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FACILITATIVE LEADERSHIP IN PUBLIC ORGANIZATIONS: A STUDY OF FEDERAL AGENCY SUPERVISORS

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By

VICTORIA MCCARTHY

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FACILITATIVE LEADERSHIP IN PUBLIC ORGANIZATIONS:
A STUDY OF FEDERAL AGENCY SUPERVISORS

A Dissertation APPROVED FOR
THE GRADUATE COLLEGE

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Table of Contents

Page

Copyright Page…….. iii

Acknowledgements…… iv

List of Tables……. viii

List of Figures…… x

Definition of Terms…… xi

Abstract…….. xii

Chapter 1: Purpose and Introduction

- The Problem Statement……. 1
- Purpose ……. 2
- Rationale for this Research……... 3
- Leadership……. 3
- Facilitative Leadership…….. 7
- Leadership Performance Appraisal…….. 8
- Methodology……. 10
- What this Study is Not……. 15
- Study Overview…… 16

Chapter 2: Literature Review & Hypothesis

- Introduction……. 17
- General Leadership Theories…….. 18
- Leadership and Empowerment…… 19
- Facilitative Leadership…… 21
- Criterion for the Selection of Variables…….. 23
- Communicating Vision…… 23
- Employee Involvement in Work Decisions…… 25
- Electronic Access to Information…… 27
- Cooperation and Teamwork…… 29
- Employee Training and Development……. 30
- Job Flexibility……. 32
- Promoting Innovation…….. 33
- Defining Good Performance…… 35
- Recognizing Good Performance……. 36
- Corrective Actions……..… 38
- Leadership and Employees' Perceptions of Supervisors Performance… 38
- The Reinvention Movement…… 40
- Variables outside the Scope of this Research…….. 42
- Public v. Private Organizations…… 44

Institutional Influences…… 45
Summary……. 46
Chapter 3: Methodology
Research Design……. 47
Population…… 48
Context…… 49
Sample…… 49
Demographics of Survey Respondents…… 49
Instrument and Raw Data…… 51
Survey Items not used…… 52
Differences between the 1998 and 2000 NPR Surveys…….. 53
Measures…… 54
Recoding Cooperation and Teamwork…… 67
Missing Data…… 69
Secondary Analysis…… 74
Study Hypotheses…… 75
Data Analysis…….. 78
Ordinary Least Squares (OLS)…… 79
Threats to Validity…….. 80
Summary…… 83
Chapter 4: Results
Introduction…… 84
Bivariate Relations……. 84
Multiple Regression Analysis…… 86
Assumptions of OLS…….. 87
Pearson Correlations for 1998 and 2000 NPR Surveys…….. 88
1998 OLS Model Summary and Regression Coefficients…….. 90
Regression Diagnostics of 1998 Data……. 94
2000 OLS Model Summary and Regression Coefficients…….. 96
Regression Diagnostics of 2000 Data……. 98
Discussion of Findings Compared to the Literature…… 99
Comparison of OLS Results for 1998 and 2000……. 102
Population Validity……. 106
Organizational Leadership…….. 107
Summary……. 109
Chapter 5: Discussion
Overview…….. 110
Summary of Findings and Interpretations…… 111
Hypothesis One: Communicating Vision……. 113
Hypothesis Two: Involvement in Decision-making……. 114
Hypothesis Three: Electronic Access to Information…… 115
Hypothesis Four: A Spirit of Cooperation and Teamwork…… 115
Hypothesis Five: Training Opportunities…….. 117
Hypothesis Six: Flexibility…… 118

Hypothesis Seven: Promoting Innovation……. 119
Hypothesis Eight: Defining Good Performance…… 119
Hypothesis Nine: Recognition of Good Performance……... 120
Hypothesis Ten: Corrective Actions……. 121
Hypothesis Eleven: Combined Effects……. 122
1998 Respondents vs. 2000 Respondents…….. 122
Implications…… 123
Contributions to the Study of Leadership…….. 125
Limitations……. 125
Public v. Private Organizations……. 125
Individual v. Organizational Leadership…… 126
External Validity……. 135
Future Research……. 136
Summary…… 137

References……. 138

Appendix A: 1998 NPR Survey Instrument…… 153

Appendix B: 2000 NPR Survey Instrument…… 158

Appendix C: Scatterplots……. 163

Appendix D: Table of Organizations Super Mean Score and Adjusted R^2……. 164

List of Tables

Table 1: Demographics for NPR Survey…… 50

Table 2. Government-Wide Employees by Pay Grade …….. 51

Table 3: Descriptive Statistics of Independent Variables…… 55

Table 4: Correlation Matrix for Team Survey Items…… 68

Table 5: Descriptive Statistics for Teamwork Variables…… 69

Table 6: Group Statistics for Missing Variables…… 71

Table 7: Independent Samples Test For Missing Data…… 73

Table.8 Descriptive Statistics for Study Variables…….. 77

Table 9: Bivariate Correlation Coefficients (1998 NPR Survey)…… 85

Table 10: Bivariate Correlation Coefficients (2000 NPR Survey)…….. 86

Table 11: Partial Correlation Coefficients (1998 NPR Survey)…….. 88

Table 12: Partial Correlation Coefficients (2000 NPR Survey)…….. 89

Table 13: 1998 Data OLS Model Summary…… 90

Table 14: 1998 Regression Coefficients……..91

Table 15: New Model Summary…… 93

Table 16: Regression Coefficients for New Model……. 94

Table 17: 1998 NPR VIF Scores……. 96

Table 18: OLS Model Summary for 2000 Survey…….. 97

Table 19: 2000 Regression Coefficients…….. 97

Table 20: 2000 NPR VIF Scores……. 99

Table 21: 1998 and 2000 Regression Coefficients……..…….. 100

Table 22: Group Statistics for 1998 and 2000 Survey Responses…… 103

Table 23: Independent Samples Test…..…… 105

Table 24: Government-wide Pay Grade Demographics…… 107

Table 25: Reliability Coefficients 1998 Data…… 108

Table 26: Reliability Coefficients 2000 Data……. 108

Table 27: Summary of Regression Coefficients…… 112

Table 28: FAA Regression Model Summary……. 128

Table 29: FAA Summary Of Regression Coefficients…… 128

Table 30: Labor Regression Model Summary…… 129

Table 31: Labor Summary of Regression Coefficients…… 130

Table 32: EPA Regression Model Summary……. 130

Table 33: EPA Summary of Regression Coefficients…… 131

Table 34: NASA Regression Model Summary…… 131

Table 35: NASA Summary of Regression Coefficients…….. 132

Table 36: Comparisons of Mean Scores and Adjusted R^2 …….. 132

Table 37: Pearson Correlations for Mean Scores and Adjusted R^2…….. 133

Table 38: Pearson Correlations for All Organizations…… 133

List of Figures

Figure 1: Relationship of Facilitative Leadership to Organizational Outcomes…… 7

Figure 2: Supervisor Behavior and Rating…… 9

Figure 3: Leadership and Supervisor's Rating…… 36

Figure 4: Supervisor Rating …… 47

Figure 5: Communicating Vision…… 47

Figure 6: Employee Involvement in Decisions……..… 48

Figure 7: Electronic Access to Information…… 48

Figure 8: Supervisor Organizes Work Groups…… 48

Figure 9: A Spirit of Cooperation and Teamwork……..… 49

Figure 10: Teams Used to Accomplish Goals…….. .49

Figure 11: Employees Rewarded for Working in Teams…… 50

Figure 12: Cross Functional Teams…… 50

Figure 13: Training Opportunities……... 51

Figure 14: Job Flexibility…… 51

Figure 15: Promoting Innovation……. 52

Figure 16: Defining Good Performance……..… 52

Figure 17: Recognizing Good Performance…… 53

Figure 18: Correcting Poor Performance…… 53

Figure 19: Facilitative Leadership and Supervisor Rating……. 85

Figure 20: A Model of Facilitative Leadership…… 95

Definition of Terms

Empowerment is the process of increasing an individual's sense of control, self-efficacy, meaning and determination in the workplace (Spreitzer, 1992).

Facilitative Leadership is the ability to serve as a medium, or human interface, between organizational leadership and lower level employees (Hord, 1992).

Innovation can be defined as the adoption of an existing idea for the first time by an organization.

Leadership is empowering subordinates by providing purpose, direction, motivation and resources to work toward a common goal.

Organizational Leadership is embodied within organizational initiatives that attempt to empower employees for the purpose of improving organizational outcomes.

A **spirit of cooperation and teamwork** is defined as "esprit de corps", harmony and union among individuals within an organization (Fayol, 1949).

Supervisor is defined as an individual within an organization that is responsible for directing and evaluating lower level employees within that organization.

Vision is defined as an organized perception of a future state (Morden, 1997).

ABSTRACT

The concept of leadership is significant, theoretically and instrumentally, in public administration. Despite the extensive literature on organizational leadership, there have been few empirical assessments of leadership's pervasiveness within a public organization.

Using secondary analysis of raw data from two federal government employee surveys, this study examines the concept of facilitative leadership by supervisors within federal agencies. Results from bivariate and multivariate analysis reveal ten factors of organizational leadership that are facilitated through supervisors in federal agencies. These factors are: developing a spirit of teamwork, recognizing good performance, involving employees in the decisions that affect their work, allowing job flexibility, defining good performance, communicating vision, correcting poor performance, providing electronic access to information and promoting innovation.

Two of these factors, providing electronic access to information and promoting innvotion were found to be negatively correlated with supervisors' ratings from their subordinates. These findings were surprising and not predictive by the literature review. When supervisors facilitate the organizational leadership factors teamwork, recognizing good performance, involving employees in the decisions that affect their work, allowing job flexibility, defining good performance, communicating vision, and correcting poor performance, they are viewed more favorably by their subordinates. However, providing electronic access to information and promoting innovation had a negative impact on supervisor ratings from subordinates.

CHAPTER I: INTRODUCTION

The Problem Statement

Leadership has been of particular concern in democracies, which, by definition, cannot rely upon the accident of birth for the recruitment of leaders. Where there is no hereditary aristocracy, every (person) is potentially a leader, and society has to give thought to the identification and proper training of (these persons) who will be able to guide its institutions. (Fiedler, 1967, p. ii)

Leadership within public organizations continues to be of concern for improving the quality of government services. Some failures of American governance can only be corrected through the leadership of public supervisors (Behn, 1998). One of these failures is an "organizational failure". This failure is in the assumption of the "machine metaphor of human organizations":

> If organizations could, as suggested by Frederick Winslow Taylor and other advocates of scientific management, function as machines (with people as interchangeable parts), then public (and private) supervisors would not have to exercise internal leadership. But human organizations do not behave as machines (Behn, 1998, 211).

Lack of leadership within public organizations can be a serious obstacle for organizational effectiveness. When public supervisors fail to exercise initiative and instead hide behind strict adherence to bureaucratic rules, the result is often an "overbearing, arbitrary, and capricious" use of government power, (Behn, 1998, 211). "The imperfections of public organizations and the American system of governance can be tempered with a concerted effort by public supervisors to lead and empower public subordinates," (Behn, 1998, 211). Given their unique position, public supervisors are obligated to lead (Behn, 1998). Organizational leadership is the responsibility of administrators throughout bureaucracy. Effective government leaders at all levels of public administration are essential for improvements.

Purpose

The purpose of this research is to determine if supervisors' activities create the perception that they are facilitating leadership. In particular the research question being: Are supervisors in public organizations perceived by their subordinates to be engaging in facilitative leadership? The supervisory concept in this study appears at all levels of the organization. In order to address this question, the research design is a deductive validation of a model derived from the empirical literature. It is primarily quantitative analysis of bivariate correlations and multivariate relationships using secondary analysis. This study is based primarily on two leadership theories. First is Hord's (1992) theory of facilitative leadership, which classifies supervisory leadership as the human interface between front-line workers and organizational leadership. Second is empowerment theory of leadership. This theory posits that effective leaders develop followers as future leaders by pushing authority downward (Ianello, 1992; Kanter, 1977; Manz & Sim's, 1987; Spreitzer, 1992; Whetton & Cameron, 2002).

This study will assess leadership in the context of the "reinventing government" reform efforts of the 1990. One government document that drives the reinvention movement is the National Performance Review (NPR). The NPR (Gore, 1993) outlines a number of reform initiatives for the administration of government services.

This research is important in the context of the reinvention movement for two reasons. First, the stated purpose of the NPR has been to allow public managers throughout federal agencies more opportunities to lead through entrepreneurship, innovation, and empowerment. Second, the reinvention movement has been one of the longest running administrative reforms in American public administration (Lenkowsky & Perry, 2000).

Rationale for this Research

This study builds on previous facilitative leadership research primarily conducted in the educational leadership literature (Hord, 1992). Hord's research is concerned with principals as important leaders in school reform efforts. Her research has found that principals are key players as facilitative leaders in these change initiatives. When principals facilitate leadership (act as the human interface between district leadership and teachers), change efforts are more successful than not (Hord, 1992).

This study will contribute to knowledge in public administration by empirically confirming the importance of leadership in public organizations (Kettl, 1998) and by classifying the type of leadership in which supervisors engage. . This research is special because it looks at supervisors in general and has a significant study sample. It is also better rounded than other studies of leadership because potentially it assesses supervisors at all levels of the organization.

Leadership

Numerous approaches to the study of leadership have been undertaken over the last century. These have varied depending on how leadership is defined and with the researcher's methodological preferences. There are, however, four underlying assumptions that current leadership theories share (Ogawa & Bossert, 1995, p. 40). The first is that leadership functions to influence organizational performance. This assumption is the most fundamental because it provides a cause, leadership, of an important effect, organizational performance (Ogawa & Bossert, 1995, p. 42). The second assumption is that leadership is related to organizational roles. That is, specific

organizational roles carry legitimate leadership authority. Third, leaders are individuals who possess certain attributes and/or engage in certain behaviors. Trait theories of leadership focus on identifying specific attributes that successful leaders possess. Behavior theories of leadership are concerned with specific behaviors that successful leadership engages in. The fourth assumption is that leaders operate within organizational cultures. Leaders affect how subordinates behave by affecting how they interpret organizational events and shape organizational culture (Bass, 1990; Schein, 1999).

From these assumptions there has emerged much consensus on certain leadership traits and abilities. The first is the ability to communicate vision. The ability to communicate a clear vision of an organization's future is one of the most important leadership abilities. Bennis (1997) calls this leadership ability *management of attention*. When articulated well, the organization's vision acts as a guide for subordinates toward a predetermined destination. It allows subordinates to draw connections between daily tasks, organizational goals and objectives (Kotter, 1996).

Another important leadership characteristic is the ability to make effective decisions. Decision-making processes can range on a continuum from autocratic to delegating (Tannenbaum & Schmidt, 1973). Autocratic decision-making involves the leader making all decisions. Whereas delegation gives subordinates sole responsibility for decisions. Towards the middle of this continuum lies participatory decision-making. This refers to involving subordinates in the decision-making process. Involvement can range from employee suggestion boxes to creating teams of subordinates that work with the leader to make decisions. Research on participatory leadership and organizational goals has found

that employee involvement in the decision-making process has a positive impact on organizational outcomes (Lawler, 1986; Miller and Monge, 1986). Subordinates tend to have greater buy-in to decisions when they have been a part of making them. This is especially important when following through on these decisions is dependent on subordinates.

One important element of involving subordinates in the decision-making process is providing access to necessary information. Decisions are enhanced when all the information regarding the topic under consideration is available. Electronic access to information is one of the best forms for providing this information. Not only is it generally quicker to obtain, it is also more up-to-date on the subject. Empowering more people by generating more autonomy, more participation in decisions and more access to resources increases the total capacity for effective action (Kanter, 1977). Effective leadership ensures that subordinates have resources, such as information, needed to perform their jobs.

Another important leadership attribute is the ability to foster a sense of cooperation and teamwork among subordinates (Whetton & Cameron, 2002). A spirit of teamwork and cooperation is a pattern of interactions that occurs amongst organizational members. Development of this spirit is a leadership function (Dyer, 1977). Leadership promotes cooperation and teamwork by developing a supportive organizational structure.

Effective leadership empowers subordinates by providing the necessary employee training and development needed to do their jobs successfully (Argyis, 2000; Berman, 1995; Spreitzer & Mishra, 1999). The development of human capital in public organizations has become increasingly important (U.S. OPM, 1995). Development of

human capital is dependent on providing training and development opportunities for public subordinates (Carnevale, 1996).

Effective leadership allows subordinates flexibility in how they complete their jobs (Whetton & Cameron, 2002). This flexibility can be in terms of flexible hours, telecommuting, or methods for accomplishing tasks. Leadership contributes to an employee's sense of empowerment when it allows a degree of freedom in how they accomplish their work responsibilities.

Effective leadership empowers subordinates by encouraging them to be creative in their jobs (Whetton & Cameron, 2002). Organizational leadership promotes innovation among subordinates by encouraging them to take risks with new programs and job-related functions.

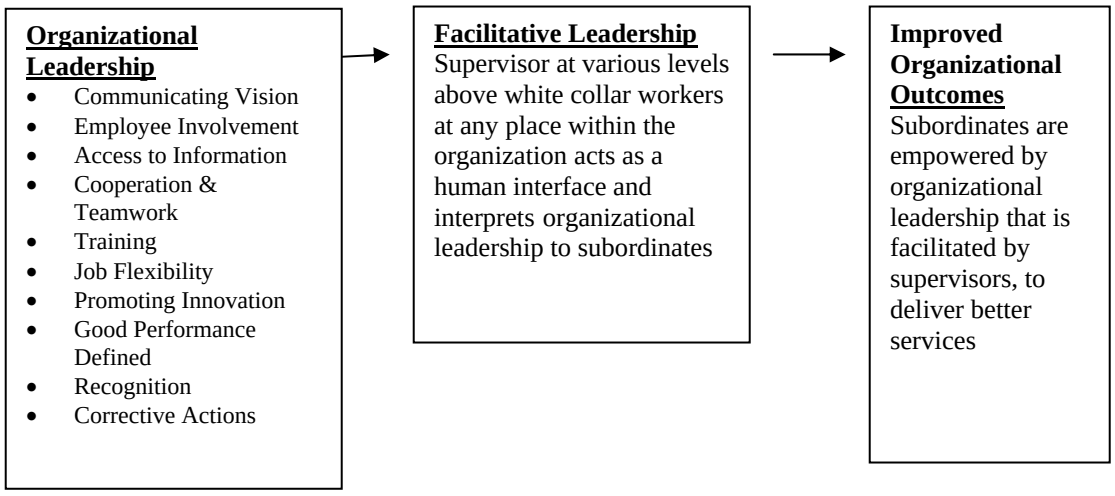
Finally, leadership defines good performance for subordinates and also provides feedback on subordinates' actual performance. Defining performance expectations, recognizing when subordinates meet or exceed these expectations and taking corrective actions when expectations are not met are performance feedback.

Thus, organizational leadership is a combination of communicating vision, involving subordinates in decision-making, electronic access to information, teamwork, training, flexibility, promoting innovation, defining good performance, recognition, and correcting poor performance. Although, executive leadership is responsible for the structure that supports the above leadership variables, supervisors throughout large organizations are responsible for facilitating this leadership.

Facilitative Leadership

Leadership at the apex of an organization is responsible for the structure that supports the leadership variables described above. Supervisors at many levels in large organizations are responsible for facilitating this leadership. This study is primarily aimed at supervisors within public organizations rather than executives and managers. Supervisors differ from executives and managers in terms oversight and span of control. However, it is recognized that public executives and managers often have supervisory responsibilities as well as being supervised themselves. Facilitating leadership occurs when supervisors at any place within the organization act as the "human interface" between organizational leadership and front-line subordinates (Hord, 1992). It is also recognized that some front-line supervisors do not possess true supervisory authority. These "pseudo-supervisors" may have been promoted to a supervisor position for monetary and retention purposes. In these cases real authority rests with the second-level supervisors (Ban, 1995). Because supervisory responsibilities are often blurred a study of facilitative leadership amongst all levels of supervisory responsibility is important.

Figure 1: Relationship of Facilitative Leadership to Organizational Outcomes



In figure one the model of facilitative leadership depicts supervisor as a medium between organization leadership and organizational outcomes. The ten factors of organizational leadership are: communicating vision, employee involvement in decisions, electronic access to information, developing a spirit of cooperation and teamwork, providing training opportunities, allowing subordinates job flexibility, promoting innovation, defining good performance, recognizing good performance, and taking corrective actions when performance standards are not met.

Leadership Performance Appraisal

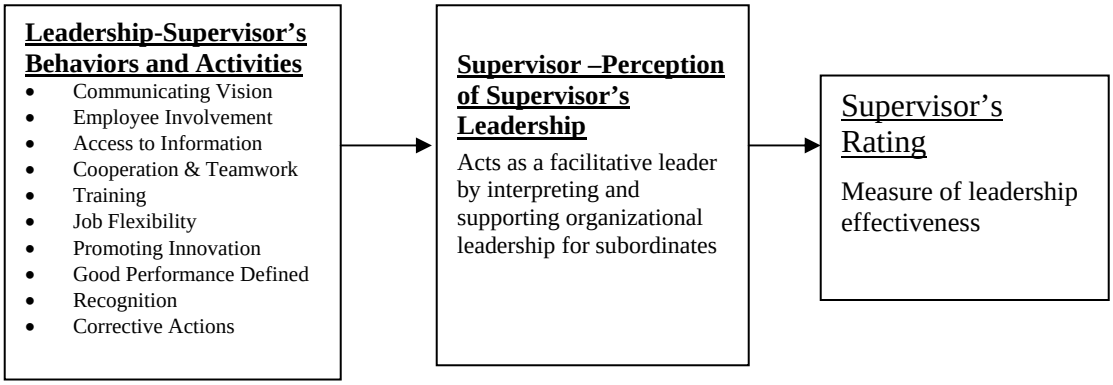
Assessing leadership performance is a difficult task. There are several approaches to undertaking this task. One approach is to assess a leader's performance based on quantifiable outcomes. Another approach is to undertake a qualitative case study that includes outcomes, interviews and observation of a leader's performance. A third approach is to use quantifiable surveys of super ordinates, peers and subordinates that assess a particular leader's performance. The fourth approach is to use a combination of all the above methods.

Performance evaluations are used in public organizations for determining if new subordinates should continue beyond their probationary period, for promotions, and in some instances, for pay raises (Lee, 1993). In December of 1995, the Office of Personnel Management (OPM) implemented a new performance appraisal system. Under this new system, federal agencies were given more flexibility in their performance appraisals (U.S. OPM, 1995). The purpose of this was to give agencies more control over their personnel decisions. Many agencies went to a 360-degree performance appraisal system in which

subordinates are appraised by their supervisors, peers and subordinates. The use of upward appraisal systems where subordinates assess the performance of their first line supervisors is a component of 360-degree appraisals. The reason for using such a system is to increase the reliability and validity of the performance measurements by triangulating all assessments (U.S. OPM, 1995). Surveys used in these types of appraisals employ questions regarding specific behaviors and/or traits (i.e. the Leadership Behavior Description Questionnaire or LBDQ).

Figure two below illustrates the relationships between organizational leadership and a supervisor's ratings. Leadership exists as an identifiable construct in subordinates' minds and its existence is a result of the interaction of key organizational and individual attributes (Bass, 1990). The model below illustrates that when a supervisor is an active medium between organizational leadership and their subordinates, subordinates will give their supervisor a better performance appraisal.

Figure 2: Supervisor Behavior and Rating



Methodology

The research design is a deductive validation of a model derived from the empirical literature. It is primarily quantitative analysis of bivariate correlations and multivariate relationships using secondary analysis. A correlational research design is used to test the relationships in the above model. Correlational analysis is useful for specifying the nature and degree of relationships among variables (Nunnally & Bernstein, 1994). Supervisor rating is the dependent variable. The independent variables are communicating vision, employee involvement in decision-making, access to information, a spirit of teamwork, training opportunities, job flexibility promoting innovation, defining good performance, recognition and corrective action. Below is a discussion of the unit of analysis, the population, sample and data analysis procedures that are employed in this study. This study is different from the above approaches in that it relates questions pertaining to organizational leadership to a supervisor's rating from subordinates.

Unit of Analysis

Immediate supervisors at many levels of the organization have been chosen as the level of analysis for leadership for two reasons. First, in a study of public supervisors Lau, Newman, & Broedling (1980) use leadership and supervision interchangeably. They define these terms as the responsibility for guiding and motivating subordinates and for integrating individual and organizational goals (Lau, Newman, & Broedling, 1980, p. 515). Supervisor's leadership skills are necessary for organizational effectiveness (Whetton & Cameron, 2002). Second, social psychologists argue that people generally attribute more cause to forces that are focal or perceptually salient - central, visually

available or proximate in time or space (Mount, Judge & Scullen, 1998; Taylor & Fiske, 1972).

Much of the leadership literature from 1950 to 1980 was concerned with supervisory and managerial leadership. Since the early 1980's, however, these levels of leadership have been largely replaced by research focusing on CEO's and top management teams (Yukl, 1998, p. 409). This study will revisit the earlier theories of supervisory leadership and build on Hord's classification of facilitative leaders.

In public organizations, supervisors are distinctly different than managers and executives. The distinction between supervisors and managers in public organizations is made by whether one has subordinates that directly answer to her. Supervisors have subordinates and are responsible for giving subordinates direction and their performance reviews. Mangers are responsible for resources rather than people in the organization. This study is concerned with supervisors at many levels throughout federal organizations. The survey instruments used for this study consist of some items that specifically ask about the respondents "immediate supervisors". However, some of the survey items do not distinguish between immediate supervisor and other levels of supervision. For this reason it is difficult to know which level of supervision each respondent is considering for items that do not specifically ask.

Population

The population for this study is federal subordinates surveyed in the 1998 and 2000 National Partnership for Reinventing (NPR) Government Surveys. An interagency team from the OPM, the Merit Systems Protection Board (MSPB) and the Federal Aviation

Administration (FAA) developed this survey. Its purpose was to assess employee opinions on workplace attitudes and the progress of reinvention within the federal government (OPM NPR Survey, 1998). Forty-eight federal agencies were selected for the survey. The criterion for selection was the extent to which the agencies' services impact the public. Thirty-two of the federal agencies have ninety percent of the federal government's contact with the public. Creators of the NPR believed that performance in these *high impact agencies* is central to restoring America's trust in government. In 2000, all thirty-two agencies designated high-impact along with seventeen other agencies were surveyed. This survey was administered to federal subordinates in 1998, 1999, and 2000. The raw data for the 1998 and 2000 surveys was made available for this research.

Sample

The research sample includes 13,689 responses from a total of 34,401 surveyed in 1998 (40% response rate) and 31,975 responses from a total of 50,844 surveyed (62% response rate) in 2000 (OPM, 2000; OPM, 1998). Survey administrators used a random sampling process to identify respondents. The survey was mailed to a stratified random sample in both 1998 and 2000. Subordinates received the survey at either their homes or their office and all responses were returned by mail to the address of the contractor.

This research examines the extent to which supervisors facilitate organizational leadership. Organizational leadership is defined as initiatives that empower subordinates in order to improve organizational outcomes. It is, also, related to the ratings subordinates give their immediate supervisors in federal public organizations. Questions

pertaining to the variables of organizational leadership as discussed above were selected from the NPR survey as independent variables related to supervisor's ratings.

These variables selected were chosen because they are common attributes of effective leadership found throughout the leadership literature. These organizational variables are also themes of the reinvention reform movement.

Question thirty-one on the NPR Survey *(Overall, how good a job do you feel is being done by your immediate supervisor/team leader?)* reflects the dependent variable, Supervisor Rating. This rating is a legitimate measure of supervisory leadership because subordinates' ratings of leadership at the immediate supervisor level are most likely to be affected by organizational factors beyond their immediate supervisor's control (Mount, Judge & Scullen, 1998). However, supervisors facilitate leadership when they serve as a medium for these factors.

Thus, Supervisor Rating = f{Communicating Vision + Employee Input into Decisions + Access to Information +Cooperation and Teamwork +Training + Job Flexibility + Promoting Innovation + Good Performance + Recognition + Corrective Action}

Data Analysis

Secondary analysis of the original survey data includes descriptive statistics, bivariate correlations, partial regression correlations, multivariate analysis, and an independent t-test of samples. Also included in the final chapter of this dissertation is a comparison of four federal agencies and their regression results.

