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How Leadership Affects Follower Satisfaction: The Federal Case

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HOW LEADERSHIP AFFECTS FOLLOWER SATISFACTION: THE FEDERAL CASE

by

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ABSTRACT

This study focuses on the effect of leadership in the federal government. Using a slightly revised version of Bass's Full Range Leadership Model, the study examines the influence of transformational leadership, transactional leadership, and combination of the two on the perception of leadership effectiveness and follower satisfaction in the federal government. To establish if this revised model is consistent with federal employees' perception of effective leadership, if leadership in the federal government increases follower satisfaction, and if both the transactional and transformational leadership are important to followers' perception of leadership and their satisfaction, data from the *2002 Federal Human Capital Survey* was used. Multiple regression analyses were conducted using transactional leadership, transformational leadership, and a combination of the two as independent variables and perceived leadership effectiveness and follower satisfaction as the dependent variables. Control variables that accounted for personal demographics (gender, minority status, and supervisory status) and organizational/job dimensions (pay, benefits, career path, personal fulfillment of the job, the physical conditions, organizational training, workplace flexibilities, coworkers and communication) were also included. Results indicate that the revised model does capture federal employees' perception of effective leadership, that leadership does increase follower satisfaction in the federal government, and that both transactional and transformational elements are important to this perceived effectiveness and follower satisfaction.

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CHAPTER ONE: INTRODUCTION

The federal government is one of the largest employers in the United States. As of September 2004, the federal government had 2,713,229 federal civilian employees (Office of Personnel Management, 2004, December). The Office of Personnel Management (2004, December) cites that the majority, 97.7%, of these employees hold jobs in the executive branch of the federal government while only small percentages of federal civilian employees work within the judicial or legislative branches (1.2% and 1.1%, respectively). With over 2 million employees, the executive branch is a very large organization that can be studied and researched.

To understand the perceptions of federal government employees, it is first important to understand the historical context in which federal employment developed, how federal employment differs from private sector employment and also the current conditions that exist in the federal government. The first employees of the federal government, those who were not elected, were secretaries and clerks. As our country grew so did federal government employment (Reid, 2000). Though in the infancy of the federal government employees were appointed based on a combination of merit and patronage, by the era of President Jackson employees were hired based on a “spoils” system where jobs were granted based largely on the political affiliations of the people and their support of the current administration (Henry, 2001; Milakovich & Gordon, 2001).

This all changed with the passage of the Civil Service Act of 1883, also known as the Pendleton Act. This legislation set the course for what we currently understand to be federal government employment: politically neutral and based on merit (Henry, 2001; Milakovich & Gordon, 2001; Shafritz & Russell, 2003; Starling, 2002). Wilson (1887) also recognized this issue in his famous essay, “The study of administration,” that set the tone for contemporary public administration. Reid (2000) suggests it was not until the 1930s though that full-time civil servants started to surpass patronage workers in federal government employment (Reid, 2000).

Since the 1950s, there is some agreement that federal agencies are staffed with professionals in the fields of their expertise (Henry, 2001; Milakovich & Gordon, 2001) though a belief exists that politics cannot be completely separated from the administrative service (Henry, 2001; Reid, 2000). This professional service of governmental bureaucrats closely represents the modern day public service of the federal government.

The development of public sector service in the federal government progressed along much differently than did private sector business. Not only are there differences in the how these different sectors developed into the organizational structures as we understand them to be today, there are other differences that are inherent within them because of the different environments in which they operate. Baldwin (1987) says that the public sector is different from the private sector in that the public sector has much more indistinct goals because of the various groups involved in the policy process and because of the lack of concrete measurement such as a profit. Also, while there is greater job security for most public sector employees, there is high turnover of leadership due to term requirements for appointed and/or elected officials. These differences need to be considered when looking as theories and empirical research that is not specific to the public sector.

Aside from the differences between the public and private sectors there are some other issues that need to be considered in the current environment of the federal government when conducting research. In fact, this environmental context is in many cases driving much of the research on the public sector. The largest organizational and internal environmental issue is reform. There is a current movement in the federal government to make it more flexible (Naff & Newman, 2004). Reform is nothing new to the federal government. The Progressives pushed for reform in the late 1880s (Reid, 2004), while a century later the federal government was pushing for reform from within. The current reform movement originated in the 1990s with the Reinventing Government movement. The National Performance Review (1993) recognized the need to reform government. Reform was needed to make the federal government more effective and efficient. The regulations of the federal government acted as obstacles that prevented federal government employees from being able to do their jobs. Almost a decade later, Naff and Newman (2004) argue that since 9/11 there continues to be an urgent need to reform the federal government, especially in the area of human resources.

With the pressure to improve public management and to reform federal agencies (Naff & Newman, 2004; Nelson, 2004), there must to be a clear understanding of what needs to be in place for reform to take place. Administrative leadership is frequently cited as one of, if not the most important element in reform efforts (see for example, Hennessey, 1998). As Cullins states, “the federal government’s biggest challenge is leadership itself” (p. 175). Hennessey (1998) advises that leadership is particularly important for reforming the federal government since leaders have influence within their organizations and therefore can affect these organizations and their performance. Moynihan and Ingraham (2004) also argue that leadership is necessary in the public sector for organizational success and for performance in public agencies.

Much governmental testimony also suggests that leadership is important to the reforming or transformation of federal government and federal government agencies (see for example, Larence, 2005; Walker, 2002). Kutz and Hite (2005) in their testimony before the Subcommittee on Government Management, Finance, and Accountability asserted that leadership is critical to the reform in the Department of Defense. They state that “lessons learned from … previous reform attempts include the need for sustained and focused leadership at the highest level” (p. 24). They further testified that if sustained leadership is absent, the transformation of the Department of Defense would most likely fail.

Eileen Larence (2005), Director of Strategic Issues, also argues for strategic leadership in the federal government in her testimony before the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia. She states that “the success agencies have in implementing new human capital flexibilities will depend in large measure on their agency leadership, the existence of high quality Chief Human Capital Officers (CHCOs), and a strategic and effective CHCO Council” (p. 8). Since the federal government’s attempt to change its personnel practices are a major driver of reform, leadership will be crucial in their implementation of these changes.

Aside from performance and their ability to drive change, leaders influence federal agencies in other important ways. For example, leadership affects the satisfaction of employees. In many cases if there were better leadership within organizations there would be improved satisfaction among the employees (Bullock, 1984). In fact, Stier (2003) suggests that in the federal government where employees’ satisfaction is crucial for organizational success, leaders are a necessary element. If federal agencies’ success depends largely on the satisfaction of the employees within the federal government, then federal employees’ satisfaction is partly determined by the leadership within the federal government. Therefore, study of federal government leadership is important for the further understanding of how and why this effect takes place.

The purpose of this investigation is to examine the effect of leadership in the federal government. Bass's Full Range Leadership Model provides a theoretical framework underlying this study.

Bass's Full Range Leadership Model

A well known leadership theory is Bass's Full Range Leadership Model. In his book *Leadership and Performance beyond Expectations*, Bass (1985) outlines the beginnings of his theory of leadership in which both transactional and transformational leadership are needed to enhance performance. Bass developed the Full Range Leadership Model (1985, 1996b) based on his belief that transformational leadership and transactional leadership were not ends on a single continuum as described by Burns (1978), but as leadership patterns that all leaders possess and use in differing amounts. For exceptional performance, transformational leadership behaviors need to augment transactional leadership behaviors (Bass & Avolio, 1993). Therefore, the best performance is the result of using both transactional and transformational leadership behaviors with their subordinates.

According to Bass (1998), transactional leadership "occurs when the leader rewards or disciplines the follower depending on the adequacy of the follower's performance" (p. 6). In essence transactional leadership is based upon an exchange agreement between the leader and the follower (Bass, 1996a). Bass (1985) contends that transactional leadership is comprised of "contingent reward" and "management-by-exception". Essentially, the leader either rewards employees for a good job or punishes them only when something goes wrong.

Transformational leadership is motivational and encourages followers to transcend their own self-interests for the betterment of the organization, and working towards higher level needs, such as self-actualization (Bass, 1996a). Transformational leadership is associated with extra effort by followers as well as with higher levels of follower satisfaction (Bass, 1985). Bass (1985, 1996a) suggests that there are four transformational leadership factors. These are "idealized influence", "inspirational leadership", "intellectual stimulation", and "individualized consideration."

Idealized influence refers to leaders who act as role models, have very high ethical and moral standards, respect of their followers, and insight into their follower's needs, and who provide ideological goals for followers. Inspirational leadership or motivation is best described as leaders who motivate and inspire their followers by challenging them, supplying meaning, and communicating a vision of the future. Intellectual stimulation includes the behaviors of leaders who push their followers to find creative and innovative solutions. Lastly, individualized consideration is associated with support of followers. Such behaviors as listening to followers, coaching and advising them, and delegating tasks as a way for followers to develop would be representative of individualized consideration (Bass, 1985, 1996a).

Bass (1985) has conducted considerable research on his own theory. In one study he had college students rate well-renowned leaders as if they were their subordinates. He found the leaders all scored higher on factors associated with transformational leadership than transactional leadership. He was also able to correlate these scores to both the satisfaction with the leaders and with their effectiveness. The results demonstrated a much higher correlation between transformational leadership and both satisfaction with the leader and effectiveness of the leader.

Statement and Significance of the Problem

In 2003, the Partnership for Public Service (PPS) and American University's Institute for the Study of Public Policy Implementation (ISPPI) conducted a study to determine what were the "best places to work in the federal government" (Partnership for Public Service, 2003). It was concluded that employee satisfaction is a major determinant of which places were the best to work for. PPS and ISPPI were also interested in determining what drives satisfaction in federal employees; effective leadership was suggested as one of the crucial factors. Though found to be very important, effective leadership was also found to be lacking in this government-wide analysis (Beekman, 2004; Partnership for Public Service, 2003).

To have a true empirical understanding of a phenomenon, it is important not only to look at what drives this phenomenon; it is equally important to see how great its effect is. Van Wart (2003) suggests that though the debate about the degree to which leadership makes a difference constitutes a major branch of the mainstream leadership literature, in public sector literature this stream of research is not as articulated. The paucity of leadership literature in the public sector has resulted in a lack of systematic empirical evidence regarding the relationship between leadership and follower satisfaction in the federal government. For leaders in the federal government a study that empirically examines which leadership behaviors have an impact on follower satisfaction would be both opportune and appropriate as we move forward in the twenty-first century.

Aside from just mainstream leadership literature, which is dominated by business and psychology, there is a need to look at leadership within the public sector. Terry (1995) indicated a decade ago that rigorous study of leadership in public agencies was lacking. Van Wart (2003) also suggests that though mainstream literature on leadership has matured, administrative leadership distinctive to the public sector lacks the same conceptual or empirical sophistication. By researching leadership in federal government agencies this study will add to the literature on transformational leadership and address some of the gap in public sector academic literature that is suggested by Fairholm (2004).

The purpose of this study is to increase the knowledge of leadership in the federal government specifically but also more generally in the public sector by looking at the relationship between leadership as defined by Bass's Full Range Leadership Model and follower satisfaction. To be able to look at this relationship, first analysis of Bass's model will be completed to determine if it actually is a measure of effective leadership in the federal government setting. This is important to determine since effective leadership is a major driver of satisfaction as determined by Beekman (2004) and the Partnership for Public Service (2003), but that effective leadership is lacking in our federal government.

Implications of this research will attempt to demonstrate the effect that leadership has on satisfaction, something that is of particular interest to researchers that study the effects of different phenomena on organizations. It could point to further need in the federal government to ensure leadership development programs are adequately preparing their leaders. Ingraham & Getha-Taylor (2004) suggest there is a need to develop leaders in the public sector, though how to accomplish this may not be as clear.

A secondary analysis of a federal government survey conducted in 2002 will be performed to assess the impact of leadership behaviors on the satisfaction of employees in various Executive Branch federal agencies including military, administrative, and regulatory agencies.

Research Questions

As discussed above there is a great need for empirical research to add to the leadership literature in the public sector. More specifically, the nature of leadership in the public sector and leadership's relationship to follower satisfaction need to be addressed. From the issues discussed above the following questions are being postulated to look at this relationship.

1. Does Bass's Full Range Leadership Model provide us with a relatively comprehensive definition of an effective leader in the federal government? In other words, is Bass's definition of leadership capturing most of the possible dimensions that would produce effective leadership?
2. To what degree are transactional and transformational leadership styles important to effective leadership in the federal government?
3. How much does leadership improve follower satisfaction in federal government agencies? Is it a major element in the satisfaction of the employees who work in the federal government?
4. Are both transactional and transformational leadership styles important to follower satisfaction in the federal government?

CHAPTER TWO: LITERATURE REVIEW

Leadership has been around for as long as people and societies have existed and it is present in all cultures no matter what their economical or social makeup may be (Bass, 1990). Leadership is not only a human quality though; it is found in many animal species, from low level vertebrates such as chickens, to higher level primates such as gorillas and whales (Bass, 1990). Through observation and experimentation, especially conducted in the animal's own natural setting, it can be deduced that there exists a hierarchy of leadership and that leadership grants privileges to those who have it (Bass, 1990). If one is a believer in the evolution theory of mankind, our leadership capabilities as humans are the result of leadership learned in the evolution of man.

Literature about leadership can be found in the writings of most societies. It can be found in early Greek and Latin literature and in the Bible, as well as in Chinese and Icelandic classic works and in ancient Egyptian hieroglyphics. In fact, much of this early writing on leadership was important in the development of civilizations. Myths or legends written about great leaders provide explanations for emergence of certain individuals or groups as leaders and of certain groups as followers or subordinates (Bass, 1990).

Leadership has also been found in all types of cultures, from those that still use hunting and gathering methods to those societies that are more technologically advanced. In small hunting and gathering societies, leadership may used to organize large-scale hunts for food. In more technologically advanced society leadership may be used in order to implement technology for the sake of generating surplus wealth and to find ways to distribute this surplus (Chemers, 1997).

Although leadership is an age-old concept, it remains a complex term that researchers and scholars grapple with continuously. One of the main reasons is the extensive number of definitions for this term. Bass (1990) suggests that "there are almost as many different definitions of leadership as there are persons who have attempted to define the concept" (p. 11). Yukl (1989, 2002) suggests that most theorists define leadership in terms of the phenomena they are researching. He indicates that as a result the definition of leadership has been built around leader traits, leader behaviors, the influence that leaders use, the patterns of interaction between leaders and followers, and the roles based in the leader-follower relation by those who have studied these different areas of leadership.

There have been many definitions of leadership throughout the ages, but Bass (1990) gives one that is very comprehensive and broad, and therefore is a good starting point for a discussion of leadership. He suggests that:

> Leadership is an interaction between two or more members of a group that often involves a structuring or restructuring of the situation and the perceptions and expectations of the members. Leaders are agents of change – persons whose acts affect other people more than other people's acts affect them. Leadership occurs when one group member modifies the motivation or competencies of others in the group (pp. 19-20).

This complex, very broad definition of leadership suggests that anyone within a group can exhibit leadership at one time or another during the process of task. Members will, in fact, vary in the amounts of leadership they show, but all have the ability to be leaders if called on (Bass, 1990).

A definition presented by Chemers (1997) suggests that "leadership is a process of social influence in which one person is able to enlist the aid and support of others in the accomplishment of a common task” (p.1). As can be seen, this definition has some very similar factors as Bass’s discussed above: it is a process, there is a factor of influence, and two parties need to be involved.

To understand what leadership is completely, a differentiation needs to be made between leadership and management. A leader does not have to be the manager and a manager is not necessarily a leader. An informal leader in an organization can lead without being the actual manager and just because someone is given the title of a manager it does not mean he or she has the ability to lead (Yukl, 2002). Conversely, someone who is said to be a leader in an organization may not have the skills and knowledge necessary to manage. Zaleznik (1977) suggests that managers and leaders differ in their attitudes about organizational goals, impressions of the work itself, relations with others within the organizations, and perceptions of who they are. Leaders are those who shape the goals of an organization and produce excitement about the work itself, while managers tend to respond to goals necessitated by the organization and its culture and to coordinate and limit people within their work roles.

With this understanding of what constitutes leadership, the next section will review the concept of leadership from a historical perspective, looking at how it has progressed and developed over the years. A review of major research and the theoretical perspectives will be presented. It is beyond the scope of this research to look at all theories in the leadership literature, so only the major theories will be highlighted. The review will begin with the early literature such as the trait approach, and progress through the behaviors or styles approach, to the situational contingency theories. Models such as Contingency theory, Path-goal theory and Situational theory will be discussed. Then a comparison of transactional leadership and transformational leadership will be presented.

<u>Historical Review of Major Leadership Theories</u>

Trait Approaches to Leadership

Early research on leadership "emphasized the examination of leader characteristics...in an attempt to identify a set of *universal* characteristics which allows leaders to be effective in *all* situations" (Schriesheim, Tolliver, & Behling, 1980, p. 4-5). Jago (1982) indicated that most of the research from the beginning of the 1900's until the 1940's tried to identify what intrinsic characteristics leaders possessed that made them different from followers.

An early essay by Thomas Carlyle (1841/1893) espoused that successful leadership was based on special traits or characteristics. These special traits enabled the leader to gain leadership positions regardless of other factors (i.e. situational factors). The "Great Man Theories" suggest that it is by possessing particular traits that certain people deserve to be in a leadership position and not by the social privileges allotted to them (Chemers, 1997). Therefore, researchers identified the particular attributes possessed by great men in history. Such great leaders as Abraham Lincoln, Napoleon, and Gandhi were studied to determine the traits that made them effective leaders of their time (Jago, 1982).

Stogdill (1948, 1974) conducted two studies to review the trait research. The first study was a literature review of studies conducted through 1947. The review of these studies indicated that the primary methods used in previous research studies were observation, case study or biographical data, having associates vote for their choice of leaders, having qualified observers rate or nominate leaders, and rating, testing, and selecting persons that occupied leadership positions. Numerous traits were presented and analyzed in this study. The traits that were studied included age, height and weight of the leader, appearance, speech fluency, intelligence, scholarship, insight and originality, adaptability, introversion-extroversion, dominance, persistence, self-confidence, mood, social skills, popularity, and many others (Stogdill, 1948).

The results of Stogdill's study suggested that these traits did have some relationship to leadership, but the main finding of this study is that traits alone do not determine a leader's success. Stogdill (1948) concluded that

> a person does not become a leader by virtue of the possession of some combination of traits, but the pattern of personal characteristics of the leader must bear some relevant relationship to the characteristics, activities, and goals of the followers. Thus, leadership must be conceived in terms of a interaction of variables which are in constant flux and change....The persistence of individual patterns of human behavior in the face of constant situational change appears to be the primary obstacle encountered not only in the practice of leadership, but in the selection and placement of leaders (pp. 64-65).

This conclusion suggests that a leader's individual traits singularly do not determine their ability to lead but other factors, ones that may change from situation to situation, need to be considered.

Stogdill (1974) revisited leadership trait literature in a second study, covering the time period from 1948 to 1970. In this study, Stogdill suggested that methods for data collection had improved and that there was more available research on leadership. He again found that many different traits have some relation to leadership. Those traits that have the most positive findings from his review were activity or energy level, intelligence, ascendance or dominance, self-confidence, need from achievement, and sociability or interpersonal skills.

