Assessing the Relationship between Ethical Project Management and Information Technology Project Success

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APPROVAL PAGE

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ABSTRACT

The purpose of this quantitative study was to assess the relationship between ethical project management and information technology (IT) project success. The success of IT projects is important for organizational success, but the rate of IT projects is historically low, costing billions of dollars annually. Using four key ethical variables identified by the Project Management Institute Code of Conduct, the relationships between IT project success and the project manager values of responsibility, respect, honesty, and fairness were evaluated. A structured survey was utilized to collect key demographic information and to capture perceptions of a convenience sample of 300 project team members regarding the ethical behavior of project managers. There was a significant, positive correlation between the perception of project success and the perception of each of the four types of project manager values (responsibility ($r(300) = .47$, $p < .001$), respect ($r(300) = .45$, $p < .001$), fairness ($r(300) = .44$, $p < .001$), and honesty ($r(300) = .47$, $p < .001$)). Because the calculated significance was less than the critical threshold for each of the constructs, the four null hypotheses were rejected. Recommendations for future ethics research regarding project managers and project success include a consideration of cultural influences, a study of ethical conflicts regarding transparency about risks versus inspirational leadership, and an investigation of the internal motivations of project managers.

ACKNOWLEDGEMENTS

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CHAPTER 1: INTRODUCTION

Project management is a pervasive and powerful means of facilitating the planning and implementation of organizational objectives (Meredith & Mantel, 2009). The success of a corporation depends upon the success of key information technology (IT) projects. The success of these IT projects depends upon more than planning, delivery skills, or mastery of project management tools. The behavior of all team members, especially project leaders, can affect the success of projects (Amason et al., 2007). Project managers and their project teams are often responsible for corporate success, but project managers may engage in ethical lapses due to technical complexity, time and budget pressures or other factors such as the temporary nature of projects.

This chapter includes some background information regarding project management ethics and the importance of proper leadership for the success of projects. A problem statement outlines relevant business issues along with the need for improving project success, and then the purpose of the study is explained. A theoretical framework follows, which provides an overview of the existing research related to this topic and shows the need for the study. Research questions and their corresponding hypotheses are provided. A brief overview of the study design, variables, instruments, and analyses is followed by a description of the significance of the proposed study. Following a listing of key definitions, a summary statement of the chapter contents is given.

Background

Failures in the business community have highlighted the need for a recommitment to ethical behavior in the corporate world (Jennings, 2006). Some business leaders believe that ethical shortcuts are necessary in the corporate world, but other leaders maintain that integrity and trust are critical elements of project success (Griffin, 2004). Yukl (2006) identified the integrity of the team leader as an important factor in explaining leader effectiveness. This implies that ethical project managers should be more effective than unethical project managers (Meredith & Mantel, 2009). The leaders of the Project Management Institute (PMI) maintain that ethical project management is critical for project management success (*Code of Ethics and Professional Conduct*, 2007). Better understanding of the relationship between ethical project management and project success may help to ensure project and corporate success.

Problem Statement

While project outcomes are of vital interest to leaders of organizations, the rate of IT project success is historically low (Legris & Collerette, 2006). Cunningham (as cited in Sumner, Bock, & Giamartino, 2006) reported on a large, international survey by the Standish Group, which found that three fourths of IT projects failed. Information technology project failure is harmful to organizations. Lientz (as cited in Legris & Collerette, 2006) estimated that such failures cost billions of dollars annually. Shore (2005) indicated that a lack of suitable project leadership increased the risk of failure. Therefore, this research is important because project leadership is a critical factor for IT project success (Amason et al., 2007), and IT project success is important to

organizations (Meredith & Mantel, 2009). Considering the importance of IT project outcomes, the generally low rate of project success, and the influence that leaders tend to have on their respective teams, a positive contribution may result from a study of the relationship between ethical project management and IT project success.

Purpose

The purpose of this quantitative research was to evaluate the perceptions of a convenience sample of US-based project team members in order to understand the relationship between key ethical values of project managers and the success of IT projects in the United States. IT Project Success was the dependent (outcome) variable. The four independent variables for the study were Responsibility, Respect, Fairness, and Honesty. Survey participants were IT professionals who have served on project teams in a role other than as project managers. An *a priori* power analysis for planned regression evaluation indicated that at least 85 responses were needed to support the analysis. However, since a factor analysis was performed, at least 300 responses were needed to provide a sufficiently large sample size (Tabachnick & Fidel, 2007).

The completed study facilitates a better understanding regarding the correlation of these concepts. Given the importance of project success to the achievement of organizational objectives, the visibility of ethical (and unethical) business leaders' activities in the world, and the recent focus of PMI leaders to update their professional code of conduct, this is a timely study. The results of this research may help future IT projects succeed, encourage ethical behavior in a project context, and provide useful guidelines for those who engage and direct project managers.

Theoretical Framework

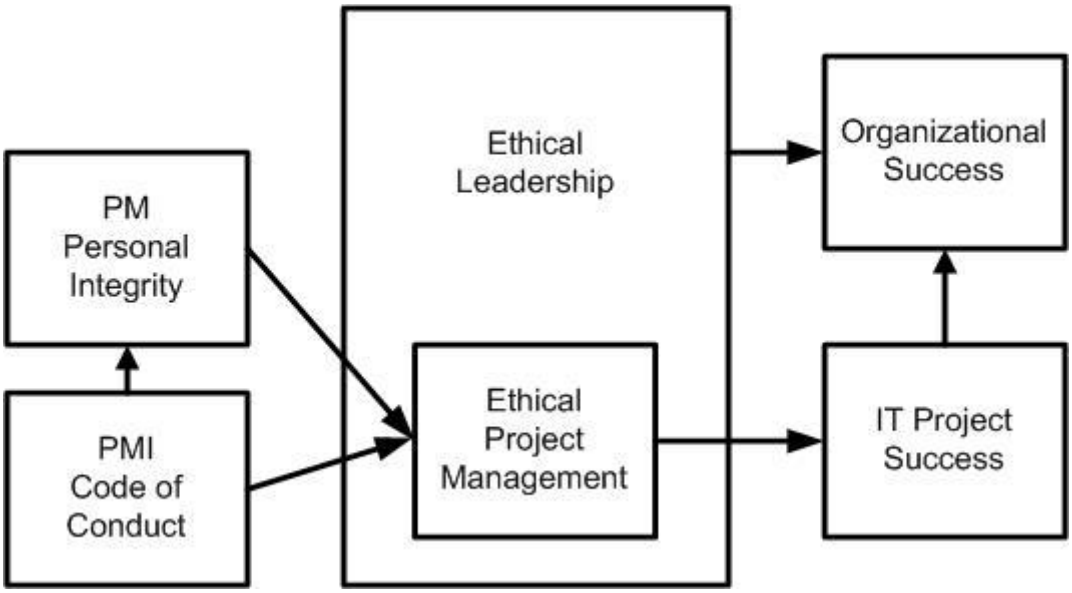

Figure 1. Theoretical framework: Project management and project success.

The theoretical framework for this study was not based upon any one model from the literature, but was constructed using the following interrelated concepts found in the literature. Professional codes of conduct have served as a guide for personal ethics (Yukl, 2006). The PMI leaders have published a requirement that project managers adhere to the PMI code of conduct (Code of Ethics and Professional Conduct, 2007). Ethical project management has been identified as a subset of ethical leadership (Meredith & Mantel, 2009). Ethical leadership has been found to be a factor associated with organizational success (Jennings, 2006). The success of IT projects has been also indentified as important for organizational success (Meredith & Mantel, 2009), since IT projects are designed to support organizational objectives. Finally, the relationship

between ethical project management and IT project success has been the focus of this study.

In addition to the listing of key concepts incorporated into this framework, some additional supporting detail from the literature was found. According to Whitten (2006), personal integrity is the key to properly addressing ethical issues in a project context. Individualistic cultures like the United States have been associated with high importance placed on the personal integrity of its leaders (Keating, Martin, Resick, & Dickson, 2007). Singh (2008) considered integrity to be one of the characteristics of genuine leadership and listed responsibility, respect, honesty, and fairness as essential elements of integrity. Jennings (2006) stated that CEOs have not been involved enough to lead the way to better ethical behavior in their respective organizations. In addition, Jennings (2006) expressed concern that universities may be focusing too much on global, environmental, technical, and diversity issues and too little on personal integrity when teaching ethics. Conscientious adherence to a defined standard of conduct of morality is an important element of ethical studies, but this element of research tends to be personal, subjective, and often excluded from consideration in research (Yukl, 2006). The leaders of PMI require certified project managers to adhere to their ethical code of conduct (*Code of Ethics and Professional Conduct*, 2007).

Although Boatright (1999) suggested that it is unrealistic to expect corporate leaders to act morally, Carroll (2001) stated that most researchers disagree. In discussing the classic moral management model, Carroll (2000) pointed out that project managers have a responsibility to act ethically. Project management leadership is one type of organizational leadership and it generates some ethical challenges due to the

cross-functional and non-recurring nature of projects (Meredith & Mantel, 2009). Yukl (2006) described transformational leadership as initially focusing on energizing and reforming organizations by appealing to the moral values and ethical concerns of followers. Yukl (2006) also asserted that a transformational leadership approach is more critical to success in settings that experience on-going change. Project managers deal constantly with change (Meredith & Mantel, 2009).

Information technology project success is often important to organizational success (Meredith & Mantel, 2009). However, the relationship of ethical project management to IT project success is asserted but is not often studied. One might expect that ethical project managers would be more effective than unethical project managers (Meredith & Mantel, 2009) would, but the literature is lacking regarding research of project manager ethical behavior and IT project success. The role of IT project success in organizational success makes it important to understand the nature of project success.

Research Questions and Hypotheses

Research questions focused on the four ethical values deemed most critical in 2007 by PMI leaders via a survey of members. The surveyed membership identified responsibility, respect, fairness, and honesty as the top four ethical values needed by project managers. Therefore, the PMI leaders selected these four values as the key focus areas for the updated PMI Code of Conduct (*Code of Ethics and Professional Conduct*, 2007). The following questions and hypotheses were defined for this study:

Q1. To what extent, if any, is perceived ethical value of responsibility as exhibited by project managers related to perceived IT project success?

$H1_0$. There is no correlation between the perception of the ethical value of responsibility exhibited by project managers and the perception of IT project success.

$H1_A$. There is a correlation between the perception of the ethical value of responsibility exhibited by project managers and the perception of IT project success.

Q2. To what extent, if any, is perceived ethical value of respect as exhibited by project managers related to perceived IT project success?

$H2_0$. There is no correlation between the perception of the ethical value of respect exhibited by project managers and the perception of IT project success.

$H2_A$. There is a correlation between the perception of the ethical value of respect exhibited by project managers and the perception of IT project success.

Q3. To what extent, if any, is perceived ethical value of fairness as exhibited by project managers related to perceived IT project success?

$H3_0$. There is no correlation between the perception of the ethical value of fairness exhibited by project managers and the perception of IT project success.

$H3_A$. There is a correlation between the perception of the ethical value of fairness exhibited by project managers and the perception of IT project success.

Q4. To what extent, if any, is perceived ethical value of honesty as exhibited by project managers related to perceived IT project success?

$H4_0$. There is no correlation between the perception of the ethical value of honesty exhibited by project managers and the perception of IT project success.

$H4_A$. There is a correlation between the perception of the ethical value of honesty exhibited by project managers and the perception of IT project success.

Nature of the Study

The study approach was non-experimental. Since the assessment of the relationship between observed ethical behavior and project success depended upon the perception of the observer, a survey approach was utilized to capture the data (Trochim, 2001). A structured survey was created (see Appendix A) to collect key demographic information and to capture the perceptions of project team members of (dependent variable) Project Success and of project manager ethical behavior. Descriptions of ethical behaviors associated with (independent variables) Responsibility, Respect, Fairness, and Honesty were based upon the PMI professional code of conduct (*Code of Ethics and Professional Conduct*, 2007). The statistical analysis of the 300 survey responses included descriptive statistics of the demographic results, a factor analysis to identify patterns in the ethical variables data, and a correlation analysis.

Significance of the Study

The matter of ethics is important in the world of business and government (Carroll & Buchholtz, 2003). Ethics are an integral part of planning and execution. Ethical considerations are critical in the arena of IT project management, although leaders often overlook the mechanisms for promoting a project environment of integrity (Meredith & Mantel, 2009). Project leadership is important to the success of projects

(Shore, 2005). Therefore, ethical behavior should be an important component of effective project leadership (*Code of Ethics and Professional Conduct*, 2007).

Leaders of PMI have identified four key ethical values and associated behaviors. The information from the PMI Code of Conduct provided a framework for creating a survey of ethical value perceptions of project team members (Code of Ethics and Professional Conduct, 2007). The results of this proposed research clarify the value of ethical behavior by project managers, facilitate project success, and provide helpful guidelines for people who seek to hire project managers.

Definitions

This section includes definitions for key terms used in the study. The following words are used in the context of project management. Some terms may be in common use but are defined because common usage includes a variety of meanings.

Fairness. Behaving fairly as a project manager is defined as acting in an impartial and objective manner and avoiding prejudice *(Code of Ethics and Professional Conduct, 2007)*. Fairness includes being transparent when making decisions, engaging in self-examination to avoid partiality and subjectivity, providing appropriate access to information, disclosing possible conflicts of interest, avoiding inappropriate favoritism when rewarding or punishing, and avoiding inappropriate discrimination (*Code of Ethics and Professional Conduct*, 2007). Each project team member has the same opportunity to show his or her worth (Buckingham & Clifton, 2001).

Honesty. Being honest as a project manager is defined as knowing the truth and behaving truthfully in both word and deed *(Code of Ethics and Professional Conduct, 2007)*. The definition also includes actively seeking the truth, avoiding being deceitful,

giving correct information in a timely manner, making only good-faith commitments, promoting an environment in which others are encouraged to be truthful, presenting information in the appropriate context, and refusing to withhold information that would cause statements to mislead others (*Code of Ethics and Professional Conduct*, 2007).

Project. A project is defined as "a temporary endeavor undertaken to create a unique product or service" (PMI Standards Committee, 2000, p. 4). The endeavor is temporary in that it has a beginning and an end, unlike on-going business processes. Characteristics of a project tend to make it unique relative to other business activities.

Project success. Whittaker (as cited in Schneider, 2007) defined project success as the completion of a project within 30% of cost, specifications, and schedule targets.

Project Management Professional. Project Manager Professional (PMP) is a project management certification administered by PMI (PMI Standards Committee, 2000). In order to earn PMP certification, PMI leaders must have experience as a project manager as well as the successful completion of a certification exam.

Respect. Respectful behavior by a project manager is defined as having proper regard for other people and all the resources overseen by the project manager (*Code of Ethics and Professional Conduct,* 2007*)*. Respect also includes understanding and honoring the customs of others, listening to other perspectives, attempting to resolve disagreements with others, behaving professionally, negotiating fairly, and avoiding abuse of authority (*Code of Ethics and Professional Conduct*, 2007).

Responsibility. Responsible behavior by a project manager is defined as accepting ownership for choices (*Code of Ethics and Professional Conduct,* 2007*)*. Responsibility also includes acting in the best interest of stakeholders, following through

with commitments, admitting and correcting mistakes, protecting confidential information, understanding and obeying the law, and reporting unethical or unlawful behavior (*Code of Ethics and Professional Conduct*, 2007).

Summary

Since IT project success is important for the success of businesses (Shore, 2005), there is value in better understanding the extent to which ethical project leadership correlates to IT project success. The key ethical values of responsibility, respect, fairness, and honesty were identified by PMI leaders as especially important (*Code of Ethics and Professional Conduct*, 2007). The results of this study were based upon a survey of the perceptions of a convenience sample of US-based IT project team members in order to assess the relationship between the key ethical values of project managers and IT project success.

This chapter included several theories and models related to moral team leadership. Research questions and hypotheses included the correlation between specific behaviors by project managers and the outcome of IT projects evaluated in this quantitative study. Consensus can be difficult to reach regarding definitions relating to leadership ethics (Yukl, 2006), but ethics-related definitions for this study were based upon ethical values and behaviors identified by the leaders at PMI (*Code of Ethics and Professional Conduct*, 2007).

