 Toward a Theory of Whistleblowing Intentions: A Benefit-to-Cost Differential Perspective

Mark Keil†
Department of Computer Information Systems, J. Mack Robinson College of Business, Georgia State University, 35 Broad Street, Room 922, Atlanta, GA 30303, e-mail: mkeil@gsu.edu

Amrit Tiwana
University of Georgia, Terry College of Business, 312 Brooks Hall, Athens, GA 30606, e-mail: tiwana@uga.edu

Robert Sainsbury
Department of Management and Information Systems, College of Business, Mississippi State University, P.O. Box 9581, Mississippi State, MS 39762, e-mail: robert.sainsbury@msstate.edu

Sweta Sneha
Department of Computer Science and Information Systems, Kennesaw State University, 1000 Chastain Road, Kennesaw, GA 30144, e-mail: ssneha@kennesaw.edu

ABSTRACT

In order to rescue information technology (IT) projects when they go awry, it is critical to understand the factors that affect bad news reporting. Whistleblowing theory holds promise in this regard and a number of salient factors that may influence whistleblowing intentions have been identified. However, an integrative theory that explains how they influence whistleblowing intentions has been conspicuously absent. In this research, we introduce and test a middle-range theory of whistleblowing that can explain how and why a variety of factors may influence an individual’s whistleblowing intentions. Drawing on the social information processing perspective, we propose that individuals holistically weigh the perceived “benefit-to-cost differential” and that this mediates the relationship between whistleblowing factors and whistleblowing intentions. Tests using data collected from 159 experienced IT project managers largely support our theoretical perspective, in which the central explanatory variable (benefit-to-cost differential) significantly mediates a majority of the proposed relationships. Implications of these findings for research and practice are discussed.

Subject Areas: Escalation, IT Project Management, Reporting Bad News, and Whistleblowing.

*We would like to acknowledge the help of Thomas Fruman, Director, Enterprise PMO, Georgia Technology Authority and the Project Management Institute Atlanta Chapter for making this study possible. We would also like to acknowledge the J. Mack Robinson College of Business at Georgia State University for their financial support of this research in the form of a 2008 summer research grant.

†Corresponding author.
INTRODUCTION

Escalation of commitment in information technology (IT) projects has been well documented and represents a significant drain on organizational resources (Keil, 1995; Keil, Mann, & Rai, 2000). Recent studies have suggested that in some cases escalation can result from the reluctance to transmit relevant information regarding a project’s true status to senior management (Oz, 1994; Smith, Keil, & Depledge, 2001; Tan, Smith, Keil, & Montealegre, 2003; Smith & Keil, 2003; Keil, Smith, Pawlowski, & Jin, 2004). In this article, we focus on the whistleblowing intentions of IT project managers. Building upon the social information processing perspective (Gundlach, Douglas, & Martinko, 2003), we explore the extent to which IT project managers weigh the costs and benefits of whistleblowing in their evaluation of various factors that are believed to influence whistleblowing intentions.

Although IT project managers may be among the first to see the signs of impending failure, they may choose not to communicate their concerns up the hierarchy (Keil & Robey, 1999), or they may put such a positive spin on the situation when they communicate project status that the message is effectively lost (Snow & Keil, 2002; Snow, Keil, & Wallace, 2007). Consequently, the decision makers who have the authority to redirect or terminate the project remain unaware of the seriousness of the problems facing the project.

The CONFIRM project is a classic example of an IT project in which failure to blow the whistle was cited as a contributing cause of failure (Oz, 1994). Jointly funded by Marriott, Hilton, and Budget Rent-a-Car, the CONFIRM project involved a computerized reservation system developed by American Airlines Corporation Information Services (AMRIS) that was designed to allow consumers to make airline, hotel, and car rental reservations using a single system. When Hilton discovered major problems with the system during beta testing, an AMRIS senior executive wrote an internal memo blaming his own employees for concealing the problems associated with the project. The memo stated that “some people who have been part of CONFIRM reservation system (RS) management did not disclose the true status of the project in a timely manner. This has created more difficult problems—of both business ethics and finance—than would have existed if those people had come forward with accurate information” (Oz, 1994, p. 29). After spending 3.5 years and $125 million on CONFIRM, the project was canceled.

The CONFIRM example raises the question: What makes managers so reluctant to blow the whistle on a project that has gone awry? Prior research suggests that reprisal risk may deter an individual from blowing the whistle. Indeed, whistleblowers have experienced reprisals that include harassment, slander, reprimands, punitive transfers, threats, demotion, and dismissal. Reprisal risk implicitly captures the notion that there may be a cost associated with being a whistleblower. This notion of cost to the would-be whistleblower provides the basis for a more nuanced theory of whistleblowing that can explain how and why a variety of factors may influence an individual’s whistleblowing intentions. Expanding on this notion of cost, we posit that individuals weigh the relative costs and benefits in deciding whether or not to blow the whistle. Although the literature suggests that there
are many factors that may influence whistleblowing intentions, little is understood about the relative importance of these factors and the extent to which their impact is mediated by the perceived benefit-to-cost differential associated with blowing the whistle.

Using a conjoint approach, we presented 159 project managers with multiple scenarios in order to test an integrative model in which the effect of seven salient factors on whistleblowing intention is mediated by the perceived benefit-to-cost differential associated with whistleblowing. The study contributes to our understanding in two ways: (i) it develops and tests a new theoretical model of whistleblowing in which perceived benefit-to-cost differential plays a central explanatory (mediating) role, and (ii) it provides a simultaneous assessment of the relative importance of salient factors that are believed to affect an individual’s intention to blow the whistle.

The remainder of the article proceeds as follows. First, we review the relevant literature on whistleblowing and introduce our hypotheses. Then we describe the methodology, including data collection, and present our analyses and results. Finally, we discuss the implications for research and practice, identify directions for future research, and conclude with a summary of the study’s key contributions.

THEORETICAL DEVELOPMENT

In the 1970s, researchers coined the term “mum effect” to describe the natural human reluctance to transmit bad news (Tesser & Rosen, 1975). One class of determinants of the mum effect is “the communicator’s unwillingness to bear various costs associated with transmitting bad news” (Tesser & Rosen, 1975, p. 201). For example, fear of negative evaluation may be regarded as a cost that is simply too great to bear.

Research on the mum effect involved a series of laboratory experiments, each typically focusing on one or two factors. Although a multitude of factors were identified as possible contributors to the mum effect, there was little or no attempt to build an overarching theory of the phenomenon. Over time, research on the mum effect subsided, and attention shifted to bad news reporting within an organizational context.