Stogdill further suggests that the extreme situational theories that had pervaded the literature since his last study were incomplete. Looking at the traits of leaders was still important, but these traits needed to be viewed in terms of the situation or in interaction with the situation. Therefore, individual traits were still important to leadership literature, but they needed to be examined within different situations (Stogdill, 1974). Stogdill's (1948, 1974) studies pointed out one of the largest weaknesses of the trait approach to leadership: the pure trait research failed to take into account the effect of the situation that the leader would find himself or herself in (Bass, 1990).

It is because of the trait literature, though, that researchers began to look at the situation as a factor in the leadership equation. Stogdill is credited with starting a revolution in leadership research when he suggested the importance of situation. After his publication in 1948, situation-specific research became the dominant approach to leadership theory. His return to traits theory again in 1974 was an important reminder that situation alone does not determine leadership, that situation and personal characteristics are important and that the interaction between them needs to be considered (Bass, 1990). This interaction between traits and situations became more important because Stogdill's idea was later followed up on by those who looked at leadership in terms of contingency theories. These contingency theories looked at leadership in terms of which traits were related to which situational variables, and how these combined to form the complex nature of leadership (Chemers, 1997).

The Great Man theory of leadership is showing a comeback in the application of those studying transformational leadership as a way to demonstrate how failing businesses are returned to profitability through transformational leadership. In-depth reviews of corporate leaders such as Lee Iacocca are being used by those studying transformational leadership (Bass, 1990; Tichy & Devanna, 1986). By looking at case studies of leaders again we are returning to a more subjective research of leadership. Though this approach may not be as empirically sound, much understanding of transformational leadership has been gleamed from in-depth life reviews of great political, social, and industrial leaders (Burns, 1978; Tichy & Devanna, 1986).

In closing, the trait approach to leadership was imperative in development of leadership as a field of study. Much of the succeeding research is built upon the foundation that was laid by the trait approach to leadership, either through looking at interactions with other factors or through trying to overcome the weaknesses suggested above (Bass, 1990).

Behavioral or Styles Approach to Leadership

In the 1940's, leadership research started exploring other avenues to determine effective leadership. The weaknesses of the trait approach in part led to this divergence (Bass, 1990; Gibson, Ivancevich, & Donnelly, 1997). Researchers started looking at the behaviors of the leader instead of the traits he or she possessed (Bass, 1990). A number of the original studies done to look at the behaviors of leaders were completed at Ohio State University throughout the 1950's. The original questionnaire consisted of 1,800 items that described leadership behavior. This list was reduced to 150 items and thereafter became known as the Leader Behavior Description Questionnaire or LBDQ (Bass, 1990; Yukl, 2002).

The results from the Ohio State studies indicated that there were two broad groupings of leadership behaviors: consideration and initiation-of-structure (Bass, 1990; Schriesheim et al., 1980; Yukl, 2002). Consideration refers to interpersonal relations demonstrated by concern for and support of subordinates, whereas initiating structure behaviors are concerned with meeting task objectives such as the coordination of activities, assignment of tasks, and setting standards for performance. These behaviors evolve around the defining of the leader's and subordinate's roles in attaining goal or task completion (Yukl, 2002). Consideration and initiation-of-structure are seen as being independent of each other. This means that leaders could be regarded as high on both, low on both, or high on one and low on the other (Yukl, 2002). Thus being rated high on consideration does not mean that the person is low on initiation-of-structure and, conversely, being rated high on initiation-of-structure behaviors does not mean that the person is considered low in consideration behaviors.

Another set of studies looking at behaviors of leaders took place at the University of Michigan during the same time period as the Ohio State studies. These studies were particularly interested in looking at relationship between leaders' behaviors and groups (Yukl, 2002). Someone with an employee orientation would have a strong emphasis on human relations, while someone with a production orientation would have strong emphasis on the production components of the job. In contrast to the Ohio State studies, these leadership behaviors were viewed at the "opposite ends of a single continuum" (Northouse, 2004, p. 68). This means that someone who has an employee orientation can not have a production orientation. It is an either-or condition.

Based upon this work, a model called the Managerial Grid was postulated by Blake and Mouton (1978, 1985). This model suggests that there are two leadership dimensions: concern for production and concern for people. Concern for production deals with organizational efficiency, task completion, and results. It can be demonstrated through policy decisions, quality of services and determination of efficiency and outputs. Concern for people involves the relationship with the people necessary to accomplish organizational work. It can be seen in the supportive and understanding behaviors of leaders.

These dimensions run on vertical and horizontal axes of the grid ranging on a scale from one to nine. One would indicate minimum amount of the quality where nine would denote maximum amount on that dimension (Blake & Mouton, 1978, 1985). These two leadership styles are seen as interdependent since leadership cannot be accomplished without both the task and the people. Different composites or styles of leadership are possible depending upon the particular combinations of these dimensions (Blake & Mouton, 1982). Based on these combinations, five leadership styles are considered. They range from “country club management” where concern for people is high and concern for production is low, to its opposite of “authority-obedience” where concern for production is maximized while concern for people is minimized. The grid also suggests that there is a “team management” style where both concern for people and concern for production are maximized, an “organizational man management” style where both concern for people and concern for production are intermediate, and an “impoverished management” style where both concern for people and concern for production is minimized (Blake & Mouton, 1978, 1985).

These behavioral or styles approaches to leadership have a number of limitations. The studies conducted at Ohio State University and the University of Michigan used surveys to gather their data which is complicated by response bias. Some respondents may answer based upon their like or dislike of the leader (Yukl, 2002). There is also little relation between how subordinates describe leaders and how leaders describe themselves in terms of initiation and consideration (Bass, 1990). These limitations may create weaknesses in theories and models initiated from this research. Are the subordinates the best observers of leadership behaviors, or are the leaders themselves the best determinates of what their behavior and subsequently their leadership styles are?

Also, although it has been suggested that high-high styles, ones that are high in both relationship and task, are most effective, this has not been demonstrated empirically. There has only been limited support for this line of thinking and it may be that a relationship orientation is good for certain outcomes while a task orientation is better for others (Yukl, 2002). Though the managerial grid model relies on combinations of people and task dimensions that recognize that certain behaviors could be appropriate for certain situations, the model never actually gives any specific hypothesis about the appropriate behaviors that could be used for different situations (Yukl, 2002). In fact, Blake and Mouton (1982) argue that the situational context should not be considered in the training and development of professionals and that relying on one best style of leadership (in their case a high-high orientation) would strengthen leadership capacity.

Yukl (2002) suggests that this lack of looking at the specific context and situational requirements that are faced by leaders prevents a complete understanding of leadership. He also suggests that like “trait research..., the behavioral research suffers from the tendency to look for simple answers to complex questions” (p. 74) because it does not look at how patterns of behaviors are used by leaders and how these interact in complex fashions. In other words, there are more than single individual behaviors involved in the complex scheme of leadership effectiveness.

Situational-Contingency Theories

In this research we see combination of leadership characteristics and situational variables. As suggested by Schermerhorn, Hunt, and Osborne (1998) “often, leader traits and/or behaviors act in conjunction with situational contingencies...to determine outcomes” (p. 213).

Additionally, “the person, the situation, and the interaction of the person with the situation (and the task confronted in the situation) *all* matter for leadership effectiveness” (Sternberg, & Vroom, 2002, p. 313-314). This is the premise of situational-contingency leadership research.

An initial theory that looked at contingent factors in determining leadership success was Fiedler’s Contingency Model (Fiedler, 1967; Fiedler & Chemers, 1974; Fiedler & Garcia, 1987). This theory “postulates that the effectiveness of a group is contingent upon the relationship between leadership style and the degree to which the group situation enables the leader to exert influence” (Fiedler, 1967, p. 15). Fiedler (1967) developed the Least Preferred Coworker Scale (LPC) to measure leadership styles. A person who gets a low score on the LPC scale is more task-oriented, while someone with a high score is more relationship-oriented.

The situation in this model is considered in terms of three group-situational factors. These group-situational factors are position power of the leader, structure of the task that needs to be completed, and relationship that exists between the leader and members of the group. “Task structure” refers to whether the task is structured or unstructured, in other words if it is clear and obtainable or unclear and ambiguous. “Position power” refers to the extent the leader’s position allows him or her to get compliance from the group. A strong position power would allow compliance based on position, a weak position power would not. The “leader-member relation” refers to how well accepted the leader is and how well the leader gets along with members of the group. This factor ranges from poor to good. By combining these situational factors, each situation can be grouped into eight octants ranging from favorable for the leader (Octant 1) to unfavorable for the leader (Octant 8) (Fiedler, 1967; Fiedler & Chemers, 1974; Fiedler & Garcia, 1987).

Fiedler (1967) suggests that "*the appropriateness of the leadership style for maximizing group performance is contingent upon the favorableness of the group-task situation*" (p. 147). Leaders with a task-oriented style will work best in situations that are highly favorable or highly unfavorable for them. On the other hand, a relationship-oriented leader works better in a more moderate level of favorableness, Octants 4 or 5 on the scale. Though this model does not suggest that there is a perfect leader, it does suggest people who are given a role of leadership may be effective if they are positioned into situations that allow for a match between that situation and their leadership style. This theory gives us some predictive power in determining what these appropriate situations are (Fiedler & Chemers, 1974).

This was one of the first models that considered the impact of the situation on leaders as prescribed by Stogdill (1948). Thus instead of focusing on a "single, best type of leadership" (Northouse, 2002, p. 113), contingency theory highlighted the importance of both the situation and the leader's style. Contingency theory may have contributed to others looking at situational factors in determining leadership success (Yukl, 2002). In terms of the larger leadership literature this model was one of the initial situational-contingency models responsible for shifting the focus from looking exclusively at traits or behaviors to theories that studied the complex combination of situational factors and traits or behaviors.

Another theory that looks at the interaction between leadership styles and situations is Situational Leadership Theory, originally called the Life Cycle Theory of Leadership (Hersey & Blanchard, 1969, 1972, 1979, 1982; Hersey, Blanchard, & Johnson, 1996). This model was built upon the Ohio State Leadership Studies and the Managerial Grid Model, which believed that there was one best leadership style, and suggested that the leadership style used by leaders should vary according to the situation (Hersey & Blanchard, 1969). The authors suggested that a third dimension, effectiveness, be added to the two-dimensional model proposed by the Ohio State studies. A leadership style is deemed effective if it is appropriate to the environment. From this understanding, they developed a model that is based upon a curvilinear relationship between leadership behaviors (either task or relationship oriented) and subordinate maturity. In a revised version of the original model, Hersey and Blanchard (1982) suggest that there are four leadership styles based upon the relationship behavior or task behavior of the leader. Relationship behaviors evolve around the emotional support provided by the leader, while task behaviors center on guidance of and direction to the subordinates.

The four styles that are derived from these behaviors are: 1) delegating, where there is a need for low relationship and low task behaviors; 2) participating, where there are high relationship and low task behaviors; 3) telling, with its high task and low relationship behaviors; and 4) selling, high on both task and relationship behaviors. This model also delineates the dimension of maturity into 4 levels from high maturity to low maturity or immaturity (Hersey & Blanchard, 1982). Additional revisions to this model resulted in renaming the maturity scale to the readiness scale (Hersey et al., 1996). A divergence between the initial researchers of this model also led to a second theory, named the Situational Leadership II (SLII), used in later training seminars (Hersey et. al., 1996).

Based on these dimensions, the researchers suggest that there is an appropriate style of leadership associated with each of the maturity levels which includes the correct level of direction and support. Telling is the style appropriate for people low in maturity because they are unable and unwilling to do something they are not confident in. This insecurity points to a need for more directive behavior to accomplish tasks. The selling style is more appropriate for those who are low to moderately mature. These people are not yet fully competent at tasks but are willing to do the tasks so a style that is both supportive and directive is best. The participating style is most appropriate for individuals with either moderate or high maturity since these individuals are viewed as able to accomplish the tasks, but are unwilling to do so, perhaps due to lack of confidence or motivation. The leader in this case needs to be supportive to help the subordinate through this time. Unlike other styles, delegating should be used with high maturity individuals only because these people are both willing and able to complete the tasks and therefore a low-profile is needed from their leader (Hersey & Blanchard, 1982).

Situational Leadership theory recognizes the importance of subordinates in determining an appropriate leadership style. Subordinates in this model are viewed as a situational determinant that influenced what leadership behaviors are needed (Graeff, 1983). Both of these concepts depart from previous research and offer the field of leadership a better understanding of and application for leadership. However, Graeff suggests that Hersey and Blanchard’s usage of subordinate maturity as a situational determinant weakens this model because of its ambiguity and that there are conceptual, theoretical, and logistical problems with this model.

A third theory of this situational-contingency approach is path-goal theory. Chemers (1997) suggests that path-goal theory overcame weaknesses associated with early contingency models. He points out that

> one of the weaknesses of Fielder’s contingency model ... was its failure to describe or directly analyze the processes by which the leader’s motivational orientation affects group processes and outcomes. One obvious path for leadership effects to follow is through the psychological states of the followers, the people who must aid the leader in accomplishing the mission. Following this logic, leadership can be construed in terms of its effects on the motivation and satisfaction of followers (p. 44).

This is what in essence path-goal theory of leadership tries to explore: how leadership affects motivations and satisfaction.

Path-goal theory developed by House (1971) and House & Mitchell (1974) examines the effect that particular leadership behaviors have on the motivation and satisfaction of subordinates. Though the relationship between supervisory behavior, motivation, and satisfaction was previously examined by Evans (1970), it is the model as developed by House that is most well known (House, 1971).

House and Mitchell (1974) presented a revised version of path-goal theory. In this model, they suggest there are four leadership styles: 1) directive, which describes a leader who tells subordinates actually what he/she wants from them; 2) supportive, which is someone who is friendly and concerned about his/her subordinates; 3) participative, which is someone who consults with his/her subordinates prior to deciding on an issue; and 4) achievement-oriented, which describes a leader who has high expectations for subordinates and who expects high levels of performance from them. These four leadership behaviors affect subordinates' satisfaction, acceptance of the leader by the subordinates, and the expectations subordinates have in terms of effort, performance, and rewards.

The four leadership behaviors are contingent on two situational factors which moderate the relationship that exists between these behaviors and the satisfaction of subordinates. These two contingency factors are *subordinate characteristics*, which include preference for locus of control and ability to perform a task, and *environmental factors*, which include the task itself, the authority system that exists in the organization, and the work group. While subordinate characteristics influence the personal perceptions of subordinates, environmental factors influence motivational stimuli, the constraints felt by the subordinate, and the rewards associated with performance. These contingency features are important because based on them certain leadership behaviors will be more effective on subordinate motivation and satisfaction than others (House & Mitchell, 1974).

House (1996) reformulated this theory because of theoretical and paradigm shifts that had occurred over the couple of decades since it development. This new theory expanded the number of leadership styles to eight. It also looked at individual differences such as unconscious motives of subordinates. He developed 26 propositions based on these leadership styles and individual differences. This reformulation shows a growth in the understanding of how leadership has changed over the last couple of decades and how theories may be revised due to more current research.

Path-goal theory contributed greatly to the study of leadership. Aside from broadening our understanding of leadership at the time, it was paramount in the influence and development of better theories. It impacted transactional theory because the model attempted to show how subordinates' satisfaction and motivation was influenced by contingent rewards (Bass, 1985; Evans, 1996). Path-goal theory also assisted in the development of charismatic and transformational leadership (Chemers, 1997; Evan, 1996). As Evans (1996) suggests, the development of these improved theories has transcended the limits of the original path-goal theory.

Another contingency approach to leadership is the Vroom-Yetton Model. Though similar to the previous situational contingencies models in some ways, it differs from each of them in "its focus on the amount and form of participation of decision making" (Vroom & Jago, 1988, p. 54). It also differs from them in the conceptualization of a situation. In the Vroom-Yetton Model, "the situation is a problem or decision faced by the leader" (p. 54). Therefore the situation for this model is not defined in terms of environmental factors, but by the problem faced by the leader and the group at that time.

The basic premise of this model is dependent on a decision tree that is set up based on questions used to determine the nature of the problem (situation). By answering “Yes” or “No” to each of the questions, the leader gets closer to determining which decision process should be used in a particular situation. By answering all the questions, one is left with a feasibility set of decision methods to choose from. These methods include autocratic decision making, consultative decision making, group decision making and delegative decision making for individual problems. What differentiates these methods of decision making is the degree of participation from the subordinates in the decision process (Vroom & Jago, 1998).

The questions that are asked in the decision model are based on situational variables, such as the amount of information the leader possess about the problem, the need for acceptance, the need for cooperation, disagreement on alternatives, and the structured or unstructured nature of the problem. Decision acceptance and decision quality are also important to the decision (Vroom & Jago, 1998; Yukl, 2002).

Paul (1989) suggests that for each particular problem a method for making the decision by the leader needs to be appropriately matched to it, so it would be possible to use each decision method over time. It is the undertaking of the leader to decide when each method should be used and how that method should be implemented based on the situation. As Paul states, “the appropriate choice of decision-making method will depend on the attributes of the problem faced” (p. 203).

Transactional Leadership Approaches

Transactional approaches are based on leadership in which "one person takes the initiative in making contact with others for the purpose of an exchange of valued things" (Burns, 1978, p. 19). Burns, who studied transactional leadership in terms of political leaders and who differentiated transactional leadership from transformational leadership as they both applied to political figures, was the first to look at this distinction (Bass, 1990; Burns, 1978). For Burns (1978),

> the relations of most leaders and followers are *transactional* – leaders approach followers with an eye to exchanging one thing for another: jobs for votes, or subsidies for campaign contributions. Such transactions comprise the bulk of the relationships among leaders and followers, especially in groups, legislatures, and parties (p. 4).

This basically describes the premise for the transactional approaches to leadership, since most are based on a social exchange (Chemers, 1997; Bass, 1990; Hollander, 1978).

Hollander developed "the first and most influential transactional leadership theory" (Chemers, 1997, p. 65). Hollander (1958) considered status to be "idiosyncrasy credit" which could be earned or taken away by subordinates based on the behavior of the leader in relation to the group. He sees leadership as an exchange of these credits, which are an indication of the leader's status or legitimacy. Leaders can earn credits that allow them to act in idiosyncratic ways, such as suggesting innovative or deviant approaches to problems. These credits are earned by the leaders through group goal achievement and by conforming to the norms of the group. Credits can be lost if the group fails to achieve its goals, especially if this is due to an innovative strategy suggested by the leader (Chemers, 1997; Hollander, 1958, 1978).

This theory has considerable support for the predictive validity of its model (Chemers, 1997). In addition, it makes several important points. There is a give-and-take relationship between leaders and followers and the leader capacity to influence is determined by the followers' belief in that leader's legitimacy. Followers are considered to be a very important variable in the leader's ability to act. Lastly, the exchange that takes place needs to be quick and fair (Chemers, 1997).