CHAPTER 2: LITERATURE REVIEW

The purpose of this quantitative research was to evaluate the perceptions of a convenience sample of US-based project team members in order to understand the relationship between the key ethical values of project managers and the success of IT projects. The leaders of PMI identified (and defined) responsibility, respect, honesty, and fairness as the key ethical values needed by project managers (*Code of Ethics and Professional Conduct*, 2007). Therefore, the literature review focused on personal integrity and business ethics, and reviewed models of leadership, which had significant ethical components. These models included the moral management model, agency theory, transactional leadership, transformational leadership, charismatic leadership, servant leadership, the big five model, and the five dysfunctions model. Each of these ethical models was discussed and applied within the context of project management ethics. In addition, three project leadership studies with significant ethical components were reviewed. These studies focused on relationships in projects, project team spirit, and conflict management in projects.

The literature search strategy involved seeking out significant research relating to personal integrity, business ethics, ethical leadership, project management ethics, and project success. Journals, books, dissertations, and other scholarly works were searched. The initial search was conducted using Northcentral University's online database system. In each case, literature sources were evaluated based on whether or not they were applicable to the field of project management.

Integrity, Morality, and Business Ethics

Personal integrity is an appropriate starting place for a consideration of ethical project management or for any business ethics investigation. Yukl (2006) stated that personal integrity was tied closely to honesty and trustworthiness. Without trust, followers would not be loyal and management would not be supportive. Desai, Embse, and Ofori-Brobbey (2008) identified trust as the key requirement behind ethical behavior. Yukl noted that when trust has been lost, a leader would no longer be viewed as having expert or referent power. Individualistic cultures like the United States have been associated with high importance being placed on the personal integrity of its leaders (Keating et al., 2007). Behaviors associated closely with integrity included truthfulness, promise keeping, taking responsibility, loyalty, confidence keeping, consistency with stated values, and dependability (Yukl, 2006). For the project manager who wants to be successful, Whitten (2006) asserted that, “Integrity is not an option” (p. 24).

Conscientious adherence to a defined standard of conduct was cited as a component of morality by Yukl (2006), but this element of research was personal, subjective, and often excluded from consideration in studies. Note that the conscience was that part of person that approved or disapproved of the person’s action, depending on whether the action taken violated that person’s standard of conduct (“Conscience,” 2009). Therefore, an individual’s conscience and the standard by which actions were judged were distinct from each other. However, Yukl (2006) linked personal integrity with consistency of action compared to declared values. A person with integrity would not be hypocritical.

According to Whitten (2006), personal integrity is the key to properly addressing ethical issues in a project context. Illegal or unethical activity encountered on a project was said to present three options: ignore it and risk implying tacit approval, leave the company and face finding a new job, or report the infraction and risk a backlash. Whitten noted that none of the options was pleasant, but if project managers condoned or ignored unethical behavior, those project managers would likely be harmed eventually. Greengard (2007) stated that effective project leadership was needed to gain the respect of project stakeholders, but asserted that honesty, fairness, tolerance, and a willingness to listen were more important than having an MBA from a prestigious school. Logue (2005) agreed that there was value in having a well-crafted, corporate code of conduct, but noted that at the heart of a successful business, leaders needed to develop trust between management and employees as well as among clients, partners, and vendors. Desai, Embse, and Ofori-Brobbey (2008) maintained that organizations whose cultures are based upon trust are likely to succeed. Although Rutland (2002) believed that codes of conduct had value, he pointed to personal values being more important than codes of conduct when considering project manager behavior. Lewis (1999) assigned heavy responsibility to parents to instill integrity into their children so that the children would grow up to be productive members of society and people of character, regardless of profession.

Jennings (2006) expressed concern that many educational institutions have focused primarily on global, environmental, technical, and diversity issues and too little on personal integrity when teaching ethics. This emphasis could lead students to conclude that as long as a corporation was a positive contributor to community

development, some dishonesty could be overlooked. Business students eventually become corporate leaders. Jennings (2006) noted that *Business Ethics* ranked Fannie Mae as the 2004 most ethical company in America about the same time that a major accounting fraud began to be reported for that company. Fannie Mae was considered ethically noteworthy for helping disadvantaged people secure affordable housing while the CEO was being forced out by the corporation's board because of dishonest financial reporting (Jennings, 2006). Whether the business leader is a project manager or a CEO, a lack of personal integrity cannot be masked forever by public displays of corporate, social responsibility.

Singh (2008) identified three characteristics as critical to genuine leadership. Energy, expertise, and integrity were considered key qualities, but integrity stood out as especially important. People lacking integrity would fail no matter how energetic and knowledgeable those people were. Singh incorporated many positive activities into the realm of integrity, including telling the truth, providing complete disclosure, avoiding hypocrisy, honoring commitments, respecting others, giving credit to others, taking responsibility for mistakes, being courageous, being open to the perspective of others, being fair, considering the common good, being humble, and being unselfish. Singh concluded his discussion by considering whether integrity by corporate leaders has paid off. Leaders with integrity were said to attract clients, get the best out of employees, and generate community goodwill. These positive outcomes mapped to leaders in a project context as well. Note that Singh included the essential elements of responsibility, respect, fairness, and honesty as part of integrity.

Carroll and Buchholtz (2003) approached the morality of business ethics as a consideration of choices made with respect to acceptable standards. Standards could be shaped by sources such as family values, religious norms, community standards, corporate rules, legal regulations, and professional codes of conduct. Of course, the perceptions of the observers can impose a subjective element into any evaluation of the ethics (Carroll & Buchholtz, 2003). Yukl (2006) identified two additional criteria for evaluating the ethical nature of a decision or activity. Besides consistency with a moral standard, Yukl noted the need to consider the purpose as well as the results of the action. Common moral shortcomings included violations of societal law, denial of human rights, deception with exploitation for personal gain, and endangering human life. Western cultures have long considered theft, faking information, unjustified blaming of others, unjustified hostility, promotion of distrust, selling corporate secrets, accepting and giving bribes, and behaving recklessly as ethically inappropriate behavior in a business setting (Yukl, 2006). Corporate codes of conduct have a longer history and greater credibility in the United States than in Europe (Keating et al., 2007). Foote (2003) emphasized the importance of ethical behavior in the corporate setting, especially during economically uncertain times. In addition, Frank (2004) pointed out the benefits realized by companies who nurtured a positive, ethical reputation, noting that moral decisions affected career choices and corporate, strategic direction. Anecdotal evidence indicated that a company perceived as ethical should see an improvement in recruitment (Frank, 2004). Economic benefits have been reported by leaders of global companies who adopt and promote corporate, environmental responsibility (Cetindamar, 2007).

Organizations have promoted ethical behavior in a variety of ways, often by policies or standards. A professional code of conduct constitutes one type of ethics standard. The Project Management Institute (PMI), the largest, professional project management certification organization in the world, has developed a Code of Conduct (*Code of Ethics and Professional Conduct*, 2007) for project managers. In order to become a PMI member or to attain certification, project managers must agree to act professionally and with integrity, work responsibly, treat others fairly, and behave honestly. Specific definitions of expected behavior were included for each of the four specific value characteristics (responsibility, respect, fairness, and honesty). PMI certified project managers are required to encourage other project managers to behave in the same, ethical manner. Obligations regarding professional behavior, relationships with customers, employers, and the public were stated in the code (*Code of Ethics and Professional Conduct*, 2007).

The leaders of the Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) described responsibility as taking ownership of decisions, tasks, and the resulting consequences. Flannes and Levin (2001) outlined four distinct roles that need to be filled by modern project managers, along with key behaviors for each of the roles. The described roles of managers included taking responsibility for complying with the project constraints. The ethical project manager takes responsibility for complying with project deliverables rather than making excuses or blaming others for failure to deliver. Harvard Business Review (2004) identified mutual accountability as a key indicator of whether a working group is actually functioning as a team.

The leaders of the Project Management Institute (*Code of Ethics and Professional Conduct,* 2007) described respect as showing proper regard for people and for other resources utilized in the project. Flannes and Levin (2001) discussed the mentoring that project managers are to provide to project team members, including the need to show sincere interest in the development and productivity of team members. Genuine interest in team members (as well as in other stakeholders) is essential to demonstrating the respect necessary for compliance with PMI standards.

The leaders of the Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) described fairness as acting in an objective and impartial manner. Meredith and Mantel (2003) maintained that fairness has contributed to nearly every aspect of successful project negotiation and delivery. Parties sharing fairness treated each other impartially and objectively, building relationships conducive to successful project collaborating.

The leaders of the Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) described honesty as acting truthfully and with integrity in what people say or do. Meredith and Mantel (2009) considered honesty perhaps the most important team member attribute on project. Being dishonest was the only kind of behavior that a project manager could not tolerate. This emphasis on the importance of honesty was due primarily to the unique nature of projects. Hayes (2003) addressed the importance of being truthful regarding problems uncovered while managing software projects. Practical advice was given to avoid difficulties. Hayes recommended identifying risk early, sounding prompt warnings regarding potential schedule delays, and offering alternatives to the client. Meredith and Mantel (2009) cited a specific

project-scoping scenario where ethical principles were challenged, but where honesty was needed. In this scenario, a client had requested a quote for highly technical work about which that client had little expertise. The consultant might have been tempted to either inflate the estimate for the project or purposely underestimate the cost with the intention to increase the price later. The ethical consultant needed to be honest with the client, even if future work agreements between them were not expected (Meredith & Mantel, 2009).

Signs of Ethical Collapse

Jennings (2006) determined that organizations heading toward widespread ethical collapse tended to exhibit identifiable signs. These ethical failures were not deterred by strict regulations such as those imposed by Sarbanes-Oxley or by corporate codes of ethics. Employees considered leadership example along with corporate culture to be most influential (Jennings, 2006). Companies that suffered ethical lapses sometimes had leaders who viewed moral choices as shades of gray rather than as black and white. Leaders in those companies did not encourage employees to speak up about ethical concerns, but instead discouraged the development of moral courage in employees by using fear and retaliation (Jennings, 2006).

Jennings (2006) identified obsession with sales goals as a contributing factor to ethical lapses. One common problem was the internal reporting of inflated sales forecast numbers, which was often seen as acceptable. Intense pressure to achieve aggressive performance levels, satisfy budget constraints, and hit scheduled launch dates contributed to lapses in ethical judgment and ultimately to the 2003 crash of the shuttle Columbia (Jennings, 2006). Engineers who agreed with leadership demands to

press forward with the schedule were rewarded, but those who identified safety concerns, which put the schedule at risk, were punished by being hindered in their advancement within NASA. Such a mindset by the organization's leadership led to disaster. Fear resulted in employees remaining silent, leading eventually to ethical breakdown and then failure. Ethical behavior is important for the success of business, not only because people want the satisfaction of behaving ethically (Jennings, 2006). Projects could take a similar path, with pressure to meet the project goals prompting ethical lapses, which ultimately cause the project to fail. Jennings recommended that each person and each organizational group encourage frank feedback regarding issues and concerns. Jennings consulted with several project managers who had been publically blocked by their respective CEOs from leading important projects because those project managers were considered too honest. These same CEOs had recently admonished honesty and ethical behavior when discussing proper conduct, but the way the CEOs treated the project managers spoke louder than the corporate policy statements (Jennings, 2006). Desai, Embse, and Ofori-Brobbey (2008) considered corporate ethics policies alone to be impractical because of the difficulties in observing and ensuring compliance.

Jennings (2006) uncovered similarities in culture when studying organizations, which had suffered ethical collapse. The following seven signs Jennings identified not only provide insight into what went wrong, but also provide an opportunity to avoid the fatal, ethical meltdown, which can occur in corporations or on project teams:

1. The pressure to satisfy goals has led to unethical behavior. Sales teams have identified sales goals as critical and projects need to be on time, in scope,

and within budget. However, wording those goals in context of ethical values, removing those who are unethical, communicating the importance of integrity, and encouraging people to raise the flag of concern as needed could help to mitigate the potential for abuse prompted by pressure to achieve challenging goal (Jennings, 2006).

2. Fear has prompted silence regarding unethical behavior. Intimidation of employees and middle managers by superiors at work or fear of leaders on project teams has kept people from speaking up about poor quality, fraud, or other issues. However, employees and project team members could be encouraged to speak up, rewarded when that happens, and reminded that leaders trust employees to help identify and avoid ethical problems (Jennings, 2006).
3. Iconic leaders and impressionable followers have led to ethical problems. Corporate leaders who are larger-than-life have felt empowered to take liberties with ethics. If followers reporting to iconic leaders have been intimidated, then impressionable followers may have been hesitant to speak up about ethical concerns. Project managers or iconic technical leads on projects may have displayed inappropriate behavior without consequences since project team members felt powerless to object. However, company board members could refuse to hire iconic leaders, encourage underlings to speak up, remind people that personal integrity is important, and train employees (Jennings, 2006). Project teams could be established and managed with the same guidelines in mind.

4. Ineffective governing boards have led to ethical problems. Corporations with weak boards have been unable to provide adequate oversight to management. Project teams with ineffective or inattentive project oversight boards may also engage in unethical behavior. However, weak boards could be replaced, rewards evaluated, and insight from management and other workers could be solicited (Jennings, 2006).
5. Conflicts of interest have led to ethics violations. Leaders of some companies headed for ethical meltdowns have been oblivious to conflicts of interest, hired family members, promoted self-interest, and made back-room deals. Project teams have not been immune to these. However, organizations could recognize the problem, establish conflict-of-interest policies, and enforce them. Organizations successfully addressing conflicts of interest have done so by either removing them or properly disclosing them (Jennings, 2006).
6. Irrational focus on innovation has prompted companies to behave unethically. Early success coupled with blindness to reality has caused people in these companies to innovate into sustained and unrealistic success. Project teams have also blindly relied on technical innovation to rescue an otherwise failing project. However, organizations could be reminded there are limits on innovation, economic and business cycles are real, honesty is important, and groupthink can be powerfully deceptive (Jennings, 2006).
7. Belief that commendable behavior in some arenas allows for ethical lapses in other arenas has caused organizations to try to justify wrongdoing. Some corporate leaders who have promoted themselves as positive, corporate

> citizens have seen that image as a cover for unethical practices. Project teams addressing a positive, community need could also be tempted to think that personal integrity is less critical. However, attitudes on social responsibility could be clarified to ensure that everyone understands that it does not eliminate the need for personal responsibility (Jennings, 2006).

Jennings (2006) considered the seven signs noted above as danger signals reflecting the true nature of an organization's culture. Jennings observed that CEOs have often not been involved enough to lead the way to better ethical behavior in their respective organizations. An extensive list of virtue standards provided for consideration included fairness, honesty, and responsibility. These were three of the four ethical values identified by the Project Management Institute as critical for project managers. Jennings admonished corporate leaders to avoid trying to justify results, but rather to place a priority on honoring virtue standards. Jennings' standards list included ability, acceptance, amiability, articulateness, attentiveness, autonomy, caring, charisma, compassion, cool headedness, courage, determination, fairness, generosity, graciousness, gratitude, heroism, honesty, humility, humor, independence, integrity, justice, loyalty, pride, prudence, responsibility, saintliness, capable of shame, spirit, toughness, trust, trustworthiness, wittiness, and zeal (Jennings, 2006). Many of these could equally apply to project teams. For example, the editors of Harvard Business Review (2004) observed that team member accountability was based on promises that team members made themselves and others. Undergirding those promises were commitment and trust. As team members worked toward common goals and purposes, their mutual commitment and trust increased (Harvard Business Review, 2004). In fact,

group effectiveness has been shown to depend fundamentally upon trust among the group members (Harvard Business Review, 2004). Desai, Embse, and Ofori-Brobbey (2008) considered trust to be the key requirement needed to drive ethical behavior. The PMI code of conduct placed responsibility upon project leaders to engender trust by practicing responsibility, respect, fairness, and honesty during the planning and delivery of projects (*Code of Ethics and Professional Conduct*, 2007).

Jennings (2006) stressed the importance of indentifying signs of ethical collapse. Statements, actions, and accomplishments by corporate leaders have sometimes been misleading. For example, Enron managers advertized (as cited in Jennings, 2006) their 64-page, award winning corporate code of conduct.

