Walden University

COLLEGE OF MANAGEMENT AND TECHNOLOGY

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Linval Frazer

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2011

Abstract

The Effect of Internal Control on the Operating Activities of Small Restaurants

by

Linval George Frazer

MBA, Keller Graduate School of Management, 2007

MS, Keller Graduate School of Management, 2006

BBA, International Business, Berkeley College, 2004

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of Doctor of Philosophy

Applied Management and Decision Sciences

Walden University

May 2011

Abstract

Researchers have found that more than 67% of restaurants fail within the first 3 years of their operation. These findings underscore the restaurant industry's current crisis of profitability and survivability. The industry's average profit is generally small, ranging from 3% to 7%. Despite these problems, researchers have not examined the effect of internal control on the operating activities of small restaurants. Internal control is defined in this study as all the policies and procedures management uses to ensure the reliability of financial reporting, compliance with laws and regulations, and the effectiveness and efficiency of operations. The purpose of this study was to determine restaurant managers' perceptions of the internal control systems of restaurants, and to examine the relationship of internal controls in restaurants and (a) the protection of assets, (b) the segregation of duties, and (c) the verification of transactions. Two hundred and seventy restaurants were selected through random sampling, and multiple regression and exploratory data analysis, including descriptive statistics, were used to analyze the data. The multiple regression analyses indicated statistically significant relationships linking perceptions of internal control systems in restaurants with each of the 3 predictors; protection of assets, segregation of duties and verification of transactions. The results indicated that majority of the study group perceived restaurants' internal control system to be inadequate compared to the Committee of Sponsoring Organization Treadway Commission (COSO) internal control integrated framework. The results of this research have potential for social change as they may increase government compliance, and improve financial reporting and best business practices of restaurants.

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Dedication

This dissertation is dedicated to my mother, Mavis Harris, whose unwavering commitment to the unyielding desire to overcome obstacles is an inspiration and an invaluable gift to me. She does not express her views through words as much as she provides an example to live by. She continues to live as the example everyday. I appreciate the understanding of my sons, Shavaughn and Tyler, for the time they sacrificed during the completion of this program.

Acknowledgments

I would like to thank the members of my dissertation committee and their leadership throughout this arduous process. I would like to thank Dr. David Pritchard, my dissertation committee chair, for challenging me to make a difference with this research. I would like to extend my appreciation to Dr. Reza Hamzaee and Dr. Cheryl Winsten-Bartlett Wilson, whose expertise and guidance contributed significantly to the validity of this research.

I would like to thank Dr. David Kistler for giving me permission to use the ICSQ in this research. I would also like to acknowledge Dr.Glen Zeitzer and Kristin Rowe from Berkeley College, who inspired me, prior to and throughout this program. Their professionalism, encouragement, and motivation were a catalyst toward this achievement.

I would like to thank my family and friends who provided love, support, and encouragement to stay on course throughout this challenging journey. I convey special acknowledgement to my mother, Mavis Harris, who taught me to persevere and prepared me to face the challenges with faith and humility. Many friends have been patient with me as I disappeared for days, sometimes weeks at a time, to research and write. Although I cannot acknowledge everybody, I specifically acknowledge Dr. Stephanie Cato, a friend and colleague who has been a reliable and sustained source of encouragement and help throughout the process. I acknowledge Sheyl Service, Marcus Gildersleeve and Lennox White, who provided love support and encouragement when the going was tough. Finally, I would like to thank those who participated in the study, the facilitators of the program, and the colleagues who made the journey an enjoyable experience.

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Chapter 1: Introduction to the Study

The restaurant industry is the second largest employer in the United States. It employs an estimated 13.1 million people, or 9% of the workforce in the United States (National Restaurant Association [NRA], 2008)). More than 945,000 restaurants and food services locations with annual sales of more than $500 billion exist in the United States (NRA, 2008). Restaurants generated more than $70 billion in profits in 2008 (NRA, 2008). This total amounted to 47% of what people in the United Stated spend on food annually (NRA, 2008). Typical restaurant food costs are about 30% to 35% of sales (Kotshevar & Withrow, 2008; Brown, 2006). Payroll and employee benefits cost around 30% to 35% of sales (Kotshevar & Withrow, 2008). The average industry profit is generally small, ranging from 3% to 7% (Kotschevar & Withrow, 2008; NRA, 2008).

Few food service operations operate successfully if their combined costs of goods sold and labor costs are above 65%, with the most common division being 35% food and beverage and 30% labor (Kotscevar & Withrow, 2008). Operations with higher costs that operate well are usually subsidized in some way. According to Kotschevar and Withrow (2008), this 65% figure is not universal. If there is proper internal control, the combined cost could total 75% and still leave a profit (Kotschevar & Withrow, 2008; Brown, 2006).

Although the restaurant industry is important to the U.S. economy, a substantial number of restaurants fail in the first 3 years (English, 1996; Parsa, Self, Njite, & King, 2005). Restaurant failures have been attributed to economic and social factors, competition and legal restrictions, and even government intervention, but most restaurant failures can be attributed to inadequate planning and improper internal control (Lee, 2006). Parsa et al. (2005) found that failure rates are notably higher for small, independent operations than for relatively large franchised restaurants. Parsa et al. (2005) also found that no restaurant had closed because of external forces. In contrast to earlier studies (English, 1996), Parsa et al. (2005) concluded that if restaurants are properly managed, external factors may not automatically lead to failure.

Boyle and Desai (1991) found that the majority of businesses fail because of internal factors affected by management's actions and disciplines. Boyle and Desai (1991) also found a negative correlation between the duration a firm is in business and its likelihood of failure; that is, if firms survive long enough, it is reasonable to expect that they have resolved their internal control issues. Doyle, Ge, and McVay (2005) supported Boyle and Desai's findings. Doyle et al. (2005) attributed the accounting scandals in 2001, to material weaknesses in internal control and the need for regulation. Doyle et al. (2005) also found that material weaknesses were more likely to occur in firms that are smaller, weaker, and younger. These findings have contributed to the call for more research on the factors associated with restaurants' survival (Parsa et al., 2005).

Previous studies on internal control bearings have focused on financial statements and their impact on the operation of firms (Curtis & Borthick, 1999; Janvrin, 2003; Kiger & Rose, 2004; Samson, Flesher, & Previs, 2006). Other studies have focused on the documentation of internal control structures and the significant monetary effect of weak controls on the firm's value (Dow, Shea, & Waldrup, 2009). The focus of this study is on internal control procedures in restaurants, on financial statements as well as the operation of restaurants through the use of the Committee of Sponsoring Organizations' ([COSO],

1992) internal control integrated framework to determine the extent to which best business practices lead to survivability. Operating activities are defined in this study as the sales and the expense activities that enter into the determination of operating income (Needles, Powers, & Crosson, 2005). Operating profit is defined as the return from standard operations, excluding the impact of extraordinary items and other comprehensive income such as investments and financing (Garrison & Noreen, 2009). The operating profit reveals the extent of a company's ability to earn profit from standard operation (S-VC-FC > 0) (Whittington & Delaney, 2009; Garrison & Noreen, 2009; Needles, Powers, & Crosson, 2005)

Statement of the Problem

The failure rate of restaurants in the United States has been high over the past 2 decades. A significant percentage of recently opened restaurants in the United States do not thrive past their second anniversary (Brown, 2003; Parsa et al., 2005). The restaurant industry operates within a small profit margin, giving it little or no room for errors, waste, and fraud (NRA, 2008; Raab, Shoemaker, & Mayer, 2007). As a result, the restaurant industry is faced with many challenges to coordinate business resources and foster best business practices. A majority of these best business practices challenges have been the result of inefficient internal control systems (Martin, 1989).

Researchers in empirical studies have shown that weak internal controls in organizations cause poor earning quality, lower return on investment, lower profit margin (Doyle et al., 2005), and lower market value (Franco et al., 2005). Weak internal controls in organizations are also associated with higher audit fees (Eldridge & Kealey, 2005). In addition, firms with internal control problems attract more scrutiny from government and regulators causing penalties, more in audit fees, increase expenses, and lower profits (Jensen, 1993; Franco et al., 2005; Boyle & Desai, 1991)

Proper restaurant management is an inherent responsibility of managers to accomplish objectives through others by ensuring that they follow procedures to minimize losses and improve customer satisfaction (Aronoff & Ward, 2007). This study determined the extent to which small restaurants operating in Nassau County in New York State have adequate internal controls in their operating activities consistent with the COSO standard.

Background of the Problem

New York is a busy national and international commercial thoroughfare. The restaurants within the area are exceptionally busy and are demanding of management (Fields, 2007; Margolis, 2009). The large clientele and the wide range of customer requirements make it important for the restaurant owners to utilize cost-effective systems within their operations so that profits are maximized and costs are lowered (Barrows & Powers, 2006). New York's cost of living is high, so restaurant managers often try to lower their operational costs to generate higher profit from their business transactions (Brown, 2006).

For restaurant owners to achieve and sustain a profitable business, stringent measures have to be in place to protect their revenue and assets from loss through pilfering, waste, and fraudulent behaviors that may frequently occur if enhanced security measures are not in place (Rutherford, 2007). Moreover, because of the rapid increase in the overall population, restaurants in New York will continue to experience challenges that require an established internal control system to monitor and make frequent revisions to their overall system (Lee, 2006).

Purpose of the Study

The purpose of this study is to determine restaurant managers' perception of the internal control systems in small restaurants operating in Nassau County in New York State, and to determine if a significant relationship exists between the dependent variable, internal control system, and the independent variables, protection of assets, segregation of duties, and verification of transactions. Adequate internal control in this study is defined as controls over operations and compliance objectives (Whittington & Delaney, 2009). Management is responsible for maintaining an internal control structure designed to provide reasonable assurance that the books and records reflect the transactions of the company and that the company's established policies and procedures are carefully followed. Because of inherent limitations in any system, there can be no absolute assurance that errors or irregularities will not occur. Nevertheless (COSO, 1992) believed that the internal control structure provides reasonable assurance that assets are safeguarded and that financial information is objective and reliable (Needles, Powers, & Crosson, 2005).

Currently, the foodservice sector makes up the largest position of New York State's tourism industry, employing more than 428,000 people and posting sales of more than $20 billion (New York State Restaurant Association [NYSRA], 2009). New York's restaurants are an increasingly important part of the state's economy. Restaurants are a key driver of employment in New York State, and their sales generate tremendous tax revenue for the state (NYSRA, 2009). According to the New York State Restaurant Association (2009) and the New York State Restaurant Association Long Island (2009), there were 37,354 eating and drinking places located in New York State and 1,173 restaurants located in Nassau County in 2009. Restaurant jobs represented 8% of total employment in New York (NYSRA, 2009). Every $1 spent in New York restaurants generates an additional $.98 in sales for New York economy (NYSRA, 2009). Results of this study can help restaurant managers address problems that are associated with lack of internal controls in organization such as cost, fraud, pilfering, and waste (Martin, 1989). Because New York's restaurants are an increasingly important part of the state's economy and a key driver of employment (New York State Restaurant Association of Long Island [NYSRALI], 2009), their survivability will generate sales resulting in tax revenue for the state.

Research Questions

The following are the research questions that guided this study:

1. What are the restaurant managers' perceptions of the internal control systems in small restaurants operating in Nassau County in New York State?
2. What is the nature of the relationship between the segregation of duties and the internal control systems in small restaurants operating in Nassau County in New York State?

3. What is the nature of the relationship between the protection of assets and the internal control systems in small restaurants operating in Nassau County in New York State?
4. What is the nature of the relationship between the verification of transactions and the internal control systems in small restaurants operating in Nassau County in New York State?
5. Are internal control systems consistent with COSO standards present in small restaurants operating in Nassau County in New York State?

Definitions of Terms

The following terms and definitions were used by the researcher throughout the study:

AICPA: American Institute of Certified Public Accountants – National professional association of Certified Public Accountants in the United States (Needles, Powers & Crosson, 2005)

SOX: Sarbanes-Oxley Act – Laws enacted to strengthen corporate accounting in the United States (Jackson, 2006).

COSO: Committee of Sponsoring Organization of the Treadway Commission – A framework to evaluate internal control over financial reporting in the United States (COSO, 1992).

NRA: National Restaurant Association – A restaurant industry business association in the United States (NRA, 2008).

ROI: Return on Investment – A financial ratio indicating the degree of profitability of a business (Needles, Powers & Crosson, 2005)

SBA: Small Business Association – A governmental business that assist small business in providing opportunities to foster growth and success (Daft, 2007).

Theoretical Framework

Internal control is the amalgamation of various principles and concepts used by management to foster best business practices in an entity (COSO, 1992). Consequently, the basis for the internal control design is embedded in the rational choice theory, the communication theory, and the COSO internal control integrated framework.

Rational Choice Theory

The rational choice theory is grounded in utilitarian social philosophy and a body of ideas often referred to as the classical school (Beccaria, 1963; Bentham, 1843/1907). Proponents of the classical school adopted a distinctive view of human nature that emphasized hedonism, rationalism, and free will (Beccaria, 1963). Liska and Messner (2009) believed that human beings choose to behave in certain ways after rationally calculating the potential pleasures (i.e., benefits) of behavior as well as the potential pain that might result from being punished for that behavior (i.e., cost; Liska & Messner, 1999).

The rational choice theory follows in the tradition of the classical school by assuming that behavior is the product of a rational assessment of costs and benefits. Rational choice theory focuses generally on how people weigh costs relative to benefits of law-violating and law-abiding alternatives (Grasmick & Bursick, 1990). Contemporary rational choice theorists consider not only legal costs but also other costs, including informal sanctions, the painful emotions that may accompany law violations (Grasmick & Bursik, 1990; Grasmick, Bursik, & Arneklev, 1993; Nagin & Paternoster, 1994), and the benefits associated with them. Contemporary rational theorists also consider the costs and benefits of law-abiding alternatives (Lisker & Messner, 1999). According to the rational choice theory, the probability of committing a given act or crime depends on the potential pains of the punishments and the potential pleasures of the rewards associated with law violations (Piliavin, Gartner, Thornton, & Matsueda, 1986).

The most sophisticated formulations of the rational choice theory have drawn on contemporary economics (Becker, 1968; Cornish & Clark, 1986; Rubin, 1978). According to the economic approach, criminals are fundamentally no different from everyone else in that they seek to maximize personal utility, given the constraints in their environment (Cornish & Clark, 1986). Some people become criminals for the same reasons others become other members of respectable professions, such as education or medicine (Cornish & Clark, 1986; Liska & Messner, 1999). For criminals, the net payoff of crime simply exceeds that of other available alternatives (Liska & Messner, 1999).

The rational choice theory has been used to describe how crime depends on the interactions between the offenders and the victims (Cook, 1980). The theory assumes that the offenders are attracted to crime targets that can provide a high payoff with little effort and low risk of legal punishment (Cook, 1980). The victims, on the other hand, want to be safe from victimization, so they take a variety of precautions to reduce the incidence of crime by creating barriers for the offenders to commit their crimes successfully, increasing the likelihood that the offenders will be detected and apprehended, and reducing their losses if they are victimized (Liska & Messner, 1999).

Offenders and victims have competing interests, just as buyers and sellers do in the marketplace. The interactions between buyers and sellers ultimately yield a market price for goods and services, which determines how many of these goods and services will be produced. In an analogous manner, offenders and victims interact in the "crime market" to determine the volume of crime (Cook, 1980). Offenders "supply" more or less crime, depending on the net return ("price") that they are able to receive. Victims "demand" more or less safety, depending on how much time and effort are required to secure it (the "price" that they must pay for a given level of security). As offenders and potential victims interact and respond to one another, they arrive at a "going rate" for crime (its net payoff), which determines how much crime will be produced (Liska & Messner, 1999).

Downes and Rock (2003) argued that the rational choice theory is not limited to purely technical and mechanistic manipulations of the environment; rather, these manipulations are consonant with a model of offenders as capable of rational choices and decisions. Rational criminals confronting critical choices are fairly susceptible to intelligent control strategies. The rational choice theory is in the ascendancy in a number of social sciences, and it plays an increasingly important role in the arguments of control theory itself. Some part of the ascendancy may be explained by the intellectual dominance and apparent successes in economics and the corresponding authority that economic models of behavior are beginning to exert over psychology, sociology, and criminology.

Becker (1968) assessed the consequences of the balance of expenditure on control and punishment versus social losses from offending. Becker adopted the economist's assumption that people will offend if the utility of doing so exceeds the utility of not doing so. Crime is not a matter of motivation, but of costs and benefits weighted by one contemplating whether to break the law (Becker, 1968; Downes & Rock, 2003).

Cornish and Clark (1986) argued that just as economics can maximize utility, criminals choose crime because of the benefits that it brings to the offenders. This tenet holds in most cases of crimes, with the possible exception of some crimes committed as the result of mental illness. That simple economist's calculus was subsequently extended and complicated by the inclusion of a larger cast of actors conceived to be making continuous decisions about the rewards and penalties of committing crimes, reporting crimes, and enforcing the law. According to Cornish and Clark, this economic perspective was never utterly rational. It was based on imperfect information, but improvisation and experience can facilitate an understanding of these deviant behaviors. Its use came to be described by Cornish and Clark as breaking down complex acts into aggregations of the simpler elements of preparation, target selection, entry to the setting, commission of the act, and escape to aftermath

According to Downes and Rock (2003), controls in contemporary society are being driven, dispersed, and extended by technological and social change toward a growing dependence on surveillance, electronically generated information, and the calculation of risks. The researchers argued that between 1996 and 1999, CCTV cameras were installed in the United Kingdom, but there was no certainty of being successful in capturing data for surveillance purposes. At the time, there was wide public belief that the cameras would reduce crime and lead to the apprehension of offenders, but the reality was that the volume of only some types of crime was reduced. Cameras are but one of many variables involved, making it difficult to ascertain how much impact they had on reducing crime from a preventative or a detective perspective. The broader result was the fashioning of new controls and mechanisms of indirect regulation and self-policing, including police watching the police for evidence of misbehavior.

Graham (1996) argued that surveillance has added layer upon layer to the urban terrain. Each layer has its own finer mosaic of sociospatial grids, its own embedded assumptions and criteria for allocating and withdrawing services or access, and its own systems for specifying and normalizing boundary enforcement by electronically defining the acceptable presence of individuals in different urban spaces and times. Categorical assessment of risk is beginning to supersede a general system of control and justice and is distinctively individualistic, according to the surveillance terrain. Those assessments and controls are increasingly been driven by technology that is less centered on moral or social judgment and more on operational efficiency (Downes & Rock, 2003).

Cressey (1953) undertook a study of the clarifications, modifications, and extensions of the concepts of definitions favorable and unfavorable to specific crimes. In his study of financial trust, Cressey categorized rationalizations and attitudes as subtypes of definitions favorable to crime. He found that none of the convicted embezzlers in his study committed the crime until they had reached a point of rationalizing it as justified or excusable. This rationalization was the last step in the process by which persons in positions of financial trust betray it. According to Cressey, the embezzler applies verbalizations, rationalizations, and vocabularies of adjustment and motives for committing crimes. This type of definition enables the offenders to look at trust violation as essential and noncriminal, as justified, or as part of a general irresponsibility for which the offenders are not accountable (Akers, 2009).

Cressey (1954) noted that such violations are not exceptions to differential associations and that the very notion of being under some uncontrollable compulsion for which one cannot be held responsible can be learned as a definition justifying or excusing lawbreaking. To Cressey (1954), the concept of verbalization or vocabulary of motives is not only a simple ex post facto rationalization of behavior but also is part of the motivational process in carrying out behavior. Akers (2009) and Cressey (1953, 1954) viewed the treatment of rationalizations of embezzlers as concrete forms or operationalization of definitions favorable to crime.

According to Cressey (1953, 1954), exposure to these rationalizations and excuses by embezzlers may justify one's own or another's norm violations that help to deflect or lessen the punishment that would be expected to follow a deviant act such as stealing. Individuals then learn the excuses either directly or through imitation, and use them to lessen self-reproach and social disapproval. Therefore, the definitions themselves are behaviors that can be imitated and reinforced and then serve as discriminative stimuli accompanying the reinforcement of overt behavior (Cressey, 1953). Deviant and criminal acts occur without being accompanied by positive or neutralizing definitions, but the acts are more likely to occur and reoccur in situations the same as or similar to those in which the definitions have already been learned and applied. The extent to which one adheres to or rejects the definitions favorable to crime is affected by the rewarding or punishing consequences that follow the act (Akers, 2009).