To determine if a linear relationship between the dependent variable and independent variables is plausible, the ordinary least squares method is used. The following model is presented:

$$SR_1 = \beta_0 + \beta_1 V + \beta_2 DM + \beta_3 AI + \beta_4 T + \beta_5 I + \beta_6 TR + \beta_7 F + \beta_8 GP + \beta_9 R + \beta_{10} CA + \varepsilon$$

V = Communicating Vision

DM = Decision-Making

AI = Access to Information

T = Teamwork

I = Promoting Innovation

TR = Training

F = Job Flexibility

GP = Good Performance

R = Recognition

CA = Corrective Action

Relationships among variables were analyzed using ordinary least squares (OLS) and the multiple correlation coefficient, adjusted R^2, was calculated. Calculation of the adjusted R^2 summarizes the magnitude of the relationship between a dependent variable and several independent variables, considered simultaneously (Mannheim & Rich, 1995).

What This Study Is Not

The focus of this study is on organizational practices that are prevalent in the leadership literature and considered prescriptions for employee empowerment. These organizational practices are an alternative explanation for supervisor ratings from their

subordinates, which is used as a proxy for leadership effectiveness. These practices lie within the technical environment of the organization. Supervisors (as individuals) at all levels of an organization mediate this organizational leadership as facilitative leaders. As a result leadership is attributed to the individual by subordinates rather than to the organization. This act of mediating organizational leadership is facilitative leadership.

Outside the scope of this study are particular tools used by an organization to accomplish tasks, such as the use of government credit cards, simplified travel plans, and streamlining the hiring process. Although this study is concerned with the literature on reinvention in government, it is focusing on the empowering subordinates' aspect of entrepreneurial government and the prescriptions for empowering subordinates. For this reason, the survey question that specifically asks if reinvention (government that works better and costs less) has been made a priority is not relevant to this research question and thus was not included in the model. Questions pertaining to quality of life issues such as support for family responsibilities and diversity were not included. Survey items that involve subordinates' attitudes, such as job satisfaction and opinions on merit were not included because such questions are multilevel constructs that involve levels of analysis outside the scope of this study (for a discussion of job satisfaction see Weiss & Cropanziano, 1996).

Study Overview

The remainder of this dissertation includes chapter two, the literature review; chapter three, the methodology of this study; chapter four, data analysis; and chapter five, a discussion of the results. Chapter two presents the theoretical foundations for this

research. It presents each of the variables discussed above in this research. It also discusses predominate theories in the leadership literature, and what these theories suggest. Chapter three considers the research design, data analysis, the threats to validity and the study's responses to possible threats. It includes a discussion of the advantages and disadvantages of secondary analysis and the survey instruments from which the data was obtained. Chapter four consists of the data analysis and results discussion. Chapter four's discussion includes threats to the research design, safe guards against these threats and results from the data analysis. Finally, chapter five summarizes the research findings, interpretation and implications. It also discusses limitations of this research and future research. The purpose chapter five is to present the above information and establish a place for this research in the context of other leadership theories.

CHAPTER II: LITERATURE REVIEW & HYPOTHESES

"Leadership is not magnetic personality--that can just as well be a glib tongue. It is not 'making friends and influencing people'--that is flattery. Leadership is lifting a person's vision to higher sights, the raising of a person's performance to a higher standard, the building of a personality beyond its normal limitations." -Peter Drucker

Introduction

Leadership has evolved over the past century into a complex construct having almost as many definitions as there are studies of it (Yukl, 1988). Historically, leaders were defined by their particular traits and positions of power. Contemporary leadership thought, however, recognizes that followers require leadership to be much more than a right of birth or a position of legitimate authority.

Although there are many definitions and perceptions of leadership, it is generally agreed that leadership involves relationships - it requires followers (Rosenthal, 1998). It is also agreed that leadership is the process of influencing others to work toward agreed upon goals (Yukl, 1998). Followers require support from leadership. Organizational leadership does this by creating a supportive environment that gives subordinates enough control to accomplish their tasks successfully. For the purposes of this research, leadership is defined as empowering subordinates by providing purpose, direction, motivation, and resources to work toward improved organizational outcomes (Block, 1996; Manz & Sims, 1987).

Organizational leadership is defined as the sum of activities that empower subordinates by providing purpose, direction, motivation and resources. These initiatives include: communication of vision, involvement in decisions affecting work, electronic access to information, teamwork, training, job flexibility, promotion of innovation,

defining good performance, recognition for good performance, and corrective actions to meet performance standards. Leadership by supervisors within federal organizations is the focus of this study. The purpose of this dissertation is to determine if supervisors' activities create the perception that they are facilitating leadership. Supervisors are in a unique position to facilitate organizational leadership because they serve as a medium between the organizational leadership and front-line subordinates. The purpose of this chapter is to present the literature on each of these factors of organizational leadership, pointing to the high profile authors and debates that surround them. Following each discussion of an organizational factor are the relevant hypotheses and related assumptions.

General Leadership Theories

There are many groups of leadership theories. Each of these emphasizes different aspects of leadership. Trait theories attempt to define leaders in terms of characteristics, such as tall, intelligent, and charismatic (Bass, 1990; Yukl, 1989). Behavioral theories of leadership categorize leaders according to specific actions, such as initiating structure, consideration of others, or managing meaning (Bennis, 1997; Yukl, 1998). Situational and contingency theories of leadership place individual leaders within the context of the leadership situation when assessing effectiveness (Fiedler, 1967; Hersey & Blanchard, 1982).

From these theories evolved more complex theories of leadership. Transactional and transformational theories of leadership recognize followers with important human needs. Transactional leadership is primarily concerned with lower human needs such as security

and safety. Transformational theory of leadership recognizes higher human needs such as self-esteem and self-actualization (Burns, 1978). Attribution theories of leadership focus on follower's perceptions of or individual needs for leadership (Meindl, 1995).

Leadership and Empowerment

Empowerment of followers is a key element of several leadership theories to include SuperLeadership (Manz & Sims, 1987), transformational leadership (Burns, 1978), and integrative leadership (Rosenthal, 1998). Empowerment is described as a form of power based on support and cooperation rather than dominance (Rosenthal, 1998, p. 21). It has been defined as the "pushing down of power" (Whetton & Cameron, 2002; Ianello, 1992).

In public organizations there are generally two types of empowerment. One type is the empowerment of employees within the organization. For example, allowing employees input into decisions that affect their jobs. The other type is the empowerment of citizens. An example of this is a "town hall meeting" where citizens are asks for their input into public policy. This research will focus on employee empowerment within an organization where administrative decision-making is routinely internal rather than citizen empowerment and democratic participation.

Leadership theories that focus on traits and charisma are insufficient because they "deal more with the single leader and multi-follower concept than with organizational leadership in a pluralistic sense" (Barnes and Kriger, 1986, p. 15). An extension of organizational leadership is the concept of shared leadership. Slater and Doig (1988) disagree with the assumption that leadership is a possession of one individual and state

that such a supposition ignores the "possibility that leadership may also be exercised by a team of individuals" (p. 296). This concept is the basis of facilitative leadership. Facilitative leadership is concerned with all levels of leadership in an organization. The concept of facilitative leadership has not been examined as closely as the investigations of individual leadership traits and behaviors. This research reinforces organizational theories that view leadership as characteristic of the entire organization, in which "leader roles overlapped and complement each other (such as supervisory leadership does) implying a more inclusive concept of leadership" (Barnes and Kriger, 1986, p. 16).

Empowerment theories of leadership focus on the leader or leadership as the facilitator of empowerment. The leadership literature tends to agree that organizations benefit from the positive effects of empowering subordinates (Behn, 1998; Ianello, 1992; Manz & Sims, 1987; Spreitzer, & Mishra, 1999; Whetton & Cameron, 2002). These positive effects include an increase sense of meaning, self-determination, self-efficacy, sense of impact, competency, and trust (Spreitzer, 1992). The benefits include increases in production, quality and trust in the organization.

Cameron & Whetton (2002) state that there are five dimensions of empowerment: Self-Efficacy is the feeling that one possesses the capability and competence to perform a task successfully. Empowered people feel that they can competent and confident that they can perform adequately (Bennis & Nannus, 1985; Conger & Kanungo, 1988; Bandura, 1989; Gecas, 1989; Zimmerman, 1990) Bandura's (1977) three conditions of self-efficacy: 1) a belief that one has the ability to perform a task; 2) a belief that one is

capable of putting forth the necessary effort; and 3) a belief that no outside obstacles will prevent one from accomplishing the task.

Self-determination refers to feelings of having a choice. Empowered people have a sense of responsibility for and ownership of their activities. Locus of control is internal, where one feels that they have control over a situation and what happens to them.

Personal-consequence refers to personal control over outcomes. It is the belief that one can make a difference by influencing the environment in which one works. Personal consequence is the belief that that at a given point in time one is able to effect a change in a desired direction (Greenberger et al, 1989). This is similar to a sense of self control where an individual feels they are able to produce change.

Empowered people have a sense of meaning (Cameron & Whetton, 2002, 416). There is a true concern for the job and personal values are aligned with organizational values. There is a feeling of personal connectedness and personal integrity as a result of engaging in the activity (Bennis & Nanus, 1985; Block, 1987; Manz & Sims, 1989).

Empowered people have a sense of personal security and trust that they will be treated fairly. They have confidence that those in authority will not harm or injure them, and that they will be treated impartially. It is possible for one to feel empowered in a situation where the authority does not demonstrate integrity and fairness. This is a sense of personal security. That is one has a sense of trust and is trusting rightness of their activities.

Facilitative Leadership

In the 1950's and 1960's supervisors were the subjects of several leadership studies (see Bass, 1990 for a discussion of these studies). Since the 1980's, however, much of the

leadership literature has been focused on leadership at the apex of organizations – corporate executives and top management teams (Waldman & Yammarino, 1999). One reason for this shift in focus has been the emergence of evidence that there is a significant correlation between executive success and organizational profits (see Waldman & Yammarino, 1999 for a discussion of these empirical studies). This private sector literature has had an influence on public sector management. In particular, federal government management during the Clinton administration was influenced by this literature. The NPR (Gore, 1993) was heavily influence by Osbourne and Gaebler's "Reinventing Government", which championed the use of private sector practices in the public sector. The reinvention movement focused on leadership that empowered employees through private sector practices and promoting innovation.

Leadership development theories generally focus on skills used by executives (Fulmer & Goldsmith, 2001) and tend to neglect the tenuous positions of supervisors and their need for different leadership skills. Supervisors are at the mercy of superiors, subordinates, peers, outside stakeholders, customers, unions, etc. (Kotter, 1947). More recent studies of change and change agents, however, recognize that leadership skills are essential for supervisors at all levels of an organization to effectively manage these sometimes-competing forces. Supervisors also serve as role models for subordinates and arguably have an impact on future leader development. Etzioni (1961) suggests that styles of supervision are transferred from higher ranks to lower ranks. Hutton (1994) argues that middle managers are important for successful transformations in organizations. Buy-in from mid-level managers is essential for facilitating change with front-line subordinates.

When supervisors and/or mid-level managers act as a medium for organizational leadership they are engaging in facilitative leadership. Facilitative leadership has been defined by Hord (1992) as the process of serving as a human interface between the top leadership and front-line subordinates. Hord's (1992) research on public school change has found that principals and superintendents as facilitative leaders play a crucial role in school reform. When principals or superintendents serve as a link between changes imposed from above and their faculty/staff then change was more successful. Svara's (1994) research consisting of nine local government case studies on facilitative leadership found that city managers that actively serve as a medium between mayors, council members and citizens were more effective in their jobs.

Criterion for the Selection of Variables

This chapter is designed to show the organizational factors of leadership that have the potential to be facilitated through and attributed to supervisors. These organizational leadership factors are generally agreed upon in the leadership literature as prescriptions for empowering subordinates. In this chapter the literature on each of the organizational factors is presented pointing to the high profile authors and the debates that surround them. Following each discussion of an organizational leadership factor, the relevant research hypothesis, related assumptions, and expectations are presented.

Communicating Vision

Effective leadership is the ability to bring followers to a place they have not been before (Bennis, 1997) or to create a future they have not seen yet (Follett & Graham,

1995). This place or future state is the "vision", which is defined as "an organized perception or phenomenon," (Morden, 1997, p. 668). One view of leadership is that of a collective, networked virtual force with powers flowing from a jointly created and shared vision (Tapascott, 1996). Creating and articulating a compelling vision is an important function of leadership (Bennis, 1997; Hennessey, 1998; Kotter, 1996). This vision guides followers' daily actions toward a future state and is the ability *management of attention* (Bennis, 1997).

Articulating a strong vision is one method for increasing a sense of empowerment in subordinates (Whetton & Cameron, 2002). When articulated well, vision acts as a guide for subordinates toward an organizational destination. It allows subordinates to draw connections between daily tasks, organizational goals and objectives (Kotter, 1996). The real power of a vision is found when those throughout an organization have a common understanding of its goals and direction (Kotter, 1996, p. 85).

The Government Performance and Reporting Act (GPRA) of 1992 requires that all federal agencies establish a strategic plan. Supervisors play a crucial role in the communication of vision. They can discourage actions aimed at implementing a new vision and can act as a barrier to prevent subordinates from making the organization's vision a reality despite subordinates' understanding and acceptance of the vision (Kotter, 1996, p. 102). Given this, one would expect the following hypothesis:

> Ha1: If supervisors communicate the organization's vision, mission and goals to subordinates, then subordinates will view their immediate supervisor's performance more favorably.

Employee Involvement in Decisions affecting their Work

Another important leadership practice is involving subordinates in decisions affecting their work (Spreitzer & Mishra, 1999). Involvement in work decisions contributes to this sense of control or power (Spreitzer, 1992), which is an important human need (Glasser, 1984). Research on participatory leadership and organizational goals has found that employee involvement in the decision-making process has a positive impact on organizational outcomes (Lawler, 1986; Miller and Monge, 1986). One reason is that participation in goal setting gains worker commitment (Whitener, 2001) and trust (Kouzes & Posner, 1987). Involving subordinates in the decision-making process, however, increases their sense of empowerment and trust (Spreitzer & Mishra, 1999). Subordinates have greater buy-in to organizational goals and trust when it is perceived that leadership has their interests in mind (Whitener, 2001).

An organization's willingness to involve subordinates in the decision-making process depends on its beliefs related to coercion, authority and control (Schein, 1992). These beliefs will tend to determine the extent to which subordinates are involved in decision-making (Schein, 1992). Cawley *et al*. (1998) classified participation as either *value-expressive participation* or *instrumental participation*. Value expressive participation refers to employee input into organizational values. Whereas, instrument participation refers to input from subordinates regarding how they do their jobs. In federal public organizations, when subordinates are given an opportunity to take part in developing their agencies vision and mission, this is an example of value expressive participation. One

example of instrumental participation in federal public organizations is the Department of Defense's rewarding of subordinates for making suggestions that safe time and money. Both of these types of participation were found to be strongly related to positive employee reactions - *value-expressive* p=.65; *instrumental* p=.59 (Cawley *et. al.*, 1996, p. 624)

Involvement can take many forms and can be thought of as either low involvement or high involvement. The difference between these two being the amount of active input subordinates have into decisions that affect their jobs. An example of low involvement is the use of subordinates' suggestion boxes. An example of high involvement is an organization's use of self-managing teams. Government agencies use employee participation for a variety of purposes to include strategic planning and developing procedures. Franklin (1996) found in her study of government agencies that subordinates, as internal organizational stakeholders, "played a larger role in key workgroup and implementation stages of performance measurement, while maintaining a high level of involvement in the impetus and collaborative stages," (p. 341). Barzelay (1992), in his study of the *Minnesota Striving Toward Excellence* (STEP) program, found increased employee participation taps the knowledge, skills, and commitment of subordinates.

Critics of the empowerment and employee involvement literature believe that these terms are used superficially and misrepresent the use of such practices by organizational leaders. Collins (1997) argues that the literature on employee participation and empowerment is lacking a clear theoretical framework. "While there may be some validity in (the view that empowerment is a state of being within organizations that

comes from employee involvement), we should be aware that in the absence of discussions of frameworks of power, and in the absence of discussions of institutional settings of these initiatives such 'state of empowerment' arguments tend to rip concepts and processes of involvement, participation and so empowerment form their larger context," (Collins, 1997, p. 128). Despite the ambiguity of this construct many agree with Perrow (1986) that involved workers are happier and more productive. The effectiveness of government organizations is increased when lower level subordinates are included in the decision-making process. Barzelay (1992) states that subordinates feel accountable when they believe intended work outcomes are consequential for other people, receive information about outcomes, and can attribute outcomes to their own efforts, initiatives and decisions," (p. 128).

Supervisors facilitate organizational leadership by supporting employee involvement in decisions that affect their work. Whether involvement is low or high, supervisors play a key role by either encouraging or discouraging their subordinates' participation. The assumption is that federal agencies have some opportunities for employee participation. Given the advantages of employee involvement (i.e. positive employee reactions and increased knowledge base), the second hypothesis is:

> Ha2: If subordinates are satisfied with their decision-making involvement, then they will view their immediate supervisor's performance more favorably.

Electronic Access to information

Organizations import, convert, and export a large amount and variety of information (Kotter, 1978). Access to information is important for subordinates at all levels of the organization. As participation in decision-making increases subordinates are in need of timely information in order to give quality input.

Leadership for government organizations has recognized the importance of electronic access to information. "The National Information Infrastructure (NII): Agenda for Action" (1993) outlined needs for developing a super cyberspace highway of information exchange. One goal of the 1993 NII was to demonstrate and provide government-wide electronic email. Government-wide email can provide rapid communication among subordinates throughout government agencies. This allows better management of interagency projects and increases communication between government officials and the public.

Information technologically (IT) has been an essential tool for corporate competitiveness and has enabled cost cutting, reorganization and re-engineering. IT is an integral part of the NPR and if applied properly is an important part of government reorganization (Stearns, 1995). Federal agencies requested more than a billion dollars in 1995 to improve the information technology infrastructure of their organizations (Implementation Plan, FY 1995). Information technology in federal agencies serves as a public network for government information services. Individual self-efficacy increases when government subordinates have electronic access to information. This contributes to a sense of empowerment in the work place (Spreitzer, 1992). Leaders are important means to provide electronic access to information. Supervisors facilitate this leadership

role by creating access to utilize available technology and access information. Based on this the third hypothesis is:

> Ha3: If public subordinates have access to the information they need for performing their job, then they will view their supervisor's performance more favorably.

Cooperation and Teamwork

Developing a spirit of teamwork and cooperation amongst subordinates is a valued leadership function (Dyer, 1977). Cooperation and teamwork differ from employee involvement in decision-making in that they refer to social interactions rather than decision-making styles. Cooperation and teamwork are important social interactions that build cohesion and reduce anxiety in organizations (Blau, 1974: Glasser 1984). These social interactions are a medium of leadership in that they lie in the personal resources of people (Ogawa & Bossert, 2000). A spirit of teamwork and cooperation is a pattern of interactions that occurs amongst organizational members. For the purpose of this research, cooperation and teamwork refers to an "esprit de corps," which refers to harmony and "union among the personnel of a concern" (Fayol, 1949, p. 35).

Fostering cooperation and teamwork is a function of organizational leadership as agencies are restructured to support teams. It is also a function of lower level managers who must recognize and reward teams (Dyer, 1977, Engleberg & Wynn, 2000). In work groups, where cooperation and teamwork exist, leadership will be attributed to the immediate supervisor or team leader.

The role of organizational leadership for promoting cooperation and teamwork is in arranging a supportive structure. Supervisors serve as a medium for the organization's support of cooperation and teamwork. This can be done through modeling cooperative behavior with subordinates, supervisors and peers. Supervisors use facilitative leadership when they reward cooperative and team behavior of their subordinates. Thus, this leads to the following hypothesis.

> Ha4: If subordinates indicate that cooperation and teamwork exist in their work unit, then they will view their immediate supervisor's performance more favorably.

Employee Training and Development

Training is a critical component of a high performing work force and has become an increasingly important aspect of managing human resources in public organizations Training can help to meet the challenge of developing a workforce that has the necessary competencies for the current technology driven workplace (OPM, 1997). Providing training and development opportunities is a major component of developing human capital, which is "the combination of knowledge skills and reasoning abilities possessed by a workforce," (Carnevale, 1996, p. 5). Training contributes to subordinates' sense of self-efficacy and empowerment (Spreitzer, 1992).

In federal agencies, these opportunities are provided by organizational leadership and facilitated by supervisors. One example of a federal agency's training efforts is the Department of Defense, Morale, Welfare, and Recreation (MWR) Training and Development (TAD) Program. This program was designed to serve the skills

development needs of MWR. Training programs include courses in computer skills, budgeting and financial management, and strategic planning.

The benefits of employee training abound. Arygis (2000) argues that training is essential for encouraging what he calls Model II behavior and discouraging Model I behavior in organizations. The dominant behavior of Model I is unilateral control. Model I behavior describes the conduct and underlying motivations of virtually all managers in all industrialized cultures (Arygis, 2000). Model II managers, by contrast, create environments in which people are willing to confront incongruities, debate assumptions, share information, and express feelings. Training for both managers and subordinates is essential for changing work environments from ones of "unilateral control" to these types of Model II environments (Arygis, 2000). As subordinates gain work related knowledge and skills, supervisors are more apt to give up some control (Spreitzer & Mishra, 1999). In his comparison of coercive and enabling bureaucracies, Adler (1999) argues that enabling bureaucracies view training as an investment to be optimized as opposed to an expense to be avoided.

Organizational leadership establishes training opportunities in federal agencies. Supervisors often determine when and if subordinates can take advantage of these opportunities. Often these determinations are based on seasonal workloads and how these duties may conflict with training schedules. For this reason, although, the training opportunities do exist, subordinates may be unaware of their existence. Supervisors empower subordinates by making subordinates aware of the types of training and times of training sessions available that suit their subordinate's needs. Thus, the following hypothesis:

Ha5: If subordinates are aware of opportunities to receive the training they need for performing their jobs, then they will view their immediate supervisor's performance more favorably.

Job Flexibility

Practitioners and scholars increasingly recognize job design and flexibility as essential elements for job satisfaction (Klagge, 1996; Susman, 1976). Subordinates in private and public sector organizations are being given more discretion on arranging their workday with flextime policies. There has also been a significant increase in telecommuting, which refers to working at home on personal computers, in both public and private sectors (Workforce Statistics, 2000). Supporters of job flexibility argue that organizational systems should help people control their own work (Adler, 1999). In studies of work related stress, research has found that the single most important contributor is lack of freedom. Glasser (1984) identified "freedom" as an important human need that contributes to one's overall well being. "In a study of administrators, engineers and scientists at the Goddard Space Fight Center, researchers found that individuals provided with more discretion in making decisions about assigned tasks experienced fewer time stressors (e.g., role overload), situational stressors (e.g., role ambiguity), encounter stressors (e.g., interpersonal conflict), and anticipatory stressors (e.g., job-related threats)," (Whetton & Cameron, 2002, p. 123).

Subordinates' perceptions of control over their work can have a direct affect on their perceptions of leadership. Empowerment, as opposed to powerlessness, is enhanced by control and related to subordinates trust in management (Spreitzer & Mishra, 1993).

Allowing “front-line” subordinates the flexibility to make changes to their work practices helps them to do a better job. Organizational leadership generally devises the policies that allow flexible work schedules and telecommuting options. Supervisors facilitate organizational leadership by allowing subordinates to take advantage of such opportunities. Thus, it is hypothesized that:

> Ha6: If subordinates are given more flexibility in how they accomplish their work, then they will view their immediate supervisor’s performance more favorably.

Promoting Innovation

An effective leadership ability is promoting creativity and innovation (Whetton & Cameron, 2002). Innovation is defined as the adoption of an existing idea for the first time by an organization (Rogers, 1995 as cited in Borins, 2000). Types of innovation are classified as holistic, technological or procedural (Borins, 2000). Holistic innovations include those that *take a systems approach to problem, coordinate organizations,* and *provide multiple services to clients* (Borins, 2000, p. 51). Technological innovations include those that use new or existing technology for improving organizational outcomes. Procedural improvement refers to reorganizing how jobs or work processes are completed. Innovations in public agencies have included common business practices such as market research, competitive analysis, executive review of plans, cost analysis, and service delivery redesign (Barzelay, 1992). Leadership’s role in promoting innovation is primarily encouraging subordinates to take risks with new programs.

Public organizations traditionally do not support risk-taking and innovation. Administrative reforms historically have emphasized constraints and controls to minimize corruption and due process (Barzelay, 1992). There is, however, evidence that career public servants are frequent initiators of innovation. Although the focus of innovators and leadership in public organizations has been on high-level officials (Doig and Hargrove, 1987), there is evidence that innovators exist at all levels of public organizations. Such evidence is found in a study by Borins (2000) of state, local and federal agencies. Using applications from the Ford-KSG awards program from 1990 through 1998, Borins identified initiators of innovation in state, local and federal agencies. Borins (2000) found in his study of public managers that from 1995 to 1998, 62 percent of middle managers at the federal level were initiators of innovation (Borins, 2000, p. 500). In this study, during the same time span, 24 percent of federal frontline subordinates were also initiators of innovation (Borins, 2000, p. 500). Only 14 percent of politicians and 24 percent of federal agency heads were frequent initiators of innovation (Borins, 2000, p. 500).

Leadership in federal agencies promotes innovation by rewarding and championing creative approaches to delivering public services. Immediate supervisors facilitate this leadership by supporting and rewarding subordinates' innovative and creative ideas (Hord, 1992). Thus, the following is hypothesized:

> Ha7: If creativity and innovation are rewarded, then subordinates will view their immediate supervisor's performance more favorably.

Defining Good Performance

Influencing subordinates to work toward organizational goals is dependent on how leadership motivates subordinates through rewards and discipline (Whetton & Cameron, 2002). Defining performance expectations, recognizing when subordinates meet or exceed these expectations and taking corrective actions when expectations are not met are essential feedback processes of leadership. The Merit Systems and Protection Board (MSPB), a quasi-judicial agency, was established to ensure that civil service laws are applied accurately and fairly. Evidence that philosophical difference amongst MSPB appointees exist. This is a result of variation in personnel decisions amongst agencies (West and Durant, 2000). Clinton appointees were found to be more employee-centered than Reagan/Bush appointees who were more manager-centered (West & Durant, 2000). This is significant for reinvention reforms that delegate personnel management to agencies or line operators in agencies (West & Durant, 2000). It is significant primarily for this research because personnel actions such as defining good performance and taking corrective actions tend to be more employee centered activities as compared to punitive personnel actions. West and Durant (2000) in their study of federal agency personnel decision appeals found that the number of Performance Appeals to the MSPB decreased from 273 (4.3 % of total initial appeals) in 1988 to 132 (1.8% of total initial appeals) in 1997.

Clarifying expectations serves as a powerful tool for motivating subordinates to perform, especially if these expectations are challenging (Kouzes & Posner, 1995). A factor that determines how followers assess leadership effectiveness is the extent to which there are clear, timely indicators of performance (Yukl, 1998, p. 161). It is

important for leadership to define what is meant by good performance. Good performance can be defined within written organizational documents or verbally. It should be clearly defined and articulated to subordinates at numerous intervals. This can be done through employee evaluations where feedback on an individual employee's performance is compared and contrasted to expectations of performance.

Subordinates who are clear about expectations will be more satisfied (Bass, 1990). Defining good performance for subordinates is also essential for fostering feelings of empowerment (Spreitzer, 1992). Not knowing what is expected and how performance is being evaluated can be a major source of stress at work (Whetton & Cameron, 2002, p. 123). Supervisors facilitate leadership by ensuring that their subordinators are clear about organizational definitions of good performance and by directly link performance evaluations to organizational expectations. This suggests the following hypothesis:

> Ha8: If subordinates are clear about how good performance is defined in their organization, they will view their immediate supervisor's performance more favorably.

Recognizing Good Performance

Once good performance is defined, effective leadership must recognize subordinates' good performance. Recognizing achievement is a leadership behavior that provides courage and motivation to subordinates (Kouzes and Posner, 1995). Recognition of subordinates' good performance is an important leadership function. Recognition is a form of constructive feedback and serves as a steering mechanism for subordinates to continue in the same direction. Whetton and Cameron (2002) categorize this feedback as

reinforcing. This involves using salient and timely rewards for good performance and linking behavior to continuous improvement. One form of recognition is through positive feedback and encouragement. Praising subordinates and providing words of encouragement serve as strong motivators.

Brooks (1955) in his study of executives found that subordinates expected recognition along with opportunity, consideration, approachability encouragement, and representation from management (Bass, 1990, p. 283). Kouzes and Posner (1995) present four essentials of recognition: (1) building self-confidence through high expectations; (2) connecting performance and rewards; (3) using a variety of rewards and (4) being positive and hopeful. "By putting these four essentials into practice and recognizing contributions, leaders can stimulate and motivate the internal drives within each individual," (Kouzes & Posner, 1995, p. 271).