Hollander's theory also has limitations. Even though the theory suggests that the leader can depart from the norms of the group, she or he still must pay attention to those norms to be able to influence the group (Bass, 1990). There are also limits to the leader's ability to deviate from the norms, especially those norms concerning the role expectations of the leader (Bass, 1990).

Because of their exchange focus many of the situational-contingency models of leadership that were discussed previously are transactional in nature. The situational-contingency approaches were later grouped together as transactional since they relied heavily on social exchange theory and expectancy theory (Van Wart, 2005). Social exchange theory (Homans, 1958) suggests that all behavior is determined by the exchange of rewards, which can be monetary or non-monetary, such as approval. Expectancy theory (Vroom, 1964) takes exchange theory a step further to suggest that outcomes such as performance or satisfaction depend on the valance of the reward. In other words, outcomes will depend on whether the followers place value in the rewards being offered to them or not. Hater and Bass (1988) suggest that contingency theories "attempt to explain why and when leadership-by-contingent-reward works" (p.695).

Aside from relying heavily on an exchange relationship as discussed by Burns (1978), these earlier situational-contingency theories can also be grouped as transactional in that they have a similar focus. These theories focus on the individual needs of followers, on supervisors in closed, stable environments, on small group settings, and on task and people orientations to produce good performance (Van Wart, 2005). The emphasis on transactional motivation, small group settings, and stable environments was dramatically shifted by the next school of thought, transformational theory.

Transformational and Charismatic Leadership Approaches

Much work has been written about transformation leadership theories since the 1980's (Bass, 1985; Conger & Kanungo, 1998; Kouzes & Posner, 1995; Tichy & Devanna, 1986). Charismatic and transformational leadership theories focus on the leader's ability to provide meaning and a collective vision for followers that will in turn motivate and foster their self-worth (Mumford & Van Doorn, 2001). This type of leadership is particularly important in open, unstable systems where change and flux is constant (Van Wart, 2005).

Bass (1985) developed a theory of transformational leadership in the 1980's that grew out of Burns's (1978) work. Bass suggests that there are four transformational leadership factors: charisma, inspirational leadership, intellectual stimulation, and individualized consideration. These were briefly discussed in the previous chapter of this study and will be further examined later. The current review will present additional models besides Bass's (1985, 1996a) Full Range Leadership Model.

Tichy and Devanna (1986) also looked at transformational leadership through a case study approach of great leaders and how these leaders worked through challenging situations. These great leaders were able to recognize that change was needed in their organizations, create a vision for followers, mobilize the commitment of the followers, and institutionalize the change within their organizations (Tichy & Devanna, 1986). They suggest that there are some common characteristics to transformational leaders, such as “They Identify Themselves as Change Agents” (p. 271); “They Are Courageous Individuals” (p. 271); “They Believe in People” (p. 273); “They Are Value-Driven” (p. 274); “They Are Life Long Learners” (p. 276); “They Have the Ability to Deal with Complexity, Ambiguity, and Uncertainty” (p. 279); and “They Are Visionaries” (p. 280).

Charismatic leadership is often grouped with transformational leadership because charisma is an essential element of transformational leadership. Max Weber was one of the early social scientists on whose work much of the research of charismatic leadership is based. He details a concept of leadership that was not based on the formal authority given to someone or the traditions held by the society. Instead, leadership was determined by extraordinary qualities possessed by the leader and resulted in him or her being considered charismatic. These qualities emerge during times of social unrest and upheaval when the leader is able to use them as a way to attract followers with a vision to solve the crisis (as cited in Yukl, 2002). Later, House (1977) proposed a theory of charismatic leadership that would allow for the empirical research set forth by eight propositions he suggested. He suggested charismatic leaders are self-confident, have moral conviction, act as role models for their followers, and articulate an inspirational vision that followers believe they can contribute to. This theory was then developed, expanded and revised by other researchers of charismatic leadership, such as Conger & Kanungo (1998).

Conger and Kanungo (1998) developed a charismatic theory of leadership derived from a behavioral model. Their model "builds on the idea that charismatic leadership is an attribution based on followers' perceptions of their leader's behavior" (p. 47). The researchers' model involves demonstrating leadership through a process trying to move members from a starting point in the present to some future position (Conger, 1999; Conger & Kanungo, 1998). This process is split into three stages. In the first stage examining the environment or status quo takes place to assess if the followers are ready for radical change. During this stage a charismatic leader is active in noticing any deficiencies with the status quo. The second stage is when a formulation of a vision and associated goals takes place. The last stage involves achievement of the vision by demonstrating that the goals associated with this vision are achievable and building trust among the followers about these goals (Conger, 1999; Conger & Kanungo, 1998).

Summary of Historical Perspectives

The above historical perspective is included to demonstrate how leadership theories have progressed in the last century. Though the earliest theories of leadership studied only characteristics of the leader and which of these made a leader successful, later theories began to look at the relationship between leaders and followers. The studies conducted at the University of Michigan and Ohio State during the 1950's looked at task and people oriented behaviors and what effect these had on followers which logically evolved into the situational-contingency models of leadership. These contingency models retained leadership styles associated with task and people and in many cases added in other styles, but most importantly they recognized the importance of environmental factors in determining the appropriate leadership styles.

These situational-contingency models can also be grouped in a larger category of transactional theories because they are premised on an exchange of some kind, monetary or other, between leaders and followers. Burns (1978) is credited with suggesting there was a dichotomy in leadership, transactional leadership and transformational leadership. But while Burns saw these as distinct leadership styles, Bass (1985, 1996a) suggested that the relationship between these styles or approaches was more complex and that transformational leadership actually augmented the effect of transactional leadership. Transformational theories developed that began to focus on change orientations in leadership and on inspirational or visionary aspects of leadership (Bass, 1985; Conger & Kanungo, 1998; Kouzes and Posner, 1995; Tichy & Devanna, 1986). In the constantly changing organizational environments of today, leadership theories with a focus on organizational change are necessary, but due reference still needs to be paid to the exchanges that occur between leaders and followers on a day to day basis.

Theories such as Bass's (1985, 1996b) Full Range Leadership Model, which includes transactional and transformational leadership approaches, are still an important part of leadership research. Bass's model presents researchers with a theory that can be empirically tested and provides insight into the duality that leaders face in current organizational settings.

Contemporary Leadership Literature

As can be seen in the previous section there are a multitude of leadership theories that have developed over the last century, which has led to a large amount of literature on leadership. This study is specifically interested in looking at how transactional and transformational styles of leadership relate to perceived leadership effectiveness and follower satisfaction in public sector agencies. Therefore a review of more recent leadership literature will concentrate on transactional and transformational leadership elements, on leadership literature available in the public sector and on literature that relates to the perception of leadership effectiveness and follower satisfaction. A more complete review of follower satisfaction and other elements related to it will follow in a separate section.

Burns (2003) notes that transformational leadership is associated with profound change. He states, "It is to cause a metamorphosis in form or structure, a change in the very condition or nature of a thing….it is change of this breadth and depth that is fostered by transforming leadership" (p. 24). This ability to cause significant change is what is needed for the survival of organizations as they move into the new century.

The study of transformational and transactional leadership behaviors has led to a much better understanding of many organizational occurrences. Jung, Chow and Wu (2003) suggest that transformational leadership is positively related to organizational innovation. That is, if top management in an organization is more transformational, the culture in the organization lends itself to be more open to try different things, which has an effect on organizational effectiveness. This may be partly due to the fact that more creativity may occur under transformational leadership than transactional leadership (Jung, 2000-2001). One of the elements proposed by Bass (1985, 1996a) in his Full Range Leadership Model is intellectual stimulation that calls for more creative thinking by subordinates. This aspect of transformational leadership produces more innovative and imaginative ways of dealing with problems. Jung (2000-2001) agrees that intellectual stimulation "may help followers look at problems from a different perspective" (p. 192) which fosters greater creativity in groups.

Transformational leadership has been associated with organizational commitment (Barling, Weber, & Kelloway, 1996; Bycio, Hackett, & Allen, 1995; Chen, 2004, Koh, Steers, and Terborg, 1995) and subordinate emotions (McColl-Kennedy & Anderson, 2002). Both transactional and transformational leadership styles have also been related to knowledge acquisition in organizations (Politis, 2002). Jaussi and Dionne (2004) also examined the effects of transactional and transformational leadership behaviors in tandem to conventional and unconventional delivery; they suggest that the delivery of the leadership behaviors is more important to satisfaction and perception of leadership effectiveness than is the leadership behavior by itself.

Transformational leadership also indirectly influences organizational citizenship behaviors, such as courtesy and altruism, in subordinates (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). This influence is mediated by trust in the leader: the more trust they have in him/her the more likely they will exhibit behaviors associated with citizenship in organizations.

Koh, Steers and Terborg (1995) also found that transformational leadership behaviors in combination with transactional leadership behaviors have an effect on organizational citizenship behaviors. However, they suggest that it is a more direct relationship. In addition, they suggest that this augmented effect also influences organizational commitment and teachers' satisfaction with their leader in an academic setting. These, in turn, influence students' performance in this academic environment. Based on their finding in Singapore, the authors postulate that transformational leadership theory may be generalizable to other environments aside from United States' business firms. Similarly, Griffin (2004) found support that transformational leadership has an indirect effect on school performance in the United States.

The ability of leaders to create and share a vision may be a very important aspect in motivating subordinates (Kirkpatrick & Locke, 1996). Kirkpatrick and Locke found that those participants who were in groups where a vision was articulated found their task to be more "'interesting,' 'challenging,' and 'important'" (p. 45). In Bass's (1985, 1996a) Full Range Leadership Model, vision is one of the characteristics of inspirational motivation and it is one of the reasons why transformational leadership is becoming such a leading theory in leadership.

Though transactional and transformational leadership behaviors are well studied in the literature, there is some criticism of the theory. Yukl (1989) suggests that leadership behaviors presented in transformational theory are limited and should include a larger range of managerial competencies. Yukl (1999a) also suggests that there is insufficient examination of specific situational and moderator variables. In addition, this theory is based only on two factors and is mostly supported by survey literature (Yukl, 1999b). Hunt (1999) suggests that may push us back to looking at leadership in terms of "doom and gloom" (p. 140) studies of earlier periods. Hunt and Conger (1999) also suggest that transformational research emphasizing organizational issues and/or conditions that facilitate leadership are areas for future research since these are lacking in the literature. This researcher is hoping to add to the literature of transformational leadership by looking at a specific sector of organizations, in this case the federal government.

Aside from mainstream literature, this researcher is interested in leadership in public sector organizations, so a review of some of the public sector leadership literature will be reviewed next. Risk-taking behavior in leaders is important to motivation of public sector employees while this behavior may be somewhat lacking in government (Javidan & Waldman, 2003). Innovation is also an important characteristic of public sector managers in their ability to solve the problems inherent in public sector organizations (Borins, 2000).

Moynihan and Ingraham (2004) suggest that leadership is an important driver of performance information needed to make decisions in public sector organizations because leadership is important to the success of organizations. Active leaders who are very involved in the strategic alignment of goals and performance criteria influence employees to take results seriously and therefore act as drivers of performance.

Superleadership has also been found to be useful in government organizations. Elloy and Randolph (1997) explore the relationship between superleadership, creating an environment where people in a group are able to act as leaders themselves, and work attitudes. They report that superleadership in autonomous work groups in a government-operated railway is associated with satisfaction and commitment. They also suggest that superleadership is related to increased organizational self-esteem and communication effectiveness. Bass's Full Range of Leadership Model (1985, 1996a) also has elements of this type of leadership in its emphasis on follower development.

A study on federal government executives conducted by Athanasaw (2003) discusses the perceptions of leadership styles of senior executives. He finds that most members of the Senior Executive Service view their leadership style as strategic leadership style. This allows them to use different leadership styles (collaborative, directive, supportive, and bureaucratic) based on the person and the situation, similar to the Managerial Grid developed by Blake and Mouton (1978, 1982, 1985). Athanasaw suggests that the directive leadership style is the least used. In addition, people who have been in federal service longer tend to use a directive style less.

There is a dearth of good empirical public sector leadership literature (Van Wart, 2003) and this researcher hopes to add to the empirical base of leadership literature in the public sector by testing Bass's Full Range Leadership Model on the perception of leadership effectiveness and follower satisfaction in the federal government. Because perception of leadership effectiveness is a dependent variable in the current research a discussion of this will follow. Since perception of leadership effectiveness and job satisfaction are discussed together in many studies, there will also be some discussion of job satisfaction here, though a more in-depth review of follower satisfaction will follow in a separate section.

Dhar and Mishra (2001) suggest there are many different ways to measure leadership effectiveness from outcomes of unit performance to more measurable standards such as profits, sales, etc. They also suggest that in many cases subjective ratings are used to evaluate leadership effectiveness. These include satisfaction level with the leader and the respect that the followers have for the leader. Many different behavioral measures such as turnover, complaints, or work slowdowns can also determine the level of leadership effectiveness. In this research subjective measures are used based upon available questions on the *2002 Federal Human Capital Survey*.

As there are many different ways to measure leadership effectiveness, there are also different ways to research it and theorize about it. Justis (1975) suggests that the contingencies of leadership are important to investigate since they are related to leadership effectiveness. Hamlin (2004), on the other hand, suggests that universalistic models are more in tune with leadership effectiveness than are contingent models, especially in the public sector. So there is a debate of some sort as to what leadership effectiveness really is.

Bolman and Deal (1991) conducted a multi-sector analysis on the concept of leadership effectiveness. They even included managers from multinational corporations to be able to make cross-sector comparisons. Effective leaders in U.S. public sector organizations, specifically higher education administrators and public school administrators, were highest on symbolic elements, which include inspirational and charismatic elements. Corporate managers from the different multinational corporations scored similarly high. The leaders in the public sector organization in Singapore, also an academic organization, were considered effective if they were more political, i.e. more powerful and adroit. Bolman and Deal's study of leadership effectiveness also demonstrated that leadership effectiveness and managerial effectiveness are separate since effective managers were not given the same ratings on the dimensions studied.

Transformational and transactional leadership has also been explored and appears to be related to leadership effectiveness and satisfaction in an express delivery organization. The effect of transformational leadership was higher than the effect of transactional leadership. When transformational leadership augmented transactional leadership, a significant effect was also found in predicting leadership effectiveness (Hater & Bass, 1988).

Jaussi and Dionne (2004) present similar results in that transformational leadership has more of an influence in the rating of leadership effectiveness than does transactional leadership. They suggest that this effect increases when leaders act in an unconventional manner, such as hanging ideas across a rope.

Charisma and individualized consideration are strongly associated with leadership effectiveness. This effect occurs in both private and public sector organizations. Intellectual stimulation is also related to leadership effectiveness, especially in public sector organizations. The same is true for contingent reward (Lowe, Kroeck, & Sivasubramaniam, 1996).

Chan and Chan (2005) also find support that transformational leadership elements are associated with leadership effectiveness and leadership satisfaction. Contingent reward is also correlated to leadership effectiveness and leadership satisfaction. Passive management-by-exception is negatively associated with leadership effectiveness and leadership satisfaction. According to the authors, augmenting transformational behaviors to transactional behaviors can "produce greater synergistic effects on the employees' work outcomes than either transformational or transactional leadership in isolation" (p. 421). Thus, this augmented effect is more important to leadership effectiveness and leadership satisfaction than transformational or transactional leadership alone.

Hooijberg and Choi (2000) have also found evidence that the relationship between the rater of leadership effectiveness and the person they are rating has an impact on his or her perception of leadership effectiveness. Subordinates, peers, and superiors perceive different leadership roles as being more effective. The self-perception of managers in most cases also differs from these. The authors indicate that there is some overlap of roles perceived to be effective by subordinates, peers, superiors, and the managers' self-perceptions, but there generally appears to be distinct differences in these perceptions.

The next section of this manuscript focuses on leadership in the public sector and will present empirical research on the subject. A complete review of two leadership studies will be presented and then discussed in terms of their relationship to this study.

Empirical Leadership Research Focusing on Public Sector Settings

This section will review in depth two empirical studies on leadership and how they relate to perceived leadership effectiveness and follower satisfaction. These articles were chosen because they looked at public sector organizations or organizations most commonly associated with being in the public sector and because they empirically studied perception of leadership effectiveness and follower satisfaction

Hooijberg and Choi (2001) argue that there are differences in the organizational environments which affect leadership in the public and private sectors. They compare the relationship of leadership behaviors and the perceived leadership effectiveness of these behaviors in both sectors using the Competing Values Framework of Leadership developed by Quinn (as cited in Hooijberg and Choi, 2001). This model suggests that leadership can have either an internal or external focus based on the demands of the environment and that leadership can be either controlling or flexible. Combinations of these elements are used to develop four leadership orientations: a people orientation (internal focus, flexibility), an adaptive orientation (external focus, flexibility), a task orientation (external focus, control), and a stability orientation (internal focus, control).

Each of these orientations has two leadership roles associated with it. The people orientation has the mentor role and the facilitator role. The mentor role "shows concern for the individual needs of subordinates," while the facilitator role "fosters cohesion and teamwork" (as cited in Hooijberg & Choi, 2001, p. 408). The adaptive orientation is comprised of the innovator role and the broker role. The innovator "searches for and experiments with new ideas" and the broker "exerts upward influence" (p. 408). The task orientation consists of the producer and director roles of leadership. The producer "sees that the unit meets stated goals" and the director "clarifies the unit's goals and directions" (p. 408). Lastly, the stability orientation is comprised of the coordinator and monitor roles. The coordinator "coordinates the workflow of the unit" and the monitor "monitors compliance with the rules" (p.408).

Hooijberg and Choi hypothesize that the producer, director, and coordinator roles are less important to the perception of leadership effectiveness in the public sector than in the private sector, while the monitor, facilitator, and mentor roles are more important in the public sector than the private sector. They also hypothesize that the effects of the innovator and broker roles in both the public and private sector are similar, and that in the public sector there are fewer leadership roles that have an effect on leadership effectiveness because public sector leaders have less discretion.

The two authors conducted surveys of managers from both the public and private sectors that attended executive education seminars at two different universities, one in the Midwest and one in the Northeast. The private sector managers were mid-level managers from a large car manufacturer; the public sector managers were high-level managers in a state government who were not politically appointed but worked under the direct supervision of appointees. Not only did the authors get responses from 819 private sector managers and 175 public sector managers, they also obtained data from the mangers' subordinates and supervisors to get a complete picture of leadership effectiveness. For each manager, approximately four subordinates responded to questionnaires, and between one and two supervisors responded.

Though particularly interested in the self-perception of the managers' effectiveness, they were able to develop separate measures of leadership effectiveness based on responses by self, subordinates, and supervisors. Each respondent answered questions on a 5-point Likert scale that inquired about overall performance; higher effectiveness was associated with higher scores. The leadership dimension was measured by items from Quinn's questionnaire on the eight leadership roles with responses on a 7-point Likert scale from (1) almost never to (7) almost always. Control variables such as age, sex, education, and managerial experience were also included because these could affect the perception people have of the leaders' effectiveness.