Communication Accommodation Theory

Street and Giles (1982) posited that the communication accommodation theory assumes that communication competence depends upon the individuals' ability to perform in ways that enhance interactions so that they can achieve their goals. This theory postulates that individuals act in ways that increase the chances that their partners or associates will look upon them as attractive communication and relational partners (Street & Giles, 1982).

The communication accommodation theory asserts that communication consists primarily of scripted behaviors that people use to present themselves favorably to their communication partners or associates (Tsoukas & Knudsen, 2003). How people communicate with and accommodate one another is to a large extent a product of their self-identities, situations, relationships, goals, and level of arousal (Giles & Street, 1985). The behavior is evaluated by calculating the extent to which it fits the expectations relevant to the situation (Giles & Street, 1985). Capella (1985) reasoned that the communication accommodation theory can explain what happens in conversations as long as they are going well, but he doubted that it could explain why they sometimes go badly. Capella (1985) argued that convergence, reciprocity, and similar communication patterns lead the communicators to evaluate one another positively.

The communication accommodation theory is based on the principle of similarity attraction, social exchange, attribution, and social identity. People are motivated to adjust their speech styles with respect to one another to foster a social identity and a shared expression of values, attitudes, and intentions (Street & Giles, 1982). A key mechanism in the process is the perception one person has of another's speech. Based on what one person perceives as the other's communication patterns, the first person makes evaluations that lead to behavior, further evaluation, and subsequent adjustments (Tsoukas & Knudsen, 2003). The assumption is that intentions, actions, and adjustments will lead to convergence as an expression of a desire for social integration, seeking or showing approval, social identification, or communication competence (Giles & Street, 1985).

Convergence is employed when one person in an interaction attempts to be like and be liked by another. If convergence is perceived to be intentional rather than accidental, it is likely to be evaluated positively (Heath & Bryant, 2000). Convergence has positive benefits. For example, it can result in enhanced perceived intelligibility, supportiveness, predictability, intersubjectivity, and smoothness of interaction; it may indicate positive feelings toward the other person involved; and it can foster warmth, perceived competence, and a willingness to cooperate (Heath & Bryant, 2000).

Convergence is likely to occur when rewards for doing so outweigh the costs, depending upon the participants' communication repertoires and their need for social approval. The social identity component of this theory predicts that divergence will occur when people desire to reject or disassociate themselves from people who are perceived to be nongroup members (Heath & Bryant, 200). Divergence will occur if people have the communication repertoire available to accomplish goals (Heath & Bryant, 2000).

Altman and Taylor (1973) and D. A. Taylor and Altman (1987) argued that people determine the amount of disclosure they need to use or are comfortable using to get to know one another. By disclosing, people have decided that they trust the people to whom they have disclosed and that they trust themselves to cope with the negative consequences that may result from disclosure (Altman & Taylor, 1973). The theory focuses on the processes by which people come to know one another in varying degrees of detail as the foundation for a solid relationship.

Social Penetration Communication Theory

Social penetration theory views the quality of communication as vital to the development and maintenance of relationships. A central premise of this theory is that positive communication produces positive relationships, whereas negative communication results in negative relationships (Altman & Taylor, 1973). In positive relationships, people are willing to disclose or communicate openly (Altman & Taylor, 1973). Relational partners tend to be flattered when others are willing to disclose to them (Heath & Bryant, 2000). This willingness to disclose asserts that people are worthy of being trusted with the details that are disclosed (Heath & Bryant, 2000). However, too much disclosure can become negative, causing a burden on the relationship (Heath & Bryant, 2000). Relationships grow through overt interpersonal behaviors and internal cognitive processes, whereby the participants create messages, select message strategies, and think about how those messages will affect the quality of the relationship (Altman & Taylor, 1973; Heath & Bryant, 2000).

D. A. Taylor and Altman (1987) postulated that the social penetration theory grows or dissolves by passing through four developmental stages: orientation, exploration, affective exchange, and stable exchange. Orientation normally takes place in public areas. At this stage, the level of intimacy is in the initial phase and is consistent with when people first met and are becoming acquainted (Taylor & Altman, 1987). The tone of the conversation at this stage is cautious and exploratory. Initial, superficial efforts are made to reduce uncertainty and forecast the reward-cost ratio of getting to know the other person (Taylor & Altman, 1987).

If the participants become willing to have an exploratory affective and effective exchange, a relationship progresses to the second stage. This stage initially includes an exploratory affective exchange, which includes aspects of personality and more private thoughts (Tsoukas & Knudsen, 2003). The tone at this stage is more friendly and relaxed. An exchange of feelings and emotions is vital at this phase to reveal information about the person who volunteers it to the partner without being coerced (Tsoukas & Knudsen, 2003). A level of trust is developed because each person is willing to share intimate details with fewer restrictions (Tsoukas & Knudsen, 2003).

The third stage of the social penetration theory is a continuation of the previous stage. It is typical of close friendships and romantic relationships, in which the intimacy increases because the participants disclose to each other in more casual and unstructured ways (Tsoukas & Knudsen, 2003). The final stage, known as the stable exchange stage, is characterized by continuous openness and informal and unstructured communication. Because of the disclosure at previous stages, the participants have come to know each other sufficiently well to reliably interpret and predict their feelings and behaviors toward each other (Tsoukas & Knudsen, 2003).

Van Lear (1987) studied whether relationships change because the mutual exchange of disclosure occurs. Van Lear investigated whether relationships show incremental increases in depth (quality) and breadth (quantity) of disclosure topics, and if so, by what pattern. Van Lear concluded that levels of disclosure tend to follow the norm of reciprocity, that is, intimate disclosure is matched by intimate disclosure. This reciprocity is the strongest for semiprivate disclosures. The development of relationships seems to follow a cyclical model of self-disclosure reciprocity, that is, one person's disclosure may prompt the partner to reciprocate at least for a short time; however, intimate disclosure is difficult to maintain for a long period of time.

The participants cannot progress through these stages without verbal and nonverbal communication, as well as situational oriented behaviors, including nonverbal cues of space, distance, and physical objects. As relationships become more intimate, the participants can make transitions through space, even into intimate space, easier and with a prediction that the outcome will be positive.

D. A. Taylor and Altman (1987) acknowledged that few relationships can grow without conflict and strain. If crisis and conflict lead to forecasts that the costs will outweigh the rewards, the relationship is likely to dissolve or at least become less intimate. This outcome may result from a failure to manage conflict effectively. According to this theory, all relationships entail costs. Understanding interpersonal relationships requires insight into this formula: Relationship outcomes = rewards – costs. D. A. Taylor and Altman presented five propositions in this regard:

When the rewards outweigh the costs, a relationship is satisfying.

In assessing the reward-cost ratio, people estimate an absolute reward-cost ratio yardstick against which to measure each relationship.

As an interaction transpires, critical moments are assessed in terms of the absolute reward-cost ratio relationship.

As the relationship continues, the participants forecast the rewards and costs based on apparent progress, given its history and immediate rewards.

The participants calculate the cumulative rewards and costs over the duration of the relationship.

For these reasons, exchange at a superficial level allows people to test the relationship before progressing to a more intimate level. If rewards are present, a relationship is either stable or changes in a positive direction. If the relationship is not positive, it is likely to change in a negative way.

Organizational Communication Theory

Farace, Stewart, and Taylor (1978) studied four key variables of organizational communication: organizational structures, messages, media, and communicators. Farace, Stewart and Taylor (1978) study was underpinned by Lasswell's (1948) question: Who says what to whom through which channel and with what effect? The researchers wanted to help executive management understand the communication process in organizations so that they could improve employee performance and increase the organizations' effectiveness (Lasswell, 1948).

People spend a significant part of their lives in organizations of all types and sizes: businesses, nonprofit organizations and governmental agencies. Organizations serve many tangible and intangible needs, but these needs always come at a cost. Employee membership is obtained at the cost of the freedom to act as they choose. To be in an organization requires that communication support the efforts of the employees to achieve organizational goals and receive tangible and intangible rewards in turn. The study of organizational communication centers on the ways by which people gain information, shape opinions, make decisions, coordinate efforts, voice expectations, assimilate into the organization, leave the organization, and create rapport with one another.

Smircich (1983a, 1983b) argued that the key to organizational success is the management of meaning. Smircich (1983) attempted to explain two broad competing perspectives of organizational communication: functionalism and interpretivism. Functionalist theory considers organizations as ends in themselves and management as the pursuit of efficiency (Smircich, 1983). The interpretive perspective recognizes that managers are enactors of their situations; they often contribute to patterns of actions that are unnecessarily limiting (Smircich, 19983). Thus, managers informed by the interpretive view develop reflexivity and consciousness of the ways they create their organizational worlds.

P. Lewis, Goodman, Fandt, and Michlitsch (2007) explained that communication can do more to advance an organization than almost any other factor. Communication is the process that managers use to interact with the stakeholders of the organization. According to P. Lewis et al (2007), "it is essential to management because it encompasses all aspects of an organization and pervades organizational activity" (p. 293). The communication process includes the senders, messages, channels, and receivers (P. Lewis et al., 2007). This process does not remain constant or static (P. Lewis et al., 2007). The objective of communication is to create some degree of accurate understanding among the participants.

Weick (1979) explained that individuals go through an enactment process that forms attitudes, beliefs, and behaviors based on the perception of a given situation. According to Weick, individuals create their own reality of the environment based on their perception of the event or situation. Equivocality influences the individual's perception in the environment when there is an ambiguous explanation to a given event or situation. The individual uses insight to understand the environment and to determine the appropriate method of response. Insight can be influenced by experiences and are stored by the individual for future use and to counter uncertainties.

R. Taylor, Cooren, Giroux, and Robichaud (1996) stated that communication encompasses a two-step translation process in organizational communication. The first step is the translation from text to conversation. In this step, the sender of the message is required to encode the meaning into spoken or written conversation. The receiver must have knowledge of the sender, the context of the message, and the relationship between messenger and receiver to understand the conversation. The second step is the translation from conversation to text. This step includes the process where the information receiver seeks meaning from the conversation. R. Taylor et al. further elaborated that the theory of organizational communication involves what they termed *distanciation*, the gap between the intended message and what was received. They contended that degrees of separation are influenced by various factors that can affect the understanding of the message sent. Organizational communication theory is one of the theoretical frameworks of this research. In order for internal control to operate effectively in an organization, these procedures must be communicated effectively to all involved.

COSO Internal Control Integrated Framework

The Committee of Sponsoring Organizations of the Treadway Commission ([COSO], 1992) created a common internal control model against which companies and organizations may assess their control systems. COSO described the five components of the framework as control environment, risk assessment, control activities, information and communication, and monitoring. COSO described the components as follows:

1. Control environment. The control environment is the core of the business. It includes the people; their individual attributes of integrity, ethical values, competence; and the environment in which they operate. They are the foundation upon which the entity functions.
2. Risk assessment. The entity must be aware of and deal with the risks it faces. It must set objectives that are integrated with sales, production, marketing, and financial and other activities so that the organization is operating in concert. It

also must establish mechanisms to identify, analyze, and manage the related risks.

3. Control activities. The entity must establish and implement control policies and procedures to ensure that the actions identified by management that are necessary to address risks to achieving the entity's objectives are carried out effectively.
4. Information and communication. Surrounding the control activities are the information and communication systems. These systems enable an entity to capture and exchange the information needed to conduct, manage, and control its operation.
5. Monitoring. The entire process must be monitored, and modifications must be made as necessary. In this way, the system can react dynamically, changing as conditions warrant.

COSO developed the framework in response to senior executives' need for effective ways to better control their enterprises and to help ensure that organizational objectives related to operations, reporting, and compliance are achieved. This framework has become the most widely used internal control framework in the United States and has been adapted or adopted by numerous countries and global businesses (Michelman & Waldrup, 2008).

Marchetti (2005) stated that the Sarbanes-Oxley Act (SOX) was enacted in 2002 primarily in response to the fiscal mismanagement of publicly traded companies. One of its effects has been to ensure greater accountability within the private sector, regardless of the size and status (public vs. private) of the company (Jackson, 2006). The intent of the SOX was to improve the accuracy and transparency of financial reports and corporate disclosures, as well as reinforce the importance of corporate ethical standards. Marchetti noted that Section 404 of the SOX has its roots engraved in the COSO internal control integrated framework and is a modified version of COSO.

Section 404 of the SOX requires management to evaluate internal controls over financial reporting and report on their effectiveness. “Many view the Act’s provision for internal controls over financial reporting (Section 404) and executive certifications (Section 302) as painful and costly to implement with little derived benefit” (Marchetti 2005, p. 3). Others see the mandated changes as an opportunity to implement best business practices, drive greater performance, and boost investors’ confidence. The COSO internal control integrated framework was designed to establish an internal control system for an entire company. It is not limited to financial or financial reporting controls. This framework balances control objectives with the required control components necessary to maintain effective internal control within a company, a process, or a function (Marchetti, 2005).

The COSO internal control integrated framework addresses the operating effectiveness and efficiency, reliability of financial reporting, compliance with applicable laws and regulations, and the safeguarding of assets. Organizations and their internal control needs vary significantly by industry, size, purpose, management philosophy, diversity and complexity of operations, local culture and operating environment, and legal regulatory requirements (Quall, 2004). Although each company’s internal control needs vary, the principles of internal control which are protection of assets, financial reporting reliability and compliance with applicable laws and regulations must exist for operational efficiency. (American Institute of Certified Public Accountants [AICPA], 2006; COSO, 1992).

Nature of the Study

A survey methodology was utilized in this study. The collected data were used to determine whether small restaurants operating in Nassau County of New York State have adequate internal controls in their operating activities consistent with the COSO standard. The benefits of using the survey method are that it is useful in describing the characteristics of a large population; they can be administered from remote locations using mail, e-mail, and telephones and large samples are feasible, making the results statistically significant (Creswell, 2003; Curwin & Slater, 2001). Restaurateurs or managers of restaurants operating in Nassau County in New York State were given the Internal Control Survey Questionnaire ([ICSQ; see Appendix) and instructed to complete it within a period of 4 weeks. Responding to the survey took an average of 15 to 20 minutes.

Assumptions

Four fundamental assumptions were included in the study. First, it was assumed that the managers of the restaurants are willing to participate in the study. A second assumption is that restaurant managers were knowledgeable of their restaurants' operating activities. A third assumption is that the restaurant managers provided honest, current, and truthful responses. The final assumption was that the ANOVA tests assumed a normal distribution.

Limitations

The focus of this study was to examine only small restaurants in Nassau County in New York State. A limitation of this study may result from the research method utilized. I used a closed-ended questionnaire, which limits the amount of information that can be collected. In addition, closed-ended questionnaires limit the respondents' ability to elaborate and I may have to contend with misinterpretation, misrepresentation, and the inability to seek for clarifications. Restaurant managers may also want to present a better picture of their restaurants' operation, and they may not be knowledgeable of the questions asked by me. Confounding variables may exist, such as the size of the restaurant establishment and restaurant managers may not consider themselves as accountants.

This research design may be susceptible to the Hawthorn effect. The dimension of the design could alert the participants to the goals of the research. This could cause the participants to modify their behaviors and responses being experimentally measured without the manipulation of independent variables. Restaurants managers may not be knowledgeable of internal control principles; therefore, methodology relying on standardization such as quantitative methodologies forces the researcher to develop questions general enough to be minimally appropriate for all respondents. The validity of the study's findings is limited to the reliability of the instrument that was used. A pilot study was conducted using test-retest procedures to minimize this limitation.

There was a limited amount of literature on whether small restaurants operating in Nassau county of New York State have adequate internal controls in their operating activities in this study, and the results of this study can only be generalized to its target population. The population from which the research study was drawn could be a potentially limiting factor because of inherent limitations such as culture, operating style, and organizational structures. This was alleviated by the previous validation of the instrument and further validation of the instrument using a pilot study.

Scope and Delimitations

The focus of this study was to examine whether small restaurants operating in Nassau County have adequate internal control in their operating activities consistent with the COSO standard. There are 1,173 restaurants located in Nassau County of New York State (NYSNRA, 2009). Two hundred and seventy of these restaurants that have been in business for at least 3 years were selected from a list of the small restaurants in Nassau County in New York State. The focus of this study was exclusively on internal controls and financial reporting processes that are analogous with the COSO internal control integrated framework. The study did not include consideration of all operational procedures, operating improvements, and efficiencies. The scope of this research depended on existing cultural climate and other factors, such as time, cost, resource availability, skill sets, and the extent of internal control (Marchetti, 2005).

This study was delimited to the dependent variable of internal controls in restaurant and the independent variables of segregation of duties, protection of assets, and verification of transactions. The study was delimited to 270 small restaurants in Nassau

County in New York State. Participants, variables, and conditions not specified in this research were beyond the scope of the study.

Significance of the Study

Internal control activities have been used in various organizations since the implementation of the COSO (1992) internal control integrated framework to support best business practices, which ultimately aid the accountability, profitability, and survivability of companies. Restaurants are cash-based businesses and they often lack the impetus to conform to standardized internal control procedures such as the COSO internal control integrated framework (Brown, 2003). Previous researchers have indicated that restaurants have a failure rate of over 67% in the first 3 years (Parsa et al., 2005). Internal control activities may aid in reducing the costs of small restaurants and propel their profit and survivability.

The restaurant business is highly susceptible to mistakes spawning from the poor planning, organization, and control of procedures in their operations. Hence, restaurant management personnel are faced with the challenges of devising measures to promote operational efficiency and ascertain that all of the financial reporting goals are met. New York State has an estimated population of 19,490,297 people (U.S. Census Bureau, 2008), and restaurants in the state are extremely busy serving the large clientele base. The major challenges that restaurant owners in New York have to address on a daily basis are the stiff competition and the ever-changing needs and preferences of customers. It is imperative for restaurants to minimize their costs to make them more efficient and competitive. Internal control activities help to refine operational procedures, assign responsibilities, and prevent the loss or misappropriation of assets through pilferage and misuse (M. A. Lewis & Slack, 2003). The survival of restaurants will lead to much needed tax revenue, gainful employment, and a positive impact on society.

Summary

In this study, I examined whether small restaurants operating in Nassau County have adequate internal control in their operating activities consistent with the COSO standard. I discussed the rational choice theory, communication theory, and the COSO internal control integrated framework to give a theoretical base of the study. I also reviewed and summarized literature pertinent to this research design. Included in chapter 2 is a review of the literature pertinent to internal control activities and their effect on small companies. Chapter 3 includes an explanation of the methodology that will be used to determine the effect of internal control activities on the survivability of small restaurants operating in Nassau County in New York State.

Chapter 2: Literature Review

Introduction

The purpose of the literature review is to understand how specific accounting internal control activities can influence the operating activities of small restaurants operating in Nassau County in New York State. Management control systems are the primary internal controls that were considered in this study. I attempted to provide answers to the following research questions:

1. What are the restaurant managers' perceptions of the internal control systems in small restaurants operating in Nassau County in New York State?
2. What is the nature of the relationship between the segregation of duties and the internal control systems in small restaurants operating in Nassau County in New York State?
3. What is the nature of the relationship between the protection of assets and the internal control system in small restaurants operating in Nassau County in New York State?
4. What is the nature of the relationship between the verification of transactions and the internal control systems in small restaurants operating in Nassau County in New York State?
5. Are internal control systems consistent with COSO standards present in small restaurants operating in Nassau County of New York State?

The study design used the internal control questionnaire module (ICQS)

(Kistler, 2008) to test if internal controls exist in small restaurants operating in Nassau County in New York State. Sections in chapter 2 include a review of the instrument and its design. Accessing the literature consisted of searching in various online databases, libraries, and local university libraries such as Walden University, Berkeley College, Keller Graduate School of Management, and New York State public library. The review included reading and assessing more than 190 peer-reviewed journal articles, 82 books, and 46 studies. Key words and phrases used in the study included *internal controls, profitability, survivability, restaurants profitability, restaurants expenses*, and *COSO*.