Whetton and Cameron (2002) state that providing immediate, unfiltered feedback on results is one tool for empowering subordinates. Timely, immediate feedback that recognizes subordinates' achievements reinforces this behavior. In a study of empowerment in state agencies, Berman (1995) found that 66% of respondents used recognition of achievements as a strategy for increasing employee empowerment. Supervisors facilitate recognition of performance by ensuring that subordinates' good performance is communicated through performance reviews and directly to subordinates at regular intervals. This suggests the following hypothesis:

> Ha9: If subordinates are satisfied with the recognition they receive for doing a good job, they will view their immediate supervisor's performance more favorably.

Corrective Actions

Timely, immediate feedback that is corrective of inappropriate or substandard performance is also an effective leadership function (Susman, 1976). Cameron and Whetton (2002) categorize this type of feedback as *reprimand,* which involves identifying specific inappropriate behavior, pointing out the impact of this behavior, and discussing remedies for the behavior. Another category of corrective feedback is *redirect.* Redirecting involves describing expectations and ensuring that the employee understands these expectations. It also involves gaining and supporting compliance. It is important to redirect subordinates' performance that does not meet the organization's expectations of good performance. Giving immediate feedback allows subordinates to correct behavior more quickly. It also clarifies the organization's expectations of good performance. Subordinates are given an opportunity to improve performance prior to performance reviews. Supervisors facilitate organizational leadership when they take corrective actions toward subordinates' performance that does not meet the organization's expectations. This suggests the following hypothesis:

> Ha10: If subordinates agree that corrective actions are taken when performance standards are not met, they will view their immediate supervisor's performance more favorably.

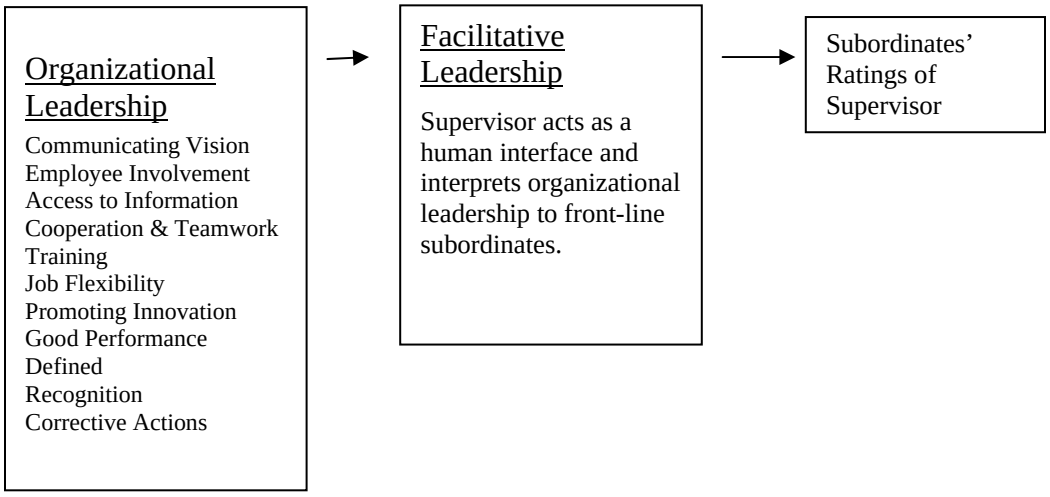
Leadership and Subordinates' Perceptions of Supervisors Performance

The above discussions and hypotheses hint at the additive effect of communicating vision, involving subordinates in decisions, electronic access to information, teamwork,

training, job flexibility, defining good performance, feedback through recognition of achievements and corrective actions for poor performance as organizational leadership. The existence or lack of these factors affects how subordinates rate their immediate supervisors' leadership abilities.

The figure below illustrates the relationship between leadership as supporting employee empowerment and subordinates' ratings of their supervisors. Perceptions are an interaction of selection, organization, and interpretation. While a perception depends on the senses for raw data, the cognitive process filters and modifies the data (Weiss & Cropanzano, 1996). The existence of these organizational factors is the raw data. A match or mismatch between subordinates' expectations of leadership is related to their assessment of immediate supervisors'. Leadership processes are those identified through the leadership and management literature. Subordinates' appraisals of their supervisors are based on the presence or lack of these processes.

Figure 3: Leadership and Supervisor's Rating



Thus, adding up the above literature on each of the above elements of organizational leadership, suggests the following hypothesis:

Ha11: If subordinates receive support from the organization through communication of vision, involvement in decisions, electronic access to information, teamwork, training, job flexibility, promotion of innovation, clearly defined performance expectations, recognition, and corrective actions to meet performance standards, then subordinates' ratings of their immediate supervisors' performance will be more favorable.

The Reinvention Movement

In 1993, the Clinton administration undertook a public sector reform effort to transform the atmosphere of federal agencies into an organizational culture of empowerment. This effort, known as the *Reinvention Movement*, differed in that its focus was not on institutional reforms specific to the public sector. Rather the administrative reforms were focused on organizational factors such as management and leadership diagnosis and prescriptions (Arnold, 1995). Arnold (1995) differentiated the reinvention movement from other administrative reforms of the executive by their context, "micro" or "macro". The "micro" orientation of the reinvention movement "approaches the executive branch as a loose array of highly diverse and substantially self-contained organizations rather than a unitary entity," (Thompson, 2000, p. 518). Whereas previous executive branch reforms, such as civil service reform under the Carter administration, related to the "macro"-context of political issues, executive authority and administration (Thompson, 2000, p. 518).

Under the Clinton administration the reinvention movement began with the publication of the National Performance Review (NPR) and the passage of the Government Performance and Reporting Act (GPRA). Empowerment of federal subordinates is a key term of this reform. Major themes of the NPR (1993) are entrepreneurship, innovation and empowerment. Entrepreneurial government means empowering public subordinates to take risks and to innovate. Empowering public subordinates refers to the "pushing down of authority" so that decisions are made by civilian subordinates as opposed to political initiatives. Innovating refers to using creative approaches for solving problems.

The vision of the NPR is to create a government that works better and costs less by changing the culture of public organizations from one of entitlement to one of empowerment (Gore, 1993). The empowerment of lower level subordinates in public organizations is essential for entrepreneurial government. In order to achieve this objective there must be leadership through communicating vision (Bennis, 1997; Kouzes & Posner, 1995), involving subordinates (Kotter, 1996), electronic access to information (Executive Office of the President, NII 1993; Whetton & Cameron, 2002); cooperation and teamwork (Tjosvold & Johnson, 2000); training and job flexibility (Whitener, 2001); promoting creativity and innovation (Bass, 1990); defining good performance through communicating expectations, recognizing achievement of expectations and taking corrective actions to assist subordinates to reach expectations (Kouzes & Posner, 1995).

Empowering public subordinates to administer public programs is a cause of concern for some political theorists (Arnold, 1995; Borins, 2000). Empowerment requires, to varying degrees, the removal of organizational controls, constraints and boundaries in

order for subordinates to freely accomplish tasks and set goals (Borins, 2000). This idea contradicts the bureaucratic model upon which government organizations are established. In this model, controls and constraints are used to ensure that public programs are administered according to the intent of public policy. Because public subordinates are not democratically elected, it is argued that empowering them undermines the democratic process (Arnold, 1995). Critics of empowerment in public organizations argue that empowerment is based on a market economy and not government (Kettl & DiIulio, 1995). The proper solution to this debate, however, lies in the impact empowerment has on the intent of public policy. If the intent of policy is violated by then empowerment is not appropriate in that particular situation. However, if by empowering a subordinate the intent is safeguard and the service becomes more effective and efficient empowerment is appropriate.

Variables outside the Scope of this Research

Variables outside the scope of this study that are also major themes in the leadership literature include trust, individual personality traits and organizational culture. The first variable trust in leadership and organizations is an important theme in the leadership literature. Trust has been found to be highly correlated with open communication in organizations (Harris, 1993) participation (Bass, 1990) employee citizenship (Whitener, 2001), and job flexibility (Kouzes & Posner, 1987). It is a significant factor in organizational effectiveness. Supervisory trust, however, is distinctly different from trust in organizations (Carnevale, 1988, p. 88). Primarily because of this distinction between

organizational trust and trust in supervisors, trust is outside the scope of this study. This study is designed to measure supervisors facilitating organizational leadership.

Leadership trait theories indicate that certain personality traits are correlated with effective leadership (Bass, 1990; Yukl, 1989; Hartman, 1999). These traits include integrity (Phillips, 1992); warmth (Hartman, 1999); and persistence (Phillips, 1992). This research generally agrees that no one-personality trait alone is highly correlated with effective leadership. Some studies (Bass, 1990; Kouzes & Posner; Yukl, 1998) have found that a combination of certain traits and abilities are correlated with effective leadership. Determining if personality traits influence supervisors' ability to serve, as a medium between organizational leadership and their subordinates is not within the scope of this study. This study, however, may provide the basis for future research on traits of facilitative leaders.

Organizational culture is another important leadership variable that is outside the scope of this current study. Culture is defined as the pattern of beliefs, values, practices and artifacts that guide members of an organization (Ott, 1989). Much of the recent research that has been done on organizational change has focused on the process of implementing change and the culture of the organization (Thompson, 2000 and Greenberg & Baron, 2000). These tend to be retrospective studies that focused on how leaders communicated changes and what factors needed to be present for successful organizational transformation. This study is primarily concerned with organizational leadership factors that have been found as prescriptions for empowerment. One objective of the NPR was to change the culture of federal organizations. However, it is recognized that the cultures of federal agencies vary considerably. This study design is not

appropriate for assessing the cultures of these agencies and its impact on employee empowerment. A qualitative research design is arguably more appropriate for such an assessment (Ott, 1989).

Public v. Private Organizations

Important differences do exist between public and private organizations. Public organizations have numerous stakeholders. These stakeholders include direct and indirect recipients of the organizations' programs, tax payers and political officials. Private organizations have stakeholders that may be limited to customers and stockholders.

Public organizations are open to greater scrutiny than private organizations. Public organizations are heavily regulated in how they perform their services as well as hiring personnel. Public organizations often times end up with multiple and conflicting goals. In a market economy, private organizations tend to focus on the goal of delivering quality products or services in order to enhance to bottom-line. In public organizations it is more difficult to assess the bottom line. Thus public organizations are budget driven rather than profit driven. Public organizations are governed by the rule of law.

Public organizations confront value conflicts between competence and responsiveness. Competence refers to an organization's effectiveness, timeliness, and reliability. Responsiveness refers to quality and fairness (public servants are expected to treat everyone equally and fairly. Public organizations also have a system of multiple bosses (separation of powers – executive, legislature, judicial, federal, state & local). This

system of checks and balances exacerbate the problem of competence and responsiveness value conflicts.

Institutional Influences

Public organizations exist as subsystems of larger societal structures and are therefore under normative pressure to align their goals with wider societal values (Scott, 2001, p. 152). The importance of the wider context or environment of an organization is referred to as its institutional environment (Scott, 2001). This differs from an organization's technical environment, which refers to its production system or inputs and outputs. The institutional environments of public organizations differ from private organizations such that strategies in one may not be appropriate in another.

This influence of institutional environment may be another explanatory factor of differences in leadership styles and effectiveness between public and private organizations. It may also be a factor in difference amongst public organizations that belong to different industries. For example, although the Veteran's Administration (VA) is a public organization, it also operates hospitals, which belong to an industry with strong institutional influences. These factors - public, private and industry - impact individuals within organizations. For this reason, it is important to note other influences in any assessment of supervisors as facilitative leaders in public organizations as well as any other organizations.

Summary

Highly motivated, talented subordinates can succeed for only so long without organizational support, nor will they stay long in organizations that refuse to provide the tools, technologies, training and structures that allow them to grow.
Paul Light (2001) *To Restore and Renew*

Leadership throughout organizations is the process of motivating subordinates to work toward organizational goals. This process requires organizational leadership to provide support that empowers subordinates. It also requires subordinates at all levels of the organization, including supervisors to engage in leadership. Supervisors are the medium for and a direct link to organizational leadership for their subordinates. Thus, supervisors in public organizations lead when they facilitate organizational leadership. Subordinates attribute organizational leadership or a lack of leadership to their immediate supervisors. Thus, supervisors' failure to provide facilitating leadership will result in poor performance ratings from subordinates.

Chapter three of this dissertation presents the methodology for testing the above eleven hypotheses related to leadership and subordinates' ratings of their immediate supervisors. Presented in the methodology section is a discussion of the research design, the measures, survey data, and the data analysis procedures.

CHAPTER III: METHODOLOGY

The purpose of this chapter is to present the research methodology. This includes presenting the research design; specifying the hypotheses to be tested; providing descriptive statistics for each study variable and presenting the data analysis methods that will be employed in this study. This chapter will also discuss the threats to this study and its limitations.

Research Design

The research design is a deductive validation of a model derived from the empirical literature. It is a quantitative analysis of bivariate correlations and multivariate relationships using secondary analysis. Its purpose is to describe the relationships between organizational factors and employee ratings of immediate supervisors. Supervisor rating is the dependent variable. Independent variables are communicating vision, employee input into decisions, electronic access to information, a spirit of teamwork, training opportunities, job flexibility, promotion of innovation, good performance defined, recognition and corrective actions.

Secondary analysis of the 1998 and 2000 National Partnership for Reinvention (NPR) Surveys were used to determine if there are significant relationships between these variables and the magnitude of these relationships. The 1998 NPR survey consists of forty-four items. Thirty-two items are measured on a five point Likert scale. The remaining items gather demographic information on the respondent. The 2000 NPR survey consists of forty-three items. Thirty-two items are measured on a five point Likert scale. The remaining items gather demographic information on the respondent. Using

bivariate and multivariate analysis, this research will explore the relationships between variables and the magnitude of these relationships.

Population

The population from which supervisor's will be selected are those surveyed in the 1998 and 2000 National Partnership for Reinventing (NPR) Government Surveys An interagency team from the OPM, the Merit Systems Protection Board (MSPB) and the Federal Aviation Administration (FAA) developed this survey. Its purpose was to assess employee opinions on workplace attitudes and the progress of reinvention within the federal government (NPR Survey, 1998). Forty-eight federal agencies were selected for the survey. The criterion for selection was the extent to which the agencies' services impact the public. Thirty-two of the federal agencies have ninety percent of the federal government's contact with the public. Creators of the NPR believed that performance in these *high impact agencies* is central to restoring America's trust in government. In 2000, all thirty-two agencies designated high-impact participated plus the seventeen other agencies. This survey was administered to federal supervisors in 1998, 1999, and 2000. The raw data for the 1998 and 2000 surveys was made available for this research. The 1999 survey was not accessible for study.

Sample

The research sample includes 13,689 responses from a total of 34,401 surveyed in 1998 (40% response rate) and 31,975 responses from a total of 50,844 surveyed (62% response rate) in 2000. Survey administrators used a random sampling process to identify respondents. The survey was mailed to stratified random samples in 1998 and 2000. Supervisors received the survey at either their homes or their office and all responses were returned by mail to the address of the contractor. The total number of surveys completed was 31,975, an overall response rate of sixty-two percent (NPR Survey, 2000).

Demographics of Survey Respondents

The results presented are based on 13,689 cases (40% response rate) in 1998 and 31,975 cases or 62% of those surveyed in 2000. Theses response rates are acceptable for survey research (Mannheim & Rich, 1995). Characteristics of the respondents presented in table one below are representative of individuals within the federal workforce (the research population). The study samples for 1998 and 2000 are generally representative of the government-wide white collar employee population. The percentages of manager/supervisory level supervisors surveyed in 1998 and 2000 were larger than the government-wide population percentage.

Table 1: Demographics for NPR Survey

Characteristic	Category	Sample % of Respondents 1998	2000	Government-wide % of Population
Gender	Female	45%	48%	44%
	Male	55%	52%	56%
Race	Minority	34%	32%	30%
	White	66%	68%	70%
Length of Federal Service	Less than one year	.8%	2%	3%
	1 to 5 years	9%	14%	11%
	6 to 10 years	17%	15%	16%
	11 to 15 years	19%	19%	21%
	16 to 20 years	15%	14%	18%
	21 to 25 years	17%	15%	15%
	26 to 30 years	14%	14%	11%
	31+ years	8%	8%	6%
Supervisory Responsibility	Non-Supervisor	69%	74%	88%
	Supervisor/ Manager	31%	26%	12%

(Source: NPR/OPM EMPLOYEE SURVEY 1998 & 2000 "Making Government a Great Place to Work", 2003; 2000 Federal Workforce Statistics)

Survey question thirty-five on the 1998 NPR survey and question thirty-four on the 2000 survey asked respondents to indicate their pay grade level. The 1998 and 2000 raw data for this item was not made available to the researcher. However, below is a table of government-wide statistics for federal government employee pay grades. Comparing the percent of NPR respondents that identified themselves as "non-supervisors" (88%) and the government-wide statistics for pay grades falling below supervisory grades (79%), it is likely that the NPR respondents are representative for pay grades of the government-wide population.

According to the statistics below, sixteen percent of government subordinates fall within pay grades one through five. Subordinates within these pay grades would most likely be supervised by a front-line supervisor. For subordinates within grades six through ten, thirty-two percent of the government-wide population, their immediate supervisor is most likely fall within pay grades eleven through twelve. Twenty percent of

government subordinates are pay grades thirteen through fifteen. Immediate supervisors for these pay grades would fall within grades fourteen and fifteen. Less than one percent of federal government subordinates are above pay grade fifteen or senior executive service (SES) grades. The immediate supervisor of SES grades may be the President.

Table 2: Government-wide Pay Grade Demographics

Federal Pay Grades	Government-wide Frequencies	Government-wide Percents	Cumulative Percent
Grades 1 – 5	208,488	16%	16%
Grades 6 – 10	406,090	32%	48%
Grades 11 – 12	385,658	31%	79%
Grades 13 – 15	257,573	20%	99%
Above 15(SL,ST.ALJ)	780	.0006%	99+%
SES	6,911	.005%	100%
Total	1,265,491		

(Source: OPM Workforce Statistics Website)

Instrument and Raw Data

The 1998 and 2000 NPR Surveys consist of forty-three items. Items one through twenty-one are measured on a five point Likert scale - response sets include: 1= strongly disagree, 2=disagree, 3=neither, 4=agree, 5=strongly agree. Items twenty-two through twenty-seven are measured on a five point Likert scale - response sets include 1= not at all, 2= to a limited extent, 3= to a moderate extent, 4= to a great extent, 5= to a very great extent. (See Appendix for the entire survey instruments) Survey items twenty-eight through thirty are measured on a five point Likert scale - response sets include 1=very dissatisfied, 2= dissatisfied, 3= neither, 4= satisfied, 5= very satisfied. Responses for survey items thirty-one and thirty-two include 1= very poor, 2= poor, 3= fair, 4=good, 5= very good. Items thirty-three through forty-three pertain to respondents' background and employment status and have various response sets. Raw data for demographic survey

items in 1998 and 2000 was not available for this research. Neither the 1998 nor 2000 surveys had any open ended response sets (see Appendix A).

The raw data from the 1998 consists of 13,689 responses. The raw data from the 2000 surveys consists of 31,975 responses. This data was deposited by the Office for Personnel Management (OPM) in SPSS format with the University of Michigan's International Consortium of Political and Social Research (ICPSR). This repository was accessed by the researcher.

Survey Items Not Used

The NPR Surveys included items that did not directly relate to general prescriptions for empowerment. Survey questions that relate to these organizational factors were selected from the National Partnership for Reinvention Survey (see Appendix for Original surveys). The main criterion for inclusion is if the question asks about the things the organization does (through the supervisors) to empower the supervisors in their job duties. Questions pertaining directly to popular prescriptions for empowerment found in the leadership literature were selected.

Questions pertaining to quality of life issues such as support for family responsibilities and diversity were not included. Survey items that involve supervisors' attitudes, such as job satisfaction and opinions on merit were not included because such questions are multilevel constructs that involve levels of analysis outside the scope of this study (for a discussion of job satisfaction see Weiss & Cropanzano, 1996). One exception was made with regards to the team variable where five questions were drawn from the survey. Responses from these questions were aggregated to form an index scale. Because the

team variable included four measures, the question relating to rewards for teams was not omitted.

Questions pertaining to specific tools used by an organization to accomplish tasks, such as the use of government credit cards, simplified travel plans, and streamlining the hiring process were not selected because they are not agreed upon in the leadership literature as prescriptions for empowering supervisors. Although this study is concerned with the literature on reinvention in government, it is focusing on the empowering supervisors' aspect of entrepreneurial government and the prescriptions for empowering supervisors. For this reason, the survey question that specifically asks if reinvention (government that works better and costs less) has been made a priority is not relevant to this research question and thus was not included in the model.

These specific items were not used for this study. Questions one through three addressed procedures for customer feedback and service. This study is concerned with internal stakeholders, supervisors, and their ratings of immediate stakeholders. Questions five, ten, fourteen, fifteen, twenty and thirty-two concern supervisors' attitudes and opinions. Questions seventeen, nineteen, twenty-two, twenty-three, twenty-four and twenty-seven are questions pertaining to specific tools or procedures for management of resources as opposed to leadership processes for empowerment and not relevant to this study. (See Survey Instrument in Appendix A for actual survey items.)

Differences in 1998 and 2000 Survey Items

The 1998 survey varies from the 2000 survey (see Appendix for actual survey). For example, in the 2000 survey question twenty-seven asks about the use of Plain English in

the work place. In the 1998 survey question twenty-seven addresses the relationship with regulatory agencies. These questions, however, do not reflect any of the variables in this study and no action was necessary by the researcher.

Measures

The survey items drawn from the 1998 and 2000 surveys represent this study's dependent and independent variables: The independent variables are communicating vision, involving supervisors in decisions, providing electronic access to information, teamwork, training opportunities, job flexibility, promoting innovation, defining good performance, recognizing good performance and taking corrective actions when performance standards are not met. The dependent variable is supervisor rating. Table two below includes descriptive statistics for each of these study variables in both 1998 and 2000. These statistics include mean scores, standard deviations and skewness statistics for each of the study variables. Variables are measured on a five point Likert scale. Response sets differ for many of these variables. However, for all of these variables, one on the scale represents the least favorable response and five represents the most favorable response to the survey question.

Skewness statistics were included to assess whether the data for each variable was normally distributed. These statistics indicate that this assumption is met. The skewness statistics below indicate that most of the study variables are slightly skewed to the left in both 1998 and 2000. Two variables were exceptions to this. Promoting innovation was symmetrical (.000) in 1998 and slightly skewed to the right (.228) in 2000. Defining good performance was slightly skewed to the right in 1998 (.169) and 2000 (.214).

Table 3: Descriptive Statistics of Study Variables

Variable	*1998 Mean*	*2000 Mean*	*1998 Std. Dev.*	*2000 Std. Dev.*	*1998 Skewness Statistic*	*1998 Skewness Std. Error*	*2000 Skewness Statistic*	*2000 Skewness Std. Error*
Vision	3.32	3.28	1.18	1.22	-.510	.021	-.389	.014
Decision-making	3.13	3.03	1.27	1.22	-.257	.021	-.207	.014
Electronic Access to Information	3.59	3.25	1.15	1.69	-.567	.021	-.654	.014
Recoded Teamwork	3.26	3.26	.99	.99	-.376	.021	-.345	.014
Training	3.27	3.34	1.16	1.21	-.490	.021	-.529	.014
Job Flexibility	3.21	3.35	1.14	1.27	-.375	.021	-.185	.014
Promoting Innovation	2.77	2.86	1.17	1.28	.000	.021	.228	.014
Defining Good Performance	2.63	2.84	1.21	1.39	.169	.021	.214	.014
Recognition	2.97	2.98	1.31	1.28	-.117	.021	-.182	.014
Corrective Actions	2.70	3.01	1.11	1.43	.001	.021	.347	.014
Supervisor Rating (SR) *5 Pt Likert Scale	3.43	3.53	1.25	1.24	-.479	.021	-.632	.014

1998 n = 13,689, 2000 n = 31,975

The mean scores for communicating vision in 1998 and 2000 are 3.32 and 3.38 respectively with standard deviations of 1.18 and 1.22. The mean scores for employee input into decisions in 1998 and 2000 are 3.13 and 3.03 respectively with standard deviations of 1.27 and 1.22. The mean scores for electronic access to information in 1998 and 2000 are 3.59 and 3.25 respectively with standard deviations of 1.15 and 1.69. The mean scores for training in 1998 and 2000 were 3.27 and 3.34 respectively with standard deviations of 1.16 and 1.21. The mean scores for job flexibility in 1998 and 2000 were 3.21 and 3.35 respectively with standard deviations of 1.14 and 1.27. The

mean scores for promoting innovation in 1998 and 2000 were 2.77 and 2.86 respectively with standard deviations of 1.17 and 1.28. The mean scores for defining good performance in 1998 and 2000 were 2.63 and 2.84 respectively with standard deviations of 1.21 and 1.39. The mean scores for recognizing good performance in 1998 and 2000 were 2.97 and 2.98 respectively with standard deviations of 1.31 and 1.28. The mean scores for taking corrective actions in 1998 and 2000 were 2.70 and 3.01 respectively with standard deviations of 1.25 and 1.24. Finally, the mean scores for the dependent variable supervisor rating in 1998 and 2000 were 3.43 and 3.53 respectively with standard deviations of 1.25 and 1.24. In 1998 the number of total survey respondents was 13,689. In 200 the number of total survey respondents was 31,975.

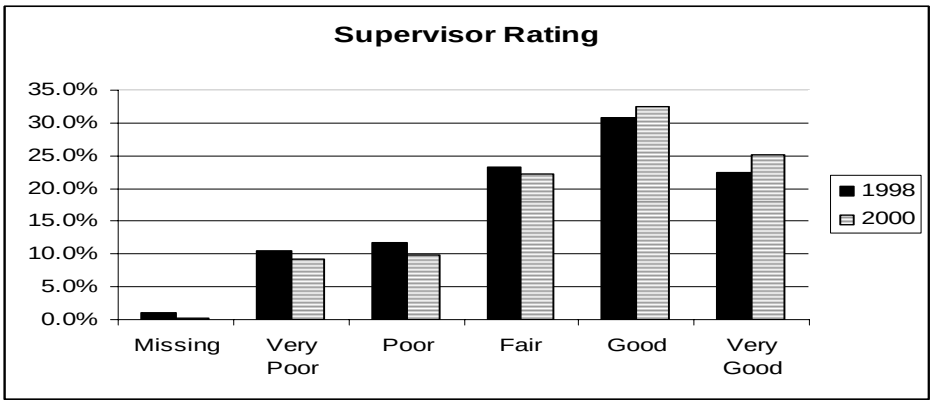
The variable teamwork was recoded for the purposes of this study. The recoding of this value is discussed below in greater detail. Above the teamwork value was included to provide a sense of this variable's importance in both 1998 and 2000. The recoded value for the mean scores for developing a sense of teamwork in 1998 and 2000 are 3.26 in both years with standard deviations of .99 in both years.

Dependent Variable

The dependent variable, Supervisor Rating (SR), is represented by question thirty-one on the NPR Survey: *Overall, how good a job do you feel is being done by your immediate supervisor?* In 2000, 58% of federal supervisors believe that their immediate supervisor is doing a good job or a very good job, (NPR Survey Results, 2000) compared to 55% in 1998 (OPM, 1998 NPR Survey Results). Twenty two percent in 2000 felt that

their supervisors were doing a fair job compared to 23% percent in 1998. Whereas 19% in 2000 and 21% in 1998 felt that their supervisors were doing a very poor to poor job.

Figure 4: Supervisor Rating

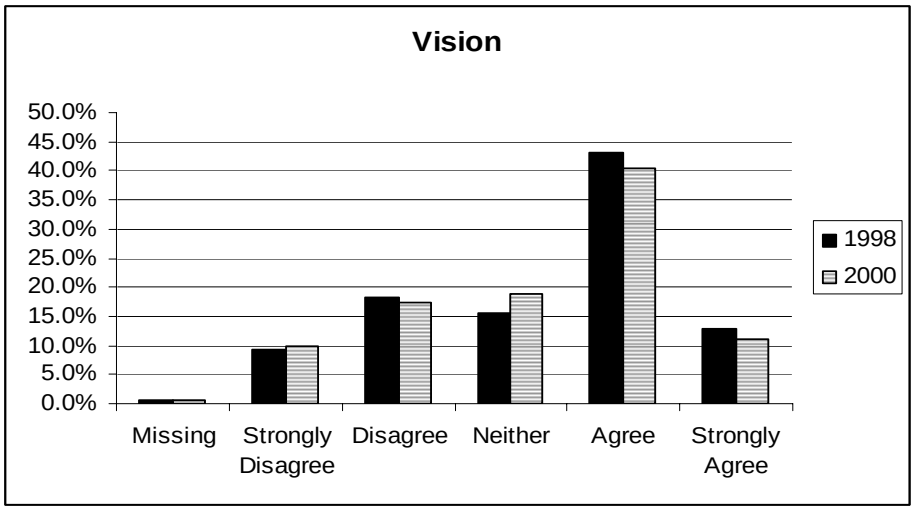


Independent Variables

Independent variables and their corresponding questions from the National Partnership for Reinvention (NPR) Survey are presented below. Each variable, with the exception of teamwork, has one representative question: Teamwork is represented by five survey questions. These are presented further below.

