I. INTRODUCTION

In a national survey of working adults in the U.S. drawn from 13 industry sectors, 74 percent of employees report having “personally seen” or having “firsthand knowledge” of corporate fraud and misconduct during the prior 12-month period (KPMG, 2008).¹ Forty-six percent indicated that the misconduct they had observed could cause “a significant loss of public trust if discovered” (KPMG, 2008). Despite legislation such as the Sarbanes-Oxley Act of 2002 (SOX) enacted to curb corporate fraud and misconduct, the prevalence and seriousness of misconduct has remained relatively constant between 2000 and 2008 (KPMG, 2008). While financial statement fraud is the least common type of corporate fraud committed, it is the most costly (ACFE, 2010). This is significant in the context of whistleblowing because 13 percent of employees in the accounting and finance functions report witnessing the falsification or manipulation of financial reporting information (KPMG, 2008).

Recent industry surveys indicate an increase in the reporting of corporate fraud by employees. The 2009 National Business Ethics Survey reports that the percentage of employees that reported misconduct when they observed it was 63 percent in 2009 as compared to 58 percent in 2007 (ERC, 2009). This is consistent with the KMPG 2008-

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¹ The survey was a blind, national survey of prescreened working adults who fell into demographic categories spanning all levels of job responsibility, 16 job functions, 13 industry sectors, and 4 thresholds of organizational size (KPMG, 2008).
2009 Integrity Survey which found an increase in the percentage of employees that preferred to use an ethics or compliance hotline to report corporate misconduct from 21 percent in 2000 to 44 percent in 2008 (KPMG, 2008).

The increase in the use of, and confidence in, employee hotlines coincides with the enactment of SOX. SOX mandates that audit committees of publicly-traded companies establish procedures for “the confidential, anonymous submission by employees of the issuer of concerns regarding questionable accounting or auditing matters” (15 U.S.C.A. §78j-1(m)(4)). In response to rules proposed by the Securities and Exchange Commission (SEC) pertaining to SOX-mandated employee hotlines, public comments were received advocating that the SEC require that such hotlines be managed and operated externally by third-party contractors (AuditConcerns, 2003; Gold, 2003; SEC, 2003). One argument was that third-party administration of employee hotlines would allow “employees to provide their contact information to the third party while keeping it anonymous from the company” (Gold, 2003). After considering the public comments, the SEC decided not to mandate specific procedures or policies for SOX-mandated employee hotlines (SEC, 2003). Instead, the SEC gave audit committees the flexibility “to develop appropriate procedures in light of a company’s individual circumstances” (SEC, 2003).

Academic research establishes that the presence of formal procedures for reporting wrongdoing encourages whistleblowing (Taylor and Curtis, 2009). A system that allows employees to report wrongdoing allows organizations to investigate and correct accounting irregularities without the negative consequences associated with reporting wrongdoing outside of the organization (Barnett et al., 1993; Dworkin and
Near, 1997). Examining whistleblowing intentions in a fraudulent financial reporting context is important to our capital markets given the magnitude of the problem, the significant costs associated with an act of fraudulent financial reporting, and the apparent knowledge of these incidents by employees (Kaplan et al., 2009a). Understanding factors that influence the reporting intention of in-house accountants is essential since they are most often the first line of defense against fraudulent financial reporting.

This research extends current whistleblowing literature on two points of interest to the practice community. First, it examines whether the motive for personal gain by corporate executives in misstating a company’s financial statements impacts the intention of in-house accountants to report the wrongful act. Attribution theory and the organizational citizenship behavior literature lead to the prediction that the motive for personal financial gain by the wrongdoer will increase reporting intention of in-house accountants to the company’s reporting hotline. Second, this study examines whether the reporting intention of in-house accountants is influenced by whether the company’s whistleblowing hotline is managed internally or by an outside, third-party contracted by the company. The obligation of loyalty of employees, the professional identity of in-house accountants with a profession that emphasizes confidentiality and loyalty, and the organizational climate / tone at the top literature all support the prediction that an in-house accountant’s reporting intention to an internally managed hotline will be greater than to one managed externally. The study informs the practice community in understanding the reporting intention of in-house accountants that discover fraudulent financial reporting as well as on design features of SOX mandated reporting channels that may increase reporting intention of in-house accountants.
In the next section of the paper the background for the study is provided and the hypotheses are developed. This is followed by a discussion of the research method and results of the study. The final section of the paper discusses the results, implications and limitations of the study.

II. BACKGROUND AND HYPOTHESES DEVELOPMENT

Background

The most common cited definition of whistleblowing is the disclosure by organizational members, former or current, of illegal, immoral or illegitimate practices under the control of their employers to persons and organizations that may be able to effect action (Dasgupta and Kesharwani, 2010; Miceli and Near, 1991b; Near and Miceli, 1985; Zhuang et al., 2005). Employees often fear blowing the whistle on corporate wrongdoing out of fear of retaliation. Retaliation against the whistleblower may include intimidation, defamation of character, job loss, demotion, and negative impact on one’s career (Keil et al., 2010) and is reported to occur in 17% to 38% of whistleblowing cases (Miceli et al., 1999; Rehg et al., 2008). The perceived risk of negative personal consequences discourages individuals from blowing the whistle on corporate wrongdoing (Dozier and Miceli, 1985; Keil et al., 2010). The decision on whether to report an act of wrongdoing depends on available alternatives and whether the perceived benefits of blowing the whistle outweigh the perceived costs (Hooks et al., 1994; Miceli and Near, 1992b).