Based on the findings of LISREL analysis, Hooijberg and Choi found support for six of their seven hypotheses. There is statistical significance in the roles of producer, director, and coordinator in regard to the sector. These are more important to private sector managers than public sector managers, whereas the facilitator and monitor roles are more important to public sector managers' perception of leadership effectiveness. There was no statistically significant difference for the role of mentor which went against the authors' hypothesis. There also was no statistical difference in a multi-group comparison of the innovator and broker roles in terms of leadership effectiveness for the two sectors as was hypothesized by the authors. In addition, there were more leadership roles that were statistically significant to the managers in the private sector, therefore showing support for the authors' last hypothesis that in the public sector fewer roles have an influence on leadership effectiveness.

Based on their study, Hooijberg and Choi suggest there is evidence that in different types of organizations, such as public and private, the various roles have a different impact on perceived leadership effectiveness. Hooijberg and Choi's study indicates a need to look at sector differences in leadership research. Therefore, one of the issues this study addresses is looking at a public sector setting to see how well Bass's Full Range Leadership Model defines leadership effectiveness. By looking to see if Bass's model holds true in a public setting, this research will be furthering an understanding of both Bass's model and leadership in the public sector in general.

Bartolo and Furlonger (2000) also looked at leadership but they looked at its relationship to job satisfaction in Australian firefighters. Since this researcher is also interested in looking at leadership in relationship to follower satisfaction, Bartolo and Furlonger's study is of particular interest. Bartolo and Furlonger hypothesize that there is a relationship between job satisfaction and leadership behaviors. They looked at the initiating-structure and consideration leadership behaviors that were popularized by the Ohio State Studies.

To determine the relationship between leadership and job satisfaction, Bartolo and Furlonger surveyed 56 fire fighters who worked for a privatized aviation fire department. The researchers or a proxy administered paper versions of the survey, using a version of the Job Descriptive Index (JDI) to measure the amount of satisfaction with the firefighters' supervisors and with their coworkers. They used the Leader Behavior Questionnaire (LBQXII) to measure the amount of perceived initiating-structure and consideration leadership behaviors in their immediate supervisor.

The findings of the above study indicate that there is overall satisfaction with both the supervisors and coworkers in this fire service. Seventy-four percent (74%) of the firefighter are satisfied with their coworkers and sixty-two percent (62%) are satisfied with their supervisors. In addition, the authors' hypothesis was supported through correlation analysis. Based on the two leadership behaviors and the two dimensions of satisfaction that the authors were looking at, they found there is a relationship between leadership behavior and job satisfaction. The Pearson's correlation between coworker satisfaction and initiating structure behavior was .45 ($p<.05$). A correlation of .58 ($p<.05$) was found between satisfaction with supervision and consideration, and a correlation of .47 ($p<.05$) was found between satisfaction and initiating-structure leadership behavior. The only correlation that was not significant was the relationship between co-worker satisfaction and consideration behavior ($r = .23$, $p>.05$). Since three out of these four correlations were significant, a relationship between leadership behavior and satisfaction can be established. Also, since all these correlations are positive, positive relations between these variables are implied. As the amount of these leadership behaviors increases, so does the level of coworker or supervision satisfaction.

Bartolo and Furlonger's study does have its limitations. They used a very small sample to look at leadership and satisfaction. Also, they did not specify any type of random sampling method to ensure that their sample was representative of the fire service. This could be a lapse in their article or it could be a problem with their methodology. They did say they used fire fighters from two stations and included fire fighters from many teams to be able to see if there were variations, but they are unclear about their selection methods. In addition, they did not do a very thorough analysis to assess this relationship. They had a very simplistic hypothesis and only used correlations to find support for that hypothesis.

The relationship of leadership behaviors to follower satisfaction in the public sector will be examined in the present investigation, and the Bartolo and Furlonger study offers some basis for looking at these two variables. Since Bartolo and Furlonger found that leadership does have some relationship to satisfaction, even though they based their study on satisfaction with supervision and with coworkers, further research is warranted to determine if this relationship holds true in other aspects of follower satisfaction. Bartolo and Furlonger's inquiry is one of the few studies that does look at leadership and satisfaction in a public sector profession. Even though they studied a privatized fire service, fire service is generally considered to be in the public sector domain and therefore this organization is probably similar to other public sector organizations in terms of culture and environment.

To overcome some of the limitations of the Bartolo and Furlonger study, this researcher plans on using a more complete model of leadership behaviors in Bass's Full Range Leadership Model and a more complete definition of satisfaction to develop a better understanding of how these relate in the federal government. The sample size will also be much larger than 56 to allow for more generalizability to other public sector organizations.

Follower Satisfaction Literature

The previous sections provided an overview of leadership literature from an historical, theoretical, and empirical viewpoint. This section will provide a discussion of the relevant satisfaction literature, both theoretical and empirical. Most satisfaction literature is based upon looking at job satisfaction in organizational settings. Therefore it is job satisfaction that is focused on here.

To begin with, a definition of job satisfaction is necessary from which to build a framework of what satisfaction is. According to Locke (1983) "*job satisfaction may be defined…as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences*" (p. 1300). Spector (1997) suggests that "job satisfaction is simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs" (p.2). It can be inferred from these two definitions that job satisfaction basically has to do with a person's like of their work and their work environment.

Job satisfaction is widely researched in many different disciplines and in a multitude of settings and is important to both practioners and academicians (Cranny, Smith, & Stone, 1992). Smith (1992) suggests that understanding job satisfaction is essential because it

> is an important part of a system of interrelated satisfactions, analogous to a river with small tributaries converging into ever-larger branches and eventually into a lake or sea. Satisfactions with specific aspects of a job situation cause satisfaction with facets of the job, with the job in general, and eventually with life. In this analogy, the specific leads to the general (p. 5).

It is one of these aspects of the job that this researcher is most interested in to determine its relation to follower satisfaction. This study investigates the relationship between transactional and transformational leadership and follower satisfaction in the federal government.

One of the reasons satisfaction is so important is because dissatisfaction can result in "behavioural withdrawal" (Locke, 1984, p. 93) in the work environment. This "behavioural withdrawal" is typified by tardiness among employees, turnover of employees, and absenteeism. Locke suggests that even though dissatisfaction may create the propensity to withdraw, it does not provoke the actual actions. People may just have thoughts of withdrawing, such as wanting to leave a position, but still staying on. Buckingham and Coffman (1999) also found that employees' overall satisfaction was related to turnover. A similar effect in nurses was discussed by Lu, While, and Barriball (2005) in that job satisfaction is related to an employee's intention to leave an organization, their absenteeism and burnout. Job satisfaction can have serious consequences for organizations and is therefore worthy of further review.

Spector (1997) suggests that there are many factors that affect job satisfaction. Organizations themselves and their policies and procedures can influence job satisfaction, as can the job itself and the conditions of the job. Appreciation, communication, recognition, promotional opportunities, personal growth, security and coworkers also play a part in how satisfied people say they are with their jobs. Pay, fringe benefits, and supervision are also pieces of a person's job that impact job satisfaction. Randolph and Johnson (2005) determined that the intrinsic aspects of a job, such as working in an environment that was in line with the employee's values, have a greater influence on career satisfaction than extrinsic factors, such as pay. In essence, it is safe to say that a model that looks at job satisfaction needs to include many variables including both intrinsic and extrinsic dimensions in it to have a complete picture of job satisfaction.

Locke (1983) also delineates the aspects of job satisfaction that have been studied in the literature. He reports that the work, pay, promotions, recognition, benefits, working conditions, supervision, co-workers, the company, and management are all dimensions of a job that have been looked at in the past and have some association with job satisfaction. Agho, Mueller, and Price (1993) also report that individual differences, i.e. personality, and not just job characteristics are important when trying to explain job satisfaction. Manning (2002) found some differences in satisfaction in organizations based on the managerial level of the respondent. Top managers, when compared to middle managers, are more likely to be satisfied with their job security and coworker cooperation. For the purposes of this present study, this researcher is mainly interested in the effect of leadership on follower satisfaction; other factors, such as those discussed by Locke (1983) and others, will need to be controlled for when looking at follower satisfaction in the federal government.

There is also support in the literature that, although job characteristics best predict the levels of job satisfaction, other organizational elements such as leadership may also be related (Glisson & Durick, 1988). Jaussi and Dionne (2004) found that leadership plays a part in subordinate satisfaction especially if leaders behave in unconventional ways. Consideration behavior by a leader has a stronger relationship to follower satisfaction than does task or initiating- structure behavior (Judge, Piccolo, & Ilies, 2004). Contingent reward behavior has also been demonstrated to have a positive relationship with subordinate satisfaction (Podsakoff, Todor, & Skov, 1982). This relationship may be due to the fact that reward fulfillment is a basis for satisfaction especially if the subordinate finds value in the reward (Porter & Lawler, 1968).

Since this researcher is interested in follower satisfaction in the public sector, literature from the public sector will also be discussed. The next few paragraphs will introduce the job satisfaction literature in the public sector. Emmert and Taher (1992) explored job satisfaction in the public sector; their findings indicate that public sector professionals and public sector blue-collar workers both felt that feedback on performance and social relations influenced job satisfaction. Public sector professionals also reported that job fulfillment was important to their job satisfaction. Similarly, deLeon and Taher (1996) found social relations to be a significant determinant of job satisfaction among local government workers.

In addition, Emmert and Taher (1996) found job characteristics, such as skill variety and autonomy, were not as important to the satisfaction of public sector workers in their study. Cherniss and Kane (1987) indicate job characteristics do have an influence on job satisfaction but that this may be moderated by "aspiration for intrinsic fulfillment through work" (p. 134). So the effect of job characteristics may not be direct, but indirect.

In the federal government, job characteristics (task clarity, skills utilization, and task contribution, pay, promotional opportunity, and relations with supervisors and coworkers) are correlated to job satisfaction (Ting, 1996). Aside from job characteristics, organizational commitment and personal demographics (age, gender, some minority statuses, and grade level in the federal government) are also related to job satisfaction in federal government employees (Ting, 1996). Ellickson (2002) found that pay, promotional opportunities, and benefits were highly predictive factors of job satisfaction in municipal government employees, whereas Selden and Brewer (2000) determined that rewards from performance also influence satisfaction in the Senior Executive Service of the federal government in a positive manner.

Additionally, job challenge is correlated to job satisfaction in public agencies. A challenging job has the most predictive value in terms of job satisfaction level in social workers in public agencies (Vinokur-Kaplan, Jayaratne, & Chess, 1994). Surprisingly, these same authors found that pay did not make a significant contribution to the level of satisfaction of these public sector workers. Daley (1986) also found job challenge to be significantly related to job satisfaction in state employees. A meaningful job is very important to federal government employees and their quality of work life (Nachmias, 1988). Thus the importance of looking at that intrinsic nature of the job is important to satisfaction.

Furthermore, participatory leadership is linked to job satisfaction. Beeler, Hunton, and Wier (1997) found that "increased participatory leadership behaviors resulted in higher mean levels of procedural justice and goal difficulty. This consequently created higher job satisfaction and job involvement" (p. 30) in government and public auditors. Similarly, Soonhee (2002) determined a significant relationship between participative management styles and job satisfaction in public county employees. Elloy and Randolph (1997) suggest superleadership behaviors, or self leadership, are associated with satisfaction in work groups. There is also a relationship between transformational leadership and teacher satisfaction in educational settings (Griffith, 2004). Research that looks at leadership and not just at supervision or relationship with the supervisor (Daley, 1986; Ellickson, 2002; Ting, 1996, 1997) is not extensively dealt with in the public sector literature. As explained at the beginning of this literature review leadership and supervision are different which is why the emphasis in this research will be on leadership.

This section has presented a framework of job satisfaction, both in the mainstream literature and in the smaller public sector literature. The next section presents some empirical studies on job satisfaction in the public sector.

Public Sector Satisfaction Research

Empirical studies on job satisfaction in the public sector were chosen based on their public sector focus and relevance to the job satisfaction literature. They were also chosen based on their examination of elements most pertinent to this study such as conceptualization of job satisfaction; this being as an aspect of follower satisfaction under investigation in the present research.

DeSantis and Durst (1996) conducted a study because they felt that little empirical work has been done on job satisfaction in the public sector. They wanted to compare the results of a public sector sample to a private sector sample because of innate differences in the reward systems of each. They used a linear additive model of job satisfaction that surmises that satisfaction is the sum of rewards (monetary and nonmonetary), job characteristics, work environment, and the employee's personal characteristics. The authors used the *National Longitudinal Surveys of Youths* conducted in 1984. The respondents that were identified as working in the public sector (n = 1,064) were chosen for analysis as was a sample of respondents in the private sector (n = 1,131).

The dependent variable of job satisfaction was analyzed from a question on a four-point scale, ranging from liked their current job very much to disliked their current job very much. The independent variables are also discussed. Reward, consisting of both monetary and nonmonetary dimensions, was measured by such indicators as if employees thought their income was good, if there were promotional opportunities, if there was job security, the availability of fringe benefits (paid vacation, health insurance, and life insurance), and actual earnings in their jobs. Most of these were measured on a four-point Likert scale, with actual earnings as an interval level variable and fringe benefits being dichotomous for each type of benefit. Job characteristics were measured on a four-point Likert scale. These characteristics included if the job was considered dangerous, if the respondents felt the job experience was valuable, if there were unhealthy conditions, and if the respondents were able to do things they did well on the job. In addition, hours worked were included in job characteristics. Work characteristics asked questions about the physical surroundings, coworkers, supervisor, the job significance, the received feedback, friendships, and job tenure. Personal characteristics included education, age, marital status, sex, and race.

The findings of DeSantis and Durst's study indicate that when all these variables are considered in a regression model together, there is not much difference in either sector. However, at the level of individual variables there were differences in the two sectors. Certain variables, such as "(a.) doing what one does best, (b.) working in pleasant surroundings, (c.) having friendly coworkers, and (d.) having a job that is meaningful in the broader context" (DeSantis & Durst, 1996, p. 336) were important to both sectors. It can thus be concluded that some variables regardless of sector influence job satisfaction. Conversely, there are some major differences in the two sectors. Good pay, valuable experience, a job with variety, development of friendships, education, and job tenure were significant for private sector employees in determining job satisfaction, but were not significant to public sector employees.

The results of this study suggest that studies of public sector employees are needed because different variables can determine job satisfaction in governmental, public sector settings. It is important to look at these variables to have a better understanding of how they actually relate to public sector employee job satisfaction. Also, since DeSantis and Durst (1996) used data from a longitudinal survey that began in 1979 and they could not choose a random sample for the public sector, they used all the participants in the survey that stated they worked in public sector positions. In addition, the level of government for the respondents of the *National Longitudinal Surveys of Youths* was not indicated, aside from the fact that they were all nonmilitary. This present study hopes to add to the public sector literature about the factors that influence follower satisfaction in the federal government and, more specifically, to look at the specific variable of leadership which is missing from the DeSantis and Durst's study.

Ting (1997) also conducted a study of job satisfaction. He used employees of the federal government to determine what variables (job, organizational, and individual) influenced job satisfaction. In this study Ting delineates ten hypotheses. The first four have to do with job characteristics. The author hypothesizes that individuals will have higher levels of job satisfaction if they are pleased with their pay and their opportunities for promotion, if there is task clarity in their positions, if their skills are utilized in their positions, and if they perceive their jobs to have significance. Two of the hypotheses have to do with organizational characteristics. These assert that there will be higher levels of satisfaction if individuals are committed to the organization and have good relationships with both coworkers and supervisors. The last four hypotheses have to do with individual characteristics. Individuals will have greater levels of satisfaction if they have more public spirit, are older employees, and are male and white. However, employees with higher levels of education attainment were hypothesized to have lower levels of satisfaction.

Data for this study (Ting, 1997) came from the *Survey of Federal Government Employees* which was a survey mailed to white collar workers, completed between November 1991 and February 1992. The sample used in this study was 56,767 randomly selected employees in the federal government. Stratification was done by both pay category and department. The author used 30,838 responses from the survey based on full-time, permanent employees in the federal government, but not senior executives.

To measure the dependent variable, job satisfaction, Ting (1997) used one question on the survey. This question used a five-point Likert scale and assessed employee satisfaction with their job. For the independent variables multiple measures were used in some cases. There were five questions that measured job characteristics. Since there were four hypotheses for these variables, each hypothesis was tested using one indicator except for the first one, which included pay and promotional opportunities. Each of these with the exception of promotional opportunities was measured on a five-point Likert scale. Promotional opportunities were measured using a dichotomous variable. Organizational characteristics used factor scales to measure organizational commitment and supervisor relationship; one question was used to measure coworker relationships answered on a five-point Likert scale. Individual characteristics used either interval measures such as for age and education, or dichotomous measures such as for public service, race, and gender.

In terms of general job satisfaction, Ting (1997) suggests higher percentages of those federal employees in higher pay levels (i.e. grade levels) are more satisfied than those at lower pay levels. When only individual characteristics are looked at, older employees have higher levels of satisfaction than younger employees, while race, gender, and level of educational attainment have no effect. Job characteristics and organizational characteristics are more likely to have an effect on job satisfaction than individual characteristics. More specifically, Ting finds support that satisfaction with pay and opportunities for promotion, along with clarity and significance of the task, and utilization of the employee’s skills are significantly related to federal government employee’s job satisfaction. Organizational commitment, relationships with supervisors, and relationships with coworkers also significantly effect job satisfaction. As these variable levels increase so does the job satisfaction of federal government employees. Public service however has no effect on job satisfaction, nor does educational attainment and gender. Race and age though have some effect in certain pay categories. In all, six of the author's hypotheses were supported fully, two were supported partially and two were not supported. The four that were not fully supported were based on the personal characteristics leading the author to suggest that job and organizational characteristics are more important to job satisfaction than personal characteristics of federal government employees.

The purpose of the present study is also to examine satisfaction in the federal government. Using a similar survey instrument, an analysis will be conducted to determine the effect leadership plays on follower satisfaction. This is the main variable that is of interest and therefore will be focused on most. Ting (1997) only focused on the relationship with the supervisor; which is not considered leadership. A more complex model of leadership needs to be looked at to determine the effects leadership has on follower satisfaction, and therefore Bass's (1985, 1996a) Full Range of Leadership Model will be used. Like Ting (1997), this researcher will include other organizational variables as well as personal demographics. Some variables that relate to the job itself will also be included. Since some of these were significant to the level of job satisfaction, they warrant additional research to see if this relationship still holds.

Summary

A review of leadership theories in the last century suggests that most of the earlier theories are of a transactional nature, while the development of transformational leadership introduced a more inspirational and change-oriented focus on leadership. Elements of transactional and transformational leadership have been tested empirically in various settings, and the findings of past research suggest that these are related to various organizational topics, including creativity (Jung, 2000-2001), performance (Bass, 1985), leadership effectiveness (Chan & Chan, 2005), and job satisfaction (Podsakoff et. al., 1982). Though there is much mainstream literature on leadership, there is a paucity of good empirical leadership literature in the public sector (Van Wart, 2003).

Based on the satisfaction literature review, many variables are found to be associated with follower satisfaction. Supervision, not leadership, though has been a focus of job satisfaction literature in the public sector (see for example, Ting, 1997). Therefore, research specifically on leadership's relationship to satisfaction in the public sector is needed to expand our knowledge on how leadership and follower satisfaction exist in governmental settings. This literature review provides a basis for the hypotheses of this study.