In the 1980s, a growing body of literature on “whistleblowing” began to emerge. Whistleblowers are organizational members who disclose information about dysfunctional organizational activities to persons or organizations that may be able to address the problem (Dozier & Miceli, 1985). Although the traditional definition of whistleblowing most often conjures up images of inappropriate activities that must be reported, the term also applies to actions that are illegitimate and organizationally dysfunctional (Dozier & Miceli, 1985). Smith and Keil (2003) have suggested that reporting the status of a troubled IT projects falls within the boundary of what one might reasonably consider whistleblowing, because projects that are not delivering value commensurate with the resources assigned to them constitute a form of organizational dysfunction that could be seen as illegitimate, especially from a shareholder value perspective.

Dozier and Miceli (1985) present a model of some factors that influence the whistleblowing process. At the core of this model is the notion that whistleblowing
Toward a Theory of Whistleblowing Intentions

involves a number of sequential steps. First, an individual must recognize that there is wrongdoing. Second, the individual must make an assessment of whether the wrongdoing ought to be reported. Third, the individual must decide if s/he is personally responsible for taking action. Fourth, the individual must decide on a choice of action. According to Miceli and Near (1992) the choice of whether or not to blow the whistle hinges on the alternatives that are available and whether the benefits of blowing the whistle outweigh the costs. Miceli and Near (1985) found some evidence suggesting that there are circumstances in which a whistleblower can benefit from exposing problems that have a large impact on them, provided that corrective action is taken. Thus, in some cases, the cessation of wrongdoing may actually benefit the whistleblower either through intrinsic rewards (e.g., an improvement in the workplace environment or resolution of a perceived problem) or through direct rewards (e.g., cash rewards such as those granted to federal whistleblowers).

Notwithstanding its benefits, whistleblowing often carries significant costs, most of which stem from the possibility of retaliation against the whistleblower (Gundlach, Douglas, & Martinko, 2003). Actual retaliation may include intimidation, defamation of character, death threats, job loss, and negative impact on one’s career, all of which can exact a psychological and physical toll on the whistleblower’s health. Rehg, Miceli, Near, and Scotter (2008, p. 223) indicate that “reprisal is common” and is reported to occur 17–38% of the time (Miceli, Rehg, Near, & Ryan, 1999).

Dozier and Miceli (1985) have argued that a perceived risk of negative personal consequences acts as a cost in the individual’s assessment of whether to blow the whistle and Miceli and Near (1992, p. 153) point out that the threat of retaliation “may increase the costs of acting.” Prior research suggests that an individual will be inhibited from reporting when s/he expects negative consequences. Drawing on the work of Bandura (1977), Miceli and Near (1992, pp. 153–153) argue that a “risk of feared consequences” can reduce one’s perceived ability to manipulate one’s environment, and will therefore discourage whistleblowing.

The evidence on whether the threat of retaliation actually deters whistleblowing is inconclusive. In a review of the literature, Miceli and Near (1992, p. 154) conclude that “the comprehensiveness or severity of perceived actual or threatened retaliation was unrelated to intended future whistleblowing at the individual level” (Near & Miceli, 1986). Thus, despite strong theoretical arguments that a risk of negative personal consequences will inhibit reporting, empirical support for this has been mixed. Numerous studies have attempted to test this relationship without finding clear support for it (Near & Jensen, 1983; Miceli, 1984; Miceli & Near, 1985; Near & Miceli, 1986 Miceli, Dozier, & Near, 1991). Keenan (1990) has shown a relationship between fear of negative personal consequences and corporate encouragement to blow the whistle. Smith, Keil, and Depledge (2001) report a significant relationship between negative personal consequences and reluctance to report. The mixed results that have been obtained in this area suggest the need for further theoretical development.

One explanation for the results obtained to date is that researchers have only examined the negative consequences or costs associated with reporting. It is plausible that individuals simultaneously assess both the potential benefits as well as
the potential costs associated with reporting. Perhaps more importantly, the pervasive notion of differences between perceived risks and expected benefits has been implicit, but not central and explicit to theoretical explanations of whistleblowing (and their empirical tests).

In this study, we build upon the social information processing framework introduced by Gundlach, Douglas, and Martinko (2003) to investigate the extent to which IT project managers weigh the costs and benefits of whistleblowing in their evaluation of various factors that are believed to influence whistleblowing intentions. Specifically, we empirically test a portion of the social information processing framework theorized by Gundlach, Douglas, and Martinko (2003). We define benefit-to-cost differential as the net difference between the perceived costs and expected benefits of whistleblowing, as perceived by a potential whistleblower. We further posit that the major factors identified earlier influence whistleblowing intentions by altering the perceived benefit-to-cost differential, which serves as a central explanatory concept to elucidate how these known predictors influence whistleblowing intentions. This view is consistent with Miceli and Near (1992) who posit that the choice of action will depend on whether the benefits of engaging in a “political behavior alternative” outweigh the costs. The idea that the difference between perceived costs and benefits can affect whistleblowing is implicit in the literature, but has never been explicitly developed into an integrative theoretical model.

Miceli and Near (1992, p. 147) suggest that a cost–benefit analysis may come into play if the would-be whistleblower considers “the status of the wrongdoers or their ability to exact revenge” and weighs this against the benefits of blowing the whistle. Gundlach, Douglas, and Martinko (2003, p. 112) observe that there are a number of theoretical perspectives (i.e., power, justice, and prosocial behavior) suggesting “that whistle-blowers consider the economic and psychological costs and benefits of acting.”

In addition to the whistleblowing stream of literature, there is also a small, but related, body of literature that has begun to emerge around “organizational silence” (Morrison & Milliken, 2000). Unlike whistleblowing, which in a narrow sense applies only to situations involving wrongdoing, organizational silence includes withholding of information about potential problems or issues by employees. Morrison and Milliken (2000, p. 706) observe that “many organizations are caught in an apparent paradox in which most employees know the truth about certain issues and problems within the organization yet dare not speak that truth to their superiors.” Although some interesting theoretical work has been done on organizational silence, most of it remains untested empirically. Morrison and Milliken (2000, p. 709) note that the “tendency to reject or respond negatively to dissent or negative feedback” is a key factor that can give rise to a climate of silence. They theorize that employees pick up on these cues “about the safety of speaking up” and will remain silent if the cost of exercising voice is perceived to be too high (Morrison & Milliken, 2000, p. 714).

One common feature of these three streams of literature is that there are significant costs that are believed to be associated with reporting bad news and that in many circumstances these costs may be perceived to outweigh whatever benefits may be derived from reporting. Despite the fact that all three streams of
literature point to the important role that the perceived benefit-to-cost differential plays in determining an individual’s willingness to report bad news, there has been no attempt to test a model that explicitly includes this construct. Models that have included the direct effect of reprisal risk (which taps into the cost side of perceived benefit-to-cost differential) on willingness to report have been proposed and tested (e.g., Smith et al., 2001).

