroller related to managing risk-factor variables at the accredited higher educational institutions of the North Central Association of Colleges and Schools in an attempt to find the most common occupational risk factors in that sector. The study also included 5 open-ended questions to assess the perception of comptrollers, directors of business services, and individuals who performed the tasks of comptrollers about how or if at all the organization's culture, policies, and procedures impacted the controls used in preventing fraud. This study considered the idea that the risk factors present at the institutions could help identify the weaknesses that lead to occupational fraud. Specifically based on the similar studies performed by Association of Certified Fraud Examiners, educational institutions are susceptible to occupational fraud due to the presence of various risk factors. However, the information and values that were gained from this research have provided several areas for future research opportunities.

Dedication

I would like to dedicate my dissertation to my dear husband, Dr. Dhimant Patel, who is always beside me through tough and easy times, helped me work my way through this dissertation with his constant caring and encouragement, and tolerated my years of neglect while I labored away on this project. His constant love, support, understanding, and patience have brought me to this point in life. I truly appreciate everything he has done to help me work through as I struggled to finish this journey.

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CHAPTER 1. INTRODUCTION

Introduction

According to Wells (2004), occupational fraud has become the crime of the 21st century. It is a widespread phenomenon that affects practically every organization.

According to Johnson and Fludesill (2001), fraud in business organizations encompasses a wide variety of conduct by employees, managers, executives, and owners. Common violations include embezzlement, corruption, petty theft, payroll abuses, and fraudulent financial reporting.

Educational institutions are no exception to fraud whether they are public or privately owned and operated or for-profit or not-for-profit institutions. With state- and federal-level budget cuts for education, many educational institutions have been forced to consolidate responsibilities (Kranacher, 2005). The potential for fraud increases with such consolidation because effective internal control is positively affected by the segregation of duties, which creates a system of checks and balances within the organization. When an organization reduces the number of employees, it must consolidate the responsibilities, creating the potential for increased fraud (Kranacher, 2005).

According to Kranacher (2005), within the realm of education, the identification of fraudulent activity can be complicated by the existence of several entities within the

organization that control their own accounts. These entities can include auxiliary enterprises that are similar to college associations and college foundations that are frequently tax-exempt fund-raising entities that benefit the mission of the institution. The college foundations are particularly vulnerable to fraud as they frequently incorporate the use of discretionary funds for administrative ease. “Unfortunately, along with the advantage of efficiency comes the potential for abuse” (Kranacher, 2005, p. 2).

The development of a proactive fraud-prevention program in educational organizations as seen in other business organizations is essential to minimize the occurrence of fraud by maximizing the potential detection of fraudulent activity. The present study contributed to the improvement of fraud controls for accredited educational institutions of North Central Association of Colleges and Schools and potentially other educational institutions nationwide based on the identified indicators or risk factors for occupational fraud in this sector and the perception of the participants on the effectiveness of the organizational policies and procedures. These improved fraud controls could contribute to the development and implementation of a proactive fraud-prevention program for these organizations and others in the education sector, which now ranks sixth in fraud indicators in the national survey of all sectors, according to the Association of Certified Fraud Examiners’ (ACFE) most recent research reports from 2008.

Background

Because the education sector influences the values and beliefs of today’s students, it is very important to discuss corruption at educational institutions and its impact on the

students and society as a whole. Various ACFE (1996, 2002, 2004, 2006, 2008) research reports have been used by this researcher to discuss the cost of fraud, number of actual fraud cases in the education sector, types of fraud, and the common risk factors associated with fraud. To add value to this study, literature from scholarly articles and books was used. The classification of occupational fraud and abuse along with the characteristics of occupational fraud are discussed. Management dilemmas and organizational culture, structure, policies, and procedures are discussed. The findings of occupational fraud surveys were used to prepare the survey instrument.

According to Rumyantseva (2005), education is the public sector that possesses the greatest ability to influence the destiny and success of society's youth. It is perhaps the only public sector that has the greatest influence on the young's values and beliefs (p. 86). Rumyantseva stated that “educational corruption has a negative impact on society. It undermines public trust in higher education, exacerbates the quality of education, prepares unqualified young professionals, and teaches those distorted values and culture” (p. 82). Rumyantseva stated that administrative corruption that does not directly involve students is demonstrated by corruption in procurement, corruption in hiring, and the misuse of public funds for private purposes. According to Dongping (2004),

Corruptness in education means educational institutions securing private gain (including gain for individuals, small groups of people, or departments) by conducting such illegal and criminal activities as exchanges of power, money, educational opportunities, and academic qualifications in contravention to the objectives of education, to the principle of educational equity, and to regulations, discipline, and the law. In a broad sense, this concept also includes academic corruptness among teachers, indiscriminate charging of fees by schools and other such activities that seriously harm the public benefit of society. (p. 95)

According to the ACFE (2006) *Report to the Nation on Occupational Fraud and Abuse*, educational organizations were the victims of 73 of the total 1,143 occupational fraud cases (6.4%) reported, making education the seventh highest industry by number of corruption cases in 2006 out of 19 total industries surveyed. In the ACFE (2008) survey, education maintained a rate of 6.9% for all cases surveyed and moved up to number six in the rankings.

The ACFE (2002) *Report to the Nation on Occupational Fraud and Abuse* warned that fraud costs organizations approximately 6 cents for every dollar of revenue. Although this may seem like an insignificant sum of money, when totaled for all organizations within the United States, it amounts to a staggering \$600 billion annually, up from \$400 billion in year 1996 as described by the ACFE (2002) report. According to the ACFE (1996) report, the average organization in the United States loses about 6% of its annual revenue to internal fraud. However, the total cost of internal fraud can be twice the amount of any missing money or assets or even more (MacErlean, 1995). This is because the total cost of fraud includes not only the direct financial losses but also many indirect costs. Indirect costs of fraud include the loss of productivity from hiring and firing employees who have perpetrated fraud, increased unemployment tax costs, cost of legal action, and cost of government intervention as reported by the ACFE (1996). The total losses from fraud also include the loss of management time needed to sort out the situation, fees charged by any independent fraud experts, and loss of business reputation (MacErlean, 1995).

According to R. Schwartz, Larson, and Kranacher (2008), higher educational institutions have been viewed as places of high ethical standards where the fraudulent

schemes common to the world simply would be unthinkable. Increasingly, however, this is proving to be untrue. Instead, higher education institutions are as rife with scams as other organizations and as much in need of adopting strong antifraud policies and procedures. The types of fraudulent schemes are varied. The perpetrators come from many levels of the higher educational institutions: Presidents, whose authority makes committing large fraud easy, to maintenance workers who might be tempted, as in a recent case, to switch the new tires on the college van with the old ones from a personal vehicle (R. Schwartz et al., 2008). Schemes tend to start small and can increase as they succeed. According to the ACFE (2006) report, educational organizations were the victims of 73 of the total 1,143 occupational fraud cases (6.4%) reported, making education the seventh highest industry by number of corruption cases in 2006 out of 19 total industries surveyed. In the ACFE (2008) survey, education maintained a rate of 6.9% for all cases surveyed and moved up to number six in the rankings.

Statement of the Problem

The title of this study is *Occupational Fraud: A Study of Accredited Higher Educational Institutions of the North Central Association of Colleges and Schools*. Occupational fraud is a major dilemma in higher education as demonstrated by the results of the ACFE (2006, 2008) surveys of institutions in the higher education sector. In spite of strong controls and policies set by the government and organizations, fraud cases are increasing in higher education. Researchers are trying to gather data for analysis for various types of fraud at various institutions and their employees' perception of the controls. ACFE conducts research on this topic continuously and sends out surveys every

2 years. Educational institutions are one of the types of institutions being surveyed regularly by the ACFE. Because the ACFE survey reports do not have any breakdowns for various education levels and the most common risk factors present at each level, the results of this research will fill in the gap by providing the most common risk factors present at the accredited higher educational institutions of the North Central Association of Colleges and Schools. The survey of fraud indicators presented a national portrait on which fraud indicators were most prevalent by sector. Education as a sector was ranked sixth in the latest survey by ACFE (2008). However, neither the level of the degree-granting institution nor the historical rate of return for the education sector to the ACFE presents a clear picture. Specifically, institutions of higher education are not broken out in the ACFE results, and the rate of return for the education sector is less than 6%. Although the ACFE surveys are considered valid and reliable in terms of the overall survey by their researchers, the specific results in higher education are not adequate to use in defining the managerial issues within higher educational institutions. Thus, there is a clear managerial need for an exploratory and descriptive study of institutions within an accrediting region. This type of study has provided this researcher with the required data for a conclusion that can help the managers with their concerns regarding occupational fraud and future researchers to perform similar research in other associations of colleges and schools.

Purpose of the Study

The purpose of this study was to explore the prevalence of various occupational risk factors present at surveyed accredited institutions of the North Central Association of

Colleges and Schools through an exploratory and descriptive study consisting of a survey based on risk factors considered among the most common associated with the potential for fraud and open-ended questions about policies, procedures, cultures, and training generally associated with fraud prevention.

This study used the information based on the 42 risk factors of the American Institute of Certified Public Accountants (AICPA, 2008a, 2008b), Statement of Auditing Standards (SAS) No. 99 (see Appendix A); ACFE (1996, 2002, 2004, 2006, 2008) reports; Committee of Sponsoring Organizations of the Treadway Commission (COSO, 1999) studies; and the Klynveld Peat Marwick Goerdeler (KPMG; 2003) report to develop a list of 24 statements (see Appendix B) to explore the prevalence of 24 variables (see Appendix C). These 24 statements were used in the research to survey comptrollers, directors of business services, and individuals who performed the tasks of comptroller related to managing risk-factor variables at the accredited higher educational institutions of the North Central Association of Colleges and Schools in an attempt to find the most common occupational risk factors in that sector. The study included five open-ended questions to assess the perception of comptrollers, directors of business services, and individuals who performed the tasks of comptroller about their perception on how or if at all the organization's culture, policies, and procedures impacted the controls used in preventing fraud.

Because the ACFE (1996, 2002, 2004, 2006, 2008) reports have provided results from surveys of educational institutions taken as a whole and nationwide, the results of the present study could facilitate the implementation and improvement in fraud control at accredited North Central Association of Colleges and Schools based on an understanding

of the distinct risk factors present within institutions of higher education in the association. The analysis and conclusions provided might assist future researchers test other educational institutions nationwide.

Rationale

Wells (2001) found that, regardless of the dollar amounts considered in audits, certified public accountants (CPAs) are being asked to play an increasingly important role in helping organizations prevent and detect internal fraud and theft. Responding to these demands requires the auditor to have a thorough understanding of occupational fraud. A CPA can be a great help in preventing and detecting occupational fraud.

According to Albrecht, Rosenfield, and Gill (1988), CPAs who are performing audits and write-ups or doing tax work are in a good position to see irregularities. These CPA professionals can help their clients avoid many occupational fraud problems if they work to understand fraud and watch for its symptoms. According to R. Schwartz et al. (2008), uncovering fraud can be difficult because of the concealment efforts of the perpetrator. Collusion among employees can help to perpetrate and conceal a fraud.

It is very common for the management of educational institutions to believe that the close relationships that exist among a smaller group of people prevent fraud from being committed (Wells, 2002). In reality, these feelings of absolute trust may create an environment of perceived opportunity to commit acts of fraud. Thompson (1991) offered some reasons why auditors may not detect fraud. The assumptions were that they did not believe that detection was their job, were too trusting of those they audited, found that the bosses already knew of and condoned the illegal activity, did not know exposures in

specific terms, did not know symptoms of fraud occurrence, did not follow through on symptoms of fraud, and were concerned about the career implications of fraud detection. Lehman and Weidenmier (2005) indicated that auditors have used software databases to detect several common red flags of billing schemes set up by employee fraudsters. Instances of occupational fraud are detected by accident (21.3%) rather than by internal or external audits (23.8% and 10.9%, respectively).

Research Questions

According to Cooper and Schindler (2001), the three factors that stimulate an interest in a scientific approach to decision making for management are “manager’s increased need for more and better information, availability of improved techniques and tools to meet the need for information, and resulting information overload if discipline is not employed in the process” (p. 6). Cooper and Schindler found that “a useful way to approach the research process is to state the basic dilemma that prompts the research and then try to develop other questions by progressively breaking down the original question into more specific ones” (p. 62), which is thought of as the management research question hierarchy. This research was based on the following six research questions. The first question was based on risk factors. The survey result based on this question provided the list of most common risk factors present at accredited higher educational institutions that will provide the managers with awareness on the controls placed at their own institutions. The responses to the other five questions provide managers information about how or if at all the organization’s culture, policies, and procedures impacted the

controls used in preventing fraud at other institutions surveyed to detect and prevent occupational fraud at their own institutions.

A major management dilemma faced by many organizations is the unethical behavior of the employees that has led to various types of fraud at the institutions. According to Decenzo and Robbins (2007), mandatory ethics training for the employees is supposed to be about helping employees recognize the way to do things properly, distinguish between right and wrong behaviors, and handle those gray areas in the most effective way.

The lack of support and encouragement for continuous education for employees is another management issue. Most of the management problems in the United States have resulted from inadequate human resources planning and lack of the coordination of human resource development efforts (Mathis & Jackson, 2003). The common management dilemmas are lack of training among those who lead the development activities and encapsulated development. According to Mathis and Jackson, “Encapsulated development occurs when an individual learns new methods and ideas but returns to work which is still bound by old attitudes and methods” (p. 331). According to Decenzo and Robbins (2007), organizational members focus on quality and continuous improvements due to the demand by consumers, and quality improvements have become strategic initiatives in the organization.

The retention of key employees is a common management issue at many organizations. According to Decenzo and Robbins (2007), it is estimated that there will be a shortage of skilled labor in the United States over the next 10-15 years. This will

require managers to use sophisticated recruitment and retention strategies. The descriptive study part of this research was based on Research Questions 2 through 6:

1. What are the most common occupational risk factors present at the accredited higher educational institutions of the North Central Association of Colleges and Schools?

2. How do the organization's policies and procedures affect the control measures implemented by the organization's management to detect and prevent occupational fraud?

3. How effective do comptrollers, directors of business services, and individuals who perform the tasks of comptroller perceive these control measures to be at detecting and preventing occupational fraud?

4. How does the institution promote ethical training?

5. How does the institution promote continued professional development?

6. What incentives do the institutions offer to key employees to retain them?

The first question listed above is based on risk factors. The survey results based on this question in the second section of the survey instrument (see Appendix B) provided the list of the most common risk factors present at accredited higher educational institutions. The responses to the five open-ended survey questions in the third section of the survey instrument provided managers information about their perception on how or if at all the organization's culture, policies, and procedures impacted the controls used in preventing fraud at their own institutions.

Significance of the Study

This study may help the institutions of accredited higher education learn about their weaknesses in the controls that can lead to future fraud and roles the culture, policies, and procedures play at the institutions. Given the list of risk factors that were developed from the results of this study, these accredited educational institutions may be able to detect fraud with this body of knowledge at an earlier stage and, therefore, would be able to develop and implement stricter controls to prevent fraudulent activities. The analysis of the responses of the five open-ended questions from the third section of the surveyed institutions was able to provide guidelines to others, including what control measures can be implemented by the organization's management to prevent fraud and how effective these control measures can be at preventing occupational fraud.

Definition of Terms

The following are definitions of the terms used in the present study.

Fraud

According to Wallace (1995), fraud is a scheme designed to deceive; it can be accomplished with fictitious documents and representations that support fraudulent financial statements. Flesher, Miranti, and Previts (1996) described fraud as dishonesty in the form of intentional deceptions or a willful misrepresentation of fact.

Financial Fraud

The AICPA (1996) SAS No. 82, “Consideration of Fraud in a Financial Statement Audit,” defined financial fraud involving accounting irregularities as misstatements arising from fraudulent financial reporting that are intentional misstatements or omissions of amounts or disclosures in financial statements to deceive financial statement users.

Asset Misappropriation

The ACFE (2008) *Report to the Nation on Occupational Fraud and Abuse* survey report stated that asset misappropriation schemes are fraud in which the perpetrator steals or misuses an organization’s cash and noncash resources.

Corruption

The ACFE (2008) *Report to the Nation on Occupational Fraud and Abuse* survey reported corruption as schemes in which fraudsters use their influence in business transactions in a way that violates their duty to employers in order to obtain a benefit for themselves or someone else.

Whistle Blowing

Eaton and Akers (2007) defined whistle blowing as activities that involve reporting wrongdoing within an organization to internal or external parties. Internal whistle blowing entails reporting the information to a source within the organization. External whistle blowing occurs when the whistleblower takes the information outside the organization, such as to the media or regulators.

Skimming

Skimming is defined as stealing money from the business before it is received and recorded by the company (Wells, 2003).

Larceny

Larceny is the theft of currency after the company has received and recorded it (Wells, 2003).

Cash Larceny

Cash larceny is any scheme in which cash receipts are stolen from an organization after they had been recorded on the organization's books and records (ACFE, 1996).

Billing

Billing is any scheme in which a person causes his or her employer to issue a payment by submitting invoices for fictitious goods or services, inflated invoices, or invoices for personal purchases (ACFE, 1996).

Check Tampering

Check tampering is any scheme in which a person steals his or her employer's funds by forging or altering a check on one of the organization's bank accounts or steals a check the organization has legitimately issued to another payee (ACFE, 1996).

Expense Reimbursements

Expense reimbursements are any scheme in which an employee makes a claim for reimbursement of fictitious or inflated business expenses (ACFE, 1996).

Payroll Fraud

Payroll fraud is any scheme in which an employee causes his or her employer to issue a payment by making false claims for compensation (ACFE, 1996).

Cash-Register Disbursements

Cash-register disbursements are any scheme in which an employee makes false entries on a cash register to conceal the fraudulent removal of cash (ACFE, 1996).

Cash-on-Hand Misappropriations

Cash-on-hand misappropriations are any scheme in which the perpetrator misappropriates cash kept on hand at the victim organization's premises (ACFE, 1996).

Noncash Misappropriations

Noncash misappropriations are any scheme in which an employee steals or misuses noncash assets of the victim organization (ACFE, 1996).

Bribery

Bribery is any scheme in which a person offers, gives, receives, or solicits something of value for the purpose of influencing an official act or business decision without the knowledge or consent of the principal (ACFE, 1996).

Illegal Gratuities

Illegal gratuities are any scheme in which a person offers, gives, receives, or solicits something of value for or because of an official act or business decision without the knowledge or consent of the principal (ACFE, 1996).

Extortion

Extortion is the coercion of another to enter into a transaction or deliver property based on wrongful use of actual or threatened force, fear, or economic duress (ACFE, 1996).

Conflict of Interest

Conflict of interest is any scheme in which an employee, manager, or executive has an undisclosed economic or personal interest in a transaction that adversely affects the company as a result (ACFE, 1996).

Assumptions and Limitations

This research included participation of the comptrollers, directors of business services, and individuals who performed the tasks of comptroller from accredited higher

educational institutions of the North Central Association of Colleges and Schools. The assumption was that the survey results would represent all accredited higher educational institutions in the North Central Association of Colleges and Schools. The similar surveys conducted by the ACFE received less than 6% of responses, which made this researcher assume that she would get similar or lower response rate for her survey. Based on the sample calculations in chapter 3 of this dissertation, this researcher was required to collect and analyze responses from 106 participants, but due to the exploratory nature of this study, this researcher accepted whatever number of responses she received for analysis.

Another assumption was the fear of ramifications from the Internal Revenue Service or board of regents may make the respondents reluctant to take the survey or respond honestly although the permission from the president to respond to the survey may encourage the participants to take the survey.

Nature of the Study

This study included all of the accredited higher educational institutions from the North Central Association of Colleges and Schools to test various independent variables using an exploratory and descriptive study. Exploration was required because this researcher lacked a clear idea of the problems she would meet during the study. In this method, the area of investigation was so vague that a researcher needed to do an exploration to learn something about the dilemma managers are facing at various accredited higher educational institutions of the North Central Association of Colleges and Schools. The researcher explored to be sure if it was practical to do a study in the

area in the future by other researchers. This research was conducted using an exploratory quantitative research method to analyze the risk factors and conduct a descriptive study to analyze the effectiveness of the policies and procedures placed.

Most educational institutions do not have any formal fraud-reporting procedures set up. Kranacher (2005) stated,

According to articles in the *Chronicle of Higher Education* and other print media, universities are sometimes quite far from the bastions of ethics they preach in their volumes of policies and procedures. In fact, because of concerns about the effect of "bad press" on public relations and fundraising, higher education has frequently sought to negotiate "back-room deals" as opposed to rooting out the problem. Therefore, the cases that do reach the public eye could be just the tip of the iceberg. (p. 7)

By responding to the survey statements on the educational institution's antifraud and integrity program by including statements on ethics training for employees, communication of policies with a new hire, and offering a reward for reporting fraud, the institutions will learn the strengths and weaknesses in their own policies. By testing the educational institution's antifraud and integrity program by including questions on ethics training for employees, retention policies, support and encouragement for professional development, communication of policies with a new hire, and offering a reward for reporting fraud, the researcher performed the appropriate research to address these issues that will make institutions more aware of their weaknesses in the implementation of policies if they do not already have them in place. By asking five open-ended questions in the third section of the survey instrument, this researcher collected the information on comptrollers, directors of business services, and individuals who perform the tasks of comptroller's perception of the effectiveness on how or if at all the organization's culture, policies, and procedures impact the controls used in preventing fraud at their institutions.

Organization of the Remainder of the Study

The next chapter reviews the management and organization theory. Chapter 3 describes the research questions and research hypotheses, presents the sample-selection processes, method of data analysis, and statistical methods to be used. Chapter 4 reports the findings of the research instrument, and chapter 5 includes discussion, implications, and recommendations for future study.

CHAPTER 2. LITERATURE

Introduction

Citing a string of recent allegations that federal education funds are being misused, sometimes for personal gain, top Republicans on the U.S. House Education and Labor Committee called on the Government Accountability Office and the U.S. Department of Education's Inspector General to undertake a thorough analysis of what safeguards are in place to protect taxpayer dollars and whether those safeguards are effective. According to Representative McKeon (R-CA), senior Republican on the Education and Labor Committee (U.S. House of Representatives, 2008), financial abuse and mismanagement in federal education programs meant to benefit disadvantaged students is unacceptable, and allegations of such a breach of the public's trust must be investigated quickly and aggressively.

According to Wells (as cited in Thomas & Gibson, 2003), chairman of the ACFE and a member of the antifraud detection subgroup, fraud is a significant problem for U.S. companies. Indeed, according to ACFE's (2002) *Report to the Nation on Occupational Fraud and Abuse*, \$600 billion or about \$4,500 per employee were lost as a result of on-the-job fraud and abuse. Although financial statement fraud was the most costly with a median loss of \$4.25 million per occurrence, about 95% of all occupational fraud incidents actually involved asset misappropriation and corruption.

According to the ACFE (2002) report, occupational fraud and abuse is a serious problem for organizations. Although the rate of occupational fraud is difficult to measure, evidence suggests that the problem is vastly underreported. According to the ACFE

(2004) report, out of 508 cases surveyed, 31 cases (6.1%) represented educational institutions with a median loss of \$31,000.

This chapter explains three major categories of fraud, which are asset misappropriation, corruption, and fraudulent statements, with their descriptions and provides managerial examples discussed in various ACFE survey results. The characteristics of occupational fraud are discussed along with elements of the fraud triangle. The most critical elements of the fraud triangle are opportunity, pressure, and rationalization. Opportunity is derived through the lack of adequate controls. Pressure is an array of causes, including lifestyle changes, personal debt, or business losses, that would affect the behavior of an employee. Rationalization is a justification of why their actions are not a crime. The occupational fraud risk factors based on the AICPA (2008a, 2008b) SAS are explained that were used in preparing the survey instrument (see Appendix B). What motivates employees and management to commit fraud and the role the organizational structure, culture, policies, and procedures plays in preventing the fraud are discussed. Actual cases of fraud in higher education institutions are discussed along with the findings of fraud surveys by COSO (1999) and KPMG (2003).

Occupation Fraud and Abuse Classifications

According to Singleton, King, Messina, and Turpen (2003), fraud can be divided into four categories: financial fraud (fraudulent statements), asset misappropriation, corruption, and other deceptive criminal acts. Executive management generally is the group responsible for financial fraud. Employees typically commit asset misappropriation and corruption fraud. External offenders are usually responsible for the other types of

fraud (e.g., credit-card theft) although sometimes former employees commit these crimes.

Various categories of fraud with their description and examples are summarized in Table 1, which was reproduced from the data collected from the ACFE (2006) report.

Table 1

Types of Occupational Fraud and Abuse

Category	Description	Example
Asset misappropriation	Any scheme that involves theft or misuse of an organization's assets.	Fraudulent invoicing Payroll fraud Skimming revenue
Corruption	Any scheme in which a person uses his or her influence in the business transactions to obtain an unauthorized benefit contrary to that person's duty to his or her employer.	Accepting or paying a bribe. Engaging in a business transaction where there is an undisclosed conflict of interest
Fraudulent statements	Falsification of an organization's financial statements to make it appear more or less profitable.	Booking fictitious sales Recording expenses in the wrong period

Note. Adapted from *2006 Report to the Nation on Occupational Fraud and Abuse* (p. 10), by the Association of Certified Fraud Examiners, 2006, retrieved from http://www.acfe.com/documents/Report_to_the_Nation.pdf. Copyright 2006 by the Association of Certified Fraud Examiners. Adapted with permission.

According to the ACFE (2004) report, out of 508 cases surveyed, educational institutions represented 31 cases. According to the ACFE (2006) report, 1,134 cases were surveyed, and educational institutions represented 73 cases. Table 2 is reproduced from the data presented in ACFE (2004, 2006) reports.

Based on the findings of survey results provided by the ACFE (1996, 2002, 2004, 2006, 2008) surveys, KPMG (2003) survey results, and PricewaterhouseCoopers (2003) international economic crimes survey results, Peterson and Zikmund (2004) found that

asset misappropriation or employee fraud is the most common category of fraud. For example, the 2002 ACFE survey found that asset misappropriations composed nearly 86% of the fraud studied, and the PricewaterhouseCoopers (2003) international economic crimes survey reported 60% of respondents experienced asset misappropriation. The KPMG fraud survey (as cited in Peterson & Zikmund, 2004) also found that 60% of the respondents experienced employee fraud during the previous 12 months.

Table 2

Method of Fraud Based on the Education Sector in the Industry

Categories of asset misappropriation in educational institutions	No. of cases out of 31 from ACFE 2004 report	No. of cases out of 73 from ACFE 2006 report
Skimming	8	15
Cash larceny	2	11
Billing	13	26
Payroll	8	13
Expense reimbursement	7	15
Check tampering	9	9
Noncash	10	16

Note. ACFE = Association of Certified Fraud Examiners. Column 2 adapted from *2004 Report to the Nation on Occupational Fraud and Abuse* (p. 16) by Association of Certified Fraud Examiners, 2004, retrieved from <http://www.acfe.com/documents/2004RttN.pdf>. Copyright 2004 by Association of Certified Fraud Examiners. Adapted with permission. Column 3 adapted from *2006 Report to the Nation on Occupational Fraud and Abuse* (p. 22) by Association of Certified Fraud Examiners, 2006, retrieved from http://www.acfe.com/documents/Report_to_the_Nation.pdf. Copyright 2006 by Association of Certified Fraud Examiners. Adapted with permission.

Corruption is a second major category of occupational fraud. According to the ACFE (2008) survey report, corruption refers to schemes in which fraudsters use their influence in business transactions in a way that violates their duty to their employers in order to obtain a benefit for themselves or someone else. According to the ACFE (2006) report, out of 1,134 total cases surveyed, there were 349 cases that involved some form of corruption. Out of 73 total cases reported by educational institutions, 24 cases (32.9%) were involved in corruption. According to Zarb (2005), corruption takes on many forms, including bribery, illegal payments, money laundering, smuggling, extortion, and nepotism. According to the ACFE (2006) report, from the 349 cases surveyed, the median loss from corruption was \$538,000 from conflict of interest, bribery, illegal gratitude, and extortion.