The goal of an effective whistleblowing system is to encourage observers of fraud to report the wrongful act thereby increasing the risk to wrongdoers of engaging in illegal, immoral or illegitimate acts. Taylor and Curtis (2009, p. 22) observe that industry
surveys and academic research support the contention that reporting mechanisms aid in the prevention and detection of unethical behavior. The intention behind SOX-mandated reporting hotlines was to increase an employee’s willingness to report by reducing the likelihood that management would discover the whistleblower’s identity (SEC, 2003).

For whistleblowing to be an effective internal control mechanism, the observer of the wrongful act must chose to report it and the report must be properly and effectively handled (Near and Miceli, 1995). Research on reporting acts of wrongdoing has included studies on the characteristics of (1) the whistleblower, such as gender, locus of control, and ethical style (e.g., Kaplan et al., 2009a; Curtis and Taylor, 2009); (2) the wrongdoing, such as the perceived seriousness of the wrongdoing (Curtis, 2006; Hooks et al., 1994; Graham, 1986); (3) the complaint recipient, such as the characteristics of the employee reporting hotline (Kaplan and Schultz, 2007; Kaplan et al., 2009b); (4) the wrongdoer, such as being a poor performing employee (Kaplan, 1995), an impolite or rude person (Robertson and Stefaniak, 2009), and his/her degree of power in the organization (Miceli et al., 2008); and (5) the organization, such as the existence of formal procedures for whistleblowing (Miceli and Near, 1992b; Taylor and Curtis, 2009), a participative management style (Keenan, 1988), and ethical attitude of executives (Miceli et al., 2008).

Studies have examined the impact of an anonymous, confidential reporting hotline on the reporting intention of the observer of corporate wrongdoing. Kaplan and Schultz (2007) found that the existence of an anonymous, confidential hotline managed by an independent third-party reduced the intention of employees to report wrongdoing to non-anonymous reporting channels. The explanation provided for this result was the
perceived reduction in personal costs of reporting to an anonymous versus non-anonymous reporting hotline.

Kaplan et al. (2009b) examined whether an anonymous hotline with strong procedural safeguards increases reporting intentions as compared to one possessing weaker procedural safeguards. Contrary to expectations, the intention to report a fraudulent act was greater under the weaker safeguards condition. In search of an explanation for this result, Kaplan et al. (2009b) conducted a small, ancillary, post-hoc study using a sample of 29 participants (MBA students) to evaluate whether their result was perhaps driven by reporting to an internal (weaker safeguard condition) versus external (stronger safeguard condition) party. The ancillary study provided some evidence that the reporting intention may be stronger for the internal reporting channel than the external reporting channel. Kaplan et al. (2009b) offer as an explanation for their unanticipated result “…that participants may believe that reporting to an externally administered channel, even one hired by the organization, is somewhat akin to going outside the organization” and suggest that “individuals may be reluctant ‘to get a third party involved’” (p. 285).²

While academic studies in business on whistleblowing have generally focused on the propensity of managers to whistleblow using either MBA students or “professional employees” of organizations (Kaplan et al., 2009b; Kaplan and Schultz, 2007), this study focuses on accountants because they would be expected to be among the first to detect or suspect an act of accounting fraud or irregularity. (Graduate accounting students are used

² Kaplan et al. (2009b) further observe “that research shows that employees generally prefer to initially report wrongful acts internally and report to outsiders reluctantly (Dworkin and Baucus, 1998; Ethics Resource Center, 2007; Miceli and Near 1992a). However, previous research does not distinguish between whether a company-sponsored anonymous reporting channel is administered by personnel internal to the company or external to the company” (p. 285, Footnote 9) and they strongly encourage further research in this area (p. 286).
as proxies for accountants in the study.) To increase the effectiveness of SOX-mandated hotlines, companies must understand how features of a reporting system impact an employee’s intention to report wrongdoing under different circumstances. This is especially relevant given the flexibility that the SEC has given publicly-traded companies in the management and design of their SOX-mandated employee hotlines. This study extends Kaplan and Schultz (2007) and Kaplan et al. (2009b) by examining whether the reporting intention of in-house accountants is influenced by whether the reporting channel is managed internally or externally.

Existing research establishes that acts of theft or misappropriation of assets are more likely to be reported than financial statement fraud (Robertson, 2010) and that employees are more likely to report material financial statement fraud than immaterial financial statement fraud (Robertson, 2010). This study extends the literature on reporting intention of financial statement fraud by examining the impact of the wrongful act being motivated by the personal financial gain of corporate executives. Acts of fraud perpetuated by executives cause more than three times the financial loss of those caused by managers and more than nine times the financial losses caused by non-management employees (ACFE, 2010). The study focuses on financial statement fraud because while it is the least common type of corporate fraud committed, it is the most costly (ACFE, 2010).

**Wrongdoer Intention for Personal Benefit**

The premise of attribution theory is that one’s search for the cause of an outcome leads to attribution of causality. Once the cause of an outcome has been determined, the

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3 Robertson (2010)”s explanation for the result was that “organizational employees consider theft more serious and perceive a greater responsibility for reporting theft” (p. 21).
observer will have an emotional reaction, whether positive, negative or neutral, which has important consequences for motivation and action by the individual (Weiner, 1985, 1986). Anger is an emotional reaction generated by the attributional process related to an actor’s intention and the amount of control he/she had over the situation (Bentancourt and Blair, 1992). Intentional acts resulting in harm generate greater feelings of anger than nonintentional acts (e.g. Weiner et al., 1987). Likewise, the perception that an act was intentional increases the likelihood of an attribution of blame (Tedeschi and Nesler, 1993).