Evaluating Ethical Leadership

White and Lean (2008) determined that team members were less likely to behave unethically when those team members viewed their respective team leaders as having integrity. Yukl (2006) concluded that individual integrity is a critical component of ethical leadership. Without integrity, a leader cannot be effective. However, reaching consensus on the definition of morally appropriateness can be problematic. People of different cultures may have different concepts regarding integrity. Furthermore, if leaders' motives must be pure in addition to their actions, then ferreting out hypocrisy can also be a challenge. When the objectives of stakeholders conflict, then ethical dilemmas can arise when influence is exerted to persuade others to adopt a particular strategy or alter their basic beliefs, especially if certain choices would help some to the detriment of others (Yukl, 2006). Clawson's foundational assertion (as cited in Morrison, 2008) was that leaders could and should influence followers by respectful and dignified

behavior. Although White and Lean believed the example of organizational leaders was most important, he recognized that codes of conduct have value, too.

Although there is no conclusive list of ethical standards for corporate leaders, Yukl (2006) provided a useful compilation:

a) Exercise of leadership influence is ethical if leaders service followers' needs, but unethical if leaders service primarily the private needs of the leader.
b) Addressing different stakeholder needs is ethical if the leader tries to accommodate them fairly, but unethical if the leader shows preference to the stakeholders promising personal gain for the leader.
c) Promoting a vision for the team is ethical if that leader incorporates input from the followers' perspectives, but unethical if the leader promotes that vision as the key to success.
d) Leadership integrity is ethical if it aligns with stated values, but unethical if its purpose is to promote the leader's personal agenda.
e) Taking risks is ethical if the leader will take personal risks in making tough choices, but unethical if the leader abstains from important action that might include individual risk to that leader.
f) Communicating pertinent information is ethical if the information is accurate and timely, but unethical if distorted or deceptive regarding issues or status.
g) Responding to criticism by others is ethical if the leader invites negative feedback to seek improvement, but unethical if the leader stifles critical feedback from followers.

h) Encouraging the development of followers is ethical if the leader serves as a coach, mentor, and trainer, but unethical if it is insincere or designed to keep the followers from working independently to advance their careers.

The Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) leaders identified the following critical, ethical behaviors for project managers to demonstrate responsibility:

a) The project manager should accept projects appropriate for the teams' qualifications, skills, and experience.
b) The project manager should complete the agreed-to tasks.
c) The project manager should admit mistakes promptly and take corrective action.
d) The project manager should protect intellectual property and confidential data.
e) The project manager should uphold policy and rule of law.
f) The project manager should report ethics or legal violations promptly.

The Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) also identified the following as critical, ethical behaviors for project managers to demonstrate respect:

a) The project manager should stay informed about the customs and standards of others and avoid disrespectful behavior.
b) The project manager should listen to the opinions of others and make an effort to understand their perspectives.
c) The project manager should approach people directly to resolve conflicts.

d) The project manager should negotiate in good faith.

e) The project manager should refuse to act abusively toward others.

f) The project manager should respect the property rights of others.

The Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) leaders identified the following as critical, ethical behaviors for project managers to demonstrate fairness:

a) The project manager should be open and transparent regarding the process of making decisions.

b) The project manager should make information available to all who have authority to receive that information.

c) The project manager should be proactive in fully revealing possible conflicts of interest to affected parties.

d) The project manager should not impose rewards or punishments for personal reasons, such as showing favorites, hiring relatives, or making bribes.

e) The project manager should avoid discrimination.

f) The project manager should follow applicable policies and regulations without bias.

The Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) leaders identified the following as critical, ethical behaviors for project managers to demonstrate honesty:

a) The project manager should make a sincere effort to learn the truth.

b) The project manager should be truthful in speech and in action and should encourage others to do the same.

c) The project manager should give correct information in a prompt manner.
d) The project manager should not commit to tasks without the intention to follow through.
e) The project manager should not be deceptive, for example by lying, speaking half-truths, talking out of context, or holding back pertinent information.
f) The project manager should never be dishonest, especially for personal benefit or in order to harm another.

Yukl (2006) summarized numerous studies of leadership failure causes to identify categories of failure, most of which contained one or more ethical components. The following is a partial listing of these causes:

a) Emotional stability issues included anger and inconsistent actions.
b) Defensive attitudes were demonstrated by attempts to hide errors or blame others.
c) Integrity lapses sometimes included trampling people for self-advancement, breaking promises, and betraying trust.
d) Poor interpersonal skills included selfishness, lack of consideration, and manipulative behavior.
e) Technical leaders exhibited overconfidence and arrogance.

Moral Management Model

Using the moral management model, Carroll (2001) highlighted three general management approaches: *immoral*, *moral*, and *amoral*. Immoral managers actively stand against ethical behavior, moral managers take a proactively ethical stance, and amoral managers attempt to disconnect ethics from the corporate world (Carroll, 2000).

In the realm of project management, the *immoral* project manager selfishly behaves unethically in an attempt to increase margins. For example, the quality of deliverables might be overstated (Meredith & Mantel, 2009). This approach by a manager results in reduced credibility and a loss of future business. *Moral* project managers strive to satisfy both the letter and the spirit of project contracts (Carroll, 2000). The ethical component of project decisions is considered. Respect for others, responsibility for actions, fairness in dealing with others, and honesty are evident not only within the team, but with all project stakeholders. *Amoral* project managers prefer to avoid considering the ethical implications of project-related decisions (Carroll, 2000). Unintentional amoral leaders are common, but this group may also be the most likely to be convinced to change into moral managers (Carroll, 2000).

Regarding the moral management model, Carroll (2000) stated that the project manager has a responsibility to act ethically. Clawson's leadership responsibilities (as cited in Morrison, 2008) included being truthful, caring, and an active listener. The Project Management Institute (PMI) leaders encourage moral management on the part of project managers by providing a Code of Conduct (*Code of Ethics and Professional Conduct,* 2007). Obligations relating to professional behavior, relationships with customers, employers, and the public were stated in the code. The leaders of PMI also provided a process for addressing unethical behavior by members, citing ethics reviews, appeal procedures, and consequences for violating this professional standard (*Code of Ethics and Professional Conduct,* 2007). Many managers have been provided a corporate code of conduct to drive specific, ethical behavior in the corporate setting (Carroll & Buchholtz, 2003).

Imposing ethical standards by a professional group like PMI or by a corporation may be helpful in promoting moral management, but Jacobs (1999) noted that a code of conduct could be a challenge to enforce. Jacobs provided several reasons for this. Requiring employees to sign an ethics clause can prompt resentment. In addition, signing under pressure may be disallowed in court. Defining and enforcing consistent ethics policies internationally can be problematic due to differing local regulations. Finally, strict enforcement of behavioral standards can be viewed as intrusive and hence imply a distrust of employees.

Meredith and Mantel (2009) suggested several ethical dilemmas encountered on projects. For example, when code development pricing was being negotiated and the client did not have enough technical knowledge to understand the difficulty level of the proposal, the consultant overstated the level of effort to increase profit or understated it to gain contractual approval (then later made up difference with change requests). Project scope creep and associated change requests also provided opportunities for immoral choices by project managers. Other examples included the use of less qualified resources than those promised, the withholding of information from the customer about product defects, misrepresentation of facts on project status reports, inflation of time or costs, and inferior quality.

Ivory (2005) reported that complex IT projects have often failed in spite of strict controls because project methodologies assumed that project delivery followed a direct, structured approach. Instead, complexity along with the unique nature of projects resulted in unsatisfactory performance by project teams. Perrow (as cited in Ivory, 2005) described a notable example of poor results by a NASA project team. Because the work

for NASA was a one-time activity (instead of an on-going operation), the project was considered less important by the providers than were other tasks so that project did not get sufficient management attention. Project management behaviors that resulted in a degraded quality of contracted services were ultimately *ethical* behaviors.

Huberts, Kaptein, and Lasthuizen (2007) listed positive leadership examples, strict application of rules, and transparency of leaders regarding matters of integrity to be especially important aspect of moral management. In fact, the more integrity demonstrated by the leader, the less likely that subordinates will violate their integrity (White & Lean, 2008). Managers play a critical role in setting the tone for morality in an organization.

While moral behavior by managers is important, there are other considerations. Meredith and Mantel (2003) noted that honesty by *all* project team members is critical since projects are especially susceptible to dishonesty. Honesty by all project team members is important because daily, operational business activities are usually well understood and consistent, but one-time project tasks and results may not be. Special projects have had much more leeway concerning abnormal events. The project manager must rely on the honesty of team members when capturing issues and status. Project managers need to allow problems to be reported within the internal delivery team so that issues can be resolved. A critical atmosphere based on blame can seriously affect a project. A delivery team can address mistakes, but dishonesty within the project team cannot be allowed (Meredith & Mantel, 2009).

Trust was also determined to be a critical part of the foundation supporting the emotional intelligence of teams (Harvard Business Review, 2004). Goleman (as cited in

Harvard Business Review, 2004) described emotional intelligence of an individual as an awareness of one's emotions and the ability to manage them, both within the individual and in relation to others. However, emotional intelligence within teams was found to be more complicated. Team effectiveness depended on emotional intelligence of the group and was conditioned upon not only the effectiveness of the group and the identity of the group, but also the level of trust among group members. These three conditions were needed in order to encourage team members to participate, cooperate, and collaborate in ways that resulted in improved decisions, higher creativity, and greater productivity (Harvard Business Review, 2004). Trust is an important component of the emotional intelligence of groups and team effectiveness.

The project manager needs to articulate and demonstrate integrity to the team. Carroll and Buchholtz (2003) reported on a survey, which showed that 71% of managers agree that integrity is an important quality for success. Whitten (2006) specifically addressed the project manager, "Your integrity represents a window into your character. As a leader, you must use it to build your success and the success of those you lead" (p. 24). Carroll and Buchholtz (2003) admonished project managers to demonstrate principled leadership to the project team. Inspiration in a cause or a project outcome has been passed from a project leader to the rest of the team (Harvard Business Review, 2004). This passing of inspiration happened because of the leader's credibility and charismatic influence over the team members.

Not everyone agreed that moral leadership should be emphasized in corporate settings. Boatright (1999) recognized the widespread acceptance of the moral management model, at least in theory. However, Boatright attempted to reject the

model without rejecting morality. Boatright suggested that expecting corporate leaders to act morally is unrealistic, only focuses on management when most people are not managers, and does not represent how people act in the marketplace. Instead, Boatright recommended a Moral Market Model, encouraging a bottom-up view of market role responsibility rather than a top-down view of ethical behavior by leadership based on relationships. Boatright relied on well defined, economic, contractual relationships. Integrity and trust were not considered especially important in corporate relationships. Most researchers appear to disagree, however (Carroll, 2001). In evaluating technical organizations, Maccoby (2007) found that leadership trustworthiness was considered a highly desirable characteristic. Furthermore, economic self-interest can be pursued while promoting moral behavior at all levels. Frank (as cited in Matthews, 2004) determined that looking out for others could ultimately serve one's self interest.

Mangers are shortsighted to ignore the moral component or to view it as an unnecessary burden. Carroll and Buchholtz (2003) agreed that it is impossible for management to avoid ethical considerations and consequences. In the context of project management, the Project Management Institute directors have insisted on ethical leadership as a condition of continued certification and have viewed it as vital to project management (*Code of Ethics and Professional Conduct*, 2007).

Agency Theory

Conard, Knauss, and Siegel (as cited in Schneider, 2007) noted that agency relationships exist when one person is authorized to act for someone else and that agency relationships are common. Carroll and Buchholtz (2003) described how agency

issues have developed in corporate environments. Through the years, widespread public ownership via shares with boards of directors overseeing company management has become common. Boards of directors often evolved under the influence of the management teams those directors were supposed to oversee. Agency problems have occurred because management control of the process for seating the directors coupled with management's self-interest have not always corresponded with shareholder (Carroll & Buchholtz, 2003).

Agency relationships exist in a project context as well and have often resulted in conflicts prompted by self-interest. Schneider (2007) used an agency theory perspective when evaluating the perceptions of programmers and front-line managers in the context of project success. In applying agency theory to software development projects, Schneider focused on goal conflicts, information disconnects among developers, and their management and project managers, any of which could lead to differing perceptions. Because perceptions are subjective and therefore not subject to direct experimentation, Schneider leveraged a survey approach using structured questions in his methodology. Schneider captured differences in perceptions and reported project outcomes, which were used to seek potential causal connections in his Web-based survey. Useful definitions of project success from Whittaker (as cited in Schneider, 2007) and project failure by Jones (as cited in Schneider, 2007) were utilized.

Transactional Leadership and Path-Goal Theory

Yukl (2006) described the interaction of transactional leader and follower as primarily task oriented, with the follower perhaps being compliant, but not necessarily motivated to be enthusiastic or especially committed to the assigned outcomes.

Research by Bass (as cited in Yukl, 2006) identified three types of behaviors associated with transactional leadership. These behaviors originally focused on rewards based on the pre-defined completion of tasks and used punishment as a response to unacceptable performance. Hence, transactional leadership utilized both a carrot and a stick to drive the completion of tasks. A more active approach was also included, which called for aggressively seeking out errors and leveraging guidelines to prevent errors.

Project managers encountered some special challenges when limited to a transactional leadership mode. Meredith and Mantel (2003) noted difficulties encountered by project managers regarding motivation of the project team members. Since most project team members have been loaned from various technical areas, motivating them can be a challenge. The project manager typically does not control the salary or bonus of a loaned team member, especially for projects that are temporary and high risk (Meredith & Mantel, 2009).

Allen (2005) focused on transactional leadership in the context of the path-goal theory. Allen studied the way that leadership affects the motivation of virtual teams. After reviewing many leadership models, Allen decided that transactional leadership was a suitable model for investigating the motivational impact of leadership characteristics, actions, and decision styles. Gibson (as cited in Allen, 2005) described several aspects of the path-goal theory that were used to categorize leadership behavior as part of the transactional leadership framework for the study.

Leadership traits have been the subject of numerous studies and Hellriegel (as cited in Allen, 2005) pointed out the importance of ethical traits such as honesty and trustworthiness in order to have effective leadership of teams. Yukl (as cited in Allen,

2005) identified at least two behaviors in the path-goal theory model, which were focused on relationships rather than on tasks; these behaviors were the supportive type and the participative type. Yukl (as cited in Allen, 2005) indicated that ethical components such as sincerity and honesty were especially important for relationship-oriented behaviors.

Although transformational leadership is more often associated with advancing ethical concerns, Yukl (2006) noted that transactional leadership is not devoid of values. However, when values are under consideration by people holding this leadership style, those people are more focused on tasks involving interaction. Specifically, exchange-related activities among project team members and with other project stakeholders require honest, fair, and responsible behavior by the project manager and other stakeholders (Yukl, 2006).

Transformational Leadership

Yukl (2006) identified transformational leadership as initially focused on energizing and reforming organizations by appealing to the moral values and ethical concerns of followers. Burns (as cited in Yukl, 2006) was a prominent proponent of transformational leadership in this form, but the popular approach has taken a less altruistic and more pragmatic direction in recent years. Nevertheless, the potential for positively influencing followers is inherent in the transformational approach. Regarding project leaders, the leaders of the Project Management Institute require project managers to strive proactively to influence team members to follow specified, ethical guidelines (*Code of Ethics and Professional Conduct*, 2007). This is clearly a transformational leadership objective.

Bass (as cited in Yukl, 2006) reported in 1996 and 1997 that transformational leadership can be quite effective regardless of circumstance or cultural setting. Behaviors initially identified with transformational leadership included idealized influence to enlist an emotional connection with the follower, individualized consideration to give mentoring or coaching, and intellectual stimulation to provide followers an improved view of issues. Inspirational motivation was later also identified as part of transformational leadership to provide a visionary perspective and to model suitable behaviors for followers. Yukl (2006) asserted that the transformational leadership approach is more critical to success in settings that experience on-going change and it is more common in environments where leaders are encouraged to demonstrate flexibility and innovation. Judge and Piccolo (2004) conducted a formal meta-analysis to investigate the relative validity of transformational (as well as transactional and laissez-faire) leadership styles. Transformational leadership had the highest overall validity in this study, but contingent reward leadership had somewhat higher validity in a business environment. Not surprisingly, a disconnected approach displayed negative correlations with all leadership measures utilized (Judge & Piccolo, 2004). Krishnan (2002) distinguished transformational leadership from transactional leadership by noting that transformational leaders seek to change existing values and motivations. However, Krishnan found that transformational leaders tended to change followers to be more in line with leader values, but not necessarily better aligned with their organizational values.