According to the ACFE (2008) survey report, fraudulent statements involve the intentional misstatement or omission of material information from the organization's financial reports. According to the ACFE (2008) report, from 1,134 cases surveyed, only 120 cases reported financial statement fraud, accounting for just over 10% of all cases surveyed. Although financial statement fraud is not nearly as common as asset misappropriation and corruption, its consequences tend to be much more severe. The median loss among financial statement fraud cases in the ACFE (2008) survey was \$2 million. Financial statements can be manipulated through concealing, reporting fictitious or overstated revenue, timing difference, improperly valuing assets, or failing to disclose significant information. According to the ACFE (2006) report, out of 1,134 total cases surveyed, there were 120 cases that were involved in financial statement fraud. Out of 73

total cases reported by educational institutions, 3 cases (4.1%) were involved in financial statement fraud.

Characteristics of Occupational Fraud

Based on a vast database of public records, testimonies at the various Enron-related trials, and insider accounts concerning Enron's rise and fall, Free, Macintosh, and Stein (2007) found that fraud occurs within organizations and can be understood by examining the elements that compose such actions. At an individual level, AICPA (2005) SAS No. 99 issued by the Auditing Standards Board indicated that the occupational fraud triangle composes three conditions that are generally present when a fraud occurs. These conditions include an incentive or pressure that provides a reason to commit fraud (personal financial problems or unrealistic performance goals), an opportunity for fraud to be perpetrated (weaknesses in the internal controls), and an attitude that enables the individual to rationalize the fraud.

Fraud Triangle

To detect and prevent fraud effectively, one must first understand what motivates people to commit fraud. Three essential elements are common to all types of fraud schemes: opportunity, pressure, and rationalization. These three elements compose the fraud triangle (Colson, 2001). According to Wolfe and Hermanson (2004), many studies suggested fraud is more likely to occur when someone has an incentive (pressure) to commit fraud, weak controls or oversight provide an opportunity for the person to commit fraud, and the person can rationalize the fraudulent behavior. According to the

AICPA (2005, 2008a) audit statement section 316, three conditions generally are present when fraud occurs.

First Element

The first and most critical element of the fraud triangle is opportunity. Many organizations unwittingly and unwisely provide their employees with a variety of opportunities to commit fraud. The most common factor is the lack of adequate controls for monitoring employee behavior. Adequate internal controls require that these three responsibilities be segregated among at least two or more employees. Employees possessing incompatible responsibilities have an easy opportunity to commit fraud. They can simply make out the checks, sign the checks, and then hide the fraud by charging it to a variety of expense accounts (Peterson & Zikmund, 2004).

Second Element

The second element of the fraud triangle, pressure, has been derived by an array of causes, including lifestyle changes, personal debt, or business losses (Peterson & Zikmund, 2004). The perceived opportunity to be able to commit the fraud and get away with it must be present. Weak or missing internal controls often are enabling factors. The heavy load of financial pressure may force the employee to alleviate that pressure, and if in a position to capitalize on the chance, it will be at the entity's peril. Those involved are able to rationalize committing a fraudulent act. These conditions are similar to those suggested by Wells (2001). Some individuals possess an attitude, character, or set of ethical values that allow them to commit a dishonest act knowingly and intentionally.

However, even otherwise honest individuals can commit fraud in an environment that imposes sufficient pressure on them. The greater the incentive or pressure, the more likely an individual will be able to rationalize the acceptability of committing fraud. The second element of the fraud triangle, pressure, is also present at accredited higher educational institutions. Decreasing student enrollments and higher rates of student dropout from school may make it more difficult for the institutions to meet the budgeted revenue. Because educational institutions are funded by state revenue, local property tax, or both, the accountability of revenue becomes a bigger issue that can put pressure on management to commit fraud.

Third Element

The third element is rationalization or the ability of perpetrators to find a morally acceptable excuse that justifies why their actions are not a crime. Based on the statistics given from the ACFE 2002 survey and survey conducted by KPMG in 2003, Peterson and Zikmund (2004) concluded that a company can reduce the risk of fraud by eliminating any one component of the triangle. Employees are much less likely to commit fraud if they believe they will be caught. Controls might be in place to detect fraud in a timely manner, but if the employee is unaware of those controls, the fraud might still be committed. Peterson and Zikmund also found that this principle also works in reverse if controls are so deficient that anyone could get away with a fraud, but if the employee believes that adequate controls are in place, the fraud will be prevented. According to Cressey (1980), that rationalization is the perpetrator's belief that a crime is not being committed. Fraud can be rationalized in a number of ways. Perpetrators often convince

themselves they are only borrowing from their employer. Some justify their theft out of a sense of being underpaid. Others depersonalize their victim's thinking; they are not stealing from the boss but only borrowing from the company. Elliot and Willingham (1980) examined several fraud cases and the impact of management and employee fraud on the various business sectors, such as insurance, banking, health care, and manufacturing, and the role of management, boards of directors, audit committees, auditors, and fraud examiners and their liability in the fraud prevention and investigation. They claimed that rationalization allows the perpetrator continued belief that he or she is basically still an honest person.

The third element of the fraud triangle, rationalization, at accredited higher educational institutions can lead to fraudulent activities as well. The fraudsters may believe that they are not stealing but borrowing from the organizations. Available funds from various grants and student loans for the students can open the door for the fraudsters at the higher educational institutions. According to Eisenberg and Franke (2007),

In recent cases in higher education, lenders have reportedly provided student-aid administrators with significant benefits--payments for service on advisory committees, stock and stock options, and trips to conferences at posh resorts--in exchange for favorable treatment, including placement on a college's list as a "preferred lender." Lenders also have allegedly made special payments to college officials for steering student-loan revenue their way. Under federal securities laws, that raises questions of possible fraud. (p. 16)

All these three factors of the triangle relate to the management behavior and attitude at accredited institutions of higher education. Many opportunities for committing fraud are available to the fraudsters due to recent budget cuts at the higher educational institutions. Many jobs are being consolidated and eliminated due to budget cuts. The segregation of duties becomes difficult for many organizations due to limited numbers of

employees. There are many controls available for such situations, and those need to be addressed by the management if they perceive fraud at their institution due to opportunities for the fraudsters. The five open-ended questions from the third section of the survey instrument provided the analysis and summary of the perception of comptrollers, directors of business services, and individuals who performed the tasks of comptroller from these accredited higher educational institutions that filled in the gap of literature available to the accredited higher educational institutions.

Occupational Fraud Risk Factors

Based on 2003 KPMG survey results, Buckhoff and Hansen (2001) found that the increasing opportunity for employee fraud was a significant problem for all businesses. Fraud is often discovered through tips or complaints from individuals. Most employees are willing to reveal fraud if asked the right questions.

According to McCracken (2008), an anonymous option offers employees and others the opportunity to report without fear of reprisal. According to Kramer (2003), corporate boards and managers should be sure that systems to encourage and facilitate reports are available and broadly announced to employees, customers, and vendors. These include confidential hot lines and fraud-awareness presentations. Typically, a 1- to 2-hour fraud awareness presentation will introduce the company's antifraud and integrity programs, describe the most common schemes that affect the organization, list some of their common risk factors, and discuss how to report suspicious activity.

AICPA's (1988) SAS No. 53 first identified risk factors of possible fraudulent activity, and SAS No. 82 (1997), published in the *Journal of Accountancy*, required

external auditors to detect fraud that may result in a material misstatement of the financial statements. Published in 1988, SAS No. 53 described 14 risk factors, and SAS No. 82 added 25 risk factors in 1997. SAS No. 99 increases the number of risk factors to 42, extensively revises the existing indicators, and requires auditors to consider the risk of a possible material misstatement due to fraud. Saksena (2001) found that the consideration of fraud in a financial statement audit has raised expectations for fraud-detection audits to new heights based on Security and Exchange Commission reports. Saksena conducted a study to determine the instances of management fraud using Security and Exchange Commission reports that included an analysis of industries where instances of management fraud were prevalent.

Based on Saksena's (2001) study, there are three streams of research dealing with the issue of management fraud. The first involves the use of a checklist of variables to help auditors identify them on an audit. These checklists consist of risk factors. PricewaterhouseCoopers (2003) defined risk factors as potential symptoms existing within the company's business environment that would indicate a higher risk of an intentional misstatement of the financial statements. The second involves the development of expert systems to serve as decision aids to help auditors detect management fraud. The third involves the development and testing of statistical models to help the auditor predict the existence of management fraud. Two kinds of statistical models dealing with management fraud have received attention. The first involves the use of internal information (risk factors), and the second involves the use of publicly available information to determine the characteristics of fraud and no-fraud firms.

Two studies have attempted to identify significant risk factors and combine them in a statistical model. Loebbecke, Eining, and Willingham (1989) developed an audit planning fraud risk assessment model. They developed a list of 36 fraud indicators divided into three categories: conditions, motive, and attitude. Bell, Szykowny, and Willingham (1993) developed a fraud-prediction model to validate whether the red-flag characteristics of fraud firms differed from no-fraud firms. The model correctly assigned 86% of the sample fraud cases as high risk and 81% of the nonfraud cases as low risk.

Occupational Fraud Motivators

Buckhoff and Morris (2002) used the fraud triangle to explain what motivates employees to commit fraud. They found that the essential elements common to all types of fraud schemes are opportunity, pressure, and rationalization. Many employees are under financial pressure and lack personal integrity; consequently, where opportunity exists, fraud often occurs. Based on the fraud triangle, Buckhoff and Morris believed that the best way to minimize the opportunity to commit fraud is to implement a good system of internal controls. According to Buckhoff and Morris, the three primary objectives of internal controls are to (a) promote operational efficiency; (b) ensure the accuracy and timeliness of financial information; and (c) encourage compliance with organizational policies, procedures, laws, and regulations.

Occupational Fraud by Employees and Management

As defined by the ACFE (2004), employee fraud entails the use of one's occupation for personal gain through the deliberate misuse or theft of an employer's

assets or resources. According to Barnes and Webb (2007), management controls primarily concerned with the prevention and detection of theft and fraud are likely to change across organizational size. This creates the possibility of economies of scale, making them relatively cheap for large organizations. As a result, larger organizations are likely to have a higher level of control than their smaller counterparts.

Based on the analysis of four different financial crisis cases from Chile and the United States, Akerlof, Romer, Hall, and Mankiw (1993) developed a theory and, based on that theoretical analysis, concluded that, in larger organizations, there is scope for the separation of duties. This may be much more difficult for smaller organizations without the employment of additional staff. Akerlof et al. argued that there is no reason why monetary size should stay constant across organizational size whereas it is likely to increase due to the greater availability of funds in larger organizations. If so, the marginal benefit of implementing the additional control in terms of size of individual thefts and fraud prevented is likely to be greater. Therefore, the level of prevention and detection will be higher, and organizational susceptibility to theft and fraud will disproportionately increase with organizational size. As management controls change by size of the organization, the effectiveness and suitability of individual forms of control will also vary at different levels of activity or organizational size.

Based on the empirical study performed by Barnes and Webb (2007) that examined the factors affecting an organization's susceptibility to theft and fraud, it was found that specific forms of control may relate to certain organizational vulnerabilities. For example, the segregation of duties may be required to prevent an employee having complete control over a transaction such as a purchase from order to payment. The

effectiveness of a management control system may, therefore, not be determined by overall effort and cost but by its features and the effectiveness of individual components. Alternatively, it may not be particular management controls that are important but rather the combination of various policies and procedures that make up those controls that is critical. There are other factors that may affect the relationship between an organization's susceptibility to fraud and its size. Clinard and Yaeger (1980) stated that thefts and fraud not only vary in type across industries (for example, fraud perpetrated by consumers in the insurance industry are very different from those in educational institutions) but with their accompanying management controls as well.

Based on a case study, Cottrell and Albrecht (1994) believed that, to detect employee fraud, managers, auditors, and department heads must learn to recognize the symptoms of employee fraud and investigate them thoroughly to obtain persuasive evidence that a crime did or did not occur. According to Cottrell and Albrecht, accounting irregularities, internal control weaknesses, analytical anomalies, lifestyle changes, behavioral changes, and tips or complaints are major categories of symptoms related to employee fraud.

Employee Fraud

Albrecht (1996) grouped the indicators of employee fraud into six categories: (a) accounting anomalies that include embezzlement, overstatement of expenses, fictitious journal entries, missing documents, alterations on documents, excessive voids or credits, increased past-due accounts, duplicate payments, entries made at or near the end of accounting periods, and others; (b) internal control symptoms that include a poor control

environment, lack of segregation of duties, lack of physical safeguards, lack of independent checks, lack of proper authorizations, lack of proper documents and records, the overriding of existing controls, and an inadequate accounting system; (c) analytical symptoms that include transactions and amounts that are too large or too small that occur at odd times and places; (d) lifestyle symptoms that include employees' greed, financial needs, or pressures; (e) behavioral symptoms that include employees' unusual and recognizable behavior patterns, unusual irritability and suspiciousness, unsolicited confessions, and others; and (f) tips and complaints that include tips from employees that something is wrong. For Albrecht, only the symptoms of fraud, risk factors, or indicators exist to alert management of wrongdoing. Such indicators of employee fraud can help comptrollers, directors of business services, and individuals who perform the tasks of comptroller at the accredited higher educational institutions detect fraud and help install stronger controls to prevent fraud.

Wells (2001) wrote an article for auditors and accountants on how to approach the fraud issue with their clients and what types of questions to ask. Wells (2001) also explained what the motivators of employee fraud are and reasons employees are compelled to commit fraud. Most cases of fraud are ordinarily traced back to the concept of greed, but Wells (2001) found that employee dissatisfaction was to blame for the majority of fraud. Some employees believe they deserve greater compensation for their services and steal from the company accordingly, using fraud as a means to increase their salary. Other embezzlers have used their fraudulent measures to help meet financial obligations. In any case, those employees who commit fraud often must "rationalize" their behavior as something that is not illegal. Wells (2001) classified fraud as the union

of motive and opportunity. To help detect instances where the proper motive and ample opportunity exists, Wells (2001) published a list of several questions that, when they can be answered “yes,” signal an opportunity for fraud. These questions include fraud specific to financial statement fraud and asset misappropriation fraud (Wells, 2001):

1. Is management compensation tied closely to company value?
2. Is management dominated by a single person or a small group?
3. Does management display a significant disregard for regulations or controls?
4. Has management restricted the auditor’s success to documents or personnel?
5. Has management set unrealistic financial goals?
6. Does management have any past history of illegal conduct?
7. Is an employee obviously dissatisfied?
8. Does the dissatisfied employee have a past history of dishonesty or illegal conduct?
9. Does that dissatisfied employee have known financial pressures, such as excessive debt, bad credit, or tax liens?
10. Has that employee’s lifestyle or behavior changed significantly? (p. 90)

Wells (2001) asserted that the ability to ask questions is a tremendous asset to those auditors trying to detect fraudulent behavior. In the higher educational institution environment, it is important for auditors to have access to the answers to similar questions. Such questions can help comptrollers, director of business services, and individuals who perform the tasks of comptroller at the accredited higher educational institutions to suspect and prevent fraud in earlier stages.

Management Fraud

Thomas and Gibson (2003) found that audit standard SAS No. 99 does something no audit standard has ever done. It contains a document titled *Management Antifraud Programs and Controls*. This document provides guidance to help prevent, deter, and detect fraud, which challenges corporate management to be an equal partner with auditors in creating an environment that neither condones nor is conducive to the existence of illegal activities. This document also identifies the measures an organization should take to prevent, deter, and detect fraud. It maintains companies should establish a culture of honesty and high ethics, antifraud processes and controls, and an appropriate oversight process. Thomas and Gibson found that the most important way for management to prevent fraud is to communicate effectively by both statement and deed. This may seem self-evident, but setting a tone at the top goes a long way toward preventing fraud throughout an organization through a code of conduct. According to M. Schwartz, Dunfee, and Kline (2005),

A code of ethics and ethics training specifically for board of directors, based on their unique role in setting the "tone at the top," is, however, one important component of a "portfolio" of initiatives in which companies should engage to help establish an ethical corporate culture. (p. 96)

Kapnick (1980) examined the role of professional associations, governmental agencies, and international accounting and auditing bodies in promulgating standards to deter and detect fraud domestically and abroad and several fraud cases and the impact of management and employee fraud on the various business sectors. Kapnick concluded that management fraud stems from improper actions of management normally accompanied by false documentation of transactions or withholding of relevant information, resulting in a material impact on the financial statements and in financial detriment to shareholders

or creditors. Johnson and Fludesill (2001) found that it is the responsibility of owners and managers to prevent fraud based on the Auditing Standards Board of the AICPA (2008b) SAS No. 1 that describes this responsibility of management as being responsible for adopting sound accounting policies and establishing and maintaining internal control that will, among other things, record, process, summarize, and report transactions consistent with management's assertions embodied in the financial statements.

Even though generally accepted auditing standards require auditors to obtain reasonable assurance that the statements are free of material misstatement, whether caused by error or fraud. Most audit tests are not designed to detect fraud, and auditors typically rely on management's assertions. AICPA (1996) SAS No. 82 acknowledged that a properly planned and performed audit may not detect a material misstatement. Based on that, Caplan (1999) believed that managers can commit fraud by overriding internal controls.

Based on SAS No. 53, Fanning, Cogger, and Srivastava (1995) prepared an assessment model. This model assesses that, for material management fraud to occur, the condition of the entity must be such that a person who commits a fraud has a reason or motivation for doing so and a person must be of a character who would commit such a dishonest criminal act.

Management fraud represents one instance of the agency problem where managers act self-interestedly in an attempt to expropriate stockholder wealth (Beasley, 1996). Agency problems can arise in a number of ways and lead to criminal conduct by the manager. According to Macey (1991), agency theory provides insights into when management fraud is likely to occur and suggests that managers may engage in fraud in

order to keep their company or division afloat. The risk-averse behavior of managers may change radically in the face of financial pressure. This may be motivated by the manager's investment in firm-specific skills that are difficult to transfer or a stigma in the job market associated with having been the manager of a failed entity. Managers may be motivated to take additional risks if there is inefficient monitoring of their actions.

Agency theory further suggests that self-interested behavior on the part of the agent may lead to fraudulent behavior. Although most managers may be risk averse, it is plausible that some faction of corporate managers prefers to engage in criminal conduct (Daboub, Rasheed, Priem, & Gray, 1995). Such criminal conduct may be influenced by the reality that stockholders cannot observe all the actions of managers, thus managers may consume large amount of perks or take opportunistic actions such that their wealth increases but the firm value is reduced (Fama, 1980).

Calderon and Green (1994) made an analysis of 114 actual cases of corporate fraud published in the *Internal Auditor* between 1986 and November 1990. They found limited separation of duties, false documentation, and inadequate or nonexistent control accounted for 60% of the cases. Moreover, the study found that professional and managerial employees were involved in 45% of the cases. According to Saksena (2001), management fraud has wide-ranging ramifications that affect the stakeholders of an organization. Shareholder wealth is not maximized if management fraud is present and goes undetected or is not reported (Davidson & Worrell, 1988). Audit firms are affected because such loss could result in a lawsuit against the firm (Palmrose, 1987) and a loss of reputation (Palmrose, 1991). Creditors and suppliers are affected if the firm defaults on

payments due to fraud. Employees are similarly affected if management fraud leads to job loss through bankruptcy or restructuring.

Regulatory organizations have commented on the responsibility of the auditor to detect management fraud. There is agreement among interested parties that audit firms need to play an active role in the detection and reporting of management fraud.

According to the AICPA (1988), the responsibility of the audit firm to detect and report management fraud has increased through the issuance of SAS No. 53.

According to the AICPA (1988) SAS No. 53, despite an increase in responsibility, access to inside information, and applying audit procedures, audit firms have not been successful in detecting and reporting management fraud. The reasons for this lack of success are several. First, the auditing standards, while increasing the role of the auditor in detecting management fraud, state that, if the audit has been performed according to generally accepted auditing standards, the auditor has done his job. Second, management fraud represents a situation where management intentionally misstates financial statements. Third, according to Cressey (1980), representatives of the auditing profession have pointed out that they are neither trained nor necessarily able to detect violations of the law that governs corporate conduct.

According to Thomas and Gibson (2003), the most important way for management to prevent fraud is to communicate effectively by both statement and deed that it will not tolerate it. This may seem self-evident, but by setting a clear tone, it will go a long way toward preventing fraud throughout an organization. Comptrollers, directors of business services, and individuals who perform the tasks of comptroller may communicate the consequences of committing fraud with the employees to make them

aware of the institutional policies and share actual fraud cases from the industry to educate employees. According to Thomas and Gibson,

Because most employees are not in a position to observe the actions of company leaders, management must make sure the value system is shared with all personnel. The best way to do this is through a code of conduct. Such a code typically discusses ethics, confidentiality, conflicts of interest, intellectual property, sexual harassment, and fraud. But management must back up this code by creating a work culture that rewards ethical actions and does not tolerate dishonest behavior even if it benefits the organization financially. Only then will employees know the code of conduct is more than just words on a piece of paper. (p. 54)

According to Singleton et al. (2003), organizations should have a code of ethics or formal ethics policy, which should be communicated and provide formal ethics training to employees. Thomas and Gibson (2003) identified the measures the organizations should take to detect and prevent fraud. It explains that organizations should establish policies of the culture of honesty and high ethics, antifraud process and controls, and appropriate oversight processes.

Organizations should implement a process for employees to report in confidence any actual or suspected violations. According to the ACFE (2008) report, among the 237 cases involving a loss of \$1 million or more, external audits were cited as the detection method 16% of the time as compared to 9% of all cases. Tips were the most common detection method for these cases with 42% of million-dollar frauds being uncovered through a tip or complaint.

Sen (2007) conducted a study that analyzed a model where a financial fraud was accompanied with a real fraud where a manager could consume an organization's assets without observation and detection. Sen believed that "a manager commits financial fraud by issuing a disclosure possibly through earnings management and associated balance

sheet bloating that hides the pecuniary consumption of the assets” (p. 1125). “Though the honest manager could never be labeled fraudulent, a fraudulent manager may escape detection” (p. 1126). Sen’s analysis is based on two key premises. The first one is that, unlike other crimes where an outside penalty acts as a sole incentive to deter crime, management fraud is also deterred by managers when their own wealth is often tied to the firm value due to incentive programs. Thus, a manager has two potential sources of gain, one from the legal compensation and the other from the fraudulent consumption. As a result, adverse consequences of fraud, such as financial distress, potentially affect the manager’s consumption in two ways; it may invite legal sanction and some of the “ill-gotten” wealth may be confiscated, and it may put some of his or her own wealth that is tied to the firm’s value at some risk. Based on the Sarbanes Oxley Act of 2002, Sen believed that the role of an outside penalty must be viewed in conjunction with the manager’s ownership of the firm. In such an environment, if the extent of ownership is beyond a threshold level, the manager’s self-interest may be sufficient to deter any fraud, and an outside penalty may not be necessary. On the other hand, if the ownership is below another threshold level, even a “reasonable” court system and significantly more than full recovery of fraudulent gains may not be sufficient to deter fraud completely.

Based on an empirical study conducted by Barnes and Webb (2007), management controls that are primarily concerned with the prevention and detection of theft and fraud are likely to change across organizational size. This creates the possibility of economies of scale, making them relatively cheap for large organizations. As a result, larger organizations are likely to have and will require a higher level of control than their smaller counterparts. Barnes and Webb found that, in larger organizations, there will be

and there is a scope for the separation of duties. This may be much more difficult or even impossible for smaller organizations without the employment of additional staff.

Based on Sarbanes Oxley Act of 2002 compliance strategies, Cozad (2005) found that, in situations where duties are not segregated properly, management should cross-train employees to segregate incompatible duties and provide the opportunity for employees to assume more challenging roles and responsibilities to avoid this common pitfall. The basic idea underlying segregation of duties is that no employee or group should be in a position both to perpetrate and conceal errors or fraud in the normal course of their duties.

Organizational Structure, Culture, Policies, and Procedures

Organizational Structure

According to Peterson, Dill, Mets, and Associates (1997), organizations, including colleges and universities, must ask tough questions about their traditional structures like

which administrative offices add value to the organization? Does the dean level of administration add value if the strategic business unit is really the discipline complimented by interdisciplinary programs such as general education? Will the forces of change in the future, reflected primarily through constituents and economic markets, be met by our traditional organizational structure? (p. 304)

According to Rost (1993), the structure of most colleges and universities reflects an industrial paradigm that emphasizes productivity whether measured by faculty publications or student and credit-hour loads. As hierarchical bureaucracies, colleges and universities often operate by top-down planning with personnel designated to

departments and offices. Rost said, “Governing boards make policies, presidents propose policy, provost and deans administer policy and manage annual operations through their staff, and faculty provide the primary services” (p. 490).

Organizational Culture

According to Schein (1992), culture is

A pattern of shared basic assumptions that a group learned as it solved its problems of external adaptation and integration that has worked well enough to be considered valid and therefore to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (p. 12)

Organizational culture is widely considered to be one of the most significant factors in reforming and modernizing public administration and service delivery. Organizational cultures are complex combinations of formal and informal systems, processes, and interactions (Cohen, 1993). According to Scott and Davis (2007), organizations codify how they do their work and how their parts relate to each other. Scott and Davis included human resource practices, the design of the jobs, and the overall organization structure as a formal system and said, “the informal organization refers to the emergent characteristics of the organization that affect how the organization operates, which includes the organization’s culture, norms, and values” (p. 23). The informal elements of a cultural system are less tangible aspects of organizational behavior. Such aspects include norms for behavior that are consistent with the ethical standards or code of conduct, mission, and decision-making processes (Trevino & Brown, 2004).

According to Trevino (1990),

Consistent role modeling of such behavior forms the basis for a strong culture where everyone understands what is appropriate for the company. Other elements

of the informal culture include the communication and belief in heroes and role models, along with myths and stories about how ethical standards of the organization have been upheld and revered by members. (p. 446)

Trevino and Weaver (2003) defined ethical culture as those aspects of the organizational context that impede unethical conduct and promote ethical conduct. According to Kaptein (2009), “ethical culture encompasses the experiences, assumptions, and expectations of managers and employees about how the organization prevents them from behaving unethically and encourages them to behave ethically” (p. 262).

Organization’s Policies and Procedures

According to Cozad (2005), for organizations to operate more efficiently and effectively, they need to update their existing policies and procedures at the organizations that serve as building blocks for the Sarbanes Oxley Act of 2002 process documentation and define employees' roles and responsibilities. They need to update any of the outdated or inadequate policies and procedures to avoid future pitfalls or control deficiencies. Current policies and procedures will also add value to the organization's operations as well as abide by the rules.

According to Rexroad, Bishop, Ostrosky, and Leinicke (1999), the Federal Sentencing Guidelines for Organizations were established to motivate organizations to police themselves to ensure compliance with federal laws. The Federal Sentencing Guidelines for Organizations have the implication that organizations have a responsibility to implement programs to prevent and detect, and if they fail to police themselves, they can be prosecuted and held liable for the criminal acts of their employees. Organizations can minimize any negative impact by implementing a compliance program that can help

organizations manage their business, legal, and regulatory risks; help protect their reputation; and protect organizations from fraud and other illegal acts.

An employee background check before new hire is very important. According to Pacini and Brody (2005), one of the keys to mitigating fraudulent activity is to ensure that the organization is composed of ethical trustworthy employees. By performing employee reference checks, organizations can help minimize the threat of theft and other employee wrongdoing. According to Hughes and White (2006), at higher educational institutions, when hiring faculty, the risk-mitigation efforts seem to be reduced significantly. Reasons cited for this include objections by faculty unions, general faculty resistance, and a decentralized hiring process. Faculty members are typically hired on a departmental basis, and university policies often are not thoroughly followed. The educational institutions need to follow their policies to prevent fraud.