The literature review includes an overview of the evolution and history of internal control, the key elements of internal control, the effect of internal control on survivability on small organizations, and the effect of internal control on restaurants. This chapter begins with a brief review and overview of the *COSO* internal control integrated framework. The discussion includes a description of the COSO (1992) framework and the five components that are pertinent to best businesses practices. The rational choice theory (Becker, 1996; Cornish & Clark, 1986; Rubin, 1978) and communication theory (Altman & Taylor, 1987; Capella, 1985; Street & Giles, 1982; Weick, 1979) in organizations are subsequently discussed. A focused discussion of the reasons restaurants fail follows. The next section includes specific internal control requirements that foster the survivability of restaurants. Prior research and a discussion of the dependent and independent variables are addressed in the final section.

Internal Control Integrated Theoretical Framework

According to the COSO (1992) internal control integrated framework, internal control encompasses the policies, rules, and procedures enacted by management to provide reasonable assurance that financial reporting is reliable, the operations are effective and efficient, and the activities comply with applicable laws and regulations. The AICPA (1972) identified two types of internal controls to help principals make decisions, namely by confirming or correcting agents' faithful performance of their duties and by providing information for future expectation. These financial controls are related to the reliability of financial information, and the administrative controls are related to the actions of agents and employees (Marchetti, 2005).

Internal control has been an integral part of businesses for centuries, but confusion exists over the exact meaning and scope of the term (Apostolou & Crumbley, 2008). Historically, the term *internal control* applies to the domain of accounting and its efforts to safeguard assets and ensure the accuracy of accounting records (Apostolou & Crumbley, 2008). According to Grandell (1977), internal control began with the earliest known records of commerce in the Mesopotamian Valley in 3500 B.C.E. and continued through the Middle Ages. Edler (1934) purported that in the absence of paper, tally sticks were used to conduct internal control activities. Unsplit tally sticks started as mathematical objects serving as mnemonic aids to counting (Kuter, 2009). In addition, tally sticks provided the earliest form of bookkeeping for record keeping (Baxter, 1989).

Although evidence of the practice of internal control can be traced back to 3500 B.C.E, little has been written about it by scholars as a discrete subject (Apostolou &

Crumbley, 2008). Since the early 1900s, accountancy writers have paid more attention to internal control and its effect on organizations (Grady, 1957). Jackson (2006) asserted that internal control has its roots in the Great Depression, which began in 1929 when the stock market crash destroyed public confidence in the stock market and the U.S. economy. The crash was blamed on wildly inflated stock prices, poor monetary policies, fraud, concealed or misleading financial information, the rampant buying of stocks on margin, and inadequate controls (Jackson, 2006).

The Securities Exchange Act (1933) was enacted to assure investors of the transparency of securities being sold and to prohibit deceit, misrepresentations, and other fraudulent securities actions. The Securities Exchange Act (1934) was enacted to give the government power to regulate many aspects of the securities industry (Jackson, 2006; Campbell & Campbell, 2006). The act provided the Securities Exchange Commission with the authority to require the periodic reporting of financial information by organizations that offered publicly traded securities, and have the power to register, regulate, and oversee the industry (Jackson, 2006).

Public companies have been required to establish and maintain internal accounting control since the enactment of the Foreign Corrupt Practices Act (1977). However, according to Marchetti (2005), the term *adequate* was not clearly defined. In response to this requirement, most companies developed their own approach to compliance through the cooperative efforts of management, internal audit, and external auditors (Marchetti, 2005). Under Section 404 of the SOX, public companies must attest to the effectiveness of their internal control over financial reporting when they file their annual reports (Campbell & Campbell, 2006). Although laws on internal control are relatively recent, Section 404 was meant to spotlight the connection between strong internal control and reliable financial statements (Harrer, 2007).

The corporate scandals of the 1980s saw many people lose their jobs (Marchetti, 2005). COSO was formed in 1985 to identify the various factors that can lead to fraudulent financial reporting and to develop recommendations to address these issues (Kieso, Weygandt, & Warfield, 2005). In 1987, COSO published its findings of the gross corporate irregularities of the 1980s. The report indicated that fraud occurred because of improper internal control that included not only financial statement controls but also certain environmental, institutional, or individual forces and opportunities ([COSO], 1987).

As part of COSO's work in identifying the factors that contributed to corporate fraud, the members also designed a model for corporations to use to address the lack of proper internal controls in corporate organizations (Jackson, 2006). In 1992, COSO established the internal controls integrated framework for developing an effective internal control system. This framework provides direction to any business that wishes to establish an effective internal control system ([COSO], 1992). This now recognized framework consists of five interrelated components: control environment, risk assessment, control activities, information and communication, and monitoring ([COSO], 1992).

These five major components of the COSO (1992) internal control integrated theoretical framework are part of a holistic framework needed to strengthen efficiency within the management of any organization. Throughout this holistic framework, a variety of activities and steps are taken to ensure that the organizations do not provide opportunities for the manifestation of fraudulent behaviors by employees ([CSOS], 1992). The framework created based on these components is constantly assessed for clarity so that the implemented internal control functions throughout the lifespan of the organization ([COSO], 1992). The five components of internal control also work harmoniously to detect, prevent, or correct errors or misstatements in the overall operations of the business ([COSO], 1992). For the process of internal control to be seen as viable, all of the financial statements generated from all business activities must be authentic and noteworthy in accounting terms (Quall, 2004).

Control Environment

According to COSO (1992), the control environment sets the tone for an organization (Pickett & Pickett, 2005) by influencing the control consciousness of its people. It is the foundation for all of the other components of internal control because it provides discipline, structure (Nearon, 2005), integrity, ethical values, employee competence, management's philosophy and operating style, and the leadership provided by senior management and the board of directors (Quall, 2004).

Risk Assessment

According to COSO (1992), every organization, be it private or public, large or small, faces risks from external and internal sources that must be assessed. A precondition to risk assessment is the establishment of objectives that are linked at different levels and are internally consistent ([COSO], 1992). Risk assessment is the identification and analysis of risks relevant to the achievement of objectives ([COSO], 1992). This assessment determines how the risks should be managed ([COSO], 1992). Because economic, industry, regulatory, and operating conditions will continue to change, mechanisms are needed to identify and deal with the special risks associated with change.

Control Activities

Control activities are the policies and procedures that ensure how management directives are executed (Whittington & Delaney, 2009). Control Activities include such activities as approvals, authorizations, verifications, reconciliations, reviews of operating performance, the safeguarding of assets, and the segregation of duties (Quall, 2004). These actions dissuade fraud or theft activities that could eventually lead to losses.

Information and Communication

Pertinent information must be identified, captured, and communicated in forms and timeframes that enable people to carry out their responsibilities. Information systems produce reports of operational, financial, and compliance-related information that make it possible to run and control the business (COSO, 1992). Information systems deal not only with internally generated data but also information about external events, activities, and conditions necessary to informed business decision making and external reporting (COSO, 1992). Effective communication also must occur in a broader sense by flowing down, across, and up the levels of the organization (COSO, 1992). All personnel must receive a clear message from top management that control responsibilities must be taken seriously (Quall, 2004). Employees in an organization must understand their own role in the internal control system, as well as how individual activities relate to the work of others (Pickett & Pickett, 2005). Employees must have a means of communicating significant information upward (Jackson, 2006). Effective communication also must exist with external parties, such as customers, suppliers, regulators, and shareholders (COSO, 1992).

Monitoring

Monitoring is a process that assesses the quality of the internal control system's performance over time through ongoing monitoring activities, separate evaluations, or a combination of the two (COSO, 1992). Ongoing monitoring occurs in the course of operations. It includes regular management and supervisory activities as well as other actions that personnel undertake while performing their duties (Jackson, 2006). The scope and frequency of separate evaluations depend primarily on an assessment of risks and the effectiveness of ongoing monitoring procedures (COSO, 1992). Internal control deficiencies should be reported upward, with serious matters reported to top management and the board of directors (COSO, 1992; Jackson, 2006).

Sarbanes-Oxley Act

SOX was enacted in response to corporate irregularities and the implosion of many companies in 2001. SOX was described as the most far-reaching reform of U.S. business practices since the Securities Act of 1933 (Jackson, 2006). The purpose of SOX was to improve quality and transparency in financial reporting and independent audits, strengthen the independence of firms that audit public trading companies, and increase corporate responsibility and the usefulness of corporate financial disclosure (Foley &

Lardner, 2005). Although SOX was passed primarily in response to wrongdoing and fiscal mismanagement in public companies, one of its outcomes has been greater accountability within the private sector, regardless of the size and status (private vs. public) of the company (Jackson, 2006).

Section 802 of SOX amends the federal obstruction of justice statute. It is now a felony to knowingly destroy, conceal, cover up, or falsify documentations or records to impede or obstruct federal investigations. SOX imposes fines and up to 20 years in prison for knowingly destroying, altering, or falsifying records with the intent to impede or influence federal investigations, including existing or contemplated government proceedings against private companies (Foley & Lardner, 2005). Section 806 of SOX, under the whistleblower protection act, purports that it is against the law for employers to discriminate or take action against employees who disclose information or evidence against fraud or irregularities (Jackson, 2006).

Although SOX were not expressly applicable to private companies, many of the requirements imposed by SOX have become best business practices and are now considered industry standards. The pressure on private companies to comply with SOX is coming from many different directions. Lenders, insurers, public merger partners, potential litigants, and state governments are all looking at the SOX-type control mechanisms installed by private companies (Foley & Lardner, 2005). It must be noted, however, that private companies are not required to be in technical compliance with SOX (Foley & Lardner, 2005). As such, private companies can pick and choose the provisions that they want to adopt. Private companies seem to be implementing most of the easier changes, such as adopting a code of ethics for officers and appointing independent directors and audit committees (Foley & Lardner, 2005). The provision of SOX that affects private companies more adversely is Section 404, which requires companies to report the effectiveness of internal control over financial reporting at the end of each fiscal or calendar year (Foley & Larder, 2005). This provision requires a report of an external auditor attesting to management's assertion of the effectiveness of the internal control in the organization (Foley & Lardner, 2005; Marchetti, 2005).

Rational Choice Theory in Organizations

According to Daft (2007), managers should try to use systematic procedures to make decisions. When managers have a deep understanding of the rational decision-making process, they can make better decisions, even if they lack some clear information (Daft, 2007). Daft explained that the point of the rational approach is that managers should try to use systematic procedures to arrive at good decisions. When managers understand the issues facing them, they generally use rational procedures to make decisions.

Simmon (1947) argued that organizations can never be entirely rational because their members have limited information-processing abilities. Simmon (1947) asserted that people (a) usually have to act on the basis of incomplete information about possible courses of action and their consequences, (b) are able to explore only a limited number of alternatives relating to any given decision, and (c) are unable to attach accurate values to the outcomes. Simmon (1947) suggested that, at best, people can achieve only limited forms of rationality. In contrast, Simmon (1947) also concluded that individuals and organizations settle for a “bounded rationality” of “good enough” decisions based on convention as well as limited search and information.

Cook (1980) and Simmon (1947) argued that rational choice theory has been used not only to describe how crime depends on the interaction between offenders and victims in organizations but also to join, leave, perform, and determine how much effort to exert in any given circumstance in an organization. These decisions are constrained by imperfect (bounded) rationality, so the individuals in organizations are aware of both constraints and opportunities in their organizational environment (Simmon, 1947). For instance, individuals in organizations use this information in their decisions to come to work, call in sick, and so on. According to Cook (1980) and Simmon (1947), these rationales can be readily adapted to explain forms of misbehavior because individuals are aware of the opportunities as well as the consequences of engaging in misconduct. Cook (1980) and Simmon (1947) also concluded that if individuals decide to engage in misconduct, they are attracted to crime targets that provide a high payoff with little effort and low risks of apprehension.

Victims, on the other hand, in their effort to negate victimization, take a variety of precautions to reduce the alternatives of crime. Victims try to make it more difficult for offenders to complete their crimes successfully, they try to increase the likelihood that offenders will be detected and apprehended, and they try to reduce their loss if they are victimized (Liska & Messner, 1999). Internal controls in restaurants can increase the likelihood of offenders being apprehended and reduce lost through fraudulent activities.

Crime prevention measures have two linked emphases: reducing the physical opportunities for offending and increasing the risk of an offender being caught (Downes & Rock, 2003). The first embraces such examples as the replacement of vulnerable cash register in a restaurant with modern Point of Sale Systems (POS) systems (Downes & Rock, 2003). The second preventative approach builds on the assumption that there is good deal of unrealized potential for making use of the surveillance role of employees who come into regular and frequent contact with the public in a semiofficial capacity (Downes & Rock, 2003). These crime prevention measures translate the physical environment into terrain patrolled, watched, and guarded by official and unofficial custodians. Proper internal controls in small or large organizations can make a considerable impact on specific crime (Downes & Rock, 2003). For example, a restaurant with the least areas of supervision attracts the most damage.

Maingot (1994) posited that individuals use the rational choice theory when they are contemplating a deviant act and must weigh their fear of sanctions and disapproval with the potential for gain and gratification. The outcome of a decision toward a deviant act is changed by the weight placed on the fear of being caught or the benefits gained when the decision is being made. Daft (2007) argued that the rational approach to individual decision making stresses the need for systematic analysis of a problem followed by choice and implementation in a logical, step-by-step sequence. Although the rational model is an ideal not fully achievable in the real world of uncertainty, complexity, and rapid change, the model does help managers to think about decisions more clearly and rationally.

Communication in Organizations

Organizational communication is also a theoretical foundation of this study. The goal is to deliver information to small restaurants managers that they can use to aid decision making. Weick (1979) argued that perception is very important in communicating. Weick (1995) further stated that enactment is the process by which individuals form attitudes, beliefs, and behaviors based on their perception of an event, a situation, or environment.

R. Taylor et al. (1996) stated that organizational communication is based on the message exchange between sender and receiver that is encoded as text and transmitted as conversation. The message from the conversation to text is translated as the message receiver attempts to extrapolate meaning (Taylor et al., 1996). The removal of any variable can distort the message or reduce distanciation, the gap between the intended message and the message received (Taylor et al., 1987).

Bernstein (1975) and Burleson (1986) stated that in order to have effective communication, the sender of the message must understand the characteristics of the information receiver to deliver the message effectively. In order to make the message acceptable to the receiver, the message design and its variables must be understood by the sender. Miller (2005) argued that acceptance of the message depends upon where the message falls or reaches in the communication process. Messages that are not consistent with organizations' existing attitudes, behaviors, and beliefs are rejected (Miller, 2005). Therefore, prior knowledge of the message receiver's attitudes behaviors and beliefs is paramount to the message sender because it enables the sender to make the necessary adjustment that are consistent with existing attitudes, behaviors and beliefs (Miller, 2005). Frezatti, Braga de Aguiar, and Rezende (2006) explained that the success of communication is determined by whether the sender understands or misunderstands the variables or characteristics of the message receiver that will be used to decode the meaning of the message. Decoding of the message is done by the receiver, and encoding of the message is done by the sender.

Each person working in an organization must assimilate to the organization not only when they join the organization but also when they join a department or a group within the organization (Jablin, 1982). Jablin (1985) believed that in their efforts to become assimilated, employees are influenced by their perceptions of work; role expectations and self-assessments, and many external forces, such as whether membership role is voluntary or mandatory. Jablin and McComb (1984) explained that individuals acquire role definitions and expectations from those with whom they have close contacts. Organizations shape how individuals become assimilated into subsequent organizations. Jablin and McComb believed that individuals are socialized by the media, schools, churches, peers and other external organizations in various ways to prepare them to enter the organization. The most critical moment however, is employment interview.

During assimilation, employees learn what is expected of them and what effort and attitudes will be required for them to contribute in a meaningful way to the organization. According to Jablin (1982), this process has two interlocking set of activities and goals: (a) an organization’s effort to integrate the individual into its corporate culture by teaching appropriate attitudes, values, and behaviors, and

(b) the individual's personal efforts to become part of that culture while maintaining individuality. Katz and Kahn (1966) maintained that membership in a company is a role-taking process. People assume specific roles unique to the goals and culture of the organization. Katz and Kahn (1966) concluded that the price of membership is the ability and willingness to comply with and follow the rules of the organization.

Jablin (1985) as well as Jablin and McComb (1984) argued that members of an organization go through three stages: anticipatory socialization, encounter, and metamorphosis. The first stage occurs prior to being recruited into the organization. The individual makes choices by selecting an occupation or a position and deciding to adapt to relevant role expectations (Jablin & McComb, 1984). This stage comprises vocational and organizational socialization (Jablin & McComb, 1984). Vocational socialization relates to the ability to perform the job, and organizational socialization relates to how the employees see themselves fitting into the organization.

In the second stage, encounter, the members attempt to break into the organization after being hired (Jablin, 1985). The members first develop an impression of the new work environment. During this phase, the members rely on scripts and schemata that were acquired before entering into the organization (Jablin, 1985; Jablin & McComb, 1994). The members also learn new scripts that are consistent with the organization's attitudes, behaviors, beliefs, and culture (Jablin, 1985). The social reality of the members affects how well they will fit into the organization. According to Jablin and McComb (1984), the new members' perceptions of the organization will be determined by their personality, values, and job experience, as well as information provided by peers, supervisors, and the organization through its many forms of communication, including training orientation, company policies, and company publications such as memoranda, newsletters, and annual reports.

The third stage, metamorphosis, is affected by the encounter stage (Jablin, 1985). During this stage, the members become knowledgeable of discrepancies and agreements between their attitudes or values and those of the organization. Jablin (1985) reasoned that if metamorphosis occurs, the new employees have adapted to the organization. Communication plays an important role in the members' efforts to learn the appropriate attitudes, values, and behaviors. The members learn how the organization communicates, what is communicated to whom, and how decisions are made in the interests of organizational growth and sustainability (Jablin, 1985). A successful metamorphosis leads to the members acquiring knowledge of the company's reward system and attaining an understanding of the satisfaction of the job, both of which foster the motivation of the employees to contribute to the organization's objectives.

Restaurant Failure

Bragg (2005) argued that profitability and survivability are the two major goals of a business. For a business to survive, it must earn a profit. The term net income is used to define profitability (Bragg, 2005). Net income is reported on the income statement and is a performance measure used by management, owners, investors and creditors to monitor a business's progress in meeting the goal of profitability (Kieso, Weygandt, & Warfield, 2005). Net income is the net increase in owner's equity that results from the operations of a company and is accumulated in the owner's capital account (Mowen, 2003). Net income, in its simplest form, is measured by the difference between revenues and expenses when revenue exceeds expenses (Mowen, 2003)

Survivability of a restaurant relates to its ability to earn a satisfactory income, pay operating expenses and bills when due, and remain solvent over a period of time. In order for a restaurant to be survivable it has to be liquid, profitable, and solvent (Coltman & Jagels, 2001). Liquidity is a company's ability to pay bills when they are due and to meet unexpected needs for cash (Bragg, 2005; Mowen, 2003). Liquidity describes the amount of time that is expected to elapse until an asset is realized or otherwise converted into cash or until liability is paid (Keisco et al., 2005). Creditors are interested in short term liquidity ratios, such as the ratio of cash to short term liabilities, because they indicate whether the enterprise will have the resources to pay its current and maturing obligations (Bragg, 2005). Solvency is the company's ability to survive for many years by paying its debts as they mature (Bragg, 2005). Declining profitability and liquidity are key indicators of business failures (Whittington & Delaney, 2009). Restaurants are cash intensive operations; therefore, their survivability relies on their ability to protect assets, be liquid and profitable (Whittington & Delaney, 2009).

Cooper, Dunkelberg, and Woo (1989) reported that 67% of new businesses fail within 4 years. Parsa et al. (2005) expanded on Cooper et al.'s findings. Parsa et al studied 2,439 restaurants in Columbus, Ohio, using local health department data from 1996 to 1999. Parsa et al. reported that 67% of the restaurants failed in the first 3 years of operation. Muller and Fisher (2004) asserted that 33% of all restaurants in the United States fail in the first year of operation and another 33% fail in the second year.