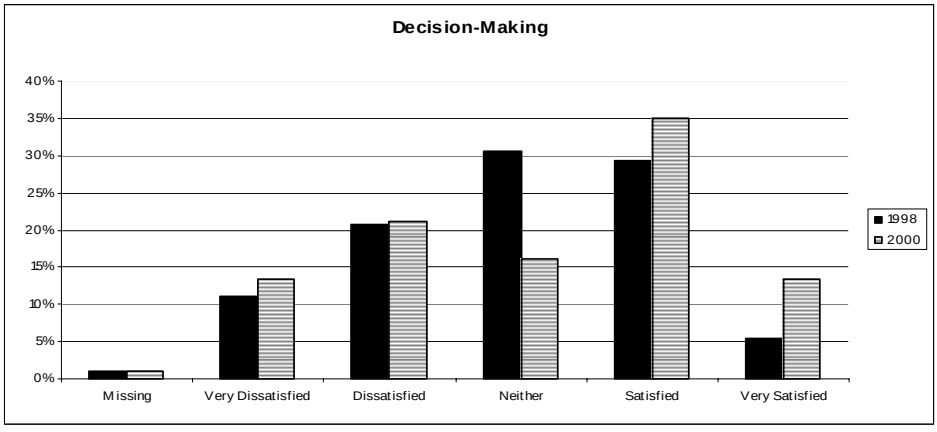
Communicating Vision (Vision) – Q3. *Managers communicate the organization's mission, vision, and values.* In 2000, 51% of federal supervisors agreed that managers communicate the organization's mission, vision, and values, (NPR Survey Results, 2000) compared to 55% in 1998 (OPM, 1998 NPR Survey Results). In 2000, 18% neither agreed nor disagreed compared to 16% in 1998. Whereas 26% in 2000 strongly disagreed or disagree that managers communicated the organization's mission, vision, and values.

Figure 5: Communicating Vision



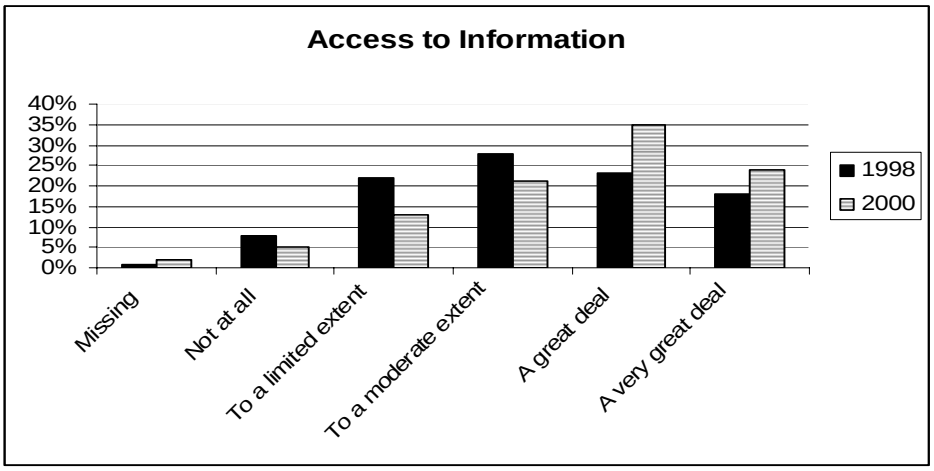
Employee Involvement in Decision-Making (DM) – Q29. *How satisfied are you with your involvement in decisions that affect your work?* In 2000, 48% of federal supervisors were satisfied with their involvement in decisions that affect their work, (OPM, 2000 NPR Survey Results) compared to 35% in 1998 (OPM, 1998 NPR Survey Results). In 2000, 16% were neither satisfied nor dissatisfied with employee involvement in decisions compare to 31% in 1998. Whereas, 25% in 2000 and 21 % in 1998 of respondents were very dissatisfied or dissatisfied.

Figure 6: Employee Involvement in Decisions



Electronic Information Access (INFO) – Q26. *Do you have electronic access to the information needed to do your job?* In 2000, 59% of federal supervisors indicated that they, to a great or very great extent, had access to the information needed to do their job; and 34% responded that they had a limited to moderate extent access to electronic information (OPM, 2000 NPR Survey Results). In 1998, 43% of federal supervisors indicated that they, to a great or very great extent, had access to the information needed to do their job; and 59% responded that they had a limited to moderate extent access to electronic information (OPM, 1998 NPR Survey Results). Whereas, 5% in 2000 and 8% in 1998 responded they did not have any access to electronic information needed for doing their job.

Figure 7: Electronic Access to Information

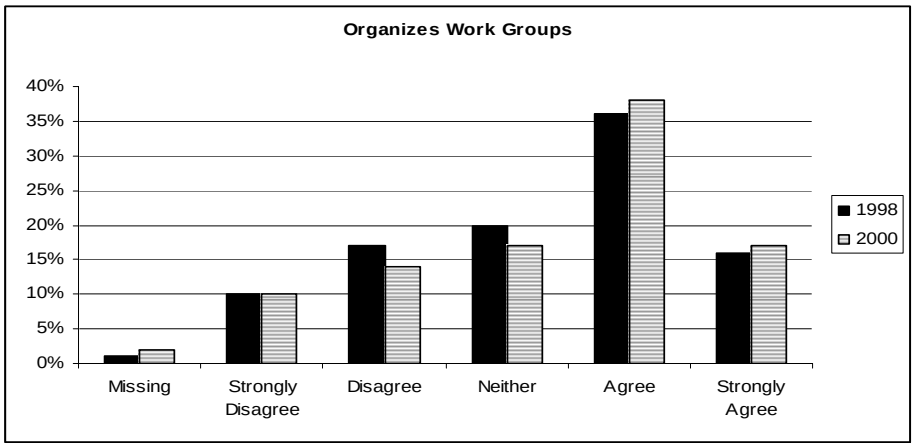


Cooperation and Teamwork (TEAM) -

Question 4. My immediate supervisor has organized our work group effectively to get the work done. In 2000, 55% of federal supervisors responded favorably to this question (OPM, 2000 NPR Survey Results) compared to 52% in 1998 (OPM,

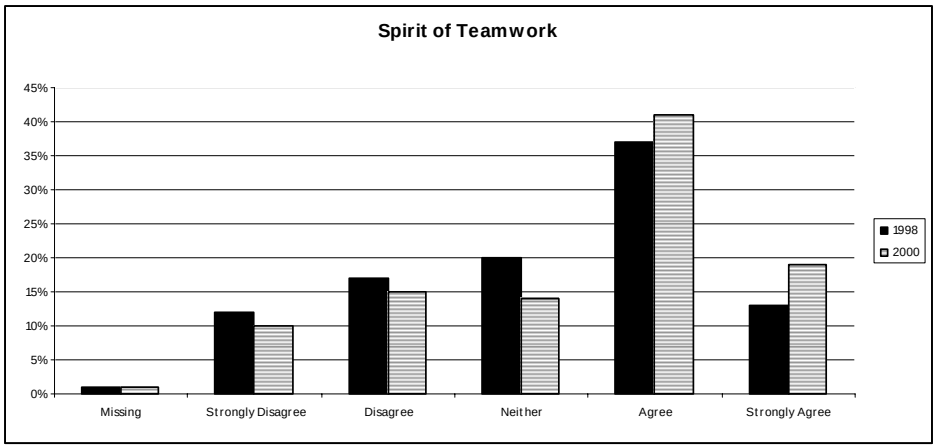
1998 NPR Survey Results). Seventeen percent in 2000 and 20% in 1998 neither agreed nor disagreed. Whereas, 24% in 2000 and 26% in 1998 disagreed or strongly disagreed that supervisor organizes work groups effectively.

Figure 8: Supervisor Organizes Work Groups



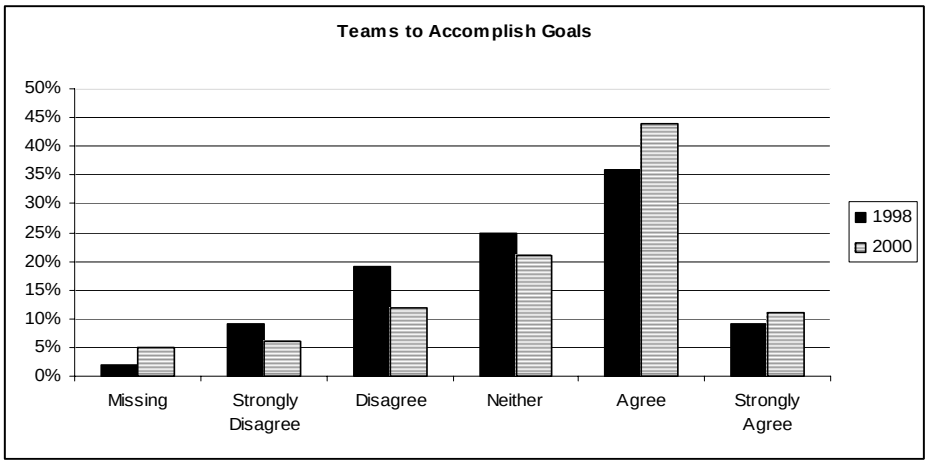
Question 6. A spirit of cooperation and teamwork exists in my immediate work unit. In 2000, 61% of federal supervisors responded favorably to this question on the NPR Survey, (OPM, 2000 NPR Survey Results) compared to 49% in 1998 (OPM, 1998 NPR Survey Results). Fourteen percent in 2000 and 20% in 1998 neither agreed nor disagreed. Whereas, 25% of respondents in 2000 and 27% of respondents in 1998, disagreed or strongly disagreed.

Figure 9: A Spirit of Cooperation and Teamwork



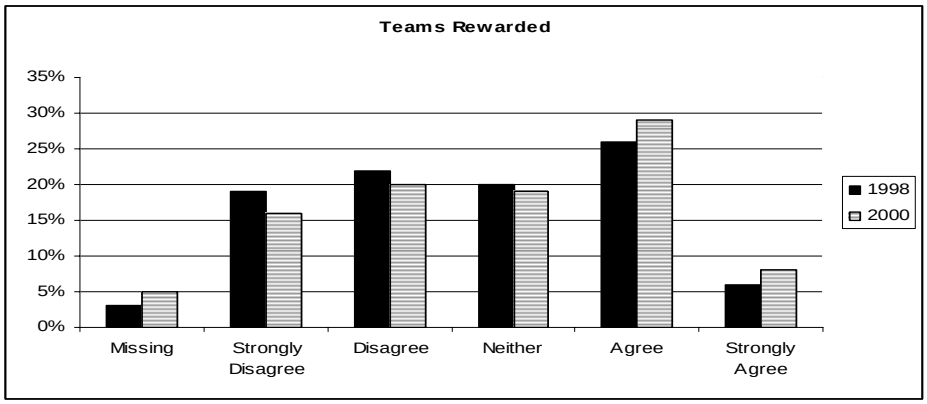
Question 7. Teams are used to accomplish organizational goals, when appropriate. In 2000, 54% of federal supervisors responded favorably to this question on the NPR Survey (OPM, 2000 NPR Survey Results) compared to 45% in 1998 (OPM, 1998 NPR Survey Results). Twenty one percent in 2000 and 25% in 1998 neither agreed nor disagreed. Whereas, 17% of respondents in 2000 and 28% of respondents in 1998 disagreed or strongly disagreed.

Figure 10: Teams Used to Accomplish Goals



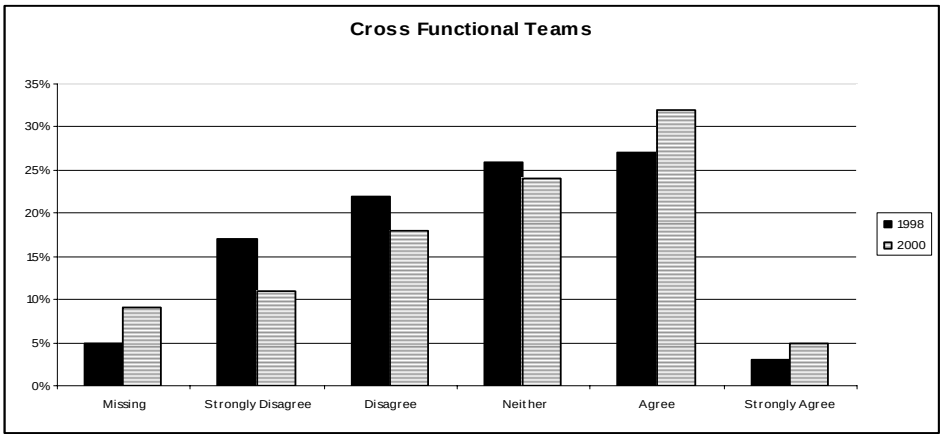
Question 8. Supervisors are rewarded for working together in teams (for example, performance ratings, cash awards, certificates, public recognition). In 2000, 35% of federal supervisors responded favorably to this question on the NPR Survey (OPM, 2000 NPR Survey Results) compared to 32% in 1998 (OPM, 1998 NPR Survey Results). Nineteen percent in 2000 and 20% in 1998 neither agreed nor disagreed. Whereas, 36% of respondents in 2000 and 40% of respondents in 1998 disagreed or strongly disagreed.

Figure 11: Supervisors Rewarded for Working in Teams



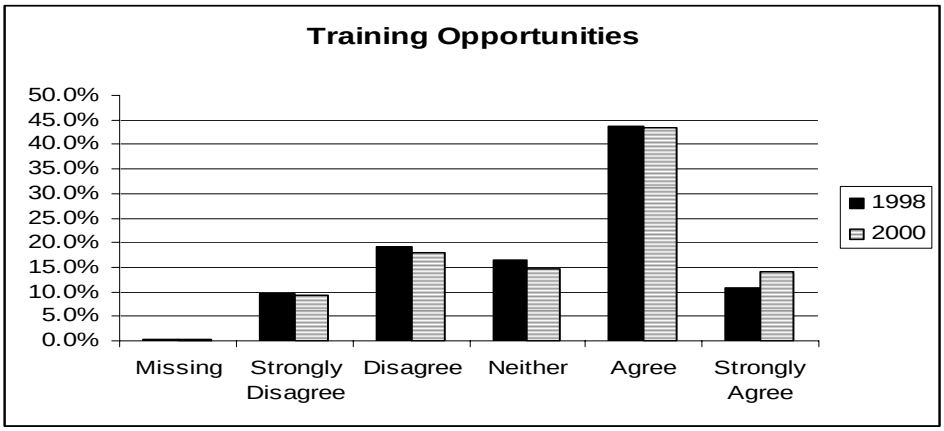
Question 9. Supervisors in different work units participate in cross-functional teams to accomplish work objectives. In 2000, 38% of federal supervisors responded favorably to this question on the NPR Survey (OPM 2000 NPR Survey Results) compared to 30% in 1998 (OPM 1998 NPR Survey Results). Twenty four percent in 2000 and 26% in 1998 neither agreed nor disagreed. Whereas, 29% of respondents in 2000 and 39% of respondents in 1998 disagreed or strongly disagreed.

Figure 12: Cross Functional Teams



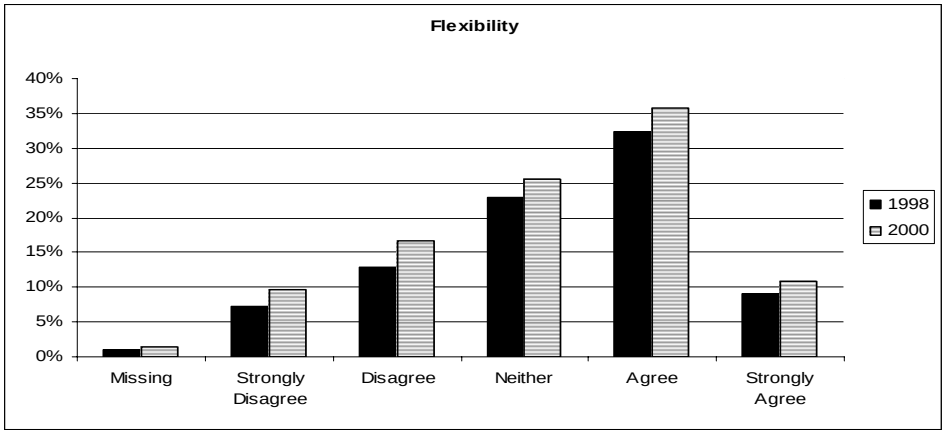
Training Opportunities (TRNG) – Q13. *Supervisors receive the training they need to perform their jobs (for example, on-the-job-training, conferences, workshops).* In 2000, 57% of federal supervisors responded favorably to this question on the NPR Survey (OPM 2000 NPR Survey Results) compared to 54% in 1998 (OPM 1998 NPR Survey Results). Fifteen percent in 2000 and 16% in 1998 neither agreed nor disagreed. Whereas, 27% of respondents in 2000 and 29% of respondents in 1998 disagreed or strongly disagreed.

Figure 13: Training Opportunities



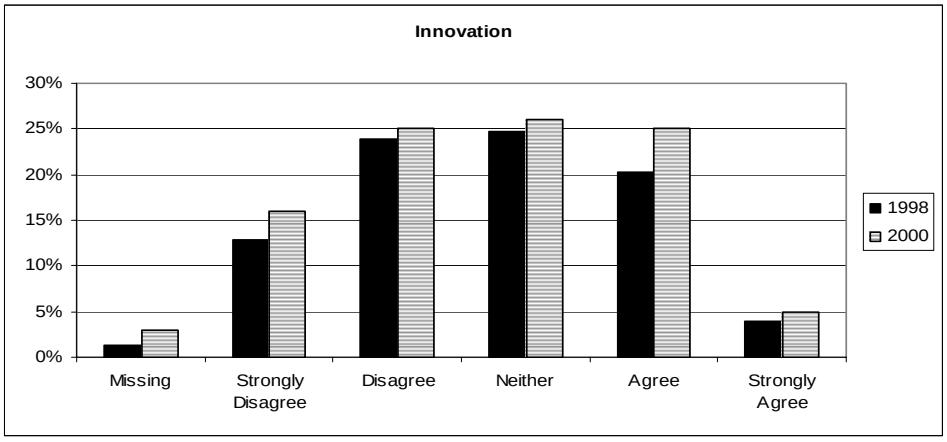
Job Flexibility (FLEX) – Q18. *In the past two years, I have been given more flexibility in how I accomplish my work.* In 2000, 47% of federal supervisors responded favorably to this question on the NPR Survey (OPM 2000 NPR Survey Results) compared to 41% in 1998 (OPM 1998 NPR Survey Results). Twenty five percent in 2000 and 23% in 1998 neither agreed nor disagreed. Whereas, 26% of respondents in 2000 and 20% of respondents in 1998 disagreed or strongly disagreed.

Figure 14: Job Flexibility



Promoting Innovation (INNOV) – Q11. *Creativity and innovation are rewarded.* In 2000, 30% of federal supervisors responded favorably to this question on the NPR Survey (OPM 2000 NPR Survey Results) compared to 24% in 1998 (OPM 1998 NPR Survey Results). Twenty six percent in 2000 and 24% in 1998 neither agreed nor disagreed. Whereas, 41% of respondents in 2000 and 37% of respondents in 1998 disagreed or strongly disagreed.

Figure 15: Promoting Innovation



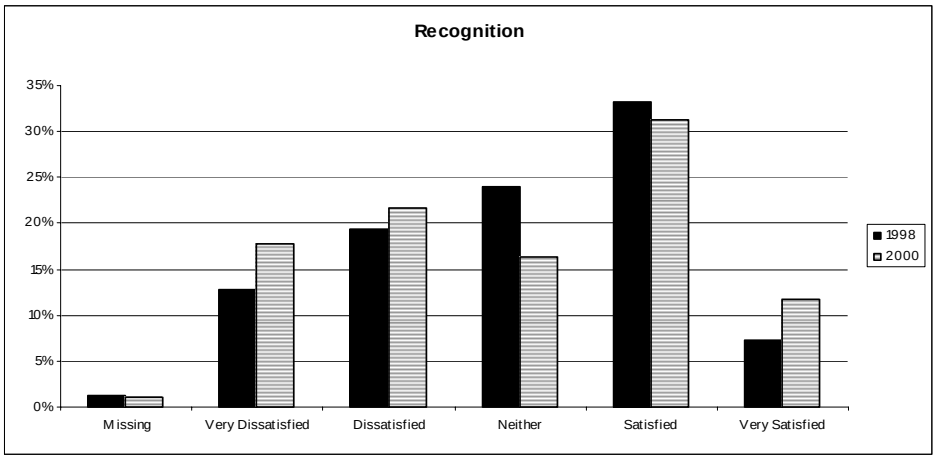
Good Performance Defined (PERF) – Q25. *Are you clear about how "good" performance is defined in your organization?* In 2000, 28% of federal supervisors responded that good performance was defined to a great or very great extent, while 46% responded a limited to moderate extent (OPM 2000 NPR Survey Results) compared to 23% and 37% respectively for 1998 (OPM 1998 NPR Survey Results). Whereas 22% in 2000 and 11% in 1998 responded *not at all*.

Figure 16: Defining Good Performance



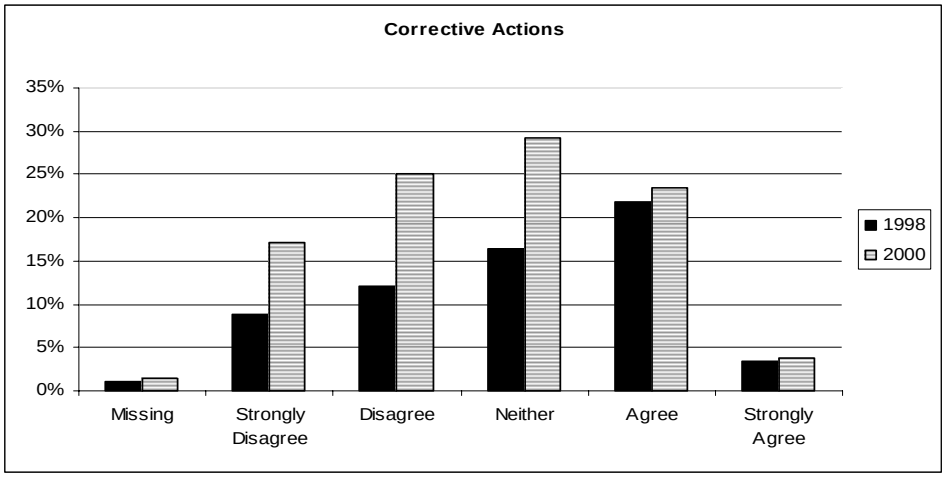
Recognition (RECG) – Q30. *How satisfied are you with the recognition you receive for doing a good job?* In 2000, 43% of federal supervisors responded favorably to this question on the NPR Survey (OPM 2000 NPR Survey Results) compared to 40% in 1998 (OPM 1998 NPR Survey Results). Sixteen percent in 2000 and 24% in 1998 were neither satisfied nor dissatisfied. While 38% in 2000 and 30% in 1998, were dissatisfied or very dissatisfied with recognition received for doing a good job.

Figure 17: Recognizing Good Performance



Corrective Actions (CORRECT) –Q20. *Corrective actions are taken when supervisors do not meet performance standards.* In 2000, only 27% of federal supervisors agreed that corrective actions are taken when supervisors do not meet performance standards (OPM 2000 NPR Survey Results) compared to 24% in 1998 (OPM 1998 NPR Survey Results). Twenty nine percent in 2000 and 16% in 1998 neither agreed nor disagreed. Whereas, 41% of respondents in 2000 and 21% of respondents in 1998 disagreed or strongly disagreed.

Figure 18: Correcting Poor Performance



The above tables are presented in order to give the reader a sense of survey responses for each of the study's variables. Below is a discussion of the teamwork variable as a composite of the five teamwork questions presented above.

Recoding Cooperation and Teamwork

There are five questions that address cooperation and teamwork. For this reason, it was necessary to recode the teamwork and cooperation variable in order to have one value for this measure. Teamwork and cooperation, esprit de corps, is a construct. Five measures have been identified that make up this construct. The table below indicates that none of the predictors intercorrelated based on an accepted threshold of less than .8.

Table 4: Correlation Matrix for Team Survey Items

	Q4 Supervisor organizes effective teams	Q6 Spirit of cooperation and teamwork.	Q7 Teams used to accomplish goals	Q8 Rewarded for working in teams	Q9 Use of cross-functional teams
1998 Q04	1.0000				
2000	1.0000				
1998 Q06	.5421	1.0000			
2000	.5431	1.0000			
1998 Q07	.4825	.5688	1.0000		
2000	.4945	.5749[t]	1.0000		
1998 Q08	.4522	.4523	.5801	1.0000	
2000	.4449	.4539	.5766	1.0000	
1998 Q09	.3899	.4299	.6025[t]	.5822	1.0000
2000	.3935	.4303	.6037[t]	.5762[t]	1.0000

The reliability coefficients for these five items is $\alpha = .84$ and standardized item $\alpha = .84$. For this reason the researcher believes that all of these questions combined are a fair measure of cooperation and teamwork. An index for the cooperation and teamwork variable was created. This index was created for the independent variable teamwork to create a recoded teamwork value by averaging individual scores for each teamwork item. Table three presents descriptive statistics for the recoded teamwork value in comparison to each of the team survey items. The recoded teamwork variable has a standard deviation of .94 for the 1998 data, .94 for the 2000 data and variances of .88 and .89 respectively.

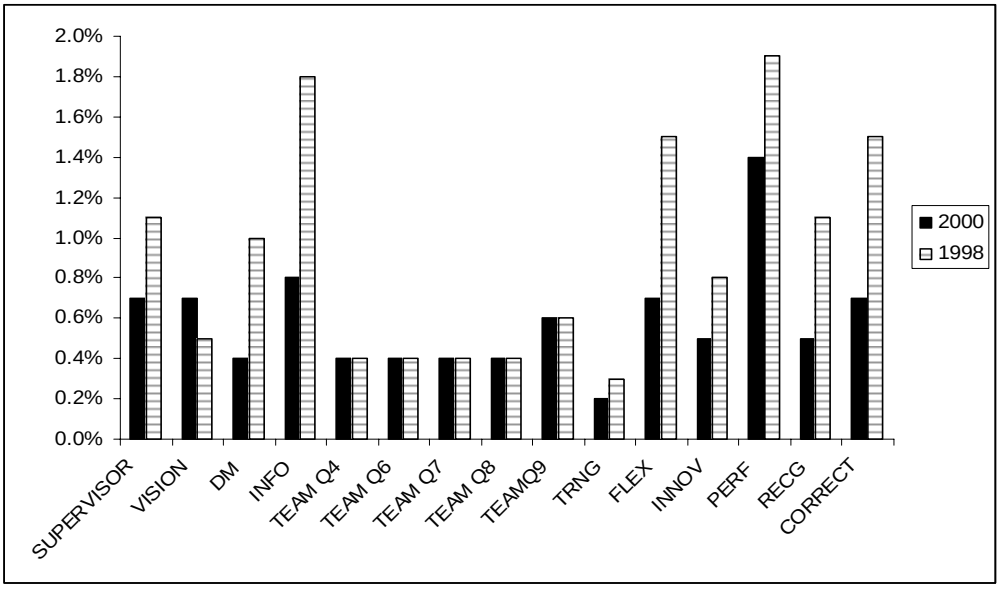
Table 5: Descriptive Statistics for Teamwork Variables

		Supervisor organizes effective teams	Spirit of cooperation and teamwork.	Teams used to accomplish goals	Rewarded for working in teams	Use of cross-functional teams.	Recoded Team (=q4+q6+q7+q8+q9/5)
1998	Mean	3.36	3.44	3.40	2.90	3.00	3.22
2000		3.38	3.45	3.44	2.93	3.09	3.25
1998	Median	4.00	4.00	4.00	3.00	3.00	3.40
2000		4.00	4.00	4.00	3.00	3.00	3.40
1998	Mode	4	4	4	4	4	4
2000		4	4	4	4	4	4
1998	Std. Deviation	1.22	1.25	1.11	1.28	1.14	.94
2000		1.23	1.26	1.10	1.27	1.15	.94
1998	Variance	1.53	1.49	1.18	1.61	1.31	.88
2000		1.52	1.58	1.21	1.62	1.33	.89

Missing Data

One threat to this research design is the amount of missing data for survey responses. This is a threat because it reduces the reliability of regression results (Nunnally & Bernstein, 1994). Roughly one third of the cases from the sets of responses are affected by missing data. The table below illustrates that a significant amount of survey data is missing from both the 1998 and 2000 NPR Employee Surveys. Table five below illustrates the missing data for each variable by survey year. The 2000 survey data suffers considerably more than the 1998 data set. It is predicted that this will lead to more robust regression results from the 1998 survey data.