Hypotheses

Based on the literature reported in the previous section and the research questions proposed in Chapter one, the following analytic models are being proposed to look at the relationships between the Full Range Leadership Model and perceived leadership effectiveness, and the Full Range Leadership Model and follower satisfaction in the federal government.

PLE = f (LD, PD) + e

Where:	LD	=	Leadership Behaviors
	PD	=	Personal Demographics
	e	=	error

FS = f (LD, PD, JC, OC) + e

Where:	LD	=	Leadership Behaviors
	PD	=	Personal Demographics
	JC	=	Job Characteristics
	OC	=	Organizational Characteristics
	e	=	error

To test these models the following hypotheses will be examined. The research questions for this study are stated here to clarify which hypotheses will be used to answer which questions. Both the null and alternative hypotheses are presented. The methods being used to test these hypotheses will be discussed in Chapter Three.

Research Question 1. Does Bass's Full Range Leadership Model provide us with a relatively comprehensive definition of an effective leader in the federal government? In other words, is Bass's definition of leadership capturing most of the possible dimensions that would produce effective leadership?

Research Question 2. To what degree are transactional and transformational leadership styles important to effective leadership in the federal government?

Hypothesis 1. Transactional leadership behaviors affect the perception of leadership effectiveness in federal government agencies.

H_o There is no relationship between transactional leadership behaviors and perceived leadership effectiveness in the federal government.

H_a Transactional leadership behaviors are positively associated with perceived leadership effectiveness in the federal government.

Hypothesis 2. Transformational leadership behaviors affect the perception of leadership effectiveness in federal government agencies.

H_o There is no relationship between transformational leadership behaviors and perceived leadership effectiveness in the federal government.

H_a Transformational leadership behaviors are positively associated with perceived leadership effectiveness in the federal government.

Hypothesis 3. Leadership (a composite of transactional and transformational leadership behaviors) affects the perception of leadership effectiveness in federal government agencies.

H_o There is no relationship between leadership and perceived leadership effectives in the federal government.

H_a Leadership is positively associated with perceived leadership effectives in the federal government.

Research Question 3. How much does leadership improve follower satisfaction in federal government agencies? Is it a major element in the satisfaction of the employees who work in the federal government?

Research Question 4. Are both transactional and transformational leadership styles important to follower satisfaction in the federal government?

Hypothesis 4. Transactional leadership behaviors affect follower satisfaction in federal government agencies.

H_o There is no relationship between transactional leadership behaviors and follower satisfaction in the federal government.

H_a Transactional leadership behaviors are positively associated with follower satisfaction in the federal government.

Hypothesis 5. Transformational leadership behaviors affect follower satisfaction in federal government agencies.

H_o There is no relationship between transformational leadership behaviors and follower satisfaction in the federal government.

H_a Transformational leadership behaviors are positively associated with follower satisfaction in the federal government.

Hypothesis 6. Leadership (a composite of transactional and transformational leadership behaviors) affects follower satisfaction in federal government agencies.

H_o There is no relationship between leadership and follower satisfaction in the federal government.

H_a Leadership is positively associated with follower satisfaction in the federal government.

CHAPTER THREE: METHODOLOGY

<u>Data, Measurement Instrument, and Sample</u>

Data

An analysis of federal survey data was conducted to answer the research questions and to test the hypotheses of this study. Data were obtained from the U.S. Office of Personnel Management (OPM). In 2002, the Office of Personnel Management conducted a survey "to assess the presence and extent of conditions that characterize high performance organizations" (2003, March, p. 2). The survey, known as the *2002 Federal Human Capital Survey*, is considered the most sizeable survey that has ever been completed on federal government employees to date. It was electronically distributed to a stratified random sample of 208,424 federal government employees in twenty-four agencies within the Executive Branch of the Federal government both in the United States and abroad between May and August 2002. Fifty-one percent of the participants responded (n = 106,742); 100,657 of those returned were considered complete and therefore usable for analysis (OPM, 2003, March).

The data from this survey were obtained and converted to an SPSS© file for analysis. Not all questions in the survey were available for public access. In addition, some questions in the dataset available to the public have been coded in a manner that makes it impossible to conduct the level of analysis desired for this study (i.e. race in the data set uses a coding of minority [M] or non-minority [N]). Data were recoded as necessary to allow a conversion between a text file and a SPSS© file. String data were converted to numerical data (i.e., gender, minority status) when needed.

In June 2005, the University of Central Florida Institutional Review Board (UCF IRB) approved the use of this dataset. Since this is a public access database with deidentified data, the UCF IRB granted approval in an exempt review. A copy of this approval can be found in Appendix A.

Measurement Instrument

In the survey, participants were asked to log in into the survey website with an ID and password that were sent only to those in the sample. Accommodations were made for those employees who needed or preferred paper versions of the survey and those employees with disabilities. In addition, participants were protected under Public Law 93-579, the Privacy Act of 1974, which makes the giving of any personal information voluntary. Participants were also notified that individual responses would be confidential and that the agencies they worked for would only receive aggregate data which would not allow for the identification of specific responses (OPM, 2002).

In this survey, similar questions were asked of nonsupervisors (including team leaders), supervisors and managers, and executives in regard to various issues including strategic alignment, strategic competencies (talent), leadership, performance culture, learning (knowledge management), personal experiences, job satisfaction, compensation and benefits, and family friendly flexibilities. Demographic items in the survey include the participants’ agencies, their agency sub-units, their supervisory status, and their gender and race (OPM, 2003, March).

Sample

The sampling frame of this survey are federal government employees working in twenty-four different federal agencies: “a statistically valid sample was drawn for each of these agencies” (OPM, 2003, March. p.10). Since these agencies are made up of various sub-units, 189 separate sub-units within these twenty-four agencies are represented. A stratified random sample of each agency by supervisory status (nonsupervisors/team leaders, supervisors/managers, and executives) was drawn. Five percent of the agencies’ total populations are included in the survey. Over 200,000 surveys were distributed electronically to employees with accommodations being made for those with limited computer access. Of the returned surveys, over 100,000 were usable (OPM, 2003, March).

Stratification was done because different groups tend to respond differently on surveys (OPM, March 2003). Supervisory status was used as the basis of stratification

> because responses across these three categories [nonsupervisors, supervisors, and executives] usually follow a stable and predictable pattern in Government surveys. That is, responses generally become more positive the higher up the employee is in the organization, and the Federal Human Capital Survey results were no exception. Given this fundamental difference in how the three categories of employees perceive the workplace, it was vital to give agencies statistically valid data for all three categories (p. 11).

Therefore, executives would respond higher on variables than supervisors, and, similarly, supervisors would respond higher than nonsupervisors. Stratification by these groups allows adequate representation within them for analysis.

An examination of nonresponse bias of the survey was conducted. Key demographic variables of the survey respondents and all federal employees were compared and are presented in Table 1. The result shows that survey respondents are representative of federal employees in gender, race, and age. They somewhat over-represent the supervisor group, but under-represent the nonsupervisor group (OPM, 2003, March).

Table 1
Comparison of 2002 Federal Human Capital Survey Respondents to Total Federal Employment

Demographics	% 2002 Federal Human Capital Survey	% Federal Government December 2001
Supervisory Status		
Executive	3%	>1%
Supervisor	37%	12%
Nonsupervisor	60%	88%
Gender		
Male	59%	57%
Female	41%	43%
Race/National Origin[a]		
African American	13%	17%
American Indian or Alaskan Native	1%	2%
Asian, Hawaiian, & other Pacific Islander	4%	5%
Hispanic	6%	7%
White	75%	70%
Other	1%	0%
Age[b]		
Under 40	18%	27%
40-49	34%	33%
50-59	41%	33%
60 & Older	8%	7%

Source: Office of Personnel Management (2003, March). *What Do Federal Employees Say? Results from the 2002 Federal Human Capital Survey*.
[a] Categories available in public access 2002 FHCS dataset are minority & nonminority.
[b] Age is not available in public access 2002 FHCS dataset.

Conceptualization and Operationalization

This section provides conceptual and operational definitions of the independent variables (transactional leadership, transformational leadership, and combined leadership), the dependent variables (perceived leadership effectiveness and follower satisfaction), and the control variables. The conceptual definitions of the independent variables are based upon Bass's Full Range Leadership Model (1985, 1996a) with slight modifications due to availability of measures and interpretation of other theories.

A test was conducted to examine reliability of measures in this study. The inter-item reliability of the measures in each measurement dimension was determined by Cronbach alphas. A Cronbach alpha "is an empirical measure of the correlation of measurement variables" (Berman, 2001, p. 96) which ranges from zero at the low point to one at the high point. Values within the range from .80 to 1.00 are highly reliable, while values between .70 and .80 are only moderately reliable. Moderate reliability is still acceptable for most statistical analysis. Values below .70 should not be used as they are considered poor unless there are no better available measures to choose from (Berman, 2001).

Transactional Leadership Behaviors

Transactional leadership behavior is one of the independent variables in this study. It was defined, described, and updated by Bass and others (Avolio, Waldman, & Yammarino, 1991; Bass 1985, 1996a, 1996b, 1998; Bass & Avolio, 1990). According to Bass (1998), "transactional leadership occurs when the leader rewards or disciplines the follower depending on the adequacy of the follower's performance" (p. 6). Furthermore, Bass (1985) states that a transactional leader:

1. Recognizes what it is we want to get from our work and tries to see that we get what we want if our performance warrants it.
2. Exchanges rewards and promises of reward for our effort.
3. Is responsive to our immediate self-interests if they can be met by our getting the work done (p. 11).

According to Bass (1985, 1998), the dimensions that make up this leadership behavior are laissez-faire leadership, management-by-exception (both passive and active), and contingent reward. This dimension was changed slightly from Bass's due to theoretical differences and the purpose of this study.

Laissez-faire leadership is the "avoidance or absence of leadership and is, by definition, most inactive, as well as most ineffective according to almost all research on the style" (Bass, 1998, p. 7). This type of leadership was not included in the present study. First, it was not included in Bass's (1985) original rendition of his conceptualization of transactional leadership. Second, this nonleadership behavior is not an active enough leadership element to be included in a study that examines how leadership in the federal government effects follower satisfaction.

The active and passive dimensions of management-by-exception were combined. In his original work, Bass (1985) conceptualized this dimension as one and therefore this researcher will be treating management-by-exception as one dimension instead of two.

The last change to Bass's (1985, 1998) model is that individualized consideration, which Bass places in the transformational leadership spectrum, was included for the purposes of this study with the transactional leadership behaviors of management-by-exception and contingent reward. This inclusion is more appropriate since "consideration" factors have been a part of transactional leadership models for decades (see for example, Hersey & Blanchard, 1969, 1972, 1982; Blake and Mouton, 1978, 1985). Chemers (1997) argues that individualized consideration is reminiscent of behaviors that have long been associated with transactional theories. Yukl (2002) also suggests that some of the aspects associated with individualized consideration had been routinely included in other, earlier theories of the 1960s. By placing individualized consideration with transactional leadership behaviors, this research expects to present a more balanced approach to examining transactional and transformational leadership.

Based on these modifications to Bass's (1985, 1996a) model, transactional leadership behavior consists of three dimensions: management-by-exception, contingent reward, and individualized consideration. Figure 1 shows the changes to Bass's model and compares Bass's model to the one being suggested in this study.

Bass's Full Range Leadership Model (Source: Bass, 1996a, 1996b)		**Leadership Behaviors Model Revised for this Study**
Laissez-Faire Leadership Management by Exception (Passive) Management by Exception (Active) Contingent Reward	Transactional Leadership Behaviors	Management by Exception Contingent Reward Individualized Consideration
In Addition to	+	**In Addition to**
Individualized Consideration Idealized Influence Inspirational Motivation Intellectual Stimulation	Transformational Leadership Behaviors	Idealized Influence Inspirational Motivation Intellectual Stimulation

Figure 1: Differences between Bass's Full Range Leadership Model and Leadership Model Proposed in this Study

Management-by-exception occurs when leaders only "intervene with negative feedback or disciplinary action when employee performance falls too far below standards" (Bass, 1985, p.136). The leader may have to clarify standards when things go wrong to get the subordinate back on course, but the main point of management-by-exception is that the leader only becomes involved when a problem with the subordinate's performance develops (Bass, 1985). Three items in the survey were used to measure management-by-exception: "Information collected on my work unit's performance is used to improve my work unit's performance," "In my work unit, steps are taken to deal with a poor performer who cannot or will not improve," and "I have enough information to do my job well." These items were measured on a five-point Likert scale from *strongly disagree* (1) to *strongly agree* (5). A test of internal reliability of this measure shows a Cronbach alpha of .661. Bass (1996b) presented a reliability measure of $\alpha = .73$. Though the .661 in this study's reliability measure would be considered a poor reliability score measure (Berman, 2001), Pallant (2005) suggests that scales with few measures (<10) may have low scores. Also, Berman suggests that sometimes scores between .6 and .7 can be used when there are no better indicators.

Contingent reward occurs when the "leader assigns or gets agreement on what needs to be done and promises rewards or actually rewards others in exchange for satisfactorily carrying out the assignment" (Bass, 1998, p. 6). In other words, the follower and leader agree on what needs to be done and then rewards are given for achievement.

Seven survey items were used to measure contingent reward in this study. Six of the items use a five-point Likert scale that ranges from *strongly disagree* (1) to *strongly agree* (5). These items are "Selections and promotions in my work unit are based on merit," "Awards in my work unit depend on how well employees perform their jobs," "High-performing employees in my work unit are recognized or rewarded on a timely basis," "Employees are rewarded for providing high quality products and services to customers," "My performance appraisal is a fair reflection of my performance," and "Discussions with my supervisor/team-leader about my performance are worthwhile." The last item for the contingent reward dimension ("How satisfied are you with the recognition you receive for doing a good job?") is also measured on a five-point Likert scale, but with different response categories. The responses for this item ranged from *very dissatisfied* (1) to *very satisfied* (5). A test of internal reliability was conducted for this dimension resulting in a Cronbach alpha of .913. This is similar to the alpha score (α = .89) presented by Bass (1996b).

Individualized consideration is when “leaders pay special attention to each individual follower’s needs for achievement and growth by acting as a coach or mentor” (Bass, 1998, p. 6). In individualized consideration, the leader sees the subordinates holistically including their needs, desires, and concerns instead of just viewing them just as employees. Each leadership interaction with employees is based on the individual by recognizing that everyone is different (Bass, 1985, 1998).

The dimension of individualized consideration is measured using seven items from the survey. Six of these items are measured on a five-point Likert scale that ranges from *strongly disagree* (1) to *strongly agree* (5): “My supervisor supports my need to balance work and family issues,” “My talents are used well in the workplace,” “Supervisors/team leaders in my work unit provide employee(s) with the opportunities to demonstrate their leadership skills,” “Supervisors/team leaders in my work unit encourage my development at work,” “I am given a real opportunity to improve my skills in my organization,” and “My job makes good use of my skills and abilities.” One item used to measure individualized consideration, “How satisfied are you with your involvement in decisions that affect your work,” is measured on a five-point Likert scale ranging from *very dissatisfied* (1) to *very satisfied* (5). The Cronbach alpha for this dimension was .905.

These operational definitions of transactional leadership can be viewed in Table 13 (see Appendix B).

Transformational Leadership Behaviors

Transformational leadership behaviors are an independent variable in this study. According to Bass (1998), "transformational leaders do more with colleagues and followers than set up simple exchanges or agreements" (p. 5). A transformational leader – through individualized consideration, idealized influence, inspirational motivation, and intellectual stimulation – achieves higher levels of motivation and organizational commitment which tends to result in "performance beyond expectations" (Bass, 1985, 1998). As described in the previous section, individualized consideration will be considered a transactional leadership behavior for the purposes of this study. The three dimensions that are included in transformational leadership behaviors are idealized influence, inspirational motivation, and intellectual stimulation.

Idealized influence or charismatic leadership as it has been called in previous renderings of the Full Range Leadership Model is when

> leaders behave in ways that result in their being role models for their followers. The leaders are admired, respected, and trusted. Followers identify with the leaders and want to emulate them; leaders are endowed by their followers as having extraordinary capabilities, persistence, and determination….They can be counted on to do the right thing, demonstrating high standards of ethical and moral conduct (Bass, 1998, p. 5).

Idealized influence is based on the employees' respect and admiration of their leaders to do the right thing.

There are two items that were used as measures for idealized influence from the *2002 Federal Human Capital Survey*. These two indicators are "My organization's leaders maintain high standards of honesty and integrity," and "Complaints, disputes or grievances are resolved fairly in my work unit," and are measured on a five-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). A measure of internal reliability was conducted for this dimension with a Cronbach alpha of .813.

Inspirational motivation is when "leaders behave in ways that motivate and inspire those around them by providing meaning and challenge to their followers' work" (Bass, 1998, p. 5). Leaders create an environment of team spirit and involve followers in creating a vision for the organization (Bass, 1998). The leader also creates "a sense of purpose in what needs to be done" (Bass, 1996a, p. 741).

Inspirational motivation was measured using two items from the survey: "In my organization, leaders generate high levels of motivation and commitment in the workforce" and "Employees have a feeling of personal empowerment and ownership of work processes." They were measured on a five-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). A measure of internal reliability was conducted with a Cronbach alpha for this dimension of .847. This is higher than alpha score (α = .76) presented by Bass (1996b).

The last dimension of transformational leadership is intellectual stimulation, which occurs when "leaders stimulate their followers' efforts to be innovative and creative by questioning assumptions, reframing problems, and approaching old situations in new ways" (Bass, 1998, pp. 5). Leaders attempt to create an environment where new ideas and creative ways to solve problems are encouraged and where "there is no public criticism of individual members' mistakes" (Bass, 1996b, p. 6).

Intellectual stimulation uses three items from the *2002 Federal Human Capital Survey* to measure it. These three items are all measured on the same five-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). They are "Supervisors/team leaders are receptive to change," "Creativity and innovation are rewarded," and "I feel encouraged to come up with new and better ways of doing things." A measure of internal reliability was conducted with a Cronbach alpha of .815.

The operational definitions of transformational leadership can also be viewed in Table 13 (see Appendix B).

Perceived Leadership Effectiveness

Perceived leadership effectiveness is a dependent variable in this study. It is being used to determine the ability of the revised leadership model to encompass what is perceived to be effective by followers in the federal government. Dhar and Mishra (2001) suggest that "the attitude of followers toward the leader is another significant indicator of leader effectiveness, which is related to satisfying the needs and expectations of followers, the respect and admiration of the followers for the leader and commitment of the followers" (p.255). Hooijberg and Choi (2000, 2001) suggest that perceived leadership effectiveness is related to leaders' success in organizations, their performance, and their ability to be role models. Perceived leadership effectiveness for this study will gauge the amount of respect that subordinates have for leaders and how well subordinates perceive that their leaders perform their jobs.