According to Parsa et al. (2005), although sufficient financing was cited as critical to the restaurants' success or failure by most of the participants in their study, some of the most successful restaurant owners started their operations with less than $100,000 in capital. Parsa et al. concluded that long-term ongoing financial management, not capital investment, may be a better predictor of restaurant viability. To underscore these findings, the internal environment was determined to be the most critical factor contributing to restaurant viability.

McQueen (1989) suggested that one of the most important reasons for failure in the restaurant sector is that barriers to entry are too low, permitting inefficient operators who lack the skills, experience, and capital to enter the business. Martin (1989) stated that the high failure rate of restaurants is primarily the result of poor management skills and training, questionable supervision, and inefficient financial and internal controls. Restaurant management is an important art of accomplishing the desired objectives through others by ensuring that they adhere to prescribed policies and procedures, minimize losses, increase profitability, improve customer satisfaction, and remain solvent (Fields, 2007).

English (1996) conducted a longitudinal study of failure rates of restaurants in El Paso, Texas. New restaurant entrants and restaurant failures were tracked through the Yellow Pages (English, 1996). English started the study in 1990 and collected data periodically until 1995. English found that restaurants in El Paso failed at a rate of 60%. The longitudinal study confirmed that the critical variables of internal control, differentiation strategy approach, and rivalry among existing firms lead to business failure.

Internal Controls in Restaurants

Sanders, Hill, and Faria (2008) asserted that in the early days of food service operations, the types of controls needed and the records maintained were relatively simple. In the contemporary business environment and its various taxes, businesses, accounting schedules, benefit packages, and innumerable other items and activities, additional controls and reports are needed in order to foster efficiency (Sanders et al., 2008). Every business owner needs to be concerned with keeping tight controls on the company's cash and how it is used (Epstein & Myers, 2009).

Internal controls are critical procedures that protect assets and ensure reliable records. In the restaurant business, every error has an effect. Clear, precise standards will help to eliminate inefficiency, fraud, errors, and waste (Sanders et al., 2008). Employers and employees have a vital interest in ensuring that internal control systems are reliable and effective (Sanders et al., 2008). Managers use internal control systems to help reduce inefficiency, fraud, errors, and wastes (Sanders et al., 2008). Employees should be aware that internal control systems can protect them and reward them for good performances (Sanders et al., 2008). Sanders et al.(2008) commented that "an example is, if theft occurs, an efficient internal control system may assist in identifying the source of the theft, which will both deter such occurrences and minimize damages to employees' moral caused by unsubstantial suspicions" (p. 10).

Lin and Wu (2006) stated that internal control has purposes other than reliable financial reporting. Internal control deals with potential risks in three areas of business: information processes (capturing data, maintaining databases, and providing information to achieve reliable financial reporting); operation processes (activities in the value chain to achieve operational efficiency and effectiveness); and compliance processes (the objective of conformity with laws and regulations).

For restaurants to be profitable and solvent, managers need to master various essential skills and closely scrutinize every detail of the organization. Internal controls involve the details that management has to be acutely aware of so that losses may be avoided (Ridley, 2008). Although internal control is integral to the profitability and survivability of restaurants, it must not compromise customer service (Ridley, 2008). Customer service is paramount when considering internal control because 83% of customers will not return to a restaurant if they have experienced poor service (Brown, 2006).

Campbell, Campbell, and Adams (2006) explained that internal control sets the overall tone of the operational functions of the organization. Ethical values, leadership, resource allocation, staff competence at all levels, the dynamics of authority and responsibility within the organization, and management philosophy are part of this critical component. Jensen (1993) posited that there are tradeoffs for proper internal controls. Jensen further suggested that some control mechanisms are inherently more effective at mitigating managerial waste and protecting corporate resources. However, Jensen also suggested that internal control systems have historically failed to respond quickly enough to protect corporate resources.

Statistics from the NRA Educational Foundation (2007) postulated that independent restaurants may lose from 4% to 5% of annual sales to fraudulent activities and theft by employees. Fraud and theft in the restaurant business have become prevalent because employees have discovered how easy they are to perpetrate (National Restaurant Association Education Foundation [NRAED], 2007). In addition, petty theft often remains unnoticed for long periods of time (Parks, 1980). Fraud and theft have become so problematic that management boards pay little or no heed to installing measures to curtail the problems (Simons, 1997). Regardless, with proper internal control procedures, the incidence of pilferage may be reduced or eliminated (Simons, 1997).

Brown (2006) argued that internal control activities can reduce or eliminate theft and pilferages in restaurants. Lynn (2006) postulated that employee theft can have a serious impact not only on restaurants' profitability but also on the morale of other employees who may be aware of what is going on. If basic internal control systems are in place, then workers know at each step of the way that they will be held responsible for shrinkage (Ridley, 2008). Internal control systems help to establish proper rules for consistency and prompt reporting, and they set up the efficient flow of paperwork and data collection. Brown acknowledged that although no system is perfect, a good internal control system will show where fraud or loss is occurring.

Parks (1980) stated that small restaurants may be more vulnerable to theft than large ones because thieves realize that smaller businesses do not have the resources to set up elaborate security systems. Therefore, the security in small restaurants must be evaluated as a management function (Parks, 1980). According to Parks, to be effective, security policies and procedures should be clearly defined and specific responsibilities should be given to various individuals.

Krippel, Henderson, Keene, Levi, and Converse (2008) conducted a longitudinal, empirical study on employee theft and the coastal South Carolina hospital industry in 2000 and 2005. The questionnaire used included demographic questions about the classification and relative size of the respondent companies (Krippel et al., 2008). The 2000 and 2005 surveys were carried out through a general mailing (Krippel et al., 2008). The response rates were 10.85% and 9.35%, respectively (Krippel et al., 2008). Respondents were asked to estimate average business losses to employee theft annually. In 2000, it was determined to be 8.135% of sales, and in 2005, it was determined to be 4.065% of sales (Krippel et al., 2008). Krippel et al. concluded that on average, employee theft appeared to reduce company profits by 2.5% in 2000 and 2.2% in 2005. The reduction of theft in 2005 could have meant that added steps were taken to improve internal controls regarding the more commonly stolen items (Krippel et al., 2008). Although there was an actual decline in theft, the researchers found that over 50% of the respondents in both years reported one or more incidents of theft (Krippel et al., 2008). Krippel et al. also found that between 2000 and 2005, the number of small hospitality companies declined but the number of franchise operations that operated hospitality companies increased. There was statistical significance of the reduction of small businesses and an increase in large national corporations in the area.

Doyle et al. (2006) explained that material weaknesses in internal control are more likely in firms that are smaller, younger, financially weaker, and more complex in structure. Although the size, age, and financial resources of the firm affect its ability to establish proper internal control, the need for internal control is unique to each firm's particular operating environment (Doyle et al., 2006). According to Brown (2003), internal control measures are intended to prevent a fire, not put out a fire. The key reason for internal control in restaurants is to prevent loss before it occurs, not detect losses that have already occurred (Brown, 2003). By preventing losses through fraud and theft, internal control gives management a glimpse of the actual performance of the business in terms of profitability and cost management (Manne, 1987).

Ge and McVay (2005) examined a sample of 261 companies that disclosed at least one material weakness after their effective date of compliance under SOX. The researchers concluded that a cause for the deficiencies was the insufficient commitment of resources to maintain and design accounting controls (Ge and McVay, 2005). One possible solution to the problems studied by Ge and McVay could be for companies to hire better managers and employees to run their businesses.

Lucier (2001) argued that management must always know the position of the business: whether it is growing or shrinking, whether amassing profit or going down the hill as a result of losses. Once management knows the stability and capability of the business, they can then make decisions that lead to growth and expansion of the restaurants (Lucier, 2001). The majority of family-owned restaurants have had concerns about internal controls overridden because of the level of trust based on the special relationships among the family members involved (Aronoff & Ward, 2007). This relationship, however, can become problematic because of expansion of the business (Arnoff & Ward, 2007). Furthermore, when employees without any previous relationship with the business owners are hired, the importance of regulating control structures becomes a necessity (Arnoff & Ward, 2007).

When the employees and the business owners are related, the implementation of rigid internal control procedures basically ensures the overall success of the company because it enhances accountability and responsibility among the family members (Aronoff & Ward, 2007). As generations undergo changes, the sense of closeness and trust is reduced, so the need for controls becomes necessary to avoid disagreements (Aronoff & Ward, 2007). Curwin and Slater (2001) asserted that the success of a business depends on its ability to carry out similar tasks at a lower cost than its competitors.

Internal controls may be used effectively to keep track of the costs incurred in the course of operating the restaurant. Knowledge of these costs is generally useful in planning and decision making with the aim of reducing or eliminating some of the costs (Epstein & Myers, 2009). The controls also take into account the organization plan, along with policies implemented within a restaurant to safeguard its assets, check the accuracy and reliability of its accounting data, promote operational efficiency, and promote adherence to prescribed managerial policies (Simmons, 1997).

Galloway (2003) suggested that through internal control, transactions are authenticated and recorded properly, which assists in the proper preparation and maintenance of financial statements. Overall, restaurants use one of two categories of internal controls: preventive and detective controls (Galloway, 2003). The preventive controls are measures put in place to minimize or eliminate any questionable errors or irregularities that may occur on an everyday basis, and they normally involve the incorporation of best practices within the industry with regard to operational and other procedures (Brown, 2003). Detective controls are investigative in nature and normally attempt to identify errors or misappropriations (Brown, 2003). Detective controls depend greatly on the proper implementation of preventative controls, which provide the necessary records needed during investigative processes (Brown, 2003). Because restaurants in New York State are labor intensive, especially within Manhattan, a majority of downtown restaurants have very broad-based preventative controls so that huge losses in the course of business may be averted (Margolis, 2009).

The division of labor is a preventative control mechanism employed by most restaurants (Margolis, 2009). In so doing, various sections are operated and managed by different personnel, which also necessitates internal transfers to reduce the incidence of collusion and the lack of productivity resulting from boredom (M. A. Lewis & Slack, 2003). Separation of duties ensures the security of various assets and proprietary information of the restaurant establishment (Brown, 2006). Frequent and unexpected changes or transfers are advisable to reduce collusion among staff members who may have fraudulent intentions (M. A. Lewis & Slack, 2003). It is important that employees in restaurants are educated about the importance of observing and adhering to the various internal control measures put in place by the restaurant at all times.

Whittington and Delaney (2009) explained that internal controls provide reasonable, but not absolute, assurance that specific entity objectives will be achieved. Even the best internal control may break down because of an error in human judgment in the decision-making process (Whittington & Delaney, 2009). Controls, be they manual or automated, can be circumvented by collusion. Management also has the ability to override internal control (Whittington & Delaney, 2009). Cost constraints such as the cost of internal control should not exceed the benefits expected to be derived (Whittington & Delaney, 2009). Custom, culture, and management systems in restaurants may inhibit fraud, but they are not absolute deterrents (Whittington & Delaney, 2009).

No system of internal control is without weaknesses. As long as control procedures are performed by people, the internal control system will be vulnerable to human error (Brown, 2006). Errors may arise from misunderstandings, mistakes in judgment, carelessness, distraction and fatigue (Roth, 1997). According to Needles, Powers, and Crosson (2005) separation of duties can be defeated through collusion by employees who secretly agree to deceive the company. In addition, established procedures may be ineffective against employees' errors or dishonesty, and controls that were initially effective may become ineffective when conditions change (Powers & Crosson, 2005). In some cases, the cost of establishing and maintaining elaborate systems may exceed the benefits. In small businesses, active involvement by the owner can be a practical substitute for the separation of some duties (Godsmark, 2005; Fields, 2007).

Epstein and Myers (2005) explained that internal control structure may be unfit for a small business that has few employees. One person may perform two or more duties at a time. This may result in negligence on the part of the staff and the quality of the work may be affected (Epstein & Myers, 2005). The authors further argued that the purpose of the internal control may no be achieved and the cost of the internal control may exceed the cost of errors and frauds (Epstein & Myers, 2005). In addition, management may not care if internal controls work properly. (Ridley,2008). Management and staff can at times view internal controls as red tape, unnecessary and a waste of time. In a small business staffs are under tight budgets and will be tempted to cut corners (Harrer, 2007).

A rigid internal control system may be grounds for apathy amongst staff which may lower their morale through bad supervision in the way the duties are delegated. The design may not be suitable for the type of business or organization and be difficult to sustain (Harrer, 2007). Management may place over-reliance on internal control system causing employees to carry out fraudulent activities (Coe & Ellis, 2001). A strong internal controls system may cause auditors to over-rely on the system, therefore relaxing applicable audit procedures which may lead to losses in the business (Michelman & Waldrup, 2008; Jackson, 2006)

Increases or decreases in restaurants' overall operational costs depend on the controls put in place by an organization. Money alone cannot buy profitability (Alonzo, 2007). For example, certain internal controls measures are inappropriate for a small restaurant having fewer than 10 employees but may be appropriate for a large downtown restaurant. The cost associated with such controls must always be compared to the expected benefits before implementation (M. A. Lewis & Slack, 2003).

To be able to have a workable internal control mechanism, management have to put in place clear financial reporting objectives (Manne, 1987). Once these objectives are established, management must further identify any activities and circumstances that may hinder the fulfillment of such objectives (Epstein & Myers, 2009). Internal controls should be structured to eliminate or reduce the possible impact of such challenges to the overall performance of the company (Galloway, 2003).

Rational financial objectives need to be in place, and the risks associated with them need to be identified. It then becomes easier to set and implement strategies through which risk can be avoided or mitigated in the restaurants' operational activities. The management of restaurants must come with internal controls, that is, approaches intended to capture process and communicate information needed for financial reporting (Lynn, 2006).

Improvements in technology and management techniques allow smart restaurant operators to keep operating costs within the boundaries needed to generate profit while providing customers with the level of services that they need to generate repeat business (Brown, 2006). Therefore, as the business progresses, the internal controls necessary to filter the gaps associated with business transactions and operational procedure become clearer, subsequently making errors, pilferages, and fraudulent activities easy to detect and thus augmenting profit margins and business growth (M. A. Lewis & Slack, 2003).

The control environment is dependent on the risk situations of various segments of the restaurant (Rutherford & O'Fallon, 2007). The failure of controls designed to safeguard assets from loss, damage, or misappropriation may compromise the essence of the control environment (Ho & Oddo, 2007). For instance, a restaurant functioning within high crime rate areas of the city may deem it necessary to have security guards as part of its physical controls against outside theft. On the other hand, a restaurant in a safer neighborhood may not see the necessity of having security guards. However, a thorough assessment of the risk situation is necessary so that controls and their benefits are effectively matched with the risks and other costs (Rutherford & O'Fallon, 2007).

Management is one critical element of the control environment within a restaurant. Restaurants are labor intensive and require transparent and inclusive management styles regarding critical internal procedures and policies (Brown, 2003; 2006). Any obvious dissatisfaction by staff may be quite noticeable by the clientele, who then might form negative opinions about the restaurant and withdraw their support (Brown, 2003). Internal theft by employees may be prevented by having well-trained supervisors oversee the activities of fellow employees as well as the overall management of the business (M. A. Lewis & Slack, 2003). According to Bragg (2005), there is nothing more damaging to a company than to make a management decision based on inaccurate information. Having access to up-to-date information concerning various activities is necessary to the successful operation of a restaurant business (M. A. Lewis & Slack, 2003).

Establishing effective management information systems and safeguarding sensitive information may be advantageous to the strategic planning of the restaurant (M. A. Lewis & Slack, 2003). Therefore, restaurants should have information-processing sectors whose main role is to process management information for decision making

(Rutherford & O’Fallon, 2007). For example, it is important for management to know and quantify the financial contributions of each waiter or waitress, compare it against the overall performance of the business and the industry, and make constructive decisions to improve efficiency and productivity (Rutherford & O’Fallon, 2007).

The management team members of the restaurant have to guarantee that the clientele who were served are accounted for and are equated to the money earned and deposited in the bank for that time period. Internal controls would ensure that transactions made can be traceable to their source documents and that such documents are safely secured (Colbert & Bowen, 1996). This type of control would enhance the integrity and reliability of information from the records (Ridley, 2008).

Communication between management and employees is critical to providing staff with insight into how to conduct business activities and follow protocols. Constant communication also helps to reduce errors within the internal communication system, thus minimizing future losses (Colbert & Bowen, 1996). Good communication also fosters teamwork and makes it easier for management to relay current information about new procedures or systems that will enhance the operational growth of the restaurant as well as its internal controls (Colbert & Bowen, 1996).

Risk assessment is a comprehensive approach by the managers and employees of restaurants to garner skills and tools necessary to identify risks to the achievement of their business objective, which is to be solvent and profitable. Risk is the uncertainty of the actions or inactions by managers and employees to respond to best business practices on the ability of the organization to achieve its objectives (Harrer, 2007). Risk can be measured in terms of the potential to affect the business (Pickett & Pickett, 2005). Highly significant risks in restaurants that are likely to occur will cause much concern to restaurant owners because they may be the conduit toward fraud, waste, mistakes, and improprieties.

Pickett and Pickett (2005) asserted that risk management goes to the heart of a problem in an organization and that restaurant managers may find themselves cutting through red tape in designing and redesigning good internal controls. The internal control system should be guided by the operations of the restaurant and any risk factors ascertained by management Hudson, 2006). Due care should be taken to have rigid procedures, along with the necessary costly control measures taken only in situations where there is a high and obvious risk of loss (Rutherford & O'Fallon, 2007). There also should be clarity within the financial and operational reporting segment so that management can identify and assess the risk factors associated with the different sectors of the company and take the necessary steps to curtail such risks (Bragg, 2005).

Bishop (1991) explained that the basis for risk management should be the analysis of the risk associated with financial reporting. Risk management should identify controls to test by starting at the top-company level controls and financial statements, and linking to significant accounts, relevant assertions, and underlying processes in which other important controls exist (Zhang & Pany, 2008). Bragg (2005) contended that some internal control procedures run a considerable risk of failure. In these cases, it is necessary to conduct a careful review of what will happen if the internal control fails. Most large restaurants in New York have financial analysts who assess their internal control systems, strategize, and then offer recommendations in areas that need improvement (Godsmark, 2005). Restaurants that are audited on a yearly basis by external auditors are examined for deficiencies in their internal controls, and any deficiency in the internal controls may be viewed by the auditors as questionable, thereby reducing the integrity of the records. This is sufficient reason for a restaurant to receive a qualified audit opinion.

Pickett and Pickett (2005) explained that monitoring refers to the measures that have been put in place by the management of an organization to ensure that internal control is properly established and is happening in an acceptable manner. The process of monitoring is an ongoing or separate evaluation (Whittington & Delaney, 2009) of a restaurant that allows the management to ascertain whether internal control over financial reporting is evident and operational (Galloway, 2003). Ongoing monitoring activities often are designed into recurring activities in restaurants such as sales and purchases (Hudson, 2006). Separate evaluations, which are performed by auditors or designated personnel, include communication of information about strengths and weaknesses, and recommendations for improving internal controls (Whittington & Delaney, 2009).

Rutherford and O'Fallon (2007) stated that this process ensures that there is no complacency in carrying out all the relevant activities needed to reduce losses in a restaurant's procedural activities. Monitoring also makes it easier to identify any deficiencies that may arise from internal control by providing the necessary feedback for improvement of the said internal control system (Rutherford & O'Fallon, 2007). An inadequate design or implementation of monitoring controls used to assess the operating effectiveness of the entity's internal control over a period of time may lead to significant deficiencies or material weaknesses (Harrer, 2007).

Internal controls can have negative and positive results on a restaurant's ability to garner profit. A cost-benefit analysis is important prior to implementing any internal control system (Bragg, 2005). Poorly chosen internal controls or operational procedures can lead to an inefficient operation of the restaurant (Epstein & Myers, 2009), which will then lead to dissatisfaction and the subsequent loss of customers (Rutherford & O'Fallon, 2007). The cost of any given internal control system may be higher than the profit, thus yielding negative returns and lowering the restaurant's profitability (Brown, 2006). Nevertheless, the presence of internal controls often yields a higher rate of efficiency and the proper use of resources (Brown, 2003).