Intentionality has been offered as an explanation for aggressive behavior (Ferguson and Rule, 1983) and it has been suggested that intentionality increases the intensity of an aggressive response (Bentancourt and Blair, 1992). Intentional wrongful acts generate anger which may cause one to take some action to rectify the wrongful act. When a corporate executive engages in fraudulent financial reporting motivated by personal financial gain, one with knowledge of the corporate executive’s motivation may experience feelings of anger that increase the likelihood of an aggressive behavioral response (e.g. Dworkin and Baucus, 1998; Miceli et al., 1991). One such response may be a greater intention to report the wrongful act to the company’s SOX-mandated employee hotline.

The organizational citizenship behavior (OCB) literature also provides support for the predicted behavior. OCB is a voluntary act, or extra-role behavior, by an employee aimed at helping the organization (Brief and Motowidlo, 1986). Organ (1988) describes OCB as “behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in aggregate promotes the effective functioning of the
organization…the behavior is not an enforceable requirement of the role or the job
description…the behavior is a matter of personal choice.” While formal procedures for
reporting wrongdoing encourage whistleblowing (Miceli and Near 1992b; Taylor and
Curtis, 2009), it nevertheless remains a voluntary act by employees (Bhal and Dadhich,
2011).

Katz (1964) delineated five categories of extra-role behavior that would be OCB:
(1) cooperating with others; (2) protecting the organization; (3) volunteering constructive
ideas; (4) self-training; and (5) maintaining a favorable attitude toward the organization.
Conscientiousness (Schnake et al., 1993; LePine et al., 2002) and civic virtue (Graham,
1986; Podsakoff et al., 2000) have been recognized as types of OCB that protect the
organization. Conscientiousness encompasses following the norms of a good worker and
doing more than is necessary of an employee by the organization (Schnake et al., 1993;
LePine et al., 2002). Civic virtue includes participating in the governance of the
organization even at great personal cost (Graham, 1986; Podsakoff et al., 2000).

Reporting acts of corporate wrongdoing would be conscientious behavior as it is a
voluntary act and would also be an act of civic virtue as a form of participation in
corporate governance.

When an employee learns of a wrongful act by a higher-ranking person in the
organization, the employee must consider consciously or unconsciously his/her role in the
organization. When the wrongful act is motivated by the personal gain of the wrongdoer,
the employee may be moved to protect the organization by reporting the wrongful act.
Acting as a conscientious organizational citizen to protect the organization from an
unambiguous fraudulent act engaged in for the personal gain of the higher-ranking
person, the observer-employee of the wrongful act is more likely to participate in the governance of the organization (civic virtue) by whistleblowing.

The preceding discussion leads to the following hypothesis:

**H1:** Reporting intention will be greater when the wrongful act of a higher-ranking person in the organization is motivated by the wrongdoer’s personal gain.

**Internal vs. External Reporting Channel**

Under the laws of most states in the United States, employees have a fiduciary relationship with their employer giving rise to a duty of undivided loyalty (American Jurisprudence, 2004; American Law Institute, 2006). This includes an obligation to maintain the confidentiality of the employer’s proprietary information, including its financial data (American Law Institute, 2006; Corpus Juris Secundum, 2006). However, the obligation of confidentiality does not extend to protect acts by one’s employer that are illegal, and in many jurisdictions employees that disclose illegal acts by their employers to law enforcement agencies or other appropriate channels are protected from discharge or adverse employment action as a matter of public policy (Barnett et al., 1993; Corpus Juris Secundum, 2006). Despite this limitation on the employee’s legal duty of loyalty, there is an unspoken rule in the corporate world that employees have a duty of loyalty not to make corporate information public, even if what the organization is doing is unlawful or unethical (Rocha and Kleiner, 2005). With the enactment of laws to protect whistleblowers that use appropriate channels of reporting from retaliation, some argue that this attitude of employee loyalty has changed over the years (Rocha and Kleiner, 2005).
Whistleblowers have typically been divided into two categories. Those that report wrongful behavior within the organization to management, their supervisor, or the organization’s ethics hotline, and those that report outside of the organization to law enforcement agencies or the press. Much of the pre-SOX research was done within this framework and involved evaluating factors that influenced reporting inside or outside of the organization (Callahan and Dworkin, 1992; Dworkin and Baucus, 1998; Miceli and Near, 1985, 1992a). Those that aired an organization’s dirty laundry to outsiders were often viewed as traitors or disloyal employees acting against the interests of their employer (Bather and Martin, 2006).

The question addressed by this study is whether in-house accountants are more likely to report to an employee hotline managed internally by the company’s internal audit department than to one managed by a third-party contracted by the organization. While reporting to either channel would be an act of whistleblowing to an internal channel, an employee may nevertheless experience a greater feeling of disloyalty reporting to a hotline managed by an outside, third-party. In the eyes of the employee, the third-party may still be viewed as an “outsider” and reporting to the third-party as a greater act of disloyalty as compared to reporting to a hotline managed within the organization.

For an in-house accountant whose education and training (and perhaps ethical standards and code of conduct if he/she holds professional licenses or certifications) emphasizes an obligation of confidentiality and loyalty to one’s client or employer (e.g., AICPA, 2010), it may be more comfortable to report an act of wrongdoing to a department within the organization managing the hotline than to an outside, third-party
contracted to manage the hotline. This is consistent with the professional identity literature that establishes that one way that individuals demonstrate professional identity is through adherence to standards and practices of their profession (e.g., Taylor and Curtis, 2009). Accountants will likely feel that reporting to an internally managed hotline is more in line with their professional obligation of confidentiality than to a hotline managed outside of the organization. The result should be a higher reporting intention to an internally managed hotline.