There are two items on the *2002 Federal Human Capital Survey* that are used to measure perceived leadership effectiveness. One item, "I hold my organization's leaders in high regard," is measured on a five-point Likert-scale that ranges from *strongly disagree* (1) to *strongly agree* (5). The second item, "Overall, how good a job do you feel is being done by your immediate supervisor/team leader," is measured with a five-point scale that ranges from *very poor* (1) to *very good* (5). A measure of internal reliability was performed, resulting in a Cronbach alpha of .731.

The preceding paragraphs outline the conceptualization and operational definitions of perceived leadership effectiveness as they relate to this study. These operational definitions can also be viewed in Table 13 (see Appendix B).

Follower Satisfaction

Follower satisfaction is the other dependent variable in this study. It estimates followers' satisfaction with their jobs and with the organizations. As detailed earlier, Spector (1997) suggests that "job satisfaction is simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs" (p. 2). Organizational satisfaction is similar in that it measures the extent to which employees are satisfied with the organization where they work. Other researchers have included the firm or organization as part of satisfaction scales with a person's job (War & Routledge, 1969). Therefore, the components of follower satisfaction will include measures of organizational and job satisfaction.

Follower satisfaction will be measured by three items from the *2002 Federal Human Capital Survey*. One item is "I recommend my organization as a good place to work," measured on a five-point Likert scale that ranges from *strongly disagree* (1) to *strongly agree* (5). The other two items are "Considering everything, how satisfied are you with your job," and "Considering everything, how would you rate your overall satisfaction in your organization at the present time." They are measured on a different five-point Likert scale ranging from *very* *dissatisfied* (1) to *very satisfied* (5). A measure of internal reliability was performed with a resulting Cronbach alpha of .881.

The previous paragraphs outline the conceptualization and operational definitions of follower satisfaction as they relate to this study. These operational definitions can also be viewed in Table 13 (see Appendix B).

Control Variables

Because multivariate analysis will be conducted to answer the research questions in this study, demographic and organizational factors need to be controlled in the model in order to specify the impact of independent variables on the dependent variable. The control variables in this study include the responders' gender, ethnicity, supervisory status, and satisfactions with other organizational dimensions that include pay, benefits, career path, personal fulfillment of the job, the physical conditions, organizational training, workplace flexibilities, coworkers and communication.

The demographics or personal characteristics that may have an effect on follower satisfaction are gender, ethnicity, and supervisory status. Supervisory status is also used as a control variable because the Office of Personnel Management (March, 2003) suggests that the higher level in the organization may antecede higher response levels. Therefore, higher level leaders (i.e. executives) may respond more favorably in terms of their satisfaction. Due to this reason, supervisory status will also be the only control variable in models examining perceived leadership effectiveness. Executives may indicate higher levels of leadership behaviors in their agencies.

The gender of the responder is a dichotomous variable with two response categories, male and female. This variable will be dummy-coded with zero (0) for females and one (1) for males for this analysis. The ethnicity of the responder is a dichotomous variable with two response categories, minority and non-minority. This variable will be dummy-coded for this analysis with one (1) for non-minorities (white) and zero (0) for minorities. The supervisory status of the respondent is a categorical variable that is coded into three categories. The categories that were used in the *2002 Federal Human Capital Survey* are "Non-Supervisor/Team Leader", "Supervisor/Manager", and "Executive" so front line to top management is included in this survey. These categories will be dummy-coded into two variables for analysis. Supervisor/Manager will be dummy-coded with one (1) for supervisors/managers and zero (0) for all others. Executive will be dummy-coded with one (1) for executives and zero (0) for all others.

The organizational and job variables relating to follower satisfaction that will be controlled in regression models are satisfaction with pay, benefits, career path, personal fulfillment of the job, physical conditions, organizational training, workplace flexibilities, coworkers, and communication. Each of these measures will be developed using either one or two questions from the *2002 Federal Human Capital Survey*. Each of the questions uses a five-point Likert scale that ranges from either *strongly disagree* (1) to *strongly agree* (5), or *very dissatisfied* (1) to *very satisfied* (5). The operational definitions of these organizational control variables may be found in Table 13 (see Appendix B).

Construct Measurement Validity

Measurement validity, according to Babbie (2001), “refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration” (p. 143). An argument can be made that the data used in this study have face validity. That is to say, most of the measures used appear to agree with the general conceptualizations of most people as to what leadership, perceived leadership effectiveness, and follower satisfaction are. Construct validity is “the degree to which a measure relates to other variables as expected within a system of theoretical relationships” (Babbie, p. G2). It must be established that leadership in this research will have the anticipated effect on perceived leadership effectiveness and follower satisfaction.

Bass (1985) studied leadership and determined that the dimensions of transactional and transformational leadership are related to leadership effectiveness. Transactional elements in his model were less associated than transformational elements. In addition, many researchers have also found a relationship between aspects of leadership and satisfaction (Glisson & Durick, 1988; Judge et a., 2004; Podsakoff et. al, 1982, 1990; Soonhee, 2002). Therefore, there is an indication that construct validity is present among the measures in this study.

Levels of Measurement and Index Creation

Levels of Measurement

The levels of measurement for the indicators of the six leadership dimensions of transactional and transformational leadership behaviors are at an ordinal level because their response categories are based on five-point Likert scales with a neutral category. These six dimensions will be used to create continuous, interval level indices discussed in the next section. These indices will be considered interval level and continuous because they consist of continuous scales from one to five. Since they do not have a true zero, they cannot be considered ratio level data; because they are additive indices, they can be considered interval level data (Berman, 2001). Values of one (1) will indicate the lowest level of the respondent's perception of leadership behavior in the organization, while five (5) will indicate the highest level of the respondent's perception of leadership behaviors in the organization.

A similar method will be used for the dependent variables. The indicators will be combined to create indices described in the following section and will result in continuous, interval level data. One (1) will indicate the lowest level of perceived leadership effectiveness or follower satisfaction and five (5) will indicate the highest level of perceived leadership effectiveness or follower satisfaction.

Index Creation

Indices were created from the responses on the *2002 Federal Human Capital Survey* for the researcher to examine transactional leadership behaviors, transformational leadership behaviors and the combined effect of these two styles of leadership. To begin with, each question from the survey was evaluated to determine if it could be used in any of the six dimensions of transactional or transformational leadership: management by exception, contingent reward, individualized consideration, idealized influence, inspirational motivation, and intellectual stimulation. As described previously, these questions were grouped according to the leadership dimensions. The six individual dimensions of the leadership model are not examined individually against the dependent variables, but the broader categories of transactional leadership behaviors, transformational leadership behaviors and the combined leadership behaviors are studied. Therefore, indices for these independent variables were created.

The index for transactional leadership behavior was created by combining the three dimensions of management by exception, contingent reward, and individualized consideration. Since each of the dimensions had response categories of five-point Likert scales to be able to compare this variable to others, the dimensions were added together and then divided by the number of measures to create a continuous scale. As described in the previous section, one (1) would indicate the lowest level of perception of transactional leadership in the organization, while five (5) would indicate the highest level of perception of transactional leadership.

The index for transformational leadership behavior was created by combining the three dimensions of idealized influence, inspirational motivation, and intellectual stimulation. The indicators of these dimensions had response categories that consisted of five-point Likert scales. To be able to compare transformational leadership behaviors with other independent and dependent variables in this study, the dimensions were added together and then divided by the number of measures to create a continuous scale from one (1) to five (5). As described in the levels of measurement section, one (1) would indicate the lowest level of perception of transformational leadership in the organization and five (5) would indicate the highest level of perception of transformational leadership.

The index for the combined leadership behaviors, a composite of transactional and transformational leadership behaviors, was created by including the transactional and transformational leadership variables. As with transactional leadership behaviors and transformational leadership behaviors one (1) would indicate the lowest level of perception of leadership in the organization and five (5) would indicate the highest level of perception of leadership in the organization. Figure 2 presents the creation of these independent variables from the dimensions.

The indices for the dependent variables were created by adding together the indicators, then dividing them by the number of measures to create an index with values that ranged from one (1) to five (5). Again, one (1) would indicate the lowest level of perceived leadership effectiveness or follower satisfaction and five (5) would indicate the highest level. The indices for the control variables were computed in a similar manner. Since the control variables either had only one or two indicators for each control variable, the variables with only one indicator were not computed into indices. The control variables that have two indicators, such as pay, career path, personal fulfillment of job, organizational training, and workplace flexibilities were created into indices by adding the two indicators together and then dividing them by two to create a range of values from one (1) to five (5). Again one (1) would indicate the lowest level of the variable and five (5) would indicate the highest level.

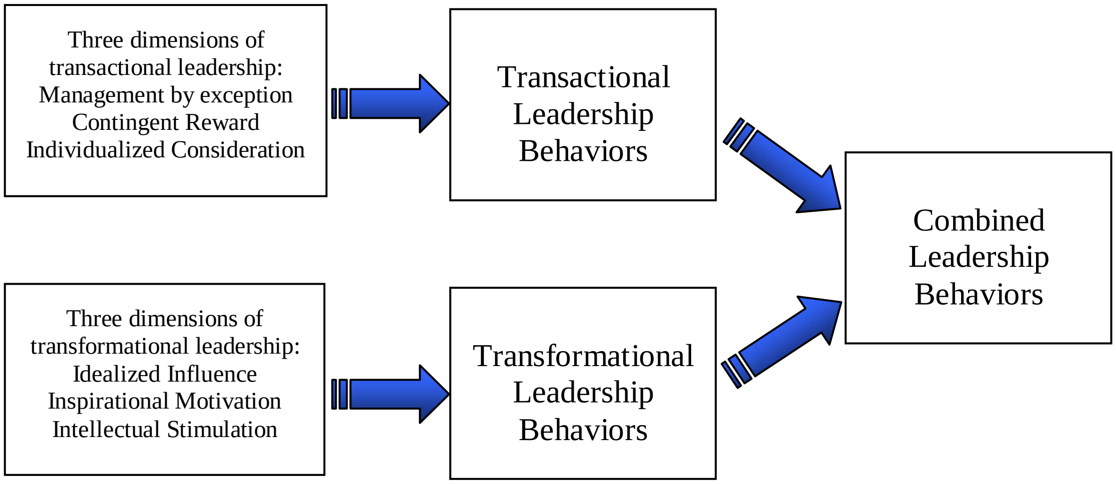

Figure 2: Development of Independent Variable Indices

Proposed Analytical Model

The proposed analytical models for this research are shown in the following figures. Figure 3 shows the proposed relationship between transactional and transformational leadership behaviors and perceived leadership effectiveness. The variable of combined leadership behavior is also shown in Figure 3 so as to examine the relationship that the combination of transactional and transformational leadership behaviors have on perceived leadership effectiveness. The control variable that may have an effect on perceived leadership effectiveness, supervisory status, is also shown in this figure.

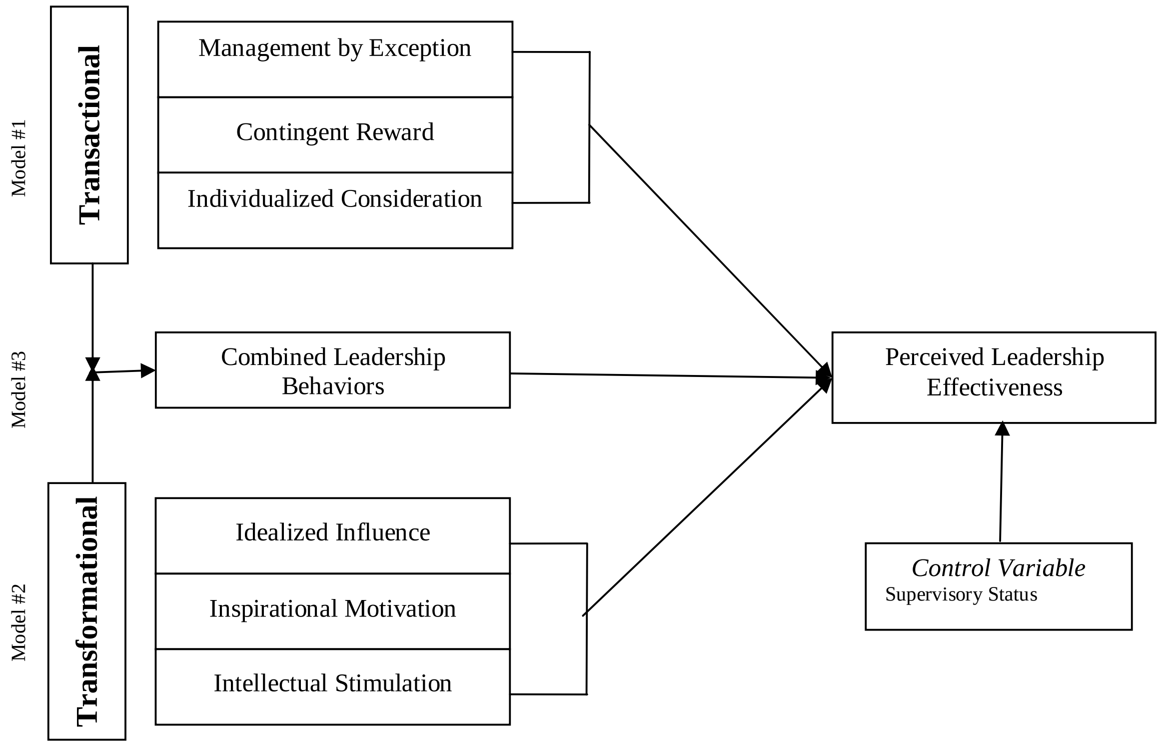

Figure 3: Relationship of Transactional, Transformational, and Combined Leadership Behaviors to Perceived Leadership Effectiveness (Models 1 – 3)

Figure 4 shows the proposed relationship between transactional and transformational leadership behaviors and follower satisfaction. The combined leadership behaviors variable is included in this model to examine the augmentation effect of transformational and transactional leadership on follower satisfaction. The control variables that may have an effect on follower satisfaction are also shown. These include personal demographics such as the gender, ethnicity, and supervisory status of the responder. In addition to personal characteristics, satisfaction with organizational and job characteristics such as pay, benefits, career path, personal fulfillment of the job, physical conditions, organizational training, workplace flexibilities, coworkers and communication are being included in this model as control variables.

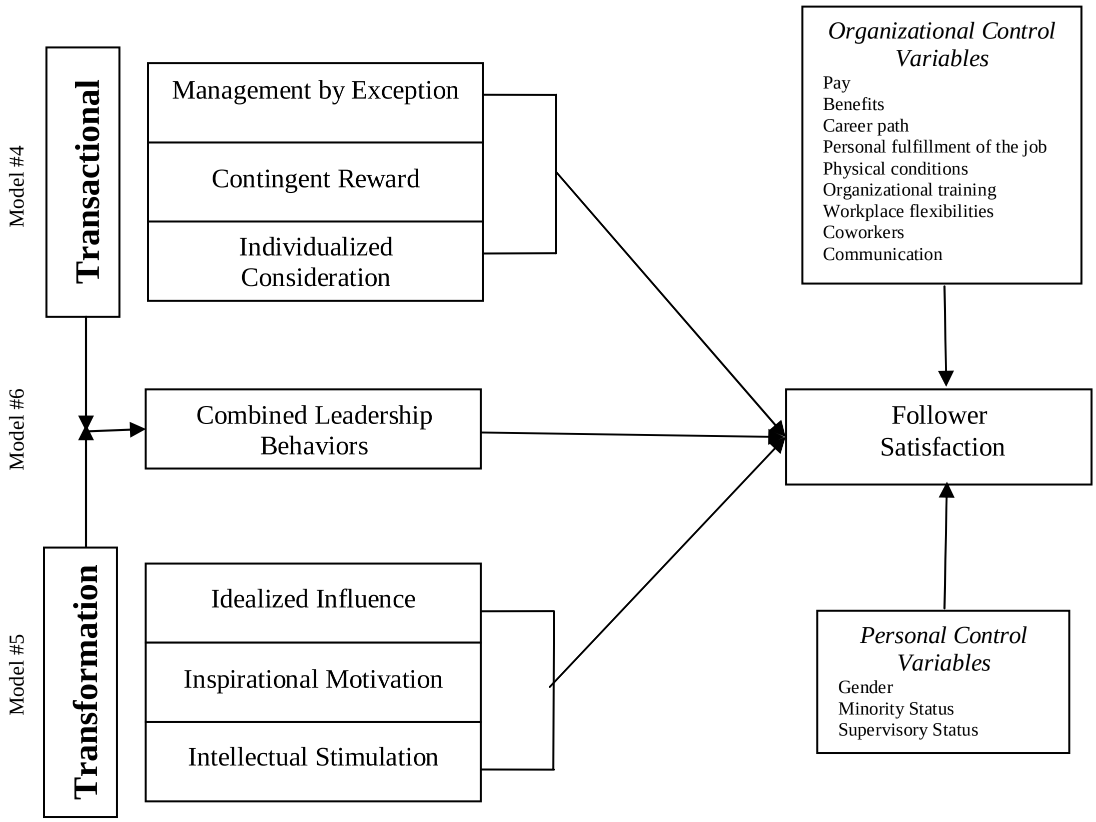

Figure 4: Relationship of Transactional, Transformational, and Combined Leadership Behaviors to Follower Satisfaction (Models 4 – 6)

Data Analysis

Univariate analysis was conducted on each variable to be able to describe and quantify them for analysis. This was done to be able to examine the variables to determine if there are any issues that needed to be considered and resolved prior to conducting bivariate and multivariate analysis. Bivariate analysis was performed to determine the relationships between variables in this study. Then, ordinary least squares (OLS) multiple regression analyses were run on the models presented in this section to test the hypotheses, set forth in Chapter Two of this study.

Limitations of Study Design

This study is a cross-sectional survey: it examines respondents' perceptions at a specific timeframe. It captures only one instance of the federal government employees' perceptions. More studies would need to be conducted to further validate the results of the study. Longitudinal data are particularly helpful in determining the change of perception over time for the variables of interest in this study.

Second, this study targets federal employees so the generalization of the findings to other governmental levels must be made with caution. Additional studies would need to be conducted on state and local government employees to determine if their perceptions are similar to those of federal government employees.

Also, this research uses a federal dataset obtained from the Office of Personnel Management. Though secondary data analysis offers a convenient way to look at leadership in the federal government without fear of a poor response rate or major response biases, it does somewhat limit the ability of researchers when designing research studies. A common problem with the use of data sets that are not collected specifically for one's own study is the possibility that indicators do not perfectly match the concepts under study. Also, there may be times where there is not a set of complete indicators for the studied dimension because the researcher is confined to the available variables in the data set.

Since federal data are used, perfect indicators for the variables are not an option, but each variable closely approximates the dimensions of Bass's model under study. In addition, the Office of Personnel Management data set was collected for this type of analysis and the indicators are well matched to the tested conceptual framework.

There is also the possible limitation of self-report bias, which occurs because "research participants want to respond in a way that makes them look as good as possible" (Donaldson & Grant-Vallone, 2002, p. 247). Therefore, the respondents of the *2002 Federal Human Capital Survey* may have responded in ways that presented themselves in a more positive light. Since this limitation is present in all self-administered surveys and the anonymity of the original survey was exceptional, this researcher does not believe that this will significantly bias the results.