Epstein and Myers (2009) argued that small business owners must try to balance the cost of protecting cash and assets with the cost of adequately separating the duties or measures used. In order for an internal control system to be fully operational, it must be detailed and specific, covering all of the elements that are intertwined within the restaurant's financial reporting system (Epstein & Myers, 2009). The internal control system also must be able to uphold integrity to curtail any corruption that may lead to losses (Rutherford & O'Fallon, 2007). Hudson (2006) discussed the critical relationship among the menu, the food that is purchased, the production of the food, the type of service, the level of expertise required of the kitchen and service staff, and the cost of doing the business. Managing cost is analogous with good internal control. This includes appropriate quantity, quality, price, and correct internal control procedures that foster profitability" (Hudson, 2006).

According to D. Miller (2006), a restaurant system tailored to a good internal control system can neutralize the enemies of quality and profitability. The less often that managers examine internal control (Godsmark, 2005), the more likely it is that they will not discover the waste, fraud, and inefficiency that destroy profits and the ability to offer excellent services. Epstein and Myers (2009) stated that the cost of internal control must be constantly evaluated by looking at cash outlay, employee time and morale, and the impact on customer service. According to Epstein & Myers (2006), "after internal controls are implemented, assumptions must be tested to determine if the detections of errors, theft, fraud and embezzlement are detected" (p. 171). An internal control system must be used on an ongoing basis to test for consistency, which will assist management in obtaining financial statements easily and thereby empowering them to make strategically informed decisions (Rutherford & O'Fallon, 2007). In addition, financial controls assist management in auditing and spotting fraudulent activities, especially when dealing with cash and other assets.

Colbert and Bowen (1996) identified some of the components of an internal control system as accounting and finance controls, administrative and managerial controls, inventory controls, purchasing controls, cash controls, and sales statistics, and budget preparation. Accounting and financial controls are measures that ensure that all the financial statements such as the cash flow statements, balance sheet statements, income statements, and retain earning statements are well kept and reliable for use by the management (Rutherford & O'Fallon, 2007). To be able to have a concise record of the company's finances, it is important for the management team to review the financial records on an ongoing basis so that leakages or errors that might happen during business transactions may be traced and corrective action taken (Brown, 2003).

The accounting system must be well instituted so that a systematic process is followed when dealing with accounting tasks and activities. An outside auditor should be brought in on a regular basis to review the accounting work by checking for legality and inaccuracy so that errors or fraud might be detected (Martin, 1989). Bookkeeping should also be up to date, well secured, and stored securely to avoid loss of information (Coltman & Jagels, 2001. The company's accounting books and financial records should be safeguarded and easy to access so that management can have information on hand for easy and fast decision making (Coltman & Jagels, 2001).

The prime objective of a restaurant is to provide an adequate return on the owners' investment in the business. The restaurant business is largely made up of small transactions and diverse activities. Transactions are conducted rapidly and often under rushed circumstances (Alonzo, 2007). According to Alonzo (2007), "for that reason, it is important to keep tight control over all profit centers" (p. 137). The income statement is the financial statement used to measure a restaurant's business income (Moncarz & Portocarrero, 2005). The income statement summarizes revenues and expenses over a stated period of time (Moncarz & Portocarrero, 2005). It has a beginning, an end, and a middle that tells the reader what happened in between (Alonzo, 2007).

The basic accounting concepts related to the measurement of income must serve as a guideline for the proper recognition of revenues and expenses, thereby ensuring accuracy and uniformity of income measurement. The income statement can be used as a valuable analytical tool. Its percentages reveal good performances as well as problem areas that need attention (Kieso & Weygandt, 2005). Industry statistics for similar operations may be obtained and used in a comparison of the restaurant's performance (Alonzo, 2007). The balance sheet is a status report that reflects the financial position of a company at a specific point in time. The balance sheet reveals what resources the restaurant owns and where these resources came from (Kotschevar & Withrow, 2006). The balance sheet can be likened to a candid snapshot that highlights how the business appears at one time, usually at the end of an accounting period (Alonzo, 2007).

According to Barrows and Powers (2006), cash flow is the money generated in the operation during the operating period. Cash flowing into the organization is used to pay off obligations plus other costs (Coltman & Jagels, 2001). Cash flow represents the actual money left over at the end of the period without the artificial contrivances of general accounting practices (Coltman & Jagels, 2001; Epstein & Myers, 2009). A foodservice industry needs cash to operate. Because of such accounting conventions as the expensing of depreciation on assets and the accruing of certain expenses not yet payable, the usual financial statements do not completely show what cash is really available to the operators (Coltman & Jagels, 2001). Operations may do well and be profitable from an accounting viewpoint, but poor managerial decisions, such as allowing inventory levels to rise and inappropriate internal control, may leave little money left to pay creditors when their bills are due (Lynn, 2006). Dollars, not book profits, are needed to actually pay the bills. Therefore, management should know the cash flow and the impact on future cash flows before making certain expansions and capital investments.

The most common measure of how well a business is performing is to calculate the ratio of net profit to total average assets. This ratio is called a return on assets, and it shows how well the assets entrusted to the management have been used (Bragg, 2005). A return on assets from 3% to 6% is considered a fair return (Kotschevar & Withrow, 2006). Net profit in this instance is the profit left over after operations, interest, other nonoperating expenses, and business taxes have been paid (Kotschevar & Withrow, 2006). Another way of measuring the financial health of an enterprise is to calculate the return on investment (Barrows & Powers, 2006). The return on investment is the amount of money obtained as profit in relation to the actual amount invested by the owners of the firm.

Buckhoff and Clifton (2003) explained that cash-intensive businesses such as restaurants are vulnerable to off-book fraud schemes. Few people will steal if they think they will be caught and suffer serious negative consequences (Buckhoff & Clifton, 2003). Accordingly, the most effective deterrent is to instill the perception of detection in employees' minds. Brown (2006) maintained that managers do not pay enough attention to cash flow, which essentially tells how much money is in the business. Without knowledge of the cash flow in the restaurant, managers suffer the consequence of insolvency.

Cash controls include a list of activities that the restaurant is involved in with regard to the handling of cash and the receipts obtained from transactions carried out by restaurant personnel, who may include, but are not limited to, cashiers, servers, the restaurant's bartenders, the management team, the bookkeepers, and the restaurant's accountant. The best practice concerned with cash control is the creation of an orderly flow of cash in and out of the restaurant's coffer (Bragg, 2005). Having an accurate account of all cash or receipt transactions is integral to balancing the accounting books; if the records analyzed are on par with the records kept on cash, then the internal control is deemed reliable (Martin, 1989).

Cash, check, and credit card controls have to be in place to reduce theft (Barrows & Powers, 2006). Cash is the asset most often stolen by dishonest employees (Miller, 2006). Fraudsters typically target cash as it enters or leaves the business Buckhoff & Clinton, 2003). Thoroughly understanding the controls and procedures in place for processing cash flowing through a business makes this type of scam much more difficult (Buckhoff & Clifton, 2003). Today, the POS makes this type of scam much more difficult (Brown, 2003). More restaurants are switching from traditional cash register to a POS (Godsmark, 2005). With the right POS, the restaurant can increase the efficiency and control of its operations (Lee, 2006).

Buckhoff and Clifton (2003) contended that inadequate cash flow controls, especially over substantial amounts, allow dishonest employees to divert cash into their own pockets. Understanding these cash controls allows managers to generate and implement appropriate controls to counter the occurrence of fraud (Epstein & Myers, 2009). To maintain adequate cash flow in the restaurant business, managers should set up a consistent payment schedule for noncontrollable expenses, such as loan payments, rent, insurance, and equipment leases; deposit cash sales every day; avoid overpurchasing, regardless of the volume discount; not to tie up cash in excess inventory; set up a budget plan to pay for utilities such as gas and electricity; and pay the bills in a timely manner (Lee, 2006).

Inventory controls help management to assess the flow of purchased goods in order to establish any odd trend (Martin, 1989). Success in managing a foodservice inventory, small or large, is essentially a matter of how well the foodservice manager understands the importance of inventory control (Sanders et al., 2008). Management can adjust to accommodate special purchases in emergency situations. The statements deduced from internal control systems can help management to gauge how well they are maintaining control over the business.

Lee (2006) posited that in order for a restaurant to establish efficient inventory control, the restaurant manager must stock a manageable supply based on the needs of the restaurant and make a habit of routinely track inventory. Adequate supplies must be on hand, with some extra being stored for emergency backup (Godsmark, 2005; Lee, 2006). However, restaurants should avoid tying up cash on excess inventory because this situation may encourage pilferage (Godsmark, 2005). As Lynn (2006) maintained, the more inventory there is on hand, the more likely it will be that employees may want to steal or pilfer some of it. Storage steps should include control procedures. The order of management of items should follow some logical method of use, such as first in first out or last in first out (Lee, 2006).

A core inventory reduction problem is a company's reliance on a demand forecast, which inherently reduces the risk of demand inaccuracy based on the perception of management creating the forecast (Bragg, 2005). Just-in-time philosophy may be implemented to control inventory costs. This philosophy addresses the need of inventory when utilized. Raw materials or supplies are not purchased until there is a need or an element of certainty that they will be needed (Alonzo, 2007). The proper kind of food, quantity, and quality must be determined and the right supplier found (Lee, 2006). Many aspects of the purchasing function can be computerized for greater efficiency (Lee, 2006). When recipes are input into available software system that are linked with production scheduling and a front-of-house point-of-sale system, utilized items are subtracted from inventory (Brown, 2006). Management are signaled when it is time to order more recipe components (Fields, 2007). Similarly, recipe component costs can be monitored so that management are alerted when food and supply item prices have climbed above a range deemed acceptable (Lynn, 2006). Substitutions can then be suggested that are acceptable (Brown, 2006).

Kotschevar and Withrow (2008) suggested that purchasing supplies and goods is not simply deciding what, when, and how much; rather, it requires further efforts in accounting, controlling, and monitoring the flow of materials within the operation from the initial recipe until they are used. All of these functions must be well coordinated, organized, and simplified as much as possible (Fields, 2007; D. Miller, 2006).

Management should scrutinize the purchasing system to determine whether any procedures can be streamlined or eliminated (NRA Educational Foundation, 2007). The system should provide procedures for an adequate flow of information between departments and the maintenance of good records to provide accountability (Kotschevar & Withrow, 2008).

The quantity purchased should be held to the lowest possible amount, with safeguards against running out. Usually a restaurant calculates its average use of items and establishes minimum and maximum levels of stock between deliveries (Lynn, 2006). Goods purchase requisition should be the basis for purchase orders (Kotschevar & Withrow, 2008). Only those employees authorized to buy goods should have access to purchase requisitions or purchase orders (Kotschevar & Withrow, 2008), which should be signed by management or the highest purchasing authority. A record should be maintained of all purchase orders for supplies used in the restaurant (Miller, 2006; Moncarz & Portocarrero, 2005). From the purchase order, a daily receiving report should be set up, indicating the food and beverage orders expected for delivery on which days, how much was ordered, and the price.

A majority of wide-scale restaurants in New York have instituted separate purchasing department because of the busy nature of the purchasing function (Rutherford & O'Fallon, 2007). Such measures have been taken to ensure that all the ordering processes are carried out according to the procedures and regulations of the restaurants (Sanders, Hill & Faria, 2006). Orders have to be formalized and maintained through a filing system so that management will be able to trace all orders made (Moncarz &

Portocarrero, 2005). The products delivered must be recorded for future reference to help the organizing team detect mistakes or fraud and assist management in putting measures in place to curtail such future activities (Rutherford & O'Fallon, 2007).

Administrative or managerial controls are measures established in a business operation that guarantee that the business operations are proficient and efficient enough to garner maximum benefits (Burton, Carrol, & Wall, 2002). These controls also ensure that the management team can keep abreast of the company's managerial policies, which have to be upheld for business to be conducted with integrity (Burton et al., 2005).

Administrative controls are mechanisms used by management to guarantee that all of the managerial policies are carried out and implemented in the leadership process (Roth, 1997). Another aspect of these controls includes management authorizing junior staff members to carry out business transactions on the restaurant's behalf. This process of authorization prevents defrauding or questionable activities by employees who may believe that management are lax in their duties and responsibilities (Rutherford & O'Fallon, 2007).

Restaurants will be able to reduce any losses due to wastage or fictitious claims of deliveries because the delivered goods will be investigated and recorded against the original orders made by staff members (PriceWaterhouse, 1993). This process will lessen any costs resulting from bloated delivery lists and ghost deliveries (Galloway, 2003). Moreover, management will have the necessary information at hand to make immediate decisions, which will assist in cutting back on time and the wasting of resources (Brown, 2003). Therefore, over time, the operational costs of the restaurant will be steadily reduced based on planned business procedures because planning delineates time and money wastage (Sanders et al., 2008).

A restaurant that upholds and maintains good quality assurance will sustain customer loyalty, which will eventually lead to increased sales and reduced wastage and operational costs (Rutherford & O'Fallon, 2007). Internal controls foster a high level of authenticity, thus enabling all transactions to be properly authorized and legalized (Saunders, Hill & Faria, 2008). The result is a reduction in hidden costs resulting from disproportionate transactions (Needles et al., 2005). In addition, all of the internal control components work harmoniously to uphold accountability for assets and ensure authentic authorization to access the use of assets, periodic reconciliation between recorded assets on the books, and the physical assets that exists along with many other features that ensure that the assets are used for their intended purposes (Needles et al., 2005; PriceWaterhouse, 1993). Poor management and insufficient training of employees also contribute to the problem of internal control (Rutherford & O'Fallon, 2007). Employee turnover in a fast-paced business such as a restaurant could be dealt with through the implementation of proper training and management programs (Alonzo, 2007). Proper training and management are important factors in retaining productive employees. (Coltman & Jagels, 2001).

The purpose of this study is to determine restaurant managers' perception of the internal control systems in small restaurants operating in Nassau County in New York State, and if a significant relationship exists between the dependent variable, internal control system, and the independent variables, protection of assets, segregation of duties, and verification of transactions.

No significant research has been conducted to determine whether small restaurants operating in Nassau County of New York have adequate internal controls in their operating activities consistent with COSO standard. However, this literature review has included studies of internal control in other organizations. Doyle et al. (2006) examined 970 companies that reported material weaknesses from August 2002 to August 2005. Doyle, Ge and McVay (2006) reported that the firms that were in the growth stage were financially weaker and small, were engaged in restructuring activities, and were more likely to have internal control weaknesses.

Ashbaugh, Collins, and Kinney (2006) supported the findings of Doyle et al. (2006) by studying a sample of 585 firms that had disclosed internal control deficiencies and another test sample of 5,281 firms that had not disclosed internal control deficiencies from November 2003 to December 2004. According to Ashbaugh et al., the larger firms with more complicated operations such as mergers and acquisitions were more likely to find and report internal control deficiencies. Ashbaugh, Collins and Kinney (2006) study was different from that of Doyle et al. in that the latter researchers restricted their analysis only to firms that had reported "material weaknesses." Ashbaugh et al. considered all three levels of internal control deficiencies, namely, material weaknesses, significant deficiencies and control deficiencies, as set forth by the Public Company Accounting Oversight Board (2004).

Coe and Ellis (2001) conducted a study of 127 cases of public officials who were prosecuted for fraud in North Carolina. The purpose of the study was to ascertain the effect of internal control failure in state-run organizations (Coe & Ellis, 2001). The findings indicated that city or county losses were more likely to occur in departments where cash was handled (Coe & Ellis, 2001). Coe and Ellis also stated that failure to segregate duties and use pre-numbered documents were the most common reasons for losses.

Duncan (1995) conducted a survey of 1,200 churches to determine the effects of internal control. Six hundred survey questionnaires were sent to churches with more than 300 members, and 600 surveys were sent to churches with fewer than 300 members (Duncan, 1995). Regression analysis was used to analyze the data (Duncan, 1995). Duncan concluded that the churches with more than 300 members had adequate or better internal control systems.

Sardino (2007) as well as O'Connor, Vera, and Chan (2007) concluded that a firm's operating performance is directly related to the fit of the firm's operating strategy with the management control system that has been implemented. O'Connor et al. collected data from three sources: a sample list of firms, a financial and market database, and a comprehensive survey of managers of Chinese-listed firms. The chief executive officers of the firms were contacted by telephone and invited to participate in the study (O'Connor, et al, 2007). The survey instrument was then mailed to 659 companies; the response rate was 27.8%. O'Connor et al. concluded that internal control does not work independently, but is more successful when working in collaboration with the firm's operating performance and strategy (Sardino, 2007).

Kistler (2008) examined the extent of and reasons for the lack of internal controls within Protestant worship centers congregation using a for-profit internal control questionnaire. Kistler survey questionnaire, the first used in this field, collected data on the accounting background of those involved in financial matters, the attitude of leaders and responsible persons toward internal controls, and the segregation of duties to ascertain the significance of their association with internal control. High scores indicated that the dependent variable, the level of internal control, was compatible with for-profit industry standards, whereas low scores indicated the opposite (Kistler, 2008). Kistler concluded that the levels of internal control in the Protestant churches were viewed as insufficient when compared to for-profit companies' standards. The implications of the findings indicated that the financial assets of the Protestant churches were vulnerable to fraud and abuse (Kistler, 2008).

I used the same for-profit internal control questionnaire instrument, the ICSQ, that Kistler (2008) employed. The ICSQ has been tested for validity and reliability using for-profit standards that are consistent with the COSO (1992) internal control integrated framework. Included in chapter 3 is an explanation of the applicability of the ICSQ and the research design.

Summary

The literature review included previous studies pertinent to the theoretical framework. Chapter 2 provided a thorough review of the existing literature on the effect of internal control on small and midsized organizations. It may be concluded that small restaurants operating in Nassau County in New York State must operate under a unified system divided into three main categories: duty division among staff, proper record keeping, and proper execution of duties. Chapter 3 includes the design of the research, including justification for the selection of the research methodology. Chapter 3 also includes details about the sample, population, the research instrument, data collection, and the data analysis.

Chapter 3: Research Methodology

Introduction

This study was designed to investigate restaurant managers' perception of the internal control systems in small restaurants operating in Nassau County in New York State, and if a significant relationship exists between the dependent variable, internal control system, and the independent variables, protection of assets, segregation of duties, and verification of transactions. The survey method was used to gather data from respondents that own or operate restaurants in Nassau County of New York State. The collected data were analyzed statistically to establish the findings. This chapter includes information on the research design, target population, sample, data collection, ICSQ, and data analysis.

Research Design

A choice of research design reflects decisions about the priority being given to a range of dimensions of the research process (Bryman, 2001). The correct design must be selected to determine the methodology that has the greatest chance of discovering the truth about a particular phenomenon (Leedy & Ormrod, 2005). The more a research design emulates a true study, the more accurate the conclusion of the research as it relates to reliability and validity (Ruane, 2005).

Sayer (1992) explained that in designing a good study, the researcher has to keep in mind the nature of the topic of interest. Sayer stated, "heterogeneity, complexity, qualitative change, and polyvalency are such that few situations are the same in respect of the interest" (p. 241). A survey design was considered appropriate for this study because it was the best research design to understand the effects of internal control on the survivability of small restaurants operating in Nassau County in New York State. According to Kasunic (2005), “survey-based research can be used to characterize the knowledge, attitude, and behavior of a large group of people through the study of a subset of them” (p. 1). Furthermore, surveys are widely utilized for the purpose of providing insight into complex issues, assisting with problem solving and supporting effective decision-making (Kasunic, 2005) Quantitative research is a strategy that emphasizes quantification in the collection and analysis of data that entails a deductive approach to the relationship between theory and research (Bryman, 2001)

Target Population and Sample

Conceptualization of a problem that calls for a survey generally implies that a target population has been identified (McTavish & Loether, 1999). The target population is the group that is being studied, which is selecting a sample of its members. The appropriateness of the target population of the study refers mainly to the suitability for the attainment of the objectives of the study (Rea & Parker, 1992). The target population for the study were restaurant managers operating small restaurants in Nassau County in New York State. The sample was selected from New York State Restaurant Association’s list of small restaurants in Nassau County in New York State that have been in business for at least 3 years. According to SBA (2001), an organization is considered a small business if it has gross receipts less than $25 million annually, employs less than 100 employees and is not an investment company.