Another explanation for the predicted behavior relates to the tone set by the audit committee by implementing an internally managed hotline. Dickson et al. (2006) defines organizational climate as “distinct perceptions and beliefs about an organization’s physical and social environment.” Organizational climate provides employees with cues regarding the types of behavior that are supported or expected by the organization (Schneider and Reichers, 1983; Thoroughgood et al., 2011). The concept is analogous to the tone at the top literature that posits that the actions of the CEO and the board of directors that promote an ethical environment will foster ethical decisions and behavior by employees (e.g., Brief et al., 1996; D’Aquila, 1998; Schroeder, 2002).

The board of directors and the audit committee serve as role models for ethical tone (Schwartz et al., 2005). An audit committee’s decision to manage the SOX-mandated reporting hotline internally may be received as a signal by employees that reporting wrongdoing is not a shameful act and is encouraged in the interest of promoting ethical behavior by all employees. On the other hand, when the management of the hotline is delegated to an outside third-party, employees may view the act of whistleblowing as a hidden, secret, and discouraged act.
The preceding discussion leads to the following hypothesis:

**H2:** *Reporting intention to an internally managed hotline will be greater than to a hotline managed by an outside, third-party contracted by their employer.*

**Interaction of Wrongdoer Intention and Reporting Channel on Reporting Intention**

As previously discussed, it is predicted that the propensity of in-house accountants to report a wrongful act will be greater when the motivation for the perpetrator’s act is personal gain (Hypothesis 1). At the same time, it is predicted that the likelihood that an in-house accountant will report a wrongful act to an internal reporting channel is greater than the likelihood of reporting the wrongful act to an external reporting channel (Hypothesis 2). The pre-SOX research indicates that whistleblowers tend to whistleblow outside of the organization when the wrongdoing is considered to be more serious (Callahan and Dworkin, 1992; Miceli and Near, 1985). This raises interesting questions regarding the interaction between the motivation for the wrongdoing and the attributes of the reporting channel on the likelihood that an employee will report the wrongful act.

When the action of the wrongdoer is motivated by personal gain so as to be completely against the interest of the corporation, its shareholders and other stakeholders, the employee (i.e., in-house accountant) may feel that it would be an act of loyalty to the corporation to report the wrongdoing (Vandekerckhove and Commers, 2004; Varelius, 2009). The wrongdoer in this case is acting solely for personal gain. Accordingly, whether the reporting channel is managed internally or externally becomes unimportant because being disloyal is not a significant issue (or less of an issue) to the employee.
reporting the wrongful act. In this situation, it is expected that there would not be a significant difference in the likelihood of reporting between an internally managed reporting channel and an externally managed reporting channel.

When the wrongdoer is not motivated by the wrongdoer’s personal gain, the wrongdoer can argue that the questionable act is for the benefit of the corporation and its stakeholders (i.e. to increase the share value for all shareholders and the employees who own shares via the employee stock ownership plan). In this case employee disloyalty by reporting the wrongful act may become a consideration and the observer of the wrongful act may be more comfortable reporting to a reporting channel managed within the organization. In the eyes of the employee that has observed the wrongful act, reporting to an internally managed reporting channel may be viewed as less disloyal than reporting to an externally managed reporting channel. Therefore, when the wrongful act is not motivated by the personal gain of the wrongdoer it is predicted that the likelihood of an in-house accountant reporting the wrongful act is greater for an internally managed reporting channel than an externally managed reporting channel.

The preceding discussion leads to the following hypothesis:

**H3:** There is an interaction effect on reporting intention between the motivation of the corporate executive officer (personal financial gain vs. no personal financial gain) and the reporting channel (internally managed hotline vs. externally managed hotline).

### III. METHODOLOGY

**Design**

A 2 x 2 design with the following between-subject variables was used in this study: personal benefit intention of wrongdoer (2 levels) and reporting channel (2
levels). The personal benefit intention conditions were the intention and lack of intention of executive officers to sell stock following the misstatement of the company’s financial statements. The misstatement was an overstatement of oil and gas reserves of the company. In the reporting channel condition, the employee hotline for reporting wrongdoing was described as either (i) one managed by the Internal Audit Department or (ii) one managed by a third-party contracted by the company. It is common for companies to outsource their whistleblowing hotline to third-party contractors (Security Executive Council, 2007). The audit committee is responsible for oversight of the reporting hotline in both conditions.

Participants

Graduate accounting students located at a major university in the southeastern part of the U.S. were recruited to participate in the study as proxies for in-house accountants. Several prior whistleblowing studies have used graduate business students as participants (Kaplan et al., 2009a, 2009b; Kaplan and Schultz, 2007; Zhuang et al., 2005). The case was administered during class time asking students to voluntarily participate in the study and allowing them to withdraw at any time. Students that participated were given nominal extra credit in the course. Students were randomly assigned to the four conditions using the “Random Between” function of Microsoft Excel. A total of 248 surveys were distributed and 231 collected. Of the 231 collected surveys, 220 usable responses were retained. Eleven surveys were removed because of the failure of the participants to correctly respond to questions regarding the intention of the executive officers to sell their shares of company stock or the reporting channel provided by the company to report wrongdoing. One participant was removed from the
dataset for the regression analysis because not all questions were answered for the
variables included in that analysis.

The mean years of age and work experience of participants were 28.11 and 4.61,
respectively. Forty-three percent of the participants were male and 37% were married.
Effective randomization among the four treatment groups was successful as measured by
demographic variables. Neither analysis of variance applied to age (F=.20, p=.90) and
years of work experience (F=1.16, p=.326) nor the Kruskal-Wallis test applied to gender
(Chi-Square=1.506, p=.681), marital status, (Chi-Square=1.705, p=.636), or being a
parent (Chi-Square=5.303, p=.151) revealed any statistically significant differences
among the groups.