Dominick, Aronson, and Lechler (as cited in Amason et al., 2007) studied transformational leadership in a project team context. Dominick, Aronson, and Lechler

preferred transformational leadership to transactional leadership because transformational leaders influenced others and inspired change, thus encouraging followers to trust, admire, and respect their leaders. By contrast, leaders using transactional leadership were focused on the tasks of project management, such as planning, communicating, and making decisions. Dominick, Aronson, and Lechler (Amason et al., 2007) indicated that leaders using transformational leadership techniques influenced project success and that encouraging leadership skills training in leaders could positively benefit project teams. Dominick, Aronson, and Lechler (Amason et al., 2007) also concluded that improving transformational leadership skills can overcome a lack of formal authority often experienced by project managers leading project teams.

Charismatic Leadership

Charismatic leadership theories have taken several forms and many authors have considered charismatic leadership and transformational leadership as interchangeable concepts (Yukl, 2006). Groves (2005) studied a charismatic leadership model in the context of organizational change acceptance and concluded that charismatic leaders have transformed their followers. Yukl identified some distinctive characteristics of charismatic leadership, however.

Several prominent theories of charismatic leadership have developed, at least two of which featured a value internalization component (Yukl, 2006). Conger and Kanugo (as cited in Yukl, 2006) in 1987 saw charisma as being attributed to leaders, unlike Shamir, House, and Arthur in 1993 (as cited in Yukl, 2006) who’s self-concept theory was more focused on the perspectives and motivations of the followers.

Nevertheless, both of these charismatic leadership theories included value internalization, which was achieved when followers demonstrated by their accomplishments both internal values and social awareness (Yukl, 2006). While charismatic leaders occasionally convinced followers to accept new values, charismatic leaders usually connected with the common values of followers to inspire them to accomplish task objectives (Yukl, 2006).

Whether a transformational leader or a charismatic one has transformed followers, the result is the same. Project managers have been charged by the Project Management Institute to encourage ethical behavior in project team members by promoting and demonstrating responsibility, respect, honesty, and fairness (*Code of Ethics and Professional Conduct*, 2007).

Servant Leadership

Greenleaf (as cited in Yukl, 2006) published a book in 1977 promoting servant leadership. Greenleaf called for the leader to listen to and understand the needs of the followers. Then the leader was asked to nurture, defend, and empower those followers. Instead of the underlings serving the needs of the leader, the leader was charged with serving the followers. Rather than wielding power over the followers, the followers were to be empowered. Transparency was necessary and trust was important for this leadership approach to be successful. The goal was to inspire the followers also to become servant leaders, so that moral leadership could be multiplied in society for the improvement of humanity. In fact, Greenleaf (as cited in Yukl, 2006) asked servant leaders to stand up for social responsibility even at the expense of corporate responsibility. Respect for the outcasts of society was highlighted. Social inequities

were to be actively addressed (Yukl, 2006). The development of ethical leaders has helped attract top talent and while benefiting society (Maccoby, 2007).

Carroll and Buchholtz (2003) reported that Greenleaf's servant leadership approach had derived its inspiration from the life of Jesus and was formulated by Hermann Hesse's novel about a servant who traveled with a group of men. That servant turned out to be the true leader of the band of men, effective because of his servant's heart. Promoting servant leadership, Larry Spears (as cited in Carroll & Buchholtz, 2003) in 1995 consolidated Greenleaf's principles into a list of ten guidelines for servant leaders. These guidelines included listening, empathy, healing, persuasion, awareness, foresight, conceptualization, commitment to the growth of people, stewardship, and building community. Some principles could use additional study. For example, persuading followers to behave morally has merit, but in a public relations context, persuasion could be viewed as negative and specific ethical guidelines have been lacking (Fawkes, 2007).

To a large extent, the moral values espoused by the Project Management Institute as critical to ethical behavior of project managers and articulated in that organization's professional code of conduct (*Code of Ethics and Professional Conduct*, 2007) were consistent with servant leadership. Responsibility, respect, fairness, and honesty by the project manager protected the interests of the project stakeholders. However, PMI leaders stopped short of requiring project managers to put society ahead of the companies represented by those project managers.

Big Five Model

Yukl (2006) explained the appeal to many researchers of grouping numerous personality traits into a more manageable number of categories, such as was done with the grouping known as the big five (or five-factor) model. Conscientiousness is one of these five general traits associated with leader effectiveness. Conscientiousness includes specific, ethics-related traits such as dependability, personal integrity (Yukl, 2006), and trustworthiness.

Using the big five model, Ionata (2006) investigated the career success of project managers. Ionata provided useful insight into what makes project leaders successful. Ionata also pointed out that leadership theories tend to focus on traits, learned behaviors, or styles adapted to situations. Kierstead (as cited in Ionata, 2006) highlighted research performed in the past 20 years in which researchers demonstrated that a leader's personality could be more important to success than knowledge. Digman and Hogan (as cited in Ionata, 2006) noted broad acceptance of the big five (five factor) model of personality. Ionata included traits such as *being open*, *conscientious*, *extroverted*, *agreeable*, and *emotionally stable*. Ionata outlined numerous leadership theories, including those relating to project management. Some of these factors had ethical components. For example, Posner (as cited in Ionata, 2006) pointed out the need for a leader to set an example and engender trust. Ionata reviewed methods for measuring personality traits based upon the five-factor model or big five framework.

Five Dysfunctions Model

Lencioni (2002) developed a practical model designed to strengthen and improve teams. After extensive evaluation of team effectiveness, Lencioni concluded that real

teamwork in an organizational context is rare. From these observations, recurring dysfunctional behaviors were identified and the five dysfunctions model was developed. Lencioni determined that the following five dysfunctions were so fundamental that embracing even one of them could ruin the success of a team:

1. Lack of trust within teams demonstrated a fundamental dysfunction, which could arise from refusal of teammates to be vulnerable. The lack of transparency and an unwillingness to recognize personal weaknesses kept some from establishing a basis of trust on the team (Lencioni, 2002).
2. Fear of conflict has resulted from a dysfunctional lack of trust. Fear of conflict has hindered the free exchange of ideas, which could have led to project improvements. Instead, comments and opinions became guarded and opportunities for improvement were lost (Lencioni, 2002)
3. Lack of commitment has followed the above dysfunction, since conflict avoidance has resulted in team members failing to buy into decisions of the group (Lencioni, 2002). Lack of commitment could also have resulted from a lack of integrity and personal reliability.
4. Avoiding accountability resulted from a lack of commitment, according to Lencioni (2002), since it caused team members to avoid holding peers accountable.
5. Lack of attention to results occurred when people avoided accountability and instead considered personal needs more important than the successful outcome of the team (Lencioni, 2002).

The five dysfunctions of this model (absence of trust, fear of conflict, lack of commitment, avoidance of accountability, and inattention to results) were determined to be so critical to team success by Lencioni (2002) that, even when only one dysfunction was allowed to exist, teamwork was impacted as though a link in a chain had been broken. Before taking a closer look at each of the dysfunctions of this model, consider the positive side of the five dysfunctions model to consider member characteristics of cohesive and highly functional teams, as described by Lencioni:

1. Team members trusted each other.
2. Members engaged in healthy conflict expression and resolution focused on ideas.
3. The team members were committed to accomplish assigned tasks.
4. Members held each other accountable to fulfill their respective responsibilities.
5. Each focused on the successful achievement of the team's goals.

Lencioni (2002) provided detailed insight into each of the five dysfunctions. Lencioni also gave some advice on how to overcome each dysfunction. After describing the dysfunctions, Lencioni gave advice on how to overcome them and indicated how the dysfunctions related to the PMI key values of responsibility, respect, honesty, and fairness (*Code of Ethics and Professional Conduct*, 2007).

Dysfunction 1: Absence of trust. Lencioni (2002) considered trust to be fundamental for a team to be successful, but Lencioni defined trust somewhat more broadly than is commonly done. Beyond a confidence that a coworker will perform well because of doing so in the past, Lencioni (2002) viewed trust in this context as also

encompassing vulnerability. Team members needed to be mutually comfortable exposing their shortcomings, interpersonal deficiencies, lack of skills, and their own mistakes. Without this level of trust, team members wasted time hiding these facts, avoiding meaningful interaction with the team, dodging risk, refusing to ask for help when needed, and dreading team meetings.

Lencioni (2002) recommended team exercises such as sharing personal histories, conducting team effectiveness exercises, taking personality preference profiles, and getting formal feedback from others regarding strengths and weaknesses. Lencioni viewed the team leader as responsible for demonstrating vulnerability first in order to promote trust on the team. The team leader also needed to ensure an environment in which vulnerability was not punished (Lencioni, 2002).

The leaders of PMI who created the current ethical code have promoted certain characteristics and behaviors. These include responsibility, respect, honesty, and fairness (*Code of Ethics and Professional Conduct*, 2007). Trust results when people demonstrate these qualities.

Dysfunction 2: Fear of conflict. Trust among team members allowed conflict resolution to occur. Lencioni (2002) agreed that teams need healthy conflict management in order to be successful. Not all conflicts were considered helpful. Disagreements over the best approach have led to corrective measures, but conflicts involving destructive quarreling or personal politics have not.

Lencioni (2002) identified how team members learned how to engage in productive conflict. Lencioni recognized the need for healthy conflict. Those inclined to avoid conflicts were asked to identify and actively work to resolve them. The team

members engaged in conflict resolution were asked to encourage each other. Team leaders needed to resist the temptation to protect others from conflict. Instead, the leader was encouraged to model proper behavior to the team.

The focus by PMI leaders on responsibility, respect, honesty, and fairness (*Code of Ethics and Professional Conduct*, 2007) would encourage this kind of healthy conflict management on project teams. Project managers are expected to take the lead. Project team members are expected to learn from their leaders.

Dysfunction 3: Lack of commitment. Lencioni (2002) noted that commitment in a team context included decision clarity and buy-in by every team member, even those who disagreed with the decision. Consensus by each team member is often impractical, so effective team members were satisfied when their perspectives were heard and considered. The team members knew that the team leader needed to have the power to make decisions to avoid a stalemate, and that buy-in by each team member was important.

To overcome this dysfunction, Lencioni (2002) recommended reviewing and clarifying commitments regarding key meeting decisions, ensuring clarity of deadlines for decisions, easing the timid by developing contingency plans, and practicing commitment in low risk situations. Team leaders need to demonstrate willingness to commit to decisions without complete information or consensus. This can be a challenge.

Several of the PMI critical values for project managers apply in this context (*Code of Ethics and Professional Conduct*, 2007). Project team members need to feel respected to be confident in making commitments. Project managers must take

responsibility for commitments on projects. Project managers must be honest in regarding the ambiguities associated with making commitments without complete information.

Dysfunction 4: Avoidance of accountability. In the context of teamwork, accountability was defined by Lencioni (2002) as “the willingness of team members to call their peers on performance or behaviors that might hurt the team” (p. 212). Without this peer pressure in place, team members have underperformed. With it, performance has shown improvement (Lencioni).

To overcome this dysfunction, Lencioni (2002) recommended publicizing team goals. Lencioni also suggested conducting regular performance assessment reviews and utilizing team rewards rather than individual rewards. In order for team leaders to encourage peer accountability, those leaders have had to avoid the temptation to always step in and hold team members accountable (Lencioni, 2002).

This dysfunction has a less direct connection to the specific, critical values (*Code of Ethics and Professional Conduct*, 2007) of PMI. Responsibility to keep commitments by a leader serves an example to team members that accountability is important.

Dysfunction 5: Inattention to results. Lencioni (2002) identified a loss of focus on stated team goals as the final dysfunction. Some team members are characterized by individual selfishness or a misguided team focus. For example, a non-profit group might include team members who believe that the nobility of their cause is more important than achieving the stated goals of the team sponsor.

Lencioni (2002) recommended making public proclamations of planned success and promoted rewarding team members for meeting goals. Team leaders have a special obligation to help the team maintain focus on the team goals.

The inclusion by PMI leaders of responsibility (*Code of Ethics and Professional Conduct*, 2007) as one of the critical, ethical values required of project managers encourages project managers to guide the project team members to stay focused on project objectives.

Culture and Relationship-Oriented Leadership

Shi and Chen (2006) looked at project leadership in a relationship-based culture, researching the human side of project management in order to understand better the soft skills needed by leaders for successful leadership in a project context. Shi and Chen considered the relationship-based Chinese culture. Relationship-oriented leadership can be especially important since a project manager does not usually have direct-line authority over members of the project team. Shi and Chen (2006) desired to clarify the causes of successful project leadership; to identify critical characteristics, traits, and skills needed by project managers; and to discover factors that encouraged better project team performance. Meredith and Mantel (as cited in Shi & Chen, 2006) provided a dozen rules for successful project leadership behavior. Leadership behavior was associated with leader characteristic categories such as charismatic, inspirational, intellectually stimulating, considerate, and participative. Among other things, these traits engendered trust, respect, and confidence. Shi and Chen reviewed literature regarding project team performance and organizational effectiveness. Shi and Chen concluded that cooperation, collaboration, and trust were key factors to project success.

Although relationships regarding leaders and followers are always important, cultural differences can be significant. Yukl (2006) provided a compilation of cultural dimensions for several key, cultural attributes. Power distance correlates to the general willingness of people to accommodate differences in status and power. People in China have a high power culture, but people in the United States have a low power culture. This means United States leaders are expected to have less authority, be more accessible, and share more power with followers. Individualism corresponds to the importance of the needs and empowerment of individuals rather than society (Yukl, 2006). People in China test low on individualism, but people in the United States generally test high. For people in the United States, this means individual achievements and individual rights are more highly valued than social responsibilities (Yukl, 2006). Uncertainty avoidance corresponds to people's comfort level with ambiguity. People in China test medium, but people in the United States test low regarding uncertainty avoidance. This means that for people in China, more ambiguity and conflict are allowed (Yukl, 2006). There is less focus on formal rules and less fear of the unknown. Relationships are important in understanding leadership. Cultural differences can impose a different paradigm that needs to be considered. Cultural context is important (Yukl, 2006).

Project Team Spirit

Shenhar, Aronson, and Reilly (as cited in Amason et al., 2007) used a case study approach to investigate the concept of project team spirit and its impact on project success. The attitudes, emotional connections, and behavioral standards of the team are encompassed in project spirit. Krishnon (as cited in Amason et al., 2007) recognized

that transformational leadership promoted common values, personal development, and the common good. Amason et al. (2007) described the project spirit encountered at four different companies in terms of vision, values, events, and symbols. The four companies where the project team interviews occurred represented four different industries: automotive, space, food, and construction. Project leaders demonstrated values, which promoted project team spirit and positively influenced the behaviors of team members.

The space industry company interviewers highlighted the openness, trustworthiness, and supportive management style. The construction industry company interviewers brought out the positive attitude of the project manager. Behavioral norms results were positive, too. During the automotive company project, the participants in team events established a common purpose and inclusive culture. During the space company project, meetings were conducted in a way that encouraged open communication, reiterated the common vision, and kept everyone involved. During the food company project meetings, people in project group gatherings promoted teamwork and lively communication. During the construction company project, people who gathered as a regular team promoted a spirit of cooperation and togetherness (Amason et al., 2007). The participants in these qualitative case studies showed that promoting team spirit could have a positive impact on project success.

Positive team spirit cannot always ensure success, however. A Massachusetts Nut Island sewage treatment plant support group failed in spite of high levels of team morale and trust (Harvard Business Review, 2004). Trust in co-workers was generally high because of shared values, backgrounds, and perspectives, but there was distrust

by the plant workers of outsiders, especially in corporate leadership. Plant leaders removed workers who seemed uncooperative or who questioned plant processes. Workers were assigned to jobs those workers enjoyed doing because job satisfaction was considered a priority. Accommodating these workers resulted in high morale and trust among the team members. However, the workers' team spirit could not overcome the fact that deteriorating conditions were going unreported. In fact, the closeness of the group contributed to the overlooking of problems that threatened success and ultimately caused the operation to fail (Harvard Business Review, 2004). Team spirit is important, but when team members experience misplaced morale, those members may fail to speak up about serious issues and thereby fail to succeed.