Actual Cases of Fraud in Higher Education Institutions

According to Kranacher (2005), some of the recent fraudulent schemes in academe include the following:

1. A case of asset misappropriation took place at the University of Tennessee, where the former president, John W. Shumaker, resigned from the job after being caught. The state comptroller's office released a report stating that poor internal control over the organization's assets led a university employee to commit fraud using the organization's assets for personal use and committed related-party transactions.
2. A case of corruption and asset misappropriation took place at the University of North Carolina School of the Arts where nearly \$1 million had been diverted for

nonacademic purposes. This case involved a corruption scheme in which a vice chancellor of finance and administration used his influence in the business transactions to obtain an unauthorized benefit contrary to his duty.

3. A case of financial statement fraud took place at Morris Brown College in Atlanta, Georgia, by the student-aid director, who allegedly obtained \$5 million in federal funds through fraudulent activity.

Findings of Occupational Fraud Surveys

The following information pertains to all business categories. Carpenter and Mahoney (2001) explained the following fraud survey findings. According to Carpenter and Mahoney, the COSO released its report in 1999 entitled *Fraudulent Financial Reporting: 1987-1997, An Analysis of U.S. Companies*. The study examined approximately 200 companies that were alleged to have been involved in fraudulent financial reporting and were investigated by the U.S. Securities and Exchange Commission from 1987 through 1997. Among its findings, the COSO (1999) study revealed the typical involvement of senior executives in fraudulent financial reporting. According to the report, the chief executive officer was involved in 72% of fraudulent financial reporting cases; the chief financial officer was involved in 43% of these cases. The frequent involvement of top executives suggests an ability of management to override controls that might otherwise preclude fraudulent misrepresentation within financial statements. This information provided by the COSO study helped this researcher prepare a question in the survey instrument for the comptroller, director of business services, and individuals who performed those tasks regarding what controls if

any were placed at their institution that would reduce involvement of top executives and management in overriding controls that might preclude misrepresentation within their financial statements.

One of the most common methods of perpetrating financial reporting fraud, as noted by the COSO (1999) study, is improper revenue and expense recognition. Given the ability of some top managers to circumvent internal controls, those controls pertaining to transaction recording and reporting should be viewed as a necessary but insufficient component of a fraud-prevention program. The COSO study found that the program should also include, for example, the requirement that multiple levels of management approve the recognition of revenues and expenses during the final and first months of a reporting period.

The COSO (1999) study also found that fraud companies were frequently dominated by insiders and others having close ties to the company. Beasley (1996) revealed a direct association between the number of internal directors and occurrence of fraudulent financial reporting. The definition of *internal directors* was broad in these studies, encompassing so-called gray directors who were indirectly involved in the company. Examples include relatives of management, consultants, and suppliers; outside attorneys; and retired executives. This information helped this researcher include a question in the survey involving related-party transactions by management that can lead to a fraudulent activity.

KPMG (2003) released the findings of its Fraud Survey, which assessed the number and magnitude of organizational fraud, such as financial statement fraud, check fraud, inventory theft, false invoicing, expense-account abuse, payroll fraud, and various

others. According to the KPMG study, personal financial pressure, followed by vices such as substance abuse and gambling, were the most common warning signs displayed by employees before discovery of an internal fraud. Other risk factors included real or imagined grievances against the organization; ongoing transactions with related parties; increased stress; internal pressure, such as the need to meet deadlines or budgets; and short vacations and unusual hours. Based on this information, this researcher asked the comptrollers, directors of business services, and individuals who perform the tasks of comptroller to list the common signs of personal financial pressure that they have found that had led to committing fraud by employees.

The fraud findings from the surveys from the COSO (1999) and KPMG (2003) studies listed the controls at various organizations that include poor safeguarding of assets, lack of segregation of duties, the frequent involvement of top executives, poor internal control, meager communication of ethics and fraud programs, and related-party transactions. Although none of these occupational fraud findings are directly related to higher educational institutions, they do provide insights on poor controls that can be used in preparing questions for testing controls at the higher educational institutions. Various ACFE (1996, 2002, 2004, 2006, 2008) reports have included educational institutions in their surveys, representing a small sector of the entire survey population, but there was no breakdown available on the levels of educational institutions. This researcher used the findings of these cases and information provided by ACFE survey results in preparing the research statements to test the controls at accredited higher educational institutions of the North Central Association of Colleges and Schools. The survey statements are discussed in detail in chapter 3.

Chapter Summary

This chapter explained four major categories of fraud with their description and examples discussed in various ACFE (1996, 2002, 2004, 2006, 2008) survey results. The characteristics of occupational fraud were also discussed along with elements of the fraud triangle. Occupational fraud risk factors were discussed in depth based on AICPA (1988, 1996, 2005, 2008a, 2008b) SAS, which were used in preparing the survey instrument. What motivates employees and management to commit fraud and the role the organizational structure, organizational culture, policies, and procedures plays in preventing the fraud were discussed. Actual fraud cases were also discussed along with the findings of fraud surveys.

CHAPTER 3. METHODOLOGY

Introduction

The purpose of this study was to explore the prevalence of various occupational risk factors present at surveyed accredited institutions of the North Central Association of Colleges and Schools. This researcher used an exploratory study consisting of survey research design to find the most common risk factors and descriptive study to find how the organization's culture, structure, policies, and procedures affected the control measures implemented by the organization's management to detect and prevent occupational fraud.

This researcher used an exploratory research method where the data were collected at one point in time. The Web-based survey was administered online using a list of statements and open-ended questions in the survey instrument. The randomly selected participants from the population of all the accredited higher educational institutions of the North Central Association of Colleges and Schools responded to the survey.

Based on the risk factors and various reports, the statements in the second section of the survey instrument were prepared. The five open-ended questions in section 3 of the survey instrument were prepared based on management dilemmas that individuals serving in the role of comptroller may experience in terms of policies, procedures, education, and cultural practices. Because this was a new survey instrument, the

researcher performed a field test and pilot study after the Capella University Institutional Review Board approval.

According to the ACFE (2008) report, occupational fraud schemes tend to be extremely costly. The median loss caused by occupational fraud found in the report was \$175,000 per business. More than one quarter of the fraud involved losses of at least \$1 million. Median loss caused by occupational fraud at educational institutions was \$58,000, which represented 6.5% of 959 total usable cases surveyed. Fraud, by its very nature, does not lend itself to being scientifically observed or measured in an accurate manner. One of the primary characteristics of fraud is that it is clandestine or hidden; almost all fraud involves the attempted concealment of the crime. Consequently, many instances of occupational fraud may go completely undetected. Further, even for those cases that do come to light, the full amount stolen may not be ascertainable or the victim organization may decide not to report the theft to the authorities or general public.

The present study was guided by the following research questions:

1. What are the most common occupational risk factors present at the accredited higher educational institutions of the North Central Association of Colleges and Schools?
2. How do the organization's policies and procedures affect the control measures implemented by the organization's management to detect and prevent occupational fraud?
3. How effective do the comptrollers, directors of business services, and individuals who perform the tasks of comptroller perceive these control measures to be at detecting and preventing occupational fraud?
4. How does the institution promote ethical training?

5. How does the institution promote continued professional development?
6. What incentives do the institutions offer to the key employees to retain them?

Research Design

Philosophical assumptions play a great role in conducting research. This research was based on the positivistic research paradigm. According to Swanson and Holton (2005), “positivism assumes that the world is objective. Therefore, the positivist researcher seeks out facts in terms of the relationship among variables using the quantitative method” (p. 19). This researcher used 24 variables to find their relationship with the dependent variable using statements that were answered by the participants using a Likert scale. Research can be guided by theories. According to Torraco (2005),

Researchers tend to pursue their work in ways that reflect their deep-seated values and assumptions about what constitutes knowledge (epistemology), the essence of being or existence (ontology), what constitutes value (axiology) and other basic philosophical beliefs. The researcher’s personal intention and choice in these matters notwithstanding, some theory research methods are better suited for the particular purposes of theorizing than others. (p. 352)

This researcher found which risk factors existed at accredited higher educational institutions. Once the list of common risk factors present was collected, the factors were grouped by states and then subdivided according to the size of the institution based on the student population and yearly revenue (see Appendix B, section 1, for demographic information).

The underlying assumption was that frequency of the existence of the risk factor would lead to the conclusion of strong or poor controls that could be the causes of occupational fraud at accredited higher educational institutions. By using an 8-point

Likert scale, the participants provided the frequency of controls that constituted the value (axiology). By grouping and then subdividing the responses based on such values at different institutions, this researcher concluded how the risk factors differed at different sizes of institutions based on the geographic locations, student enrollment, and education levels offered. The assumption was also that the larger institutions based on the student population may have had different risk factors present than smaller institutions. This researcher used an exploratory and descriptive research method to reflect the researcher's deep-seated assumptions of factors affecting management dilemmas related to occupational fraud at various accredited higher educational institutions.

According to Cooper and Schindler (2001), "the research design is the blueprint for fulfilling objectives and answering questions. Selecting a design may be complicated by the availability of a large variety of methods, techniques, procedures, protocols, and sampling plans" (p. 75). According to Dzurec and Abraham (1993), there are two types of researchers. Both sets of researchers select and use analytical techniques that are designed to obtain the maximal meaning from their data and manipulate their data so that findings have utility with respect to their respective views of reality. Moreover, both types of inquirers attempt to explain complex relationships that exist in the social science field.

Nau (1995) found that, in general, the quantitative philosophy could be defined as an extreme of empiricism according to which theories are not only to be justified by the extent to which they can be verified but also by an application to facts acquired.

Quantitative investigations look for distinguishing characteristics, elemental properties,

and empirical boundaries and tend to measure "how much" or "how often" (The Tripp-Reimer Study section, para. 4).

Quantitative research uses the survey method to test the hypothesis. According to Roberts (1999), the survey method is one of the most common approaches used in the social sciences to study the characteristics and interrelations of sociological and psychological variables empirically. According to Marsh (1982), "The survey method refers to an investigation where systematic measurements are made over a series of cases yielding a rectangle of data, the variables in the matrix are analyzed to see if they show any patterns, and the subject matter is social" (p. 6). Roberts claimed that the systematic measurements of the variables involve considerations of how the measurements are to be made and what will be measured. After data collection is complete, the analysis of the variables includes not only the testing of the hypotheses but also the development and psychometric assessment of the variables (Roberts, 1999).

The purpose of this study was to find the most common risk factors present at the accredited higher educational institutions of the North Central Association of Colleges and Schools and the perception of the controls in place based on the policies and procedures. For this research, all the accredited higher educational institutions from North Central Association of Colleges and Schools were included in the population. A random-sampling table was used to select the sampling frame of 500 accredited colleges from the target population. The survey instrument was answered by the participants who had skills, knowledge, and expertise in the area of occupational fraud.

The education sector ranked sixth in fraud indicators in the national survey of all sectors, according to the ACFE's most recent research reports in 2008. The ranking was

based on less than 6% of responses on surveys sent by ACFE researchers. ACFE is not able to provide any breakout by level and region of accreditation. The limited data available on occupational fraud in educational institution led this researcher to use exploratory research to gather data for the future researcher to develop hypotheses.

According to Cooper and Schindler (2006),

Exploration is useful when researchers lack a clear idea of the problems they will meet during the study. In this method, the area of investigation may be so new or so vague that a researcher needs to do an exploration just to learn something about the dilemma facing the manager. Researchers may explore to be sure it is practical to do a study in the area. (p. 139)

Additionally, Cooper and Schindler (2001) said, “the exploratory phase of the research process uses secondary data to expand understanding of the management dilemma and gather background information on the topic to refine the research question” (p. 287). This researcher used the 42 risk factors of the AICPA (2008a) SAS No. 99, various ACFE reports (1996, 2002, 2004, 2006, 2008), COSO (1999) study, and KPMG (2003) reports to understand the common risk factors and management dilemma to refine the research statements and open-ended questions in the survey instrument.

To find the most common occupational risk factors present at accredited higher educational institutions of the North Central Association of Colleges and Schools, this researcher used an exploratory quantitative survey research design to test 24 independent variables. Based on the independent variables, 24 survey statements were prepared for the comptrollers, directors of business services, and individuals who perform the tasks of comptroller to answer using an 8-point Likert scale. This suggested that each variable was a clear-cut construct what was one dimensional that could be measured by a single

survey item. In regard to the use of the Likert scale, Cooper and Schindler (2001) offered the following guidance:

The Likert scale is the most frequently used variation of the summated rating scale. Summated scales consist of statements that express either a favorable or unfavorable attitude toward the object of interest. The respondent is asked to agree or disagree with each statement. Each response is given a numerical score to reflect its degree of attitudinal favorableness, and the scores may be totaled to measure the respondent's attitude. (p. 234)

Because the purpose of this research was to find the most common risk factors present and not the degree of controls placed at these institutions, each risk factor was measured using a single survey item. An 8-point Likert scale encouraged the participants to answer the statements honestly because the answer did not have to be a definite yes, which meant agreeing to poor control, or answering no, which meant agreeing to strong control. The participants had an additional option--"I am not comfortable answering this question"--if they did not want to respond to the question or they did not understand the question.

Sample

Bartlett (2005) stated, "A sample is a small subset of a population selected to be representative of the whole population chosen" (p. 101). There are various reasons for sampling. Cooper and Schindler (2001) found lower cost, greater accuracy of results, greater need of data collection, and availability of population elements are the compelling reasons for sampling. This section includes information on the target population, sampling frame, sample design, and sample-size calculations. To collect the sample for analysis, the survey instrument was sent to the presidents of the 500 out of 1,000

randomly selected accredited higher educational institutions of the North Central Association of Colleges and Schools where permission was granted by forwarding the informed consent letter to the comptrollers, directors of business services, and individuals who performed the tasks of comptroller to respond to the survey by the presidents of the institutions.

Target Population

The target population for this research was approximately 1,000 accredited higher education institutions of the North Central Association of Colleges and Schools. The contact information for these accredited higher educational institutions of the North Central Association of Colleges and Schools was obtained using the *Higher Education Directory* (Higher Education Publications, 2009), which is publicly available.

Sampling Frame

According to Cooper and Schindler (2001), “The sampling frame is closely related to the population. It is the list of elements from which the sample is actually drawn. It is a complete and correct list of population members only” (p. 170).

According to Kalleberg, Marsden, Aldrich, and Cassell (1990), a sampling frame is a researcher's operational definition of a population, and the validity of generalizations from a sample is conditional on the adequacy of the frame. A useful sampling frame should allow an unbiased sample to be drawn or, failing that, should have known biases.

Hitzig (2004) advised that, when planning a sampling procedure, it is important to establish that every item in the population is included in the frame. If a frame is not

complete, then some members of the population of interest to the researcher would have no chance of being included in the sample. An incomplete frame can lead to biased estimates of the population value that is under examination if the researcher is not careful to distinguish between the size of the population and size of the frame on which the selection of the sample was performed. The sampling frame for this study was 500 accredited higher educational institutions of the North Central Association of Colleges and Schools, which was obtained using a random-sampling table.

Sample Design

According to Cooper and Schindler (2001), planning a sample design is to identify the target population and select a sample. To determine who and how many responses to collect, a sample is collected very carefully that represents that population. By having an appropriate sampling plan, one would be able to obtain a more representative sample from the target population. Cooper and Schindler (2001) found that a random sample can be selected using computer software, a table of random numbers, or a calculator with a random-number generator. According to Fowler (2002),

Simple random sampling approximates drawing a sample out of a hat: Members of a population are selected one at a time, independent of one another and without replacement; once a unit is selected, it has no further chance to be selected. (p. 339)

In order to obtain a more representative sample from the target population, a probabilistic sampling method was employed by this researcher. For this study, the random-sampling table was used where 500 institutions from the total population of approximately 1,000 accredited higher educational institutions of North Central

Association of Colleges and Schools were selected. Therefore, each of the qualifying accredited higher educational institutions of the North Central Association of Colleges and Schools had an equal probability of being selected for this study.

Sample Size

One of the most important things in any analysis is the determination of the sample size required to test for the analysis. The reason why the sample size is important is because the sample size allows one to determine whether the results of the analyses can be extended to the general public or target population. If the sample size is too small, then one may not be able to generalize the results to the general public because the sample may not be representative of the target population. Inversely speaking, by taking a very large sample size, one may end up wasting time, money, and effort in an attempt to gather too much information that could have been obtained from a smaller sample. There are many different ways to calculate the sample size. According to Fowler (2002),

The sample size decision is like most other design decisions, it must be made on a case-by-case basis, with the researchers considering the variety of goals to be achieved by a particular study and taking into account numerous other aspects of the research design. (p. 339)

This researcher used the sample-size determination formula for collected data.

The sample selected using the formula was large enough for the analysis and conclusions.

According to Bartlett, Kotrlik, and Higgins (2001), the following formula requires the returned sample size of 116 for this study.

$$n_0 = (t)^2 * (s)^2 / (d)^2$$

$$t = 1.96$$

$$s = 1.333$$

$$d = .24$$

Where t is equal to value for selected alpha level of .025 in each tail = 1.96

Where s = estimate of standard deviation in the population = 1.333 (estimate of variance deviation for the 8-point scale calculated by using 8/6).

Where d is equal to acceptable margin of error for mean being estimated = .24 (number of points on primary scale * acceptable margin of error; points on primary scale = 8; acceptable margin of error = .03 [error researcher is willing to except]).

118 is the required sample size for an 8-point Likert scale with a 95% confidence level and 3% acceptable error, alpha level of .05.

Therefore, for a population of 1,000, the required sample size was 118. However, because this sample size exceeds 5% of the population ($1000 * .05 = 50$), Cochran's correction formula was used to calculate the final sample size. These calculations are as follows:

$$n = n_0 / (1 + n_0 / \text{Population}) = (118) / (1 + 118 / 1000) = 105.55$$

Where population size = 1,000.

Where n_0 = required return sample size according to Cochran's formula = 106.

Where n = required return sample size because sample > 5% of population.

Based on the above calculation, the final required returned sample size was 106 although this researcher anticipated a response rate of 3% based on ACFE survey response rate being 5% to 7% for surveys conducted by them in the past 10 years. This researcher was warned by the research director at ACFE not to expect more than 3% of usable responses because of being an individual researcher and the sensitive nature of the

subject matter. This researcher made all the efforts possible to collect the required sample. This researcher collected 41 completed survey responses, which was a better response rate than expected but was lower than the needed response rate based on the sample calculations. Since this is an exploratory research, this researcher used the collected responses for analysis. It is important to this researcher and future researchers to use whatever amount of data that they collect for an exploratory research purpose.

Instrumentation and Measures

According to Straub, Boudreau, and Gefen (2004), the major components of validity are content validity and construct validity. According to Straub et al., content validity is established through literature reviews and expert judges or panels. Several rounds of pretesting the instrument with different groups of experts are highly advisable. Having valid content is desirable in instruments for assuring that constructs are drawn from the theoretical essence of what they propose to measure. For this study, the researcher performed an expert panel review as a part of the field study where seven experts with the skill, knowledge, and expertise in the content area expressed their opinion, and based on their opinion, the researcher modified the survey instrument.

According to Peter (1981), construct validation is the vertical correspondence between a construct that is at an unobservable conceptual level and a purported measure of it that is at the operational level. According to Cooper and Schindler (2001), attitude scales and aptitude and personality tests generally concern concepts that fall under construct validity. This researcher included five open-ended questions in the survey instrument to validate the construct of the survey instrument.

The survey instrument included 24 quantitative statements requiring the participants to respond using an 8-point Likert scale or an option to decline to answer by selecting “I am not comfortable answering this question” from the list if they did not understand the question or did not want to respond to the question. The Likert scale had scores of 1 to 7, where the values were as follows: 1 (*always*), 2 (*almost always*), 3 (*generally*), 4 (*often*), 5 (*sometimes*), 6 (*almost never*), 7 (*never*), and 8 (“*I am not comfortable answering this question*”). Controls placed sometimes, almost never, and never can make the fraudster commit fraud without getting caught. The response score of 5 and below represented a poor control placed at the institutions and could be a risk factor for occupational fraud.

Field Test

Prior to the research, to validate the contents of the instrument and obtain feedback on the entire survey, an expert panel review of the survey instrument was performed. The researcher contacted seven professionals (who did not take part in the actual survey) who had knowledge, skills, and expertise and were familiar with occupational fraud to examine the survey instrument to express their opinions on its content to make sure that the statements were appropriate. The panel of experts suggested this researcher modify the survey instrument by reducing the size of the survey instrument from the original 48 statements to 24 statements, change the language used to more simple words so that the nonaccounting professional could also understand the statements, made the open-ended questions in section 3 optional, and used a Likert scale

instead of just yes and no answers for responses. The researcher made those adjustments in the current survey instrument.

Pilot Study

According to Cooper and Schindler (2001), a pilot study is conducted to detect weaknesses in design and instrumentation and provide proxy data for the selection of a probability sample. Because this researcher developed a new survey instrument, a pilot study was required to determine the inherent reliability. Additionally, Cooper and Schindler (2001) stated that a “Pretest is one form of a pilot test, which will rely on colleagues, respondent surrogates, or actual respondents to refine a measuring instrument” (p. 81). According to Cooper and Schindler (2001),

The size of the pilot group may range from 25-100 subjects, depending on the method to be tested, but the respondents do not have to be statistically selected. In very small populations or special applications, pilot testing runs the risk of exhausting the supply of respondents and sensitizing them to the purpose of the study. (p. 81)

This researcher feared the risk of exhausting the supply of respondents so conducted a pilot study where the colleagues, accountants, deans, and other administrators of various accredited educational institutions participated in the pilot study. These respondents were knowledgeable about fraud at higher educational institutions but were not members of the proposed sampling frame.

Hunt, Sparkman, and Wilcox (1982) found that there are grounds for believing that the size of the pilot study sample is not fixed but should be a function of the instrument and target population. According to Hunt et al. (1982), long complex instruments would seem to require larger pretest samples than short simple instruments.

Likewise, if the ultimate questionnaire was to be used with unsophisticated target populations, it would require a larger pretest sample than would one intended for sophisticated audiences. Because the target population for this research was highly sophisticated, the sample size for the pilot study was 13 participants. After Capella University Institutional Review Board approval, this researcher performed a pilot study. For the examination of exploratory data analysis, frequency tables, bar charts, Kaiser-Meyer-Olkin (KMO) test, and Bartlett test were essential. This researcher analyzed responses from sections 1 and 2 of the survey using these techniques with the help of Statistical Package for Social Sciences (SPSS, Version 15.0) software. The open-ended questions from the third section were analyzed using Atlas.ti software (Version 6.0), where the responses from the participants were summarized without duplicating the responses. The analysis included the number of respondents who responded similarly. To determine the reliability of the pilot study, this researcher used Cronbach's alpha with the minimum that is required, which is .70.

Data Collection

Questionnaires are the most widely used data-collection technique in surveys and provide a very efficient way of creating the matrix of data required for analysis (Roberts, 1999). According to de Vaus (1992), questionnaires can be administered in three ways: face-to-face, by telephone, or by mail. Each of the methods has advantages and disadvantages, and these can be compared using five dimensions: response rates, ability to produce representative samples, limitations on questionnaire design, quality of responses, and implementation problems. According to Kerlinger (1986), mailed

questionnaires are criticized on poor response rates and the poor quality of responses. These limitations can be mitigated by good techniques in questionnaire design. By posting the survey online, it is possible to obtain a large enough sample to reduce sampling error to acceptable levels. According to Fowler (2002), “making the task easy, repeating contacts, using more than one mode to contact respondents, and offering alternative modes of responding for those who do not respond initially seem likely to be the keys to maximizing response rates” (p. 340). This researcher used the Internet to collect data. This researcher collected the e-mail addresses of the presidents of the surveyed institutions using the *Higher Education Directory* (Higher Education Publications, 2009) that is publicly available.

This researcher used Plan A, which included two requests using e-mails, and Plan B to contact the president using a telephone request to respond to the e-mail. In Plan A, an initial e-mail with a letter requesting the president of the institution to respond to the e-mail was sent (see Appendix D). An informed consent letter was attached to this initial e-mail. An informed consent letter (see Appendix E) included a description of the study, purpose of the study, a Web link to the survey instrument, and the researcher’s contact information in case they had any questions. The benefits of this study that are explained in this research could make higher educational institutions aware of the most common risk factors from the 24 risk factors tested, which could help the institutions instill stronger controls to prevent and detect fraud at their institutions. The analysis of the five open-ended questions could help institutions understand how the organization’s culture impacted the control measures implemented by the organization’s management to detect and prevent occupational fraud at their institutions and the perception of the effectiveness

of the control measures at various institutions. It also explained what actions the comptrollers, directors of business services, and individuals who perform the tasks of comptroller from the institutions would like the board of directors, president, vice presidents, and deans to take as they establish policies in future to predict and prevent fraud.

The initial e-mail with an attached permission request letter and an informed consent letter was e-mailed to the presidents of the accredited higher educational institutions. The president was asked to respond to the researcher that he or she had received the e-mail with the attachments. If the president wanted the institution to participate in the survey, he or she forwarded the attached informed consent letter to the participant with his or her permission. The participant had 7 days to take the survey. The president did not have to tell this researcher if the institution would or would not participate in the survey, he or she had forwarded the survey to the participant, or whom from the institution would be responding to the survey instrument. If the institution agreed to participate, the name of the participant or the institution was not mentioned, instead, the computer identity was used for analysis. By doing so, the participating institution's and participant's identity were kept anonymous. Once the president granted his or her permission to the participant to take the survey by forwarding the informed consent letter, he or she had no way of knowing whether or not the participant participated to the survey and what his or her responses were.

If the president did not respond to this e-mail in 7 days informing the researcher that he or she had received the e-mail with the attachments from the researcher, the researcher sent the first reminder e-mail (see Appendix F) and waited for another 7-day

period. If no response was received by the end of 7 days after the first reminder, this researcher used Plan B where the researcher made a telephone contact using a telephone script (see Appendix G) to the president requesting a response to the e-mail that he or she had received it.

If the president did not respond to the e-mail after the telephone call request, this researcher sent an e-mail thanking the president for his or her consideration in taking part in the study and sent the permission request letters to remaining institutions from the population. If the institution agreed to participate in the survey and participant responded to the survey instrument, the Web access to the survey instrument was removed. No one at the participating institution knew if the survey had been completed or what the responses were on the survey instrument.

Data Analysis

According to Cooper and Schindler (2001), “the objective of exploratory data analysis (EDA) is to learn as much as possible about the data. EDA simplifies this goal by providing a perspective and set of tools to search for clues and patterns” (p. 475).

According to Cooper and Schindler (2001),

In exploratory data analysis, the data guide the choice of analysis or a revision of the planned analysis, rather than analysis presuming to overlay its structure on the data without the benefit of the analyst’s scrutiny. This is comparable to our position that research should be problem oriented rather than tool driven. The flexibility to respond to the patterns revealed by successive iterations in the discovery process is an important attribute of this approach. (p. 453)

The exploratory approach emphasizes visual representation and graphical techniques over summary statistics. For an examination of exploratory data analysis,

frequency tables, bar charts, KMO, and Bartlett tests are essential. This researcher analyzed responses from sections 1 and 2 using these techniques with the help of SPSS (Versions 15.0) software. The open-ended questions from the third section were analyzed using Atlas.ti (Version 6.0) software where the responses from the participants were analyzed in major themes without duplicating the responses. The analysis included the number of respondents that responded similarly to each question.

Validity and Reliability

Roberts (1999) suggested that survey research just collects masses of data and provides nothing of theoretical value. Roberts advised that the development of a sound theoretically based research model is fundamental to the empirical study to the collection of meaningful data and their analysis. Survey researchers must be clear about the data being collected and why it is of value to the study before the data-collection commences. Roberts also found that survey research is too restrictive because of the limitations of highly structured questionnaires.