**Materials and Procedure**

Participants were provided with materials containing general instructions and
background information about a hypothetical company. The case study was developed
based on an incident reported in the public press and an examination of documents
generated in litigation arising out of the incident. In addition, the author conferred with
the President of an independent oil and gas company to confirm that the approach for
reporting oil and gas reserves as stated in the case was representative of a method that
would be used in practice. Finally, once the case was written the author had several
graduate accounting students that would not be participants in the study read the case and
provide feedback regarding any unclear, vague or ambiguous items.

The hypothetical company in the case was a publicly-traded independent oil and
gas company. Accounting Standards Codification 932 requires publicly-traded companies
with significant oil and gas activities to disclose proved oil and gas reserve quantities
when presenting a complete set of financial statements. These disclosures are also required in the SEC filings of publicly-traded companies. The case contained a description of the reporting requirements.

The President and CEO of the company, a reservoir engineer by education and training, sets the company’s oil and gas reserves for financial reporting purposes after evaluating the analysis of the internal reservoir engineers and outside consultants. A senior accountant of the company is aware that the oil and gas reserves as stated in its financial statements are significantly greater than estimated by the company’s internal reservoir engineers and outside consultants. In the intention to sell condition, the senior accountant overheard the President/CEO of the company state on several occasions that s/he and other executive officers of the company were planning on selling some of their shares after the issuance of the annual report.

In trying to decide whether to report the overstatement, the senior accountant reads the company’s employee handbook and learns that Section 806 of the Sarbanes-Oxley Act prohibits an employee that reports wrongdoing from being discharged, demoted, suspended, threatened, harassed, or discriminated against as a result of the report and allows the employee to sue for damages in the event of such adverse job action. The senior accountant also learns in reading the employee handbook that the Sarbanes-Oxley Act requires the Audit Committee of the Board of Directors to establish a method for employees to anonymously and confidentially report any accounting irregularity or act relating to fraud against shareholders. Depending on the treatment or condition to which a participant is assigned, s/he was told in the hypothetical case that the senior accountant may report wrongdoing either to a hotline managed by (i) the
company’s Internal Audit Department or (ii) an outside firm contracted by the Audit Committee.⁴ All reports are forwarded by the hotline to the Audit Committee, and company policy prohibits any employee of the Internal Audit Department or outside firm contracted to manage the hotline (whichever is applicable) from disclosing the report to any member of the company’s management. The participants were asked to evaluate the likelihood that the company’s senior accountant would report the act of wrongdoing to the reporting hotline.

Participants were asked to read the hypothetical scenario at their own pace. After the participants completed reading the case, they were asked to indicate the likelihood that the senior accountant would report the overstatement of oil and gas reserves. Participants were also asked to evaluate the seriousness of the questionable act (amount of social harm done), the responsibility of the senior accountant to report the questionable act (duty or obligation), and the senior accountant’s personal cost of reporting the questionable act (trouble, risk, or discomfort). They were also asked to indicate the influence that generally accepted accounting principles (GAAP) and the protections afforded by Section 806 of the Sarbanes-Oxley Act to employees that report any accounting irregularity or act relating to fraud against shareholders had on the likelihood that the senior accountant would report the questionable. After participants completed this portion of the survey instrument, they were asked to respond to additional questions that included demographic information, manipulation checks, and other variables of interest. After a participant completed reading the case and providing responses to the

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⁴ These channels are the two options suggested by Confidential Communication Services (2003) to implement the SOX requirements: “One way is for the Audit Committee to set up and administer its own complaint channel functions . . . The other way is to engage the services of an outsourcing agency for such complaint channels.”
first section of the survey instrument, the participant was not permitted to return to the case or the first section of the survey.

**Dependent Variable**

The dependent variable in this study is the likelihood that the senior accountant would report to an employee hotline the overstatement of oil and gas reserves in the company’s annual financial statements (LKD) using an eleven-point Likert scale. Prior research indicates that an individual’s desire to maintain a positive self-image may result in a self-evaluation that is more favorable than an evaluation of others (Brown, 1986; Duck *et al.*, 1995; Gunter and Thorson, 1992; Randall and Fernandes, 1991; Rest, 1979). The third-person viewpoint is common in research involving ethical issues (e.g. Arnold and Ponemon, 1991; Rest, 1986; Schultz *et al.*, 1993). A third-person perspective is used in this study in an effort to obtain forthright responses and has been used in a number of studies in the whistleblowing area (Bame-Aldred *et al.*, 2007; Kaplan and Schultz, 2007; Shultz *et al.*, 1993; Zhuang et al., 2005).

**Variables of Interest**

The two independent variables of interest are the motivation for personal gain by the corporate executives (sale of stock vs. no sale of stock) and the reporting channel available to the employee to report wrongdoing (internally vs. externally managed hotline). Both variables were manipulated between subjects. The third variable of interest is an interaction variable between the two independent variables of interest.
Control Variables

Prior studies have examined factors that influence an employee’s decision to report a wrongful act. It has been argued that the perceived seriousness of the wrongdoing, the perceived responsibility to report the wrongdoing, and the perceived personal cost of reporting the wrongdoing all impact whistleblowing intention (Graham, 1986; Zhuang et al., 2005). It would also be expected that the violation of generally accepted accounting principles (e.g., Maroney and McDevitt, 2008) and the protections afforded employees by Section 806 of the Sarbanes-Oxley Act would impact an accountant’s reporting decision. Generally accepted accounting principles should be the starting point for any decision by an accountant since it defines how assets and liabilities, as well as revenues and expenses, are measured and recognized (e.g., Bame-Aldred et al., 2007).