Figure 19: Missing Data for Study Variables



Three approaches to dealing with missing data in SPSS include: pairwise deletion, listwise deletion and estimation (Nunnally & Bernstein, 1994, p. 123). SPSS defaults to listwise deletion but can be changed to pairwise. In pairwise deletion, a missing observation for a given variable affects only the specific correlations involving that given variable. This causes fewer data to be lost and is preferred to listwise deletion. If there were a pattern to the missing data correlations between different variables, it would be influenced more by the respondent's composition in pairwise deletion. Estimation is an alternative to this. However, due to the large amount of missing data in this study, results from any of these approaches should be interpreted with caution.

In order to determine if the large amount of missing raw data in this study is having a significant impact on the regression model (Nunnally & Bernstein, 1994), a dummy variable was created for responses with missing data. Response sets with missing data were coded (1) and those without coded (0) for each response set that had missing data.

An independent t-test was conducted to determine if there was a statistically significant difference in the population means, where:

μ_m = population mean of respondents with missing data;

μ_r = population mean of respondents without missing data

$H_{\phi:}\ \mu_m = \mu_r$

$H_{1:}\ \mu_m$ does not equal μ_r

Table 6: Group Statistics for Missing Variables

	DUMMY	N	Mean	Std. Deviation	Std. Error Mean
VISION	0	24258	3.26	1.19	.0076
	MISSING	6908	3.27	1.10	.0133
INNOV	0	24258	2.79	1.19	.0075
	MISSING	6606	2.75	1.11	.0137
TRAIN	0	24258	3.34	1.21	.0077
	MISSING	7484	3.39	1.17	.0136
FLEX	0	23839	3.25	1.18	.0076
	MISSING	6505	3.27	1.11	.0138
CORRECT	0	24258	2.72	1.17	.0075
	MISSING	4830	2.98	1.15	.0165
PERFORM	0	24258	2.76	1.23	.0079
	MISSING	5481	2.84	1.19	.0161
INFO	0	22098	3.70	1.17	.0078
	MISSING	4809	3.36	1.29	.0187
DECISION	0	24258	3.06	1.25	.0080
	MISSING	7508	2.97	1.09	.0126
RECOG	0	24258	2.99	1.31	.0084
	MISSING	7460	3.03	1.17	.0136
SUPER	0	24258	3.50	1.25	.0080
	MISSING	7410	3.69	1.15	.0134
TEAM	0	24258	3.26	.95	.0061
	MISSING	3365	3.24	.89	.0154

Table five above presents the descriptive statistics for each of the groups' variables. The independent t-tests of significance indicate that there are statistically significant differences between the 1998 and 2000 samples on many of the study variables. The assumption of homogeneity was met for the IV's VISION, FLEXIBILTY, and TEAM. This assumption was not met for the DV SUPERVISOR RATING or the IV's

INNOVATION, TRAINING, CORRECTIVE ACTIONS, GOOD PERFORMANCE, INFORMATION, DECISION-MAKING or RECOGNITION.

The next step was to determine if the null hypothesis ($H_\phi = \sigma_m$ equal σ_r) could be accepted. If the reported "p values" below fall within the appropriate lower and upper bounds for the 95% confidence level, then we accept the null hypothesis. If they do not fall within these bounds, then we reject the null hypothesis. The table for the independent samples t-tests of significance is located in the appendices. An examination of this table leads of to the following conclusions. The null hypothesis was only accepted (no difference between population means) for the independent variable VISION t(31,164) = -.616, p=.538; TEAM t(27,621)=.975, p=.330; TRAINING t(12474) = -3.176, p=.000; and FLEXIBILITY t(30,342)= -1.370, p=.171.

The null hypothesis was rejected for SUPERVISOR RATING where t(13213) = -11.630, p=.000;CORRECTIVE ACTIONS t(6966) = -14.798, p=-.000; GOOD PERFORMANCE t(8354) = -4.411, p=.000; INFORMATION t(6614) = 16.726, p=.000; DECISION-MAKING t(14073) = 5.945, p=.000; RECOGNITION t(13654) = -2.507, p=.000, INNOVATION where t(11,077) = 2.424, p =.015.. This analysis indicates that the population of survey respondents with missing data and those without missing data differs on all of the study variables items with the exception of INNOVATION. This indicates that the amount of missing data may have a pattern and possibly an impact on the overall regression model. For this reason it was necessary to generate regression based imputations for the missing values.

Imputations are based on an algorithm that generates *k* number of iterations from set parameters to figure the best estimates of missing values (Rubin, 1987). The statistical

package NORM was used for this purpose. Raw data from the 1998 and 2000 surveys were separately loaded into the NORM program, which calculated value estimates for all missing data. This procedure results in significantly more reliable missing value estimates than other procedures such as running OLS on the original data or using list wise deletion (Allison, 2000, p. 14).) = -3.176, p=.000.

Table 7: Independent t-tests of significance for missing data

		Levene's Test for Equality of Variances		T-test for Equality of Means				
		F	Sig.	T	Df	Sig. (2-tailed)	95% Confidence Interval	
							Lower	Upper
Vision	Equal variances assumed	3.5	.060	-.616	31,164	.538	-.04	.02
	Equal variances not assumed			-.645	11921.038	.519	.01	.05
Decisions	Equal variances assumed	41.5	.000	5.546	31764	.000	-.11	-.06
	Equal variances not assumed			5.945	14073.204	.000	-.11	-.06
Information	Equal variances assumed	32.4	.000	17.876	26905	.000	.30	.38
	Equal variances not assumed			16.726	6614.061	.000	.30	.38
Teamwork	Equal variances assumed	174.9	.000	.974	27,621	.330	-.16	-.11
	Equal variances not assumed			.974	27,621	.330	-.16	-.11
Training	Equal variances assumed	443.6	.000	-3.661	31740	.000	-.08	-.02
	Equal variances not assumed			-3.176	12472	.000	-.08	-.02
Flexibility	Equal variances assumed	158.7	.000	-1.370	30342	.171	-.05	-.00
	Equal variances not assumed			-1.417	10832.973	.156	-.05	.00
Innovation	Equal variances assumed	2449.3	.000	2.331	30862	.020	.00	.07
	Equal variances not assumed			2.424	11077.201	.015	.00	.06
Good Performance	Equal variances assumed	188.5	.000	-4.311	29737	.000	-.12	.04
	Equal variances not assumed			-4.411	8354.656	.000	-.11	-.04
Recognition	Equal variances assumed	43.1	.000	-2.366	31716	.018	-.07	-.00
	Equal variances not assumed			-2.507	13654.375	.012	-.07	-.00
Corrective Actions	Equal variances assumed	.001	.973	-14.617	29086	.000	-.30	-.23
	Equal variances not assumed			-14.789	6966.961	.000	-.30	-.23
Supervisor Rating	Equal variances assumed	11.5	.001	11.630	-13213	.000	-.13	-.08

Secondary Analysis

Secondary analysis is defined by Hakim (1982) as "any further analysis of an existing data set which presents interpretations, conclusions or knowledge additional to, or different from, those presented in the first report on the inquiry as a whole and its main results," (quoted in Clark & Maynard, 2000, p. 58). Elder et al. (1993) present six steps in the research process when using secondary analysis on archival data. These are (1) problem specification, (2) search for appropriate data, (3) preparation of research proposal, (4) analysis of archival data, (5) decision to recast data or not, and (6) sequence of analysis. These steps were followed for this research.

Problem Specification and Search for Appropriate Data

First, the researcher specified the problem as: What has been the impact of the National Performance Review on leadership throughout public organizations? Determining the best research design for studying this question resulted in a search for existing data collected from a public organization. Elder et al. (1993) state that when searching for an appropriate existing data set it is valuable to have a well-honed problem statement. However, it is usually necessary to refit the research question to the data (Elder *et al.,* p. 21). This was done when the appropriate data was found by recasting the above research question into: Are supervisors in public organizations perceived by their subordinates to be engaging in facilitative leadership?

Once the NPR data was located, the process of fitting the research question to the data was undertaken. This resulted in the research question again is: Are supervisors in public organizations perceived by their subordinates to be engaging in facilitative

leadership? Supervisors were identified as important leaders within organizations. Organizational factors were identified from the popular leadership literature and matched with NPR survey items resulting in the following and NPR survey items for each variable in this study. Eleven hypotheses related to organizational leadership and supervisors as facilitators of organizational leadership were generated:

Ha1: If supervisors *communicate the organization's vision* to subordinates, then subordinates will view their immediate supervisor more favorably.

Ha2: If supervisors are satisfied with their *involvement in decision-making*, then they will view their immediate supervisor more favorably.

Ha3: If supervisors have *electronic access to the information* needed for performing their job, then they will view their supervisor more favorably.

Ha4: If subordinates indicate that *cooperation and teamwork* exist in their work unit, then they will view their immediate supervisor more favorably.

Ha5: If supervisors have opportunities to receive the *training* they need to perform their jobs, then they will view their immediate supervisor more favorably.

Ha6: If supervisors are given more *flexibility* in how they accomplish their work, then they will view their immediate supervisor more favorably.

Ha7: If *creativity and innovation are rewarded*, then subordinates will view their immediate supervisor more favorably.

Ha8: If supervisors are clear about how *good performance is defined* in their organization, then they will view their immediate supervisor more favorably.

Ha9: If supervisors are satisfied with the *recognition they receive for doing a good job*, then they will view their immediate supervisor more favorably.

Ha10: If supervisors agree that *corrective actions are taken when performance standards are not met*, then they will view their immediate supervisor more favorably.

Combined effects hypothesis to be tested (Ha11): If supervisors receive support from the organization through *communication of vision, involvement in decisions effecting their work, electronic access to information, teamwork, training, job flexibility, promotion of innovation, clearly defined performance expectations, recognition, and corrective actions to meet performance standards*, then supervisors' ratings of their immediate supervisors' performance will be more favorable.

Preparing Research Proposal

The third step in secondary analysis is preparing the research proposal. This begins with making the best case for the goodness of fit between the data and the research question. The purpose of chapter one is to present the research question and rationale for its importance. The purpose of chapter two is to present the case for goodness of fit between my research question, the literature and NPR surveys.

Step four involves an initial analysis of the survey data in order to prepare a research proposal. This analysis involved a comparison between 1998 and 2000 survey items and sampling procedures. It also involved a thorough inventory of the survey items to include calculating descriptive statistics and testing assumptions of regression analysis, such as normality of distributions. Table eight below is again descriptive statistics for each of the variables in this study.

Table 8: Descriptive Statistics of Study Variables

Variable	*1998 Mean*	*2000 Mean*	*1998 Std. Dev.*	*2000 Std. Dev.*	*1998 Skewness Statistic*	*1998 Skewness Std. Error*	*2000 Skewness Statistic*	*2000 Skewness Std. Error*
Vision	3.32	3.28	1.18	1.22	-.510	.021	-.389	.014
Decision-making	3.13	3.03	1.27	1.22	-.257	.021	-.207	.014
Electronic Access to Information	3.59	3.25	1.15	1.69	-.567	.021	-.654	.014
Recoded Teamwork	3.26	3.26	.99	.99	-.376	.021	-.345	.014
Training	3.27	3.34	1.16	1.21	-.490	.021	-.529	.014
Job Flexibility	3.21	3.35	1.14	1.27	-.375	.021	-.185	.014
Promoting Innovation	2.77	2.86	1.17	1.28	.000	.021	.228	.014
Defining Good Performance	2.63	2.84	1.21	1.39	.169	.021	.214	.014
Recognition	2.97	2.98	1.31	1.28	-.117	.021	-.182	.014
Corrective Actions	2.70	3.01	1.11	1.43	.001	.021	.347	.014
Supervisor Rating (SR) *5 Pt Likert Scale	3.43	3.53	1.25	1.24	-.479	.021	-.632	.014

1998 n = 13,689, 2000 n = 31,975

Although response sets differ for many of these variables, the scale for all of them is the same: one on the scale represents the least favorable response and five represents the most favorable response to the survey question. The mean scores for communicating vision in 1998 and 2000 are 3.32 and 3.38 respectively with standard deviations of 1.18 and 1.22. The mean scores for employee input into decisions in 1998 and 2000 are 3.13 and 3.03 respectively with standard deviations of 1.27 and 1.22. The mean scores for electronic access to information in 1998 and 2000 are 3.59 and 3.25 respectively with standard deviations of 1.15 and 1.69. The mean scores for developing a sense of

teamwork in 1998 and 2000 are 3.26 in both years with standard deviations of .99 in both years. The mean scores for training in 1998 and 2000 were 3.27 and 3.34 respectively with standard deviations of 1.16 and 1.21. The mean scores for job flexibility in 1998 and 2000 were 3.21 and 3.35 respectively with standard deviations of 1.14 and 1.27. The mean scores for promoting innovation in 1998 and 2000 were 2.77 and 2.86 respectively with standard deviations of 1.17 and 1.28. The mean scores for defining good performance in 1998 and 2000 were 2.63 and 2.84 respectively with standard deviations of 1.21 and 1.39. The mean scores for recognizing good performance in 1998 and 2000 were 2.97 and 2.98 respectively with standard deviations of 1.31 and 1.28. The mean scores for taking corrective actions in 1998 and 2000 were 2.70 and 3.01 respectively with standard deviations of 1.25 and 1.24. Finally, the mean scores for the dependent variable supervisor rating in 1998 and 2000 were 3.43 and 3.53 respectively with standard deviations of 1.25 and 1.24. In 1998 the number of total survey respondents was 13,689. In 200 the number of total survey respondents was 31,975.

The skewness statistics indicate that the assumption of normality is met for each of the variables. To verify this normal probability plots for each were created in SPSS. It was concluded based on these plots and the skewness statistics that the assumption of normality for each of the study's variables was met.

Data Analysis

After the initial analysis of the data, step five is to determine whether or not the archived data should be recast. Recasting data involves an evaluation of the data's coding scheme, creating new codes, writing a new code book, recoding dating and checks

of reliability and validity. It was only necessary to recast the teamwork variable from the NPR data. This was done by creating an index score for teamwork that was based on the average of five survey questions addressing teams.

The final step, is determining the sequence of data analysis for the research proposal. Data analysis includes three main steps: analysis of descriptive statistics to determine if assumptions for regression analysis are satisfied. The first assumption is that the regression of the dependent (D) variable for each independent variable (IV) is linear. Second, the variance of the DV remains the same for any fixed combination of IV. Third, the regression of DV for each IV is normally distributed. Correlation coefficient analysis was used to address this assumption.

Ordinary Least Squares will be used to test the relationships between the independent variables and the dependent variable. The regression model is based on the following function statement: Supervisor Rating (SUPER) = f {Vision (VISION) + Employee Input (DM) + Access to Information (INFO) +Teamwork (TEAM) + Innovation (INNOV) +Training (TRNG) + Flexibility (FLEX) + Good Performance (PERFOR) + Recognition (RECG) +Corrective Action (CORRECT)}

The following model is presented:

$$SR_1 = \beta_0 + \beta_1 V + \beta_2 DM + \beta_3 AI + \beta_4 T + \beta_5 I + \beta_6 TR + \beta_7 F + \beta_8 GP + \beta_9 R + \beta_{10} CA + \varepsilon$$

Relationships among variables were analyzed using ordinary least squares and the multiple correlation coefficient, R^2, was calculated. Calculation of R^2 serves as an index that summarizes the magnitude of the relationship between a dependent variable and several independent variables, considered simultaneously (Mannheim & Rich, 1995).

Threats to Validity

Internal Validity

A major threat to this study is that the survey data used was not created for the purpose of exploring employees' perceptions' of their supervisor's facilitative leadership. The stated purpose of the NPR Survey is to assess the progress of the National Performance Review (OPM, 1998). However, this survey is ideal for this research question for two reasons. First, the sampling procedures and response rate for the 2000 NPR Survey are representative of federal government white-collar supervisors, who are the primary focus of this research topic. Second, the survey items include organizational leadership factors that are predominate in the current literature.

This study is concerned with supervisory leadership, however, it is recognized that respondents may have considered other levels of leadership. This may have especially been the case if the survey item did not specifically state to consider immediate supervisor when addressing the question. Question three of the 1998 and 2000 NPR surveys ask respondents to consider managers in general rather than their immediate supervisor. Question twenty asks respondents about corrective actions but does not specify at what level corrective actions may be taking place. Questions pertaining to creativity, good performance, training, involvement in decisions, and electronic access to information also do not specifically ask respondents to consider their immediate supervisor. However, there is a fair body of literature on employee perceptions and job satisfaction where subordinates attribute leadership success and/or failures to their immediate supervisor (Taylor & Fiske, 1975; Weiss, & Cropanzano, 1996).

Using the NPR survey is limiting and introduces possible threats. With the exception of teamwork, this research is using a single NPR question as representing each of the independent variables. Cook & Campbell's (1979) mean that "one-variable, 'pure' measuring instruments are an impossibility. All measures involve many known theoretical variables, many as yet unknown ones, and many unproved presumptions," (quoted in Maxwell & Delaney, 1990, p. 9). To account for this limitation of the design, this research it is acknowledged that the NPR survey items are not presented as definitions of the organizational factors. Instead the research is limited to determining if there is a relationship between whether supervisors agree or disagree that these organizational factors are present and their ratings of immediate supervisors.

Two other variables that may affect supervisors' ratings of their supervisors are trust (Carnevale, 1988) and job satisfaction (Weiss & Cropanzano, 1996). Trust was not addressed in the NPR survey. Although there are survey items that address job satisfaction, treatment of this is beyond the scope of this research because treatment involves multilevel analysis of this construct (Weiss & Cropanzano, 1996). The data set available is not appropriate for this type of analysis. However, it is important to mention that these variables may have an affect on how supervisors view their supervisors' leadership abilities.

Another threat to this study that may amplify the results is the context of this study. The context of this study is government reform under the Clinton administration. Executive government reform under Clinton, know as the reinvention movement, focuses on leadership and empowerment in the federal government. The NPR Employee Survey directly addresses questions related to empowerment in federal agencies.

External Validity

Another possible threat to validity is that of "history". The 2000 NPR Survey was administered to federal agencies during a year in which the new presidential administration took office. The NPR is associated with the Clinton administration and responses to survey items may have been affected by the new Bush administration. This threat will be addressed through a comparison of the 1998 NPR Survey data and the 2000 NPR Survey data. An independent paired samples test is used to determine if there are significant differences between the 1998 and 2000 Surveys.

It is possible that the NPR Survey and the wording of the survey items were leading respondents in their responses. Again the reinvention movement is identified with Clinton administration and survey questions were worded to identify with the reinvention movement. For example survey item sixteen states: *My organization has made reinvention an important priority.* The survey instrument that was administered to respondents also carries the title, National Partnership for Reinventing Government Survey. This increases the chances that the presence of the survey instrument may have influence survey responses to be more favorable toward NPR initiatives. This is known as Hawthorne effect threatens the validity of the research findings (Nunnally & Bernstein, 1994). However, this study did not use survey items that specifically asked about the NPR.

Summary

This study took a five step approach for using secondary analysis. The first step was to specify the research problem: The research question being addressed is, *how well are supervisors facilitating leadership in public organizations?* Step two was to search for appropriate data. This search led to the 1998 and 2000 National Partnership for Reinvention Employee Surveys. Step three was to prepare the research proposal and operationalize variables. All of the research variables except teamwork were operationalized with one corresponding survey item. Teamwork was operationalized as a composite score of five survey items. Step four was to conduct an initial analysis of the survey data. This initial analysis included descriptive statistics and bivariate correlations for the teamwork variable. Finally step five was to determine the sequence of data analysis: 1) descriptive statistics, 2)bivariate correlations, 3)multivariate analysis and 4)independent t-tests of significance.

Chapter four of the dissertation presents the data analysis results. It includes a discussion of regression assumptions, bivariate analysis of the research variables, and regression analysis results. It also includes a discussion of diagnostics employed to evaluate regression models in order to determine if the models are valid. Finally, independent samples t-tests of significance are included to assess whether differences exist between the 1998 and 2000 samples. Chapter five includes summaries of the findings, interpretation and implications. It also elaborates on the limitations of this research.

CHAPTER IV: RESULTS

Introduction

In chapter three a model is specified in which organizational leadership is predicted to influence supervisor ratings. The dependent variable is employees' ratings of their supervisor. This measure serves as a proxy for supervisory leadership effectiveness (Bass, 1990), particularly facilitative leadership effectiveness (Hord, 1992). Ten independent variables were drawn from the popular leadership literature. These independent variables are communicating vision, employee input into decisions, access to information, teamwork, training, job flexibility, promoting innovation, defining good performance, recognition, and corrective actions.

The purpose of this chapter is to present the results of the data analysis. This chapter includes a discussion of bivariate correlations of the research variables, multivariate analysis, regression assumptions, and regression analysis results. It also includes a discussion of diagnostics employed to evaluate regression models in order to determine if the models are valid. Finally, independent samples t-tests of significance are included for a comparison of the 1998 and 2000 samples. The purpose of this test is to determine if these samples differ from one another on each of the independent variables.

Bivariate Correlations

In order to analyze bivariate relationships between independent variables a two-tailed partial correlation analysis was conducted in SPSS. The first two tables below present the correlation coefficients for the 1998 and 2000 independent variables. Although there

is no “magical value” to determine multicollinearity (Nunnally & Bernstein, 1994, p. 191), a general rule of thumb for concern is when coefficients are above .80.

From the tables below it can be seen that none of the study variables in 1998 exceed the .80 threshold established above.

Table 9: Bivariate Correlations (1998 NPR Survey)

	1	2	3	4	5	6	7	8	9	10
1. VISION	1.000									
2. DM	.304	1.000								
3. INFO	.195	.227	1.000							
4. TEAM	.446	.417	.256	1.000						
5. TRNG	.324	.296	.253	.364	1.000					
6. FLEX	.236	.414	.190	.334	.233	1.000				
7. INNOV	.384	.426	.227	.526	.349	.323	1.000			
8. PERFOR	.354	.331	.262	.358	.282	.223	.379	1.000		
9. RECG	.267	.506	.206	.391	.261	.283	.499	.367	1.000	
10. CORREC	.240	.157	.055	.247	.206	.115	.255	.309	.194	1.000
Coefficient / (D.F.) / 2-tailed Significance)										

(Threshold of determination p > .80)

Table ten below presents the bivariate correlations for the 2000 NPR Survey data. As with the 1998 data, none of the independent variables coefficients exceed .08, which indicates that multicollinearity is not a concern. However, due to the number of independent variables, VIF scores for each variable will be examined with the regression results to further consider multicollinearity as a threat.

Table 10: Bivariate Correlations (2000 NPR Survey)

	1	2	3	4	5	6	7	8	9	10
1. VISION	1.000									
2. DM	.304	1.000								
3. INFO	.211	.244	1.000							
4. TEAM	.448	.415	.292	1.000						
5. TRNG	.315	.282	.246	.374	1.000					
6. FLEX	.243	.413	.240	.354	.239	1.000				
7. INNOV	.382	.421	.230	.507	.337	.322	1.000			
8. PERFOR	.347	.335	.267	.365	.278	.260	.380	1.000		
9. RECG	.263	.479	.207	.391	.243	.285	.491	.358	1.000	
10. CORREC	.235	.184	.088	.273	.208	.148	.259	.293	.206	1.000
Coefficient / (D.F.) / 2-tailed Significance)										

(Threshold of determination p. >.80)

Multiple Regression Analysis

The purpose of regression analysis is to investigate and model relationships between variables (Hayes, 1994; Maxwell & Delaney, 1990). This technique is used to test the hypotheses of this study, which is represented by the following equation:

Supervisor Rating/SR (Y) = β_0 +

β_1 (Vision/V) +

β_2 (Decision Making/DM) +

β_3 (Access to Information/AI) +

β_4 (Teamwork/T) +

β_5 (Promoting Innovation/I) +

β_6 (Training/TR) +

β_7 (Flexibility/F) +

β_8 (Good Performance/GP) +

β_9 (Recognition/R) +

β_{10} (Corrective Actions/CA) +

ε (Error)

Assumptions of Ordinary Least Squares (OLS)

Four assumptions must be met in order for analyzing data with OLS regression. Each of these assumptions was explored for this analysis. An examination of the data indicates that these assumptions are satisfied.

Assumption 1: There must be a linear relationship between the regressions of the DV for each combination of IV's. An examination of the scatterplots of bivariate relationships indicates that this assumption is met.

Assumption 2: The variance of the DV must remain the same for any fixed combination of IV's. A detailed discussion of this is included below under the regression diagnostics heading.

Assumption 3: The DV must remain normally distributed for any fixed combination of IV's. Normal probability plots were generated for each of the independent variables to determine that this assumption is satisfied.

Assumption 4: All IV observations must be statistically independent of each other. This assumption was also satisfied. Additional diagnostics were performed to determine whether there are any other threats to the regression results.

Pearson Correlations for 1998 and 2000 NPR Surveys

Table eleven below includes Pearson correlations for the 1998 imputed survey data. All of the coefficients are significant, p<.001. The coefficients for innovation, team, recognition and decisions in relation to supervisor rating equal or exceed .50 (Weinberg & Abramowitz, 2002). Coefficients for vision, training, flexibility, corrective actions, and good performance fall between exceed r = .30 but are less than r = .50. This indicates moderate relationships between each of these independent variables and the dependent variable, supervisor rating. The coefficient for information, r = .275, indicates a weak relationship between this variable and supervisor rating (Weinberg & Abramowitz, 2002).

Table 11: Pearson Correlations for 1998 imputed survey data

	1	2	3	4	5	6	7	8	9	10	11
1 Supervisor Rating	1.000										
2 Vision	.477*	1.000									
3 Innovation	.500*	.531*	1.000								
4 Training	.389*	.446*	.474*	1.000							
5 Flexibility	.447*	.395*	.474*	.367*	1.000						
6 Corrective Actions	.329*	.357*	.375*	.310*	.246*	1.000					
7 Performanc	.468*	.501*	.525*	.413*	.388*	.411*	1.000				
8 Information	.275*	.294*	.329*	.333*	.288*	.141*	.353*	1.000			
9 Decisions	.585*	.493*	.591*	.446*	.561*	.311*	.512*	.340*	1.000		
10 Recogniti	.579*	.467*	.644*	.420*	.467*	.340*	.536*	.321*	.674*	1.000	
11 Team	.651*	.587*	.647*	.490*	.499*	.378*	.526*	.354*	.616*	.597*	1.000

*p<.001 n=13689

The results for the 2000 imputed survey data are included in table twelve below. These results are consistent with the 1998 results above. The independent variables team, recognition, and decisions indicate a strong relationship with supervisor rating (r >/= .50).

Innovation (r = .44) has a moderate relationship with the dependent variable, supervisor rating. This differs from its 1998 Pearson correlation result (r = .50). Pearson correlations for vision, training, flexibility, corrective actions, and performance indicate moderate relationships (where .30 < r < .50) with supervisor rating, the dependent variable. The correlation between information and supervisor rating, r = .09, indicates a weak relationship.

Table 12: Pearson Correlations for 2000 imputed survey data

	1	2	3	4	5	6	7	8	9	10	11
1 Supervisor Rating	1.000										
2 Vision	.436*	1.000									
3 Innovation	.442*	.474*	1.000								
4 Training	.362*	.412*	.427*	1.000							
5 Flexibility	.431*	.369*	.433*	.345*	1.000						
6 Corrective Actions	.310*	.291*	.329*	.247*	.305*	1.000					
7 Performanc	.345*	.360*	.369*	.310*	.297*	.259*	1.000				
8 Information	.097*	.145*	.134*	.200*	.100*	-.082*	.241*	1.000			
9 Decisions	.523*	.442*	.507*	.408*	.481*	.242*	.379*	.234*	1.000		
10 Recogniti	.538*	.422*	.556*	.380*	.420*	.274*	.394*	.205*	.616*	1.000	
11 Team	.606*	.542*	.588*	.474*	.481*	.331*	.403*	.234*	.573*	.566*	1.000

*p<.001 n=31,975

The Pearson correlations above give a partial picture of relationships between the study variables. Ordinary least squares results provide a better picture of the relationships between independent variables and the dependent variables.