In this study, we examine the mediating role that perceived benefit-to-cost differential plays as an individual responds to some of the salient factors that are believed to influence bad news reporting. We posit that these factors exert their influence largely through the effect that they have on the perceived benefit-to-cost differential associated with reporting. In this study, we adopt the term whistleblowing to describe the phenomenon of interest and draw upon the above three streams of literature to describe the phenomenon of interest and draw upon the above three streams of literature to develop and test a theoretical model.

Prior work has also left open the question of which factors are more influential in shaping whistleblowing intentions. Because it would be impossible to test all of the factors that have been suggested as having a possible effect on whistleblowing within the confines of a single study, here we take a pragmatic approach, focusing only on the salient factors that we believe will exert the greatest impact on the perceived benefit-to-cost differential associated with reporting and which senior management has some control over. Our selection of factors was based on the social information processing framework of whistleblowing (Gundlach, Douglas, & Martin, 2003) which includes judgments of responsibility coupled with a careful review of the whistleblowing literature. Based on theory and a review of the literature in this area (including the prevalence of certain key factors) we identified seven salient factors that may influence whistleblowing intentions, which allowed us to construct a parsimonious model. We make no claim to have included all factors that may influence whistleblowing intentions. For practical reasons, we were limited in the number of factors that could be investigated within the context of a single study. Figure 1 presents the research model used in this study. In the remainder of this section, we introduce and describe our hypotheses.

**Personal Reporting Responsibility**

*Personal reporting responsibility* is defined as the degree to which a potential whistleblower has a formally prescribed responsibility to report. Personal reporting responsibility has been identified as one of the critical variables that encourage a decision to report negative information (Miceli, 1984; Dozier & Miceli, 1985; Miceli & Near, 1992; Smith et al., 2001; Smith & Keil, 2003; Keil et al., 2004).

Miceli and Near (1984) suggest that individuals who have a formally prescribed role to report wrongdoing are more likely to observe and report negative information than those whose role is not prescribed. Brief and Motowidlo (1986) suggested that even informal prescriptions of roles may be critical in reporting bad news. Drawing on the work of Dozier and Miceli (1985), Smith, Keil, and Deplelde (2001) introduce a model in which personal responsibility to report influences whistleblowing intention. In this and a subsequent study by Keil et al. (2004), personal responsibility was found to have a direct effect on whistleblowing intentions. However, Smith and Keil (2003) suggest that theoretically an assessment of
costs and benefits should play a mediating role between personal responsibility and whistleblowing intention. For example, those who are personally responsible for reporting may expect to be rewarded (or at least not punished) for identifying problem situations and bringing them to the attention of senior management. Thus, when reporting is role-prescribed this should serve to raise the perceived benefit-to-cost differential associated with reporting, which in turn should increase whistleblowing intention. Thus,

**H1:** Personal reporting responsibility enhances whistleblowing intention because it increases benefits relative to perceived costs.

**Trust in Supervisor**

*Trust in supervisor* is defined as the extent to which a potential whistleblower trusts the integrity of his or her immediate superior. Prior research suggests that the relationship an individual has with his/her immediate supervisor may be an important predictor of whistleblowing intention. Specifically, trust in the supervisor is believed to be an important factor (Mellinger, 1956; Read, 1962; Roberts & O’Reilly, 1974; Hosmer, 1995). Gaines (1980) observed that individuals who trust their supervisor tend to have more upward communication of problems than do other organizational members. Blackburn (1988) and Graham (1986) suggested that support and trust of supervisors would lead to more whistleblowing, but without explaining why or how. Both Miceli and Near (1992) and Blackburn (1988) pointed to the need for more empirical work to investigate the effect of supervisor/subordinate trust on the decision to report bad news. We posit that when
individuals trust their supervisor, this should serve to increase the perceived benefits of reporting relative to the perceived costs. The underlying logic is that when individuals trust their supervisor, the perceived costs associated with reporting are likely to be lower, as the individual will be less concerned about reprisal risk from his/her superior. This in turn increases the benefit-to-cost differential, increasing the likelihood of whistleblowing, Therefore,

\[ H2: \text{Trust in supervisor enhances whistleblowing intention because it increases benefits relative to perceived costs.} \]

**Ability to Hide Information**

*Ability to hide information* is defined as the likelihood that no one else will know about the project’s problems in the foreseeable future unless the potential whistleblower reports them. Agency theory suggests that the ability of an agent to hide information will influence his/her willingness to report bad news (Jensen & Meckling, 1976). Research on escalation of commitment to a failing course of action has suggested that subjects are more likely to engage in escalation behavior when they are able to hide negative information concerning a project’s status (Kanodia, Bushman, & Dickhaut, 1989) and this has been empirically demonstrated (Harrell & Harrison, 1994; Tuttle, Harrell, & Harrison, 1997). Translating this to the realm of bad news reporting, Keil et al. (2004) found that information asymmetry had a negative effect on whistleblowing intentions.

When bad news associated with a project cannot be easily concealed, agents are more likely to blow the whistle; because the bad news will come to be known anyway, one might as well report it so as not to be perceived in a negative light. On the other hand, when bad news concerning a project can be hidden for an extended period of time, individuals may believe that there is no point to take the risk of being labeled a whistleblower, especially if there is a chance that the project can be turned around before others even discover that there is a problem. Therefore, greater ability to hide information lowers the perceived benefits of whistleblowing, lowering the benefit-to-cost differential associated with whistleblowing. This in turn influences whistleblowing intentions. Thus,

\[ H3: \text{The ability to hide information lowers whistleblowing intention because it decreases benefits relative to perceived costs.} \]

**Reporting Anonymity**

*Reporting anonymity* is defined as the extent to which the potential whistleblower can report the bad news without revealing his/her identity. Smith, Keil, and Depledge (2001) identified reporting anonymity as a key factor that could affect whistleblowing intentions. Once an organizational member detects the presence of dysfunctional activities that may warrant reporting, one of the decisions that he/she has to make is whether the reporting should be done anonymously or not. Prior research suggests that whistleblowers may prefer to remain anonymous, even when formal channels exist to report relevant project information (Miceli & Near, 1992). By shielding the identity of the whistleblower, reporting anonymity decreases the risk of reprisal. Therefore, reporting anonymity lowers the costs vis-à-vis the
potential benefits of blowing the whistle, which in turn increases the likelihood of whistleblowing. Thus,

**H4:** Reporting anonymity will enhance whistleblowing intention because it increases benefits relative to perceived costs.