According to Andrews (1984), three kinds of measurement error are possible in the answers given by the respondents in the survey: bias, random-measurement error, and correlated-measurement error. Bias is a consistent tendency for a measure to be higher or lower than it should be. Random-measurement errors are deviations from the true scores on one measure that are statistically unrelated to deviations in any other measure in the same analysis. On the other hand, correlated measurement errors are deviations from true scores that do relate to deviations in other measures being analyzed. In survey data, the

major source of correlated error is methods effect. This effect arises because the same method is used to derive the measures.

Andrews (1984) suggested that data quality may be conceptualized with three components: the valid part of the measure or validity, the method effect, and residual error. Construct validity may be increased by decreasing measurement error through its two problem components: the method effect and residual error.

Guba and Lincoln (1989) stated that, although all research must have truth value, applicability, consistency, and neutrality in order to be considered worthwhile, the nature of knowledge within the rationalistic or quantitative paradigm is different from the knowledge in the naturalistic or qualitative paradigm. Guba and Lincoln also noted that, within the rationalistic paradigm, the criteria to reach the goal of rigor are internal validity, external validity, reliability, and objectivity.

According to Straub et al. (2004), reliability is a statement about measurement accuracy, that is, the extent to which the respondent can answer the same questions or close approximations the same way each time. Coombs (1976) suggested that the reliability suggests that the researcher is attempting to find proximal measures of the true scores that perfectly describe the phenomenon. The mechanism for representing the underlying reality is integral to all data and data gathering. According to Straub et al. (2004), the six generally recognized techniques used to assess reliability are internal consistency, split halves, test-retest, alternative or equivalent forms, interrater reliability, and reliability.

This research tested variables that were relevant to the research topic. The participants were the comptrollers, directors of business services, and individuals who

performed the tasks of comptroller from the accredited higher educational institutions of the North Central Association of Colleges and Schools who had the knowledge of the area in question, which made the responses more reliable. The 8-point Likert scale and an additional option, “I am not comfortable answering this question,” if they did not understand the question or did not want to respond to the question, was used by the participants to show if and how often the controls were implemented at the accredited higher educational institutions of the North Central Association of Colleges and Schools. The 8-point Likert scale made the participants feel comfortable in answering the statements about if and how often the controls were placed and not asking how much control they had in place. This larger Likert scale with an additional option to allow them to not respond without any explanation or consequences encouraged them to answer honestly, which provided a greater response rate than ACFE researchers had gotten. For the analysis of the responses to be reliable, this researcher made sure that the instructions on the Likert scale were well explained to the participants. This researcher used SPSS (Version 15.0) software to determine the following tests: Cronbach's alpha, means, standard deviations, bar charts, factor analysis, KMO, and Bartlett test for the analysis of the collected data. The confidentiality statement provided by this researcher made the participants feel at ease in responding fully and honestly, which made the results of this research more reliable.

Russ and Hoover (2005) stated, “the internal validity of an information-gathering effort is the extent to which it actually (correctly) answers the questions it claims to answer using the data that were gathered” (p. 76). According to Russ and Hoover (2005),

The internal validity need not be as great for exploratory investigations. This is because the study can be replicated and extended more carefully in order to produce an internally valid test of conclusions that were tentatively reached from an exploratory study. (p. 77)

Cooper and Schindler (2001) stated that “external validity is concerned with the interaction of the experimental treatment with other factors and the resulting impact on the ability to generalize to (and across) times, settings, or persons” (p. 403). This study was conducted using a random sample from all the accredited higher educational institutions of the North Central Association of Colleges and Schools. Based on the sample calculations, this researcher made multiple efforts to collect the required 106 responses from the population of almost 1,000 accredited institutions. Because the ACFE’s response rate for such research is lower than 6%, this researcher as an individual researcher and not conducting this research as a part of any fraud examination organization was expecting only a 3% to 4% response rate, which was much lower than expected. Due to the exploratory nature of the research method, this researcher used the collected data for analysis which was much lower than preferred. The results of this study may then be replicated by other similar associations of the accredited higher educational institutions in the United States for exploratory study.

Ethical Considerations

Occupational fraud is a very sensitive topic for many comptrollers, directors of business services, and individuals who perform the tasks of comptroller to discuss. For this research, the sample of institutions for the survey was selected using a random-sampling table where each institution from the population had an equal chance of being selected. All the participants were required to use the Web link included in the informed

consent letter to respond to the survey instrument so that the responses were accessed only by the researcher. By taking the actual survey, the participants were giving an implied consent to this researcher. Once the participant responded to the survey instrument and submitted the survey, the Web link was removed and no further access was given to that participant or the participating institution to go back to the survey document.

To make this research effective, it should meet the requirements of the National Research Act of 1974. According to Bryant (2005), the National Research Act was signed into a law in 1974, which created a commission charged with protecting the well-being of human and subjects. This commission produced the Belmont Report, which articulated a set of principles for the respect of persons, beneficence, and justice to guide researchers. Respect for person's principles allows the participants to enter into research voluntarily. The principle of beneficence deals with the researcher's obligation to protect the participants by identifying the risks and benefits of the research. The principle of justice requires that equality be operative in determining who will bear the burden of human subject's research.

For this research, a permission request letter was sent to the president of each institution along with an informed consent letter. The president had access to the survey instrument before granting the permission so that the president knew what was being asked of the participants. If the president agreed to allow the institution to participate in this survey, he or she granted the permission to the comptrollers, directors of business services, and individuals who performed the tasks of comptroller who had skills, knowledge, and expertise to take the survey by forwarding the informed consent letter

containing the link to the survey instrument to that participant. The survey instrument asked the participant to respond to a question that the permission to respond to the survey came from the president without any undue pressure.

Potential Benefits

As with any study, this study contained some risks and benefits. Potential benefits to the participating institutions were great. The analysis of this research could make higher educational institutions aware of the most common risk factors from the 24 listed, which could help the institutions to instill stronger controls to prevent and detect fraud at their institutions. The analysis of the five open-ended questions could help institutions understand how the organization's culture impacts the control measures implemented by the organization's management to detect and prevent occupational fraud. Also, it highlights the perception of the effectiveness of the control measures at various institutions and actions that the comptrollers, directors of business services, and individuals who perform the tasks of comptroller from other institutions would like the board of directors, president, vice presidents, and deans to take as they establish policies in the future to predict and prevent fraud.

Potential Risks

The potential risk was that the information provided by the participants would get into public hands or governmental agencies with their identities and provided responses during or after the research work was taking place. The potential risk was nominal because the identities of the participants or participating institutions were not provided, rather the computer identity was tracked to assure that the same computer was not used

twice to fill out surveys. The results were aggregated for analysis so that no one participant's remarks could be identified. The contents of the surveys were saved to a password-protected hard drive in a locked file cabinet to which only this researcher had access. The information will be kept for a period of 7 years and will then be destroyed by the researcher by shredding the paper documents, and the information from the hard drive will be deleted.

To keep the responses confidential, the responses by the participants will not be shared with anyone else, and the access to the Web link to the survey instrument was denied after the survey was submitted. The president had no way of knowing if the participant really responded to the survey or what his or her responses were.

This researcher is an instructor at one of these accredited higher educational institutions of the North Central Association of Colleges and Schools. This researcher's employer institution may have been selected randomly in the survey sample. Being part of the population for this survey, it would not create any conflict of interest because the researcher was a full-time teaching instructor and had no direct contact with the participant who would have been a part of the administration and took the survey.

Organization of the Remainder of the Study

Chapter 4 reported the findings of the research instrument. Quantitative statements from the first two sections of the survey instrument were analyzed using SPSS (Version 15.0) software. Five open-ended questions from section 3 of the survey instrument were analyzed using Atlas.ti software (Version 6.0). Chapter 5 includes the

discussion and implications on the reported findings from chapter 4. The researcher made recommendations for future study based on the findings from chapter 4.

CHAPTER 4. DATA ANALYSIS AND RESULTS

Introduction

According to Madey (1982), combining quantitative and qualitative research helps to develop a conceptual framework to validate quantitative findings by referring to information extracted from the qualitative phase of the study and construct indices from qualitative data that can be used to analyze quantitative data.

The objective of this research was to examine the occupational fraud risk factors to find the most common risk factors present at the surveyed institutions of the North Central Association of Colleges and Schools. The study included five open-ended questions to assess the perception of comptrollers, directors of business services, and individuals who perform the tasks of comptroller about their perceptions on how or if at all the organization's culture, policies, and procedures impacted the controls used in preventing fraud. The results of the quantitative study defined the most common risk factors, which vary based on the type, size, highest degree granted, and subregions within the North Central Association of Colleges and Schools. The results of the qualitative study provide the readers with the participants' perceptions on how the policies and procedures have weaknesses that could lead to poor controls at the accredited higher educational institutions in the North Central Association of Colleges and Schools.

Purpose of the Study

The purpose of this study was to use a quantitative method to find the most common risk factors for occupational fraud present at the surveyed institutions. The researcher used a list of 24 statements to find the most common risk factors present at the surveyed institutions. To assess the comptrollers, directors of business, and individuals who perform the tasks of comptroller about their perceptions on how or if at all the institution's culture, policies, and procedures impact the controls used in preventing fraud, the researcher implemented a qualitative method using five open-ended questions.

Onwuegbuzie (2003) demonstrated how themes emerging from qualitative data analyses can be factor analyzed to obtain meta-themes that subsume the original themes, thereby describing the relationship among these themes. Similarly, with respect to quantitative-based research, the collection, analysis, and interpretation of qualitative data can aid the interpretation of statistically significant, practically significant, clinically significant, and economically significant findings (Onwuegbuzie & Leech, 2004).

This research was conducted examining the following six questions:

1. What are the most common occupational risk factors present at the accredited higher educational institutions of the North Central Association of Colleges and Schools?
2. How do the organization's policies and procedures affect the control measures implemented by the organization's management to detect and prevent occupational fraud?
3. How effective do comptrollers, directors of business services, and individuals who perform the tasks of comptroller perceive these control measures to be at detecting and preventing occupational fraud?

4. How does the institution promote ethical training?
5. How does the institution promote continued professional development?
6. What incentives do the institutions offer to key employees to retain them?

Description of the Sample

The target population for this research was 1,106 accredited higher education institutions of the North Central Association of Colleges and Schools. The contact information for these accredited higher educational institutions of the North Central Association of Colleges and Schools was obtained using the *Higher Education Directory* (Higher Education Publications, 2009) that is publicly available.

The survey instrument was sent to 500 randomly selected participants from the total population of 1,106. Due to a very low response rate from the first set of survey participants, the second set of surveys was sent to the remaining 606 participants. Out of 1,106 total participants surveyed, 54 participants responded to the survey to some degree. All 54 participants completed the first section of the survey instrument. The second section was completed by only 41 participants who yielded a response rate of 3.7% of the total population of 1,106. For analysis purposes, incomplete surveys were those that had the first or second sections incomplete and, therefore, were excluded from the analysis. Out of 54 participants who responded to the survey, 13 participants did not complete section 2. Table 3 shows the institutions with their type, highest degree granted, region they belong to, and their institution size. Because the third section of the survey instrument was optional, incomplete responses on the third section were not considered incomplete for the purpose of analysis. This researcher collected 41 completed survey

responses, which was a better response rate than expected but was lower than the needed response rate based on the sample calculations. Since this was exploratory research, this researcher used the collected responses for analysis. It is important to this researcher and future researchers to use whatever amount of data that they collect for an exploratory research purpose.

Measures of Assessment and Demographic Data

The first section of the survey instrument includes four demographic questions. The demographic questions captured the following data for the participant's institution: description of the institution, highest degree granted by the institution, region to which the institution belonged, and number of students enrolled.

Descriptive Analysis of the Respondents' Demographic Information

Type of Institution

As shown in Table 4, the three categories of the surveyed institutions were public, private, and proprietary. All 41 participants answered this section with no values missing.

Table 3

Excluded Responses

Participants who did not complete section 2	Type of institution	Highest degree granted	Region	Institution size (number of students enrolled)
1	Public	Associates	Mid-South	20,000-29,999
2	Private	Associates	South Central	Less than 2,500
3	Public	Associates	Rocky Mountain	10,000-19,999
4	Private	Bachelor	Mid-South	5,000-9,999
5	Private	Bachelor	Mid-South	2,500-4,999
6	Private	Bachelor	North Central	10,000-19,999
7	Private	Bachelor	South Central	5,000-9,999
8	Public	Bachelor	South Central	20,000-29,999
9	Private	Bachelor	Rocky Mountain	30,000-39,999
10	Private	Bachelor	Rocky Mountain	5,000-9,999
11	Private	Bachelor	Rocky Mountain	5,000-9,999
12	Private	Bachelor	Rocky Mountain	10,000-19,999
13	Private	Master	Rocky Mountain	20,000-29,999

Highest Degree Granted

As shown in Table 5, the statistics for the highest degree granted by the surveyed institutions indicated that 21 participants from 41 responses had an associate's degree, and it was the dominant category. The second highest number of participants was granted a doctoral degree. Grouped responses from institutions granting a bachelor's and master's degree added up being the lowest number of participants.

Table 4

Type of Institution

Type of institution	Frequency	Percentage	Valid percentage	Cumulative percentage
Public	28	68.3	68.3	68.3
Private	12	29.3	29.3	97.6
Proprietary	1	2.4	2.4	100.0
Total	41	100.0	100.0	

Table 5

Highest Degree Granted

Highest degree	Frequency	Percentage	Valid percentage	Cumulative percentage
Associates	21	51.2	51.2	51.2
Bachelor's	2	4.9	4.9	56.1
Master's	7	17.1	17.1	73.2
PhD	11	26.8	26.8	100.0
Total	41	100.0	100.0	

Region

The breakdown of the region category shows that the participating institutions belonged to Mid-South, Great Lakes, North Central, South Central, and Rocky Mountain regions of the North Central Association of Colleges and Schools. The Great Lakes

region was the dominant group with 20 participants or over 48% of all five regions of the North Central Association of Colleges and Schools participating (see Table 6).

Table 6

Regions of North Central Association of Colleges and Schools

Region	Frequency	Percentage	Valid percentage	Cumulative percentage
Mid-South	1	2.4	2.4	2.4
Great Lakes	20	48.8	48.8	51.2
North Central	9	22.0	22.0	73.2
South Central	7	17.1	17.1	90.2
Rocky Mountain	4	9.8	9.8	100.0
Total	41	100.0	100.0	

Institution Size

As shown in Table 7, the statistics for the institutional size are based on the total number of students enrolled. The table indicates that 16 participants from 41 respondents belonged to the institution size that was less than 2,500 student enrollment, which was the dominant category.

Background Information About Respondents

The majority of the respondents, 43.9% or 18, stated that their institution almost never or never experiences domineering management behavior based on institutional

structure, whereas when grouped responses of always, almost always, generally, often, and sometimes, the response rate was 56.1% (see Figure 1).

Table 7

Institution Size

Institution size	Frequency	Percentage	Valid percentage	Cumulative percentage
Less than 2,500	16	39.0	39.0	39.0
2,500-4,999	6	14.6	14.6	53.7
5,000-9,999	9	22.0	22.0	75.6
10,000-19,999	7	17.1	17.1	92.7
29,000-29,999	2	4.9	4.9	97.6
40,000+	1	2.4	2.4	100.0
Total	41	100.0	100.0	

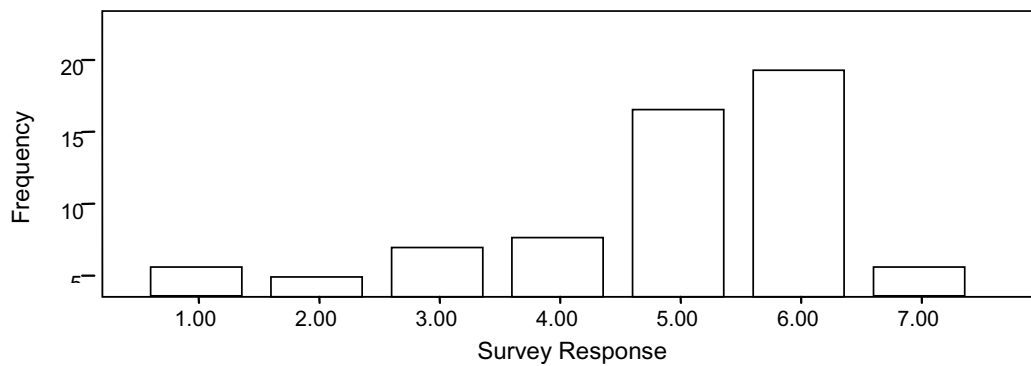


Figure 1. Domineering management behavior. 1 (*always*); 2 (*almost always*); 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

The majority of the respondents, 97.6% or 40, stated that their institution almost never or never imposed restrictions on the auditors, whereas 2.4% or only 1 response stated that his or her institution often imposed restrictions on the auditors (see Figure 2).

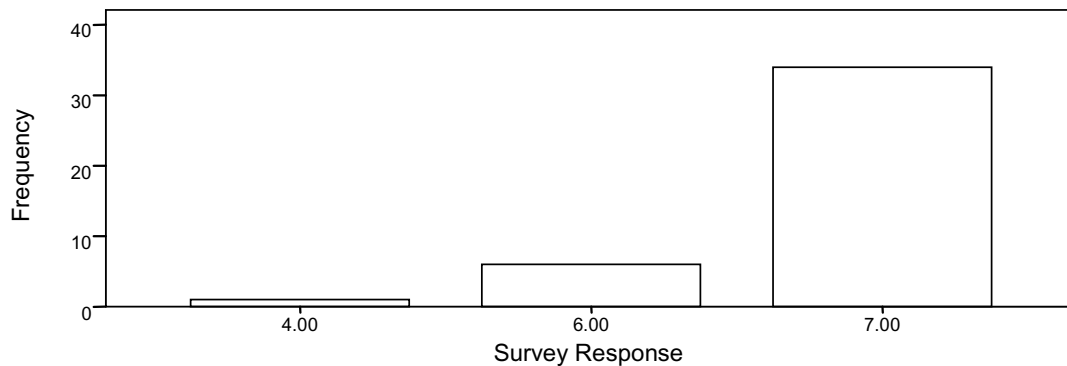


Figure 2. Restrictions on the auditors. 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

The majority of the respondents, 87.8% or 36, stated that their institution almost never or never neglected the known reportable conditions of internal control failures; 2.4% or 1 respondent stated that he or she did not feel comfortable answering this question. When responses of generally, often, and sometimes were grouped, the response rate was 9.8% or 4 (see Figure 3).

The majority of the respondents, 70.7% or 29, stated that their institution almost never or never based their financial forecasts on speculations, whereas when responses of generally and sometimes were grouped, the response rate was 26.8% or 11, and 2.4% or 1 participant stated that “I am not comfortable answering this question” (see Figure 4).

Figure 5 illustrates that the majority of the respondents, 63.5% or 26, stated that their institution almost never or never allowed significant related-party transactions,

whereas when responses of always, often, and sometimes were grouped, the response rate was 34.1% or 14, and 2.4% or 1 participant stated that “I am not comfortable answering this question.”

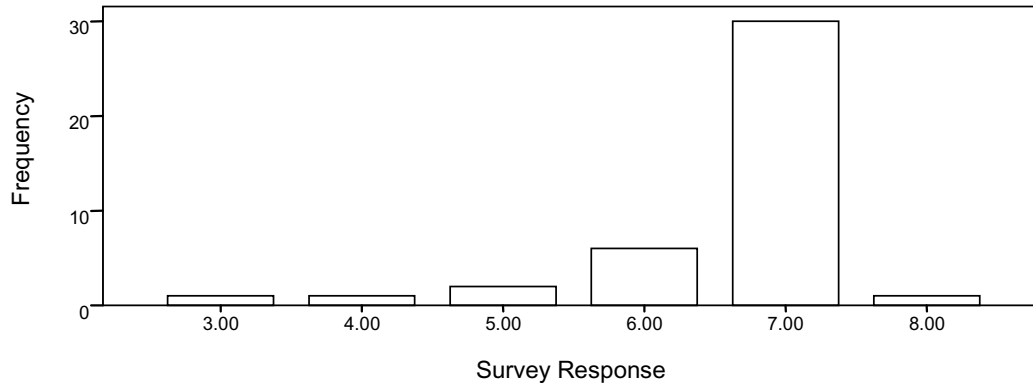


Figure 3. Failure to correct known reportable conditions. 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*), 8 (“*I am not comfortable answering this question*”).

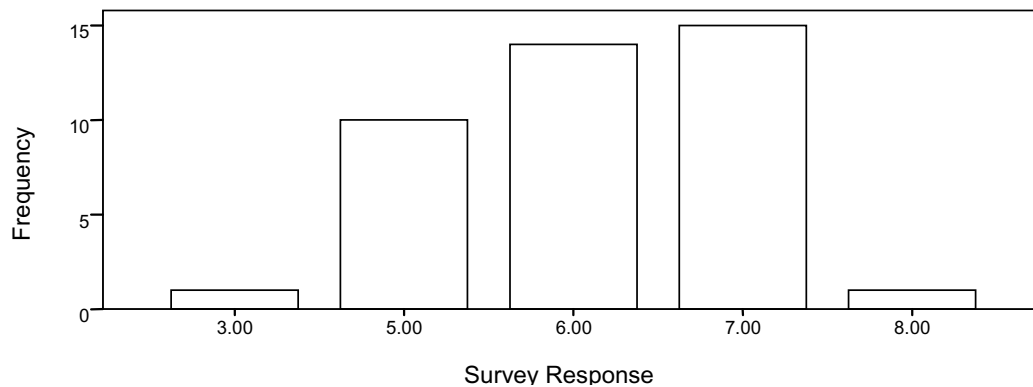


Figure 4. Aggressive or unrealistic financial forecasts. 3 (*generally*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*), 8 (“*I am not comfortable answering this question*”).

The majority of the respondents, 53.7% or 22, stated that their institution almost never or never experienced a domination of management by a single-person authority as opposed to a board over the deans, instructors, management, and support staff, whereas

when responses of always, almost always, generally, often, and sometimes were grouped, the response rate was 46.3% or 19 (see Figure 6).

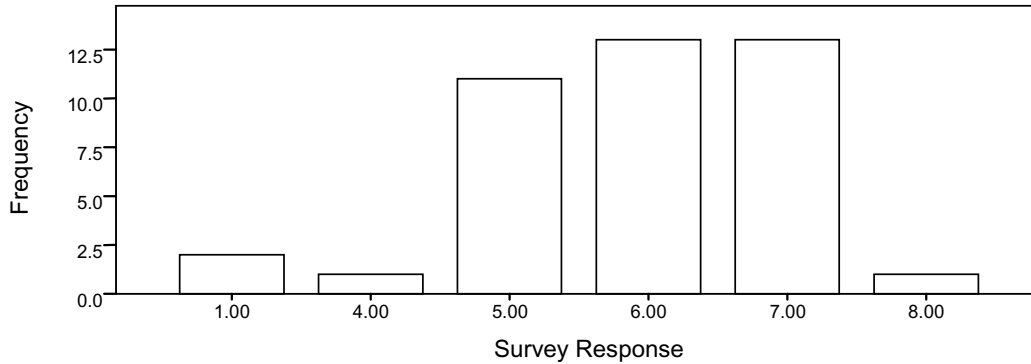


Figure 5. Significant related-party transactions. 1 (*always*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*), 8 (“*I am not comfortable answering this question*”).

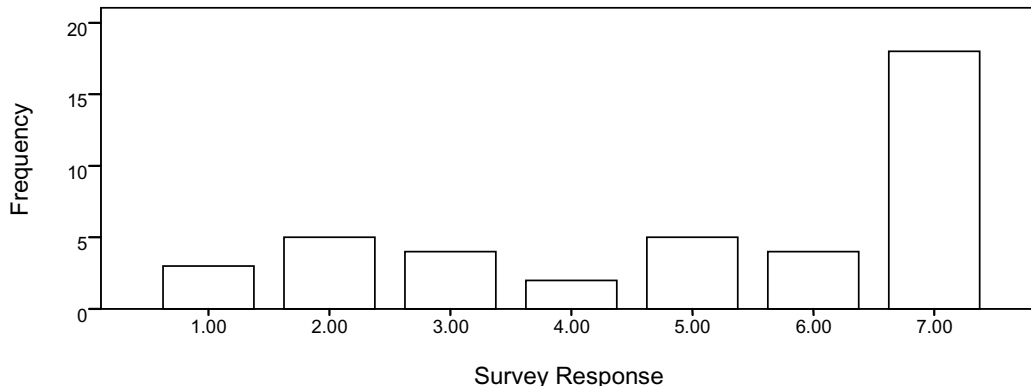


Figure 6. Domination of management by a single person. 1 (*always*); 2 (*almost always*); 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

As Figure 7 demonstrates, the majority of the respondents, 80.5% or 33, stated that their institution almost never or never put undue pressure on operating management to meet financial targets, whereas when responses of almost always and sometimes were grouped, the response rate was 19.5% or 18.

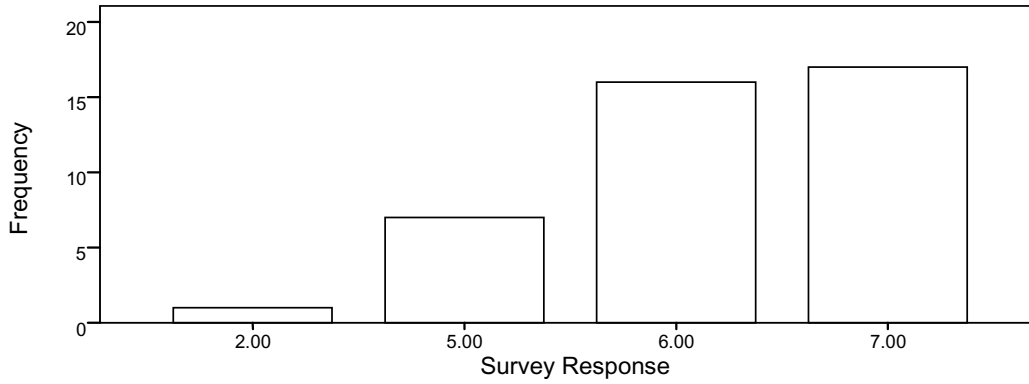


Figure 7. Excessive pressure on operating management to meet financial targets. 2 (almost always); 5 (sometimes); 6 (almost never); 7 (never).

According to Figure 8, the majority of the respondents, 83% or 34, stated that their institution almost never or never had a low priority on management to share appropriate values or ethical standards regularly with employees, whereas when responses of generally and sometimes were grouped, the response rate was 14.6% or 6, and 2.4% or 1 participant stated that “I am not comfortable answering this question.”

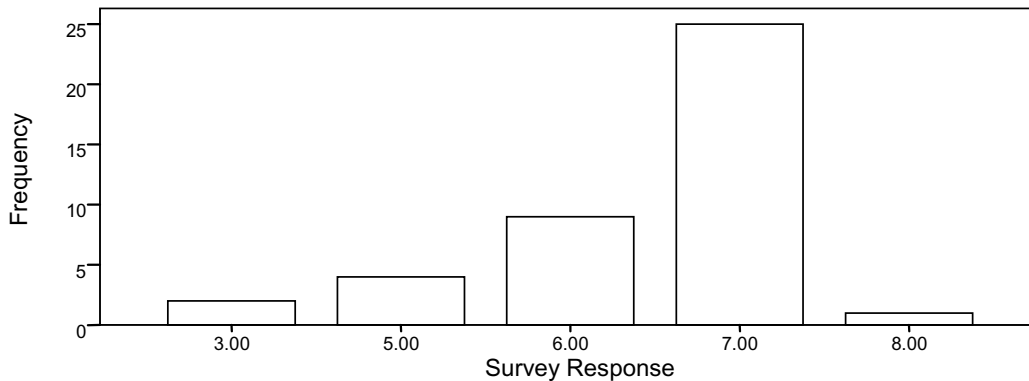


Figure 8. Lack of communication of inappropriate values or ethical standards. 3 (generally); 5 (sometimes); 6 (almost never); 7 (never), 8 (“I am not comfortable answering this question”).

The majority of the respondents, 61% or 25, stated that their institution almost never or never experienced a high level of management turnover, whereas when

responses of generally, often, and sometimes were grouped, the response rate was 39% or 16 (see Figure 9).