Project Conflict Management

Once a project gets under way, project members may quickly get involved in conflicts. Flannes and Levin (2001) identified several points of contention typically associated with project teams. Project team members can face conflict because of a lack of role clarification, disagreements regarding methods or approach, differing perspectives, or because of carryover concerns from previous encounters. Flannes and Leven (2001) also noted that the high value placed on rugged individualism within the United States could contribute to increased conflict in working teams. Thamhain and Wilemon (as cited in Meredith & Mantel, 2009) in 1975 identified major sources of conflict historically encountered during different stages of the project life cycle. For example, during project initiation, the initial efforts to define priorities, procedures, and schedules have become common sources of conflict. During project ramp-up, adjustments, and fleshing out of priorities, schedules, and procedures continued to

provide an environment for conflict. After the project was well under way, then scheduling issues, technical problems, and resourcing issues dominated. During project closeout, pressures to finalize and reconcile deliverables, reallocate resources, and conduct a lessons learned session have generated conflict scenarios. The Project Management Institute has attempted to equip project managers to avoid unnecessary conflict and to manage project conflict more effectively by exhibiting responsibility, respect, honesty, and fairness (*Code of Ethics and Professional Conduct*, 2007).

Flannes and Levin (2001) outlined several different roles for the project manager. Flannes and Levin discussed the facilitator role that project managers were to provide within the project team, including taking responsibility for facilitating conflict resolution. In addition, some key ethical boundaries may be crossed during implementation of some of the more aggressive resolution conflict approaches. For example, a hard-nosed, competitive style of conflict resolution has the goal of the project manager winning the conflict while the opponent in the conflict is defeated (Flannes & Levin, 2001). There is danger in not being respectful to project teammates or at least in being perceived that way. Meredith and Mantel (2003) noted that even when conflicts occurred between projects within a company, attempting to defeat the opponent is inappropriate because of the resulting resentment. Resentment by the opponent could cause problems in the future when the parties need to work together again on another project. Therefore, respectful negotiation was recommended.

Editors of the Harvard Business Review (2004) described the difficulty of accommodating team conflicts for productive purposes, and the editors noted that one measure of perceived fairness is to monitor participation by team members. Therefore,

team members who have distanced themselves from participation may be implying that the group conflict has been handled unfairly.

In addressing project conflicts, Amason, Mooney, and Holahan (as cited in Amason et al., 2007) described a study in which cognitive conflict turned into affective conflict. Therefore, healthy disagreements regarding how to make decisions deteriorated into power struggles and personal attacks. These researchers considered whether this deterioration could be averted if project teams developed high levels of trust in each other. Although several factors, such as team characteristics, the nature of the tasks, and organizational attributes were seen to be highly influential when it came to conflict in corporate settings, Amason et al. sought to understand how these negative and positive types of conflict related to each other. The PMI leaders utilize the code of conduct to encourage project managers to create trust by showing responsibility, respect, fairness, and honesty. People who exhibit trust help people to avoid unproductive conflict and help to ensure project success.

Summary

Ethics in project management or in any business context is a complex topic that starts with a simple principle. If people do what is right, then ethical problems are avoided (Yukl, 2006). Right behavior is only possible if people know what the right thing is and are willing to do it. Personal integrity is critical for mutual trust to exist on project teams (Whitten, 2006).

Standards of morality can come from different sources (Yukl, 2006). Alternative methods of evaluating ethical leadership were explored, but the leaders of PMI have defined a Professional Code of Conduct that includes responsibility, respect, honesty,

and fairness as the key ethical values that are required of project managers (*Code of Ethics and Professional Conduct*, 2007). The moral management model (Carroll, 2001) is consistent with the ethical behavior required by the Project Management Institute leaders. The concept of agency relationships (Carroll & Buchholtz, 2003) in project management was also explored, since conflicts of self-interest may arise (Schneider, 2007).

Transactional leadership is common in project management, but transformational leadership in a project management context reflects the pervasive, positive influence the ethical behavior of the project manager can have on the rest of the project team (Amason et al., 2007). Elements of charismatic leadership and servant leadership also were explored relative to business ethics and project management. Ethical aspects of the big five model were identified (Yukl, 2006). The developer of the five dysfunctions model (Lencioni, 2002) described how absence of trust, fear of conflict, lack of commitment, avoidance of accountability, and inattention to results each build upon one another. Problems related to these dysfunctions were substantially addressed by PMI leaders' focus on responsibility, respect, honesty, and fairness (*Code of Ethics and Professional Conduct*, 2007). Finally, recent research regarding project management ethics relating to cultural implications (Shi & Chen, 2006), team spirit (Amason et al., 2007), and conflict management (Flannes & Levin, 2001) were reviewed.

Multiple studies in the literature cover leadership, ethics, management relationships, projects and project success. However, none was found that specifically focused on the relationship between ethical project management and project success.

CHAPTER 3: RESEARCH METHOD

In this chapter, the methods used to investigate the correlation between the ethical behavior of project managers and IT project success are listed. A description of the research method is followed by information regarding the study participants, materials and instruments, and research procedure. Data collection, processing, and analysis descriptions are followed by the methodological assumptions, limitations, and delimitations of this study. Finally, ethical assurances for this study are given followed by a summary of key points.

Overview

Project management has become a common means of facilitating organizational objectives (Meredith & Mantel, 2009). The success of corporations depends upon the success of key information technology (IT) projects. The success of these projects relies upon more than planning, implementation, and the skillful use of project management tools. The actions of all team members, especially project leaders, impacts project success (Amason et al., 2007). Project managers and their project team members are often critical to corporate success, but project managers may behave unethically. Ethical lapses during project delivery may be due to technical complexity, time and budget pressures, as well as other factors such as the temporary nature of projects.

The matter of ethics cannot be ignored in the world of business and government (Desai & Ofori-Brobbey, 2008). Ethics are an integral part of planning and execution. Ethical considerations are critical in the arena of IT project management, although leaders often overlook the mechanisms for promoting a project environment of integrity (Meredith & Mantel, 2009). Shore (2005) indicated that a lack of suitable project

leadership increases the risk of failure. While project success is of vital interest to leaders of organizations, project success is not certain. Cunningham (as cited in Sumner, Bock, & Giamartino, 2006) reported on a large, international survey that documented that three fourths of IT projects have failed. This research is important because ethical leadership is crucial for organizational success (Yukl, 2006), project leadership is critical for IT project success (Amason et al., 2007), and IT project success is important to organizations (Meredith & Mantel, 2009).

The purpose of this quantitative research was to determine the perceptions of a sample of US-based IT project team members regarding the relationship between key ethical values of project managers and the success of IT projects. An analysis of the surveyed perceptions resulted in a better understanding regarding the correlation of these concepts. Given the importance of project success to the achievement of organizational objectives, the visibility of ethical (and unethical) business leaders' activities in the world, and the recent focus by the leadership of PMI to update its professional code of conduct, this is a timely study. The results of this research could help future IT projects succeed, encourage ethical behavior in a project context, and provide useful guidelines for those who engage and direct project managers.

Research Questions

Research questions include the four ethical values deemed most critical by PMI leaders in a survey of members. The surveyed members identified responsibility, respect, fairness, and honesty as the top four ethical values needed by project managers (*Code of Ethics and Professional Conduct*, 2007). The following questions identified specific objectives for the proposed quantitative study:

Q1. To what extent, if any, is perceived ethical value of *responsibility* as exhibited by project managers related to perceived IT project success?

Q2. To what extent, if any, is perceived ethical value of *respect* as exhibited by project managers related to perceived IT project success?

Q3. To what extent, if any, is perceived ethical value of *fairness* as exhibited by project managers related to perceived IT project success?

Q4. To what extent, if any, is perceived ethical value of *honesty* as exhibited by project managers related to perceived IT project success?

Hypotheses

The relationship or correlation between project success and each of the four perceived ethical values were investigated as hypotheses. Based on the research questions noted above, the hypotheses consisted of the following:

$H1_0$. There is no correlation between perceived ethical value of responsibility exhibited by project managers and perceived IT project success.

$H1_A$. There is a correlation between perceived ethical value of responsibility exhibited by project managers and perceived IT project success.

$H2_0$. There is no correlation between perceived ethical value of respect exhibited by project managers and perceived IT project success.

$H2_A$. There is a correlation between perceived ethical value of respect exhibited by project managers and perceived IT project success.

$H3_0$. There is no correlation between perceived ethical value of fairness exhibited by project managers and perceived IT project success.

$H3_A$. There is a correlation between perceived ethical value of fairness exhibited by project managers and perceived IT project success.

$H4_0$. There is no correlation between perceived ethical value of honesty exhibited by project managers and perceived IT project success.

$H4_A$. There is a correlation between perceived ethical value of honesty exhibited by project managers and perceived IT project success.

Operational Definition of Variables

Operational definitions of variables are provided in this section. The variables described were critical to the study and were operationalized in order to identify appropriate labels. Construct validity also depended on the proper translation of these concepts (Trochim, 2001).

Perceived IT project success: Dependent variable (Y). Information technology project success was the (dependent) outcome variable and was rated by the survey participant on a Likert-type ordinal scale, but treated as described by Trochim (2001) as an “interval level response format” (p. 115). The perception of success was captured by using responses from survey question 8 (see Appendix A).

Responsibility: Independent variable (X_1). The ethical value of responsibility was based on the perceptions of the survey participant. Likert-type ordinal scale responses were treated as interval responses (Trochim, 2001) and used to identify behaviors specified by the Project Management Institute as exemplifying this key ethical value (*Code of Ethics and Professional Conduct*, 2007). Data regarding six behaviors associated with this variable were captured by using responses from survey questions 10, 11, 18, 25, 27, and 30 (see Appendix A). These six Likert-type scale statements were used to measure behaviors identified by PMI leaders as exemplifying the key ethical value of responsibility. The values for the three negatively worded questions (25, 27, and 30) were reversed, and then the six items were summed and divided by six to yield an average.

Respect: Independent variable (X_2). The ethical value of respect was based on the perceptions of the survey participant. Likert-type ordinal scale responses were treated as interval responses (Trochim, 2001) and used to identify behaviors specified by the Project Management Institute as exemplifying this key ethical value (*Code of Ethics and Professional Conduct*, 2007). Data regarding six behaviors associated with this variable were captured by using responses from survey questions 14, 15, 21, 23, 24, and 28 (see Appendix A). These six Likert-type scale statements were used to measure behaviors identified by PMI leaders as exemplifying the key ethical value of respect. The values for the three negatively worded questions (15, 23, and 28) were reversed, and then the six items were summed and divided by six to yield an average.

Fairness: Independent variable (X_3). The ethical value of fairness was based on the perceptions of the survey participant. Likert-type ordinal scale responses were

treated as interval responses (Trochim, 2001) and used to identify behaviors specified by the Project Management Institute as exemplifying this key ethical value (*Code of Ethics and Professional Conduct*, 2007). Data regarding six behaviors associated with this variable were captured by using responses from survey questions 12, 13, 17, 20, 26, and 29 (see Appendix A). These six Likert-type scale statements were used to measure behaviors identified by PMI leaders as exemplifying the key ethical value of fairness. The values for the three negatively worded questions (13, 17, and 20) were reversed, and then the six items were summed and divided by six to yield an average.

Honesty: Independent variable (X_4). The ethical value of honesty was based on the perceptions of the survey participant. Likert-type ordinal scale responses were treated as interval responses (Trochim, 2001) and used to identify behaviors specified by the Project Management Institute as exemplifying this key ethical value (*Code of Ethics and Professional Conduct*, 2007). Data regarding six behaviors associated with this variable were captured by using responses from survey questions 9, 16, 19, 22, 31, and 32 (see Appendix A). These six Likert-type scale statements were used to measure behaviors identified by PMI leaders as exemplifying the key ethical value of honesty. The values for the three negatively worded questions (16, 19, and 22) were reversed, and then the six items were summed and divided by six to yield an average.

Research Method and Design

Multiple theories, methods, and research designs with potential applicability to the proposed research topic were explored. Assessing the relationship between ethical project management and IT project success also required an understanding of morality, ethics, leadership, and other key topics in a project context.

The study approach utilized was non-experimental. Furthermore, since the assessment of the relationship between observed ethical behavior and project success depended upon the perception of the observer, a survey approach was utilized to capture the data (Trochim, 2001). As the ethical behavior being measured was specifically limited to the perceived responsibility, respect, honesty, and fairness demonstrated by the project manager, a custom survey was designed for this study. This structured survey was utilized to collect key demographic information and to capture the perceptions of project manager ethical behavior. Behaviors associated with the ethical characteristics of responsibility, respect, fairness, and honesty were described based upon the updated Project Management Institute professional code of conduct (Code of Ethics and Professional Conduct, 2007).

Participants

The surveyed population came from IT professionals living in the United States who had experienced significant participation on an IT team project, but not as the project manager. These projects had to have been completed sufficiently to allow for an assessment of success or failure. The IT professionals were required to be literate and able to access the web-based survey tool.

A power analysis indicated that at least 85 responses were needed to support the analysis. This number of responses was based on results from G*Power software and utilized an effect size 0.15, an alpha significance of 0.05, and an estimated power of 0.80. However, since a factor analysis was planned and performed, at least 300 responses were needed to provide a sufficiently large sample size (Tabachnick & Fidel, 2007).

Identified pools of project team members suitable for the study were not readily available. The purchase of an email list of IT professionals was impractical due to the high cost. The use of project team members from a specified corporation was inappropriate because of the potential negative publicity associated with reporting on unethical behavior within a specific company. An initial convenience sampling (Trochim, 2001) of Association of Computing Machinery members resulted in few qualified responses to the pilot test of the survey. Using what was learned from the pilot study experience, a convenience sample using snowball sampling referrals (Zikmund, 2003), coupled with an incentive award drawing, was utilized for the main data collection in order to secure enough qualified project team members for the study. Only IT project professionals were solicited as required by the study parameters. McMillan and Schumacher (as cited in Rose, 2009) noted that the use of a non-probability sample limits the ability to generalize the results. However, Bernard (as cited in Rose, 2009) concluded that bias associated with a targeted approach helps ensure that participants are reliable and competent. Before any data were collected, the method of collection was approved by the Northcentral University ethics committee.

The participants accessed the survey using a link to the web-based survey instrument hosted by Zoomerang at www.zoomerang.com. A screening description in the introductory statement was used to ensure that the participant had served as a project team member (in a role other than as project manager) on an IT project which had completed (as planned or prematurely in failure) and with significant opportunities to interact with the project manager. This interaction with the project manager during project delivery was important since the survey participant was asked to respond to

questions regarding the perceived behavior of the project manager occurring during the course of the project. A sample of 300 qualified survey responses was gathered during the data collection period.

Materials/Instruments

A survey instrument (see Appendix A) was created to support this research. This approach allowed the survey instrument to be tailored to measure the ethical behavior of project managers as perceived by project members on actual IT projects, with significant alignment to the authoritative direction of PMI leaders. However, the use of a custom survey instrument required consideration of validity and reliability to ensure the suitability of the instrument.

The 2007 code of conduct by the leadership of PMI represented a valuable and authoritative resource for effectively narrowing the scope of the proposed research. This code of conduct not only included the four most important ethical values needed for project management, but it also detailed at least six specific behaviors for each of the four ethical values (*Code of Ethics and Professional Conduct*, 2007). These behavioral descriptions were utilized as the basis for creating the 24 ethics scenario questions for the survey instrument.

Appendix A contains the survey instrument used in this study. The ethics scenario questions for the survey instrument were ordered randomly. In addition, three of the six questions for each of the four ethical values were phrased negatively.

The six behavioral scenario questions for each of the four key ethical values of responsibility, respect, fairness, and honesty defined the four subscales to measure perceived ethical behavior of the project managers. Project team members were asked

to indicate their agreement with each question on a five-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). Respondents were not required to answer the demographic questions, but they were required to answer the questions relating to project success and ethical behaviors. The answers to the questions were used to calculate the scores for each of the four ethical values.

The dependent and independent variables were rated by the survey participant on an ordinal, Likert-type scale described by Trochim (2001) as an "interval level response format" (p. 115). Tests of normality were utilized to confirm that the ordinal data could be treated as interval data, including using Normal Q-Q plots (see Appendix B) and checking for skewness (Aczel & Sounderpandian, 2002). Regarding the interval use of ordinal Likert scale items, Jaccard and Wan (1996) concluded that "for many statistical tests, rather severe departures (from intervalness) do not seem to affect Type I and Type II errors dramatically" (p. 4). The factor analysis utilized in this study depended upon these Likert-type responses being treated as interval responses. Reliability (internal consistency) was confirmed by calculating Cronbach's alpha (Trochim, 2001) for each of the four constructs (with results reported in the Findings chapter 4).