CHAPTER FOUR: RESULTS

This section presents the results of analysis on the study and control variables. Various tests will be performed to determine the relationship between leadership and the dependent variables: follower satisfaction and perceived leadership effectiveness. The appropriateness of using multiple regression will be discussed and the results will be summarized. Lastly, a case will be made as to whether each hypothesis presented in Chapter Two was supported or not.

Descriptive Statistics

Prior to running any bivariate or multivariate tests, descriptive statistics were run for all variables in the two models specified in the previous chapter. Table 2 shows the results of the descriptive statistics for all variables in this study. The minimum and maximum values for all variables fell within the scale's range used for the indicators in this study. This initial analysis shows that the typical responder of the *2002 Federal Human Capital Survey* is a white (n = 74,921, 75.0%) male (n = 58,900, 58.6%) who is a not a supervisor (n = 60,117, 60.2%).

The mean for transactional leadership behaviors is 3.45 (n = 87,396) and the mean for transformational leadership behaviors is 3.26 (n = 89,752). The mean of the combined leadership behaviors variable is 3.36 (n = 82,703). The mean for the dependent variables are 3.47 (n = 100,324) for perceived leadership effectiveness and 3.61 (n = 100,473) for follower satisfaction.

Table 2
Descriptive Statistics for Variables

Variables	n	Mean	Median	Mode	Standardized Deviation	Minimum	Maximum
Independent Variables							
Transactional Leadership	87396	3.45	3.56	4.00	.801	1.00	5.00
Transformational Leadership	89752	3.26	3.39	4.00	.961	1.00	5.00
Combined Leadership	82703	3.36	3.48	4.00	.859	1.00	5.00
Dependent Variables							
Perceived Leadership Effectiveness	100324	3.47	3.50	4.00	1.028	1.00	5.00
Follower Satisfaction	100473	3.61	4.00	4.00	.991	1.00	5.00
Control Variables							
Gender of Respondent[a]	100442	N/A	N/A	1.00	.492	0.00	1.00
Minority Status of Respondent[b]	99862	N/A	N/A	1.00	.433	0.00	1.00
Supervisory Status[c]	99871	N/A	N/A	1.00	.553	1.00	3.00
Pay	100571	3.65	4.00	4.00	.981	1.00	5.00
Benefits	100571	3.83	4.00	4.00	.917	1.00	5.00
Career Path	100571	3.00	3.00	3.00	1.148	1.00	5.00
Personal Fulfillment of Job	100571	3.97	4.00	4.00	.904	1.00	5.00
Physical Conditions	100352	3.64	4.00	4.00	1.111	1.00	5.00
Organizational Training	100420	3.50	4.00	4.00	.976	1.00	5.00
Workplace Flexibilities	100571	3.32	3.50	3.00	.867	1.00	5.00
Coworkers	100571	4.00	4.00	4.00	.868	1.00	5.00
Communication	100571	3.24	3.00	4.00	1.152	1.00	5.00

[a] 0 = Female, 1 = Male
[b] 0 = Minority, 1 = Nonminority
[c] 1 = Nonsupervisor/Team Leader, 2 = Supervisor/Manager, 3 = Executive

The descriptive statistics for the control variables are also summarized in Table 2. The mean for satisfaction with pay is 3.65 (n = 100,571). Satisfaction with benefits has a mean of 3.83 (n = 100,571). Career Path has a mean of 3.00 (n = 100,571). The mean for personal fulfillment of job is 3.97 (n = 100,571). The mean for satisfaction with physical conditions is 3.64 (n = 100,352). Satisfaction with organizational training has a mean of 3.50 (n = 100,420). Satisfaction with workplace flexibilities has a mean of 3.32 (n = 100,571). Coworkers has a mean of 4.00 (n = 100,571). Lastly, the mean of communication is 3.24 (n = 100,571).

Analysis of Variables

After conducting descriptive statistics of the variables in the study and analysis of normality tests and visual inspection of charts and graphs, it was determined that most of the ordinal level variables in this study do not have normal distributions. Though not severely distorted, all the independent and dependent variables were moderately negatively skewed. All of the control variables with the exception of "career path" also appeared to be somewhat skewed based on the visual inspection of graphs and descriptive statistics. This is not uncommon with social science research (Pallant, 2005).

Some univariate outliers were also detected, but since they were within the range of possible values they were retained. To limit the impact of these outliers and skewed variables on the analysis, all variables in this study, except for the control variable "career path," which based on a visual inspection appeared to have a relatively normal distribution, were looked at for possible transformation. Both dependent variables improved with transformation. Normality tests and visual inspection of charts and plots suggested that the best transformations for the dependent variables were a reflection and a square root method for “perceived leadership effectiveness,”, and reflection and logarithm for “follower satisfaction”. All three of the independent variables, transactional leadership, transformational leadership and combined leadership, were also transformed using the reflection and square root method. Visual inspection of the variables suggested that this method gave the variables a more normal distribution. Transformation of the control variables in the study failed to significantly alter the distributions and they were retained in their untransformed manner. Allison (1999) suggests that normality of the individual variables is not as important to regression as the normality of the disturbance or error. Therefore, these control variables were kept in their current form.

After transformation, the independent and dependent variables under study were closer to a normal distribution of values. Normality tests and visual inspection of the variables showed that the transformation helped in bringing these variables closer to a normal distribution and therefore these transformed variables were used in the analysis for this study. Reflection was done on each of the transformed variables because the negative skewness of these variables needed to be reversed. So while a high response previously would have indicated a strong agreement with a variable, it would now indicate a strong disagreement with a variable (Tabachnick & Fidell, 2001).

An analysis of multivariate outliers using Mahalanobis distance was conducted for this study. Mutlivariate outliers were retained in the analysis because of the high impact that removal of these had on the executive supervisory status. When multivariate outliers with Mahalanobis distance values higher than the critical value of 16.266 ($p<.001$) with three independent variables (Tabachnick & Fidell, 2001) were removed from models, almost all executives were removed from the study. In fact, for models with perceived leadership effectiveness as the dependent variable, all multivariate outliers as defined by the Mahalanobis distance were executives. A similar occurrence resulted in models with follower satisfaction as the dependent variable; almost all of the executives were removed from analysis if these outliers were eliminated. This implies that these models may not be able to predict the values of executives, but they were retained in this analysis because they are a very small portion of all cases (3.0%).

Correlation Analysis

Bivariate correlations of the variables were also performed to determine the relationship between individual variables that are used in the regression models. Because of the transformation of variables discussed in the previous section, the signs in the correlation were in many cases reversed. This did not occur in the relationship between the independent and dependent variables because both of these were reversed, canceling the effect. In other words, the correlations between these variables resulted in the true direction of the relationship. The correlations with control variables had to be adjusted back by changing the direction of the plus or minus sign in order to restore the actual relationship between these variables. The correlations of the variables to the dependent variables in this study are presented in Table 3.

Cohen (1988) defines correlations as "large" if they have absolute r values greater than .50. Absolute r values between .10 and .29 have "small" correlations, whereas absolute r values between .20 and .49 have "medium" correlations. Larger correlation values suggest stronger associations between the variables. Therefore, there is a very strong positive relationship between transactional leadership and perceived leadership effectiveness (r = .795, n = 87311, $p < .0005$) since this is much greater than the value for a large relationship as defined by Cohen

(1988). There is also a very strong positive relationship between transformational leadership behaviors and perceived leadership effectiveness (*r* = .844, *n* = 89706, *p*<.0005). A strong, positive relationship between the combined leadership behaviors and perceived leadership effectiveness (*r* = .847, *n* = 82672, *p*<.0005) also exists.

Table 3
Correlations of Independent and Control Variables to Dependent Variables

Variables	Perceived Leadership Effectiveness	Follower Satisfaction
Independent Variables		
Transactional Leadership Behaviors	.795	.781
Transformational Leadership Behaviors	.844	.788
Combined Leadership Behaviors	.847	.809
Control Variables		
Pay		.316
Benefits		.266
Career Path		.618
Personal Fulfillment of Job		.649
Physical Conditions		.350
Organizational Training		.542
Workplace Flexibilities		.304
Coworkers		.471
Communication		.633

Note. Correlation signs were reversed as needed because of transformation of dependent variables.
Note. Only those control variables that are within a model are shown in terms of correlations to the independent variables.
All correlations significant at the *p*<.01 level.

There is a strong positive relationship between transactional leadership behaviors and follower satisfaction (*r* = .781, *n* = 87372, *p*<.0005). A strong positive relationship between transformational leadership behaviors and follower satisfaction (*r* = .788, *n* = 89720, *p*<.0005) also exists. A strong positive relationship between the combined leadership behaviors and follower satisfaction (*r* = .809, *n* = 82688, *p*<.0005) is also indicated. There are also large correlations between career path (*r* = .618, *n* = 100473, *p*<.0005), personal fulfillment of job (*r* =

.649, *n* = 100473, *p*<.0005), organizational training (*r* = .542, *n* = 100335, *p*<.0005) and communication (*r* = .633, *n* = 100473, *p*<.0005). The other control variables have either small or medium associations to follower satisfaction.

Table 4 presents the correlations between the control variables that are included in the regression models for follower satisfaction. There is a strong association between pay and benefits (*r* = .580) and a strong relationship between communication and career path (*r* = .537). Other relationships between control variables are either moderate or weak in nature.

Table 4
Correlations of Ordinal Level Control Variables in Follower Satisfaction Models

Variables	1	2	3	4	5	6	7	8	9
Pay	---								
Benefits	.580	---							
Career Path	.352	.254	---						
Personal Fulfillment of Job	.167	.157	.446	---					
Physical Conditions	.169	.178	.264	.268	---				
Organizational Training	.245	.234	.485	.419	.301	---			
Workplace Flexibilities	.191	.203	.261	.209	.197	.280	---		
Coworkers	.160	.149	.318	.386	.234	.325	.180	---	
Communication	.215	.196	.537	.423	.304	.499	.268	.359	---

Note. Correlation signs were reversed as needed because of transformation of dependent variables.
All correlations significant at the *p*<.01 level.

Pearson's product moment correlations were also reviewed between the control variables and the independent variables. Assumptions of multicollinearity in the multiple regression models are reviewed later. Table 5 presents the correlations of the control variables and the three leadership variables.

Table 5
Correlations of Control Variables to Independent Variables

Variables	Transactional Leadership	Transformational Leadership	Combined Leadership
Pay	.297	.252	.283
Benefits	.265	.230	.257
Career Path	.661	.624	.663
Personal Fulfillment of Job	.603	.562	.600
Physical Conditions	.391	.370	.395
Organizational Training	.647	.571	.627
Workplace Flexibilities	.330	.308	.330
Coworkers	.518	.497	.523
Communication	.705	.706	.729

Note. Correlation signs were reversed as needed because of transformation of dependent variables.
All correlations significant at the $p<.01$ level.

Simple Regression of Models

Prior to performing multiple regression, simple regression should be run to examine the relationship between the independent variable(s) of interest and the dependent variables. Understanding the bivariate relationship between variables is important for analysts to make a determination if the significance and strength of the relationship remains once other variables are controlled for (Berman, 2001). As Berman suggests, “multiple regression is usually one of the last steps of an analysis” (p.118). Simple regression was performed to examine the effect of the three independent variables of interest (transactional leadership, transformational leadership and the combination of these two) on the two dependent variables (perceived leadership effectiveness and follower satisfaction) in this study.

The proposed models of regression, presented in Chapter Three, consist of 6 models: three for perceived leadership effectiveness and three for follower satisfaction. Each of these models was examined using simple regression. The results of these regression analyses can be found in Table 6.

Table 6
Summary of Simple Regression Models

Regression Models	adjusted r^2	*B*	β	t	sig.
Model 1 (transactional→leadership effectiveness)	.631	1.025	.795	386.6	.000
Model 2 (transformational→leadership effectiveness)	.713	.933	.844	471.8	.000
Model 3 (combined→leadership effectiveness)	.717	1.033	.847	457.4	.000
Model 4 (transactional→follower satisfaction)	.610	.572	.781	369.6	.000
Model 5 (transformational→follower satisfaction)	.621	.494	.788	383.4	.000
Model 6 (combined→follower satisfaction)	.654	.560	.809	395.7	.000

Berman (2001) suggests that coefficient of determination (r^2) values greater than .40 are "strong" and values greater than .65 are "very strong". This is the amount of variance that is explained in the dependent variable by the independent variable. Each of the models explains the majority of the variance in both perceived leadership effectiveness and follower satisfaction. Combined leadership behavior explains 71.7% of perceived leadership effectiveness (t = 457.4, p<.001) and 65.4% of follower satisfaction (t = 395.7, p<.001) in federal government employees.

Each of these same models were tested with multiple regression to determine if these relationships hold while controlling for other variables that may have an effect on them in federal government agencies and to test the hypotheses of this study. Prior to running tests of multiple regression, the models were evaluated to determine if they met all the assumptions needed to use multiple regression. The next section will describe what these assumptions are and determine if these models are suitable for multiple regression.

Multiple Regression Assumptions

Prior to analyzing the data using multiple regression, it is necessary to ensure that the assumptions of multiple regression are met (Berman, 2001; Pallant, 2005, Tabachnick & Fidell, 2001). The following multiple regression assumptions need to be evaluated: (1) the absence of multicollinearity, (2) the absence of outliers, (3) linearity of the model, (4) homoscedasticity, (5) the normal distribution of residuals, (6) the independence of residuals, and (7) at least ordinal level dependent variables with five categories (Berman, 2001; Pallant, 2005). The results of these tests are presented in this section.

Multivariate outliers, discussed in a previous section, were retained in the model after inspecting Mahalanobis distances because removal greatly impacted the executives in the sample. Further analysis demonstrated that cases with standardized residuals with values less than -3.3 and greater than 3.3, as suggested by Tabachnick and Fidell (2001), could be removed without severe impact on the executives in the study. These cases where standardized residuals denoted them as multivariate outliers were removed from all six regression models and then the models were rerun. Though sometimes multivariate outliers can in essence hide other multivariate outliers (Tabachnick & Fidell), further removal of outliers did not significantly change the results of the regression model.

Tabachnick and Fidell (2001) suggest that variables with bivariate correlations greater than .70 should be reviewed to examine the possibility of collinearity. In this study, the only variable that produces a higher bivariate correlation with any of the other independent or control variables is communication. This control variable is highly associated with all three independent variables: transactional leadership (r = .705), transformational leadership (r = .706), and combined leadership (r = .729). Communication is only examined in the three models with follower satisfaction as the dependent variable. Pallant (2005) suggests that tolerance values less than .10 and VIF (variance inflation factors) greater than 10 indicate the presence of multicollinearity. Berman (2001) uses a more conservative estimate with multicollinearity indicated by VIF values in excess of 5. The tolerance values in all the models were all greater than .10, ranging from .256 to .969, and the VIF values were all less than 5, the highest value was 3.912. This suggests that multicollinearity is not a serious concern in these models.

Visual inspection of graphs and plots for all models suggests that there is not violation of the assumptions of linearity, normality, or homoscedasticity. All models appear to have a linear relationship. They all appear to be relatively normal and there does not appear to be a problem with homogeneity. Also, all dependent variables used in these models are at least ordinal level data. Since indices were created, both dependent and independent variables are considered interval level.

Based on the tests for assumptions of multiple regression there does not seem to be any significant violations of the assumptions for any of the six models. Therefore, multiple regression analysis is suitable for hypotheses testing in this study. A discussion of the multiple regression results follows in the next section.

Multiple Regression Results

This section summarizes the results of the six regression runs in this study. The three models with perceived leadership effectiveness are discussed first. Then the three models with follower satisfaction are presented. Due to the transformation of some variables, as discussed in a previous section, the positive and negative signs have been changed as needed to demonstrate the actual relationship between the variables.

A multiple regression analysis was conducted on the relationship between transactional leadership behaviors and perceived leadership effectiveness while controlling for supervisory status of the respondent. Supervisory status of the respondent was dummy-coded for this analysis as discussed in the previous section. The results for this analysis are presented in Table 7. Transactional leadership behaviors, while controlling for supervisory status, account for 64.7% (n = 86430, F = 52723.5, p<.0005) of the explained variance of perceived leadership effectiveness. Transactional leadership behaviors have the most influence on this model (β = .813, t = 392.5, p<.0005), while executive status (β = -.007, t = -3.5, p<.0005) and supervisor/ manager status (β = -.058, t = -27.8, p<.0005) have almost no influence at all.

Table 7
Multiple Regression Results for Model 1 (Transactional Leadership→Leadership Effectiveness)

Variables	*B*	β	t	sig.
Transactional Leadership Behaviors	1.054	.813	392.5	.000
Executive[a]	-.013	-.007	-3.5	.000
Supervisor/Manager[b]	-.039	-.058	-27.8	.000

n = 86,430
adjusted r^2 = .647

[a] 0 = Not executive, 1 = Executive
[b] 0 = Not supervisor/manager, 1 = Supervisor/Manager

A multiple regression analysis was also conducted on the relationship between transformational leadership behaviors and perceived leadership effectiveness, controlling for supervisory status of the respondent. The results for this analysis are presented in Table 8. Transformational leadership behaviors, while controlling for supervisory status, account for 72.7% (n = 88773, F = 78763.7, p<.0005) of the explained variance of perceived leadership effectiveness. Transformational leadership behaviors have the most influence on this model (β = .862, t = 480.7, p<.0005), while executive status (β = -.019, t = -10.8, p<.0005) and supervisor/ manager status (β = -.055, t = -30.4, p<.0005) have almost no influence at all.

Table 8
Multiple Regression Results for Model 2 (Transformational Leadership→Leadership Effectiveness)

Variables	*B*	β	t	sig.
Transformational Leadership Behaviors	.963	.862	480.7	.000
Executive[a]	-.035	-.019	-10.8	.000
Supervisor/Manager[b]	-.037	-.055	-30.4	.000

n = 88,773
adjusted r^2 = .727

[a] 0 = Not executive, 1 = Executive
[b] 0 = Not Supervisor/Manager, 1 = Supervisor/Manager

In addition, multiple regression was performed to examine the relationship between combined leadership behaviors and perceived leadership effectiveness, controlling for supervisory status. The results for this analysis are presented in Table 9. Combined leadership behaviors, while controlling for supervisory status, account for 73.2% (n = 81806, F = 74331.8, p<.0005) of the explained variance of perceived leadership effectiveness. The combined leadership behaviors have the most influence on this model (β = .866, t = 466.5, p<.0005), while executive status (β = -.022, t = -11.7, p<.0005) and supervisor/manager status (β = -.064, t = -34.5, p<.0005) have almost no influence.