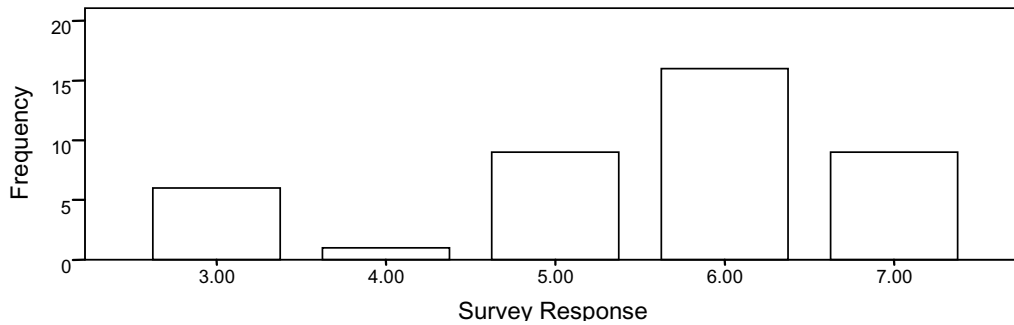


Figure 9. High employee turnover. D 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

The majority of the respondents, 80.5% or 33, stated that their institution almost never or never experienced a multicampus organizational structure where each campus had its own operational control. When responses of always, almost always, generally, often, and sometimes were grouped, the response rate was 17.2% or 7, and 2.4% or 1 participant responded stated that “I am not comfortable answering this question” (see Figure 10).

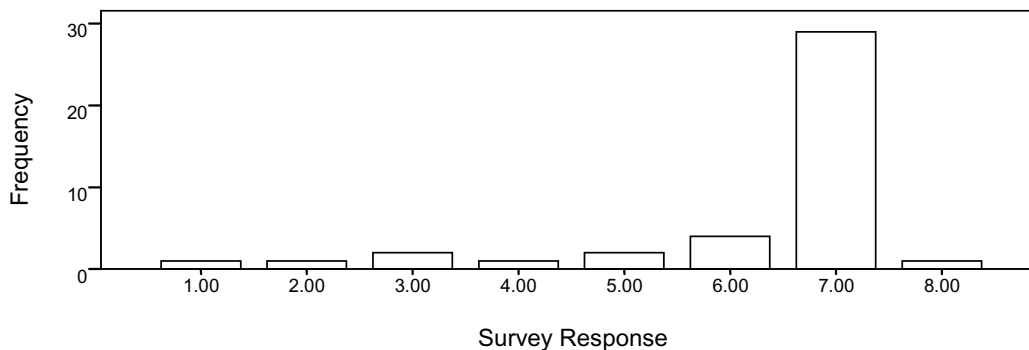


Figure 10. Overly complex organizational structure. 1 (*always*); 2 (*almost always*); 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*), 8 (“I am not comfortable answering this question”).

The majority of the respondents, 90.2% or 37, stated that their institution almost never or never experienced declined profitability due to rapid growth of online program offerings at other higher educational institutions, whereas when responses of generally and sometimes were grouped, the response rate was 9.8% or 4 (see Figure 11).

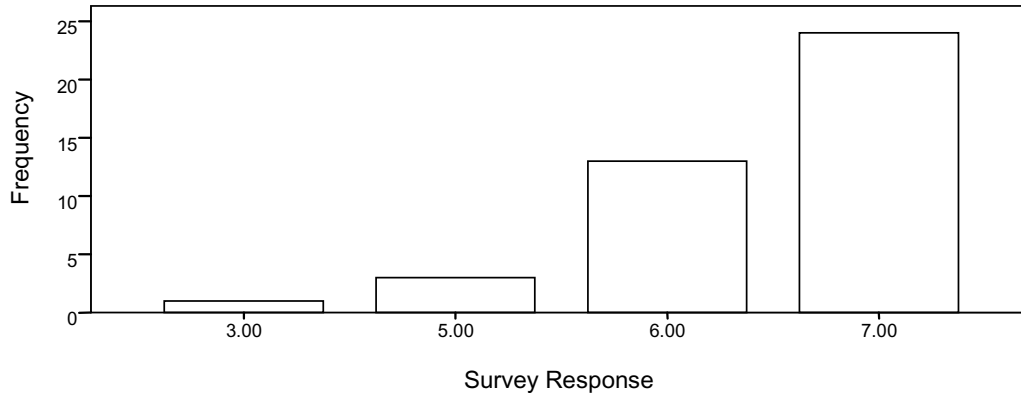


Figure 11. Rapid growth of online program offerings. 3 (*generally*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

Figure 12 illustrates that 17.2% or 7 institutions almost never or never fell in a highly competitive market or one that may have been saturated, whereas when responses of always, almost always, generally, often, and sometimes were grouped, the response rate was 80.5% or 33.

The majority of the respondents, 90.3% or 37, stated that their institution almost never or never had poor concern for declines in student enrollment, whereas when responses of generally and sometimes were grouped, the response rate was 9.7% or 4 (see Figure 13).

Figure 14 shows that the majority of the respondents, 87.8% or 36, stated that their institution almost never or never disregarded segregation of duties with respect to

financial controls, whereas 12.2% or 5 participants stated that sometimes their institution disregarded segregation of duties with respect to financial controls.

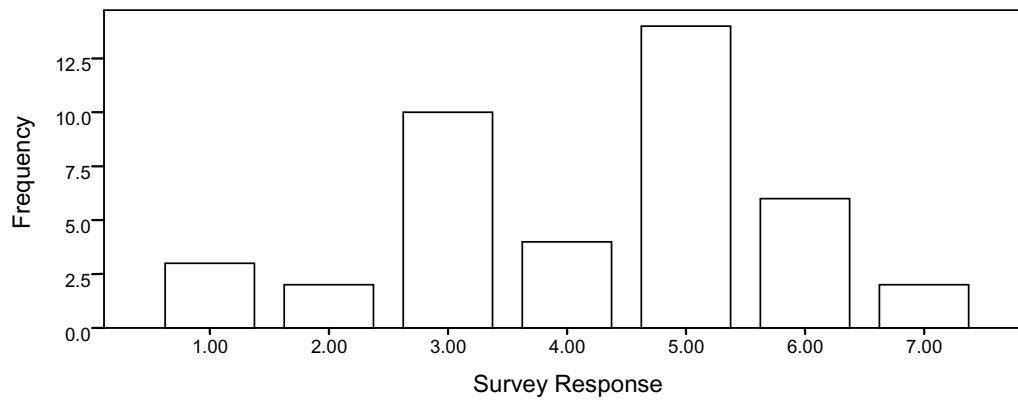


Figure 12. High degree of competition or market saturation. 1 (*always*); 2 (*almost always*); 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

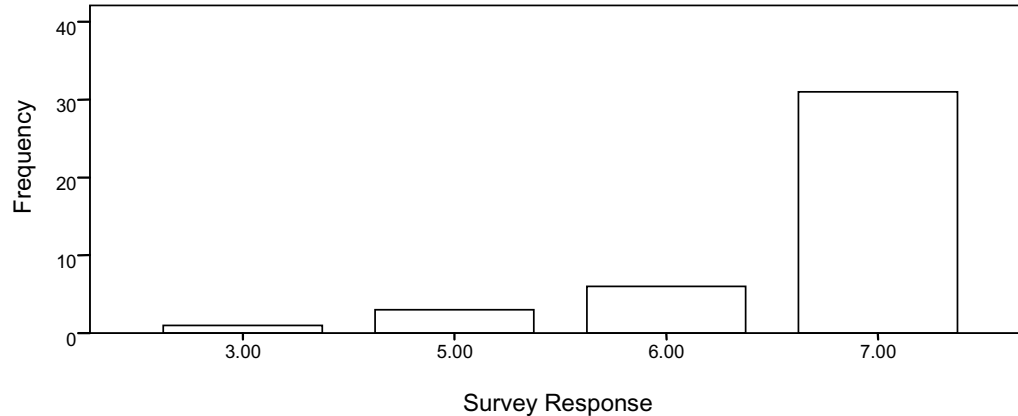


Figure 13. Significant declines in customer demand. 3 (*generally*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

The majority of the respondents, 70.6% or 31, stated that their institution almost never or never disregarded employee background checks before hiring, whereas when

responses of always, almost always, generally, often, and sometimes were grouped, the response rate was 24.4% or 10 (see Figure 15).

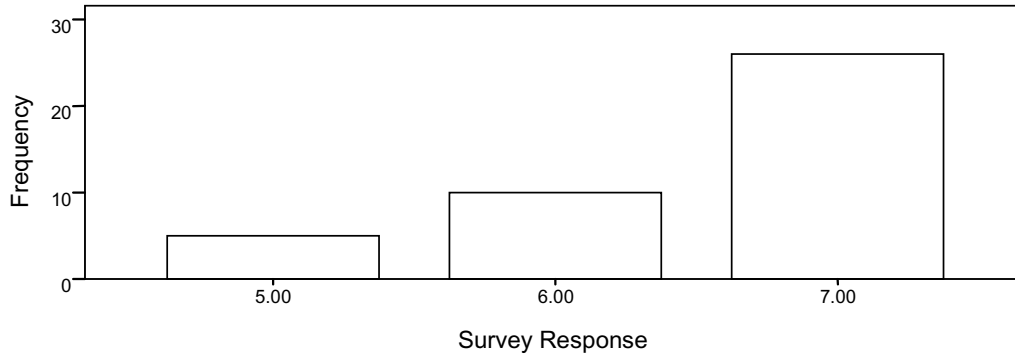


Figure 14. Lack of segregation of duty. 5 (sometimes); 6 (almost never); 7 (never).

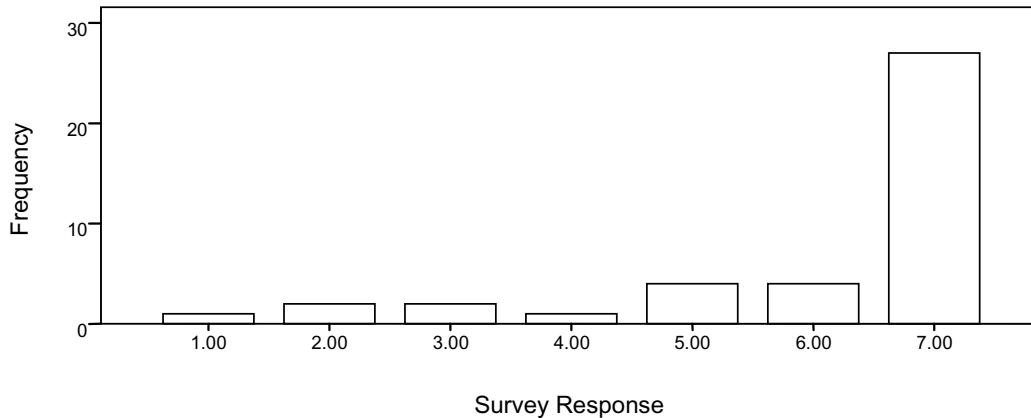


Figure 15. Lack of employee background check before new hire. 1 (always); 2 (almost always); 3 (generally); 4 (often); 5 (sometimes); 6 (almost never); 7 (never).

According to Figure 16, 73% or 30 stated that their institution almost never or never communicated consequences of fraud to employees poorly, whereas when responses of always, almost always, generally, often, and sometimes were grouped, the

response rate was 14.6% or 10, and 2.4% or 1 participant responded that “I am not comfortable answering this question.”

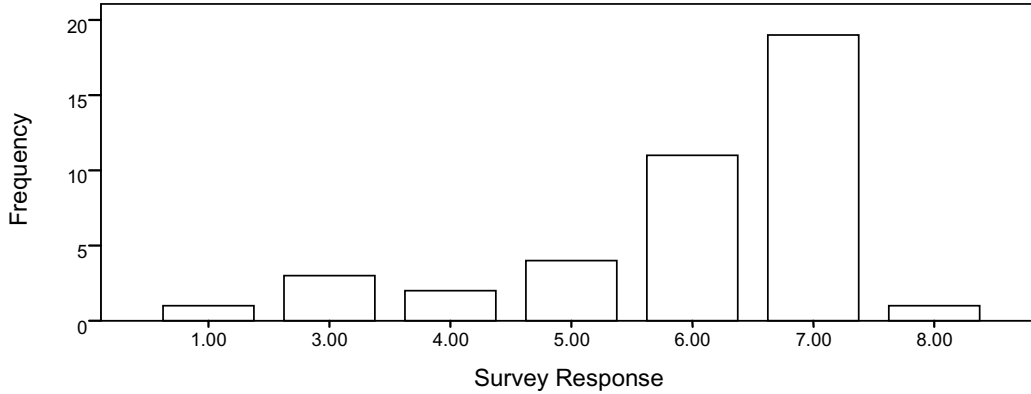


Figure 16. Lack of communication of consequences of fraud. 1 (*always*); 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*), 8 (“*I am not comfortable answering this question*”).

As shown in Figure 17, the majority of the respondents, 78.1% or 32, stated that their institution almost never or never was reluctant in promoting awareness of institutional policies regularly and systematically, whereas when responses of generally, often, and sometimes were grouped, the response rate was 21.9% or 9

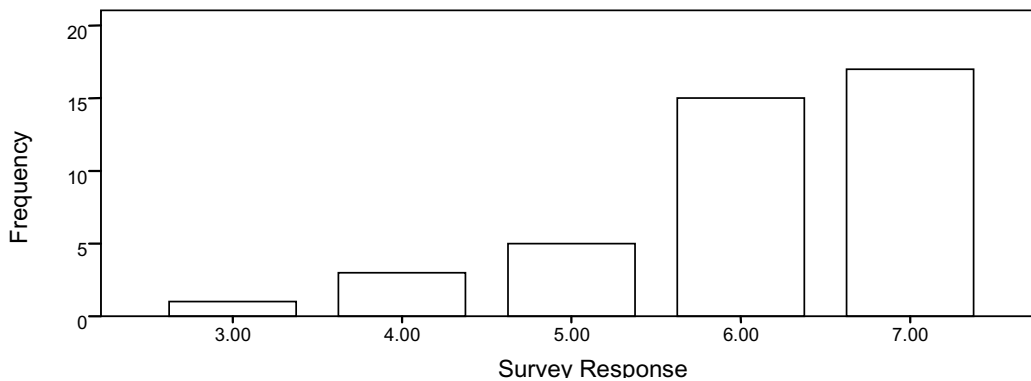


Figure 17. Lack of awareness of institutional policies. 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

The majority of the respondents, 95.1% or 39, stated that their institution almost never or never had poor internal controls over the general ledger accounts, whereas when responses of often and sometimes were grouped, the response rate was 4.9% or 2 (see Figure 18).

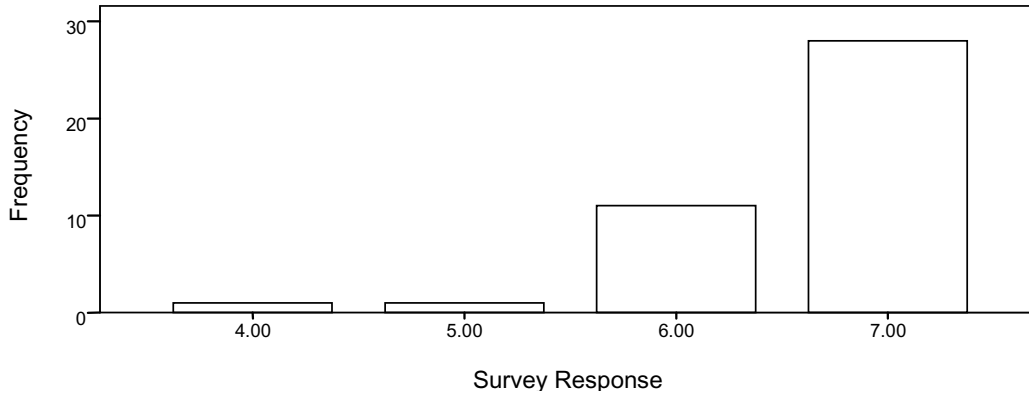


Figure 18. Lack of internal controls. 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

As shown in Figure 19, the majority of the respondents, 90.2% or 37, stated that their institution’s assets were almost never or never inadequately safeguarded, whereas when responses of almost always, generally, and sometimes were grouped, the response rate was 9.8% or 4.

As shown in Figure 20, the majority of the respondents, 78.1% or 32, stated that their institution almost never or never had limited access to the medium for reporting tips on fraudulent activity, whereas when responses of always, generally, often, and sometimes were grouped, the response rate was 19.5% or 8, and 2.4% or 1 participant responded that “I am not comfortable answering this question”.

As shown in Figure 21, the majority of the respondents, 65.9% or 27, stated that their institution almost never or never had lack of internal controls to inform management

of any employee living beyond his or her means, whereas when responses of always, generally, often, and sometimes were grouped, the response rate was 34.1% or 14.

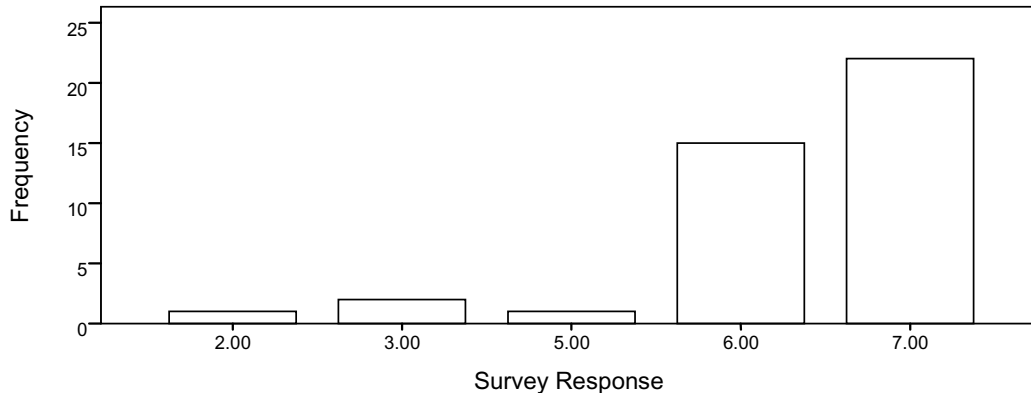


Figure 19. Lack of safeguarding of assets. 2 (*almost always*); 3 (*generally*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

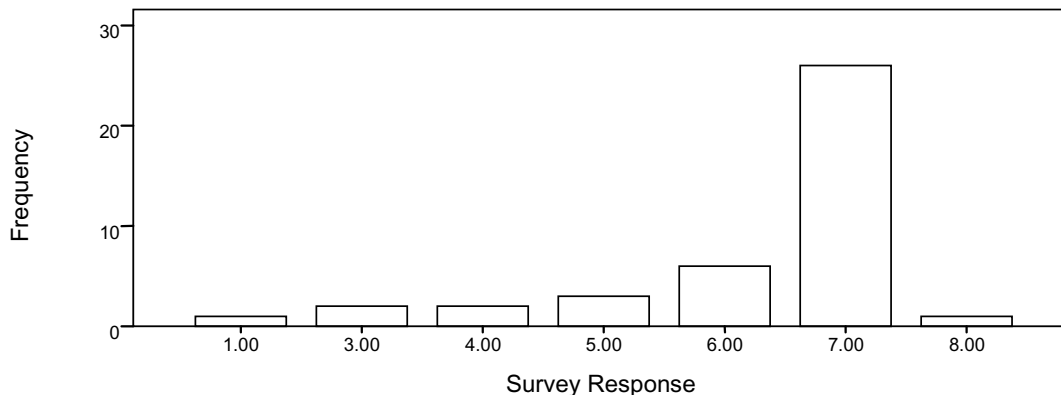


Figure 20. Lack of medium for reporting tips on fraudulent activity. 1 (*always*); 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*), 8 (*"I am not comfortable answering this question"*).

As shown in Figure 22, the majority of the respondents, 85.4% or 35, stated that their institution almost never or never had aggressive unrealistic financial goals, whereas when responses of generally, often, and sometimes were grouped, the response rate was

12.2% or 5, and 2.4% or 1 participant responded that “I am not comfortable answering this question.”

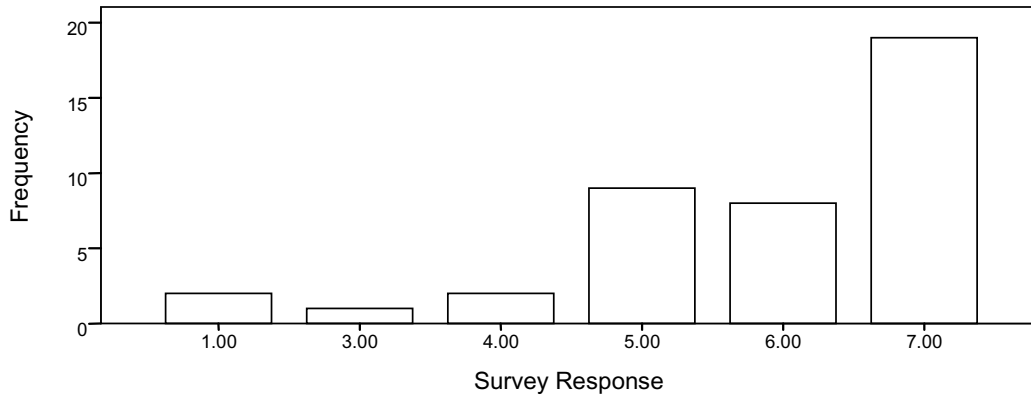


Figure 21. Employees living beyond their means. 1 (*always*); 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*).

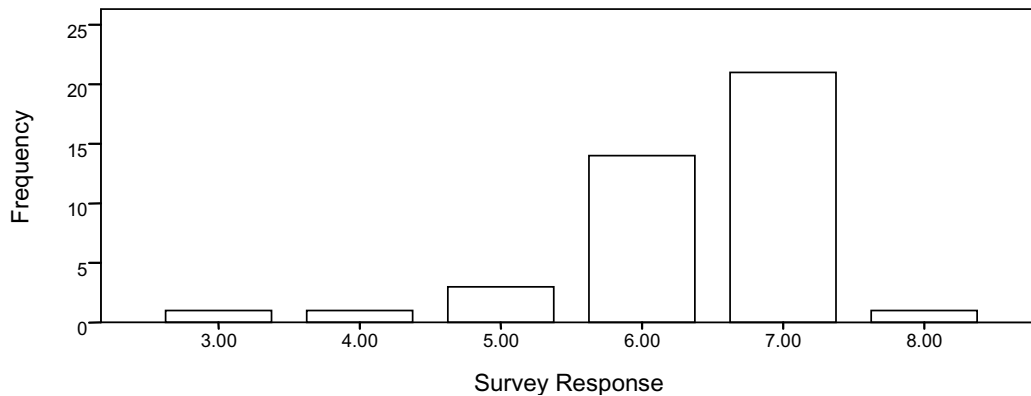


Figure 22. Unrealistic financial goals. 3 (*generally*); 4 (*often*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*), 8 (“I am not comfortable answering this question”).

Figure 23 illustrates that the majority of the respondents, 87.8% or 36, stated that their institution almost never or never had exhibited disregard for regulations or controls, whereas when responses of generally and sometimes were grouped, the response rate was

9.8% or 4, and 2.4% or 1 participant responded that “I am not comfortable answering this question.”

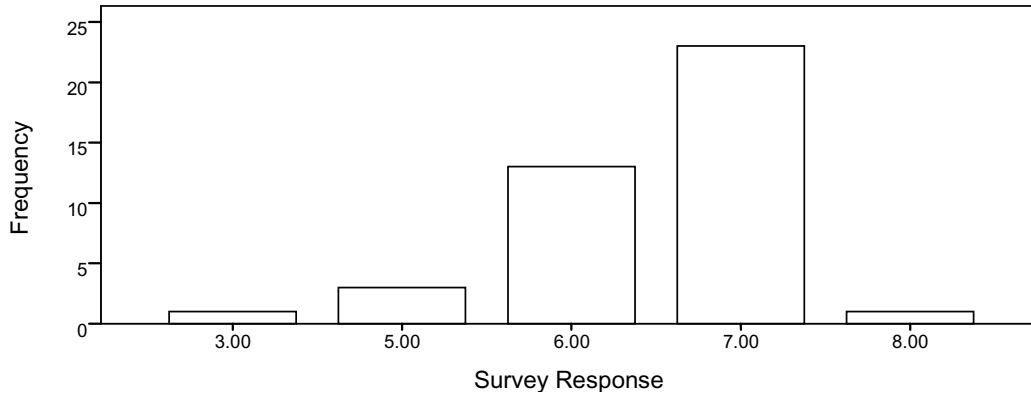


Figure 23. Disregard for regulations or controls. 3 (*generally*); 5 (*sometimes*); 6 (*almost never*); 7 (*never*), 8 (“*I am not comfortable answering this question*”).

As shown in Figure 24, the majority of the respondents, 95.1% or 39, stated that their institution almost never or never had disregard for new accounting, statutory, or regulatory requirements, whereas 4.9% or 2 respondents stated that their institution often had disregard for new accounting, statutory, or regulatory requirements.

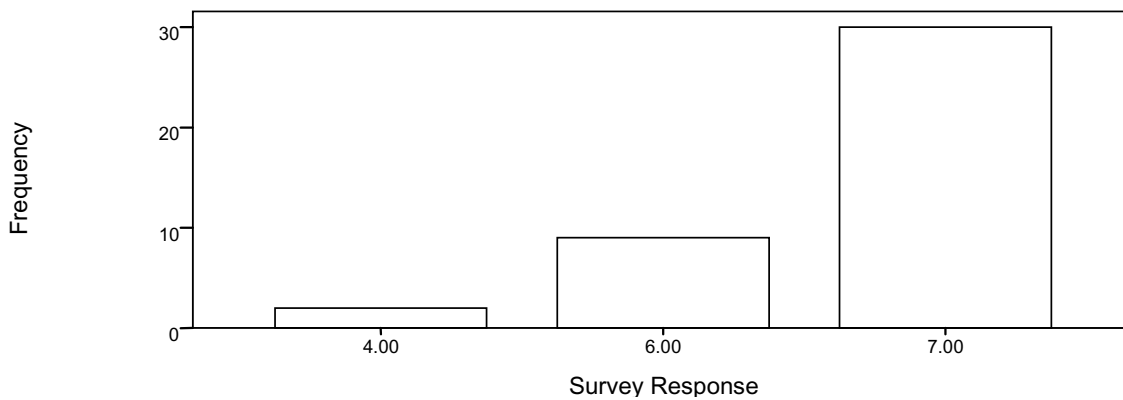


Figure 24. Lack of meeting statutory and regulatory requirements. 4 (*often*); 6 (*almost never*); 7 (*never*).

Frequency distribution

Based on the frequency distribution, Table 8 shows all the variables tested with their frequency of presence. Table 8 shows the cumulative percentage frequency of the presence of the risk factors.

Table 8

Most Common Risk Factors Present

Variable	Cumulative percentage and frequency	Rank
High degree of competition or market saturation	80.5	1
Domineering management behavior	56.1	2
Domination of management by a single person	46.3	3
High employee turnover	39.0	4
Significant related-party transactions	34.1	5
employees living beyond their means of reporting	34.1	5
Aggressive or unrealistic forecasts	26.8	6
Lack of employee background check before new hire	24.4	7
Lack of communication of consequences of fraud	24.4	7
Lack of awareness of institutional policies	22.0	8
Excessive pressure on operating management to meet financial targets	19.5	9
Lack of medium for reporting tips on fraudulent activity	19.5	9
Overly complex organizational structure	17.1	10
Lack of communication of inappropriate values or ethical standards	14.6	11
Lack of segregation of duty	12.2	12
Unrealistic financial goals	12.2	12
Failure to correct known reportable conditions	9.8	13
Rapid growth of online program offerings	9.8	13
Significant declines in customer demand	9.8	13
Lack of safeguarding of assets	9.8	13

Table 8

Most Common Risk Factors Present (continued)

Variable	Cumulative percentage and frequency	Rank
Disregard for regulations or controls	9.8	13
Lack of internal controls	4.9	14
Lack of meeting statutory and regulatory requirements	4.9	14
Restrictions on the auditors	2.4	15

Based on the information provided in the table, a high degree of competition or market saturation was the most common risk factor overall followed by domineering management behavior, domination of management by a single-person authority, high employee turnover, significant related-party transactions, and employees living beyond their means of reporting. Based on the information collected, restrictions on the auditors, lack of internal controls, and lack of meeting statutory and regulatory requirements were the least common risk factors present overall.