Incremental steps were taken to complete the survey development, to test effectiveness and completeness, and to refine the statistical analysis approach. First, a draft survey instrument was created based on the defined variables. Content validity was established by creating the ethical behavior questions based on the behavioral descriptions specified by the PMI leadership (*Code of Ethics and Professional Conduct*, 2007) and by soliciting feedback on the instructions and questions from three

experienced and certified project managers. This step was taken to help ensure that the survey would measure what it was intended to measure (Zikmund, 2003). Expert input helped to ensure item comprehensibility and face validity. Based on feedback from the experienced project managers, the instructions were improved, the interval scale nature of the response sets clarified, and project manager experience level was highlighted.

Second, upon receiving approval by the NCU IRB (Institutional Review Board), a pilot test was conducted using 30 IT project team members to exercise the survey and perform an initial analysis. Of the 39 initial survey participants, 30 pilot test participants re-took the survey several weeks later to check for test-retest reliability. Hertzog (2008) considered 25 as a lower limit for pilot survey sample size, with 35-40 being the preferred range. Cronbach's alpha was calculated for the final version to determine internal consistency (reliability). The survey instrument was finalized and the statistical analysis approach confirmed. The survey (see Appendix A) was study-ready after these changes were made. Finally, the main survey was conducted utilizing a convenience sample of 300 IT professionals solicited from snowball sampling (Zikmund, 2003) using a web-based survey instrument hosted by Zoomerang at www.zoomerang.com and the results were analyzed to assess the relationship between ethical project management and IT project success.

Procedure

A survey was created based upon ethical behavioral descriptions specified by the Management Institute (*Code of Ethics and Professional Conduct*, 2007). Expert feedback was obtained based on a review of the survey instructions and questions by several experienced and certified project managers. Next, a pilot test was conducted

using 39 IT project team members to test the survey and to perform an initial analysis. When pilot study participants were asked to re-take the test a few weeks later, 30 useable responses were received. The survey was then refined by clarifying the instructions and simplifying two of the questions. The statistical analysis approach was confirmed. Finally, the survey (see Appendix A) was conducted using a convenience sample of 300 people and results analyzed.

Data Collection, Processing, and Analysis

Survey results included quantified responses concerning the perceived behaviors of project managers representing the four key ethical values of responsibility, respect, fairness, and honesty (*Code of Ethics and Professional Conduct*, 2007). Statistical relationships among the ethical values relative to IT project success were analyzed. The statistics software tool utilized for the analysis was SPSS 16.0 Graduate Student Version.

Study results were arranged to show the breakdown of the demographic and ethical feedback data. Data screening was used to look for missing data or outliers and to check for violations of assumptions such as normality. Basic descriptive statistics were generated to get an initial understanding of the survey data. Tables were used to display raw data and percentages. Basic statistics were used to identify patterns in the data

The dependent and independent variables were rated by the survey participants on an ordinal Likert-type scale, described by Trochim (2001) as an “interval level response format” (p. 115). Tests of normality were utilized to confirm that the ordinal data could be treated as interval data, including using Normal Q-Q plots and checking

for skewness (Aczel & Sounderpandian, 2002). Regarding the interval use of ordinal Likert scale items, Jaccard and Wan (1996) concluded that “for many statistical tests, rather severe departures (from intervalness) do not seem to affect Type I and Type II errors dramatically” (p. 4). The factor analysis utilized for this study depended on these Likert-type responses being treated as interval responses. Principal components factor analysis was used to uncover patterns that simplify the data (Smith, 2002). Factor analysis was performed on the 24 ethics-related questions in order to determine if the set of questions for each of the four constructs were distinct, relevant and intact. The pattern matrix resulting from a factor analysis included the detailed grouping of the questions. Cronbach’s alpha was calculated to check the internal consistency of the constructs. Finally, correlation analyses were performed for the independent and dependent variables in order to test the research hypotheses. Pearson’s product moment correlation coefficients were generated to investigate the bivariate relationships for the variables.

Methodological Assumptions, Limitations, and Delimitations

According to Zikmund (2003), correlational research is limited in practical application because proof of correlation does not imply causation. If significantly more people carry umbrellas on days when it rains, it should not be assumed that carrying umbrellas causes the rain. Instead, other factors may be causing both to occur. Likewise, it is possible that even if a significant correlational relationship is shown to exist, ethical behavior has not been proved to be the cause of project success. Instead, both ethical behavior and project success may be caused by other factors.

Concepts gleaned from current literature and answers to relationship questions in the study survey were utilized to support conclusion validity, demonstrating whether there is reason to believe that a relationship exists between ethical behavior by the project manager and project success. Internal validity in the planned study was promoted by taking reasonable steps to eliminate other possible causes of the desired outcome. These include extraneous variables such as history, maturation, testing, instrumentation, selection, and mortality (Zikmund, 2003). Construct validity in this study was supported by defining project success and ensuring that behavioral questions were worded clearly. External validity in this study was addressed by utilizing a suitable sample size (Tabachnick & Fidel, 2007) from available, qualified, project team members. Qualifying statements in the introduction to the survey were provided to allow prospective respondents to determine whether they were suitable candidates. During the final data collection period, there were 635 visits to the survey site, but over half of them never went beyond the qualifying introduction page. This may mean that some people did not take the survey because they realized that they were not qualified to do so.

The data collected for this research was limited to the perceptions of the respondents regarding project success and ethical behavior demonstrated by the respective project managers. Although bias can appear when survey participants reflect only their personal perspective (Huberts et al., 2007), the behaviors surveyed were fundamental ones, which would be more universally accepted as right or wrong. The researcher did not attempt to determine the project managers' intentions or whether the project manager violated the conscience. Therefore, only the observed behavior was

reported and considered. For example, responsible behavior by the project manager was noted as such by the project member responding to the survey, even if the project manager was violating his or her conscience during the observed activity. The observer could not have known whether the project manager acted conscientiously. In addition, even though it may have provided a more accurate description of a team leader to survey all the members of the teams (White & Lean, 2008); it was beyond the scope of this study to target whole project teams. However, surveying all members of a small team could have reduced the perception of anonymity (White & Lean, 2008).

The approach was limited in that some unethical behavior may not have been observed or detected. For example, a clever project manager could have been secretly dishonest. This limitation may have been overcome by surveying project managers about their own behavior, but the reliability of a self-assessment concerning morality would rightfully have been suspect according to Peterson (as cited in Huberts et al., 2007). For example, a dishonest person might have denied doing something dishonest, while claiming to be trustworthy.

Ethical Assurances

Anonymity for the online survey was accommodated by not requiring the participants' names and by having a third party collect and report the survey results. Individual results were not released to the public. Although the survey participants answered the questions based on real-life projects, no project descriptions or organizational names were required during the survey. The survey participants, projects, project managers, and organizational leaders responsible for the projects were anonymous. The only exception to the anonymity was that survey participants had the

option of providing a personal email address if they wanted to be included in the incentive drawing after the close of the survey collection period. However, the respondents were not required to participate in the drawing. There were 635 visits to the qualifying preview page of the survey, of which 300 respondents completed the survey. Of the 300 who completed the survey, 242 left email addresses in order to participate in the voluntary incentive drawing. The survey was disabled after 300 qualified responses were received.

This research study adhered to requirements of Northcentral University's ethics committee. Approval from this committee was attained before data were collected from individual survey participants. Participation in the survey was strictly voluntary. Any raw data gathered from the surveys was destroyed or securely maintained. The survey instrument utilized did not deceive or misinform. The survey participants were not exposed to psychological distress or physical harm.

Summary

This chapter included a restatement of the research problem and purpose of the study. The research questions, hypotheses, and operational definitions were also restated. A quantitative research method was planned using a non-experimental approach. Perceptions of ethical behavior by project managers were captured using a survey method. The custom survey questionnaire was based upon ethical behaviors expected by leaders of the Project Management Institute of all project managers on projects (*Code of Ethics and Professional Conduct*, 2007).

The survey was refined via reviews and feedback by experienced project managers. Further refinement resulted from the pilot test. The survey respondents

provided their perceptions of the ethical behaviors of the project managers. A statistical analysis of the quantified survey responses allowed insight into whether the perception of responsibility, respect, fairness, and honesty (*Code of Ethics and Professional Conduct*, 2007) demonstrated by project managers correlated with successful outcome of the IT projects under consideration by the survey participants. A principal components factor analysis was conducted to consider whether it was feasible to simplify the data (Smith, 2002).

Also in this chapter, types of validity (Trochim, 2006) and approaches to support validity (Zikmund, 2003) were described. Limitations of the study and corresponding reasons were outlined. Finally, assurances of an ethical approach and a description of adherence to university policies were provided.

CHAPTER 4: FINDINGS

The purpose of this study was to describe the relationship between key ethical values of project managers and the success of IT projects. Findings were obtained by evaluating the results of a survey that focused on the ethical values of responsibility, respect, honesty, and fairness. The survey instrument was utilized to capture the perceptions of a convenience sample of US-based project team members regarding the observed behavior of project managers. The statistical approach included descriptive statistics of the demographic results, a factor analysis to identify patterns in the ethical variables data, and a correlation analysis. Findings from this study could be used to help future IT projects succeed, to encourage ethical behavior during projects, and to provide useful guidelines for people who engage and direct project managers.

This chapter includes the results of the pilot survey. The findings of the main data collection are then presented. Finally, the results of the survey and an evaluation of the findings are presented within the context of the research questions and hypotheses under consideration.

Results

A pilot study was conducted to evaluate and refine the survey instrument. Over a period of 5 weeks, a convenience sample of 39 qualified participants took the initial survey, followed several weeks later by a re-test request to which 33 participants responded. Three of the participants responded to the re-test with significant variations compared to their initial test responses. For example, the reported sex of the project manager or the complexity of the project changed from the test to the re-test. These unusual response variations prompted a follow-up conversation confirming suspicions

that participants had mistakenly evaluated a different project in the re-test than the ones they had in mind during the initial test. Therefore, these three survey re-test responses were removed from the re-test survey data.

The questions regarding the sex (gender) of the survey respondent and the project manager resulted in a perfect correlation between initial test and re-test. The remaining demographic questions displayed test/re-test correlations ranging from .76 to .97. Test/re-test correlation for project success was .83. All of these correlations were significant at the .01 level. Likewise, significant correlations existed between the test/re-test questions for nearly all the 24 ethics-related questions. The sixth Fairness question (F5) resulted in a .39 correlation between the test and re-test surveys, which was significant at the .05 level. The fourth Responsibility question (Y4) resulted in a .29 correlation. Due to the results of the pilot study, these two questions were re-worded for simplicity and clarity (No further evaluation of the re-wording was made prior to data collection). Correlations between test and re-test for the remaining 22 ethics questions ranged from .54 to .93, all of which were significant at the .01 level. Overall, the 24 ethics questions averaged a test/re-test correlation of .74.

Survey reliability or internal consistency for the pilot survey was also investigated by calculating Cronbach's alpha for Responsibility ($\alpha = .83$), Respect ($\alpha = .86$), Fairness ($\alpha = .89$), and Honesty ($\alpha = .91$). These results indicated sufficiently reliability. Tests of normality confirmed that the ordinal data for the ethical questions could be treated as interval data for parametric testing (Trochim, 2001).

Normal Q-Q plots were generated (see Appendix B) for each of the four ethical subscales. The normal distribution of the data was evidenced by the fact that the

expected normal values and actual values aligned on the Q-Q plots (see Appendix B). Normality was also confirmed by checking skewness for Responsibility (γ_1 = -.72), Respect (γ_1 = -.90), Fairness (γ_1 = -.80), and Honesty (γ_1 = -1.03). In addition, the data collected during for the study related to independent cases, because the participants completed the surveys on their own and were not influenced by the data provided by anyone else.

After refinements to the survey resulting from the pilot study, the main data collection began on November 25, 2009 and continued until 300 qualified results were obtained on February 12, 2010. Of the 300 participants, there were 194 (65.1%) males and 104 (34.7%) females. Reported project experience ranged from one to 45 years with an average of 13.07 years. More than half of the participants reported that religion was the primary source of their ethical standard. The project managers for the projects under consideration by the survey takers included 195 (66.1%) males and 100 (33.9%) females. Project management experience estimates ranged from 0 to 37 years with an average of 10.34 years. Of these project managers, 152 (51%) were PMI certified and 87 (29.2%) were not certified. The certification status of 59 (19.8%) project managers was unknown to the survey takers. For the projects under consideration during this study, 10 (3.4%) were not very complex, 147 (49.7%) were moderately complex, and 139 (47.0%) were very complex (see Table 1). For this survey, a successful project was defined as one that was completed within 30% of cost, specifications, and schedule targets. Survey participants rated 19 (6.3%) projects as very unsuccessful, 41 (13.7%) projects as moderately unsuccessful, 30 (10.0%) projects as neither successful nor

unsuccessful, 113 (37.7%) projects as moderately successful, and 97 (32.3%) projects as very successful.

Table 1

Demographic Characteristics (N=300)

Demographic	Count / (Valid Percent)
Sex (gender) of survey respondent	
Male	194 (65.1%)
Female	104 (34.7%)
Primary source of ethics standard of respondent	
Religion	156 (52.2%)
Family or Friends	50 (16.7%)
Corporate code of conduct	7 (2.3%)
Professional code of conduct	49 (16.3%)
Other	37 (12.3%)
Sex (gender) of project manager	
Male	195 (66.1%)
Female	100 (33.9%)
PMP (Project Management Professional) certification	
No	152 (51.0%)
Yes	87 (29.2%)
Unknown	59 (19.8%)
Project complexity	
Not very complex	10 (3.4%)
Moderately complex	147 (49.7%)
Very complex	139 (47.0%)

A factor analysis using Principal Component Analysis (PCA) as the extraction method on the 24 ethics-related questions was conducted to determine whether the six sets of questions represented distinct, conceptually relevant and intact constructs. The Kaiser-Meyer-Oklin result of .97 ($p < .001$) indicated that the sample was adequate to allow the correlation matrix to be analyzed.

The results from the PCA included just two components with eigenvalues greater than 1. Component C1 had an eigenvector total of 13.2, representing 54.9% of the variance. Component C2 had an eigenvector total of 1.5, representing 6.2% of the variance. Refer to the resulting pattern matrix (see Table 2) for additional detail. This pattern matrix describes which ethics questions related most closely. All 24 of the ethics-related questions appeared in these two components, with only two instances of significant cross loading (with factor loading > .35).

Table 2

Pattern Matrix for Principal Components Analysis

Survey Question	Component C1	C2
Q32-Honesty-H2	.94	
Q18-Responsibility-Y2	.92	
Q29-Fairness-F1	.91	
Q14-Respect-R1	.79	
Q09-Honesty-H1	.79	
Q12-Fairness-F2	.78	
Q24-Respect-R3	.77	
Q31-Honesty-H4	.73	
Q26-Fairness-F6	.71	
Q11-Responsibility-Y1	.65	
Q27-Responsibility-Y3R	.64	
Q10-Responsibility-Y5	.63	
Q19-Honesty-H5R	.53	.40
Q23-Respect-R2R	.51	
Q22-Honesty-H3R	.47	.35
Q21-Respect-R5	.35	
Q15-Respect-R6R		.83
Q25-Responsibility-Y4R		.80
Q20-Fairness-F5R		.78
Q17-Fairness-F4R		.71
Q30-Responsibility-Y6R		.70
Q16-Honesty-H6R		.69
Q13-Fairness-F3R		.52
Q28-Respect-R4R		.50

There were no compelling reasons to support the use of the factored components, so the reliability of the six questions defining each of the four ethical constructs was calculated using Cronbach's alpha. This test resulted in an internal consistency value of .84 for Responsibility, .85 for Respect, .85 for Fairness, and .92 for

Honesty (see Table 3). Due to this significant internal consistency, the four ethical constructs (or subscales) were utilized rather than the PCA components.

Table 3

Reliability and Averages of Ethical Constructs

Subscale Construct (N=6)	Cronbach's Alpha	Average Score
Responsibility	.84	4.03
Respect	.85	4.03
Fairness	.85	3.96
Honesty	.92	4.02

The research questions and associated hypotheses for this study were based upon four key ethical values (responsibility, respect, honesty, and fairness). Specifically, the ethics-related survey questions were based upon the six behaviors for each of the four values, all of which were specified by the leaders of the Project Management Institute (*Code of Ethics and Professional Conduct*, 2007). Respondents were asked to consider a specific project and to provide their perceptions of the project manager's behavior during that project.

Q1. To what extent, if any, is the perceived ethical value of responsibility as exhibited by project managers related to perceived IT project success?