To test the hypotheses of this study, the following model was used:

\[
LKD = a + b_1 \text{STK\_SALE} + b_2 \text{INT\_REPT} + b_3 (\text{STK\_SALE} \times \text{INT\_REPT}) \\
+ b_4 \text{SERIOUS} + b_5 \text{RESP} + b_6 \text{PERS\_COST} + b_7 \text{GAAP} + b_8 \text{SOX} + e_i
\]

The following are the variables of interest in the regression model:

\text{STK\_SALE} (H1) Dummy variable where “1” is intention of the executive officers of the company to sell stock after the overstatement of oil and gas reserves and “0” is absence of such intention

\text{INT\_REPT} (H2) Dummy variable where “1” is reporting to Internal Audit Department and “0” is reporting to contracted CPA Firm

\text{STK\_SALE} \times \text{INT\_REPT} (H3) Interaction variable of \text{STK\_SALE} and \text{INT\_REPT}

The following variables were utilized as control variables in the regression model:
The perceived seriousness of the questionable act (amount of social harm done) measured on a nine-point Likert scale with end points “low” to “high”

The perceived responsibility of the employee to report the questionable act (duty or obligation to report) measured on a nine-point Likert scale with end points “low” to “high”

The employee’s perceived personal cost of reporting the questionable act (trouble, risk, or discomfort) measured on a nine-point Likert scale with end points “low” to “high”

The influence of generally accepted accounting principles on the likelihood that the employee will report measured using a nine-point Likert scale with end points “low” to “high”

The influence of the protections afforded by Section 806 of the Sarbanes-Oxley Act to employees that report any accounting irregularity or act relating to fraud against shareholders on the likelihood that the employee will report measured using a nine-point Likert scale with end points “low” to “high”

IV. RESULTS

Comparison of Means: Likelihood of Reporting Overstatement of Reserves

*Table 1* sets forth the intention of in-house accountants to report (LIKENESS) the overstatement of reserves (as assessed by the participants) under the four conditions of the experiment. Reporting intention was significantly greater ($t=3.220, p=.001$) when the executive officers intended to sell their stock in the company following the issuance of the annual report (LKD=8.05, SD=1.76) than when they had not indicated such an intention (LKD=7.19, SD=2.14). Likewise, reporting intention to the internally managed hotline (LKD=7.93, SD=1.96) was greater than to the externally managed hotline (LKD=7.25, SD=2.00). This difference was also significant ($t=2.523, p=.012$).

[Insert Table 1 about here]
A comparison of means between reporting intention to the internally managed hotline as compared to the externally managed hotline in the sale of stock versus no sale of stock condition yields interesting results as indicated by Figure 1. In the stock sale condition, there was no significant difference \((t=1.599, p=.113)\) in reporting intention to the internally managed hotline (Group 3: LKD=8.31, SD=1.67) and to the externally managed hotline (Group 4: LKD=7.76, SD=1.84). When a sale of stock is not planned by the executive officers, there was a significantly greater intention to report \((t=2.011, p=.047)\) to the internally managed hotline (Group 1: LKD=7.58, SD=2.16) than to the externally managed hotline (Group 2: LKD=6.78, SD=2.05).

![Insert Figure 1 about here](image)

Reporting intention to the internally managed hotline was greater than to the externally managed hotline in both the sale of stock (8.31 vs. 7.76) and no sale of stock condition (7.58 vs. 6.78). However, the difference was only significant for the no sale of stock condition \((t=2.011, p=.047)\). The condition with the lowest reporting intention was when there was no intended sale of stock and the reporting channel was to the externally managed hotline (Group 2: LKD=6.78, SD=2.05). Reporting intention in this condition was significantly less than in each of the other three conditions (Group 1: t=2.011, p=.047; Group 3: t=4.286, p=.001; Group 4: t=2.589, p=.011).

**Regression Model Results**

Regression analysis was used to measure the impact of the motivation of the corporate executives to misstate the financial statements for personal gain, the reporting channel, and their interaction on reporting intention while controlling for other variables.
that prior research establishes may impact the likelihood of reporting. Table 2 provides the Pearson’s correlations for variables included in the regression model and Table 3 provides the results of the model with an adjusted $R^2 = .447$ ($F=23.050$, $p<.001$). The results are consistent with prior research showing a positive relationship between reporting intention and the perceived seriousness of the wrongdoing ($t=2.44$, $p=.008$), the perceived responsibility to report ($t=1.95$, $p=.027$), generally accepted accounting principles ($t=6.13$, $p=.001$), and the protections afforded whistleblowers against adverse job action by the Sarbanes-Oxley Act ($t=5.19$, $p=.001$).

Prior research hypothesized a negative relationship between the potential personal cost of reporting and reporting intention. However, most studies have failed to establish such a relationship in an experimental setting (Keil, et al., 2010; Near and Jensen, 1983; Miceli, 1984; Miceli and Near, 1985; Near and Miceli, 1986). Consistent with these prior studies, the data did not support a relationship between the personal cost of reporting and reporting intention ($t=-.35$, $p=.363$).