**Management Responsiveness**

*Management responsiveness* is defined as the extent to which the management of the company will be responsive toward solving the reported problems. Prior research suggests that individuals will be more inclined to take on the role of the whistleblower when they believe that the recipient of the news will take action in response to the information (Dozier & Miceli, 1985; Miceli & Near, 1985; Graham, 1986; Blackburn, 1988; Keenan, 1990; Miceli & Near, 1992). Prosocial actions such as whistleblowing are influenced by the extent to which an individual feels capable of bringing about change (Dozier & Miceli, 1985) and whistleblowing is more likely to be efficacious when the recipient is responsive to it. Thus, in an organizational setting, the perceived willingness of management to initiate corrective action is likely to be an important factor affecting whistleblowing intentions.

Graham (1986) and Miceli and Near (1985) suggest that management responsiveness is important for two reasons: (i) it signals that appropriate action will be taken to address the issue, and (ii) it offers reassurance to the whistleblower that s/he will be protected from retaliation. Blackburn (1988) noted that silence among employees was associated with a perception that higher management was not supportive of their concerns. Likewise, Morrison and Milliken (2000) theorize that managerial practices such as a tendency to reject or respond negatively to bad news can contribute to a climate of silence in organizations.

To date, research addressing the role of the complaint recipient in the whistleblowing process has been somewhat limited (Miceli & Near, 1992). However, it has been noted that expectancy of positive management response due to implemented policies and procedures supporting whistleblowing is positively associated with the act of whistleblowing (Keenan, 1990; Miceli & Near, 1992). Management responsiveness encourages reporting by altering the benefit-to-cost differential associated with whistleblowing in two ways. First, management responsiveness can increase the perceived benefits associated with whistleblowing by raising the prospect that the whistleblowing will be efficacious. Second, management responsiveness can lower the perceived costs associated with whistleblowing by reducing concerns about reprisal risk. Thus,

**H5:** Management responsiveness enhances whistleblowing intention because it increases benefits relative to perceived costs.

**Organizational Climate Conducive to Reporting**

*Organizational climate conduciveness* is defined as the degree to which an organization’s policies and climate encourage reporting irregularities. Prior research suggests that when the climate is made more conducive there is an increase in whistleblowing (Miceli & Near, 1992; Tan et al., 2003; Keil et al., 2004). The existence of forms, policies, and procedures pertaining to reporting has a positive
impact on individuals’ perception that an organization supports whistleblowing (Miceli & Near, 1992). How an organization has responded in the past to instances of whistleblowing contributes to individuals’ perceptions of whether the organizational climate is conducive to such behavior (Smith & Keil, 2003). Threatened retaliation or other indications that retaliation might follow whistleblowing may cause the organizational members to perceive the cost of reporting to be high (Farrell & Peterson, 1982; Dozier, 1988). This is consistent with Morrison and Milliken’s (2000) theory of organizational silence in which they suggest that the tendency to reject or respond negatively to bad news can contribute to a climate of silence. Morrison and Milliken (2000) also theorize that certain organizational structures and policies such as a lack of formal upward feedback mechanisms can also contribute to a climate of silence in organizations. Theoretically, if such formal feedback mechanisms existed and if there were a tendency to accept or respond positively to bad news, this would go a long way toward avoiding a climate of silence.

In other words, an organizational climate conducive to reporting can increase the benefit-to-cost differential by raising the prospect that the whistleblowing will be efficacious, or by lowering its perceived costs by providing formal feedback mechanisms and by reducing concerns over reprisal risk. This in turn increases willingness to blow the whistle. Therefore,

\[ H6: \text{An organizational climate conducive to reporting enhances whistleblowing intention because it increases benefits relative to perceived costs.} \]

**Senior Management Attachment to Project**

*Senior management attachment* to project is defined as the extent to which a project is the brain child of someone in senior management who has repeatedly championed the project. Prior research suggests that if organizational members perceive senior management to be overtly attached to a project, then there may be greater reluctance to report negative information about the project due to a fear of retaliation (Conlee & Teser, 1973; Johnson, Conlee, & Tesser, 1974; Tesser & Rosen, 1975). Keil and Robey (2001) provide anecdotal evidence suggesting that even audit and control professionals are unlikely to blow the whistle when they perceive that senior management is attached to the project. As one auditor in their study observed: “I sure wouldn’t want to march into this guy’s office and tell him the project that he had been championing for all these years should be put to death” (Keil & Robey, 2001, p. 88). In this research, we posit that senior management attachment to a project discourages reporting by altering the benefit-to-cost differential associated with whistleblowing. Theoretically, this can occur for two reasons. First, senior management attachment to a project could be interpreted by lower level employees as indicating that they would reject any bad news concerning the project. If this were the case, it would reduce the perceived benefits associated with whistleblowing by lowering the chances that such action would be efficacious. Second, senior management attachment to a project may raise the perceived costs associated with whistleblowing by increasing concerns over reprisal risk, as senior management might respond negatively to dissent or bad news under such circumstances. Thus,
**H7:** Senior management attachment to a project will reduce whistleblowing intention because it decreases benefits relative to perceived costs.

**METHODOLOGY**

For the purposes of this study, participants (i.e., IT project managers) were asked to imagine that they worked for a large consulting firm that builds order processing systems for clients. As described in the Appendix, each participant was informed that s/he had just discovered that the project for an existing outside customer has serious technical problems that will almost certainly result in unacceptable system performance during the client’s peak order season, thus having a negative impact on the client’s ability to process orders. Participants were informed that the problem would not become apparent until four months later during the client’s busy season and that until then nobody else would be aware of the issue.

The study was conducted using a conjoint research design, allowing us to construct hypothetical scenarios with varying levels of the factors believed to be associated with willingness to report bad news. Conjoint analysis is well suited for determining what combination of a limited number of attributes is most influential on respondent choice or decision making. This approach has been used in recent IS research (e.g., Tiwana & Bush, 2007) and allows for the concurrent evaluation of multiple factors that may influence a decision. The choice to use a conjoint design for this research was influenced by the desire to have the respondents consider a variety of factors simultaneously. Having all the factors included increases the validity of the results as respondents are not asked to choose between simplified solutions, but must weigh the various factors associated with the decision. Users then base their decisions on all the factors in the scenario (Louviere, 1988). This more realistically simulates a decision-making process when compared to looking at only one attribute at a time. In this research, the conjoint approach allowed us to compare the relative influence of the seven factors on an individual’s likelihood of reporting bad news.

The design of a conjoint study relies on developing multiple scenarios in which the levels of the factors are varied. In order to examine the effect of the seven attributes discussed earlier, we followed the standard practice in conjoint studies, which in this case meant developing eight different scenarios varying high and low levels for each attribute as shown in Table 1. Each participant was asked to respond to the eight scenarios by providing an assessment of the benefit-to-cost differential associated with reporting the bad news and the likelihood that s/he would report the bad news.