$H1_0$. There is no correlation between the perception of the ethical value of responsibility exhibited by project managers and the perception of IT project success.

$H1_A$. There is a correlation between the perception of the ethical value of responsibility exhibited by project managers and the perception of IT project success.

Results. Pearson product moment correlation ($r(300) = .47$, $p < .001$) revealed a significant, positive relationship between project success and responsibility (see Table 4). As the responsibility of the project manager increased, project success increased. This strong correlation is unlikely to have occurred by chance. The calculated significance was less than the critical threshold ($p < .05$). Therefore, the null hypothesis $H1_0$ is rejected.

Table 4

Correlation of Ethical Values with Project Success

Ethical Values	Pearson Correlation with Project Success
Responsibility	.47**
Respect	.45**
Fairness	.44**
Honesty	.47**

** Correlation is significant at the .01 level (2-tailed).

Q2. To what extent, if any, is the perceived ethical value of respect as exhibited by project managers related to perceived IT project success?

$H2_0$. There is no correlation between the perception of the ethical value of respect exhibited by project managers and the perception of IT project success.

$H2_A$. There is a correlation between the perception of the ethical value of respect exhibited by project managers and the perception of IT project success.

Results. Pearson product moment correlation ($r(300) = .45$, $p < .001$) revealed a significant, positive relationship between project success and respect (see Table 4). As

the respect of the project manager increased, project success increased. This strong correlation is unlikely to have occurred by chance. The calculated significance was less than the critical threshold ($p < .05$). Therefore, the null hypothesis $H2_0$ is rejected.

Q3. To what extent, if any, is the perceived ethical value of fairness as exhibited by project managers related to perceived IT project success?

$H3_0$. There is no correlation between the perception of the ethical value of fairness exhibited by project managers and the perception of IT project success.

$H3_A$. There is a correlation between the perception of the ethical value of fairness exhibited by project managers and the perception of IT project success.

Results. Pearson product moment correlation ($r(300) = .44$, $p < .001$) revealed a significant, positive relationship between project success and fairness (see Table 4). As the fairness of the project manager increased, project success increased. This strong correlation is unlikely to have occurred by chance. The calculated significance was less than the critical threshold ($p < .05$). Therefore, the null hypothesis $H3_0$ is rejected.

Q4. To what extent, if any, is the perceived ethical value of honesty as exhibited by project managers related to perceived IT project success?

$H4_0$. There is no correlation between the perception of the ethical value of honesty exhibited by project managers and the perception of IT project success.

$H4_A$. There is a correlation between the perception of the ethical value of honesty exhibited by project managers and the perception of IT project success.

Results. Pearson product moment correlation ($r(300) = .47$, $p < .001$) revealed a significant, positive relationship between project success and honesty (see Table 4). As the honesty of the project manager increased, project success increased. This strong

correlation is unlikely to have occurred by chance. The calculated significance was less than the critical threshold ($p < .05$). Therefore, the null hypothesis $H4_0$ is rejected.

Evaluation of Findings

The conceptual framework indicates that a link between ethical project management and IT project success would be of interest. According to Whitten (2006), personal integrity is the key to properly addressing ethical issues in a project context. The leaders of PMI require certified project managers to adhere to their ethical code of conduct (*Code of Ethics and Professional Conduct*, 2007). The findings of this study confirm that, for the convenience sample responding to the survey, a significant correlation exists between the perception of project manager ethical behavior (represented as responsibility, respect, honesty, and fairness) and IT project success. The findings of this study are consistent with several models discussed in Chapter 2.

Although Boatright (1999) suggested that it is unrealistic to expect corporate leaders to act morally, Carroll (2001) stated that most researchers disagree. In discussing the classic moral management model, Carroll (2000) pointed out that project managers have a responsibility to act ethically. Project management leadership is one type of organizational leadership and it generates some ethical challenges due to the cross-functional and non-recurring nature of projects (Meredith & Mantel, 2009). Yukl (2006) described transformational leadership as initially focusing on energizing and reforming organizations by appealing to the moral values and ethical concerns of followers. Yukl (2006) also asserted that a transformational leadership approach is more critical to success in settings that experience on-going change. Project managers deal constantly with change (Meredith & Mantel, 2009). Moral management, transformational

leadership, and other models linking ethical behavior to effective leadership are consistent with the findings of this study.

IT project success is often important to organizational success (Meredith & Mantel, 2009). The results of this study may help individuals to understand the relationship of ethical project management to IT project success. Meredith and Mantel (2009) asserted that ethical project managers are more effective than unethical project managers (Meredith & Mantel, 2009), but the literature lacks research regarding project manager ethical behavior and IT project success. As described in the conceptual framework, the role of IT project success in organizational success makes it important to understand better the nature of project success. The findings of this study indicate that, in this case, the perception of ethical behavior by project managers was significantly correlated with IT project success.

Experienced and certified project managers were more often assigned to riskier projects. An indication that this was true was the fact that project complexity correlated significantly (r = .18) with project manager experience and project complexity correlated significantly (r = .13) with project manager certification. In addition, although project manager certification did not correlate significantly with any of the four ethical values, project manager experience did correlate significantly with Responsibility (r = .15), Respect (r = .21), and Fairness (r = .13). Project manager experience may have correlated with these ethical values for several reasons. Perhaps the older generation grew up with a stronger value system, or perhaps experienced project managers learned from their experiences to be more ethical. Another reason may be that ethical

behavior was so important in project management that unethical people did not stay in that profession for very long.

Regarding the factor components (see Table 2), 16 of the 24 ethics questions appeared in component C1 and the remaining eight of the 24 ethics questions appeared in component C2. In component C1, the positively worded questions tended to appear with higher eigenvectors. On the other hand, component C2 consisted of only negatively worded questions. In addition, the questions included in component C2 appeared to be questions representing ethical scenarios that were less likely to occur than those included in component C1. Finally, component C1 questions appear to reference more internally focused behaviors, whereas C2 questions dealt more with the project manager's behavior toward others. These are possible reasons why the factor analysis grouped them together into factor components C1 and C2.

While the factor analysis did not provide evidence that the four PMI ethical values separated distinctly into components, the Cronbach's alpha results (see Table 3) provided sufficient evidence of internal consistency. An evaluation of individual results for the four ethical values constructs follows.

The correlation findings for Responsibility versus Success indicated a significant correlation, indicating that a relationship is present. As the calculated significance was less than the critical threshold ($p < .05$), the null hypothesis $H1_0$ is rejected. There was a strong, positive correlation between the perception of the ethical value of Responsibility exhibited by project managers and the perception of IT project success.

The correlation findings for Respect versus Success indicated a significant correlation, indicating that a relationship is present. As the calculated significance was

less than the critical threshold ($p < .05$), the null hypothesis $H2_0$ is rejected. There was a strong positive correlation between the perception of the ethical value of Respect exhibited by project managers and the perception of IT project success.

The correlation findings for Fairness versus Success indicated a significant correlation, indicating that a relationship is present. As the calculated significance was less than the critical threshold ($p < .05$), the null hypothesis $H3_0$ is rejected. There was a strong, positive correlation between the perception of the ethical value of Fairness exhibited by project managers and the perception of IT project success.

The correlation findings for Honesty versus Success indicated a significant correlation, so a relationship is present. As the calculated significance was less than the critical threshold ($p < .05$), the null hypothesis $H4_0$ is rejected. There was a strong, positive correlation between the perception of the ethical value of Honesty exhibited by project managers and the perception of IT project success.

Although there have been many studies focusing on leadership, ethics, management relationships, projects, and project success, these findings specifically focused on the relationship between ethical project management and IT project success. The leaders of the Project Management Institute require that certified project managers adhere to the PMI code of conduct (*Code of Ethics and Professional Conduct*, 2007). The results of this research study include evidence that a correlation exists between ethical project manager behavior (as defined by PMI leaders) and the success of IT projects.

The findings support the value of the moral management model, along with key elements of transformational leadership, charismatic leadership, and servant leadership.

These positive leadership models include justification for leaders to demonstrate aspects of responsibility, respect, fairness, and honesty. This study's findings add to the body of knowledge by showing the correlation of these ethical values to IT project success.

Summary

A pilot study was conducted to provide confidence in the survey instrument. There were 39 initial participants and 30 qualified re-test participants. The main data collection included 300 qualified survey participants. The participants provided demographic information and responded to questions regarding the behavior of project managers on IT projects.

Following a factor analysis, the questions were naturally grouped into two components. Component C1 consisted of questions that represented 55% of the variance and tended to be more urgent, internalized, and positively worded. Component C2 consisted of questions that represented about 6% of the variance and were less urgent, more outward focused, and negatively worded. Although the factor analysis of the final 300 surveys did not indicate that the four ethical values were distinctly measured by each corresponding set of six questions, the reliability of the instrument was sufficiently demonstrated by Cronbach's alpha results (see Table 3).

The findings for the four research questions were presented. All four null hypotheses were rejected. These were enumerated as follows:

1. There is a strong, positive correlation ($r = .47$) between the perception of the ethical value of responsibility exhibited by the project manager and the perception of IT project success.

2. There is a strong, positive correlation (r = .45) between the perception of the ethical value of respect exhibited by the project manager and the perception of IT project success.
3. There is a strong, positive correlation (r = .44) between the perception of the ethical value of fairness exhibited by the project manager and the perception of IT project success.
4. There is a strong, positive correlation (r = .47) between the perception of the ethical value of honesty exhibited by the project manager and the perception of IT project success.

These findings align with the PMI professional ethics code (*Code of Ethics and Professional Conduct*, 2007). Key elements of several popular leadership models were also supported. These models included moral management, transformational leadership, and servant leadership.

CHAPTER 5: IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSIONS

The high rate of IT project failures in the United States is harmful to the financial well-being of companies, according to Lientz (as cited in Legris & Collerette, 2006). Project leadership failures are believed to be a major contributor to these costly failures (Shore, 2005). This research could be valuable because ethical leadership is crucial for organizational success (Yukl, 2006), project leadership is a critical factor for IT project success (Amason et al., 2007), and IT project success is important to corporations as well as to other organizations (Meredith & Mantel, 2009). The purpose of this non-experimental, correlational, quantitative research was to evaluate the perceptions of a convenience sample of US-based project team members in order to understand better the relationship between key ethical values of project managers and the success of IT projects in the United States.

The method utilized in this study included the collection of perception-based data via an online survey. Steps were taken to ensure sufficient instrument validity and reliability. The initial survey was improved using input from project management experts and from pilot test results. Existing literature and answers to relationship questions in the study survey supported conclusion validity by confirming that there is reason to believe that a relationship exists between ethical behavior by the project manager and project success. Construct validity in this study was supported by providing clear descriptions and suitable definitions. External validity in this study was addressed by utilizing 300 participants (Tabachnick & Fidel, 2007) who were pre-qualified by survey introduction directions.

According to Zikmund (2003), correlational research is limited because proof of correlation does not imply causation. It is possible that even if a significant, correlational relationship is shown to exist, ethical behavior has not been proven to be the cause of project success. Instead, both occurrences may be caused by other factors. In addition, the data collected for the research was limited to the perceptions of the respondents regarding project success and the ethical behavior demonstrated by the respective project managers. There was no attempt to determine the project manager's intentions. Only the observed behavior was reported and considered. Finally, the approach was limited in that not all unethical behavior may have been observed. For example, a clever project manager could have been dishonest secretly without the survey participant noticing. This limitation may have been overcome by surveying project managers about their own behavior, but the reliability of a self-assessment concerning morality would be uncertain according to Peterson (as cited in Huberts et al., 2007).

Key ethical dimensions were also considered. Anonymity for participants taking the online survey was accommodated by not requiring the participant's name and by having a third party collect and report the survey results. Individual results were not released. Although the survey participants answered questions based on actual projects, no project descriptions or organizational names were solicited during the survey. The study adhered to requirements of Northcentral University's ethics committee. Approval was obtained from the committee before data were collected from survey participants. Participation in the survey was strictly voluntary. Participant contact information and data gathered during the study were either securely maintained or

destroyed. The survey instrument utilized did not deceive or misinform. The survey participants were not exposed to psychological distress or physical harm.

This chapter includes a discussion of the implications of the study. The research questions are discussed and conclusions drawn. Potential limitations are also outlined followed by recommendations for practical applications of the study results as well as recommendations for future research. Finally, conclusions are presented with a summary of key chapter points.

Implications

While project outcomes are of vital interest to leaders of organizations, the rate of IT project success has been historically low (Legris & Collerette, 2006). Cunningham (as cited in Sumner et al., 2006) reported on a large, international survey by the Standish Group, which found that three fourths of IT projects failed. Project failure is harmful to organizations. Lientz (as cited in Legris & Collerette, 2006) estimated that these failures cost billions of dollars annually. Furthermore, Shore (2005) indicated that a lack of suitable project leadership increased the risk of failure. Therefore, this research is important because ethical leadership is crucial for organizational success (Yukl, 2006), project leadership is a critical factor for IT project success (Amason et al., 2007), and IT project success is important to organizations (Meredith & Mantel, 2009).The research questions included in this study will be revisited, along with key conclusions:

Q1. To what extent, if any, is perceived ethical value of responsibility as exhibited by project managers related to perceived IT project success?

$H1_A$. There is a correlation between the perception of the ethical value of responsibility exhibited by project managers and the perception of IT project success.

Implications. The leaders of the Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) identified the following critical, ethical behaviors for project managers to demonstrate responsibility:

1. The project manager should accept projects appropriate for the teams' qualifications, skills, and experience.
2. The project manager should complete the agreed-to tasks.
3. The project manager should admit mistakes promptly and take corrective action.
4. The project manager should protect intellectual property and confidential data.
5. The project manager should uphold policy and rule of law.
6. The project manager should report ethics or legal violations promptly.

According to Yukl (2006) and Singh (2008), responsibility is a behavior that is closely associated with integrity, and Whitten (2006) observed that integrity is essential for the project manager who wants to be successful. This quantitative study confirms the existence of a statistically significant correlation between the perception of project manager responsibility (as defined by the leaders of the Project Management Institute) and the perception of IT project success.

Q2. To what extent, if any, is perceived ethical value of respect as exhibited by project managers related to perceived IT project success?

$H2_A$. There is a correlation between the perception of the ethical value of respect exhibited by project managers and the perception of IT project success.

Implications. The leaders of the Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) also identified the following as critical, ethical behaviors for project managers to demonstrate respect:

1. The project manager should stay informed about the customs and standards of others and avoid disrespectful behavior.
2. The project manager should listen to the opinions of others and make an effort to understand their perspectives.
3. The project manager should approach people directly to resolve conflicts.
4. The project manager should negotiate in good faith.
5. The project manager should refuse to act abusively toward others.
6. The project manager should respect the property rights of others.

Respect for others is part of the moral management model (Carrol, 2000) and the servant leadership model, according to Greenleaf (as cited in Yukl, 2006). Meredith and Mantel (as cited in Shi & Chen, 2006) included respect for others as one of the key rules for successful project leadership. Flannes and Levin (2001) considered respect important for project conflict resolution. Singh (2008) indentified respect for others as an activity associated with leadership integrity and Whitten (2006) observed that integrity is essential for the project manager who wants to be successful. This quantitative study confirmed the existence of a statistically significant correlation between the perception of project manager respect (as defined by the leaders of the Project Management Institute) and the perception of IT project success.

Q3. To what extent, if any, is perceived ethical value of fairness as exhibited by project managers related to perceived IT project success?

$H3_A$. There is a correlation between the perception of the ethical value of fairness exhibited by project managers and the perception of IT project success.

Implications. The leaders of the Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) identified the following as critical, ethical behaviors for project managers to demonstrate fairness:

1. The project manager should be open and transparent regarding the process of making decisions.
2. The project manager should make information available to all who have authority to receive that information.
3. The project manager should be proactive in fully revealing possible conflicts of interest to affected parties.
4. The project manager should not impose rewards or punishments for personal reasons, such as showing favorites, hiring relatives, or making bribes.
5. The project manager should avoid discrimination.
6. The project manager should follow applicable policies and regulations without bias.

Greengard (2007) considered fairness more important to project success than having an MBA. Meredith and Mantel (2003) asserted that fairness contributes to almost every aspect of successful project negotiation and delivery. Jennings (2006) considered fairness to be a critical virtue necessary to avoid the collapse of organizations. Fairness is an integral component of the moral management model (Carroll, 2000) and the

servant leadership model (Carroll & Buchholtz, 2003). Fairness is important for successful conflict management in projects (*Code of Ethics and Professional Conduct*, 2007). Singh (2008) identified fairness as one of the essential elements of integrity and Whitten (2006) noted that integrity is essential for the project manager who wants to be successful. This quantitative study confirms the existence of a statistically significant correlation between the perception of project manager fairness (as defined by the leaders of the Project Management Institute) and the perception of IT project success.