1998 OLS Model and Regression Coefficients

The results of the OLS regression for the model where $SR_1 = \beta_0 + \beta_1 V + \beta_2 DM + \beta_3 AI + \beta_4 T + \beta_5 I + \beta_6 TR + \beta_7 F + \beta_8 GP + \beta_9 R + \beta_{10} CA + \varepsilon$ are presented in table nine below. The model was initially tested using the 1998 NPR imputed survey data due to the amount of missing values in the original data (a thorough discussion of this threat is included in chapter three).

Model one is a summary of the 1998 data. The multiple correlation coefficient R indicates how well the independent variables in the equation predict scores on the dependent variable, supervisor rating. The R=.714 value suggests a relatively strong relationship between the independent and dependent variables. However, it is important to note that the number of independent variables in the equation and the sample size influences the R-values. This model contains ten independent variables and 13,689 valid responses. For these reasons, R^2 is a better indicator of relationship strength (Weinberg & Abramowitz, 2002). The coefficient of determination (R^2=.508) indicates that about 51% of the variance in supervisor rating was accounts for by the independent variables and is statistically significant (p=.000).

Table 13: 1998 Data OLS Model Summary

Model	R	R^2	ADJ R^2	Standard Error	F Change	DF 1	DF 2	Sig F Change
1	.714	.508	.508	.882	1412.327	10	13678	.000

a Predictors: (Constant), VISION, DECISION-MAKING, INFORMATION, TEAMWORK, INNOVATION, TRAINING, FLEXIBILITY, GOOD PERFORM, RECOGNITION, CORRECTIVE
b Dependent Variable: SUPER

The above model summary indicates that there is a relationship between the ten independent variables and the dependent variable. In order to determine how each independent variable affects the dependent variable it is necessary to examine the regression coefficients that are presented in table fourteen below.

Table 14: 1998 Regression Coefficients

Variable	β	T	Sig T
Vision	.059*	7.334	.000
Decision Making	.165*	17.723	.000
Access to Information	-.013	-2.009	.045
Teamwork	.370*	39.915	.000
Training	.005	.744	.457
Flexibility	.057*	7.538	.000
Innovation	-.059*	-6.475	.000
Good Performance	.053*	6.629	.000
Recognition	.191*	20.843	.000
Corrective Action	.038*	5.530	.000

(*p<.001)(Constant B =.386, T =11.456)(1998 imputed survey data)

The level of significance chosen is p<.001 due to the large sample size. The regression coefficient for vision is positive and significant where β=.059, p=.000. This supports hypothesis one that communicating vision will have a positive affect on supervisors' ratings from their subordinates.

Decision making was found to be positively and significantly correlated with supervisor rating where β=.165, p<.000. This supports hypothesis two that employee involvement in decisions will have a positive affect on supervisors' ratings from their subordinates.

Access to information is insignificant, β=-.013, p=.045. Based on these results we must reject hypothesis three that electronic access to information will have a significant affect on supervisors' ratings from their subordinates.

Teamwork was found to be positively and significantly correlated with supervisor rating, β=.370, p=.000. This supports hypothesis four that developing a spirit of cooperation and teamwork will have a positive affect on supervisors' ratings from their subordinates.

Training was found to be insignificant, β=.005, p=.457. These results do not support hypothesis five that training has a significant affect on supervisors' ratings from their subordinates.

Flexibility is significantly and positively correlated with the dependent variable, β=.057, p=.000. This supports hypothesis six that flexibility will have a positive affect on supervisors' ratings from their subordinates.

The regression coefficient for innovation indicates a significant and negative relationship with the dependent variable, β=-.059, p=.000. These results do not support hypothesis seven that if subordinates agree that creativity and innovation are rewarded they will view their supervisor more favorably.

Good performance was both positive and significant, β=.053, p=.000. This supports hypothesis eight that if subordinates agree good performance is clearly defined then they will view their immediate supervisor more favorably.

Recognizing good performance was both positive and significant, β=.191, p=.000. This supports hypothesis nine that if subordinates agree good performance is recognized then they will view their immediate supervisor more favorably.

Finally, corrective actions is both positive and significant, β=.038, p=.000. This supports hypothesis ten that if subordinates agree corrective actions are taken when

performance standards are not met they will view their immediate supervisor more favorably.

These results will be discuss more fully below in comparison with the results from the 2000 data model summary and regression coefficients. This includes a discussion of the literature predictions from which the hypotheses were derived in light of the regression results from both 1998 and 2000.

The above regression coefficients suggest that the model should be refitted without access to information and training. Regression coefficients for access to information and providing training opportunities were insignificant ($p > .001$) and had no significant impact on the dependent variable, supervisor rating. For these reasons, only the independent variables that were found to be significantly correlated with the dependent variable were included in the new model. The resulting summary for this new model is in table fifteen below.

Table 15: 1998 New Model Summary

Model	R	R^2	ADJ R^2	Standard Error	F Change	Df1	Df2	Sig F Change
2	.713	.508	.508	.882	1764.584	8	13680	.000

The new model summary produces the same results as the original model tested. This model also explains about 51% ($R^2 = .508$) of the variance in supervisor rating. Dropping access to information and training from the model appears to have no affect on the overall model. The regression coefficients below also indicate that this is true. Independent variables were entered into the regression in order of importance. Importance is based on the strength of the independent variable's relationship to the dependent variable in the original model.

Table 16: Regression Coefficients for New Model

Variable	β	T	Sig T
Teamwork	.370	40.213	.000
Recognition	.191	20.809	.000
Decision	.164	17.733	.000
Vision	.059	7.416	.000
Innovation	-.059	-6.520	.000
Flexibility	.056	7.479	.000
Performance	.051	5.753	.000
Corrective Action	.039	6.463	.000

(level of significance p<.001)(Constant B =.386, T =11.456) (1998 imputed survey data)

As seen in table sixteen above the regression coefficients for each independent variable remain the same as in the original model. This new model above indicates that in 1998, about half of the variance in a supervisor's rating from subordinates is determined by eight organizational leadership factors facilitated through the supervisor. These eight factors include: fostering a sense of teamwork, recognizing good performance, involving employees in decisions that affect their work, communicating vision, promoting innovation, allowing job flexibility, defining good performance and taking corrective actions when performance standards are not met,. These regression results support the new model as a more parsimonious model of facilitative leadership.

Regression Diagnostics

In order to determine if the above model summary is valid it is necessary to examine the residual errors of the regression data. Using the 1998 NPR imputed survey data a scatterplot of unstandardized residual errors and supervisor rating was generated

(Appendix C). The scatter plot is used to determine if assumptions of regression are satisfied.

Linearity, Normality & Homoscedasticity

The scatterplot of unstandardized residuals indicates that the regression assumptions of linearity and normality were satisfied. The assumption of homoscedasticity is also satisfied. This is the assumption that coefficient estimates for regression residuals have a constant variance. If variance changes over the range, heteroscedasticity is occurring.

Multicollinearity

If they are this is a problem of multicollinearity. The major concern with multicollinearity is that if severe it can increase the variance of the estimated regression coefficients, thus decreasing the calculated t-scores of these coefficients. This is a problem if severe and makes it difficult to identify the separate effects of the correlated independent variables in a regression equation. Coefficient estimates also become sensitive to changes in specification when multicollinearity is a problem.

An examination of the Variance Inflation Factor (VIF) is one method for detecting multicollinearity. The VIF is an estimate of how much multicollinearity has increased the variance of an estimated coefficient. A high VIF indicates that multicollinearity has increased the estimated variance of the estimated coefficient. This yields a decreased t-score. A common rule is that if VIF>5, then multicollinearity is a concern (Weinberg & Abramowitz, 2002). An examination of the VIF scores in table thirteen below indicates that multicollinearity is not a concern in the model.

Table 17: 1998 NPR VIF Scores

Independent Variable	VIF
Vision	1.799
Decisions	2.434
Information	1.250
Team	2.751
Training	1.520
Innovation	2.326
Flexibility	1.597
Good Performance	1.799
Recognition	2.347
Corrective Actions	1.305

Table seventeen above presents the VIF scores for each of the independent variables. The VIF scores for the variables decisions, team, innovation, and recognition are higher than the other variables. However, they are not even close to five.

2000 NPR Survey Data Analysis

Statistics for the OLS analysis of the 2000 NPR imputed survey data are summarized below in table fourteen. The R=.679 value suggests a relatively strong relationship between the independent and dependent variables. As with the 1998 data, however, it is important to note that the number of independent variables in the equation and the sample size influences the R-values. This model contains ten independent variables and 31,975 valid responses. For these reasons, adjusted R^2 is a better indicator of relationship strength. The coefficient of determination (ADJ R^2=.461) indicates that 46% of the variance in supervisor rating was accounts for by the independent variables and is statistically significant (p<.000).

Table 18: OLS Model Summary for 2000 Survey

Model	R	R^2	ADJ R^2	Standard Error	Sig F Change
3	.679	.461	.461	.91	.000

a Predictors: (Constant), VISION, DECISION-MAKING, INFORMATION, TEAMWORK, INNOVATION, TRAINING, FLEXIBILITY, GOOD PERFORM, RECOGNITION, CORRECTIVE
b Dependent Variable: SUPER

Below are the regression coefficients for the 2000 data. The level of significance chosen is p<.001 due to the large sample size. All of the independent variables were significant. These results differ from the 1998 regression results where access to information and training were found to be insignificant.

Table 19: 2000 Regression Coefficients

Variable	β	T	Sig T
VISION	.070*	13.419	.000
Decision Making	.140*	24158	.000
Access to Information	-.076*	-17.285	.000
Recoded Teamwork	.330*	53.853	.000
Training	.020*	3.974	.000
Flexibility	.083*	16.482	.000
Innovation	-.033*	-5.830	.000
Good Performance	.042*	8.675	.000
Recognition	.195*	33.715	.000
Corrective Action	.057*	12.449	.000

(* p<.001) (Constant B =.640, T =30.151)
(2000 imputed survey data)

The regression coefficient for vision is positive and significant where β=.070, p=.000. Decision making was found to be positively and significantly correlated with supervisor rating where β=.140, p<.000. Access to information is insignificant, β=-.076, p=.000. Teamwork was found to be positively and significantly correlated with supervisor rating, β=.330, p=.000. Training was found to be significant, β=.020, p=000. Flexibility is significantly and positively correlated with the dependent variable, β=.083, p=.000. The regression coefficient for innovation indicates a significant and negative relationship with

the dependent variable, β=-.033, p=.000. Good performance was both positive and significant, β=.042, p=.000. Recognizing good performance was both positive and significant, β=.195, p=.000. Finally, corrective actions is both positive and significant, β=.057, p=.000.

Regression Diagnostics

As with the 1998 data in order to determine if the above model summaries are valid it is necessary to examine the residual errors of the regression data. Using the 2000 NPR Survey data a scatterplot of unstandardized residual errors and supervisor rating was generated (Appendix B).

Linearity, Normality & Homoscedasticity

The scatterplot of unstandardized residuals for the 2000 data indicates that the regression assumptions of linearity and normality were satisfied. The assumption of homoscedasticity is also satisfied.

Multicollinearity

VIF scores for the independent variables were used to determine if multicollinearity was a problem. Again a high VIF score indicates that multicollinearity has increased the estimated variance of the estimated coefficient. A common rule is that if VIF>5, then multicollinearity is a concern. Table twenty below presents the VIF scores for the 2000 data independent variables. The VIF scores indicate that multicollinearity is not a concern for any of the variables because all of the VIF scores were not even close to five.

Table 20: 2000 NPR VIF Scores

Independent Variable	VIF
Vision	1.727
Decisions	2.128
Information	1.462
Team	1.620
Training	1.308
Innovation	1.664
Flexibility	1.281
Good Performance	2.120
Recognition	2.088
Corrective Actions	2.725

Discussion of Findings Compared to Literature

The model summaries for the 1998 and 2000 NPR data indicate that organizational leadership accounts for half of the variance in employee ratings of their supervisors. Both the 1998 regression results did not support hypothesis eleven. However the 2000 regression results did support this hypothesis:

> If employees receive support from the organization through communication of vision, involvement in decisions, electronic access to information, teamwork, training, job flexibility, promotion of innovation, clearly defined performance expectations, recognition and corrective actions to meet performance standards, then employees' ratings of their supervisors' performance will be more favorable.

The 1998 regression model summary appears to be a more robust and parsimonious model. Therefore, it is concluded that hypothesis eleven was not supported by the results. The independent variables access information and providing training have been dropped from this model. Promoting innovation must be reflected as having a negative affect on supervisor rating.

The impact that each of these organizational leadership factors has on supervisor rating can be assessed through their regression coefficients. The regression coefficients (B1 through B10) in the table below represent the effect of each independent variable on the dependent variable controlling for other variables.

Table 21: 1998 and 2000 Regression Coefficients

	1998	*1998*	*2000*	*2000*
Variable	β	Sig T	β	Sig T
Vision	.059	.000	.070	.000
Decision Making	.165	.000	.140	.000
Access to Information	-.013	.045	-.076	.000
Recoded Teamwork	.370	.000	.330	.000
Training	.005	.457	.020	.000
Flexibility	.057	.000	.083	.000
Innovation	-.059	.000	-.033	.000
Good Performance	.053	.000	.042	.000
Recognition	.191	.000	.195	.000
Corrective Action	.038	.000	.057	.000

(level of significance p<.001)(1998 Constant B =.386; T =11.456; 2000 Constant B=.640; T = 30,151)
(1998 and 2000 imputed survey data)

As predicted by the literature and in support of hypothesis one, vision is statistically significant in 1998 and 2000 (β_V =.059, p = .000 and β_V = .070, p=.000). In 1998, vision accounts for 5.9% of the variance in supervisor rating. In 2000, vision accounts for 7 % of the variance.

Hypothesis two, if employees are satisfied with their involvement in decisions affecting their work, then they will view their supervisor more favorably, was supported in 1998 and 2000. Decision-making was statistically significant and positively correlated with supervisor rating in both 1998 and 2000 (β_{DM} = .165, p=.000 and β_{DM} = .140, p=.000).

Access to information was not statistically significant in 1998. It was in 2000. However, it is negatively correlated with supervisor rating in both the 1998 and 2000

data. The access to information beta coefficients for the 1998 and 2000 NPR data are β_I = -.013, p=.045 and β_I = -.076, p=.000 respectively. These findings do not support hypothesis three, if employees have electronic access to the information needed to do their jobs, then they will view their supervisors more favorably.

Teamwork was statistically significant in 1998 and 2000 in predicting the dependent variable supervisor rating. This supports hypothesis four: If subordinates indicate that cooperation and teamwork exist in their work unit, then they will view their immediate supervisor more favorably. Teamwork accounts for 37% of the variance (β_{TEAM} = .370, p=.000) in the dependent variable, supervisor rating in 1998. In 2000, teamwork accounts for 33% of the variance (β_{TEAM} = .330, p=.000) in the dependent variable.

Hypothesis five was not supported by these results. The findings for training did not support the predictions that training would be positively and significantly correlated with supervisor rating in 1998 and 2000 (β_{TR} = -.005, p=.457 and β_{TR} = .020, p=.000). Instead these findings indicate training is not significantly related to supervisor rating.

Hypothesis six, flexibility is significantly and positively correlated with supervisor rating was supported by both the 1998 and 2000 NPR data. The 1998 regression coefficient for flexibility is β_{FLEX} = .057, p=.000 accounting for 5% of the variance in the dependent variable. The 2000 regression coefficient for flexibility is β_{FLEX}= .083, p=.000 accounting for 8% of the variance in the dependent variable.

The regression results indicate that innovation is significantly correlated with supervisor rating. However, innovation has a negative beta coefficient (β_{INNOV} = -.059, p=.000 and β_{INNOV} = -.033, p=.000). This does not support hypothesis seven, if creativity

and innovation are rewarded then subordinates will view their immediate supervisor more favorably.

Hypothesis eight, if employees are clear about how good performance is defined in their organization, then they will view their immediate supervisor more favorably was supported by both the 1998 and 2000 data. Good performance was found to be both significantly and positively correlated with supervisor rating in the 1998 and 2000 NPR data (β_{PERF} = .053, p=.000 and β_{PERF} = .042, p=.000).

Hypothesis nine, if employees are satisfied with the recognition received for doing a good job, then they will view their supervisor more favorably was supported with the regression analysis of the 1998 and 2000 data. Recognition was both positively and significantly correlated with supervisor rating and accounts for 19% of the variance in supervisor rating (β_{RECG}=.191, p=.000 and β_{RECG}=.195, p=.000) in 1998 and 2000.

Hypothesis ten, if employees agree that corrective actions are taken when performance standards are not met, then they will view their immediate supervisor more favorably was supported. In 1998 corrective actions was significant and accounts for 3% of the variance in supervisor rating ($\beta_{CORRECT}$=.038, p=.000). In 2000, corrective actions was also significant and accounts for 6% of the variance in supervisor rating ($\beta_{CORRECT}$=.057, p=.000).

Comparison of 1998 and 2000 Survey Samples

A comparison of the 1998 and 2000 OLS Model Summaries indicates that the 1998 data provides a better fit to the data (R^2_{1998} = .508; R^2_{2000} = .461). One reason for this difference may be that the 2000 presidential election had an impact on survey responses.

To determine if there is a significant difference between the populations of 1998 and 2000 survey respondents an analysis of the survey samples is discussed.

Table twenty-two below is a comparison of descriptive statistics for the 2000 and 1998 NPR Surveys. With the exceptions of communicating vision and employee involvement in decisions, respondents' mean scores from the 2000 survey were more favorable than those from the 1998 survey on the independent variables and the dependent variable, Supervisor Rating.

Table 22: Group Statistics

	Year	N	Mean	Std. Deviation
Vision	1998	13689	3.32	1.19
	2000	31975	3.29	1.23
Decisions	1998	13689	2.77	1.18
	2000	31975	2.86	1.28
Information	1998	13689	3.27	1.17
	2000	31975	3.35	1.22
Teamwork	1998	13689	3.22	1.15
	2000	31975	3.36	1.27
Training	1998	13689	2.71	1.12
	2000	31975	3.01	1.43
Flexibility	1998	13689	2.64	1.21
	2000	31975	2.84	1.40
Innovation	1998	13689	3.59	1.16
	2000	31975	3.25	1.69
Good Performance	1998	13689	3.14	1.28
	2000	31975	3.03	1.22
Recognition	1998	13689	2.98	1.32
	2000	31975	2.99	1.29
Corrective Actions	1998	13689	3.26	.99
	2000	31975	3.28	.99
Supervisor Rating	1998	13689	3.43	1.26

An independent t-test was conducted to determine if there was a statistically significant difference in the population means, where:

μ_{2000} = population mean of 2000 respondents

μ_{1998} = population mean of 1998 respondents

H_{ϕ}: $\mu_{2000} = \mu_{1998}$

H_{1}: μ_{2000} does not equal μ_{1998}

Two assumptions of the independent samples t-test must be met in order to test the null hypothesis:

1. Both populations are normally distributed.
2. Both populations are homogeneous, have equal variances.

The first assumption was tested when examining the data for ordinary least squares. These tests included producing normality plots for each variable and generating a skewness statistic. The assumption of normality was met. The second assumption of homogeneity was checked using Levene's test in SPSS for each of the study variables generated. These results are presented in table twenty-three below. Based on the Levene's test, equal variances for IV's are not assumed with the exception of flexibility (FLEX).

The null hypothesis of no statistically significant difference in population means was rejected if $p<.05$ (Weinberg & Abramowitz, 2002). From table twenty-three below it was determined that the null hypothesis is rejected for the dependent variable supervisor rating, $t(25647.5)$for the IV's vision, $t(26488)=2.88$, $p<.05$; decision making, $t(27970.6) = -7.221$, $p<.05$; information, $t(26858.3)=-6.433$, $p<.05$; teamwork, $t(28543.2)=-11.257$; $p<.05$; training, $t(32737.7)=-24.359$, $p<.05$; flexibility, $t(29573) = -15.023$, $p<.05$; innovation, $t(36863.2)=25.134$, $p<.05$; and performance, $t(24914.9) = 8.092$, $p<.05$; and innovation, $t(36862.3)=25.13$, $p<.05$

There is a no statistically significant difference between the 1998 population of respondents and the 2000 population for recognition $t(25395.8)=-.882$, $p>.05$ and corrective actions, $t(25960) = -1.082$, $p>.05$.

Table 23: Independent Samples Test

		Levene's Test for Equality of Variances		T-test for Equality of Means				
		F	Sig.	T	Df	Sig. (2-tailed)	95% Confidence Interval	
							Lower	Upper
Vision	Equal variances assumed	3.5	.060	2.848	45662	.004	.01	.05
	Equal variances not assumed			2.884	26648.7	.004	.01	.05
Decisions	Equal variances assumed	41.5	.000	-6.985	45662	.000	-.11	-.06
	Equal variances not assumed			-7.221	27970.6	.000	-.11	-.06
Information	Equal variances assumed	32.4	.000	-6.331	45662	.000	-.10	-.05
	Equal variances not assumed			-6.433	26858.3	.000	-.10	-.05
Teamwork	Equal variances assumed	174.9	.000	-10.797	45662	.000	-.16	-.11
	Equal variances not assumed			-11.257	28543.2	.000	-.16	-.11
Training	Equal variances assumed	443.6	.000	-22.101	45662	.000	-.33	-.28
	Equal variances not assumed			-24.359	32737.7	.000	-.33	-.28
Flexibility	Equal variances assumed	158.7	.000	-15.050	45662	.000	-.23	-.18
	Equal variances not assumed			-15.923	29573.3	.000	-.23	-.18
Innovation	Equal variances assumed	2449.3	.000	21.738	45662	.000	.31	.38
	Equal variances not assumed			25.134	36862.3	.000	.32	.37
Good Performance	Equal variances assumed	188.5	.000	8.231	45662	.000	.07	.13
	Equal variances not assumed			8.092	24914.9	.000	.07	.13
Recognition	Equal variances assumed	43.1	.000	-.890	45662	.374	-.03	.01
	Equal variances not assumed			-.882	25395.8	.378	-.03	.01
Corrective Actions	Equal variances assumed	.001	.973	-1.081	45662	.280	-.03	.008
	Equal variances not assumed			-1.082	25960.1	.279	-.03	.008
Supervisor Rating	Equal variances assumed	11.5	.001	-8.353	45662	.000	-.13	-.08

These results indicate that the respondents in 1998 do not differ on a majority of the study variables from the respondents in 2000. One possible reason for these differences may be the anticipated administrative changes in 2000 due to the Presidential election year. Another possible reason is the significant difference in sizes of the two populations. The 2000 data base contains over 18,000 more responses than the 1998 data base.

Population Validity

The population of this study is composed of federal white-collar workers. Conclusions drawn from this research cannot be extrapolated to other populations of workers. The purpose of this study is to determine if subordinates perceive their supervisors to be engaging in facilitative leadership. This is a study of federal supervisors. Survey question thirty-five on the 1998 NPR survey and question thirty-four on the 2000 survey asked respondents to indicate their pay grade level. The 1998 and 2000 raw data for this item was not made available to the researcher. However, table above of government-wide statistics for federal government employee pay grades. Comparing the percent of NPR respondents that identified themselves as "non-supervisors" (88%) and the government-wide statistics for pay grades falling below supervisory grades (79%), it is likely that the NPR respondents are representative for pay grades of the government-wide population.

Table 24: Government-wide Pay Grade Demographics

Federal Pay Grades	Government-wide Frequencies	Government-wide Percents	Cumulative Percent
Grades 1 – 5	208,488	16%	16%
Grades 6 – 10	406,090	32%	48%
Grades 11 – 12	385,658	31%	79%
Grades 13 – 15	257,573	20%	99%
Above 15(SL,ST.ALJ)	780	.0006%	99+%
SES	6,911	.005%	100%
Total	1,265,491		

(Source: OPM Workforce Statistics Website)

According to the statistics below, sixteen percent of government employees fall within pay grades one through five. Employees within these pay grades would most likely be supervised by a front-line supervisor. For employees within grades six through ten, thirty-two percent of the government-wide population, their immediate supervisor is most

likely fall within pay grades eleven through twelve. Twenty percent of government employees are pay grades thirteen through fifteen. Less than one percent of federal government employees are above pay grade fifteen or senior executive service (SES) grades. The survey demographics indicate that respondents in 1998 and 2000 were representative of the federal white-collar workers. For this reason the population is appropriate and valid.

Organizational Leadership Theory

One premise of this research study has been that organizational leadership is defined as empowering subordinates by communicating vision, involving employees in decision-making, providing access to information, developing a spirit of teamwork, training, promoting innovation, defining good performance, recognizing good performance, and taking corrective actions when performance expectations are not met. These elements of organizational leadership are dominant themes in the current leadership literature. The results from the data analysis indicate that there are actually eight factors of facilitative leadership: promoting teamwork, involving employees in decision-making; recognizing good performance; flexibility; communicating vision; promoting innovation; and taking corrective actions when performance standards are not met. For this reason, testing the reliability of organizational leadership composed of these eight factors is also important. The reliability of this measure was tested using SPSS to generate a Cronbach's alpha. Organizational leadership as a construct composed of these eight independent variables yields a significant Cronbach's alpha for the 1998 data, $\alpha = .88$(N=13,698, N of Items = 8)

Table 25: Reliability Coefficients 1998 Data

N of Cases = 13,689	N of Items = 10
Alpha = .8878	

The table below shows that it also yields a significant Cronbach's alpha for the 2000 data, α = .81(N=31,975, N of Items = 8). These scores indicate the eight factors presented above create a reliable measure of organizational leadership.

Table 26: Reliability Coefficients 2000 Data

N of Cases = 31,965	N of Items = 10
Alpha = .8901	

Summary

Overall, the model of organizational leadership having an impact on supervisor's rating from employees is statistically significant. The new model consists of eight independent variables developing a spirit of teamwork, involving employees in decision-making, recognizing good performance, communicating vision, flexibility, rewarding innovation, defining good performance, and taking corrective actions when performance expectations are not met compose a reliable measure of organizational leadership. The data analysis above indicates that seven of these independent variables are positively and significantly correlated with the dependent variable. One variable, promoting innovation, is negatively correlated with the dependent variable, supervisor rating.

Implications of the data analysis will be discussed in chapter five. In particular, hypotheses that were not supported by the data analysis will be discussed in light of the current leadership theories. Chapter five will also include a discussion of the NPR survey

and differences in the respondent groups for the 1998 and 2000 surveys. Finally, chapter five will discuss future research that stems from this analysis.

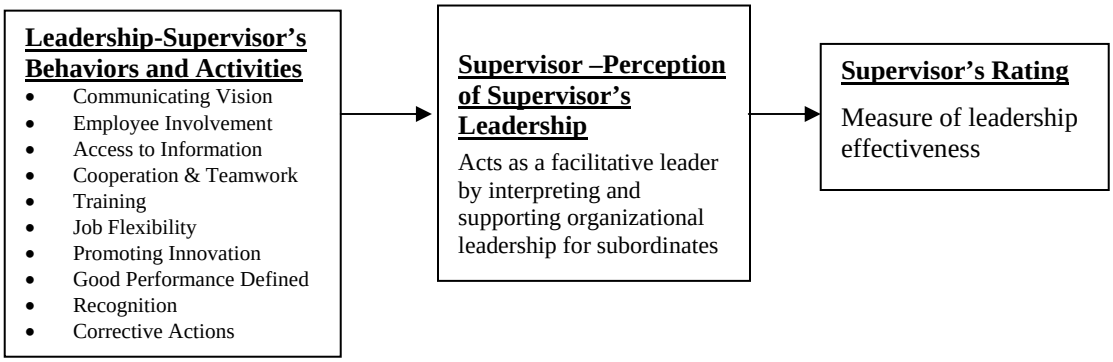
CHAPTER 5: DISCUSSION

Overview

This chapter's discussion includes summaries of the findings, interpretation and implications from this study. This chapter also includes limitations of this research. Finally, this chapter includes a discussion of future research for which this study serves as a basis. The purpose of this final chapter is to present the above information and establish a place for this research in the context of other leadership theories.

The main objective of this study is to determine if supervisors' activities create the perception that they are engaging in facilitative leadership. By assessing perceptions supervisors' leadership style throughout the federal government, this study builds on established facilitative leadership theory. Facilitative leadership combines attribution and behavioral theories of leadership. The premise of this research is that evidence if supervisors are engaging in facilitative leadership is reflected in their ratings from subordinates. The model below illustrates the relationships between organizational leadership, facilitative leadership and subordinates' perceptions of their supervisors. Subordinates' perceptions that supervisors are engaging in facilitative leadership are a mediating factor in their performance ratings from subordinates. For the purpose of this study, subordinate ratings of their supervisors are a measure of leadership effectiveness.