Sampling Procedure

The participants were selected by random sampling. The ultimate goal of the research is to arrive at findings that have general applicability (McTavish & Loether, 1999). The participants were chosen from a list of the small restaurants in Nassau County in New York State that have been in operation for at least the last 3 years. The criteria to participate in this study are that (a) the participants must be the managers of small restaurants operating in Nassau County in New York State, (b) the participants must have at least 10 employees, and (c) the participants must have been in business for at least the last 3 years.

Many sampling methods exist to ensure the validity of the generalization of research findings. The one that is selected will depend on the nature of the population and on constraints placed on the research effort (Martinez-Pons, 1997). According to Martinez (1997), "a properly drawn sample is such that any findings regarding it can be legitimately generalized to the population from which it is drawn" (p. 110). The purpose of sampling is to facilitate generalizations about a population based on a scientifically selected subset of that population. Sampling is necessary because it is generally not practical or feasible to seek information from every member of a population (Rea & Parker, 1992).

According to Cappelleri and Darlington (1994), Cohen's statistical power analysis is one of the most popular approaches to calculating the required sampling size. According to Cohen (1988), in order to estimate a sample size for regression analysis, four factors need to be known: (a) the significance level or alpha, (b) an estimate of the effect size, (c) the desired power level, and (d) the number of predictors. The significance level for this study is 0.05, the desired power level is 0.95, and the number of predictors is three, which leaves the effect size to be estimated.

Effect size generally means the degree to which the phenomenon is present in the population or the degree to which the null hypothesis is false (Cohen, 1988). It essentially measures the discrepancy between the null hypothesis and a specified value of the alternative hypothesis. Cohen (1992) developed an effect size index for each type of statistical analysis. Each index has grouped effect sizes into small, medium, and large values. All the indexes are scale free and continuous ranging from zero upwards (Cohen, 1992). For regression analysis, Cohen's (1992) effect size index is 0.02, 0.15, and 0.35 for small, medium, and large effect sizes, respectively. The smaller the effect size, the more difficult it would be to detect the degree of deviation of the null hypothesis in actual units of response. Cohen (1992) proposed that a medium effect size is desirable as it would be able to approximate the average size of observed effects in various fields. Cohen (1992) also argued that a medium effect size could represent an effect that would likely be "visible to the naked eye of a careful observer" (p156). Thus, for this study, a medium effect size of 0.15 will be used.

The sample size necessary to conduct the regression analysis for this study was estimated using G*Power 3.0 software (Faul et al., 2007). According to Cohen's (1992) criteria, effect sizes of 0.02, 0.15 and 0.35 are considered small, medium, and large, respectively. Using power = 0.95, $\alpha = 0.05$, number of predictors = 3, and ES = 0.15, the estimated sample size was equal to 89. Therefore, the sample size will be $N \geq 90$. For most samples, a return rate of one-third is reasonable (Cohen, 1992). Therefore, in order to ensure that at least 90 respondents complete the survey, the number of restaurants that will be asked to participate will be 90 * 3 = 270.

According to the National Restaurant Association ([NRA], 2009), there are 1,173 restaurants in Nassau County, including small and large restaurants. A random sample of 270 restaurants was drawn as a subset of the total population of all the small restaurants listed on the New York State Restaurant Association's database of small restaurants in Nassau County in New York State that have been in business for at least 3 years. All the names of the small restaurants operating for at least 3 years in Nassau County were assigned a numeric value and were entered in an Excel formula function that randomly selected 270 restaurants as the sample frame from the target population. If a restaurant was selected that did not meet the criteria for selection, I discarded that selection and make another selection.

According to Fowler 2002, there are three attributes that must be considered in connection with a sampling frame: (a) comprehensiveness, (b) probability of selection, and (c) efficiency. All the small restaurants in Nassau County in New York State were entered in the Excel formula function and a random selection of 270 restaurants was made from the restaurants ensuring that Fowler's criteria are met.

Instrumentation

The literature review revealed that no existing questionnaire had been developed to collect data from restaurants operating in Nassau County in New York State. I used the ICSQ, a self-administered survey questionnaire designed by Kistler (2008) as part of a study on internal controls in the Protestant Church. According to Singleton and Straits (2005), “Survey based researches involve the administration of questionnaires or interviews to relatively large groups” (p. 9). The use of a questionnaire enables the researcher to reach a large contingent of participants in a cost efficient manner (Leedy & Ormrod, 2005).

Kistler (2008) conducted a study on the effects of internal control on the Protestant Church’s environment. Kistler (2008) developed a survey instrument by drawing questions and ideas from numerous sources. Kistler primary sources included three dissertations on internal controls (Duncan, 1995; Nicholas, 1980; Smith, 1983), and the AICPA (2006). The original questions were written in a 5-point Likert scale format integrating the theoretical framework and examining the independent and dependent variables. Four variables, consisting of one dependent variable and three independent variables, were analyzed. The dependent variable was internal controls within a church and the independent variables were the number of trained accounting personnel: the attitude towards internal control and the degree of segregation of duties.

Kistler (2008) used the survey instrument to collect data to determine the significance or association of the independent variables with the dependent variable. High scores indicated that that the dependent variable had a high level of frequency while low scores indicated the opposite (Kistler, 2008). Each question on the Likert scale had 5 possible answers with answers ranging from low to high (Kistler, 2008). Five represented the best possible internal control and one represented the least possible internal control. Total scores, as defined by the maximum number of points possible on the questionnaire were obtained for each set of the independent variable questions. Then the total average scores were used as a predictive construct validity measurement. Low scores indicated a lack of internal controls while high scores indicated that internal controls were adequate (Kistler, 2008).

I obtained permission from Kistler (2008) to use the ICSQ. Although this instrument was designed to determine the effects of internal control in churches, which are usually nonprofit organizations, the instrument was designed using for-profit business standards and, therefore, since the business standards are appropriate for the restaurant industry, the survey was deemed to be appropriate for this study. I modified Kistler's instrument for use in the restaurant environment instead of a church environment, so a pilot study was conducted using a test-retest approach in order to assess the instrument's reliability and validity.

Reliability and validity are important in assessing the integrity of a survey instrument and its results. According to Singleton and Straits (2005), reliability of the instrument refers to the stability and consistency of the instrument in measuring what it is supposed to measure. It is the degree to which an instrument will give similar results for the same measurement at different times (Wiersma, 1991). The ICSQ instrument was tested for reliability and validity by Kistler (2008) when examining the Protestant Church's financial environment, internal controls, and financial integrity. Instruments that have been tested for reliability are widely used by researchers until invalidating features are found (Singleton & Straits, 2005).

Validity concerns the ability to infer that scores from a sample are representative of the population from which the sample are drawn (Creswell, 2005; Bryman, 2001). Instruments used in quantitative studies have internal and external validity. Internal validity is the basic minimum of control, measurement, analysis, and procedures necessary to make the results interpretable (Wiersma, 1991). According to Wierma (1991), “internal validity deals with being able to understand the data and draw conclusion from them” (Wiersma, 1991, p. 104). Bryman (2001) noted that external validity refers to whether the results of a study can be generalized beyond the specific research context.

Content validity is based on the extent to which a measurement reflects the specific intended domain of content (Carmines & Zeller, 1991). Content validity refers to how well the content material was reflected in the survey instrument and is a good indicator of whether the desired trait is measured (Leedy & Ormund, 2005). Thus, assessment of content validity is vital to survey development. Content validity is assessed qualitatively by a panel of experts (Carmines & Zeller, 1991). For assessment of content validity for surveys, each question is given to a panel of expert analysts, and they give their opinion about whether the question is useful in or unrelated to measuring the construct under study (Nunnally & Bernstein, 1994).

Because the ICSQ instrument was the first to be used to determine the effects of internal control, Kistler (2008) conducted a pilot study to determine its content validity. The pilot test was constructed to compare Protestant worship centers with inadequate internal controls to Protestant worship centers with adequate internal controls using for-profit public companies' business standards. When conducting the pilot study, Kistler (2008) mailed the questionnaires to approximately 20 pastors to assess the instrument's content validity. The purpose of the pilot study was explained to the pastors and they were asked to complete the questionnaire and give written feedback regarding the questions asked. Comments were asked for on the clarity, layout, wording and understanding of the questionnaire. Expert opinions from the accounting faculty at the State University of Potsdam were also obtained to assess the instrument's content validity. The feedback from the experts was incorporated into the survey. After the modifications were made, the instrument was considered to have content validity. Kistler (2008) obtained total scores for each set of independent and dependent variable questions. The total scores were used as a predictive validity measurement. Adequate internal controls obtained a high score on the questionnaire, and inadequate internal controls as defined, received a low score.

Kistler (2008) used Cronbach's alpha to measure the instrument's internal consistency reliability. Cronbach's alpha was used to estimate the survey items' inter-correlations, assessing if the items measured the same construct (adequacy of financial controls). Kistler (2008) reported the Cronbach's alpha as 0.80, which is considered to be reliable since it is equal to or greater than 0.80 (Gliem & Gliem, 2003).

For further assessment of the reliability of the instrument, I used the test-retest approach. The test-retest approach is a two-step process in which the survey is administered once to a group of individuals and then, 2 to 4 weeks later, the survey is administered again to the same individuals (Singleton & Straits, 2005). The pilot study data were collected from a sample of 10 restaurants with the retest survey administered 2 weeks after the test survey. The pilot study data were analyzed using Cronbach's alpha to determine internal consistency of the instrument. For Cronbach's alpha, George and Mallery (2003) suggested that ">0.9-Excellent, >0.8-Good, >0.7-Acceptable, >0.6-Questionable, >0.5-Poor, and <0.5-Unacceptable" (p.231) is a good scale for assessing the instrument's internal consistency reliability. Furthermore, Gliem and Gliem (2003) state that a Cronbach's alpha 0.8 is probably a reasonable goal. In addition to Cronbach's alpha, Pearson's correlation coefficient between the test and retest data will be calculated to determine the strength of the correlation between the test and retest data. A correlation coefficient of +1.0 indicates that the test and retest data are identical, which further confirms reliability because it indicates that the participants responded identically to the questions.

Data Collection

The sample comprised of 270 restaurants operating in Nassau County in New York State that were selected through random sampling. I telephoned the selected restaurants and introduce the study to the managers. I then scheduled an appointment with the manager of each restaurant over the course of 3 weeks. Restaurant managers were given the option of doing the survey by telephone or by face to face interview. The ICSQ was then administered to the manager of each restaurant to fill out. The advantages of face to face interview and telephone interview are that there is centralized quality control over all aspects of data collection (Lavrakas, 1993). In addition, the survey is completed quicker and with a higher response rate (Singleton and Straits, 2005). The survey was conducted over 3 weeks. I made follow-up telephone calls to the restaurant managers weekly over the 3-week period. Internet or web and mail survey were considered but rejected because such surveys of the restaurant population can be subjected to bias if the respondents are restricted to restaurant owners who use only the Internet, which could result in low response rates. There also is no systematic way to sample the general population using a web survey because there is difficulty obtaining a sample frame in which every individual in the target population has a known chance of being selected for participation (Dillman, 2000). In addition, extremes in variation of users and equipment capabilities can affect sampling (Bradley, 1999). Disadvantages of mail surveys are that they are sometimes never returned, resulting in the sample selection frame to be less random because there is little control over the survey being completed and returned. Mail survey also does not provide the options for clarity and explanations (Singleton & Straits, 2005).

Research Questions

Following are the research questions that guided this study:

1. What are the restaurant manager’s perceptions of the internal control systems in small restaurants operating in Nassau County in New York State?
2. What is the nature of the relationship between the segregation of duties and the internal control systems in small restaurants operating in Nassau County in New York State?

3. What is the nature of the relationship between the protection of assets and the internal control systems in small restaurants operating in Nassau County in New York State?
4. What is the nature of the relationship between the verification of transactions and the internal control systems in small restaurant operating in Nassau County in New York State?
5. Are internal control systems in consistent with COSO standards present in small restaurants operating in Nassau County in New York State?

The first research question was addressed descriptively through exploratory data analysis using descriptive statistics and charts. The second through fourth research questions were assessed by testing the hypothesis listed in the section below. The fifth research question was addressed descriptively by comparing the responses given by the restaurant owners regarding internal control systems to the COSO standards.

Hypotheses

The following hypotheses were tested in this study:

$H_0$1: There is not a significant relationship between the restaurant managers' perception of the segregation of duties, and their perception of the internal control systems.

$H_1$1: There is a direct negative relationship between the restaurant managers' perception of the segregation of duties, and their perception of the internal control systems.

$H_0$2: There is not a significant relationship between restaurant managers' perception of protection of assets, and their perception of the internal control systems.

$H_1 2$: There is a direct positive relationship between restaurant managers' perception of protection of assets and their perception of the internal control systems

$H_0 3$: There is not a significant relationship between restaurant managers' perception of verification of transactions and their perception of the internal control systems

$H_1 3$: There is a direct positive relationship between restaurant managers' perception of verification of transactions and their perception of the internal control systems

$H_0 4$: The level of internal control is not adequate by obtaining a mean score of 4 or 5 in the survey questionnaire.

$H_1 4$: The level of internal control is adequate by obtaining a mean score of 4 or 5 in the survey questionnaire.

Data Analysis

The response data from the survey was entered into SPSS version 16.0 software for statistical analysis. A linear regression analysis was used to analyze the data. Singleton and Straits (2005) commented that regression analysis is the effect of one interval or ratio variable on another. The four variables that were analyzed are one dependent variable and three independent variables. The dependent variable was internal control in restaurants (Y1). The three independent variables are (a) protection of assets (X1), (b) segregation of duties (X2), and (c) verification of transactions (X3). A 5-point Likert scale was used to integrate the theoretical framework examining the dependent and independent variables. Each question on the Likert scale had five possible answers, with possible scores ranging from 5 (*best possible internal control*) to 1 (*lowest possible internal control*). Total scores as defined by the maximum points on the instrument were obtained for each set of independent variable questions. The average of the total scores was used as a predictive construct validity measurement. Low scores indicated a lack of internal control, and high scores indicated adequate internal controls (Kistler, 2008).

The mean score was determined by averaging all scores for the dependent variable and the three independent variables. The mean score for each variable was used to determine whether internal control was adequate or inadequate among the sample of restaurants operating in Nassau County in New York State. A reading of 4 (*Likely*) or 5 (*Very Likely*) on the Likert scale indicated that for-profit standard has been achieved, which is consistent with the COSO (1992) framework.

Definitions of Variables

This study had one dependent variable and three independent variables. The dependent variable is internal controls in restaurants, and the independent variables are protection of assets, segregation of duties, and verification of transactions. The dependent variable is defined as the policies and procedures used by management to ensure the reliability of financial reporting, compliance with laws and regulations, and the effectiveness and efficiency of operations (Needles, Powers, & Crosson, 2005). These best business practices are identified by the control environment in the COSO (1992) internal control integrated framework. According to COSO, the control environment sets the tone of an organization and is the foundation for all other components. The control environment includes discipline, structure, integrity, ethical values, employees' competence, and management's philosophy and operating style. The dependent variable, internal control (INTCRL), is coded 1 to 5 according to the presence or absence of these procedures, with 4 to 5 signifying the presence of internal control according to the COSO framework, and 1 to 3 signifying less than the COSO standard.

The first independent variable is the protection of assets (PRASSET), as defined by the control activities in the COSO integrated framework. These activities safeguard a company's assets and ensure the reliability of accounting records. These activities include the authorization and recording of transactions, physical controls, documents, and records. The independent variable of protection of assets is coded 1 to 5, with 4 to 5 signifying the presence of these procedures consistent with the COSO integrated framework and 1 to 3 signifying less than the COSO standard. To evaluate the relevance of protection of assets, 10 questions were asked to address protection of assets issues.

The second independent variable is segregation of duties (SEGDTY). Segregation of duties (SEGDTY) deals with the assignment of responsibilities to individuals to deal with such issues as authorization, record keeping, and custodianship (Whittington & Delaney, 2009). Questions are drawn up to address each aspect of segregation of duties. To evaluate the relevance of segregation of duties, 7 questions were asked to address segregation of duties. SOX Section 404 defines segregation of duties as the organizational plan that separates functional responsibilities to ensure that mistakes and embezzlement are reduced in the workplace setting. The independent variable segregation of duty is coded 1 to 5, with 4 to 5 signifying the presence of segregation of duties in the restaurant consistent with the COSO internal control integrated framework, and 1 to 3 signifying less than the COSO standard (Needles, Powers, & Crosson, 2005).

The third independent variable is verification of transactions (VERTRN), as defined by the COSO internal control integrated framework. This verification facilitates preparation of financial statements, establishes accountability of assets, and records and verifies transactions. Records should be periodically checked against the assets by someone other than the persons responsible for those records and assets. This independent variable is coded 1 to 5, with 4 to 5 signifying the presence verification of transactions consistent with the COSO internal control integrated framework, and 1 to 3 signifying less than the COSO standard. To evaluate the relevance of verification of transactions, 14 questions were asked to address segregation of duties.

Factor analysis was conducted to assess how well each of the questions that measure the independent variables. According to Rea and Parker (1992), "the main applications of factor analytic techniques are: (1) to *reduce* the number of variables and (2) to *detect structure* in the relationships between variables, that is to *classify variables*. Therefore, factor analysis is applied as a data reduction or structure detection method" (StatSoft, 2010, para. 1). Combining two (or more) correlated variables into one factor, illustrates the basic idea of factor analysis, or of principal components analysis to be precise (Statsoft, 2010, para. 8). After the pilot study was completed, the data were analyzed using a factor analysis, specifically principle components analysis (PCA). PCA is a common technique for finding patterns in data of high dimension (Leedy & Ormund, 2005). Thus, for each of the independent variables, the items on the survey were assessed with PCA to determine if they are measuring the same factor or component.

The following logistic regression module summarizes the variables and design for the research:

$$INTCTR = \beta 0 + \beta 1PRASSET + \beta 2SEGDTY + \beta 3VERTRN + \varepsilon$$

Internal control in restaurants is the dependent variable or the predicted value. The dependent variable depends on the regression of the independent variables and their slopes. The slopes of the independent variables will determine whether the dependent variable's value will increase or decrease in the same or in the opposite direction.

The error term (ε) describes the values of all other variables other than the independent variables that would affect the dependent variable. Beta zero (β0) is the slope intercept of the regression line or the value when all the independent variables are zero. INTCTR = 4 to 5 for a restaurant that has internal control procedures analogous with COSO standard, and 1 to 3 is below COSO standard. ASSET = 4 to 5 for a restaurant that has adequate procedures to protect asset consistent with COSO standards and 1 to 3 is below COSO standard. SEGDTY = 5 for a restaurant that has adequate procedures to segregate duties consistent with COSO standards, 1 to 3 is below COSO standard. VERTRN = 5 for a restaurant that has adequate procedures to verify transactions consistent with COSO standards, and 1 to 3 is below COSO standard.

Summary

The focus of this study was on the effects of internal control on the survivability of small restaurants in Nassau County in New York State. In order to test to determine any statistically significant relationships, raw data were collected using a survey method. The survey had one dependent variable and three independent variables. The dependent variable was internal controls in restaurant and the independent variables were segregation of duties, protection of assets, and verification of transactions. A 5-point Likert scale was used to determine the mean average of the responses to ascertain whether internal control is low or adequate. These data were used to determine any relationship between internal control and the survivability of restaurants in Nassau County in New York State.

Chapter 4

Introduction

Chapter 3 included the research design and methods used to assess restaurant managers' perceptions of the internal control systems in small restaurants operating in Nassau County in New York State and to determine if a significant relationship exists between the dependent variable, internal control systems, and the independent variables, protection of assets, segregation of duties and verification of transactions. The purpose of this chapter is to report the results of the study and answer the research questions posed in Chapter 1. This chapter is divided in four sections including the overview, pilot study, research questions, and summary.