Table 9 was prepared using the results of the cross tabulations (see Appendix H) and shows the most common risk factors present at 28 public institutions participated in the study was the domination of management by a single person. At 12 private institutions surveyed, the most common risk factor present was a high degree of competition or market saturation. At proprietary type of institutions, only one institution participated in the survey and reported that domineering management behavior was the most common risk factors present.

Table 10 shows the summary of cross tabulation between the variables and the highest degree granted by the institutions (Appendix-I). Based on highest degree granted, 21 institutions granting associates degree participated in the survey, reported employees living beyond their means of reporting, was the most common risk factors present. For two institutions granting bachelor's degree that participated in the survey, reported that the most common risk factor was high degree of competition or market saturation. The seven master's degree-granting institutions reported lack of segregation of duty as the most common risk factor present. The 11 PhD degree-granting institutions that participated in the survey reported that high degree of competition or market saturation was the most common risk factor present.

Table 9

Type of Institutions

Risk factor	Ranking			Overall Rank #
	Public # 28	Private # 12	Proprietary # 1	
High degree of competition or market saturation	3	1	4	1
Domineering management behavior	3	2	1	2
Domination of management by a single person	1	5		3
High employee turnover		3		4
Significant related-party transactions	3	4		5
Employees living beyond their means of reporting		5		5
Aggressive or unrealistic forecasts			2	*
Lack of communication of consequences of fraud	4			*

Overly complex organizational structure		3	*
Rapid growth of online program offerings	5		*

Note. # = number of schools in this category.

*Not in the top 5.

Table 11 shows the results of cross tabulations between the risk factors and regions of the North Central Association of Colleges and Schools (see Appendix J). Only one institution participated in the survey from the Mid-South region of North Central Association of Colleges and Schools.

Table 10

Highest Degree Granted

Risk factors	Ranking				Overall Rank #
	Associates # 21	Bachelor's # 2	Master's # 7	PhD # 11	
High degree of competition or market saturation		1	4	1	1
Domineering management behavior	3	2	2	2	2
Domination of management by a single person	2	3		4	3
High employee turnover		2	3		4
Significant related-party transactions	4	3	5	3	5
employees living beyond their means of reporting	1	4	5		5
Aggressive or unrealistic forecasts		3			*
Lack of communication of consequences of fraud	5			5	*
Excessive pressure on operating management to meet financial targets	4	2			*
Overly complex organizational structure		4			*
Restrictions on the auditors		3			*
Failure to correct known reportable		3			*

conditions			
Lack of segregation of duty	3	1	*
Unrealistic financial goals	3		*
Lack of meeting statutory and regulatory requirements.	3		*
Rapid growth of online program offerings	4		*
Significant declines in customer demand	4		*
Lack of safe grading of assets	4		*
Lack of communication of inappropriate values or ethical standards	5		*

Note. # = number of schools in this category.
 *Not in the top 5.

Table 11

Regions of the North Central Association of Colleges and Schools

Risk factor	Ranking					
	Mid-South #1	Great Lakes # 20	North Central # 9	South Central # 7	Rocky Mountain #4	Overall Rank # 41
High degree of competition or market saturation	2	1	2		1	1
Domineering management behavior	2	2	2	5	1	2
Domination of management by a single person	2		1	1		3
High employee turnover		2			3	4
Significant related-party transactions		2	2	2		5
employees living beyond their means of reporting	1				1	5
Lack of employee background check before new hire			3			*
Lack of communication of consequences of fraud				3		*
Excessive pressure on operating management to meet financial targets					3	*
Lack of medium for reporting tips on fraudulent activity			3			*
Overly complex organizational structure	2			4		*
Disregard for regulations or controls		2				*
Restrictions on the auditors					2	*

Note. # = number of schools in this category.

*Not in the top 5.

It reported that employees' living beyond their means of reporting was most common risk factor. The 20 institutions that participated in the survey from Great Lakes regions of North Central Association of Colleges and Schools reported that a high degree of competition or market saturation was the most common risk factors present. Nine institutions participated in the survey from the North Central region of North Central Association of Colleges and Schools and reported domination of management by a single person as most common risk factor. Seven institutions which participated in the survey from South Central region of North Central Association of Colleges and Schools reported domination of management by a single person was the most common risk factors present. Four institutions which participated in the survey from the Rocky Mountain region reported that high degree of competition or market saturation as the most common risk factor present.

Appendix K shows the cross tabulations between the risk factors and institution size (number of students enrolled) of the North Central Association of Colleges and Schools. According to Table 12, the 16 participating institutions with a student population of less than 2,500 reported a high degree of competition or market saturation, as the most common risk factor present. The six participating institutions with a student population of 2,500 to 4,999 reported high degree of competition or market saturation as the most common risk factor present. The nine participating institutions with a student population of 5,000-9,999 reported that domination of management by a single person was the most common risk factor present.

Table 12

Institution Size

Risk factors	Ranking						Overall rank
	Less than 2,500 #16	2,500- 4,999 # 6	5,000- 9,999 #9	10,000- 19,999 # 7	20,000- 29,999 #2	40,000+ # 1	
High degree of competition or market saturation	1	1	2	2	3	3	1
Domineering management behavior	4	3	3	2	1	1	2
Domination of management by a single person	2		1	1			3
High employee turnover	5		3	3	3	2	4
Significant related-party transactions			1	1		1	5
employees living beyond their means of reporting		2	1	4			5
Aggressive or unrealistic forecasts			2	4	3		*
Lack of employee background check before new hire			1				*
Lack of communication of consequences of fraud		4		1		4	*
Lack of awareness of institutional policies						4	*
Excessive pressure on operating management to meet financial targets		4		4			*
Lack of medium for reporting tips on fraudulent activity				5	2		*
Overly complex organizational structure	3					2	*
Disregard for regulations or controls						4	*
Rapid growth of online offering		4			3		*
Lack of awareness of company policies		4	2				*
Lack of safeguarding of assets				4	3		*
Unrealistic financial goals				5			*
Lack of communication of inappropriate values or ethical standards					3		*

Note. # = number of schools in this category. *Not in the top 5.

Seven participating institutions with a student population of 10,000-19,999 reported domination of management by a single person as the most common risk factor present. Two participating institutions with a student population of 20,000-29,999 reported that domineering management behavior was the most common risk factor present. There were no institutions participating in the survey with a student population of 30,000-39,999. Only one institution participating in the survey with a student population of greater than 40,000 reported domineering management behavior as the most common risk factor present.

Table 13 shows the results of the KMO and Bartlett's test. The overall KMO result was 0.562. Because this value was not close to 1.000, it was not reasonable to complete the factor analysis. The Cronbach's alpha for the study was .895. This is acceptable, and the results are considered reliable. The results were computed, and a list of the most common risk factors was generated. These results are discussed and analyzed in more detail in chapter 5.

Table 13

Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test

Test	Result
Bartlett's Test of Sphericity	
Approximate Chi-square	546.571
<i>Df</i>	276
Significance	.000
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.562

Section 3 of the survey instrument included five open-ended questions. Twenty-eight participants responded to those questions to some degree. All the responses were transcribed into rich text format, which was imported into Atlas.ti software (Version 6.0) using a menu option and then transformed into the data set. The data importing and retrieval capacity of this software helped the storing and managing of raw data during the coding process.

Multilevel Encoding

The data-collection process collected over seven pages of data that were coded to reflect more descriptive meanings of the responses. A code dictionary was prepared with more descriptive definition for each code (see Appendix L). First-level codes were selected directly from the responses received and were written in lower case (see Table 14). The second level of codes was selected as new understanding of the data grew and the themes emerged (see Table 15).

According to the answers, the presence or prevention of occupational fraud had an intricate relation with procedures and processes within the organization. The respondent from Institution 16 said, “Control and prevention measures are in compliance with policies and procedures established in the institution.” At least three respondents described processes such as two signatures for checks, annual audits, real-time review of financial data, and so forth. The principal topics signaled in the answers developed two important topics: control and professional development, which was perceived as being promoted, encouraged, learned, facilitated, and stated. The respondents from Institution 26 stated, “Overall, the professional development is promoted and encouraged by annual

conflict of interest's statements, code of conduct for principle investigators, a counsel dedicated to PD, and a learning management system.”

Table 14

First-Level Codes

Code	Frequency
Adequate support	9
Annual performance review	1
Awareness	3
Awareness among employees	1
Bonuses	1
Budget	3
Checks and balances	4
Competitive salary	1
Control measures in place	3
Education assistance	3
Efforts to address perceived deficiencies	1
Efforts to build awareness	1
Evaluation process	1
External facilitator	2
Flexible work schedule	1
In progress	1
Internal facilitator	4
Lack of continuation of ethical training	1
Lack of ethical training	2

Table 14

First-Level Codes (continued)

Code	Frequency
Need for support staff	3
Offer workshop	1
Online training	1
Opportunities for development	1
Policies in place	21
Positive work environment	2
Prizes	1
Reduce turnover	1
Required training	4
Requirement	1
Resources available	1
Restrictions	1
Retirement funds	2
Statewide conference	1
Strong management support	2
Understanding of the economy	1
Work ethic in place	5
Levels of controls exist	1

In order to effect and obtain control, it was necessary to establish measures. Seventeen quotes were selected based on the how-to they described. This "how-to-implement" measure was the core and root of many policies and procedures established

to follow, review, and audit many types of processes and transactions within the organization.

Table 15

Second-Level Codes

Code	Frequency
Authority	4
Awareness	2
Budget	1
Checks and balances	1
Communication	2
Culture	1
Desire	4
External auditor	4
External facilitator	3
Financial incentive	1
Financial resources available	7
Fresh ideas	1
Incentives	14
Internal control	7
Internal facilitator	12
Internal review	1
Lack of control measures	2
Lack of encouragement	2
Lack of Incentive	12
Lack of Resources	3
Levels of controls exists	1
Limited incentive	3
Mandatory training	1

Table 15

Second-Level Codes (continued)

Code	Frequency
Need for awareness	1
Need for training	3
No need for incentives	5
Opportunities for development	11
Policies are in progress	1
Policies in place	12
Policies in progress	1
Poor controls	2
Record keeping	1
Required training	1
Requirement	4
Support	2
Turnover	1
Verification	1
Work ethic in place	1

Three organizations reported the use of internal and external control and audit methods. However, the quotes reporting external audit tended to be more descriptive and emphatic on how the external control had a wider coverage; ability of testing the functionality of the policies and procedures established; and their autonomy to select

which area or department of the institution would be reviewed in depth, taking advantage of the surprise factor.

The respondent from Institution 4 said, “The programs and trainings are coordinated and facilitated by an external institution, which has helped the institution to focus on right-decision-making along the campus.” The respondent from Institution 8 stated, “the wish of having external control and facilitation is expressed.”

Part of the internal and external measures was the teaching and facilitation of security and fraud prevention and reporting topics. Just two organizations reported this type of resource. The respondent from Institution 8 said, “The institution’s fraud policy is fairly new and was implemented with a mandatory training for all employees.” The respondent from Institution 21 stated, “the institution has two mechanisms: 1. Fraud detection procedures and 2. Awareness, through meetings and on-line tools. These activities have funds allocated and are promoted as on-campus training.”

The respondent from Institution 11 reported external facilitation of these matters specified the experience and trajectory of the contacted institution and said, “Overall, the institution has policies and procedures that meet the need of occupational fraud control and prevention, and that professional development is included and a result of communicating annually the institutions expectations to each employee.”

The major difference produced by internal versus external facilitation or resources was reportedly the internal management and coordination of control measures and facilitation and socialization of fraud prevention where staff increased their own ability to get involved in the control processes. One respondent expressed the institution’s desire to acquire more resources to empower the staff in the control role. The respondent from

Institution 13 said, “The institution expresses the wish of having more resources to implement necessary measures.”

Regardless of internal or external control, the result was different control levels, normally each more precise and elaborate than the other. Respondents from three organizations reported greater control levels. The respondent from Institution 4 said, “There are several levels of control in this institution, being the highest one the Board of Trustees”; the respondent from Institution 13 said, “The institutions control measures are in accordance with the policies and procedures of the institution”; and the respondent from Institution 17 said, “an agreement between control measures and policies is reviewed continuously by board requirements.” One respondent considered the “public at large” the final--and maybe greater--control stage. This may reflect that public observation was considered one of the most important and valued controls that rest on the institution and its public image.

The greater output of enhanced staff ability and different control stages and levels was awareness. Awareness addressed the fact that staff and observers knew the processes and controlled measures applied on them and outcomes of fraudulent activities. One respondent stated that part of being aware and informed of occupational fraud, its prevention, policies, and procedures, would help identify and report any suspicious transaction or process within the organization.

The respondents from the organizations recognized that, in order to facilitate and offer external resources and controls, it was necessary to allocate economic resources to this area. According to the answers, the money allocated was dedicated to professional development. Respondents stated that increasing and improving the staff’s knowledge

and ability on occupational fraud were a means of developing professionally. Nonetheless, just three organizations reported that professional-development activities were mandatory or a must have for promotion or annual performance reviews. The respondent from Institution 8 said, “The institution’s fraud policy is fairly new and was implemented with a mandatory training for all employees.” The respondent from Institution 9 said, “Ethics training and professional development is a departmental responsibility.” The respondent from Institution 26 said, “Overall, the professional development is promoted and encouraged by annual conflict of interest’s statements, code of conduct for principle investigators, a counsel dedicated to PD, and a learning management system.”

The rest of the organizations, instead of making mandatory the professional development, encouraged their staff members to invest in their careers. By encouragement, they made this type of development and knowledge acquisition a personal responsibility; this meant that it depended on each of them to meet ends with the organization’s needs of having an informed and knowledgeable staff. Each institution had its own methods to encourage their staff members to improve and develop professionally by making it easy to access training online, offering prizes to individuals with an outstanding record of professional-development-related activities, communicating to each employee what was expected from his or her performance on an annual basis. One respondent stated that, even if they allocated resources to professional development, they did not actively encourage it. The respondent from Institution 8 said, “There is a professional-development budget allocated, but the institution does not encourage it actively.”

These statements signaled that economic resources were almost the only means used to offer and encourage staff to follow a professional-development path, allocating money to training and offering prizes and incentives. But even if money was always used to facilitate access, encouragement, and reward, it was carried out in two major different ways: economic monetary incentives and qualitative incentives. Seven respondents reported offering and rewarding their staff members with economic incentives for their professional-development efforts, such as trips, money prizes, bonus, salary raise, and tuition and fee reimbursement. Also, seven other respondents stated staff members were offered qualitative incentives that in general and common terms were employees' benefits, a work environment of unique quality, additional education benefits, mentorship opportunities, and so forth (see Appendix H). The extremely beneficial output of this type of incentive was that it represented lifelong benefits for the employees and their families, such as education, health insurance, life insurance, retirement plans, comfortable and trusted work environment, and others. The respondent from Institution 4 said, "Reportedly, all these measures, combined with employee benefits that produce lifelong assets for staff and their families, help to keep the turnover rate low and eliminate the necessity of extra incentive packages."

According to the responses, the incentives and measures taken by the organizations drove and resulted in work ethics that were reflected in higher standards and an ethical conduct that was promoted daily through continuous interactions and attitudes. This remark on ethics was important because it was common to find ethics addressed as a value or state of mind that was already instilled or part of the individual nature, but this short survey, upon reflection and identification of topics, reflected how

the information flowed in order to generate ethic attitudes and behaviors in their employees.

Accordingly, ethics was an asset invested in and multiplied within the staff, was lost due to turnover, and resulted from a lack of encouragement and incentives and the retirement of lifelong valuable employees. The respondent from Institution 7 said, “Ethics is taught, facilitated, and promoted within the institution, and the facilitation of it is made accessible by offering it in-house and making some of the trainings optional. The institution reports ‘very few’ incentives in place to retain its employees.”

Each institution had five questions available to answer, but it was optional as to which of them to answer. Twenty out of 28 respondents answered all five questions. Even though the survey was open ended, most of the answers were short and vague. A few of them pointed to details or specificities about their institution. The lack of elaborate or profound answers could be related to the level and experience of the respondent within the institution, his or her responsibilities around policies and procedures, and his or her knowledge on occupational fraud. They may have been reluctant to answer due to the possibilities of the employer discovering disclosure of weaknesses or fraud at their institution. Time constraints, apathy to the institution’s problems, no reward for extra effort, and exposure of fraudulent activity on their part could have added to the short responses that dealt with self-reporting.

Summary of Findings

This chapter presented the findings of this study on identifying the most common risk factors present at the surveyed institutions of the North Central Association of

Colleges and Schools. The survey instrument was sent to 1,106 accredited institutions of the North Central Association of Colleges and Schools. Forty-one participants completed the first two sections of the survey instrument and were included in the analysis using SPSS (Version 15.0) software. Statistical analysis included frequency distribution tables, factor analysis, cross tabulations, Cronbach's alpha, KMO, and Bartlett's test. The results of the frequency tables showed the comparisons among various institutions' demographic categories. Cross tabulation of the data showed the ranking of the risk factors present at the surveyed institutions. The KMO and Bartlett's test result was 0.562, which was not close to 1.000; therefore, it was not reasonable to complete the factor analysis. Based on the analysis, the most common risk factor for the surveyed institutions of the North Central Association of Colleges and Schools was a high degree of competition or market saturation. Section 3 of the survey instrument was optional and included five open-ended questions. Twenty-eight respondents answered those questions to a varying degree. Atlas.ti software (Version 6.0) was used to analyze the collected data.

CHAPTER 5. DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

This research was conducted to study what were the most common risk factors for occupation fraud present at surveyed institutions of the North Central Association of Colleges and Schools and the perception of the participants from those institutions on how or if at all the organization's culture, policies, and procedures impacted the controls used in preventing occupational fraud. The ACFE has been surveying various industries since 1988. Educational institutions have been surveyed by the ACFE, but there was no available breakdown within the education levels or associations. The ACFE has produced the ranking of the industries for occupational fraud cases but has not surveyed institutions to find the most common risk factors of occupational fraud present at educational institutions.

This study has provided how the respondents were selected and contacted and how different media, such as e-mail and telephones, were used to contact the institutions to participate in the study. This study examined and compared the responses among the institutions based on their type, size, geographic location, and student enrollment. ACFE, which has been researching a similar topic, has not provided the actual survey questions to the readers. This study has the size of the survey instrument, actual survey questions, how they were required to respond using the Likert scale, and how long the survey instrument was accessible to the participants. The study also showed how the sample size for the survey responses was calculated from the population and how collected data were analyzed using various software along with actual responses of the participants without

revealing their identity. This research also provided the risks and benefits of the study. It illustrated detailed information on how the researcher saved the collected data. By utilizing the qualitative five open-ended questions in the survey, the qualitative section of this study provided a rich amount of data explaining the participants' perception of the controls environment at their institutions.

Review of Research Purpose and Objectives

The survey instrument included three sections. The first two sections of the survey instrument included demographic questions and statements regarding policies, procedures, and participants' perceptions. These participants were required to respond to the demographic questions by selecting an answer from a given list in the first section. For section 2, a selection was made on an 8-point Likert scale. The objective of the first two sections was to examine the common risk factors present and relationship among various demographic factors. The third section of the survey instrument included five qualitative open-ended questions. The questions were optional for the participants to answer. Out of 41 completed surveys received, 28 participants responded to the open-ended questions to some degree. The responses were tested using Atlas.ti software (Version 6.0). The responses were divided into 37 primary and 38 secondary codes. The researcher prepared two types of reports (see Appendix H). The first type of report revealed the survey responses with codes and the relationship between those codes. The second report was generated using Atlas.ti to illustrate the codes, quotes, and relevance among the codes. The third report was written by the researcher explaining how the codes

were grounded in the data and how they emerged and related to the information provided. It also showed the institutions' overview through their responses provided

Review of Research Methods

The research was conducted utilizing quantitative and quantitative research methods. Responses to the four demographic questions from section 1 and the 24 statements of the risk factors from section 2 of the survey instrument were collected using an 8-point Likert scale: 1 (*always*), 2 (*almost always*), 3 (*generally*), 4 (*often*), 5 (*sometimes*), 6 (*almost never*), 7 (*never*), and 8 (“*I am not comfortable answering this question*”). The eighth point on the Likert scale, “I am not comfortable answering this question,” was used if the participants did not understand the question or did not want to respond to the question. The research of the five open-ended questions from section 3 of the survey instrument was conducted using a qualitative research method.

Summary of Findings and Results

Other than the ACFE (1996, 2002, 2004, 2006, 2008) surveys, there are no known studies conducted on occupational fraud and risk factors present at educational institutions of the North Central Associations of Colleges and Schools. This survey included three sections. The first two sections were mandatory, and the third section was optional for the participants to respond. Incomplete surveys were not included in the analysis.

Summary of Section 1 of the Survey Instrument

The first section of the survey instrument included four demographic questions. The responses received from the 24 variables tested varied widely among different categories within each demographic question. Cross-tabulation results in chapter 4 compared the most common risk factors present in each of those categories.

Based on the data collected from the first demographic question on types of institutions, for public institutions, the most common risk factors were domination of management by a single person, employees living beyond their means of reporting, domineering management behavior, significant related-party transactions, and high degree of competition or market saturation. For private institutions, the most common risk factor was a high degree of competition or market saturation. For the proprietary institutions, domineering management behavior, overly complex organizational structure, and a high degree of competition or market saturation were the most common risk factors. Overall, a high degree of competition or market saturation was the most common risk factor among all three types of institutions.

The data collected from the second demographic question on highest degree granted by the institutions showed the most common risk factors present at the institutions granting an associate's degree were employees living beyond their means of reporting, lack of employee background check before new hire, domination of management by a single person, overly complex organizational structure, lack of communication of inappropriate values or ethical standards, excessive pressure on operating management to meet financial targets, related-party transactions, domination of

management by a single person, aggressive or unrealistic financial forecasts, and domineering management behavior.

For institutions granting a bachelor's degree, the most common risk factor was a high degree of competition or market saturation. For institutions granting a master's degree, the most common risk factor present was also rapid growth of online program offerings. For the institutions granting doctoral degrees, the most common risk factors were domineering management behavior, significant related-party transactions, domination of management by a single person, high degree of competition or market saturation, and lack of communication of consequences of fraud.

The third demographic question showed the relation between the risk factors and the five regions of the North Central Association of Colleges and Schools. Based on the data received and cross tabulations, the most common risk factor present in the Mid-South region was lack of internal controls. For the Great Lakes region, the most common risk factor present was a high degree of competition or market saturation. For the North Central region, the most common risk factors present were domineering management behavior, related-party transactions, domination of management by a single-person authority, high degree of competition or market saturation, lack of employee background checks before new hire, and lack of a medium for reporting tips on fraudulent activity. For the South Central region, the most common risk factors present were related-party transactions, domination of management by a single-person authority, overly complex organizational structure, and lack of communication of consequences of fraud. For the Rocky Mountain region, the most common risk factors present were domineering

management behavior, a high degree of competition or market saturation, and lack of internal controls.

The fourth demographic question was the institution size of surveyed accredited institutions of the North Central Association of Colleges and Schools. Cross tabulations were made between the risk factors and institution size (number of students enrolled) of the North Central Association of Colleges and Schools. Based on the data received and cross tabulations, the most common risk factors present in institutions with student enrollment less than 2,500 were domination of management by a single-person authority, overly complex organizational structure, and a high degree of competition or market saturation. The most common risk factors present in institutions with student enrollment between 2,500 and 4,999 students were a high degree of competition or market saturation and employees living beyond their means of reporting.

The most common risk factors present in institutions with student enrollment between 5,000 and 9,999 were significant related-party transactions, domination of management by a single person, lack of employee background checks before new hire, lack of internal controls, and employees living beyond their means of reporting. The most common risk factors present in institutions with student enrollment between 10,000 and 19,999 were related-party transactions, domination of management by a single-person authority, and lack of communication of consequences of fraud. The most common risk factors present in institutions with student enrollment between 20,000 and 29,999 were domineering management behavior and lack of medium for reporting tips on fraudulent activity. The most common risk factors present in institutions with student enrollment over 40,000 were domineering management behavior, high employee turnover, overly

complex organizational structure, high degree of competition or market saturation, lack of communication of consequences of fraud, lack of awareness of institutional policies, lack of medium for reporting tips on fraudulent activity, and disregard for regulations or controls.

Summary of Section 2 of the Survey Instrument

Section 2 of the survey instrument included 24 statements requiring participants to select the most suitable answer from an 8-point Likert scale. Based on the information provided, a high degree of competition or market saturation was the most common risk factor overall followed by domineering management behavior, domination of management by a single person, significant related-party transactions, and high employee turnover in the surveyed institutions. Restrictions on the auditors, lack of internal controls, and lack of meeting statutory and regulatory requirements were the least common risk factors present overall.

Summary of Section 3 of the Survey Instrument

The third section in the survey instrument included five open-ended questions. This section was optional for the participants to respond. The five open-ended questions were answered by 28 academic or higher education institution respondents about the effect of the organization's policies and procedures on occupational fraud. The following text explains the presence of certain terms and concepts and how the codes were assigned to the selected quotes.

The term *institution* was used for brevity to recognize each accredited higher educational institution of the North Central Association of Colleges and Schools, name each group of answers, and facilitate the classification process. Respondent refers to a group of answers written by one individual who by no means stated the institutional view or statement of the institution's legal entity as a whole in relation to policy and procedures and occupational fraud. The answers summarized here may be the direct reflection of the respondent's opinion and perception.

The respondent from Institution 1 answered three out of five questions. This respondent stated that the lack of success of the control measures was related to the high turnover rate of employees in administrative positions. The institution had no incentives to encourage employees to stay at the institution.

The respondent from Institution 2 answered all five questions through one-line answers and explained that the institution had policies in place that were communicated independently along the departments and was reinforced and encouraged through staff development days, training opportunities, and orientation, which was facilitated when the employee entered the institution and afterwards by staff request. The respondent affirmed that regular employee benefits were the incentives in place and there was no knowledge of any other type of incentive.

The respondent from Institution 3 answered all five questions. In this institution, the board dictated and audited the institution, passing the control to two different control levels: business staff and administration. They kept up with annual audits, and workshops, trainings, and reviews of conflict of interest were mandatory. Bonuses were

available for employees with high performance and those who excelled and exceeded the board's expectations.

The respondent from Institution 4 answered all five questions. There were several levels of control in this institution, the highest one being the board of trustees. One of the control stages was external and was out of the institution's control and decision making. Internally, they had access to real-time financial data. The programs and trainings were coordinated and facilitated by an external institution, which had helped the institution to focus on right decision making at the campus. The records kept to measure attendance and impact of workshops and trainings were not designed to be punitive but were to scope the reaching efforts and outcomes. Additionally, the institution offered an economic incentive to employees based on attendance and participation in the human resources, professional-development events, and programs. Reportedly, all these measures, combined with employee benefits that produced lifelong assets for staff and their families, helped to keep the turnover rate low and eliminated the necessity of extra incentive packages.

The respondent from Institution 5 answered two of five questions. The institution applied control by comparing checks and balances, and employees were encouraged by funds allocated and cross training.

The respondent from Institution 6 answered two of the five questions. The institution was driven by their five core values and allocated faculty conference funds.