**Measures and Profile Development**

The independent variables, as discussed above, included the respondent’s personal reporting responsibility, their trust in their supervisor, their ability to hide information, their level of anonymity when reporting, management’s responsiveness to reporting, the organizational climate concerning bad news reporting, and the level of senior management attachment to the project. Each of these factors was varied between a high and low level within the eight scenarios developed. The ultimate
**Table 1:** Salient factors that are likely to influence whistleblowing.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Definition</th>
<th>Informing Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal reporting responsibility</td>
<td>Degree to which the would-be whistleblower has a formally prescribed responsibility to report.</td>
<td>Miceli, 1984; Brief &amp; Motowidlo, 1986; Dozier &amp; Miceli, 1985; Miceli &amp; Near, 1992; Smith et al., 2001; Smith &amp; Keil, 2003; Keil et al., 2004.</td>
</tr>
<tr>
<td>Trust in supervisor</td>
<td>Extent to which the would-be whistleblower trusts the integrity of his/her immediate superior.</td>
<td>Mellinger, 1956; Read, 1962; Roberts &amp; O’Reilly, 1974; Gaines, 1980; Graham, 1986; Blackburn, 1988; Hosmer, 1995.</td>
</tr>
<tr>
<td>Ability to hide information</td>
<td>Likelihood that no one else will know about the project problems for a long time unless the would-be whistleblower reports them.</td>
<td>Jensen &amp; Meckling, 1976; Kanodia, Bushman, &amp; Dickhaut, 1989; Harrell &amp; Harrison, 1994; Tuttle, Harrell, &amp; Harrison, 1997; Tan et al., 2003; Keil et al., 2004.</td>
</tr>
<tr>
<td>Reporting anonymity</td>
<td>Extent to which the would-be whistleblower can report the bad news without revealing his/her identity.</td>
<td>Miceli &amp; Near, 1992; Smith et al., 2001.</td>
</tr>
<tr>
<td>Organizational climate conduciveness</td>
<td>Degree to which the organization’s policies and climate encourage reporting unusual irregularities.</td>
<td>Farrell &amp; Peterson, 1982; Dozier, 1988; Morrison &amp; Milliken, 2000; Tan et al., 2003; Keil et al., 2004.</td>
</tr>
<tr>
<td>Senior management attachment to project</td>
<td>Extent to which this project was the brain child of someone in senior management who has repeatedly championed the project.</td>
<td>Conlee &amp; Tesser, 1973; Johnson, Conlee, &amp; Tesser, 1974; Tesser &amp; Rosen, 1975; Keil &amp; Robey, 2001.</td>
</tr>
</tbody>
</table>

The dependent variable in our study was the likelihood that a respondent would report bad news about a project. We posited that the relationship between the factors investigated in our study and an individual’s likelihood of reporting would be mediated by the perceived benefit-to-cost differential associated with reporting. Thus we included a measure designed to tap into respondents’ view of the benefit-to-cost differential involved in each scenario.

A fractional factorial design was employed using the conjoint algorithm in SPSS® 11.5 to generate the smallest number of conjoint project profiles to be presented to each respondent that most efficiently generated the maximum
Table 2: Conjoint scenarios with means and standard deviations.

<table>
<thead>
<tr>
<th>Conjoint Scenario</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal reporting responsibility</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Trust in supervisor</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Ability to hide information</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Reporting anonymity</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Management responsiveness</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Organizational climate conduciveness</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Senior management attachment to project</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Likelihood of reporting bad news</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.86</td>
<td>1.74</td>
</tr>
<tr>
<td></td>
<td>6.40</td>
<td>2.96</td>
</tr>
<tr>
<td></td>
<td>6.39</td>
<td>3.10</td>
</tr>
<tr>
<td></td>
<td>4.09</td>
<td>2.85</td>
</tr>
<tr>
<td></td>
<td>5.39</td>
<td>2.89</td>
</tr>
<tr>
<td></td>
<td>5.41</td>
<td>2.97</td>
</tr>
<tr>
<td></td>
<td>6.20</td>
<td>3.17</td>
</tr>
<tr>
<td></td>
<td>5.15</td>
<td>2.93</td>
</tr>
</tbody>
</table>

information (Kuhfeld, Tobias, & Garratt, 1994). Thus, instead of asking the respondents to evaluate 128 ($2^7$) possible combinations of seven variables with two levels, the fractional factorial design has the benefit of reducing the number of attribute combinations into a manageable set of profiles that each participant can assess (Green, Helsen, & Shandler, 1988; Louviere, 1988; Priem, 1992). Moreover, the predictive ability of a fractional design is highly comparable to a full profile design (Molin, Oppewal, & Timmermans, 2000). In this case, the lowest number of required conjoint profiles was eight, which means that each manager was presented with the same set of eight project profiles. The attribute levels within each of the scenarios are shown in Table 2.

Subject Pool and Data Collection

Our sampling frame was the Project Management Institute’s (PMI) Atlanta Chapter. PMI is the major project management professional association worldwide, with over 265,000 members from more than 170 countries. At the time of our data collection, the PMI Atlanta Chapter had 3,700 members with a majority in the IT and Telecommunication fields. Among these members, the chapter leadership estimated that a core group of 500 members were active in the local chapter and participated on a regular basis with local events sponsored by the chapter.
Volunteers were solicited for the study through an announcement in the chapter’s electronic newsletter and a subsequent e-mail sent to chapter members. The survey was hosted online and respondents were provided with a URL where they could access an informed consent form, instructions, and the conjoint profiles they were asked to respond to.

Each respondent was introduced to the seven bad news reporting factors and their definitions (shown in the Appendix) followed sequentially by the eight conjoint profiles in which the level of these factors was presented as being either high or low (see Table 2). After viewing each of the conjoint profiles, respondents were asked to express their perceived benefit-to-cost differential with respect to reporting and the likelihood that they would report the bad news. These measures used semantic differential scales, as shown in the Appendix.

RESULTS AND DISCUSSION

Respondent Demographics

A total of 132 respondents participated in the study, for an approximate response rate of 26.4%. This response rate compares favorably to other studies of IT managers. Respondents had an average of 22.8 years of work experience (SD 8.4 years) and rated themselves as having considerable experience serving as members of software development project teams (mean of 5.2 on a 7-point scale where 1 = not experienced and 7 = very experienced). The average age of the respondents was 46 (SD 11). Forty-four percent of the respondents were female and 56% were male.