Overview

The purpose of this study was to determine restaurant managers' perception of the internal control systems in small restaurants operating in Nassau County in New York State and to determine if a significant relationship exists between the dependent variable, internal control systems, and the independent variables, protection of assets, segregation of duties, and verification of transactions. Peer review and test-retest approaches were used to assess the reliability of the instrument. Five subject matter experts examined the survey to assess whether the questions clearly assessed what they were intended to assess and to determine if the survey and the format of the questionnaire were confusing or unclear in any way. The test-retest approach was a two-step process in which the survey was first administered to 10 restaurant managers and then administered again to the same restaurant managers 2 weeks later. The test-retest data was analyzed using Cronbach's alpha to determine internal consistency of the instrument. The data were collected by sending the survey instrument to 270 small restaurant owners. The collected data were analyzed using SPSS version 16.0. Of the 1,173 restaurants in Nassau County, including small and large restaurants, a random sample of 270 restaurants was drawn from the total of 1173 restaurants in Nassau County in New York State. The survey was completed by 117 restaurant owners, which is a response rate of 43% for a sample that comprises 9.97% of the restaurant population.

Pilot Study

Gall, Gall, and Borg (2003) posited that pilot testing allows the researcher to test the effectiveness of a proposed survey instrument and allows for modification of the instrument before full-scale adoption. Flaws, limitations, or other weaknesses within a study can be identified by a pilot study (Fink, 2009). An instrument's validity and reliability can be assessed with a pilot study (Nunnally & Bernstein, 1994). I used a peer review and a test-retest sequence for this pilot study.

According to Fink (2009), a survey questionnaire must be assessed to determine whether the survey items measure the construct of interest. An instrument is considered to have face and content validity when the survey items measure what they are intended to measure. Peer reviews give foundation to the face and content validity of the survey instrument (Nunnally & Bernstein, 1994). Peer reviews are used to institute validity and are necessary because the survey items represent a distinct domain of content validity (Fink, 2009).

A peer review was used to evaluate the face and content validity of this study's survey instrument (Appendix A). The survey was examined by five subject matter experts to assess whether the questions clearly assessed what they were intended to assess and to determine if the survey and the format of the questionnaire were confusing or unclear in any way. The subject matter experts were all internal control systems experts. The objective of the peer review was to answer the following questions:

- Is the content of the questionnaire appropriate for the audience?
- Are the survey items easy to understand?
- Are the instructions easy to follow?
- Are any of the survey items intrusive, invasive, potentially embarrassing, or of a sensitive nature?
- Are there any other comments?

All the subject matter experts concurred that the survey instrument was valid and the questions did not require any significant changes. Thus, the field trial verified that the survey meets face and content validity.

Reliability was assessed through a test-retest sequence. In a test-retest sequence, the survey is administered to a small group of people (the *test*); then, after 2 weeks to 1 month, the survey is re-administered to the same group of people (the *retest*). According to Nunnally and Bernstein (1994), the anticipated results of the test-retest sequence is that the test results will not be significantly different from the retest results.

In October 2010, 10 restaurants were asked to complete the survey (the *test*). The timeframe that is recommended for completing both the test and the retest is 2 weeks to 1 month (Nunnally, 1964). For this study, the retest of the test-retest sequence was completed 2 weeks after the test. Both the test and retest of the survey instrument yielded 10 complete surveys, a response rate of 100%. The results were input into Statistical Package for Social Sciences (SPSS) software version 16.0 for analysis.

The expected outcome of the test-retest sequence was that there would be little or no significant difference (a high correlation) between the results of test and retest data. Thus, the Pearson's correlation coefficient (*r*) is an appropriate measure of the correlation between the test and retest data. Pearson's *r* was calculated for each scale on the survey: internal control, protection of assets, segregation of duties, and verification of transactions. The correlation coefficients ranged from 0.995 to 1.00 with all *p*-values equal to 0.000 (Table 1), which is less than alpha of 0.001, so the null hypotheses were rejected. Therefore, the correlations between the test and retest responses are significant, which indicates that the instrument is reliable across time.

Table 1

Correlation Coefficients (*r*) for the Test-Retest Data for the Independent Variable of Vision Alignment (*n* =10).

Coefficient	*R*	Significance (*p*)
Internal control	1.000	0.000
Protection of assets	1.000	0.000
Segregation of duties	1.000	0.000
Verification of transactions	0.995	0.000

Pearson's *r* varies from -1 to +1. According to Chen and Popovich (2002), a perfect correlation of 1.0 occurs when all the data points lie exactly on a straight line. Correlations between 0.90 and 1.00 are considered very high correlation (Chen & Popovich, 2002). Thus, all the correlation coefficients shown in Table 1 are very high correlations. Therefore, the correlations between the test and retest data were significant and very strong for each of the instruments four subscales, which indicated that the respondents answered the questions very similarly on both the test and retest survey. The correlation results of the test-retest procedure indicated that the survey is reliable through time.

The reliability of the survey instrument was evaluated further using Cronbach’s alpha, which is a measure of the internal consistency of an instrument (Cronbach, 1951). Cronbach's alpha is an index of reliability linked with the coefficient of variation, which accounts for an accurate score of the underlying construct, which is the hypothetical variable to be measured (Hatcher, 1994). Cronbach’s alpha coefficients range in value from 0 to 1. Cronbach's alpha determines the internal consistency or inter-item correlation of items that are summated or averaged to determine a score for a survey instrument to measure its reliability (Nunnally & Bernstein, 1994).

Cronbach’s alpha was 0.954 for the test data and 0.953 for the retest data (Table 2). Since the survey comprised four subscales representing one dependent variable and three independent variables, reliability was assessed for each subscale. Survey questions 1–8 were combined to calculate an average score for the dependent variable, internal control, while survey questions 9–15 were combined to calculate an average score for the independent variable. In addition, segregation of duties, questions 16–25 were combined to calculate an average score for protection of assets, and questions 26–39 were used to calculate the average score for verification of transactions subscale. For the questions that comprised the internal control subscale, Cronbach’s α was equal to 0.850 (n = 10) for the test data and 0.842 (n = 10) for the retest data (Table 2). For the questions that comprised the protection of assets subscale, Cronbach’s α was 0.880 (n = 10) for both the test and retest data (Table 2). For the segregation of duties subscale, Cronbach’s α was

0.763 (n = 10) for both the test and retest data (Table 2). For the verification of transactions subscale, Cronbach's α was equal to 0.754 (n = 10) for the test data and 0.756 (n = 10) for the retest data (Table 2). Eliminate the period after the table number.

Table 2

Cronbach's alpha values for the survey instrument subscales that measures the independent and dependent variable (n =10)

		Cronbach's alpha	
Scale	Items, *n*	*Test*	*Retest*
Overall instrument	39	0.954	0.953
Internal control	8	0.850	0.842
Protection of assets	10	0.880	0.880
Segregation of duties	7	0.763	0.763
Verification of transactions	14	0.754	0.756

George and Mallery (2003) provided the following rules of thumb: "> 0.9 – Excellent, > 0.8 – Good, > 0.7 – Acceptable, > 0.6 – Questionable, > 0.5 – Poor, and < 0.5 – Unacceptable," (p. 231). Additionally, Nunnally (1978) stated that an instrument is acceptable when the reliability coefficient is greater than 0.70. The Cronbach's alpha values for the test and retest data from the pilot study was greater than 0.750 (Table 2). The reliability of the overall survey scale is excellent since it is greater than 0.90. Since the subscale of internal control (dependent variable) has an alpha value greater than 0.80, it is considered to have good reliability, as does the scale for protection of assets (independent variable) since it also a Cronbach's alpha greater than 0.80. The subscales of segregation of duties and verification of transactions are considered to be acceptable since their Cronbach's alphas are greater than 0.70. It can be concluded that the internal reliability of the survey instrument is acceptable for this study.

The validity of this instrument was established with a field trial using five subject matter experts. In addition, the reliability of this instrument was assessed using a test-retest sequence. The results of the field trial and test-retest assessment indicated that this instrument is a reliable and valid assessment tool.

The sample comprised of 270 small restaurants operating in Nassau County in New York State. To collect data, the survey instrument was sent to 270 small restaurant owners. The collected data was analyzed using SPSS version 16.0. There are 1,173 restaurants in Nassau County, including small and large restaurants. A random sample of 270 restaurants was drawn as a subset of the total of all the small restaurants in Nassau County in New York State. Therefore, the useable responses numbered 117, or 9.97%.

The response data from the survey was entered into SPSS version 16.0 software for statistical analysis. This study had one dependent variable and three independent variables. The dependent variable was internal control in restaurants *(Y1).* The three independent variables were (a) protection of assets *(X1)*, (b*)* segregation of duties *(X2)*, and (c) verification of transactions (X3). Each survey question was scored on a 5-point Likert scale with possible answers ranging from best possible internal control (5) to lowest possible internal control (1). Low scores indicate a lack of internal control, and high scores indicate adequate internal controls (Kistler, 2008).

Mean scores for each variable were obtained by averaging of the scores for the survey questions that made up the scale for the variable. For the independent variable, internal control, questions 1–8 were used to calculate the mean score. For the dependent variable, segregation of duties, questions 9–15 were used to calculate the mean score. Questions 16–25 were used to calculate the mean score for the dependent variable, protection of assets. Questions 26–39 were used to calculate the mean score for the dependent variable, verification of transactions. The mean score for each variable was used to test the hypotheses associated with this study. A score of 4 (Likely) or 5 (Very Likely) on the Likert scale indicates that for-profit standard has been achieved, which is consistent with the COSO (1992) framework, therefore, the restaurants score is aligned with the COSO (1992) framework when the mean score is above 4.0. The data collected using the survey instrument were used to answer the following five research questions:

1. What are the restaurant manager's perceptions of the internal control systems in small restaurants operating in Nassau County in New York State?
2. What is the nature of the relationship between the segregation of duties and the internal control systems in small restaurants operating in Nassau County in New York State?

3. What is the nature of the relationship between the protection of assets and the internal control systems in small restaurants operating in Nassau County in New York State?
4. What is the nature of the relationship between the verification of transactions and the internal control systems in small restaurant operating in Nassau County in New York State?
5. Are internal control systems in consistent with COSO standards present in small restaurants operating in Nassau County in New York State?

Research Questions

Research question 1 was assessed using exploratory data analysis, including descriptive statistics. The mean score for the dependent variable, internal control, was 2.97 (s.d. = 1.17, Table 3). The mean score for the independent variable, segregation of duties, was 2.89 (s.d. = 1.02, Table 3), while the mean score for the independent variable, protection of assets, was 3.31 (s.d. = 1.12, Table 3). The mean score for the independent variable, verification of transactions, was 3.10 (s.d. = 1.26, Table 3). These mean scores are near 3.0, which represents a neutral response. Since these means are all below 4.0 (Figure 1), which represents the cut-off between adequate and inadequate control, it can be concluded that, on the average, small restaurants operating in Nassau County in New York State have internal control systems that are considered inadequate.

Table 3

Mean and standard deviation for the four study variables (n = 117)

	Mean	Std. Deviation
Internal control	2.97	1.17
Segregation of duties	2.89	1.02
Protection of assets	3.31	1.12
Verification of transactions	3.10	1.26

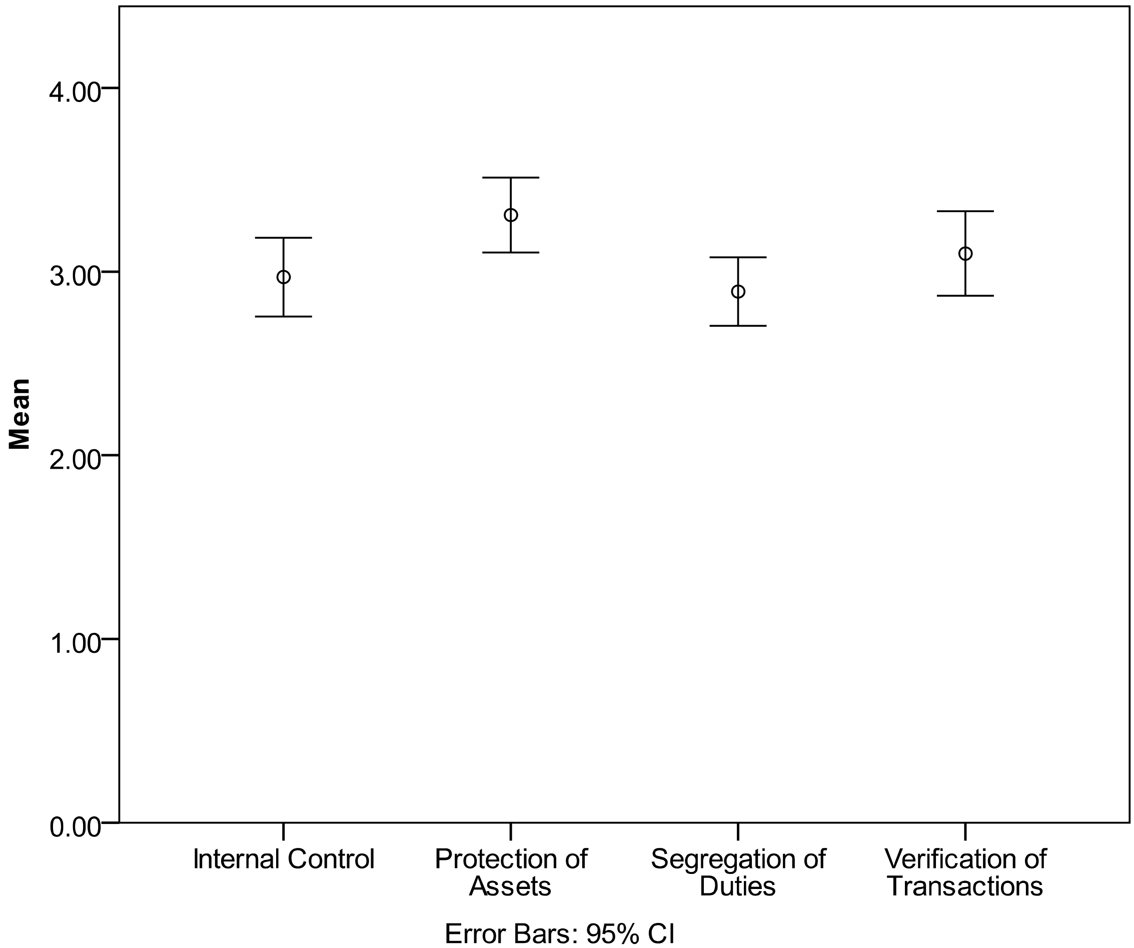

Figure 1. Mean scores with 95% confidence intervals for the four variables.

For each variable, the restaurants' scores were divided into two groups, those with adequate control and those with inadequate control. Since a score of 4 (Likely) or 5 (Very Likely) on the Likert scale indicated that for-profit standard had been achieved, the restaurants with a mean score above 4.0 were considered to have adequate control. Thus, the restaurants with mean scores greater than or equal to 4.0 were categorized as adequate, while scores below 4.0 were considered inadequate. Table 4 displays the frequency of occurrences for the four variables, and each of the variables had a higher percentage of restaurants with inadequate control than adequate control. For internal control and verification of transactions, 77 (66%) restaurants had inadequate control, while only 40 (34%) were categorized as adequate. Of the restaurants overall, 92 (79%) had inadequate segregation of duties, while only 25 (21%) had adequate segregation of duties. Seventy-four (63%) of the restaurants had inadequate protection of assets, while only 43 (37%) had adequate segregation of duties.

To determine if the percents (also called *proportions*) shown in Table 4 are significantly different from 50 %, a one-sample binomial test was conducted. A one sample binomial test is used to test whether the proportion of occurrences for a two-level categorical variable significantly differs from a hypothesized value (Creswell, 2003). For this study, I wanted to determine if the proportions were significantly different from 0.50 (50%), which would mean that the percent of restaurants with inadequate control was equal to the percent of restaurants with adequate control. Since the *p*-values for all four variables are less than alpha of 0.05 (Table 5), the null hypotheses that the proportions are equal to 0.50 are rejected. Thus, the one-sample binomial test results were significant for all four variables, which indicate that the proportions were significantly different from 50%. Thus, the percent of restaurants operating with inadequate internal control systems are significantly greater than 50 %. It can be concluded that the managers of small restaurants operating in Nassau County in New York State perceive the internal control, segregation of duties, protection of assets, and verification of transactions in their restaurants to be inadequate.

Table 4

Frequency of occurrence for restaurants with inadequate control and adequate control

	Inadequate Control	Adequate Control	Total
Internal Control	77 (66%)	40 (34%)	117
Segregation of Duties	92 (79%)	25 (21%)	117
Protection of Assets	74 (63%)	43 (37%)	117
Verification of Transactions	77 (66%)	40 (34%)	117

Table 5

Binomial test results for restaurants with inadequate control and adequate control (N = 117)

	Test Statistic	Significance (p)
Internal Control	40.0	0.001
Segregation of Duties	25.0	0.000
Protection of Assets	43.0	0.006
Verification of Transactions	40.0	0.001

Research questions 2 through 5 were assessed using hypothesis testing. The following hypotheses were tested:

$H_0$1: There is not a significant relationship between the restaurant managers' perception of the segregation of duties, and their perception of the internal control systems.

$H_1$1: There is a direct negative relationship between the restaurant managers' perception of the segregation of duties, and their perception of the internal control systems.

$H_0$2: There is not a significant relationship between restaurant managers' perception of protection of assets, and their perception of the internal control systems.

$H_1$2: There is a direct positive relationship between restaurant managers' perception of protection of assets and their perception of the internal control systems

$H_0$3: There is not a significant relationship between restaurant managers' perception of verification of transactions and their perception of the internal control systems

$H_1$3: There is a direct positive relationship between restaurant managers' perception of verification of transactions and their perception of the internal control systems

$H_0$4: The mean score for the level of internal control is not significantly greater than 4.0.

$H_1$4: The mean score for the level of internal control is significantly greater than 4.0.

Research questions 2 through 4 were assessed with hypotheses 1 through 3, respectively. Hypotheses 1 through 3 were tested using a multiple regression analysis. The results of the regression analysis indicated that all three independent variables were significant predictors of the dependent variable, since the observed significance (p = 0.000, Tables 6 and 8) was less than alpha of 0.05. The regression model was determined to be

INTCTR = -0.218 – 0.121 * SEGDTY + 0.676 * PRASSET + 0.419 * VERTRN + ε,

where INTCTR represents internal control, PRASSET represents protection of assets, SEGDTY represents segregation of duties, VERTRN represents verification of transactions, and ε represents the standard error of the estimate (Table 8). Research question 2 was addressed using hypotheses 1. There is a negative relationship between segregation of duties and internal control as evidenced by the negative slope of -0.121. This indicates that the dependent variable internal control will decrease by a factor of -0.121 for every value of segregation of duty that is computed. Research question 3 was addressed using hypotheses 2. There is a positive relationship between protection of assets and internal control as evidenced by the positive slope of 0.676. This indicates that the dependent variable internal control will increase by a factor of 0.676 for every value of protection of asset that is computed. Research question 4 was addressed using hypotheses 3. There is a positive relationship between verification of transactions and internal control as evidenced by the positive slope of 0.419. This indicates that the dependent variable internal control will increase by a factor of 0.419 for every value of verification of transactions that is computed.

Table 6

Results of the Multiple Regression Analysis

	Sum of Squares	df	Mean Square	F	Sig.
Regression	156.899	3	52.300	2309.698	.000[c]
Residual	2.559	113	.023		
Total	159.458	116			

Table 7

Coefficients for the Multiple Regression Analysis

Coefficient	
R	.992
R^2	.984
Std. Error of the Estimate (ε)	.15048

Table 8

Results of the Multiple Regression Analysis

	INTERCEPT	SEGDTY	PRASSET	VERTRN
b	-0.2182	-0.121039	0.676689	0.419589
s(b)	0.06387	0.052065	0.107938	0.078228
t	-3.417	-2.324758	6.269243	5.363649
p - value	0.0009	0.0219	0.0000	0.0000
VIF		14.3984	74.3706	49.7189

Furthermore, the correlation coefficient (R) was 0.992 (Table 7), which indicates that there is a very strong correlation between the independent variables and the dependent variable, internal control. In addition, the coefficient of determination (R^2) was 0.984 (Table 7), which indicates that 98.4% of the variability in the internal control in small restaurants operating in Nassau County in New York State was accounted for by the independent variables, verification of transaction, protection of assets, and segregation of duties. It can be concluded that there is a positive relationship between the independent variables protection of assets and verification of transactions and the dependent variable internal control, and there is a negative relationship between the independent variable segregation of duties and the dependent variable internal control.