Q4. To what extent, if any, is perceived ethical value of honesty as exhibited by project managers related to perceived IT project success?

$H4_A$. There is a correlation between the perception of the ethical value of honesty exhibited by project managers and the perception of IT project success.

Implications. The leaders of the Project Management Institute (*Code of Ethics and Professional Conduct*, 2007) identified the following as critical, ethical behaviors for project managers to demonstrate honesty:

1. The project manager should make a sincere effort to learn the truth.
2. The project manager should be truthful in speech and in action and should encourage others to do the same.
3. The project manager should give correct information in a prompt manner.
4. The project manager should not commit to tasks without the intention to follow through.
5. The project manager should not be deceptive, for example by lying, speaking half-truths, talking out of context, or holding back pertinent information.

6. The project manager should never be dishonest, especially for personal benefit or to harm another.

Greengard (2007) believed honesty to be essential for effective project leadership. Meredith and Mantel (2003) considered honesty critical during project scoping. Honesty was considered to be one of the virtues needed for an organizational team to be successful (Jennings, 2006). Honesty was also identified as a key component of moral management (Carroll, 2000). According to Hellriegel (as cited in Allen, 2005), effective leadership of a team depends on honesty. Lencioni (2002) asserted that to avoid dysfunctional behavior, honesty was important. Honesty was also considered important for successful conflict resolution on projects, according to Amason, Mooney, and Holahan (as cited in Amason et al., 2007). Singh (2008) included honesty as an essential element of integrity and Yukl (2006) stated that personal integrity was closely linked to honesty. In addition, Whitten (2006) noted that integrity is essential for the project manager who wants to be successful. The results of this quantitative study confirmed the existence of a statistically significant correlation between the perception of project manager honesty (as defined by the leaders of the Project Management Institute) and the perception of IT project success.

Limitations

As with all research, this study had some limitations. Survey participants were found using a convenience sample approach in order to secure a sufficient number of qualified respondents. McMillan and Schumacher (as cited in Rose, 2009) noted that the use of a non-probability sample limits the ability to generalize the results. Another

limitation was that ethical behavior was strictly limited to those behaviors specified by the leaders of the Project Management Institute.

In addition, no long-term behavior or implications were addressed (honesty in revealing a serious product defect to a client could cause an on-going project to fail, but the project manager's honesty could engender trust and generate future business). This study was limited to IT projects and may not be applicable to other types of projects, such as construction work. The study focused on US-based projects, so international or cross-national customs were not evaluated. Finally, only the perceived ethical behaviors of the project managers were considered in this study. Ethical issues with project team members could affect the success of projects, but ethics-related behavior of project team members was beyond the scope of this study.

Recommendations

Since IT project success is important for the success of businesses (Shore, 2005), there is value in better understanding the extent to which ethical project leadership correlates to IT project success. The results of this study provide a foundation for a better understanding of these related concepts and some practical recommendations. Organizational leaders responsible for hiring, training, and managing project managers should take steps to ensure that project managers behave ethically. These steps could include the implementation of a code of conduct and periodic training regarding the importance of ethical behavior. There are also several recommendations for future research. First, an investigation of cultural influences on the actions of leaders and resulting outcomes (Yukl, 2006) in the context of project management could be performed. Second, future research could focus on the conflicting objectives that a

leader faces regarding transparency about risks and problems versus the importance of being optimistic and inspirational (Yukl, 2006) in the field of project management. Third, research could be performed not only on the observable behaviors of project managers, but also on their internalized values and motivations (Yukl, 2006).

Conclusions

Many leadership approaches include an ethical component. Organizational leaders should always be looking for ways to help their managers succeed. Failure by project leadership can result in failed projects (Shore, 2005) and IT projects commonly fail (Legris & Collerette, 2006). Project Management Institute leaders require that project managers follow the professional code of conduct (*Code of Ethics and Professional Conduct*, 2007). There is great interest in ethical behavior, effective leadership, and project success, but there has been little in the research literature regarding a connection between ethical behavior by project managers and the success of IT projects.

Focusing on the key ethical values of responsibility, respect, fairness, and honesty (*Code of Ethics and Professional Conduct*, 2007), a survey of project team members was conducted to gather data regarding the success of IT projects and the perceived behavior of the respective project managers. A significant, positive correlation was discovered in this study. These relationships represent links that have long been believed to exist by organizational leaders. For project managers, the results show that demonstrating ethical behavior by displaying responsibility, respect, fairness, and honesty was not only the right thing to do; it was also the successful thing to do.

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APPENDIXES

Appendix A:

Survey of Perceptions of Ethical Behavior

You are invited to participate in a ten-minute survey designed to provide important data to support research for a doctoral dissertation. Your information will be incorporated into the survey results of other survey respondents. To be eligible to take this survey, you need to have performed substantial work on a US-based, IT project in a role *other* than as the project manager. Substantial work means that you had significant interaction with the project manager throughout the life of the project.

You will be asked for demographic information and then for your perception of the success or failure of that one, specific project. Finally, you will be asked to a series of questions regarding your perception of the ethical behavior of the project manager *on that same project*. (You will *not* be asked for the name the company or project manager.) If the project had more than one project manager, then consider the *primary* project manager when providing demographic information and use a *composite* of project managers when answering questions about ethical behavior. Also, note that some questions are stated in the negative, so please read each question carefully before answering.

Questions About The Survey Respondent

1. What is your gender?

   ❑ Male ❑ Female

2. How many years of experience (rounded up to the nearest year) have you served on project teams? _____ Year(s)

3. What is the primary source of your ethical beliefs?

   ❑ Family or Friends ❑ Religion ❑ Corporate Code of Conduct,

   ❑ Professional Code of Conduct ❑ Other (Specify) _____

Questions About Your Specific Project

4. What was the gender of the Project Manager?

   ❑ Male ❑ Female

5. How many years of project management experience (estimated to the nearest year) did the Project Manager have? (Leave blank if you cannot estimate it.) _____ Year(s)

6. Was the Project Manager certified as a Project Management Professional (PMP) by the Project Management Institute?

   ❑ No ❑ Yes ❑ Unknown

7. How complex was the project?

   ❑ Not Very Complex ❑ Moderately Complex ❑ Very Complex

8. For this survey, a successful project is defined as one that, in your opinion, was completed within 30% of cost, specifications, and schedule targets. Based on this definition of success, how successful was the project?

   ❑ 1 = Very Unsuccessful ❑ 2 = Moderately Unsuccessful ❑ 3 = Neither

   ❑ 4 = Moderately Successful ❑ 5 = Very Successful

For each of the remaining questions please give your perception regarding the ethical behavior of the Project Manager during the delivery of the project. Please indicate how much you agree or disagree with each statement as follows:

Interval Scale Key: 1 = Strongly Disagree, 2 = Moderately Disagree,

3 = Neither Agree Nor Disagree, 4 = Moderately Agree, 5 = Strongly Agree

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9. The Project Manager was truthful.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

10. The Project Manager upheld all applicable policies, rules, regulations, and laws.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

11. The Project Manager made decisions with consideration for the best interests of society, public safety, and the environment.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

12. The Project Manager provided equal access to information for those authorized to have that information.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

13. The Project Manager failed to disclose possible conflicts of interest to the appropriate stakeholders.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

14. The Project Manager listened to the points of view of others and sought to understand them.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

15. The Project Manager failed to respect the property of others.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

Interval Scale Key: 1 = Strongly Disagree, 2 = Moderately Disagree,

3 = Neither Agree Nor Disagree, 4 = Moderately Agree, 5 = Strongly Agree

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16. The Project Manager engaged in dishonest behavior for personal benefit.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

17. The Project Manager attempted to influence a decision despite having a conflict of interest in the decision *and* without the full disclosure or consent of the appropriate stakeholders.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

18. The Project Manager kept commitments that he or she made.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

19. The Project Manager engaged in behavior intended to deceive others, such as telling half-truths, withholding information, or stating things out of context.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

20. The Project Manager discriminated against others based on gender, race, age, religion, disability, or nationality.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

21. The Project Manager did not act in an abusive manner toward others.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

22. The Project Manager did not demonstrate good faith when making project commitments or promises.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

Interval Scale Key: 1 = Strongly Disagree, 2 = Moderately Disagree,

3 = Neither Agree Nor Disagree, 4 = Moderately Agree, 5 = Strongly Agree

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23. The Project Manager failed to approach people directly to resolve project conflicts or disagreements.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

24. The Project Manager negotiated project changes in good faith.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

25. The Project Manager failed to protect confidential information.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

26. The Project Manager applied organizational guidelines without prejudice.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

27. The Project Manager did not take proper ownership of errors or omissions *or* take proper corrective action for errors or omissions.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

28. The Project Manager was disrespectful with regard to norms or customs of others.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

29. The Project Manager demonstrated appropriate transparency in the decision-making process.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

Interval Scale Key: 1 = Strongly Disagree, 2 = Moderately Disagree,

3 = Neither Agree Nor Disagree, 4 = Moderately Agree, 5 = Strongly Agree

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30. The Project Manager failed to report unethical conduct by a project team member to the appropriate authorities.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

31. The Project Manager promoted an environment in which others felt safe in telling the truth.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

32. The Project Manager provided accurate information in a timely manner.

❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5

Appendix B:

Plots Indicating Ethical Subscales (Normally Distributed)

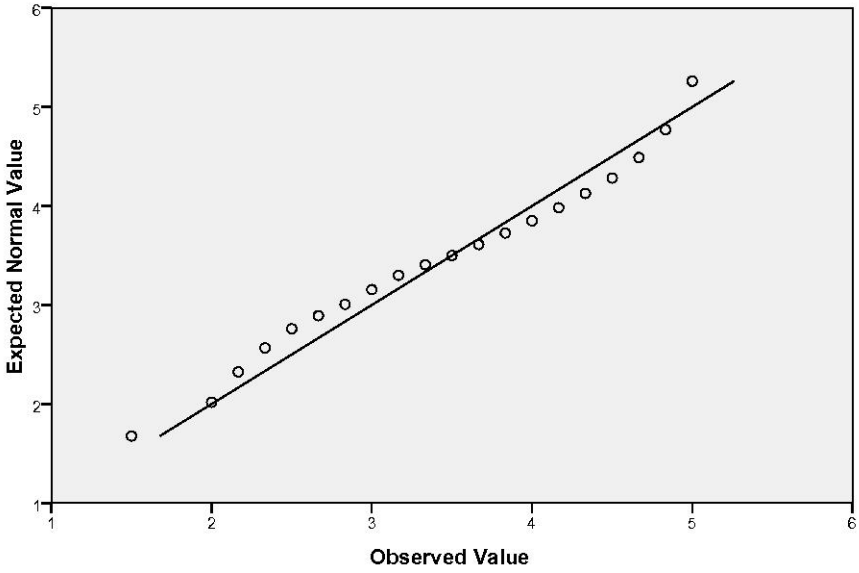

Figure B1. Normal Q-Q probability plot for Responsibility.

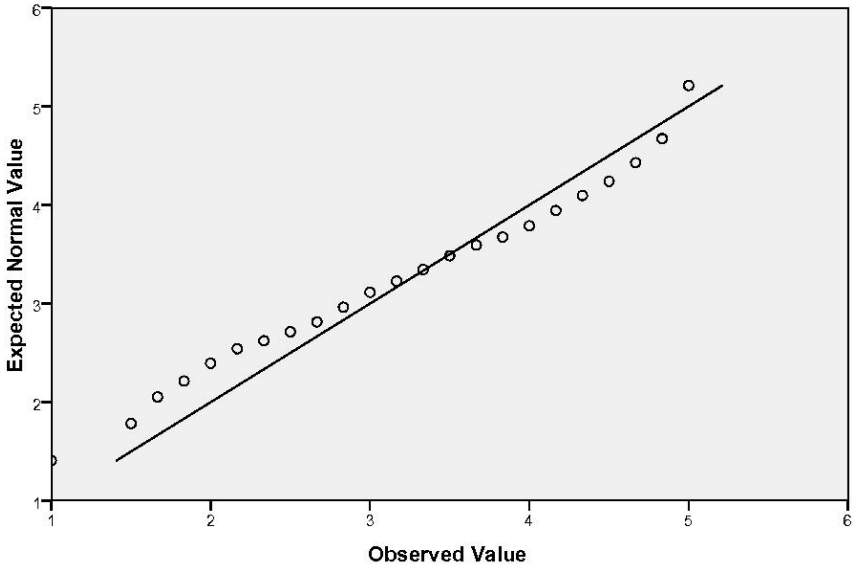

Figure B2. Normal Q-Q probability plot for Respect.

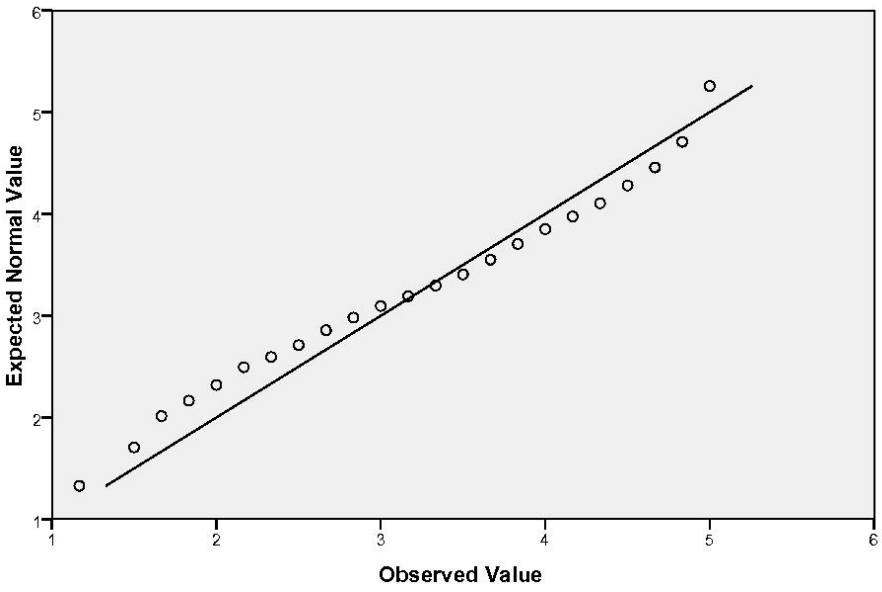

Figure B3. Normal Q-Q probability plot for Fairness.

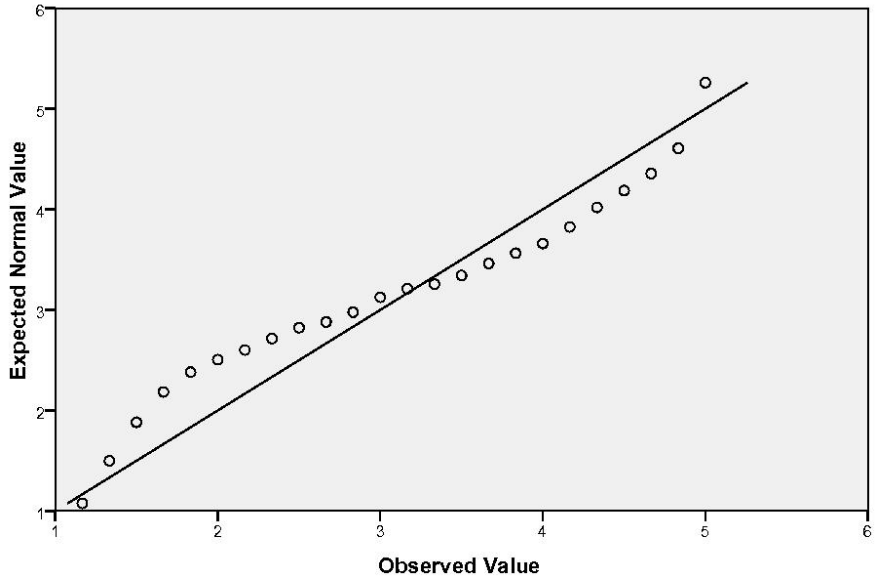

Figure B4. Normal Q-Q probability plot for Honesty.