To test for non-response bias, the surveys received were grouped into two “waves” based on the date returned, with later respondents serving as a surrogate for non-respondents. Using this approach, it was possible to determine statistically whether later respondents were significantly different from earlier respondents on such variables as age, work experience, risk propensity, evaluation confidence, and perceived benefit-to-cost differential. We observed no significant differences between early and late respondents on any of the key respondent attributes. Specifically, no significant differences between early and late respondents were observed for organizational tenure ($T = -1.04$, n.s.), business experience ($T = -1.05$, n.s.), age ($T = -1.65$, n.s.), software development experience ($T = -1.106$, n.s.), or software project management experience ($T = -0.718$, n.s.). Therefore, non-response bias does not appear to be a threat to the findings. Although the above tests cannot guarantee the absence of any non-response bias, they suggest that the respondents are representative of the population surveyed.

Hypothesis Testing Results

Hierarchical regression was used to analyze the data and test our hypotheses. The analysis involved three steps (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Step 1 focused on the dependent variable, whistleblowing intention, and consisted of three sub-steps. First, the control variables—years of work experience, software development project team experience, risk propensity, age, gender, and evaluation confidence—were entered (step 1.1). As shown in Table 3, the control
### Table 3: Analysis results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1.1</th>
<th></th>
<th>Step 1.2</th>
<th></th>
<th>Step 1.3</th>
<th></th>
<th>Step 2</th>
<th></th>
<th>Mediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>Beta 9.15</td>
<td>t-Value 10.06</td>
<td></td>
<td>Beta 0.15</td>
<td>t-Value 5.14</td>
<td></td>
<td>Beta 0.13</td>
<td>t-Value 4.58</td>
<td></td>
</tr>
<tr>
<td>Years of work experience</td>
<td>0.32***</td>
<td>7.88</td>
<td>0.32***</td>
<td>8.67</td>
<td>0.15***</td>
<td>5.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S/W development team experience</td>
<td>0.03</td>
<td>1.02</td>
<td>0.03</td>
<td>1.12</td>
<td>0.06**</td>
<td>2.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk propensity</td>
<td>0.14***</td>
<td>4.56</td>
<td>0.14***</td>
<td>5.02</td>
<td>0.07***</td>
<td>3.29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.12**</td>
<td>-3.08</td>
<td>-0.12***</td>
<td>-3.39</td>
<td>-0.06*</td>
<td>-2.15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.08**</td>
<td>2.64</td>
<td>0.08**</td>
<td>2.90</td>
<td>0.10***</td>
<td>4.26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation confidence</td>
<td>0.12***</td>
<td>3.68</td>
<td>0.12***</td>
<td>4.04</td>
<td>0.09***</td>
<td>4.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal reporting responsibility (H1)</td>
<td>0.10***</td>
<td>3.77</td>
<td>0.03</td>
<td>1.19</td>
<td>0.13***</td>
<td>4.58</td>
<td>4.50***</td>
<td></td>
<td>Full</td>
</tr>
<tr>
<td>Trust in supervisor (H2)</td>
<td>0.28***</td>
<td>10.20</td>
<td>0.11***</td>
<td>4.94</td>
<td>0.28***</td>
<td>9.90</td>
<td>9.13***</td>
<td></td>
<td>Partial</td>
</tr>
<tr>
<td>Ability to hide information (H3)</td>
<td>-0.01</td>
<td>-0.26</td>
<td>0.00</td>
<td>-0.06</td>
<td>-0.01</td>
<td>-0.34</td>
<td>0.34</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Reporting anonymity (H4)</td>
<td>0.09***</td>
<td>3.19</td>
<td>0.03</td>
<td>1.28</td>
<td>0.10***</td>
<td>3.53</td>
<td>3.49***</td>
<td></td>
<td>Full</td>
</tr>
<tr>
<td>Management responsiveness (H5)</td>
<td>0.19***</td>
<td>6.73</td>
<td>0.07**</td>
<td>3.04</td>
<td>0.19***</td>
<td>6.93</td>
<td>6.65***</td>
<td></td>
<td>Partial</td>
</tr>
<tr>
<td>Organizational climate</td>
<td>0.16***</td>
<td>5.86</td>
<td>0.05*</td>
<td>2.35</td>
<td>0.18***</td>
<td>6.44</td>
<td>6.21***</td>
<td></td>
<td>Partial</td>
</tr>
<tr>
<td>Conductiveness (H6)</td>
<td>0.07**</td>
<td>2.41</td>
<td>0.04*</td>
<td>1.78</td>
<td>0.05</td>
<td>1.61</td>
<td>1.61</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Senior management attachment to project (H7)</td>
<td>0.60***</td>
<td>23.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived benefit-to-cost differential</td>
<td>0.09***</td>
<td>0.25***</td>
<td>0.52***</td>
<td>0.17***</td>
<td>0.05</td>
<td>1.61</td>
<td>1.61</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.09***</td>
<td>0.25***</td>
<td>0.52***</td>
<td>0.17***</td>
<td>0.05</td>
<td>1.61</td>
<td>1.61</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>—</td>
<td>0.16***</td>
<td>0.27***</td>
<td>0.05</td>
<td>1.61</td>
<td>1.61</td>
<td></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>F ($\Delta R^2$)</td>
<td>—</td>
<td>30.6***</td>
<td>559.6***</td>
<td>31.93***</td>
<td>0.05</td>
<td>1.61</td>
<td>1.61</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Model $F$</td>
<td>17.78***</td>
<td>26.38***</td>
<td>78.48***</td>
<td>31.93***</td>
<td>0.05</td>
<td>1.61</td>
<td>1.61</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01, ***p < .001.
variables explained 9% of the variance in whistleblowing intention. Years of work experience, risk propensity, female gender, and evaluation confidence were all positively associated with whistleblowing intention, whereas age was negatively associated with whistleblowing intention. Next, the seven whistleblowing factors were entered along with the control variables (step 1.2), producing a $\Delta R^2$ of 0.16 and explaining 25% of the variance in whistleblowing intention. Finally, the mediator—perceived benefit-to-cost differential—was entered into the analysis along with the seven whistleblowing factors and the controls, producing a $\Delta R^2$ of 0.27 and explaining 52% of the variance in whistleblowing intention.

Step 2 of the analysis focused on the relationship between the seven whistleblowing predictors and the mediator (perceived benefit-to-cost differential). Together, the predictors explained 17% of the variance in perceived benefit-to-cost differential. Sobel mediation tests (Baron & Kenny, 1986) were performed to determine if the mediator (perceived benefit-to-cost differential) significantly carried the influence of the independent variables (whistleblowing factors) to explain the dependent variable (whistleblowing intention). The results of this analysis (shown in Table 3) show that six of the eight hypotheses were supported. The perceived benefit-to-cost differential associated with reporting was found to partially or fully mediate the effect of five of the seven whistleblowing factors on whistleblowing intention. Thus H1 (personal reporting responsibility), H2 (trust in supervisor), H4 (reporting anonymity), H5 (management responsiveness), and H6 (organizational climate conduciveness) were all supported, whereas H3 (ability to hide information) and H7 (senior management attachment to project) were not.