Research question 5 was addressed with hypothesis 4. A one-sample t-test was used to test hypothesis 4 by comparing the mean score for internal control to the value of 4.0 to determine if it was significantly greater. The mean score was 2.97 (s.d. = 1.17, Table 3) and the *t*-test had a *p*-value that was less than alpha of 0.05 " $p < .05$", therefore, the mean score for internal control was not significantly greater than four. In addition, as described above for research question one, the proportion of restaurants categorized with inadequate internal controls was significantly greater than 50 %. Therefore, the results of this study indicate that the mangers of small restaurants operated in Nassau County of New York State perceive the restaurants' internal control systems to be inadequate.

Statistical Analysis Conclusion

Research question 1 was assessed using exploratory data analysis, including descriptive statistics. The mean score for the dependent variable, internal control, was

2.97. The mean score for the independent variable, segregation of duties, was 2.89, while the mean score for the independent variable, protection of assets, was 3.31. The mean score for the independent variable, verification of transactions, was 3.10. These mean scores are near 3.0, which represents a neutral response. Since these means are all below 4.0, which represent the cut-off between adequate and inadequate control, it can be concluded that, on the average, small restaurants operating in Nassau County in New York State have internal control systems that are considered inadequate.

Research questions 2 through 4 were assessed with hypotheses 1 through 3, respectively. Hypotheses 1 through 3 were tested using a multiple regression analysis. The results of the regression analysis indicated that all three independent variables were significant predictors of the dependent variable, since the observed significance (p = 0.000) was less than alpha of 0.05. There was a positive relationship between the independent variables protection of assets and verification of transactions and the dependent variable internal controls. There was a negative relationship between the independent variable segregation of duties and the dependent variable internal controls. The variance inflation factor was observed to be high in the regression module. This is because the independent variables are fundamental to the principles of internal control. While there was high multicollinearity among the independent variables, the results were significant. The exact relationship may not be accurately reflected by the model; hence a 1 to 1 approach was adopted. The coefficient of determination (R^2) is very high (0.9840). This indicates that 98.40% of the predicted value is explained by the variables.

Research question 5 was addressed with hypothesis 4. A one-sample *t*-test was used to test hypothesis 4 by comparing the mean score for internal control to the value of 4.0 to determine if it was significantly greater. The mean score was 2.97 and the *t*-test had a p-value that was $p < .05$, therefore, the mean score for internal control was not significantly greater than four. In addition, as described above for research question one, the proportion of restaurants categorized with inadequate internal controls was significantly greater than 50 %. Therefore, the results of this study indicate that the mangers of small restaurants operated in Nassau County of New York State perceive the restaurants' internal control systems to be inadequate.

Summary

This chapter included the findings of the study on the perception of the internal control systems in small restaurants operating in Nassau County in New York State, and to determine if a significant relationship exists between the dependent variable, internal control systems, and the independent variables, protection of assets, segregation of duties and verification of transactions. Findings of the study indicated that restaurant managers perceived internal control systems in small restaurants operating in Nassau County to be inadequate or below the COSO standard. Findings also indicate that there was a statistical significant relationship among internal controls systems, protection of assets, segregation of duties and verification of assets.

Chapter 5

Introduction

The purpose of this study was to determine restaurant managers' perceptions of the internal control systems in small restaurants operating in Nassau County in New York State and to determine if a significant relationship exists between the dependent variable, internal control systems, and the independent variables, protection of assets, segregation of duties, and verification of transactions. Major sections of chapter 5 include summary, conclusions, recommendations for future studies, social impact, and concluding statements.

Summary

This study was conducted to determine restaurant managers' perception of the internal control systems in small restaurants operating in Nassau County in New York State and to determine if a significant relationship exists between the dependent variable, internal control systems, and the independent variables, protection of assets, segregation of duties, and verification of transactions. Five research questions were developed in order to examine these variables. Before the research studies, four hypotheses were tested. All four assumptions were statistically tested and met.

Peer review and test-retest approaches were used to determine the assessment of the reliability of the instrument. Five subject matter experts examined the survey to assess whether the questions clearly assessed what they were intended to assess and to determine if the survey and the format of the questionnaire were confusing or unclear in any way. The test-retest approach was a two-step process in which the survey was administered once to 10 restaurant managers and then 2 weeks after the survey was administered again to the same restaurant managers. The test-retest data was analyzed using Cronbach's alpha to determine internal consistency of the instrument.

To collect data, the survey instrument was sent to 270 small restaurant owners. Data for the survey were collected through the survey instrument. A survey cover letter which invited participants to take part in the survey study was disseminated to the statistical randomly selected subset of 270 small restaurant managers in Nassau County in New York State. Participants who agreed to participate in the survey were sent the survey questionnaire. Follow-up phone calls were made to the selected participants over 2 weeks. The survey remained active for 35 days, at which time data collection stopped. In all, 126 responses were collected from the total amount of restaurants of 1173, at a response rate of 10.74%. Nine of the respondents failed to supply complete answers to the survey questionnaire, so only 117 responses were used in the statistical analysis. The collected data were analyzed using SPSS version 16.0. The results of the data analysis found a relationship between the three independent variables: protection of assets, segregation of duties and verification of transactions, and the dependent variable internal control system. It was also determined through descriptive statistical analysis that restaurant managers perception of internal controls in small restaurants operating in Nassau County in New York State are below the COSO standard.

Conclusions

Research Question 1

This dissertation included five research questions. The first research question concerns restaurant managers' perception of internal control. What are the restaurant managers' perceptions of the internal control systems in small restaurants operating in Nassau County in New York State? In Table 4, 77 or 66% of the total participants response were below 4 (Likely) or 5 (Very Likely) on the Likert scale and defined as inadequate internal control with COSO standard. Based on the result in Table 3, where the mean score was 2.97, one could conclude that restaurant managers perceived that internal control in small restaurants operating in Nassau County in New York State to be inadequate or below COSO standard. The results of this study support earlier findings that supported a relationship between internal controls and failure rate (English, 1996; Parsa, Self, Njite, & King, 2005) and profitability (Lee, 2006). The implication of this research is that restaurants managers who have negative perceptions of internal controls systems may not consider the usefulness of internal control systems and its relationship to cost, profitability, and survivability. In contrast, restaurant managers who have positive perceptions of internal control systems may increase profit margin, lower costs, and increase the return on investment (Doyle et al., 2005; Eldridge & Kealey, 2005; Franco et al., 2005)

Research Question 2

The second research question concerns segregation of duties and internal control systems. What is the nature of the relationship between the segregation of duties and the internal control systems in small restaurants operating in Nassau County in New York State? The study results presented in Table 8 shows a negative statistical significant relationship between segregation of duties and internal controls systems. A smaller percentage of small restaurant managers agreed or strongly agreed to the usefulness of segregation of duties in restaurants operating in Nassau County in New York State. The mean score in Table 3 of 2.89 indicated that segregation of duties fell below the COSO standard. Therefore, it could be concluded from the data presented in chapter 4 that segregation of duties were inadequate in small restaurants operating in Nassau County in New York State. Segregation of duties is a preventative control mechanism employed by organizations (Margolis, 2009). This is necessary for a business to reduce the risk of undetected error and limit opportunities to misappropriate assets or conceal intentional misstatements in the financial statements (Stone, 2009). No internal control audit standard or accounting pronouncement prescribes specific segregation of duties requirements (Stone, 2009). However, maintaining a system of effective internal control does require appropriate separation of duties. The results of this research support earlier findings that there may be a negative relationship between segregation of duties and small restaurants in that segregation of duties may be unfit for small businesses that has few employees (Brown, 2006; Margolis, 2009; Whittington & Delaney, 2009) Establishing and maintaining segregation systems may be expensive and may exceed the benefits in small restaurants (Brown, 2003). However, active involvement by managers through effective communication can be a practical substitute for the segregation of duties. Communication plays an important role in the employee's effort to learn the appropriate attitudes, values, and behaviors (Jablin, 1995). They learn through effective communication how the restaurant communicates, what is communicate to whom, and how decisions are made in the interest of restaurants' growth and sustainability.

Research Question 3

The third research question concerns protection of assets and internal control systems. What is the nature of the relationship between the protection of assets and the internal control systems in small restaurants operating in Nassau County in New York State? Based on the results of this study in table 5, there was a positive statistical significant relationship between protection of assets and internal control systems. A smaller percentage of small restaurant managers agreed or strongly agreed to the usefulness of protection of assets in restaurants operating in Nassau County in New York State. The mean score in table 3 of 3.31 indicated that protection of assets fell below the COSO standard of 4 and above. Therefore, it could be concluded that protection of assets was inadequate in small restaurants operating in Nassau County in New York State. This could contribute to the high failure rates in restaurant. Cook (1980) and Simmon (1947) posited that individuals in organizations are aware of both constraints and opportunities. Individuals in organizations use this information to either make rational or irrational decisions. Cook (1980) and Simmon concluded that if individuals decide to engage in misconduct, they are attracted to targets that provide a high payoff with little effort and low risks of apprehension. Therefore, reducing opportunities (Downes & Rock, 2003) of waste, fraud, and pilfering increase the likeliness of assets being protected and restaurants being profitable. Management is responsible for establishing satisfactory systems of internal control to safeguard the restaurant's assets.

Research Question 4

The forth research question concerns verification of transactions. What is the nature of the relationship between the verification of transactions and the internal control systems in small restaurants operating in Nassau County in New York State? Based on the results of this study in table 5, there was a positive statistical significant relationship between verification of transactions and internal control systems. The mean score in table 3 of 3.10 indicated that verification of transactions fell below the COSO standard. Therefore, it could be concluded that verification of transactions were inadequate in small restaurants operating in Nassau County in New York State. The restaurant business is largely made up of small transactions and diverse activities. Transactions are conducted rapidly and often under rushed circumstances (Alonzo, 2007). Therefore, it is important that restaurant managers be able to review the financial records on an ongoing basis so that leakage or errors that might happen during business transactions may be traced and corrective action taken (Brown, 2003). Cash-intensive businesses such as restaurants are vulnerable to fraudulent off-book schemes (Buckoff & Clifton, 2003). Brown maintained that restaurant managers do not pay enough attention to verification of transactions, which essentially represent how well the restaurant is doing financially. Parsa et al. (2005) concluded that long-term financial management is a good predictor of restaurant viability. Without knowledge of all transactions in the restaurant, managers suffer the consequences of insolvency.

Research Question 5

The fifth research question concerns COSO standards. Are internal control systems consistent with COSO standards present in small restaurants operating in Nassau County in New York State? A score of 4 (Likely) or 5 (Very Likely) on the Likert scale indicated adequate internal control by the small restaurants have been obtained. The restaurants with mean score of 4 and 5 were considered having adequate internal controls, while the restaurants that had mean score of below 4 were considered as having inadequate internal controls. Table 4 displays the frequency of occurrences for the four variables, and each of the variables had a higher percentage of restaurants with inadequate control than adequate control. For internal control and verification of transactions, 77 (66%) restaurants had inadequate control, while only 40 (34%) were categorized as adequate. Ninety-two (79%) of the restaurants had inadequate segregation of duties, while only 25 (21%) had adequate segregation of duties. Seventy-four (63%) of the restaurants had inadequate protection of assets, while only 43 (37%) had adequate segregation of duties. Table 4 displays mean and standard deviation for the four study variables. Each variable had an average mean of below 4. Internal control had an average mean result of 2.97, Segregation of duties 2.89, protection of assets 3.31 and verification of transactions 3.10. Therefore, it could be concluded that the restaurants operating in Nassau County in New York State internal control systems are operating below COSO standards.

The results support Doyle et al.'s (2006) findings in that material weaknesses in internal controls are more likely in organizations that are smaller, younger and financially weaker. Although the size, structure, and financial resources of the company affect its ability to establish internal control, the need for internal control is unique to each organization's particular operating environment. Krippel et al (2008) concluded from their study that the number of small hospitality companies declined while the number of franchise operations increased. This was attributed to restaurant managers being able to master various essential skills and closely scrutinize the details of the organization. No system of internal control is without any weaknesses (Brown, 200), but basic internal control procedures may enhance profitability and survivability of restaurants.

Recommendations for Future Research

The findings of this study offer several recommendations for future research. First, it would be interesting to see this study replicated on a larger scale, example, for the entire restaurant industry. This would include other restaurants operating in other states that have lower operating costs and lower prices. Would reduce business cost such as lower taxes, lower utility, and real estate or rent expense affect internal control systems in restaurants?

Second, this study could be replicated in other small businesses that are not restaurants. It would be helpful to determine if internal control is adequate in other small businesses because these findings could help other small businesses identify cost constraints and be better able to deal with high costs associated with internal control problems. Future research is warranted because small businesses managers need to understand how to design and implement internal control systems that are congruent with their operating environment. This understanding would help them to collectively and individually understand and share existing internal control measures to improve small businesses operations, survivability and profitability

Finally, it is recommended that this study be replicated with profitability ratios such as profit margin and or return on asset. This recommendation is proposed because financial ratios are the most common measure of how well a business is performing. Ratios express the mathematical relationship between one quantity and another. Profitability ratios may aid in measuring the success or failure of restaurants. Profitability is also linked to liquidity because earnings ultimately produce cash flow. Profitability management is a complex activity that includes, first, achieving a satisfactory gross margin and, second, maintaining acceptable levels of operating expenses. Achieving a satisfactory gross margin depends on setting appropriate prices for merchandise and services and purchasing merchandise at favorable prices and terms. Maintaining acceptable levels of operating expenses depends on controlling expenses and operating efficiently. Future research may focus on determining if there is a significant relationship between internal control systems and profitability of restaurants using profitability ratios

Social Impact

The restaurant industry is the second largest employer in the United States (NRA, 2008). The industry employs an estimated 13.1 million people, or 9% of the workforce in the United States (NRA, 2008). The industry generates an estimated $500 billion in sales and $70 billion in profits (NRA, 2008). Therefore, the restaurant industry is important to the U. S. economy. However, a substantial number of restaurants fail in the first 3 years (English, 1996; Parsa, Self, Njite, & King, 2005). Failure rates have notably been higher for small restaurants than for relatively large franchised restaurants. Researchers have shown that weak internal controls in organization leads to higher costs, lower return on investment and lower profit margin (Doyle et al., 2005). Therefore, this study has potential for small restaurants to improve their internal control systems. Results of this study can help restaurant managers address problems that are associated with of lack internal controls in restaurant such as cost, fraud, pilfering, waste (Martin, 1989) and could lead to lower failure rate of small restaurants. Restaurants are an increasingly part of the economy and a key driver of employment and tax revenue. Therefore, adequate internal controls in small restaurants could lead to increase survivability and profitability.

Concluding Statement

The findings of this research demonstrated evidence that internal control, grounded in rational choice theories, communication theories, and the COSO integrated theoretical framework, can have positive effects on small restaurants survivability and profitability. In an economy with seemingly endless economic instability leading to higher failure rates of small businesses, proper internal controls can aid in making small businesses more sustainable and profitable. While changes can not be affected overnight or for that matter weeks, with meticulous approach to managing resources through adequate internal control measures and strong commitment to social change, small businesses can become more profitable and solvent over a period of time. While I understand that there are other external extenuating factors that affect small businesses in an economy, and inherent limitations in any system, nevertheless, internal control structures provide reasonable assurance that assets are safeguarded and that financial information is objective and reliable.

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Appendix

Please respond to the questions below to the best of your ability. Each question starts with: “What is the likelihood that”

1. A financial audit is conducted on a yearly basis?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

2. Financial statement will reflect the exact financial position of the restaurant?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

3. Annual updates of inventory, equipment and other non-cash assets are made?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

4. Proper document preservation, such as maintaining cash tapes, invoices, cancelled checks and bills are in place?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

5. Your organization has up to date policies and procedures manual?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

6. Employees who steal from the restaurant (physical property, money, information, time) will be discovered?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

7. The restaurant has internal control structure in place to prevent and detect fraud
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

8. The restaurant has internal control system in place to prevent pilferage and waste.
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

9. More than one signature required on checks?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

10. The people dealing with cash are rotated?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

11. Monthly bank reconciliations are prepared by someone other than the person writing the checks?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

12. The counting of cash is controlled by more than one person?

(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

13. Deposits are made by someone independent of the accounting and cashiering functions?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

14. The restaurant's ordering and receiving processes are segregated to the greatest extent possible?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

15. The authorization, processing, check signing, recording and bank reconciliation functions are clearly segregated?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

16. Cash receipts are kept in secure storage until deposited?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

17. Deposits are made daily?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

18. All staff members are required to take one full week of continuous vacation time annually, especially those handling or posting cash receipts.
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

19. All checks (including voided checks) are accounted for?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

20. Blank check stocks are stored securely?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

21. The restaurant has adequate security to limit access to authorized persons? (Such security could include security guards, locks, chain length fences, etc.)
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

22. A cash disbursement voucher is prepared for each invoice or check request that details the date of check, check number, payee, amount of check, description of expense account to be charged, authorization signature, and accompanying receipts?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

23. You have a Point of Sale System?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

24. The Point of Sale System monitors sales, purchases and inventory levels?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

25. Inventory on hand represents inventory on balance sheet.
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

26. All documents related to purchases, receivables and inventories are numbered in a sequential order?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

27. Advance payments to vendors and/or employees are recorded as receivables and controlled in a manner that assures that they will be offset against invoices or expense vouchers?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

28. Cashed checks are compared with bill or receipts?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

29. Cash receipts are recorded and reconciled to the general ledger monthly?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

30. Unusual trends or discrepancies in restaurant accounts are identified and reconciled monthly?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

31. Missing numbers in sequences of numerically controlled documents are identified and investigated immediately?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

32. Purchases are pre-approved?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

33. Invoices from unfamiliar or unusual vendors are reviewed and approved for payment by authorized personnel who are independent of the invoice processing function?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

34. If the restaurant keeps an accounts payable register, payments are promptly recorded in the register to avoid double payment?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

35. If purchase orders are used, all purchase transactions are used with pre-numbered purchase orders?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

36. All purchases and requisitions of goods and services are reconciled to the monthly general ledger?

(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

37. Requests for reimbursement and other invoices are checked for mathematical accuracy and reasonableness before approval?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

38. Invoices are marked "paid" with the date and amount of the check or cancelled in some way?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

39. The restaurant will conduct an annual inventory review?
(1) Very unlikely (2) unlikely (3) Neutral (4) Likely (5) Very likely

Curriculum Vitae

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Education

Doctor of Philosophy in Applied Management and Decision Sciences (Accounting).
Walden University, March 2011.

Masters Degree in Business Administration
Keller Graduate School of Mangement

Master of Science Degree in Accounting and Finance
Keller Graduate School of Management, 2006

Bachelor of Business Administration (International Business
Berkeley College, 2004

Teaching Experience

Professor of Accounting and Business 2007 - Present

Courses Taught

ACC 101 – Principles of Accounting
ACC 104 – Managerial Accounting
ACC 105 – Financial Accounting
ACC 107 – Computer Accounting
ACC 201 – Intermediate Accounting 1
ACC 202 – Intermediate Accounting 2
ACC 203 – Intermediate Accounting 3
ACC 301 – Advance Accounting
ACC 420 – Government and Not for Profit Accounting
BUS 100 – Organization Management
MATH 100 – Business Mathematics
MGT 220 – Business Management
MGT 314 – Organization Theory and Development
MGT 332 – Operation Management

Professional Work Experience

Auditor NYS Department of Taxation and Finance	2007 - Present
Accountant Nazaire and Company Inc. CPA and Consultants	2006 -2007
Financial Analyst RRTOP, New York	2005 - 2007
Assistant Director/Dietary Union Plaza Nursing Home	2003 - 2006

Honors / Organization

Sigma Beta Delta