Figure 20: Supervisor Behavior and Rating



Summary of Findings and Interpretations

The results from this study yield some expected findings but also contain some surprises. These results indicate that supervisors should be concerned with facilitative leadership. In particular, these results indicate that supervisors should pay close attention to fostering a sense of teamwork, recognizing good performance and involving subordinates in decisions that affect their work. These three elements of organizational leadership account for about 70% of supervisors' performance ratings from their subordinates in 1998 and 2000. Of the organizational leadership initiatives in this study, fostering a sense of teamwork amongst subordinates has the greatest positive impact on supervisors' ratings.

In 1998 the independent variable teamwork accounts for 37% of the variance in supervisor rating. Fostering a sense of teamwork accounts for 33% of the variance in 2000. Recognition of good performance is the second most influential variable accounting for 19% of the variance in supervisor rating in both 1998 and 2000. The third most influential independent variable is employee involvement in decisions that affect their work. This accounts for 16% in 1998 and 14% of the variance in supervisor rating

for both 1998 and 2000. From these findings we can conclude that these three variables – teamwork, decisions, and recognition are the most important variables in figure twenty above.

Table 27: Summary of Regression Coefficients predicting Supervisor Ratings

	1998	*1998*	*2000*	*2000*
Variable	β	Sig T	β	Sig T
Vision	.059*	.000	.070*	.000
Decision Making	.165*	.000	.140*	.000
Access to Information	-.013	.045	-.076*	.000
Recoded Teamwork	.370*	.000	.330*	.000
Training	.005	.457	.020*	.000
Flexibility	.057*	.000	.083*	.000
Innovation	-.059*	.000	-.033*	.000
Good Performance	.053*	.000	.042*	.000
Recognition	.191*	.000	.195*	.000
Corrective Action	.038*	.000	.057*	.000

(*p<.001) (1998 B=.386, n=13,689) (2000 B=.640 n=31,695)

The results presented in table twenty-seven also indicate that leadership theories need modifying in regards to electronic access to information, training, and the promotion of innovation. Promoting innovation was found to be negatively correlated with supervisors' ratings. Access to information and training opportunities were not significant variables with the 1998 data. These variables were, however, significant in the analysis of the 2000 survey data. It is important to note that with the large sample size in 2000 there is an increased chance of committing a Type I (false positives) errors. Each of the study's hypotheses and summaries of the research findings are discussed below.

Hypothesis One: Communicating Vision

The first hypothesis, *if supervisors communicate the organization's vision to subordinates, then subordinates will view their immediate supervisor more favorably* was supported by the data analysis in both 1998 and 2000. This hypothesis is represented by survey item number three: *Managers communicate the organization's mission, vision, and values.* Subordinates with higher ratings of supervisors who communicated vision tended to rate their supervisors performance higher. This finding is consistent with the research on vision (Kotter, 1996) and facilitative leadership (Hord, 1992). A leader's ability to communicate vision throughout an organization provides a road map for subordinates to follow in their daily job activities. Communicating vision, mission and goals comprise strategic leadership and one goal of the GPRA (Public Law, 103-62). The purpose of which is to improve program effectiveness (Franklin & Long, 2003).

Although communicating vision was statistically significant it does not appear to have as much weight as some of the other study variables. This is not consistent with the leadership literature that strongly equates leadership with vision (Kotter, 1996; Kouzes & Posner, 1985; Whetton & Cameron, 2002). One explanation for this can be found in the results from Franklin and Long's (2003) study of implementation barriers to strategic planning in government. In this study Franklin and Long (2003) found other factors, such as budget and attention from stakeholders outside of the organization, that impact the strategic planning process. This may cause the strategic planning process, which includes creating a vision, for federal agencies to be viewed as simply a requirement to "check off" as being completed rather than a tool for improving organizational outcomes.

Hypothesis Two: Involvement in Decision-making

The second hypothesis, *if subordinates are satisfied with their involvement in decisions that affect their work, then they will view their immediate supervisor more favorably* was supported in both 1998 and 2000. This hypothesis is represented by survey item number twenty-nine. *How satisfied are you with your involvement in decisions that affect your work?* Involving subordinates in decisions that affect their work is the third most influential variable of supervisor ratings. These results indicate that supervisors in federal agencies will be viewed as being more effective if they involve their subordinates in work related decisions. Supervisors who allow subordinates to make important work decisions reduce subordinates' stress and increase their feelings of control (Whetton & Cameron, 2002). Involving subordinates in decisions that affect their work emphasizes greater trust by supervisors (Spreitzer & Mishra, 1992). Trust has been found to be reciprocal (Kouzes & Posner, 1985). This implies that when supervisors exhibit trust in their subordinates, there is an increase in subordinates' trust of their supervisor. This, in turn, can affect the supervisor's overall performance rating (Varma, Denisi & Peters, 1996).

Hypothesis Three: Electronic Access to Information

The third hypothesis, *if subordinates have electronic access to the information needed for performing their job, then they will view their supervisor more favorably,* was not supported in 1998. It was, however, supported in 2000. This hypothesis is represented by survey item number twenty-six: *Do you have electronic access to information needed to do your job?*

The literature predicted that access to information should be positively correlated with supervisor rating. However, the data analysis indicates that electronic access to information is not significant in 1998. This result contradicts much of the leadership literature on the importance of providing information to subordinates (Kanter, 1983; Spreitzer, 1992; Whetton & Cameron, 2002).

Whetton & Cameron (2002) argued that when supervisors provide subordinates with more information rather than less, subordinates gain a sense of empowerment (p. 422). The purpose of providing information is also to reduce uncertainty (Whetton & Cameron, 2002). So merely having access to information does not guarantee that uncertainty will be reduced. One possible explanation for this outcome is each individual's ability to process and utilize the information. Herbert Simon (1972) described this as "bounded rationality," which refers to the limited ability to process large amounts of information (Lee *et. al.,* 1999).

Because there is a lot of conflicting information available electronically, supervisors may need to assist subordinates in determining the quality and relevance of information. Too much bad information can actually result in increasing uncertainty. Thus, having too much information easily accessible becomes an unempowering experience that affects how subordinates view their supervisor's rating.

Hypothesis Four: A Spirit of Cooperation and Teamwork

The fourth hypothesis, *if subordinates indicate that cooperation and teamwork exist in their work unit, then they will view their immediate supervisor more favorably* was supported by the data analysis in both 1998 and 2000. This hypothesis is represented by

five survey item numbers*:* Question four, *My immediate supervisor has organized our work group effectively to get the work done; Q*uestion six, *A spirit of cooperation and teamwork exists in my immediate work unit;* Question seven, *Teams are used to accomplish organizational goals, when appropriate;* Question eight, *Subordinates are rewarded for working together in teams;* and Question nine, *Subordinates in different work units participate in cross-functional teams to accomplish work objectives.* An index for teamwork was created based on an average of these five survey items.

The data analysis results indicate that teamwork has the greatest impact on supervisor rating. Fostering a sense of teamwork accounts for 37% in 1998 and 33% in 2000 of the variance in supervisor rating. These high percentages demonstrate a need for supervisors to focus on building a spirit of cooperation and teamwork amongst subordinates.

Supervisors play a crucial role in facilitating organizational leadership efforts toward these ends. Federal agencies, given this model, could increase efforts training supervisors on the promotion of cooperation and team building. Currently various agencies engage in team building workshops or sessions. These, however, are generally "one shot deals." One possible benchmark organization for supervisor training is the Michigan AmeriCorps program. Program directors attend monthly meetings that begin with team building activities. Directors are encouraged to use these activities with their subordinates and also to share other team building activities with their peers. This approach can be successful because it serves two functions: team building amongst peer directors and/or staff and also training for these directors/staff to take back to their subordinates.

Hypothesis Five: Training Opportunities

The fifth hypothesis, *if subordinates have opportunities to receive the training they need to perform their jobs, then they will view their immediate supervisor more favorably,* was not supported in 1998. It was, however, supported in 2000. This hypothesis is represented by survey item number thirteen: *Subordinates receive the training they need to perform their jobs (for example, on-the-job training, conferences and workshops).* The data analysis in chapter four indicates no statistically significant relationship between supervisor rating and training opportunities for 1998. This result contradicts much of the management literature regarding the importance of training to effective leadership.

Federal agencies such as the OPM continue to make employee training an important component of their business plans. The first goal of the 1999 OPM Strategic Plan is to "provide policy direction and leadership to recruit and retain the federal workforce required for the 21st Century" (OPM Strategic Plan, 1999). This goal "supports the transformation of federal training from a set of process-focused, event-based activities into an outcome oriented, measurable performance improvement function that supports managers and subordinates in sustaining a consultative learning environment" (OPM 1999 Strategic Plan, p. 21).

There is one possible reason that training opportunities were not statistically significant in 1998. This implies that the mere existence of training does not guarantee its effectiveness. Given that training was statistically significant in 2000 this variable needs to be explored more fully.

The results of this research indicate that employee training in federal agencies should be reevaluated to determine its effectiveness. There are specific characteristics of effective training. Schumaker (2004) found in her study of municipal clerks two important dimensions of effective training: organizational environment and relevance of training to the job. A positive organizational environment is characterized by providing incentives for training (such as paying for training), providing opportunities for employees to use skills learned in training on the job, and encouraging an organizational culture where employees support one another in their training (Schumaker, 2004, p. 52). Determining whether or not these characteristics are present for training programs is just as important as whether or not training opportunities exist.

Hypothesis Six: Flexibility

The sixth hypothesis, *if subordinates are given more flexibility in how they accomplish their work, then they will view their immediate supervisor more favorably* was supported in both 1998 and 2000. This hypothesis is represented by survey item number eighteen: *In the past two years, I have been given more flexibility in how I accomplish my work.* Flexibility can refer to the times and places in which subordinates complete work. Flexibility can also refer to the work methods. Due to the nature of work in some federal agencies, laws and regulations may not allow for much deviation in methods relating to work routines. If that is the case these agencies could offer programs such as flextime and telecommuting. Supervisors are in key positions to promote such programs. Currently some federal agencies offer flexibility for subordinates. The

benefits of such opportunities include an increased sense of employee empowerment (Spreitzer, 1992; Whetton & Cameron, 2002) and control.

Hypothesis Seven: Promoting Innovation

The seventh hypothesis, *if creativity and innovation are rewarded, then subordinates will view their immediate supervisor more favorably* was not supported in 1998 or 2000. This hypothesis is represented by survey item number eleven: *Creativity and innovation are rewarded.* The results indicate a significant negative correlation between promoting innovation and supervisors' ratings from their subordinates. This finding is surprising given the leadership literature on creativity and innovation. Perhaps the leadership literature on promoting innovation is not applicable to supervisors in federal level public organizations. Supervisors within public organizations have different constraints than those in the private sector. They are generally more constrained by rules and regulations that limit the ability to effectively promote creativity. Those supervisors who do promote innovation may be viewed by their subordinates as operating without appropriate authority. This in turn does affect supervisor ratings from their subordinates.

Hypothesis Eight: Defining Good Performance

The eighth hypothesis, *if subordinates are clear about how good performance is defined in their organization, they will view their immediate supervisor more favorably* was supported. This hypothesis is represented by survey item number twenty-five: *Are you clear about how "good performance" is defined?* Supervisors should clearly define good performance for their subordinates. This alleviates guesswork on the subordinates'

part as to meeting performance expectations. In order to do this, however, organizational leadership must define good performance for the supervisors and clearly state performance expectations for all subordinates. Supervisors should then be trained in how to effectively communicate these expectations to subordinates.

Hypothesis Nine: Recognition of Good Performance

The ninth hypothesis, *if subordinates are satisfied with the recognition they receive for doing a good job, they will view their immediate supervisor more favorably*, was supported by the research findings in both 1998 and 2000. This hypothesis is represented by survey item number thirty: *How satisfied are you with the recognition you receive for doing a good job?* Recognition of good performance is the second most influential variable next to teamwork of organizational leadership that affects supervisors' ratings.

The results of this research indicate that supervisors in federal agencies should be aware of recognizing subordinates' good performance. Recognition of appropriate behavior serves as reinforcement and encourages subordinates to continue in the same direction. Supervisors within federal agencies tend to be limited by regulations from providing monetary recognition of good performance. However, research indicates that this can also be done with timely verbal praise and subordinate appraisals (Kouzes & Posner, 1995; Whetton & Cameron, 2002).

Hypothesis Ten: Corrective Actions

The tenth hypothesis, *if subordinates agree that corrective actions are taken when performance standards are not met, then they will view their immediate supervisor more*

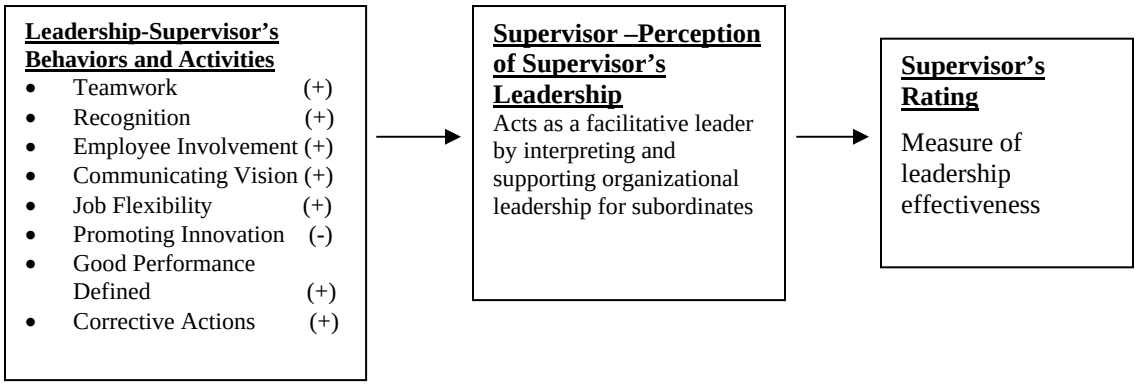
favorably was supported. This hypothesis is represented by survey item number twenty: *Corrective actions are taken when subordinates do not meet performance standards.* The results in chapter four indicate that taking corrective actions for substandard performance is significant. This means that supervisors within federal agencies should be concerned with correcting substandard performance. Providing timely feedback in order to redirect poor performance is a crucial element of this. Inappropriate behavior left unchecked can reduce the overall morale of employees and has a negative impact on the organizational culture (Whetton & Cameron, 2002). It is important for supervisors to identify inappropriate behavior, explain the impact this behavior has on others in the organization, and ask questions about causes of the inappropriate behavior (Whetton & Cameron, 2002).

Hypothesis 11: Combined Effects Hypothesis

This study set out to test a model of organizational leadership that is composed of ten factors: communicating vision; involving subordinates in decisions; providing electronic access to information; developing a spirit of teamwork; providing opportunities for training; allowing flexibility; promoting innovation; defining good performance; recognizing good performance; and correcting poor performance. The results of this study, however, reveal that organizational leadership is composed of eight factors. These include all of the above factors with the exception of two: providing training opportunities and access to information. These two factors were insignificant in 1998 and significant in 2000. However, due to the size of this data set there is an increased chance of false positives for these variables. Because of this threat to the validity of the

2000 model, the 1998 model is more robust. Figure nineteen below is a revised model of facilitative leadership based on the 1998 findings. When supervisors serve as the human interface between organizational leadership as defined above they are viewed as more effective by their subordinates.

Figure 21: New Model of Facilitative Leadership



1998 Respondents v. 2000 Respondents

The results of the independent samples t-tests of significance indicate that there is a statistically significant difference for all of the study variables, except teamwork, innovation and recognition, between 1998 respondents and 2000 respondents of the NPR Survey. With the exceptions of communicating vision and employee involvement in decisions, respondents' mean scores from the 2000 survey were more favorable than those from the 1998 survey on the independent variables and the dependent variable, supervisor rating. Respondents in 2000 tended to rate their supervisor's performance higher than those in 1998.

Implications

Three surprising and significant findings from this study are the results for these three variables: providing electronic access to information, promoting innovation and

providing training opportunities. Current leadership theories offer a considerable amount of advice on effective leadership. This study implies that much of the contemporary advice such as developing a spirit of teamwork, recognizing good performance, involving subordinates in decisions, allowing job flexibility, defining good performance, communicating vision, correcting poor performance and providing training opportunities is supported.

The results from this study imply that although public and private sector organizations are more similar than not. There are some significant differences. These include: providing electronic access to information, promoting innovation and providing training opportunities.

Contributions to the Literature

Important differences do exist between public and private organizations. Public organizations have numerous stakeholders. These stakeholders include direct and indirect recipients of the organizations' programs, tax payers and political officials. Private organizations have stakeholders that may be limited to customers and stockholders.

Public organizations are open to greater scrutiny than private organizations. Public organizations are heavily regulated in how they perform their services as well as hiring personnel. Public organizations often end up with multiple and conflicting goals. In a market economy, private organizations tend to focus on the goal of delivering quality products or services in order to enhance their bottom-line. Public organizations are

budget driven rather than profit driven. Public organizations are governed by statutes and regulations.

Public organizations confront value conflicts between competence and responsiveness. Competence refers to an organization's effectiveness, timeliness, and reliability. Responsiveness refers to quality and fairness (public servants are expected to treat everyone equally and fairly. Public organizations also have a system of multiple bosses (separation of powers – executive, legislature, judicial, federal, state & local). This system of checks and balances exacerbates the problem of competence and responsiveness to value conflicts.

These differences between public and private organizations revolve primarily around managing public organizations rather than supervisory leadership. Ban (1995) described the differences between levels of leadership within public organizations. The leadership literature distinguishes between management and leadership where management concerns *things* and leadership concerns *people* in the organization. The results from this study indicate that public and private organizations are more similar in regards to leading people within their organizations. As discussed above, seven of the ten variables in this study's model of facilitative leadership are both positively and significantly correlated with supervisor rating.

Differences between public and private organizations as discussed above may explain the inconsistencies between this study's results and the literature review for the variables electronic access to information, promoting innovation, and providing training opportunities. It is possible that electronic access to information is not as significant in public organizations because the decision-making processes tend to be more centralized

than in many private organizations. Employees may not see the need for information if they do not have decision-making authority. Promoting innovation was found to be significant and negatively correlated with supervisor rating. Because public agencies are heavily regulated the promotion of innovation may be viewed less favorably than in private organizations.

One reason that training opportunities may not be as significant in public organizations is that employees are often operating in their jobs long before training is available. For example, the Michigan National Guard often promotes individuals without past supervisory experience into supervisory positions. These individuals are typically in supervisory positions for several months before supervisory training is available. Private organizations have more streamlined hiring processes where individuals are selected for supervisory experience than public organizations that have hiring restrictions, such as selecting internal candidates.

Limitations

Other Possible Factors of Supervisor Rating

This study found that organizational leadership accounted for about half of the variance in supervisor rating. There are many other factors that may account for the remainder of this variance. These include subordinates trust in their supervisor, supervisor's personality traits, and affective regard for a supervisor. Institutional influences or organizational culture may also affect subordinates ratings of their supervisors. The institutional environment may be another explanatory factor of differences in leadership styles and effectiveness between public and private

organizations. It may also be a factor in difference amongst public organizations that belong to different industries. For example, although the Veteran's Administration (VA) is a public organization, it also operates hospitals, which belong to an industry with strong institutional influences. These factors - public, private and industry - impact individuals within organizations.

The organizational culture may also be a factor of supervisor rating. Some public agencies, such as the EPA, have a different composition of employees than other public agencies. Employees within the EPA typically have higher levels of education. Some public agencies employ individuals with more technical education. Cultures amongst public agencies may also differ in their advancement of individuals to supervisory positions (Ban, 1995). Some or all of these factors may impact employees' perceptions of their supervisors.

Individual Leadership v. Organizational Leadership

The results from this study beg the question: *Is facilitative leadership a function of the individual leader or does strong organizational leadership confound these research results?* Put simply, is it really necessary for supervisors to engage in facilitative leadership or will their ratings from subordinates be determined by the organizational leadership. Although this is not the intended question under study, it is worth considering. In order to sort out what can be attributed to individual supervisors as facilitative leaders and what can be attributed to organizational leadership; four of the agencies from this study were evaluated separately and then compared to each other.

These four agencies were chosen on two conditions. The organizations were grouped as either NPR or non-NPR. NPR organizations included those taking part in NPR initiatives prior to the 1998 survey. From these groups two organizations were selected based on their supervisor rating mean score. One organization from each group was chosen with the lowest mean score on supervisor rating. The other organization from each group was chosen with the highest mean score for supervisor rating.

The 1998 NPR survey included respondents from forty-eight federal agencies. The mean scores range from 3.14 to 3.91 for supervisor rating by agency. Supervisor rating is measured on a five point Likert scale where one is the least favorable response and five is the most.

The two agencies chosen with the lowest scores were Labor Department (excluding OSHA employees), with a mean supervisor score of 3.19, n=273, and the Federal Aviation Administration (FAA), with a mean score of 3.14, n=276. Labor Department was chosen because it did not participate in NPR initiatives at the time of the 1998 study. The FAA was chosen because it falls under the Department of Transportation, which agreed to participate in the NPR in 1996.

Two agencies with the highest mean scores for supervisor rating were also chosen for this comparison. These were NASA, with a mean score of 3.91, n=385 and the EPA with a mean score 3.72, n=309. NASA is the non-NPR organization and the EPA is the NPR organization.

Separate regressions were run on the new model that resulted from the chapter four data analysis for each of these four organizations. Regression results for the FAA model

summary indicates that 60% (adj. R^2=.600) of the variance in supervisor rating is accounted for by the new model of facilitative leadership.

Table 28: Model Summary for FAA Regression

Model	R	R^2	ADJ R^2	Standard Error	F Change	Df1	Df2	Sig. F Change
FAA	.782	.612	.600	.81	52.590	8	267	.000

(1998 imputed data)

Table twenty-nine below includes regression coefficients for the eight independent variables. These coefficients indicate that teamwork, recognition, and decision are positively and significantly correlated with the dependent variable, supervisor rating. Developing a spirit of teamwork accounts for 45% of the variance in supervisor rating (β = .457, p=.000). Recognition accounts for 26% of the variance in the dependent variable, supervisor rating (β = .260, p=.000). Involving employees in the decisions that affect their work accounts for about 19% of the variance in supervisor rating (β = .198, p=.001). Communicating vision, promoting innovation, job flexibility, defining good performance and taking corrective actions for performance that does not meet expectations were all insignificant.

Table 29: FAA Regression Coefficients

Variable	β	T	Sig. T
Teamwork	.457*	7.474	.000
Recognition	.260*	4.057	.000
Decision	.198*	3.254	.001
Vision	.000	-.005	.996
Innovation	-.044	-.750	.454
Flexibility	-.040	-.864	.388
Performance	-.002	-.041	.968
Corrective Action	.030	.631	.529

(*p<.01)(B= .168, n=275)(1998 imputed data)

Regression results for the Labor Department model summary indicate that 54% (adj. R^2=.548) of the variance in supervisor rating is accounted for by the new model of facilitative leadership.

Table 30: Labor Department (excluding OSHA employees)

Model	R	R^2	ADJ R^2	Standard Error	F Change	Df1	Df2	Sig. F Change
Labor	.749	.561	.548	.85	42.205	8	264	.000

(1998 imputed data)

Table thirty-one below includes regression coefficients for the eight independent variables. These coefficients indicate that teamwork, recognition, decision and vision were positively and significantly correlated with the dependent variable supervisor rating. Developing a spirit of teamwork accounts for 36% of the variance in supervisor rating (β = .363, p=.000). Recognition accounts for 18% of the variance in the dependent variable, supervisor rating (β = .183, p=.001). Involving employees in the decisions that affect their work accounts for about 16% of the variance in supervisor rating (β = .161, p=.018). Communicating vision accounts for 17% (β = .17, p=.00). Promoting innovation was significantly and negatively correlated with supervisor rating at the 95% confidence interval. It accounts for about 13% (β = -.13, p=.02) of the variance in the dependent variable, supervisor rating. Job flexibility, defining good performance and taking corrective actions for performance that does not meet expectations were all insignificant.

Table 31: Regression Coefficients for the Labor Department

Variable	β	T	Sig. T
Teamwork	.363*	5.516	.000
Recognition	.183*	2.699	.001
Decision	.161**	2.388	.018
Vision	.176*	3.035	.003
Innovation	-.133**	-2.200	.029
Flexibility	.096	1.663	.097
Performance	.029	1.535	.619
Corrective Action	.001	.498	.982

(*p<.01, **p<.05)(B= .292, n=273)(1998 imputed data)

Regression results for the EPA model summary indicate that 49% (adj. R^2=.490) of the variance in supervisor rating is accounted for by the new model of facilitative leadership.

Table 32: Regression Model Summary for EPA

Model	R	R^2	ADJ R^2	Standard Error	F Change	Df1	Df2	Sig. F Change
EPA	.710	.503	.490	.86	38.021	8	300	.000

(1998 imputed data)

Table thirty-three below includes regression coefficients for the eight independent variables. These coefficients indicate that teamwork, recognition, decision and vision were positively and significantly correlated with the dependent variable supervisor rating. Developing a spirit of teamwork accounts for 43% of the variance in supervisor rating (β = .432, p=.000). Recognition accounts for 14% of the variance in the dependent variable, supervisor rating (β = .148. p=.010). Involving employees in the decisions that affect their work accounts for about 18% of the variance in supervisor rating (β = .186, p=.002). Communicating vision, promoting innovation, job flexibility, defining good performance and taking corrective actions for performance that does not meet expectations were all insignificant.

Table 33: Regression Coefficients for EPA

Variable	β	T	Sig. T
Teamwork	.432*	6.676	.000
Recognition	.148*	2.606	.010
Decision	.186*	3.119	.002
Vision	.016	.290	.772
Innovation	-.001	-.024	.981
Flexibility	.056	1.093	.275
Performance	.053	1.044	.297
Corrective Action	-.046	-.996	.320

(*p<.01)(B= .253, n=309)(1998 imputed data)

Regression results for the all other Labor model summary indicate that 43% (adj. R^2=.437) of the variance in supervisor rating is accounted for by the new model of facilitative leadership.

Table 34: Regression Model Summary for NASA

Model	R	R^2	ADJ R^2	Standard Error	F Change	Df1	Df2	Sig. F Change
NASA	.670	.448	.437	.83	38.198	8	376	.000

(1998 imputed data)

Table thirty-five below includes regression coefficients for the eight independent variables. These coefficients indicate that teamwork, recognition, decision and vision were positively and significantly correlated with the dependent variable supervisor rating. Developing a spirit of teamwork accounts for 32% of the variance in supervisor rating (β = .322, p=.000). Recognition accounts for 13% of the variance in the dependent variable, supervisor rating (β = .131, p=.018). Communicating vision accounts for 21% (β = .211, p=.000). The independent variables involving employees in the decisions, promoting innovation, job flexibility, defining good performance, and taking corrective actions were all insignificant.

Table 35: Regression Coefficients for NASA

Variable	β	T	Sig. T
Teamwork	.322*	5.728	.000
Recognition	.131**	2.386	.018
Decision	.077	1.391	.165
Vision	.211*	4.439	.000
Innovation	-.105	-1.897	.059
Flexibility	.079	1.796	.073
Performance	.072	1.418	.157
Corrective Action	.045	2.582	.010

(*p<.01; **significant at p<05)
(B= .097, n=385)(1998 imputed data)

An interesting finding from this comparison of these four organizations is that supervisor mean scores and the adjusted R^2 for each organization were inversely related.

Table 36: A Comparison of Four Federal Agencies

Organization	ADJ R^2	Super Rating Mean	Super Rating Std. Dev.	N
NASA	.43	3.91	1.11	385
EPA	.49	3.72	1.20	309
LABOR	.54	3.19	1.27	273
FAA	.60	3.14	1.28	276

The mean scores for NASA and the EPA suggest that supervisors in these agencies are perceived to be performing better than those in LABOR or at the FAA. A review of the standard deviations for mean supervisor ratings in table thirty-six above indicates that employees surveyed at NASA and the EPA differed in their use of the scale when rating immediate supervisors (std. dev. 1.11 and 1.20) than employees surveyed at the EPA and FAA (1.27 and 1.28). This difference may indicate a scaling problem for the survey item. It is also important to note that the data used in this analysis is ordinal level data. True OLS methods use interval level data. The low number values to select from with this ordinal data, rather than continuous values, may result in high standard deviation values.

Table 37: Pearson Correlations for Adj. R^2 and Mean Score

		ADJ R^2	MEAN SCORE SUPER
ADJ R^2	Pearson Correlation	1.000	-.945
	Sig. (2-tailed)	.	.055
Mean Super Rating	Pearson Correlation	-.945	1.000
	Sig. (2-tailed)	.055	.