The respondent from Institution 7 answered all five questions. The survey was answered while the process of restating and reformulating policies and procedures was occurring at the institution. The respondent noted that the time between the final

document, its approval, and implementation was long due to the requirements of the process itself; the board of regents must approve the new document, and the lag period tended to stretch the implementation even longer. Ethics was taught, facilitated, and promoted within the institution, and the facilitation of it was made accessible by offering it in-house and making some of the trainings optional. The respondent reported very few incentives were in place to retain its employees.

The respondent from Institution 8 answered all five questions. The institution's fraud policy was fairly new and was implemented with a mandatory training for all employees. Even though the policy as well as the trainings did not promote ethics or control measures, a sense of awareness and ethical attitude was the focus. The wish of having external control and facilitation was expressed. There was a professional-development budget allocated, but the institution did not encourage it actively. Also, there were no specific or additional incentives in place; the respondent reported that an employee normally needed to threaten to abandon his or her position to obtain additional benefits.

The respondent from Institution 9 answered all five questions. With the support of the administration, the controls on cash receipts, assets, and travel expenses were being improved, and the development of these measures depended exclusively on time. Ethics training and professional development were a departmental responsibility. The mechanism to retain their employees was by building a "unique work environment."

The respondent from Institution 10 answered all five questions. The institution conducted annual reviews and made improvements according to identified deficiencies. The limitations to exceed the actual measures were resources, not staff ability or

intention. Even though professional development was not a priority across campus, online trainings and a report hotline were available. Despite the fact that there were no additional incentives in place, the institution reported that the loss of key employees was due to retirement.

The respondent from Institution 11 answered all five questions. This respondent's answers were extremely short and vague. Overall, the respondent reported that the institution had policies and procedures that met the need of occupational fraud control and prevention and professional development was included. The institution's expectations to each employee were communicated annually.

The respondent from Institution 12 answered all five questions. In this institution, after 10 years of improvements, there was a lack of internal controls, which were supported by the separation of duties. Ethical training was part of employee orientation, and it was promoted through occasional professional-development opportunities, such as professional seminars and conferences. The respondent reported that there were incentives in place and they were properly approved and documented.

The respondent from Institution 13 answered all five questions. The institution's control measures were in accordance with the policies and procedures of the institution. The institution expressed the wish of having more resources to implement necessary measures. Even if they promoted a development day and professional-development opportunities, they were not mandatory; the employees were cleared by signing a document at the hiring process. Because it was a public institution, it had been not possible to offer economic incentives, but qualitative incentives were in place.

The respondent from Institution 14 answered all five questions. Reportedly, the institution would benefit from structured control measures besides the actual internal auditing process and review-approval practice. Desired resources would be the confirmation of an auditing committee and anonymous hotline to report suspicious situations. Although the institution offered scheduled professional-development days, the respondent reported that the institution did not actively promote ethical training. Even if the participants reported that there were no additional incentives in place besides competitive benefits, they mentioned tuition and fees reimbursement for employees who enrolled in professional-development-related events.

The respondent from Institution 15 answered one of the five questions. The respondent summarized the survey in one answer, stating that each employee had a budget allocated for professional development and was encouraged to use it.

The respondent from Institution 16 answered all five questions. Control and prevention measures were in compliance with policies and procedures established at the institution. They were supported as well by the institution's core values and financial training programs. The incentives offered by the institution were a strong benefits package, good work environment, and advancement opportunities.

The respondent from Institution 17 answered all five questions. Agreement between control measures and policies was reviewed continuously by board requirements. The ethics were promoted by providing employees with an institutional ethics statement upon hiring, and funds were allocated for workshops and courses for professional development. The respondent stated that, as a public institution, it was not able to offer additional incentives.

The respondent from Institution 18 answered all five questions. The respondent stated that, in most of the cases, it is the identified flaws that required a tightening of the measures and, therefore, the reformulation of the written processes. In this case, the changes and needs were identified and suggested by several parties, such as internal observers, external observers, and the public.

The current system of control and audit was managed by an external agent, but the institution recognized that actual staffing levels limited the ability to identify, report, and investigate from the inside, expressing their desire to have wider staff support to have effective internal control. Ethics and ethical conduct were qualified as the foremost issues within the institution, and they emanated from the highest administrative positions. They were promoted from level to level as an institutional value and were practiced and reinforced daily through regular interaction. The respondent stated that resources were allocated for professional development and employees were encouraged to participate in statewide conferences, Web-based meetings, and training sessions; the respondent reflected on how these specific budgets were in risk of being diminished during hard economic periods. Administrators focused on employee benefits instead of additional incentives to encourage and ensure long-term commitment to the institution, generating a low turnover rate, where most of the employees lost were due to retirement. The respondent stated that, in general, individuals looking for job positions with monetary incentives did not regularly work in the education field.

The respondent from Institution 19 answered four of five questions. The institution had a rigid control system, but they reflected on how these strict measures might have been a trigger for individuals to try and find ways to circumvent the system.

Even if the distance from the main campus, as they were a branch from it, had made it difficult to access trainings, they had found and implemented alternate options and kept an annual review of a conflict of interest statement that flowed through different stages of approval. In addition to the lack of economic incentives, the actual economic situation might have led to cuts on existing benefits, which were reflected on key employee retention.

The respondent from Institution 20 answered four of five questions. The institution's management implemented control measures that were supported and enhanced by the existing policies and procedures. This system was based on an internal audit practice and annual training for staff involved in financial tasks; the last activity was funded by the institution.

The respondent from Institution 21 answered all five questions. The institution had two mechanisms: fraud detection procedures and awareness through meetings and online tools. These activities had funds allocated and were promoted as on-campus training. Their methods to retain employees in general were a competitive financial package and retirement incentives.

The respondent from Institution 22 answered three of five questions. In this institution, staff development and Web-based training were mandatory for annual performance reviews.

The respondent from Institution 23 answered two of five questions. The institution reported that, besides few or no incentives, the faculty had budgets allocated annually for professional development.

The respondent from Institution 24 answered all five questions. Currently, the institution had policies and procedures that dictated the control measures and levels and an ethics policy that was reviewed at employee orientation. In the case of faculty staff, professional development was a requirement for tenure promotions; for the rest of the staff, it depended on the department and its individual parameters. There were no incentives in place.

The respondent from Institution 25 answered all five questions. Transparency and proper stewardship of the institutions resources were part of and an outcome of the policies and procedures of this institution. These methods were encouraged and supported by the management and board, and it was developed and enriched by internal feedback during informational meetings. Even if they did not have incentives in place, they were working on implementing performance evaluations that linked their results to annual raises.

The respondent from Institution 26 answered all five questions. The institution was in the process of drafting and formulating processes that would help reflect current practices, therefore, preventing fraudulent actions. The drafting process was being reviewed by the internal audit staff. Overall, professional development was promoted and encouraged by annual conflict of interest statements, code of conduct for principle investigators, a counsel dedicated to professional development, and a learning management system.

The respondent from Institution 27 answered all five questions. The institution benefited from the mixture of internal policies and procedures with fresh ideas brought in

by managers who were encouraged to involve external institutions. There was a bonus plan in place and funding for educational opportunities as incentives.

The respondent from Institution 28 answered all five questions. This institution reported two types and levels of control on their policies and procedures: internal annual review and reformulation and external annual audit and testing. Even if one of the stages of control and review was internal, the desire of obtaining more staffing resources was expressed. The institution also focused on sending periodic ethical reminders to employees, and a mandatory online training program had to be completed on an annual basis. In the same way, professional development was promoted by allocated funds, small economic incentives in place, and internal workshop offers. The incentives within this institution were basically monetary but with a qualitative outcome, offering educational, mentorship, and development opportunities.

Limitations of the Study

There were several limitations to this study. There are several associations of schools and colleges in the United States. The scope of this study was limited to the North Central Association of Colleges and Schools. The researcher used the information based on 42 risk factors of the AICPA (2008a; see Appendix-B), SAS No. 99 (see Appendix A); various ACFE (1996, 2002, 2004, 2006, 2008) reports; COSO (1999) studies; and KPMG (2003) report to develop a list of only 24 statements (see Appendix B) of the 42 risk factors to explore the prevalence of the 24 variables based on the relevance to the educational institutions. The survey instrument was sent to the presidents of the participating institutions, who forwarded it to the participants. The responses could

vary based on the participants' area of specialty, knowledge, understanding, interpretation of the question, and desire to respond. Only 41 participants responded to the survey completely out of the total population of 1,106 institutions contacted using various approaches.

Recommendations for Future Research

Participants for this survey were recruited via e-mail and telephone. For this method, a list of 1,106 accredited higher educational institutions of the North Central Association of Colleges and Schools was obtained using the *Higher Education Directory* (Higher Education Publications, 2009) that was publicly available. Participants used a computer and the Internet to take the survey. Telephones were used to recruit the participants for the pilot study and actual survey when the presidents of the institutions did not respond to the researcher after the first reminder. By making multiple efforts using various methods, such as sending the initial permission request letter and reminder letter and making phone calls, the researcher was able to collect a better rate of responses than expected. Future researchers should use various methods and approaches to collect usable data. This researcher used the most updated phone directory for the contact information, which was not the most accurate because the directory was printed in the previous year and many employees had changed jobs after the directory was printed and published. Future researchers should also obtain the most updated contact information on the institutions by calling and confirming the names and e-mail addresses of the participants from the accredited institution before sending the survey instrument. By using the information from such directories, it can lead the researcher to send the surveys

to individuals not belonging to the researched association. Such an error can upset the presidents at those institutions who may issue a report to the researcher's mentor, college, or the association of schools and colleges. Because it is difficult to collect larger data for analysis, the future researcher should include more than one association to include a larger population.

Responses collected using the optional five open-ended questions provided a great deal of information to this research; the future researcher should make those open-ended questions mandatory for the participants to complete the survey. Those responses can be short or long, depending on the participant's willingness to share the information. The future researcher can use the information provided by the participants to the open-ended questions to create a new list of qualitative questions to collect new information.

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APPENDIX A. STATEMENT OF AUDITING STANDARDS NO. 99 RISK FACTORS

List of 42 risk factors from SAS No.99:

1. Known history of violations of securities law, or claims against the entity, its senior management, or board members alleging fraud or violations of securities laws.
2. Domineering management behavior in dealing with the auditor, especially involving attempts to influence the scope of the auditor's work.
3. Formal or informal restrictions on the auditor that inappropriately limit his access to people or information or limit his ability to communicate effectively with the board of directors or the audit committee.
4. Frequent disputes with the current or predecessor auditor on accounting, auditing, or reporting matters.
5. Recurring attempts by management to justify marginal or inappropriate accounting on the basis of materiality.
6. Management failure to correct known reportable conditions in internal controls in a timely basis.
7. A practice used by management of committing to analysts, creditors, and other third parties to achieve aggressive or unrealistic forecasts.
8. Significant, unusual, or highly complex transactions, especially occurring close to year end that pose difficult "substance over form" questions
9. Significant related-party transactions not in the ordinary course of business or with related entities are not audited or audited by another firm.
10. Inadequate monitoring of significant internal controls.
11. Domination of management by a single person or small group in a non-owner-managed business without compensating controls.
12. Significant bank accounts or subsidiary or branch operations in tax-haven jurisdictions for which there appears to be no clear business justification
13. Ineffective accounting and information systems, including situations involving reportable conditions.
14. Excessive pressure on operating management or personnel to meet financial targets (sales and profitability incentive goals) exerted by board of directors or chief

executive officers.

15. Significant portions of management's compensation, represented by bonuses and stock options, being contingent upon achieving aggressive targets for stock price, operating results, financial position, or cash flow.
16. Excessive interest by management in maintaining or increasing the entity's stock price or earnings trend.
17. Ineffective communication, implementation, support, or enforcement of the entity's values or ethical standards by management or the communication of inappropriate values or ethical standards.
18. Unreasonable demands on the auditor, such as unreasonable time constraints regarding the completion of the audit or the issuance of the auditor's report.
19. Non-financial management's excessive participation in the selection of accounting principles or the determination of significant estimates.
20. High turnover rates or employment of ineffective accounting, internal audit, or information technology staff.
21. Ineffective board of directors or audit committee oversight over the financial reporting process and internal control system.
22. Assets, liabilities, revenues, or expenses based on significant estimates that involve subjective judgments or uncertainties that are difficult to corroborate.
23. Difficulty in determining the organizations or individuals that have controlling interest in the entity.
24. Overly complex organizational structure involving unusual legal entities or managerial lines of authority.
25. High turnover of chief executive officers or board directors.
26. Recurring negative cash flows from operations or an inability to generate cash flows while reporting earnings and earnings growth.
27. Unrealistic profitability or trend level expectations by management in overly optimistic press releases or annual report messages.
28. Unrealistic profitability or trend level expectations of investment analysts, institutional investors, significant creditors or other external parties in overly optimistic press releases or annual report messages.

29. Rapid growth or unusual profitability especially compared to that of other companies in the same industry.
30. Perceived or real adverse effects of reporting poor financial results on significant pending transactions, such as business combinations or contract awards.
31. An interest by management in employing inappropriate means to minimize reported earnings for tax-motivated reasons.
32. A strong financial presence or ability to dominate a certain industry sector that allows the entity to dictate terms or conditions to suppliers or customers that may result in inappropriate or not arm's length transactions.
33. Significant operations located or conducted across international borders in jurisdictions where differing business environments and cultures exist.
34. Operating losses making imminent threat of bankruptcy, foreclosure, or hostile takeover.
35. Marginal ability to meet exchange listing requirements or debt repayment.
36. Management and/or board directors holding significant financial interests in the entity.
37. Management and/or board directors have personally guaranteed significant debts of the entity.
38. Need to obtain additional debt or equity financing of major research and development or capital expenditures to stay competitive.
39. High degree of competition or market saturation, accompanied by declining margins
40. Significant declines in customer demand and increasing business failures in the industry or overall economy.
41. High vulnerability to rapid changes in technology, product obsolescence, or interest rates.
42. New accounting, statutory, or regulatory requirements.

APPENDIX B. SURVEY INSTRUMENT

This study has been approved by Capella University's IRB 170118-1, effective from August 13, 2010 through November 13, 2010.

VOLUNTARY CONSENT

By taking the survey, you are saying (1) that you have read the informed consent form which was forwarded to you by your president or have had it read to you and (2) that you understand informed consent letter, the research study, and its risks and benefits..

Note: By taking the survey below, you are telling the researcher “Yes,” you want to participate in this study. Please keep one copy of this form for your records.

To protect your integrity and privacy, participants must check the following box before responding to the survey if it applies:

- Permission to respond to this survey came from the President without any undue pressure.

Click “Next” to go to the actual survey.

Survey Instrument

Section-1

Please select the answer that most closely relates to your institution:

1. Your institution would best be described as:

- A Public
B Private (non profit)
C Proprietary (for profit)

2. What is the highest degree granted by your institution?

- D Technical (vocational) certificate

- E Associate's degree
F Bachelor's
G Master's Degree
H Ph.D., Ed.D, or professional degrees

3. Your institution belongs to which of the following Regions?

- I Northeast Region (ME, VT, NY, NH, MA, RI, CT)
J Mid-Atlantic (PA, NJ, DE, MD, VA, DC)
K Mid-South (WV, KY, TN, NC, SC)
L Southeast (MS, AL, GA, FL, Caribbean)
M Great Lakes (WI, IL, MI, IN, OH)
N North Central (NE, IA, SD, ND, MN, MT)
O South Central (KS, MO, OK, AR, TX, LA)
P Northwest (AK, WA, OR, ID, MT)
Q Pacific (CA, NV, HI)
R Rocky Mountain (AZ, CO, NM, UT, WY)

4. Institutional Size (number of students enrolled)

- S Less than 2,500
T 2,500 – 4,999
U 5,000 – 9,999
V 10,000 – 19,999
W 20,000 – 29,999
X 30,000 – 39,999

Y 40,000+

Section-2

Evaluate the items below and choose the answer that most closely relates to your institution.

1 = Always, 2 = Almost Always, 3 = Generally, 4 = Often, 5 = Sometimes, 6 = Almost Never, 7 = Never, or 8 = "I am not comfortable answering this question"

1. My institution experiences authoritarian management behavior based on institutional structure.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

2. My institution imposes restrictions on the auditors.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

3. My institution neglects the known reportable conditions of internal control failures.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

4. My institution's financial forecasts are based on speculations.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

5. My institution allows related-party transactions.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

6. My institution has a single person authority as opposed to a board over the deans, instructors, management, and support staff.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

7. My institution puts undue pressure on operating management to meet financial targets.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

8. My institution has a low priority on management to regularly share appropriate values or ethical standards with employees.
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____
9. My institution has a high level of management turnover.
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____
10. My institution has a multi campus organizational structure where each campus has its own operational control.
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____
11. My institution has declined profitability due to rapid growth of online program offerings at other higher educational institutions.
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____
12. My institution is in a highly competitive market or one that may be saturated.
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____
13. My institution has poor concern for declines in student enrollment.
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____
14. My institution disregards segregation of duties with respect to financial controls.
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____
15. My institution disregards employee background checks before hiring.
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____
16. My institution poorly communicates consequences of fraud to employees.
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____
17. My institution is reluctant in promoting awareness of institutional policies regularly and systematically.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

18. My institution has poor internal controls over the general ledger accounts.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

19. My institution's assets inadequately safeguarded.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

20. My institution has limited access to the medium for reporting tips on fraudulent activity.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

21. My institution has controls in place to inform management of any employee living beyond his/her means.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

22. My institution has unrealistic financial goals.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

23. My institution has exhibited disregard for regulations or controls.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

24. My institution have disregard for new accounting, statutory, or regulatory requirements.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

Section Three:

1. How do the organization's policies and procedures affect the control measures implemented by the organization's management to detect and prevent occupational fraud?
2. Is there any further support from administration would you like to have in

designing and implementing control measures to detect and prevent fraud?

3. How does your institution promote ethical training?
4. How does the institution promote continued professional development?
5. What incentives do the institution offers to key employees to retain them?

APPENDIX C. LIST OF INDEPENDENT VARIABLES

1. Domineering management behavior.
2. Restrictions on the auditors.
3. Failure to correct known reportable conditions.
4. Aggressive or unrealistic forecasts.
5. Significant related-party transactions.
6. Domination of management by a single person.
7. Excessive pressure on operating management to meet financial targets.
8. Lack of communication of inappropriate values or ethical standards.
9. High employee turnover.
10. Overly complex organizational structure.
11. Rapid growth of online program offerings.
12. High degree of competition or market saturation.
13. Significant declines in customer demand.
14. Lack of segregation of duty.
15. Lack of employee background check before new hire.
16. Lack of communication of consequences of fraud.
17. Lack of awareness of company policies.
18. Lack of internal controls.
19. Lack of safeguarding of assets.
20. Lack of medium for reporting tips on fraudulent activity.
21. Employees living beyond their means.

22. Unrealistic financial goals.
23. Disregard for regulations or controls.
24. Lack of meeting statutory and regulatory requirements.

APPENDIX D. PERMISSION REQUEST LETTER

Capella University
Institutional Review Board
225 South 6th Street, 9th Floor
Minneapolis, Minnesota 55402

This study has been approved by Capella University's IRB 170118-1, effective from August 13, 2010 through November 13, 2010.

Mr. / Ms. President,

My name is Swapna Patel, a doctoral learner under the direction of Professor Katherine Dew, Ph.D., in the School of Business and Technology at Capella University. I am conducting a research study, titled "Occupational Fraud: A study of Accredited Higher Educational Institutions of the North Central Association of Colleges and Schools." The purpose of this research is to explore the prevalence of occupational risk factors and conclude what are the most common occupational fraud risk factors present at the surveyed accredited higher education institutions of the North Central Association of Colleges and Schools.

Your organization has been randomly selected from a population of about 1000 accredited higher educational institutions of North Central Association. Since limited research has been conducted in the topic area of risk factors and controls for fraud in higher education, your participation in this survey will benefit numerous post secondary institutions. Your comptroller's/Director of Business Services/Individual who performs those tasks of a comptroller's careful consideration and response to the survey are important to ensure objective research. When he/she responds to the survey, he/she will examine the strengths and weaknesses that already exist at your institution. When all the collected data is analyzed, you will be able to gain access to the final analysis which will show the most common risk factors present at higher educational institutions in general and the perceptions on their controls and effectiveness of all other participants. The results are aggregated and all responses are confidential so the results from a single institution will not be identifiable. The perception of other participants may help you determine the efficacy of your institution's policies and procedures. As a member of the accredited higher educational institutions of North Central Association, participation will provide many benefits to all the educational institutions for coming years.

The potential risk could be that the information provided by the participants gets in to the public hands or to governmental agencies with their identities and provided responses during or after the research work is taking place. The potential risk will be nominal since the identities of the participants will not be included rather the computer identity will be used to track the response. In this way, the name of the participant and the institution will be kept anonymous .The results will be aggregated for analysis, so that no

one participant's remarks can be identified. The contents of the surveys will be saved to a password-protected hard drive in a locked file cabinet to which only this researcher will have access. The information will be kept for a period of seven years and will then be destroyed by the researcher by shredding the paper documents and the information from the hard drive will be deleted.

At this point I am requesting you to check the attached informed consent letter including the link www.surveymonkey.com to the survey instrument and then respond back to me informing that you have received my email with the attachment. After reading this permission request letter and an informed consent letter, if you decide to allow your institution to participate in the survey, please grant the permission by forwarding the informed consent letter including the link www.surveymonkey.com to the Comptroller/Director of Business Services/Individual who serves those roles at your institution and has knowledge, skills, and expertise in the area of internal controls or management duties by forwarding the attachment to respond to the survey. The participant will have seven days to take the survey. This survey may take approximately 20 minutes to complete.

I thank you very much in advance for considering granting permission for participation in the survey by forwarding the informed consent letter to the participant. Response from your institution will be greatly appreciated and will add value to my research. Please contact me via e-mail or phone: swapnapatel@hotmail.com or (715) 771-9781. You can contact my immediate supervisor Dr. Katherine Dew at Katherine.Dew@Faculty.Capella.edu or the Chair of the Institutional Review Board through the Research & Scholarship office at (612) 977-4716.

Sincerely,
Ms. Swapna Patel
Ph.D. Candidate
Capella University, School of Business and Technology

APPENDIX E. INFORMED CONSENT LETTER

Capella University
Institutional Review Board
225 South 6th Street, 9th Floor
Minneapolis, Minnesota 55402

Dear Prospective Survey Participant,

My name is Swapna Patel, a doctoral learner under the direction of Professor Katherine Dew, Ph.D., in the School of Business and Technology at Capella University. I am conducting a research study, titled “Occupational Fraud: A study of Accredited Higher Educational Institutions of the North Central Association of Colleges and Schools.” The purpose of this research is to explore the prevalence of various occupational risk factors and conclude what are the most common occupational fraud risk factors present at the surveyed accredited higher education institutions of the North Central Association of Colleges and Schools and how, if at all, the Comptrollers/Directors of Business Service/ Individuals who perform those tasks of a comptroller at the institutions perceive the impact of organizations’ culture, policies, and procedures on controls used in preventing fraud at their institution. The purpose of this research is not at all to uncover fraud at any institutions surveyed.

Your organization has been randomly selected from a population of about 1000 accredited higher educational institutions of North Central Association. Since limited research has been conducted in this area, your participation in this survey will benefit numerous post secondary institutions. Your careful consideration and response to the survey is important to ensure objective research. When you respond to the survey, you will examine the strengths and weaknesses that already exist at your institution. When all the collected data is analyzed, you will be able to gain access to the final analysis which will show the most common risk factors present at higher educational institutions in general and the perceptions on their controls and effectiveness of all other participants. The results are aggregated and all responses are confidential so the results from a single institution will not be identifiable. The perception of other participants may help you determine the efficacy of your institution’s policies and procedures. As a member of the accredited higher educational institutions of North Central Association, participation will provide many benefits to all the educational institutions for coming years.

The potential risk could be that the information provided by the participants gets in to the public hands or to governmental agencies with their identities and provided responses during or after the research work is taking place. The potential risk will be nominal since the identities of the participants will not be included rather the computer identity will be used to track the response. In this way, the name of the participant and the institution will be kept anonymous .The results will be aggregated for analysis, so that no one participant’s remarks can be identified. The contents of the surveys will be saved to a password-protected hard drive in a locked file cabinet to which only this researcher will

have access. The information will be kept for a period of seven years and will then be destroyed by the researcher by shredding the paper documents and the information from the hard drive will be deleted.

After you receive permission from your President by him/her forwarding this informed consent letter, if you decide to participate in the survey and to grant an implied consent to the researcher, click the attached web link www.surveymonkey.com to respond to the survey instrument. You have seven days to take the survey. This survey may take approximately 20 minutes to complete.

Once you complete the survey and submit, the web link will be removed and will not be accessible for anyone from your institution. This method will make sure that your responses will not be accessible to anyone else but this researcher. Once the President grants his permission to you to take the survey by forwarding this informed consent letter, he/she will have no way of knowing whether or not you participated to the survey or what were your responses to the survey.

Participation in this study is voluntary and participants may stop participating in this survey at any time without penalty. No compensations will be offered by this researcher. Agreeing to participate does not wave any of your rights; however, no funds have been set aside to compensate you in the event of injury. If you suffer harm because you participated in this research project, you may contact me at (715) 771-9781 or you may contact the Chair of the Institutional Review Board through the Research & Scholarship office at (612) 977-4716

Thank you very much for your consideration in participating in the survey. If you have any questions, please contact me via e-mail or phone: swapnapatel@hotmail.com or (715) 771-9781. You can contact my immediate supervisor Dr. Katherine Dew at Katherine.Dew@Faculty.Capella.edu or the Chair of the Institutional Review Board through the Research & Scholarship office at (612) 977-4716.

INVESTIGATOR'S STATEMENT

I certify that this form includes all information concerning the study relevant to the protection of the rights of the participants, including the nature and purpose of this research, benefits, risks, costs, and any experimental procedures.

I have described the rights and protections afforded to human research participants and have done nothing to pressure, coerce, or falsely entice this person to participate. I am available to answer the participant's questions and have encouraged him/her to ask additional questions at any time during the course of the study.

Investor's Signature: _____
Investor's Name: Swapna Patel
Date: _____

Sincerely,
Ms. Swapna Patel
4345 Nicolet Drive
Green Bay,
WI 54311

APPENDIX F. REMINDER LETTER FOR PERMISSION REQUEST

Capella University
Institutional Review Board
225 South 6th Street, 9th Floor
Minneapolis, Minnesota 55402

This study has been approved by Capella University's IRB 170118-1, effective from August 13, 2010 through November 13, 2010.

Mr. / Ms. President,

This is a reminder letter for the permission requested a week ago for you to grant permission for your institution to participate in my study. I do understand you are very busy and may not have responded to this request or simply did not get this email earlier. I am sending this second request. Please help me with this research since it is very important to all the accredited higher educational institutions of North Central Association of Colleges and Schools.

My name is Swapna Patel, a doctoral learner under the direction of Professor Katherine Dew, Ph.D., in the School of Business and Technology at Capella University. I am conducting a research study, titled "Occupational Fraud: A study of Accredited Higher Educational Institutions of the North Central Association of Colleges and Schools." The purpose of this research is to explore the prevalence of various occupational risk factors and conclude what are the most common occupational fraud risk factors present at the surveyed accredited higher education institutions of the North Central Association of Colleges and Schools and the Comptrollers/Directors of Business Service/Individuals who perform those tasks of a comptroller at those institution's perception on how or, if at all, the organization's culture, policies, and procedures impact the controls used in preventing fraud at their institution.

Your organization has been randomly selected from a population of about 1000 accredited higher educational institutions of North Central Association. Since limited research has been conducted in the topic area of risk factors and controls for fraud in higher education, your participation in this survey will benefit numerous post secondary institutions. Your careful consideration and response to the survey is important to ensure objective research. When you respond to the survey, you will examine the strengths and weaknesses that already exist at your institution. When all the collected data is analyzed, you will be able to gain access to the final analysis which will show the most common risk factors present at higher educational institutions in general and the perceptions on their controls and effectiveness of all other participants. The results are aggregated and all responses are confidential so the results from a single institution will not be identifiable. The perception of other participants may help you determine the efficacy of your institution's policies and procedures. As a member of the accredited higher educational institutions of North Central Association, participation will provide many benefits to all

the educational institutions for coming years.