The results of the regression analysis support both Hypothesis One and Hypothesis Two. Controlling for the variables discussed above, a positive relationship is established between reporting intention and the intended sale of stock by executives ($t=2.26$, $p=.013$) and the internal reporting channel ($t=2.36$, $t=.001$), respectively. These results indicate that reporting intention is greater when the wrongdoer will personally benefit from the wrongful act (Hypothesis One) and is greater to an internal reporting channel than an external reporting channel (Hypothesis Two). Accordingly, Hypothesis One and Hypothesis Two are supported by the data.
Regarding Hypothesis Three, the results indicate that the interaction between the intended sale of stock and the reporting channel was not significant ($t = -0.27$, $p = 0.784$). Thus the significant main effects do not depend on the type of fraudulent act. Therefore, the results do not support Hypothesis Three. Nevertheless, a comparison of reporting intention among the conditions yield results that raise additional research questions as discussed in the conclusion.\(^5\)

V. DISCUSSION, CONCLUSION AND LIMITATIONS

This study contributes to the existing whistleblowing literature by providing evidence on the effects of the motivation of wrongdoing (intention for personal gain vs. no intention for personal gain) and the type of reporting channel available to in-house accountants (internal vs. external) on reporting intention to an employee hotline of an act of fraudulent financial reporting. Understanding factors that impact the decision of an observer to report the discovery of a fraudulent act is important for audit committees, internal auditors, and external auditors. Under SOX, audit committees are required to establish and oversee a confidential, anonymous reporting channel for employees to report concerns regarding questionable accounting and auditing matters. The SEC has given audit committees the flexibility to develop procedures that are appropriate for their company’s individual circumstances (SEC, 2003). In addition, on May 25, 2011 the SEC ruled that whistleblowers to the SEC can qualify for cash rewards under the Dodd-Frank Wall Street Reform and Consumer Protection Act (Public Law 111-203) without first reporting the wrongful act to the company’s internal reporting channel (SEC, 2011). The

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\(^5\) The analysis was also run limiting the dataset to participants with five years or greater of work experience ($n = 70$) with the model remaining significant at $p < 0.001$ with and adjusted $R^2 = .448$. There was no change in the results for the variables of interest with stock sale ($p < 0.045$) and internal reporting ($p = 0.021$) remaining significant and the stock sale / internal reporting interaction variable remaining nonsignificant ($p < 0.405$).
cash incentive available by reporting directly to the SEC increases the pressure on audit committees to design internal reporting channels that will encourage employees to report internally.

The results of this study suggest that in-house accountants are more likely to report fraudulent financial reporting when the perpetrator personally benefits from the wrongful act. In addition, the results indicate that in-house accountants are more likely to report wrongdoing to an internal reporting hotline managed by the internal audit department than to a hotline managed by a third-party. The results of our regression analysis show that the intention to report wrongdoing was not affected by or dependent on the interaction of the personal motivation for the wrongdoing and the type of reporting channel.

The finding of the study that an internal reporting channel may be preferred is consistent with Kaplan et al. (2009b) where the participants were MBA students as proxies for management employees. The participants in this study were graduate accounting students serving as proxies for in-house accountants. The findings of Kaplan et al. (2009b) and this study are contrary to conventional thinking that employees are more likely to report wrongdoing to an outside, third-party contracted to administer the SOX-mandated employee hotline than to one managed internally. These results are likely driven by employee concerns about being perceived as being disloyal by reporting to an outside, third party albeit one contracted by their employer to manage the hotline. Given these results, further research is warranted regarding whether an employer education program can mitigate this difference in situations where a company decides to implement a hotline managed by an outside, third-party.
Finally, although the results of the model did not support Hypothesis Three, the pattern of the reporting intention in the four conditions is interesting. A simple comparison of means indicated that the difference in reporting intention to the internal versus external channel was not significantly different when the financial misstatement was motivated by personal gain, but was significantly greater for the internal channel when the misstatement was not for the personal gain of the executives. The suggestion is that when the wrongdoer is motivated by personal gain in total disregard of the interest of the corporation and its stakeholders the anger generated by the wrongdoing may motivate an intention to report regardless of whether the reporting channel is internal or external. Additionally, in this situation the observer may feel that it would be an act of loyalty to report whether the channel is internal or external. The result raises the question of whether an employee offered the option to choose either an internal or external anonymous, confidential reporting channel to report wrongdoing if both are available would have a greater propensity to report than an employee offered only one of the two channels. It would also be interesting to examine whether selection of the internal or external channel when both are available is influenced by type of wrongdoing.

The results of this study are subject to several limitations. First, using a hypothetical incident in an experiment is not the same as actually discovering a fraudulent act in an actual work environment. Emotional facts, such as fear and anger, that may enter into the decision making process are likely to play a minimal role in an experimental setting. Nevertheless, experiments have been used extensively to explore reporting intentions for wrongful acts within an organizational setting (Curtis and Taylor, 2009; Kaplan et al., 2009a, 2009b; Kaplan and Schultz, 2007; Schultz et al., 1993; Taylor
and Curtis, 2009; Zhuang *et al.*, 2005). In this case, an experimental approach with a carefully constructed case strengthens internal validity.

A second limitation relates to the use of graduate accounting students as participants. The participants in the study were predominantly full-time working professionals with an average of 4.61 years of work experience. Graduate accounting students have the credentials required to hold an in-house accounting position. While the participants appear to be representative of an in-house accountant who might discover a fraudulent act at work, there is no direct evidence to support this.

A third limitation of the study relates to the type of fraudulent act used in the study. The hypothetical case involves an executive officer that is fraudulently misstating the oil and gas reserves of the company for the purpose of maintaining the stock price. This factual pattern was selected because it was generally based on a case reported in the popular press and involved an accounting standard with a clear set of requirements. While there is no reason to question the generalizability of the findings regarding motivation for personal gain beyond a situation involving an overstatement of oil and gas reserves of a company, this is left to further research.