(NASA, EPA, LABOR, FAA N=4)

Due to the small sample size (n=4), it is difficult to draw valid conclusions from these results. This led to a comparison of all forty organizations survey in 1998 (Appendix D). The Pearson correlation in table thirty-eight below indicates that there is a significant negative correlation between the adjusted R^2 and mean score for supervisor rating.

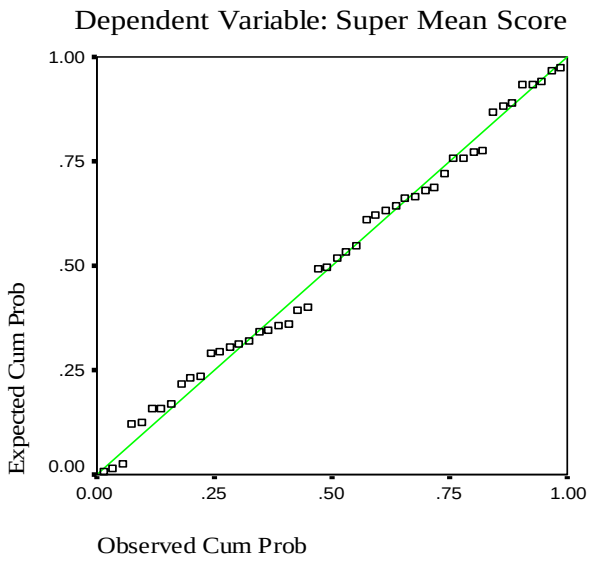
Table 38: Correlations

		ADJ R^2	MEAN SCORE SUPER
ADJ R2	Pearson Correlation	1.000	-.374**
	Sig. (2-tailed)	.	.009
MEAN SCORE SUPER	Pearson Correlation	-.374**	1.000
	Sig. (2-tailed)	.009	.

**Correlation is significant at the 0.01 level (2-tailed) n=48.

Figure twenty below illustrates this inverse linear relationship between the adjusted R^2 and supervisor rating. The normal probability plot below indicates a strong inverse linear relationship between the adjusted R^2 and supervisor rating. This can be seen in how tightly the data points are clustered around the fitted line.

Figure 22: Normal Probability Plot for Regression of ADJ R^2 and Super Mean Score



The adjusted R^2 for each organization indicates the amount of variance in supervisor rating that is attributed to organizational leadership. The above results indicate that in organizations where more of a supervisors rating is attributed to organizational leadership, supervisors' overall mean score is lower than in organizations where less of the variance in supervisor rating is accounted for by organizational leadership. Whether one of the four organizations is NPR or not does not seem to matter. It seems to be a matter of individual leadership rather than organizational. NASA and the EPA supervisors are rated higher; less of the variance in this rating is accounted for by the factors of organizational leadership. Whereas, FAA and Labor Department supervisor are rated lower and more variance in this rating is accounted for by organizational leadership.

When considering the debate of organizational leadership over individual leadership the findings of this study call into question Selznick's (1957) assertion that leadership is dispensable at lower levels of a bureaucracy. Instead the findings echo the sentiments of Kettl (1998) and Behn (1998), that leadership is needed at all levels of a public

organization. It may be true that for large organizations, bureaucracy keeps things running for awhile. However without leadership at lower levels the bureaucracy becomes rusty and the machine slows down, eventually coming to a halt over time. If leadership at the apex of an organization is viewed as a steering mechanism then leadership at lower levels in the organization should be viewed as the oil in the machine that keeps things running smoothly. This does not mean that the people in the organization are "interchangeable parts." Human organizations are not the same as machines. It merely means that the bureaucracy is a mechanism that needs continual maintenance. Supervisory leadership is this maintenance.

External Validity

The population of this study is composed of federal white-collar workers. Conclusions drawn from this research cannot be extrapolated to other populations of workers. The intent of this study was to evaluate leadership from the Clinton administrations reinvention movement. The survey demographics indicate that respondents in 1998 and 2000 were representative of the federal white-collar workers. For this reason the population is appropriate and valid so that results can be generalized to this population of federal subordinates.

Another threat to the validity of this design is *statistical conclusion validity.* Due to the large sample size there is an increased chance of committing a Type I (false positive) error (Cook & Campbell, 1979). One way to control for this threat is to use magnitude estimates in conjunction with tests of significance. Using the significance level of less than .001 rather than .050 is also recommended for sample sizes this large.

This study is also replicable. The survey instrument and survey data are available through the University of Michigan's ICPSR. The statistical procedures used to analyze the data can be replicated using most available statistical packages.

Future Research

This research provides a platform for exploring the concept of facilitative leadership more fully in other public and private sector organizations. One avenue of future research is to survey a sample of state and local subordinates on their supervisors' facilitation of organizational leadership factors such as developing teamwork, recognizing good performance, involving subordinates in the decision-making process, allowing job flexibility, defining good performance, communicating vision, correcting poor performance, elctronic access to information and promoting innovation. The results from such a study can be compared to the findings in this study of federal supervisors in order to determine if there are significant differences between state and federal organizaitons.

Another avenue for future research is a survey of private sector subordinates assessing their perceptions of supervisors' facilitative leadership. The framework of facilitative leadership based on this study's results will be used in a private sector study. The purpose of this is to examine whether or not a model of facilitative leadership can be generalized to both public and private sector organizations. The purpose of this future research is to further develop a model of facilitative leadership that is more inclusive of all leadership throughout organizations.

Summary

In summary, this framework of facilitate leadership is useful for federal supervisors in that it provides tangible behaviors that supervisors can engage in to be effective leaders. Organizational leadership is the responsibility of administrators throughout bureaucracy. Effective government leaders at all levels of public administration are essential for empowering subordinates and improving organizational outcomes. Supervisors within public organizations are obligated to facilitate organizational leadership given their unique positions. Lack of leadership within public organizations can be a serious obstacle for organizational effectiveness. The results of this study provide a framework of leadership that can be facilitated by supervisors. This framework includes developing a spirit of teamwork, recognizing good performance, involving subordinates in the decision-making process, allowing job flexibility, defining good performance, communicating vision, and correcting poor performance.

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Appendix A

1998 NPR Employee Survey

NATIONAL PARTNERSHIP FOR REINVENTING GOVERNMENT SURVEY

Your responses to this survey will be **strictly confidential**. They will be combined with responses from others in your organization and other Federal agencies into a summary report. No one in your organization will have access to your individual responses. We urge you to take advantage of this opportunity to express your views. Your frank and honest answers are appreciated.

Any information you provide is completely voluntary. While we need your input and urge your cooperation, declining to respond to any item will have no effect on you.

Please use any pen or pencil to blacken the circle corresponding to your response choice.

In my organization:	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
1. There are service goals aimed at meeting customer expectations.	○	○	○	○	○
2. There are well-defined systems for linking customers' feedback and complaints to employees who can act on the information.	○	○	○	○	○
3. Managers communicate the organization's mission, vision, and values.	○	○	○	○	○
4. My immediate supervisor has organized our work group effectively to get the work done.	○	○	○	○	○
5. At the place I work, my opinions seem to count.	○	○	○	○	○
6. A spirit of cooperation and teamwork exists in my immediate work unit.	○	○	○	○	○
7. Teams are used to accomplish organizational goals, when appropriate.	○	○	○	○	○
8. Employees are rewarded for working together in teams (for example, performance ratings, cash awards, certificates, public recognition).	○	○	○	○	○
9. Employees in different work units participate in cross-functional teams to accomplish work objectives.	○	○	○	○	○
10. Recognition and rewards are based on merit.	○	○	○	○	○
11. Creativity and innovation are rewarded.	○	○	○	○	○
12. Employees receive training and guidance in providing high-quality customer service.	○	○	○	○	○
13. Employees receive the training they need to perform their jobs (for example, on-the-job training, conferences, workshops).	○	○	○	○	○

22070

NATIONAL PARTNERSHIP FOR REINVENTING GOVERNMENT SURVEY

In my organization:	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
14. Differences among individuals (for example: gender, race, national origin, religion, age, cultural background, disability) are respected and valued.	○	○	○	○	○
15. Supervisors/team leaders understand and support employees' family/personal life responsibilities.	○	○	○	○	○
16. My organization has made reinvention an important priority.	○	○	○	○	○
17. In the past 2 years, the productivity of my work unit has improved.	○	○	○	○	○
18. In the past 2 years, I have been given more flexibility in how I accomplish my work.	○	○	○	○	○
19. Employees are required to report the hours they work on a daily basis.	○	○	○	○	○
20. Corrective actions are taken when employees do not meet performance standards.	○	○	○	○	○
21. Management and the union(s) work cooperatively on mutual problems.	○	○	○	○	○

To what extent:	Not at All	To a Limited Extent	To a Moderate Extent	To a Great Extent	To a Very Great Extent
22. Has your organization implemented simplified travel regulations?	○	○	○	○	○
23. Has your organization streamlined the process for hiring employees?	○	○	○	○	○
24. Has the use of government credit cards for small office purchases been implemented in your organization?	○	○	○	○	○
25. Are you clear about how "good performance" is defined in your organization?	○	○	○	○	○
26. Do you have electronic access to information needed to do your job?	○	○	○	○	○

If you do not work for a regulatory agency, skip items 27 and 28 and go to the next page.

27. Is your organization working with its regulated community to achieve better compliance through partnerships?	○	○	○	○	○
28. Is your organization working to streamline its regulatory program to make it more readable and customer-focused?	○	○	○	○	○

22070

NATIONAL PARTNERSHIP FOR REINVENTING GOVERNMENT SURVEY

With reference to your job:

	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
29. Considering everything, how satisfied are you with your job?	○	○	○	○	○
30. How satisfied are you with your involvement in decisions that affect your work?	○	○	○	○	○
31. How satisfied are you with the recognition you receive for doing a good job?	○	○	○	○	○

	Very Poor	Poor	Fair	Good	Very Good
32. Overall, how good a job do you feel is being done by your immediate supervisor/team leader?	○	○	○	○	○
33. How would you rate the overall quality of work being done in your work group?	○	○	○	○	○

Background and Employment Information

The following questions ask about your background and employment status. The information you voluntarily provide will help to determine the representativeness of participation and aid with interpretation of the results.

34. How long have you been a Federal Government employee (excluding military service)?
- ○ Less than 1 year
- ○ 1 to 5 years
- ○ 6 to 10 years
- ○ 11 to 15 years
- ○ 16 to 20 years
- ○ 21 to 25 years
- ○ 26 to 30 years
- ○ 31+ years

35. What is your pay grade?
- ○ 01 through 05
- ○ 06 through 10
- ○ 11 through 12
- ○ 13 through 15
- ○ Above 15 (SL,ST,ALJ)
- ○ SES

36. Are you:
- ○ Female
- ○ Male

37. Are you of Hispanic or Latino origin?
- ○ No
- ○ Yes

38. What race do you consider yourself to be?
- ○ American Indian or Alaska Native
- ○ Asian
- ○ Black or African American
- ○ Native Hawaiian or Other Pacific Islander
- ○ White
- ○ Other

39. Are you in a workplace that is represented by a union collective bargaining agreement?
- ○ Yes
- ○ No
- ○ Don't know

40. Where is your job located?
- ○ National headquarters
- ○ Regional headquarters
- ○ Field

41. Please print the first three numbers of your work location's zip code and darken the corresponding bubbles.

Work location zip code:

	☐	☐	☐	X	X
1	○	○	○	○	○
2	○	○	○	○	○
3	○	○	○	○	○
4	○	○	○	○	○
5	○	○	○	○	○
6	○	○	○	○	○
7	○	○	○	○	○
8	○	○	○	○	○
9	○	○	○	○	○
0	○	○	○	○	○

22070

NATIONAL PARTNERSHIP FOR REINVENTING GOVERNMENT SURVEY

42. Using the list of organizations on the inside back cover of your folder, print your organization's assigned code and darken the corresponding bubbles.

Organization Code
(see list printed on the inside back cover of your survey folder)

	☐	☐	☐
1	○	○	○
2	○	○	○
3	○	○	○
4	○	○	○
5	○	○	○
6	○	○	○
7	○	○	○
8	○	○	○
9	○	○	○
0	○	○	○

43. What is your job category?

- ○ Professional (for example, scientist, engineer, psychologist, attorney)
- ○ Administrative (for example, personnel mgmt, budget, contracting, and procurement specialist)
- ○ Technician
- ○ Clerical (for example, support staff, executive secretary)
- ○ Wage Grade
- ○ Other

44. What is your level of supervisory responsibility?

- ○ None, I am not a supervisor
- ○ Team leader
- ○ First line supervisor
- ○ Manager
- ○ Executive

Comments? You are our best source of ideas. We invite you to share one or two brief comments or suggestions regarding government reinvention.

Thank you for participating in the NPR survey!

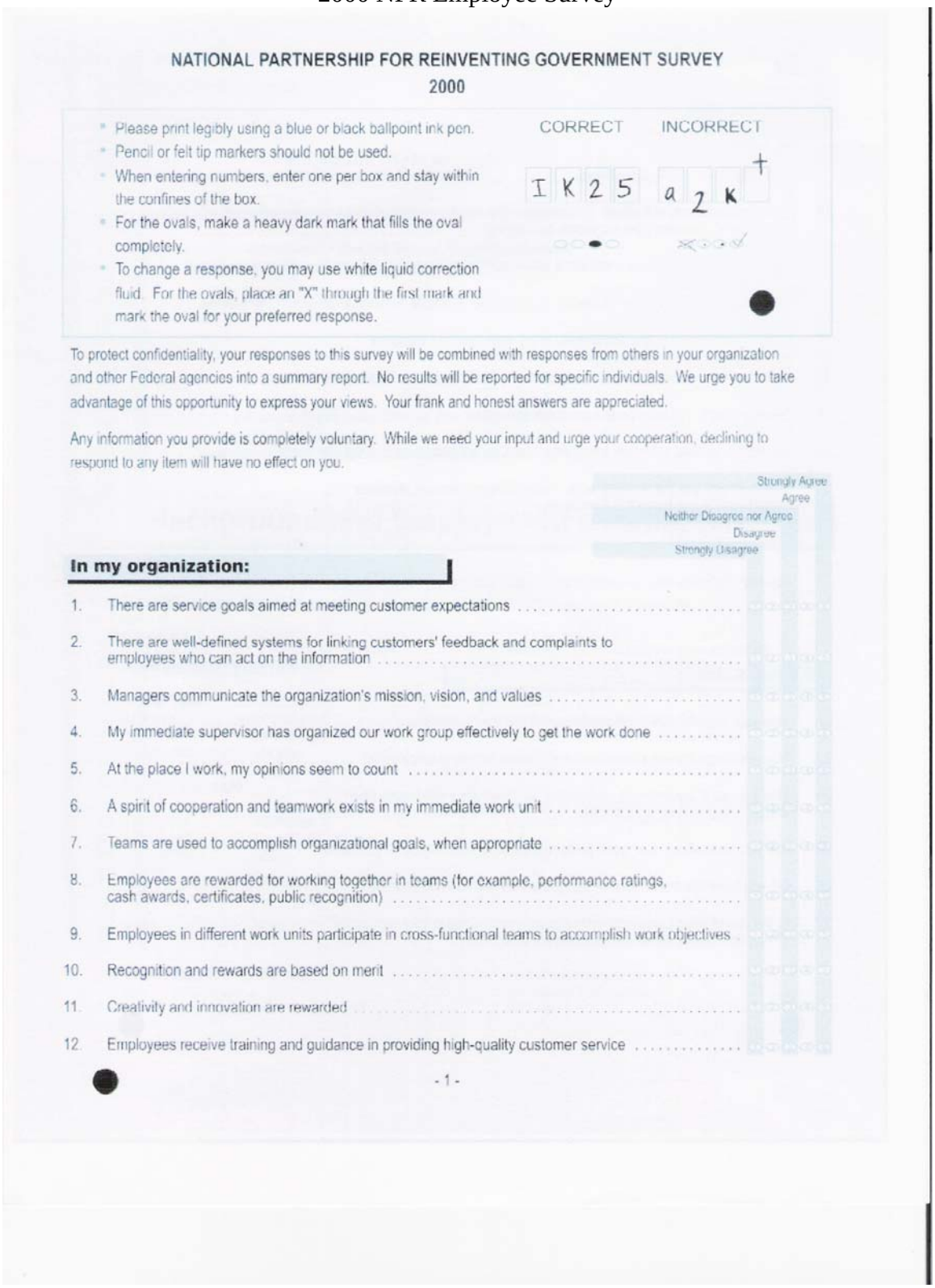
For your convenience, we have provided you with a self-addressed, postage-paid envelope. Please return the survey to the address below. **Do not bend or fold the survey.**

NPR Survey Center
c/o The Federal Executive Board
P.O. Box 25082
Oklahoma City, OK 73125-9942

22070

Appendix B

2000 NPR Employee Survey



NATIONAL PARTNERSHIP FOR REINVENTING GOVERNMENT SURVEY
2000

- Please print legibly using a blue or black ballpoint ink pen.
- Pencil or felt tip markers should not be used.
- When entering numbers, enter one per box and stay within the confines of the box.
- For the ovals, make a heavy dark mark that fills the oval completely.
- To change a response, you may use white liquid correction fluid. For the ovals, place an "X" through the first mark and mark the oval for your preferred response.

CORRECT INCORRECT

To protect confidentiality, your responses to this survey will be combined with responses from others in your organization and other Federal agencies into a summary report. No results will be reported for specific individuals. We urge you to take advantage of this opportunity to express your views. Your frank and honest answers are appreciated.

Any information you provide is completely voluntary. While we need your input and urge your cooperation, declining to respond to any item will have no effect on you.

In my organization:	Strongly Agree	Agree	Neither Disagree nor Agree	Disagree	Strongly Disagree
1. There are service goals aimed at meeting customer expectations					
2. There are well-defined systems for linking customers' feedback and complaints to employees who can act on the information					
3. Managers communicate the organization's mission, vision, and values					
4. My immediate supervisor has organized our work group effectively to get the work done					
5. At the place I work, my opinions seem to count					
6. A spirit of cooperation and teamwork exists in my immediate work unit					
7. Teams are used to accomplish organizational goals, when appropriate					
8. Employees are rewarded for working together in teams (for example, performance ratings, cash awards, certificates, public recognition)					
9. Employees in different work units participate in cross-functional teams to accomplish work objectives					
10. Recognition and rewards are based on merit					
11. Creativity and innovation are rewarded					
12. Employees receive training and guidance in providing high-quality customer service					

- 1 -

In my organization:	Strongly Agree	Agree	Neither Disagree nor Agree	Disagree	Strongly Disagree
13. Employees receive the training they need to perform their jobs (for example, on-the-job training, conferences, workshops)					
14. Differences among individuals (for example, gender, race, national origin, religion, age, cultural background, disability) are respected and valued					
15. Supervisors/team leaders understand and support employees' family/personal life responsibilities					
16. My organization has made reinvention a priority (for example, working smarter and more efficiently)					
17. In the past two years, the productivity of my work unit has improved					
18. In the past two years, I have been given more flexibility in how I accomplish my work					
19. Sign-in sheets and time cards have been eliminated					
20. Corrective actions are taken when employees do not meet performance standards					
21. Management and the union(s) work cooperatively on mutual problems (If you don't know, leave this item blank.)					

To what extent:	To A Very Great Extent	To A Great Extent	To A Moderate Extent	To A Limited Extent	Not at all
22. Has your organization implemented simplified travel regulations?					
23. Has your organization streamlined the process for hiring employees?					
24. Has the use of government credit cards for small office purchases been implemented in your organization?					
25. Are you clear about how "good performance" is defined in your organization?					
26. Do you have electronic access to information needed to do your job?					
27. Is the use of Plain Language writing being emphasized in your workplace? (If you don't know, leave this item blank.)					

With reference to your job:

		Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
28.	Considering everything, how satisfied are you with your job?					
29.	How satisfied are you with your involvement in decisions that affect your work?					
30.	How satisfied are you with the recognition you receive for doing a good job?					

		Very Good	Good	Fair	Poor	Very Poor
31.	Overall, how good a job do you feel is being done by your immediate supervisor/team leader?					
32.	How would you rate the overall quality of work being done in your work group?					

Background and Employment Information

The following questions ask about your background and employment status. The information you voluntarily provide will help to determine the representativeness of participation and aid with interpretation of the results.

33. How long have you been a Federal Government employee (excluding military service)?

- Less than 1 year
- 1 to 5 years
- 6 to 10 years
- 11 to 15 years
- 16 to 20 years
- 21 to 25 years
- 26 to 30 years
- 31+ years

34. What is your pay grade?

- 01 through 05
- 06 through 10
- 11 through 12
- x13 through 15
- Above 15 (GL, ST, ALJ)
- SES

35. Are you:

- Female
- Male

36. Are you of Hispanic or Latino origin?

- No
- Yes

37. What race do you consider yourself to be?

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Other

38. Are you in a workplace that is represented by a union collective bargaining agreement?

- Yes
- No
- Don't know

39. Where is your job located?

- National headquarters
- Regional headquarters
- Field

40. Please print the first three numbers of your work location's ZIP Code.

Work Location ZIP Code

41. Using the list of organizations on the inside back cover of your folder, print your organization's assigned code.

Organization Code (See list printed on the inside back cover of your survey folder.)

42. What is your job category?

- Professional (for example, scientist, engineer, psychologist, attorney)
- Administrative (for example, personnel mgmt, budget, contracting, and procurement specialist)
- Technician
- Clerical (for example, support staff, executive secretary)
- Wage Grade
- Other

43. What is your level of supervisory responsibility?

- None, I am not a supervisor
- Team leader
- First line supervisor
- Manager
- Executive

Comments: You are our best source of ideas. We invite you to share one or two brief comments or suggestions regarding government reinvention. Please use only black or blue ballpoint pen and stay within the box.

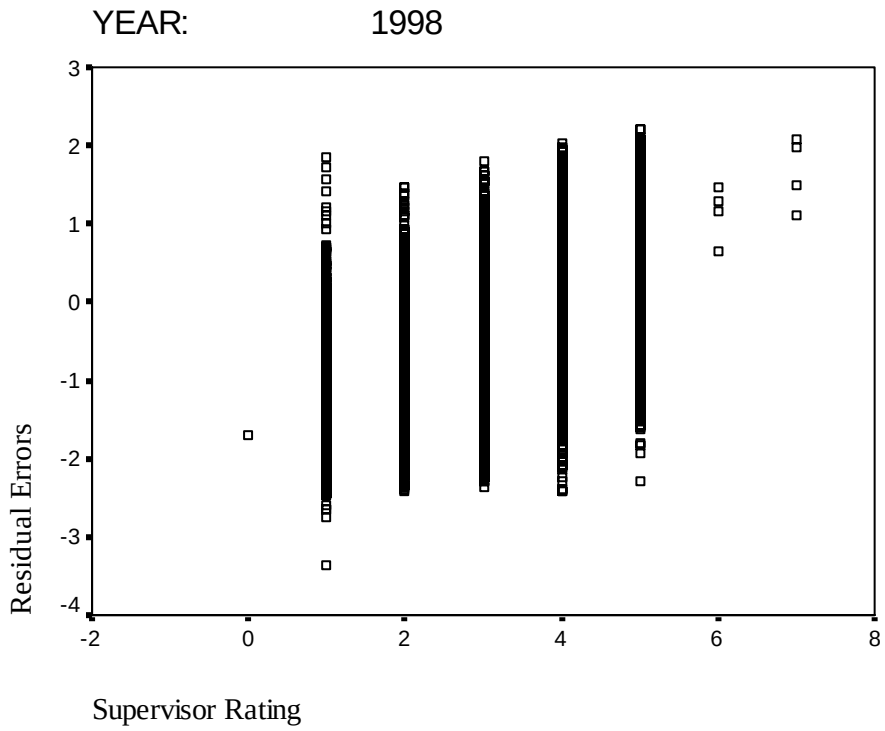
Thank you for participating in the NPR survey!

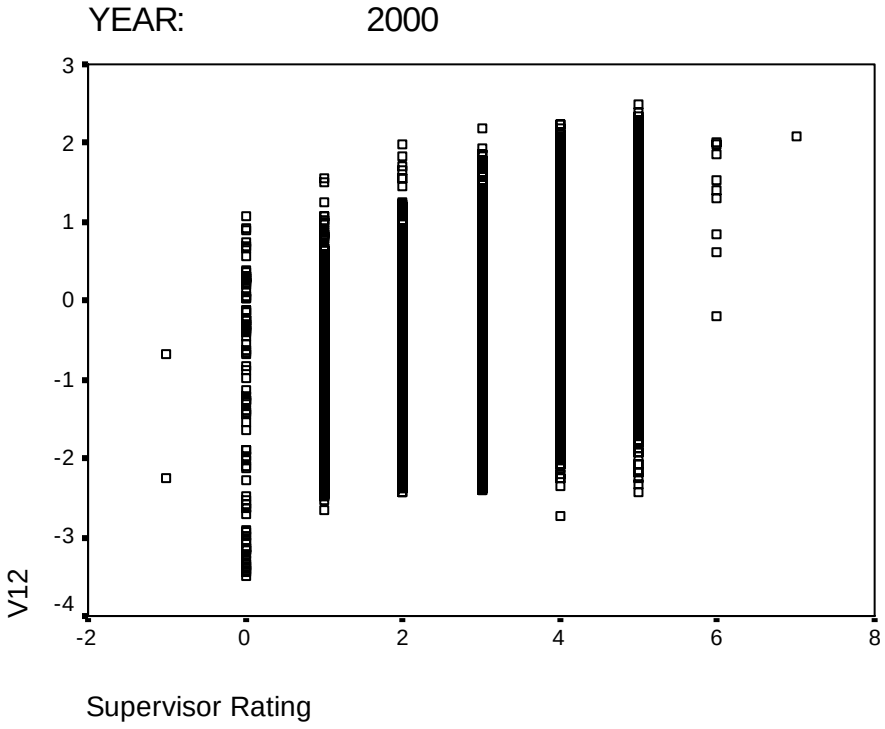
For your convenience we have provided you with a self-addressed, postage-paid envelope. Please return the survey **NO LATER THAN SEPTEMBER 29, 2000,** to the address below. **Do not bend or fold the survey.**

2000 National Partnership Survey
c/o Questar
P.O. Box 64675
St. Paul, MN 55164-9547

000845C/Questar 54321

Appendix C


YEAR: 1998
Residual Errors
3
2
1
0
-1
-2
-3
-4
-2
0
2
4
6
8
Supervisor Rating


YEAR: 2000
V12
3
2
1
0
-1
-2
-3
-4
-2
0
2
4
6
8
Supervisor Rating

Appendix D

Organization	Mean of Super Rating	ADJ R^2	N
FAA	3.14	0.60	276
All other Labor	3.19	0.54	273
All other Defense	3.22	0.53	220
Health Care Financing	3.23	0.41	308
Immigration	3.24	0.53	212
OSHA	3.24	0.48	314
Dept. of Navy	3.27	0.56	184
Dept. of Army	3.29	0.61	218
Food & Cons Services	3.31	0.50	326
NPS	3.32	0.48	358
Forest Service	3.33	0.46	273
FSI	3.33	0.49	295
All other interior	3.33	0.55	292
US Custom Service	3.33	0.53	260
All other transportation	3.34	0.46	277
Financial Mgmt	3.34	0.48	219
Veterans Health	3.34	0.53	187
All other VA	3.36	0.57	156
FEMA	3.38	0.53	379
Dept. of Air Force	3.4	0.58	167
Defense Logistics	3.4	0.58	243
Dept. of Energy	3.4	0.53	364
SSA	3.4	0.49	273
APHIS	3.41	0.54	318
Post Sec. Ed.	3.41	0.56	312
FDA	3.41	0.51	296
HUD	3.41	0.48	204
All other justice	3.41	0.46	190
IRS	3.42	0.41	266
EEOC	3.43	0.52	277
Children & Families	3.44	0.48	305
Veterans Benefits	3.44	0.52	318
All other HHS	3.45	0.5	277
All other agriculture	3.46	0.48	370
All other state	3.5	0.46	200
All other education	3.51	0.47	325
Small Business	3.51	0.53	358
Bureau of Consular Affairs	3.54	0.51	243
ITO	3.55	0.44	301
NOAA	3.56	0.47	341
All other commerce	3.57	0.58	311
All other treasury	3.58	0.46	272
GSA	3.6	0.51	257
OPM	3.65	0.55	297
PTO	3.67	0.37	203
Bureau of Census	3.67	0.46	342
EPA	3.72	0.49	309
NASA	3.91	0.43	385