At this point I am requesting you to check the attached informed consent letter including the link www.surveymonkey.com to the survey instrument and then respond back to me informing that you have received my email with the attachment. After reading this permission request letter and an informed consent letter, if you decide to allow your institution to participate in the survey, please grant the permission by forwarding the attached informed consent letter including the link www.surveymonkey.com to the Comptroller/Director of Business Services/Individual who serves those roles at your institution and has knowledge, skills, and expertise in the area of internal controls or management duties by forwarding the attachment to respond to the survey. The participant will have seven days to take the survey. This survey may take approximately 20 minutes to complete.

I thank you very much in advance for considering granting permission for participation in the survey. Response from your institution will be greatly appreciated and will add value to my research. Please contact me via email or phone: swapnapatel@hotmail.com or (715) 771-9781.

Sincerely,
Ms. Swapna Patel
Ph.D. Candidate
Capella University, School of Business and Technology

APPENDIX G. TELEPHONE SCRIPT

Mr. / Ms. President,

My name is Swapna Patel. I am a doctoral learner at Capella University. I am conducting a research study on Occupational fraud at Accredited Higher Educational Institutions of the North Central Association of Colleges and Schools. Your organization has been randomly selected from a population of about 1000 accredited higher educational institutions of North Central Association.

(Insert President's name), I had emailed you a permission request letter and a reminder letter over the last two weeks. Since I have not heard back from you, I am calling you today to ask you if you are interested in having your institution participate in this study. Pause. If you still are interested I will send you another email with all the attachments. (Insert President's name), you do not have to tell me any thing else whether you are going to allow your institution to participate or not, or who will be taking the survey. Pause.

(Insert President's name), the purpose of this research is to explore the prevalence of occupational risk factors and conclude what are the most common occupational fraud risk factors present at the surveyed accredited higher education institutions of the North Central Association of Colleges and Schools. Pause.

(Insert President's name), to make this research meaningful and useful, I really need your help. (Insert President's name), will you please consider allowing your institution participates in this research study? Pause.

Thank you (Insert President's name) for your time and consideration to help me with my research.

APPENDIX H. CROSS TABULATION: TYPE OF INSTITUTIONS

Cross Tabulation: Type of Institution

Variable	Institution											
	Public				Private				Proprietary			
	Likert scale				Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V1	7	93	0	0	0	83	17	0	0	100	0	0
V2	0	14	86	0	0	25	75	0	0	0	100	0
V3	0	25	71	4	0	25	75	0	0	0	100	0
V4	0	64	32	4	0	50	50	0	0	100	0	0
V5	7	61	32	0	0	67	25	8	0	0	100	0
V6	10	47	43	0	0	58	42	0	0	0	100	0
V7	0	64	36	0	0	50	50	0	0	0	100	0
V8	0	43	57	0	0	25	67	8	0	0	100	0
V9	0	82	18	0	0	75	25	0	0	0	100	0
V10	4	28	64	4	0	8	92	0	0	100	0	0
V11	4	39	0	0	0	50	50	0	0	0	100	0
V12	7	89	4	0	8	84	8	0	0	100	0	0
V13	0	29	71	0	0	17	83	0	0	0	100	0
V14	0	36	64	0	0	42	58	0	0	0	100	0
V15	4	35	61	0	0	25	75	0	0	0	100	0
V16	4	52	43	4	0	42	50	8	0	0	100	0

Cross Tabulation: Type of Institution (continued)

Variable	Institution											
	Public				Private				Proprietary			
	Likert scale				Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V17	0	64	36	0	0	50	50	0	0	0	100	0
V18	0	32	68	0	0	33	67	0	0	0	100	0
V19	0	46	54	0	0	50	50	0	0	0	100	0
V20	4	32	64	0	0	33	59	8	0	0	100	0
V21	8	46	46	0	0	58	42	0	0	0	100	0
V22	0	53	47	0	0	33	59	8	0	0	100	0
V23	0	50	50	0	0	25	67	8	0	0	100	0
V24	0	29	71	0	0	25	75	0	0	0	100	0

Note. Scale 1 shows no controls present, Scales 2-6 show some controls present and could be risk factors, Scale 7 shows strong control present, and Scale 8 shows that the participant was not comfortable answering this question. V1 = Domineering management behavior, V2 = Restrictions on the auditors, V3 = Failure to correct known reportable conditions, V4 = Aggressive or unrealistic forecasts, V5 = Significant related-party transactions, V6 = Domination of management by a single person, V7 = Excessive pressure on operating management to meet financial targets, V8 = Lack of communication of inappropriate values or ethical standards, V9 = High employee turnover, V10 = Overly complex organizational structure, V11 = Rapid growth of online program offerings, V12 = High degree of competition or market saturation, V13 = Significant declines in customer demand, V14 = Lack of segregation of duty, V15 = Lack of employee background check before new hire, V16 = Lack of communication of consequences of fraud, V17 = Lack of awareness of company policies, V18 = Lack of internal controls, V19 = Lack of safeguarding of assets, V20 = Lack of medium for reporting tips on fraudulent activity, V21 = Employees living beyond their means, V22 = Unrealistic financial goals, V23 = Disregard for regulations or controls, V24 = Lack of meeting statutory and regulatory requirements.

APPENDIX I. CROSS TABULATION: HIGHEST DEGREE GRANTED

Cross Tabulations: Highest Degree Granted in Percentages

V	Degree															
	Associates'				Bachelor's				Master's				PhD			
	Likert scale				Likert scale				Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V1	5	95	0	0	0	100	0	0	0	86	14	0	9	81	10	0
V2	0	14	86	0	0	50	50	0	0	29	71	0	0	9	91	0
V3	0	24	71	5	0	50	50	0	0	14	86	0	0	27	82	0
V4	4	62	29	5	0	50	50	0	0	43	57	0	0	64	36	0
V5	5	62	33	0	0	50	50	0	0	57	28	15	9	64	27	0
V6	9	47	44	0	0	50	50	0	0	43	57	0	9	55	36	0
V7	5	62	33	0	0	100	0	0	0	28	72	0	0	54	45	0
V8	5	43	52	0	0	0	50	50	0	28	72	0	0	27	73	0
V9	0	86	14	0	0	100	0	0	0	72	28	0	0	64	36	0
V10	5	28	62	5	0	0	100	0	0	14	86	0	0	27	73	0
V11	0	38	62	0	0	0	100	0	0	28	72	0	0	64	36	0
V12	0	95	5	0	50	50	0	0	14	72	14	0	9	91	0	0
V13	5	33	62	0	0	0	100	0	0	14	86	0	0	9	91	0
V14	0	33	67	0	0	50	50	0	0	28	72	0	0	45	54	0
V15	5	28	67	0	0	100	0	0	0	14	86	0	0	36	64	0
V16	0	57	43	0	0	0	50	50	0	28	72	0	9	55	36	0
V17	0	62	38	0	0	100	0	0	0	28	72	0	0	64	36	0
V18	0	24	76	0	0	100	0	0	0	28	72	0	0	36	64	0

Cross Tabulations: Highest Degree Granted in Percentages (continued)

	Degree															
	Associates'				Bachelor's				Master's				PhD			
	Likert scale				Likert scale				Likert scale				Likert scale			
V	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V19	0	43	57	0	0	0	100	0	0	43	57	0	0	64	36	0
V20	5	33	62	0	0	0	50	50	0	14	86	0	0	45	65	0
V21	10	43	47	0	0	0	100	0	0	57	43	0	0	64	36	0
V22	0	57	43	0	0	50	0	50	0	43	57	0	0	27	73	0
V23	0	52	48	0	0	0	50	50	0	28	72	0	0	36	64	0
V24	0	24	76	0	0	50	50	0	0	14	86	0	0	36	64	0

Note. V = variable. Scale 1 shows no controls present, Scales 2-6 show some controls present and could be risk factors, Scale 7 shows strong control present, and Scale 8 shows that the participant was not comfortable answering this question. V1 = Domineering management behavior, V2 = Restrictions on the auditors, V3 = Failure to correct known reportable conditions, V4 = Aggressive or unrealistic forecasts, V5 = Significant related-party transactions, V6 = Domination of management by a single person, V7 = Excessive pressure on operating management to meet financial targets, V8 = Lack of communication of inappropriate values or ethical standards, V9 = High employee turnover, V10 = Overly complex organizational structure, V11 = Rapid growth of online program offerings, V12 = High degree of competition or market saturation, V13 = Significant declines in customer demand, V14 = Lack of segregation of duty, V15 = Lack of employee background check before new hire, V16 = Lack of communication of consequences of fraud, V17 = Lack of awareness of company policies, V18 = Lack of internal controls, V19 = Lack of safeguarding of assets, V20 = Lack of medium for reporting tips on fraudulent activity, V21 = Employees living beyond their means, V22 = Unrealistic financial goals, V23 = Disregard for regulations or controls, V24 = Lack of meeting statutory and regulatory requirements

APPENDIX J. CROSS TABULATION: REGIONS

Cross Tabulation: Mid-South, Great Lakes, and North Central Region in Percentages

Variable	Region											
	Mid-South				Great Lakes				North Central			
	Likert scale				Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V1	0	100	0	0	0	100	0	0	5	90	5	0
V2	0	0	100	0	0	25	75	0	0	5	95	0
V3	0	0	100	0	0	25	50	25	0	25	75	0
V4	0	0	100	0	0	75	25	0	0	65	30	5
V5	0	0	100	0	0	100	0	0	5	55	35	5
V6	0	100	0	0	0	25	75	0	10	60	30	0
V7	0	100	0	0	0	50	50	0	0	40	60	0
V8	0	0	100	0	0	75	25	0	0	40	60	0
V9	0	0	100	0	0	100	0	0	0	65	35	0
V10	0	100	0	0	0	50	50	0	0	25	70	5
V11	0	0	100	0	0	25	75	0	0	50	50	0
V12	0	100	0	0	25	50	25	0	5	90	5	0
V13	0	0	100	0	0	50	50	0	0	25	75	0
V14	0	0	100	0	0	50	50	0	0	30	70	0
V15	0	0	100	0	0	25	75	0	5	25	70	0
V16	0	0	100	0	0	75	25	0	0	50	50	0
V17	0	0	100	0	0	75	25	0	0	55	45	0
V18	0	0	100	0	0	25	75	0	0	25	75	0

Cross Tabulation: Mid-South, Great Lakes, and North Central Region in Percentages (continued)

Variable	Region											
	Mid-South				Great Lakes				North Central			
	Likert scale				Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V19	0	0	100	0	0	50	50	0	0	45	55	0
V20	0	0	100	0	0	50	50	0	5	35	65	0
V21	100	0	0	0	0	25	75	0	0	50	50	0
V22	0	0	100	0	0	50	50	0	0	50	50	0
V23	0	0	100	0	0	100	0	0	0	40	60	0
V24	0	0	100	0	0	50	50	0	0	20	80	0

Note. Scale 1 shows no controls present, Scales 2-6 show some controls present and could be risk factors, Scale 7 shows strong control present, and Scale 8 shows that the participant was not comfortable answering this question. V1 = Domineering management behavior, V2 = Restrictions on the auditors, V3 = Failure to correct known reportable conditions, V4 = Aggressive or unrealistic forecasts, V5 = Significant related-party transactions, V6 = Domination of management by a single person, V7 = Excessive pressure on operating management to meet financial targets, V8 = Lack of communication of inappropriate values or ethical standards, V9 = High employee turnover, V10 = Overly complex organizational structure, V11 = Rapid growth of online program offerings, V12 = High degree of competition or market saturation, V13 = Significant declines in customer demand, V14 = Lack of segregation of duty, V15 = Lack of employee background check before new hire, V16 = Lack of communication of consequences of fraud, V17 = Lack of awareness of company policies, V18 = Lack of internal controls, V19 = Lack of safeguarding of assets, V20 = Lack of medium for reporting tips on fraudulent activity, V21 = Employees living beyond their means, V22 = Unrealistic financial goals, V23 = Disregard for regulations or controls, V24 = Lack of meeting statutory and regulatory requirements

Cross Tabulation: South Central and Rocky Mountain Regions in Percentages

Variable	South Central				Rocky Mountain			
	Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8
V1	0	100	0	0	14	71	15	0
V2	0	12	88	0	0	100	0	0
V3	0	44	56	0	0	0	100	0
V4	0	66	34	0	0	43	57	0
V5	11	66	23	0	0	57	43	0
V6	12	44	44	0	0	28	72	0
V7	0	77	23	0	0	86	14	0
V8	0	33	56	11	0	14	86	0
V9	0	100	0	0	0	86	14	0
V10	11	0	89	0	0	28	72	0
V11	0	44	56	0	0	28	72	0
V12	0	100	0	0	14	86	0	0
V13	0	22	78	0	0	28	72	0
V14	0	67	33	0	0	14	86	0
V15	0	56	44	0	0	29	71	0
V16	11	45	33	11	0	43	57	0
V17	0	67	33	0	0	57	43	0
V18	0	56	44	0	0	28	72	0

Cross Tabulation: South Central and Rocky Mountain Regions in Percentages

(continued)

Variable	Region							
	South Central				Rocky Mountain			
	Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8
V19	0	67	33	0	0	28	72	0
V20	0	22	67	11	0	28	72	11
V21	0	56	44	0	14	58	28	0
V22	0	44	44	12	0	43	57	12
V23	0	55	33	11	0	0	100	11
V24	0	44	56	0	0	14	86	0

Note. Scale 1 shows no controls present, Scales 2-6 show some controls present and could be risk factors, Scale 7 shows strong control present, and Scale 8 shows that the participant was not comfortable answering this question. V1 = Domineering management behavior, V2 = Restrictions on the auditors, V3 = Failure to correct known reportable conditions, V4 = Aggressive or unrealistic forecasts, V5 = Significant related-party transactions, V6 = Domination of management by a single person, V7 = Excessive pressure on operating management to meet financial targets, V8 = Lack of communication of inappropriate values or ethical standards, V9 = High employee turnover, V10 = Overly complex organizational structure, V11 = Rapid growth of online program offerings, V12 = High degree of competition or market saturation, V13 = Significant declines in customer demand, V14 = Lack of segregation of duty, V15 = Lack of employee background check before new hire, V16 = Lack of communication of consequences of fraud, V17 = Lack of awareness of company policies, V18 = Lack of internal controls, V19 = Lack of safeguarding of assets, V20 = Lack of medium for reporting tips on fraudulent activity, V21 = Employees living beyond their means, V22 = Unrealistic financial goals, V23 = Disregard for regulations or controls, V24 = Lack of meeting statutory and regulatory requirements.

APPENDIX K CROSS TABULATION: INSTITUTION SIZE BY NUMBER OF STUDENTS ENROLLED

Cross Tabulation: Institution Size by Number of Students Enrolled in Percentages for Less Than 2,500, 2,500-4,999, and 5,000-9,999

Variable	Student enrollment											
	Less than 2,500				2,500-4,999				5,000-9,999			
	Likert scale				Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V1	0	100	0	0	0	100	0	0	0	67	33	0
V2	0	25	75	0	0	17	83	0	0	11	89	0
V3	0	38	62	0	0	17	83	0	0	22	77	0
V4	0	56	44	0	0	33	67	0	0	89	11	0
V5	0	75	19	6	0	50	50	0	11	44	45	0
V6	6	50	44	0	0	50	17	33	11	33	56	0
V7	0	63	37	0	0	67	33	0	0	55	45	0
V8	0	31	63	6	0	50	50	0	0	22	78	0
V9	0	94	6	0	0	33	67	0	0	67	33	0
V10	6	6	88	0	0	50	50	0	0	33	67	0
V11	0	25	75	0	0	67	33	0	0	56	44	0
V12	13	75	12	0	17	83	0	0	0	100	0	0
V13	0	25	75	0	0	33	67	0	0	22	78	0
V14	0	38	62	0	0	50	50	0	0	44	56	0
V15	0	31	69	0	0	33	67	0	11	33	56	0

Cross Tabulation: Institution Size by Number of Students Enrolled in Percentages for Less Than 2,500, 2,500-4,999, and 5,000-9,999 (continued)

Variable	Student enrollment											
	Less than 2,500				2,500-4,999				5,000-9,999			
	Likert scale				Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V16	0	38	56	6	0	67	33	0	0	33	67	0
V17	0	56	44	0	0	67	33	0	0	56	44	0
V18	0	44	56	0	0	33	67	0	0	11	89	0
V19	0	44	56	0	0	50	50	0	0	33	67	0
V20	0	25	69	6	0	33	67	0	0	33	67	0
V21	0	50	50	0	17	50	33	0	11	56	33	0
V22	0	63	31	6	0	17	83	0	0	44	56	0
V23	0	50	44	6	0	17	83	0	0	44	56	0
V24	0	33	67	0	0	33	67	0	0	33	67	0

Note. Scale 1 shows no controls present, Scales 2-6 show some controls present and could be risk factors, Scale 7 shows strong control present, and Scale 8 shows that the participant was not comfortable answering this question. V1 = Domineering management behavior, V2 = Restrictions on the auditors, V3 = Failure to correct known reportable conditions, V4 = Aggressive or unrealistic forecasts, V5 = Significant related-party transactions, V6 = Domination of management by a single person, V7 = Excessive pressure on operating management to meet financial targets, V8 = Lack of communication of inappropriate values or ethical standards, V9 = High employee turnover, V10 = Overly complex organizational structure, V11 = Rapid growth of online program offerings, V12 = High degree of competition or market saturation, V13 = Significant declines in customer demand, V14 = Lack of segregation of duty, V15 = Lack of employee background check before new hire, V16 = Lack of communication of consequences of fraud, V17 = Lack of awareness of company policies, V18 = Lack of internal controls, V19 = Lack of safeguarding of assets, V20 = Lack of medium for reporting tips on fraudulent activity, V21 = Employees living beyond their means, V22 = Unrealistic financial goals, V23 = Disregard for regulations or controls, V24 = Lack of meeting statutory and regulatory requirements

Cross Tabulation: Institution Size by Number of students enrolled in Percentages for 10,000-19,999, 20,000-29,000, and 40,000+

Variable	Student enrollment											
	10,000-19,999				20,000-29,999				40,000+			
	Likert scale				Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V1	0	100	0	0	29	71	0	0	0	100	0	0
V2	0	14	86	0	0	0	100	0	0	0	100	0
V3	0	14	72	14	0	0	100	0	0	0	100	0
V4	0	57	43	0	0	100	0	0	0	0	0	100
V5	14	57	29	0	0	50	50	0	0	100	0	0
V6	14	57	29	0	0	50	50	0	0	0	100	0
V7	0	57	43	0	0	50	50	0	0	0	100	0
V8	0	29	71	0	0	100	0	0	0	0	100	0
V9	0	86	14	0	0	100	0	0	0	100	0	0
V10	0	14	72	14	0	50	50	0	0	100	0	0
V11	0	29	71	0	0	100	0	0	0	0	100	0
V12	0	100	0	0	0	100	0	0	0	100	0	0
V13	0	14	86	0	0	50	50	0	0	0	100	0
V14	0	14	86	0	0	50	50	0	0	0	100	0
V15	0	43	57	0	0	0	100	0	0	0	100	0
V16	14	57	29	0	0	100	0	0	0	100	0	0
V17	0	100	0	0	0	100	0	0	0	100	0	0

Cross Tabulation: Institution Size by Number of students enrolled in Percentages for 10,000-19,999, 20,000-29,000, and 40,000+ (continued)

Variable	Students enrolled											
	10,000-19,999				20,000-29,999				40,000+			
	Likert scale				Likert scale				Likert scale			
	1	2-6	7	8	1	2-6	7	8	1	2-6	7	8
V18	0	29	71	0	0	50	50	0	0	0	100	0
V19	0	57	43	0	0	100	0	0	0	0	100	0
V20	0	43	57	0	50	0	50	0	0	100	0	0
V21	0	57	43	0	0	0	100	0	0	0	100	0
V22	0	43	57	0	0	50	50	0	0	0	100	0
V23	0	29	71	0	0	50	50	0	0	100	0	0
V24	0	14	86	0	0	50	50	0	0	0	100	0

Note. Scale 1 shows no controls present, Scales 2-6 show some controls present and could be risk factors, Scale 7 shows strong control present, and Scale 8 shows that the participant was not comfortable answering this question. V1 = Domineering management behavior, V2 = Restrictions on the auditors, V3 = Failure to correct known reportable conditions, V4 = Aggressive or unrealistic forecasts, V5 = Significant related-party transactions, V6 = Domination of management by a single person, V7 = Excessive pressure on operating management to meet financial targets, V8 = Lack of communication of inappropriate values or ethical standards, V9 = High employee turnover, V10 = Overly complex organizational structure, V11 = Rapid growth of online program offerings, V12 = High degree of competition or market saturation, V13 = Significant declines in customer demand, V14 = Lack of segregation of duty, V15 = Lack of employee background check before new hire, V16 = Lack of communication of consequences of fraud, V17 = Lack of awareness of company policies, V18 = Lack of internal controls, V19 = Lack of safeguarding of assets, V20 = Lack of medium for reporting tips on fraudulent activity, V21 = Employees living beyond their means, V22 = Unrealistic financial goals, V23 = Disregard for regulations or controls, V24 = Lack of meeting statutory and regulatory requirements.

APPENDIX L. RESPONSES OF THE QUALITATIVE SECTION OF THE SURVEY

The term institution is used for brevity to recognize each accredited higher educational institutions of the North Central Association of Colleges and Schools, to name each group of answers, and to facilitate the classification process. Institution refers to a group of answers written by one individual; who by no means states the institutional view or statement of the institution legal entity, and as a whole, in relation to policy and procedures and occupational fraud. The answers summarized here may be the direct reflection of the respondent's opinion and perception.

Institution #1 answered three out of five questions. This institution states that the lack of success of the control measures is related to the high turnover rate of employees in administrative positions. The institution has no incentives to encourage employees to stay in the institution.

Institution #2 answered all five questions. Affirms that regular employee benefits are the incentives in place; there is no knowledge of any other type of incentive.

Institution #3 answered all five questions. For this institution, annual audits, and workshops, trainings and reviews of conflict of interest are mandatory. Bonuses are available for employees with high performance and those who excel and exceed the board's expectations.

Institution #4 answered all five questions. There are several levels of control in this institution, being the highest one the Board of Trustees. The programs and trainings are coordinated and facilitated by an external institution, which has helped the institution to focus on right-decision-making along the campus. Additionally, the institution offers

an economic incentive to employees, based on attendance and participation in the human resources, professional-development events and programs. Reportedly, all these measures, combined with employee benefits that produce life-long assets for staff and their families, help to keep the turnover rate low, and eliminate the necessity of extra incentive packages.

Institution #5 answered two of five questions. The institution applies control by comparing checks and balances, and employees are encouraged by funds allocated and cross training.

Institution #6 answered two of five questions. The institution is driven by their five core values and allocates faculty conference funds.

Institution #7 answered all five questions. Ethics is taught, facilitated and promoted within the institution, and the facilitation of it is made accessible by offering it in-house and making some of the trainings optional. The institution reports “very few” incentives in place to retain its employees.

Institution #8 answered all five questions. The institution’s fraud policy is fairly new and was implemented with a mandatory training for all employees. Even though, the policy as well as the trainings do not promote ethics or control measures, are focused instead on a sense of awareness and ethical attitude. The wish of having external control and facilitation is expressed. There is a professional-development budget allocated, but the institution does not encourage it actively.

Institution #9 answered all five questions. Ethics training and professional development are a departmental responsibility. The mechanism to retain their employees is by building a “unique work environment”.

Institution #10 answered all five questions. The institution conducts annual reviews and makes improvements according to identified deficiencies. The limitations to exceed the actual measures are resources, not staff ability or intention. On-line trainings and a report hotline are available. Despite the fact that there are no additional incentives in place, the institution reports that the loss of key employees is due to retirement.

Institution #11 answered all five questions. This institution's answers are extremely short and vague. Overall, they report that the institution has policies and procedures that meet the need of occupational fraud control and prevention, and that professional development is included and a result of communicating annually the institutions expectations to each employee.

Institution #12 answered all five questions. In this institution, there is a lack of internal controls. Ethical training is part of employee orientation, and promoted through occasional professional-development opportunities, such as professional seminars and conferences.

Institution #13 answered all five questions. The institutions control measures are in accordance with the policies and procedures of the institution. The institution expresses the wish of having more resources to implement necessary measures. Because it is a public institution, it has been not possible to offer economic incentives, but qualitative incentives are in place.

Institution #14 answered all five questions. Desired resources would be the conformation of an auditing committee and an anonymous hotline to report suspicious situations. Although the institution offers scheduled professional-development days, they report that the institution does not actively promote ethical training.

Institution #15 answered one of five questions. The institution summarizes the survey in one answer, stating that each employee has a budget allocated for professional development and is encouraged to use it.

Institution #16 answered all five questions. Control and prevention measures are in compliance with policies and procedures established in the institution. The incentives offered by the institution are a strong benefits package, good work environment and “advancement opportunities”.

Institution #17 answered all five questions. Agreement between control measures and Policies is reviewed continuously, by board requirements. The ethics are promoted by providing employees with an institutional ethics statement upon hiring, and professional development has funds allocated, to spend in workshops and courses.

Institution #18 answered all five questions. The current system of control and audit is managed by an external agent, but the institution recognizes that actual staffing levels limit the ability to identify, report and investigate from the inside, expressing their desire to have wider staff support to have effective internal control. Ethics and ethical conduct are qualified as the foremost issues within the institution, and emanate from the highest administrative positions, being promoted from level to level as an institutional value, practiced and reinforced daily through regular interaction. The institution states that resources are allocated for professional development and employees are encouraged to participate in state wide conferences, web based meetings and training sessions, but they reflect on how these specific budgets are in risk of being diminished during hard economic periods.

Institution #19 answered four of five questions. The institution has a rigid control system, but they reflect on how these strict measures may be a trigger for individuals to try and find ways to circumvent the system. Additional to the lack of economic incentives, the actual economic situation might lead to cuts on existing benefits, which will be reflected on key employee retention.

Institution #20 answered four of five questions. The institutions management implements control measures that are supported and enhanced by the existing policies and procedures. This system is based on an internal audit practice and annual training for staff involved in financial tasks; the last activity is funded by the institution.

Institution #21 answered all five questions. The institution has two mechanisms: 1. Fraud detection procedures and 2. Awareness, through meetings and on-line tools. These activities have funds allocated and are promoted as on-campus training. Their methods to retain employees in general are a competitive financial package and retirement incentives.

Institution #22 answered three of five questions. In this institution, staff development and web-based raining is mandatory for annual performance reviews.

Institution #23 answered two of five questions. The institution reports that, besides few or no incentives, faculty has budgets allocated annually for professional development.

Institution #24 answered all five questions. Currently, the institution has policies and procedures that dictate the control measures and levels, and that include an ethics policy that is reviewed at employee orientation. There are no incentives in place.

Institution #25 answered all five questions Transparency and proper stewardship of the institutions resources, is part of and an outcome of the policies and procedures of this institution. Even if they do not have incentives in place, they are working on implementing performance evaluations that link they results to annual raises.

Institution #26 answered all five questions. The institution is in the process of drafting and formulating process that will help reflect current practices, therefore preventing fraudulent actions. Overall, the professional development is promoted and encouraged by annual conflict of interest's statements, code of conduct for principle investigators, a counsel dedicated to PD, and a learning management system.

Institution #27 answered all five questions. The institution benefit from the mixture of internal Policies and procedures, with fresh ideas brought in by Managers, who are encouraged to involve in external institutions. There is a bonus plan in place and funding for educational opportunities as incentives.

Institution #28 answered all five questions. This institution reports two types and level of control on their policies and procedures: 1. Internal annual review and reformulation and 2. External annual audit and testing. Even if one of the stages of control and review is internal, the desire of obtaining more staffing resources is expressed.