Table 9

Multiple Regression Results for Model 3 (Combined Leadership→Leadership Effectiveness)

Variables	*B*	β	t	sig.
Combined Leadership Behaviors	1.068	.866	466.5	.000
Executive[a]	-.039	-.022	-11.7	.000
Supervisor/Manager[b]	-.043	-.064	-34.5	.000

n = 81,806
adjusted r^2 = .732

[a] 0 = Not executive, 1 = Executive
[b] 0 = Not Supervisor/Manager, 1 = Supervisor/Manager

The next three models look at the relationship of the independent variables to follower satisfaction. First, a multiple regression analysis was conducted to look at the relationship between transactional leadership behaviors and follower satisfaction while controlling for gender of the respondent, minority status of the respondent, supervisory status of the respondent, pay, benefits, career path, personal fulfillment of the job, physical conditions, organizational training, workplace flexibilities, coworkers, and communication. Gender, minority status, and supervisory status of respondent were all dummy-coded for this analysis as discussed in a previous section. The results of this model are presented in Table 10. Transactional leadership behaviors, while controlling for all these variables, account for 70.9% (n = 85715, F = 14932.9, p<.0005) of the explained variance of follower satisfaction. Among all variables in the model, transactional leadership behaviors have the largest influence on the dependent variable (β = .361, t = 99.6, p<.0005), followed by personal fulfillment of the job (β = .259, t = 110.8, p<.0005) and career path (β = .129, t = 49.8, p<.0005).

Table 10
Multiple Regression Results for Model 4 (Transactional Leadership→Follower Satisfaction)

Variables	*B*	β	t	sig.
Transactional Leadership Behaviors	.265	.361	99.6	.000
Executive[a]	-.020	-.017	-9.0	.000
Supervisor/Manager[b]	-.017	-.046	-23.6	.000
Gender[c]	.000	-.001	-0.3	.748
Minority Status[d]	.006	.013	6.9	.000
Pay	.012	.062	26.0	.000
Benefits	.002	.012	5.3	.000
Career Path	.021	.129	49.8	.000
Personal Fulfillment of Job	.054	.259	110.8	.000
Physical Conditions	.005	.031	15.1	.000
Organizational Training	.003	.015	5.9	.000
Workplace Flexibilities	.005	.021	10.6	.000
Coworkers	.015	.070	32.0	.000
Communication	.024	.152	57.2	.000

n = 85,715
adjusted r^2 = .709

[a] 0 = Not executive, 1 = Executive
[b] 0 = Not Supervisor/Manager, 1 = Supervisor/Manager
[c] 0 = Female, 1 = Male
[d] 0 = Minority, 1 = Nonminority

The next model looked at the relationship between transformational leadership behaviors and follower satisfaction while controlling for gender of the respondent, minority status of the respondent, supervisory status of the respondent, pay, benefits, career path, personal fulfillment of the job, physical conditions, organizational training, workplace flexibilities, coworkers, and communication. A multiple regression analysis was conducted and the results of this model are presented in Table 11. Transformational leadership behaviors, while controlling for all these variables, account for 73.3% (n = 87981, F = 17286.0, p<.0005) of the explained variance of follower satisfaction. Among all variables in this model, transformational leadership behaviors have the largest influence on the dependent variable (β = .414, t = 136.6, p<.0005), followed by personal fulfillment of the job (β = .257, t = 118.0, p<.0005) and career path (β = .121, t = 50.1, p<.0005).

Table 11
Multiple Regression Results for Model 5 (Transformational Leadership→Follower Satisfaction)

Variables	*B*	β	t	sig.
Transformational Leadership Behaviors	.262	.414	136.6	.000
Executive[a]	-.023	-.020	-11.1	.000
Supervisor/Manager[b]	-.015	-.040	-22.2	.000
Gender[c]	-.003	-.008	-4.7	.000
Minority Status[d]	.001	.002	1.4	.170
Pay	.013	.071	31.9	.000
Benefits	.003	.013	6.0	.000
Career Path	.019	.121	50.1	.000
Personal Fulfillment of Job	.053	.257	118.0	.000
Physical Conditions	.005	.028	14.6	.000
Organizational Training	.007	.039	17.2	.000
Workplace Flexibilities	.004	.020	10.5	.000
Coworkers	.013	.063	30.7	.000
Communication	.017	.108	42.5	.000

n = 87,981
adjusted r^2 = .733

[a] 0 = Not executive, 1 = Executive
[b] 0 = Not Supervisor/Manager, 1 = Supervisor/Manager
[c] 0 = Female, 1 = Male
[d] 0 = Minority, 1 = Nonminority

The last model looked at the relationship between the combined leadership behaviors of transactional and transformational leadership and follower satisfaction while controlling for gender of the respondent, minority status of the respondent, supervisory status of the respondent, pay, benefits, career path, personal fulfillment of the job, physical conditions, organizational training, workplace flexibilities, coworkers, and communication. A multiple regression analysis was conducted and the results of this model are presented in Table 12. Combined leadership behaviors, while controlling for all these variables, account for 73.4% (n = 81089, F = 15992.1,

p<.0005) of the explained variance of follower satisfaction. Among all variables in this model, combined leadership behaviors have the largest influence on the dependent variable (β = .463, t = 129.4, p<.0005), followed by personal fulfillment of the job (β = .241, t = 104.7, p<.0005) and career path (β = .107, t = 42.0, p<.0005).

Table 12
Multiple Regression Results for Model 6 (Combined Leadership→Follower Satisfaction)

Variables	*B*	β	t	sig.
Combined Leadership Behaviors	.324	.463	129.4	.000
Executive[a]	-.024	-.021	-11.3	.000
Supervisor/Manager[b]	-.018	-.047	-24.5	.000
Gender[c]	-.002	-.004	-2.3	.022
Minority Status[d]	.002	.006	3.0	.002
Pay	.013	.067	28.7	.000
Benefits	.002	.012	5.2	.000
Career Path	.017	.107	42.0	.000
Personal Fulfillment of Job	.050	.241	104.7	.000
Physical Conditions	.004	.023	11.5	.000
Organizational Training	.002	.012	5.1	.000
Workplace Flexibilities	.004	.017	8.7	.000
Coworkers	.011	.052	24.1	.000
Communication	.016	.101	37.4	.000

n = 81,089
adjusted r^2 = .734

[a] 0 = Not executive, 1 = Executive
[b] 0 = Not Supervisor/Manager, 1 = Supervisor/Manager
[c] 0 = Female, 1 = Male
[d] 0 = Minority, 1 = Nonminority

Affect on Hypotheses

As presented in Chapter Two of this manuscript, the following hypotheses were tested in this study:

Hypothesis 1. Transactional leadership behaviors affect the perception of leadership effectiveness in federal government agencies.

H_o There is no relationship between transactional leadership behaviors and perceived leadership effectiveness in the federal government.

H_a Transactional leadership behaviors are positively associated with perceived leadership effectiveness in the federal government.

Hypothesis 2. Transformational leadership behaviors affect the perception of leadership effectiveness in federal government agencies.

H_o There is no relationship between transformational leadership behaviors and perceived leadership effectiveness in the federal government.

H_a Transformational leadership behaviors are positively associated with perceived leadership effectiveness in the federal government.

Hypothesis 3. Leadership (a composite of transactional and transformational leadership behaviors) affects the perception of leadership effectiveness in federal government agencies.

H_o There is no relationship between leadership and perceived leadership effectives in the federal government.

H_a Leadership is positively associated with perceived leadership effectives in the federal government.

Hypothesis 4. Transactional leadership behaviors affect follower satisfaction in federal government agencies.

H_o There is no relationship between transactional leadership behaviors and follower satisfaction in the federal government.

H_a Transactional leadership behaviors are positively associated with follower satisfaction in the federal government.

Hypothesis 5. Transformational leadership behaviors affect follower satisfaction in federal government agencies.

H_o There is no relationship between transformational leadership behaviors and follower satisfaction in the federal government.

H_a Transformational leadership behaviors are positively associated with follower satisfaction in the federal government.

Hypothesis 6. Leadership (a composite of transactional and transformational leadership behaviors) affects follower satisfaction in federal government agencies.

H_o There is no relationship between leadership and follower satisfaction in the federal government.

H_a Leadership is positively associated with follower satisfaction in the federal government.

Each of these hypotheses was tested using multiple regression; results are discussed in the previous section. This section will delineate the tests results on the hypotheses.

There is support for Hypothesis 1. Transactional leadership does have an effect on the perception of leadership in the federal government. The null hypothesis was that there was no relationship between transactional leadership behaviors and perceived leadership effectiveness was rejects and support was found that there is a positive relationship between these two variables.

There is support for Hypothesis 2. Transformational leadership behaviors do have an effect on the perception of leadership in the federal government. The null hypothesis that there was no relationship between transformational leadership behaviors and perceived leadership effectiveness was rejected and support was found that there is a positive relationship between these two variables.

There is support for Hypothesis 3. The null hypothesis that there was no relationship between the combination of transactional and transformational leadership behaviors and perceived leadership effectiveness was rejected. There is evidence that a positive relationship exists between these two variables.

There is support for Hypothesis 4. Transactional leadership behaviors do have an effect on follower satisfaction. The null hypothesis that there was no relationship between transactional leadership behaviors and follower satisfaction was rejected and support was found that there is a positive relationship between these two variables.

There is support for Hypothesis 5. Transformational leadership does have an effect on follower satisfaction. The null hypothesis that there was no relationship between transformational leadership behaviors and follower satisfaction was rejected and support was found that there is a positive relationship between these two variables.

Lastly, there is support for Hypothesis 6. The null hypothesis that there was no relationship between the combined leadership behaviors of transactional and transformational and follower satisfaction was rejected. There is evidence that a positive relationship exists between these two variables.

Summary

The results of correlation analysis suggest there are strong relationships between the independent variables (transactional leadership behaviors, transformational leadership behaviors, and combined leadership behaviors) and the dependent variables (perceived leadership effectiveness and follower satisfaction). Simple regression and multiple regression also support the existence of relationship between these variables. Hypothesis testing through multiple regression demonstrated support for all six hypotheses under investigation.

CHAPTER FIVE: CONCLUSIONS AND FUTURE RESEARCH

Conclusions

This study set out to answer whether leadership has an effect on follower satisfaction in the federal government. First, a determination was made whether Bass's revised model of leadership was applicable to employees of the federal government. Modifying his Full Range Leadership Model (1985, 1996a), the present investigation determined that the revised model was indicative of what employees perceive as effective leadership in the federal government. Both transactional and transformational leadership elements are important to the perception of leadership effectiveness. Of interest is the finding that a combination of these two leadership styles is perceived by federal government employees as "effective leadership".

High explained variances in the regression models (64.7% and 72.7%) suggest that transactional and transformational elements capture most of what federal employees perceive as effective leadership. Important to the understanding of what federal employees really want in their leaders is the strong relationship between transactional and transformational leadership behaviors and the perceptions of the employees. Federal employees need the reward-orientation associated with the transactional dimensions of leadership, but at the same time perceive that the change-orientation in transformational leadership is also needed. The implication for public managers in leadership positions is that they need to determine how to balance the transactional and transformational elements of leadership.

In addition, the study attempted to establish whether leadership - as operationally defined by the revised model - has an effect on the satisfaction of followers in the federal government.

Consistent with previous literature (see for example, Bartolo & Furlonger, 2000), the findings confirm that leadership does influence follower satisfaction. When leaders demonstrate transactional and transformational leadership behaviors, or the combination of the two, there is an increase in follower satisfaction. Leadership behaviors have a stronger effect on satisfaction than other organizational and personal factors such as pay, benefits, coworkers, and gender. The key finding of this study is that based on the relative ranks of each of the beta scores, leadership was the most important indicator of satisfaction in the federal government. The results show that leadership has an enormous influence on federal government employees' affective state; therefore, federal leaders need to improve the quantity and more importantly, the quality, of their leadership within the federal government or risk organizational complications associated with employee dissatisfaction.

Beekman (2004) argues that "employee satisfaction plays a critical role in high performing organizations" (p. 48). He further suggests that the federal government "must make employee satisfaction a top priority…[to] help government retain employees with the needed experience and make government an attractive option for people looking to make public service an important part of their career" (p. 49). The findings of this investigation indicate that leadership is clearly linked to follower satisfaction among federal employees. Since satisfaction is linked to organizational performance and other organizational outcomes (Beekman, 2004), the federal government needs to increase its leadership capacity by training and developing leaders. Ingraham and Getha-Taylor (2004) suggest that "developing and sustaining effective leaders for the 21st century is clearly fundamental" (p 96) because of their influence on employee satisfaction and organizational performance. Trained leaders are needed to meet the challenges facing future policy arenas.

The policy implication derived from this study for the public sector is that public managers need training in transactional and transformational leadership skills and behaviors. The components of such training would include becoming a change agent, inspiring followers, creating a vision for the organization, rewarding for performance, and developing followers. The need for training in the federal government in effect echoes the work of Ingraham and Getha-Taylor (2004). Similar models for training are also needed in state and local governments, public service agencies, and other public sector organizations.

The key finding that leadership has an effect on follower satisfaction must be kept in the perspective of the limitations that were discussed in Chapter Three. Since survey research was conducted, there may be a self-report bias in the *2002 Federal Human Capital Survey*. In addition, there is possible nonresponse bias. Also, since secondary data was used, the indicators may not have been proper measures of the dimension under study. Though these limitations exist, they are not a serious concern since they are, to some extent or another, present in most survey or secondary research.

Future Research

Since one of the limitations of the study was the failure of the regression models to predict efficiently the responses of executives in the federal government, further research is needed to determine if executives have different perceptions of leadership effectiveness and if they have different levels of satisfaction than other employees in the federal government. An analysis of the differences among executives and the rest of manager and nonmanagers could answer this question.

Additional research could be conducted to determine which of the two, transactional or transformational leadership behaviors, is more important to the perception of leadership effectiveness and follower satisfaction. This study did not compare these variables, but further analysis could make this determination. This could impact how leaders are trained in the federal government. Should government focus more on the reward for performance approach as demonstrated by the transactional behaviors, or should it focus on inspiration, motivation, and change associated with transformational leadership.

In addition, research could be conducted to evaluate the individual dimension of Bass's (1985, 1996a) Full Range Leadership Model. Are any of the six dimensions more important in determining follower satisfaction or perception of leadership effectiveness? Is inspiration or reward more important, is allowing employees to be creative more important than showing them consideration? A research study that would look at the separate dimensions of management by exception, contingent reward, individualized consideration, idealized influence, inspirational motivation, and intellectual stimulation could determine if any of these are more important to the satisfaction of the followers in the federal government or to their perception of effective leadership. This would be an interesting way of seeing which of these facets need to be considered more in making decisions about leadership development.

Lastly, this revised model could be tested in other public organizations (state and local government, non-profit organizations, social service agencies, etc.) to determine if similar effects are found that might offer additional insight into leadership in the public sector. This would increase the amount of public sector leadership and offer a way to make comparisons among different organization types.

APPENDIX A: APPROVAL LETTER FROM UCF IRB

University of
Central
Florida

Office of Research & Commercialization

June 8, 2005

Tracey Trottier
4770 Sharpes Lake Avenue
Cocoa, FL 32926

Dear Ms. Trottier:

The University of Central Florida's Institutional Review Board (IRB) received your protocol IRB #2647 entitled, "How Leadership Affects Follower Satisfaction: The Federal Case". The IRB Chair did not have any concerns with the proposed project and has indicated that under federal regulations this minimal risk research involving the collection or study of existing de-identified data is exempt from review by our IRB, so an approval is not applicable and a renewal within one year is not required.

Please accept our best wishes for the success of your endeavors. Should you have any questions, please do not hesitate to call me at 407-823-2901.

Cordially,

Barbara Ward

Barbara Ward, CIM
IRB Coordinator

Copies: IRB File

12443 Research Parkway • Suite 302 • Orlando, FL 32826-3252 • 407-823-3778 • Fax 407-823-3299

APPENDIX B: TABULAR DEFINTION OF VARIABLES

Table 13
Tabular Definition of Variables

Variables	Operational Definition	Level of Measurement
Independent Variable Transactional Leadership Behaviors		
	1. Management by Exception	
	Information collected on my work unit's performance is used to improve my work unit's information. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	In my work unit, steps are taken to deal with a poor performer who cannot or will not improve. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	I have enough information to do my job well. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	2. Contingent Reward	
	Selections for promotions in my work unit are based on merit. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	Awards in my work unit depend on how well employees perform their jobs. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	High-performing employees in my work unit are recognized or rewarded on a timely basis. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	Employees are rewarded for providing high quality products and services to customers. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal

Variables	Operational Definition	Level of Measurement
	My performance appraisal is a fair reflection of my performance. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	Discussions with my supervisor/team-leader about my performance are worthwhile. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	How satisfied are you with the recognition you receive for doing a good job? Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal
	3. Individualized Consideration	
	My supervisor supports my need to balance work and family issues. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	My talents are used well in the workplace. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	Supervisors/team leaders in my work unit provide employee(s) with the opportunities to demonstrate their leadership skills. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	Supervisors/team leaders in my work unit encourage my development at work. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	I am given a real opportunity to improve my skills in my organization. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal

Variables	Operational Definition	Level of Measurement
	My job makes good use of my skills and abilities. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	How satisfied are you with your involvement in decisions that affect your work? Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal
Independent Variable Transformational Leadership Behaviors		
	1. Idealized Influence	
	My organization's leaders maintain high standards of honesty and integrity. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	Complaints, disputes or grievances are resolved fairly in my work unit. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	2. Inspirational Motivation	
	In my organization, leaders generate high levels of motivation and commitment in the workforce. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	Employees have a feeling of personal empowerment and ownership of work processes. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	3. Intellectual Stimulation	
	Supervisors/team leaders are receptive to change. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal

Variables	Operational Definition	Level of Measurement
	Creativity and innovation are rewarded. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	I feel encouraged to come up with new and better ways of doing things. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
Dependent Variable Perceived Leadership Effectiveness		
	I hold my organization's leaders in high regard. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	Overall, how good a job do you feel is being done by your immediate supervisor/team leader? Very Good Good Fair Poor Very Poor	Ordinal
Dependent Variable Follower Satisfaction		
	I recommend my organization as a good place to work. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	Considering everything, how satisfied are you with your job? Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal
	Considering everything, how would you rate your overall satisfaction in your organization at the present time? Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal
Control Variables		
	1. Gender of Responder Male Female	Nominal

Variables	Operational Definition	Level of Measurement
	2. Ethnicity of Responder Nonminority Minority	Nominal
	3. Supervisory Level of Responder Nonsupervisor/Team Leader Supervisor/Manager Executive	Nominal
	4. Pay	
	How do you rate the amount of pay you get on your job? Very Good Good Fair Poor Very Poor	Ordinal
	How satisfied are you with your pay: Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal
	5. Benefit	
	How do you rate your total benefits program? Very Good Good Fair Poor Very Poor	Ordinal
	6. Career Path	
	How satisfied are you with your opportunity to get a better job in your organization? Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal
	7. Personal Fulfillment of Job	
	My work gives me a feeling of personal accomplishment. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	I like the kind of work I do. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	8. Physical Conditions	

Variables	Operational Definition	Level of Measurement
	Physical conditions (for example, noise level, temperature, lighting, cleanliness of the workplace) allow employees to perform their job well. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	9. Organizational Training	
	I receive the training I need to perform my job. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	How satisfied are you with the training you receive for your present job? Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal
	10. Work Flexibilities	
	How satisfied are you with telework/telecommuting: Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal
	How satisfied are you with alternative work schedules: Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal
	11. Coworkers	
	The people I work with cooperate to get the job done. Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree	Ordinal
	12. Communication	
	How satisfied are you with the information you receive from management on what's going on in your organization? Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied	Ordinal

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