The results of the Sobel mediation tests show that two of the seven factors—personal reporting responsibility and reporting anonymity—are fully mediated by the perceived benefit-to-cost differential (i.e., they have no direct effect on whistleblowing intention). The effects of three of the seven factors—trust in supervisor, management responsiveness, and organizational climate conduciveness—are partially mediated by the perceived benefit-to-cost differential, indicating that they also have a significant direct effect on whistleblowing intention. Two of the seven factors—ability to hide information and senior management attachment to the project—were not found to be mediated by the perceived benefit-to-cost differential. Information hiding ability had neither a direct, nor an indirect, effect on whistleblowing intention. Senior management attachment did have a direct effect on whistleblowing intention, but its effect was smaller than the other predictors and in the opposite direction to what we had hypothesized. Thus, it appears that senior management attachment can actually promote whistleblowing. Further investigation is warranted in order to explore this finding. One possible explanation for such a finding is that senior management attachment may signal to would-be whistleblowers that management cares so much about a project that they would want to know if there are any signs of impending failure, so that corrective action could be taken. Figure 2 depicts the relationships that were observed and can serve as a revised model for future research.

The results clearly show the importance of perceived benefit-to-cost differential in predicting whistleblowing intention. When perceived benefit-to-cost differential is added to the regression, it results in a $\Delta R^2$ of 0.27, effectively doubling the explained variance relative to the regression model that included only the
seven whistleblowing factors and the controls. The results also reveal differential effects among the seven whistleblowing factors. Controlling for benefit-to-cost differential, trust in supervisor explained the largest amount of variance in whistleblowing intention, followed by management responsiveness, and organizational climate conduciveness.

**Limitations**

Before discussing the study’s implications, it is appropriate to recognize its limitations. First, the results are based on hypothetical scenarios, raising concerns about generalizability to actual organizational settings. However, we believe that our study design was strengthened by our use of working professionals who had significant experience working on software projects and could certainly relate to the factors that might inhibit or promote workplace whistleblowing.

A second limitation is that we cannot assess the extent to which members of PMI’s Atlanta Chapter are representative of the PMI membership at large. However, the large number of respondents and the apparent care with which they completed the exercise suggests that we can have a measure of confidence in the results. A third limitation is the relatively small number of factors that were included in the conjoint profiles. Clearly, there are factors other than the seven that were investigated here, which could have a significant effect on an individual’s whistleblowing intention. That being said, we believe that our selection of factors
included the ones most likely to be important in shaping the decision of whether or not to report bad news. Moreover, inclusion of additional factors was not practical because it would have increased the number of conjoint profiles that each subject had to evaluate and respond to.

In spite of the aforementioned limitations, we believe that our study has important implications for both research and practice. One avenue for future research would be to incorporate other factors that may influence whistleblowing intentions, such as the strategic importance of the project and other IT project-related factors.

**IMPLICATIONS AND CONCLUSIONS**

**Implications for Research**

Our overarching contribution is an integrative middle-range theory of how the salient drivers of whistleblowing influence whistleblowing intentions. The intervening explanatory mechanism linking these drivers to whistleblowing intentions has largely been treated as a theoretical black box in prior whistleblowing research. The crux of our theory is that such drivers influence whistleblowing intention because they alter the holistic benefit-to-cost differential as perceived by a potential whistleblower. Benefit-to-cost differential therefore mediates these relationships and contributes the missing “how” discussed above. The results provide strong support for our proposed mediation logic.

Although there has been some discussion of cost/benefit considerations in deciding on whether a particular “political behavior alternative” should be chosen (Miceli and Near, 1992, p. 60), prior research has not conceptualized the important mediating role that benefit-to-cost differential plays in the relationship between salient whistleblowing drivers and whistleblowing intention. Building on the idea that perceived costs (e.g., reprisal risk) can deter bad news reporting, this study develops and tests a more nuanced model of whistleblowing that demonstrates the crucial mediating role of perceived benefit-to-cost differential.

The strength of the hypothesized mediation effect is such that two of the whistleblowing factors (personal responsibility to report and reporting anonymity) exert their influence on whistleblowing intention solely through an individual’s perceived benefit-to-cost differential. The effects of three of the other factors we investigated (trust in supervisor, management responsiveness, and organizational climate conduciveness) were partially mediated by the perceived benefit-to-cost differential. This suggests that the influence of many (five out of seven) salient factors that can influence whistleblowing is significantly mediated by the perceived benefit-to-cost differential. Thus, a key research contribution of this study is the articulation of a more nuanced model of whistleblowing that unlike prior direct effects models, theoretically explains the intervening mechanisms through which whistleblowing intentions are formed.

This model suggests that when placed in whistleblowing situations, individuals take a number of factors into account and consciously or subconsciously holistically aggregate the perceived costs and benefits in deciding whether or not to report. In making this assessment, it appears that the various factors carry different weight in terms of their influence on whistleblowing intention. This represents a second key contribution of our study.
Although a number of whistleblowing factors have been discussed in the literature, this study represents the first empirical test to discern their relative impacts on whistleblowing intent by simultaneously modeling several predictors. Among the seven whistleblowing factors tested, trust in supervisor has, by far, the largest impact on whistleblowing intention. This is followed by management responsiveness and organizational climate. Responsibility to report, reporting anonymity, and senior management attachment also have significant effects, but they are comparatively weaker predictors. Ability to hide information was not found to be a significant factor.

Implications for Practice

Our results should be of practical value to managers and executives who are seeking to encourage honest and open project reporting in their organizations. The results imply that individuals go through a holistic weighing of costs and benefits in deciding whether or not to report bad news. For managers and executives, this means that the key to creating an honest and open reporting environment is to keep the benefit-to-cost differential as high as possible for the individual by maximizing the benefits of reporting and/or minimizing the costs. Based on this research, the three most potent factors—trust in supervisor, management responsiveness, and organizational climate conduciveness—all have something in common, namely that they can affect both the costs and benefits in the benefit-to-cost differential construct. We speculate that this is not simply a coincidence, but that this is precisely what makes these three factors so potent. Moreover, these three factors are very much under the control of senior management. After all, senior management can (i) recruit and provide training to supervisors, (ii) choose to be responsive to the concerns reported by whistleblowers, and (iii) create an organizational culture that is conducive to whistleblowing in which bad news does not “get you killed.”