Finally, the participants in the study were from different organizational settings. This made it difficult to control for extraneous factors such as job characteristics, employee satisfaction, ethical environment, and so on.
REFERENCES


United States Code Annotated, Title 15, Section 78j-1 (“18 USCA 78j-1”) (West 2011).

United States Code Annotated, Title 18, Section 1514A (“18 USCA 1514A”) (West 2011).


TABLE 1
Likelihood of Whistle Blowing by Group

Panel A:

<table>
<thead>
<tr>
<th>Whistle Blow to</th>
<th>No Sale of Stock by Officers</th>
<th>Sale of Stock by Officers</th>
<th>Pooled Results by Reporting Avenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Audit</td>
<td>GROUP 1 (n = 59) Mean: 7.58; SD: 2.16</td>
<td>GROUP 3 (n = 55) Mean: 8.31; SD: 1.67</td>
<td>N = 114 Mean: 7.93; SD: 1.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External Hotline</td>
<td>GROUP 2 (n = 55) Mean: 6.78; SD: 2.05</td>
<td>GROUP 4 (n = 51) Mean: 7.76; SD: 1.84</td>
<td>N = 106 Mean: 7.25; SD: 2.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pooled Results by No Sale/Sale</td>
<td>N = 114 Mean: 7.19; SD: 2.14</td>
<td>N = 106 Mean: 8.05; SD: 1.76</td>
<td></td>
</tr>
</tbody>
</table>

Panel B:
TABLE 2
Pearson’s Correlations for Variables of Interest and Control Variable
(n = 219)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>1. Likelihood of reporting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Stock Sale</td>
<td>.213*</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3. Internal Reporting</td>
<td>.168†</td>
<td>-.003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Seriousness</td>
<td>.387*</td>
<td>.197†</td>
<td>.053</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Responsibility</td>
<td>.368*</td>
<td>.090</td>
<td>.070</td>
<td>.429*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Personal Cost</td>
<td>.034</td>
<td>.080</td>
<td>.008</td>
<td>.112*</td>
<td>.096</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. GAAP</td>
<td>.503*</td>
<td>.071</td>
<td>-.013</td>
<td>.187*</td>
<td>.279*</td>
<td>.053</td>
<td></td>
</tr>
<tr>
<td>8. SOX</td>
<td>.490*</td>
<td>.004</td>
<td>.019</td>
<td>.329*</td>
<td>.265*</td>
<td>-.023</td>
<td>.343†</td>
</tr>
</tbody>
</table>

*p < .05; †p < .01
### TABLE 3
Regression of Likelihood of Reporting on Variables of Interest and Control Variables
(n = 219)

**Dependent Variable:** Likelihood of Reporting

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>Expected Sign</th>
<th>Coefficient Estimate</th>
<th>t-Statistic</th>
<th>p-Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>N/A</td>
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<td>-1.182</td>
<td>-1.37</td>
<td>.172</td>
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<tr>
<td>Variables of Interest:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Stock Sale</td>
<td>.48 (.50)</td>
<td>+</td>
<td>.666</td>
<td>2.26</td>
<td>.013</td>
</tr>
<tr>
<td>Internal Reporting</td>
<td>.52 (.50)</td>
<td>+</td>
<td>.664</td>
<td>2.36</td>
<td>.001</td>
</tr>
<tr>
<td>Stock Sale * Internal Reporting</td>
<td>.25 (.43)</td>
<td>?</td>
<td>-.111</td>
<td>-.27</td>
<td>.784</td>
</tr>
<tr>
<td>Control Variables:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seriousness</td>
<td>8.15 (1.22)</td>
<td>+</td>
<td>.238</td>
<td>2.44</td>
<td>.008</td>
</tr>
<tr>
<td>Responsibility</td>
<td>8.12 (1.38)</td>
<td>+</td>
<td>.163</td>
<td>1.95</td>
<td>.027</td>
</tr>
<tr>
<td>Personal Cost</td>
<td>6.95 (1.98)</td>
<td>-</td>
<td>-.018</td>
<td>-.35</td>
<td>.363</td>
</tr>
<tr>
<td>GAAP</td>
<td>6.32 (2.13)</td>
<td>+</td>
<td>.318</td>
<td>6.13</td>
<td>.001</td>
</tr>
<tr>
<td>SOX</td>
<td>7.80 (1.53)</td>
<td>+</td>
<td>.293</td>
<td>5.19</td>
<td>.001</td>
</tr>
</tbody>
</table>

Adjusted R$^2$: .447; F = 23.050; p < .001

*p-values are one-tailed for all variables with the exception of the interaction variable stock sale and internal reporting.
FIGURE 1
Likelihood of Reporting: Sale vs. No Sale Comparison ($t$ tests)

No Sale of Stock
- $n = 114$
- Mean: 7.19
- SD: 2.14

<table>
<thead>
<tr>
<th>$t$ Test:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diff. = .854</td>
</tr>
<tr>
<td>$t = 3.220$</td>
</tr>
<tr>
<td>$p = .001$</td>
</tr>
</tbody>
</table>

Sale of Stock
- $n = 106$
- Mean: 8.05
- SD: 1.76

Internal Audit Dept.
- (Group 1)
- $n = 59$
- Mean: 7.58
- SD: 2.16

$t$ Test:
- Diff. = .794
- $t = 2.011$
- $p = .047$

External Hotline
- (Group 2)
- $n = 55$
- Mean: 6.78
- SD: 2.05

Internal Audit Dept.
- (Group 3)
- $n = 55$
- Mean: 8.31
- SD: 1.67

$t$ Test:
- Diff. = .544
- $t = 1.599$
- $p = .113$

External Hotline
- (Group 4)
- $n = 51$
- Mean: 7.76
- SD: 1.84