Because the perceived benefit-to-cost differential plays an important mediating role, managers may find it useful to examine other ways in which the benefits of reporting can be increased or the costs of reporting can be decreased. On the benefit side of the differential, it may be advisable to create incentives for employees who bring forward information that could help resolve issues more quickly. Making the disclosure of even bad news tied to rewards for employees would positively influence their benefit-to-cost differential and increase whistleblowing. As long as the organization supported the employees who reported, this would serve to motivate others to report all news. Of course, taken too far, this might become problematic and lead to over reporting of problems that do not rise to the level of requiring whistleblowing. Thus, a careful balance must be struck. Management responsiveness represents another way in which the benefits of reporting can be heightened. Employees are more likely to blow the whistle if they perceive that management will take corrective action to resolve the problem or concern. Senior executives must therefore make sure that managers throughout the organization are responsive to whistleblowers. Failing to take appropriate action in response to the concerns raised by one whistleblower will send a signal to other would-be whistleblowers that management does not care to hear bad news.
In terms of reducing the costs associated with whistleblowing, the greatest point of leverage can be found in the relationship between supervisors and subordinates. Supervisors must be trained and encouraged to establish a trusting relationship with their subordinates. If an individual has trust in his/her supervisor, the perceived cost will be lower, and there will be a greater intention to report. Management responsiveness and organizational climate for reporting represent the next two most important points of leverage. Senior executives must make sure that leverage is to hire and train supervisors with the interpersonal skills needed to develop trusting relationships with their employees. Individuals who do not trust their supervisor(s) will be deterred from reporting because the perceived cost of doing so will be too high. Senior executives must also work to create a culture in which employees know that being the whistleblower is something that will not get you fired or reprimanded. Other important, but somewhat weaker levers include making sure that employees know that they have a personal responsibility to report and creating channels for reporting that allow the whistleblower to maintain his/her anonymity.

Because the ability of the employee to hide negative information did not appear to be a significant factor in terms of whistleblowing intention, this suggests that executives’ and managers’ time would be better spent establishing trusting relationships with their subordinates as opposed to implementing elaborate monitoring systems designed to reduce information asymmetry and deter employee opportunism. [Received: January 2009. Accepted: April 2010.]

REFERENCES


**APPENDIX: INSTRUCTIONS, SAMPLE PROJECT SCENARIO, AND MEASURES**

**INSTRUCTIONS:** The purpose of this study is to understand the various factors that influence bad news reporting behavior (whistleblowing). You will be presented with a series of eight project scenarios (in the form of tables). Please evaluate EACH project scenario by answering the TWO questions that follow. Use the information provided in the table and your own experience and knowledge to evaluate each project scenario.

In the scenarios that follow, assume that...
You work for a large consulting firm that builds order processing systems for clients.

You have just discovered that the project for an existing outside customer has serious technical problems.

Because of the technical problems, it is almost certain that the system performance during the client’s peak order season, four months from the delivery date, will be unacceptable. This will have a negative impact on the client’s ability to process orders.

You are the only person who is aware of the system’s problems and its possible negative consequences.

In the scenarios that follow...

- **Personal reporting responsibility** refers to the degree to which you have a formally prescribed responsibility to report project problems to your supervisor.

- **Trust in supervisor** refers to the extent to which you trust the integrity of your immediate superior.

- **Ability to hide information** refers to the likelihood that no one else knows about the project problems until the system is used, unless you report it.

- **Reporting anonymity** refers to the extent to which you can report the bad news to your supervisor without him/her knowing that you were the messenger with the bad news.

- **Management responsiveness** refers to the extent to which the management of your company will be responsive toward solving the reported problems if they are brought to their attention.

- **Organizational climate conduciveness** refers to the degree to which your organization’s policies and actions encourage reporting unusual irregularities in ongoing projects.

- **Senior management attachment to project** refers to the extent to which this project was the brain child of someone in senior management who has repeatedly championed the project.

Sample IT project scenario (1 of 8)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal reporting responsibility</td>
<td>Low</td>
</tr>
<tr>
<td>Trust in supervisor</td>
<td>Low</td>
</tr>
<tr>
<td>Ability to hide information</td>
<td>Low</td>
</tr>
<tr>
<td>Reporting anonymity</td>
<td>High</td>
</tr>
<tr>
<td>Management responsiveness</td>
<td>High</td>
</tr>
<tr>
<td>Organizational climate conduciveness</td>
<td>High</td>
</tr>
<tr>
<td>Senior management attachment to project</td>
<td>High</td>
</tr>
</tbody>
</table>

Answer the following two questions based on the information provided in the table with respect to Scenario # 1. On scale of 1 to 9 please select the number which most appropriately reflects your opinion:
The costs to me of reporting the bad news would exceed the benefits

I lean toward keeping the bad news to myself

The benefits to me of reporting the bad news would exceed the costs

I lean toward reporting the bad news to my supervisor

Mark Keil is the Board of Advisors Professor of Computer Information Systems at Georgia State University’s Robinson College of Business. His research focuses on information technology (IT) project management, including project escalation and de-escalation, risk management, project status reporting, and IT implementation issues affecting adoption and use. His work has appeared in *MIS Quarterly, Information Systems Research, Journal of Management Information Systems, Strategic Management Journal, IEEE Transactions on Engineering Management, and many other journals. He currently serves as a senior editor for the *Information Systems Journal* and associate editor for *Information Systems Research* and is on the editorial board of the *Journal of Management Information Systems*. He has previously served on the editorial boards of other journals including *Decision Sciences*. He earned his bachelor’s degree from Princeton University, his master’s degree from MIT’s Sloan School of Management, and his doctorate in management information systems from the Harvard Business School.

Amrit Tiwana is an associate professor of management information systems at the University of Georgia’s Terry College of Business. He previously served on the faculty of Emory University and Iowa State University (where he held the Union Pacific Professorship). He currently serves as an associate editor at *Information Systems Research*, where he received the journal’s outstanding associate editor award in 2009, and has also served as a special associate editor at *MIS Quarterly*. He serves on the editorial boards of *Journal of Management Information Systems and IEEE Transactions on Engineering Management*. His work has appeared in *Information Systems Research, Strategic Management Journal, ACM Transactions on Software Engineering & Methodologies, Journal of Management Information Systems, California Management Review, IEEE Transactions on Engineering Management, IEEE Software*, and others.

Robert Sainsbury is an assistant professor of business information systems in the Department of Management and Information Systems at Mississippi State University. He received a master’s in information systems management at Brigham Young University, where he participated in the PhD prep program. He earned his PhD in computer information systems at Georgia State University. His current research interests include information systems security, deception, and digital networks.
Sweta Sneha is an assistant professor at Kennesaw State University in the Department of Computer Science and Information Systems. She earned her PhD in computer information systems from Georgia State University. She has conducted research in the domains of mobile/wireless network and enhanced decision support systems; adoption, usage, and integration of emerging m-health services in the practice and delivery of health care; and organizational impact and process change associated with the integration and usage of technology. Her research has been published in premier information systems journals and conferences including Decision Support Systems, IEEE Communications, AMCIS, HICSS, and IEEE Broadmed.