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Gene A. Brewer
University of Georgia

Sally Coleman Selden
Syracuse University

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Why Elephants Gallop: Assessing and Predicting Organizational Performance in Federal Agencies

Gene A. Brewer
University of Georgia
Sally Coleman Selden
Syracuse University

ABSTRACT

Hal G. Rainey and Paula Steinbauer (1999) recently proposed a theory of effective government organizations.[1] Several other theories exist in whole or in part, but empirical testing is rare. In this article we cut to the chase and examine several key elements of these theories empirically. First, we explore the theoretical dimensions of organizational performance and derive a taxonomy to help measure the construct. Second, we draw from the literature and develop a model predicting organizational performance. Third, we operationalize and test the model with data from the 1996 Merit Principles Survey, U.S. Merit Systems Protection Board. In the end, this model explains 70 percent of the variation in employee perceptions of organizational performance across the twenty-three largest federal agencies. Most hypothesized relationships are confirmed. We conclude the article with a discussion of implications, limitations, and suggestions for future research.

Improving the performance of government agencies is a central concern of public administration, and speculation about the factors related to agency effectiveness is abundant in the literature and elsewhere. Unfortunately, little effort has been made to verify these factors empirically. One reason is that organizational performance is a difficult concept to define and measure. Stakeholders often disagree about which elements of performance are most important, and some elements are difficult to measure because they are preventive in nature (i.e., wars staved off, environmental disasters averted, and human suffering alleviated). In the public sector, tinkering with agency performance also has strong political implications.

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[1]In a recent article published in this journal, the authors argued that elephants and public organizations have something in common. Both are saddled with inaccurate stereotypes. Elephants are believed to be slow and insensitive creatures, when in fact they can run very fast and are very sensitive. Similarly, public organizations are believed to be low-performing and unresponsive, when in fact many public organizations perform very well and are models of responsiveness. After making the crucial point that some public organizations are doing a good job, the authors propose a theory of effective public organizations and urge the research community to test this theory empirically.

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These difficulties are illustrated by several sharply different assessments of federal agency performance. Congressional lawmakers recently issued "report cards," grading federal agencies on how well they have complied with the 1993 Government Performance and Results Act (P.L. 103-62). In general, agency efforts were characterized as "disappointing" (Gingrich et al. 1998, 2). In another study, the Government Performance Project rated management at fifteen federal agencies and concluded: "The causes of low agency grades come from outside as well as inside and almost invariably include unresolved political dilemmas" (Laurent 1999, 1). Yet the National Partnership for Reinventing Government recently surveyed federal workers and found that 72 percent believe the quality of work at their agencies is good or very good (FEDmanager 1998). Perhaps more convincing is a University of Michigan Business School study showing that twenty-nine high-impact federal agencies received customer satisfaction ratings that were much higher than expected and on par with most private-sector firms (National Quality Research Center 1999).

Despite these different perceptions, most observers would agree that organizations vary in how well they perform. So why do some organizations perform better than others? Unfortunately, this question cannot be answered with certainty. Herman L. Boschken (1994, 308) says most of the literature on organizational performance is "disappointing." After several years of study, a National Research Council committee was "unable to draw conclusions, based on scientific evidence, on what does or does not work to enhance organizational performance" (Druckman, Singer, and Van Cott 1997, 10). The committee added:

> . . . research is more likely to address practical issues if it is guided by a conceptual framework that specifies relationships among the various influences on organizational performance. . . . Without such a foundation for research, results are likely to address only the narrow issues of whether one or another popular approach is more plausible. Developing theory and doing research on these relationships should take priority in any research agenda on organizational performance.

Accordingly, this article reviews recent efforts to model high performance organizations and identifies the most influential factors that affect federal agency performance. First, we explore the theoretical dimensions of organizational performance and derive a taxonomy to help measure the construct. Second, we draw from the literature and develop a model predicting organizational performance. Third, we operationalize and test the model with data from the 1996 Merit Principles Survey, U.S. Merit Systems Protection Board. Then we discuss the implications and

limitations of this research and offer some suggestions for future inquiry.

LITERATURE AND MODEL DEVELOPMENT

High performance organizations are defined in various ways, but the following description is fairly typical: "High-performance organizations are groups of employees who produce desired goods or services at higher quality with the same or fewer resources. Their productivity and quality improve continuously, from day to day, week to week, and year to year, leading to the achievement of their mission" (Popovich, ed. 1998, 11). The authors posit that high performance organizations are clear on their missions, define outcomes and focus on results, empower employees, motivate and inspire people to succeed, are flexible and adjust nimbly to new conditions, are competitive in terms of performance, restructure work processes to meet customer needs, and maintain communications with stakeholders (pp. 16-22). Popovich, ed. (1998, 33) states that consistent, sustained leadership focused on high performance is the first prerequisite for implementing a high-performance work organization. The inspirational tone of these passages is characteristic of the organizational performance literature, but unfortunately, there is little scientific evidence to support most of these assertions.

A review of the literature on organizational performance in the public sector reveals several theoretical studies that strive for comprehensiveness (Ingraham, Joyce, and Kneedler forthcoming; Rainey and Steinbauer 1999; Wolf 1993; and several studies cited therein). Some studies emphasize the importance of performance generally (Cohen 1993; Kettle, et al. 1996; Hedley 1998; Berman and West 1998), while others focus on performance measurement and monitoring (for example, see Hatry and Wholey 1992; Hatry 1999; Hatry, ed. 1999; Kopczynski and Lombardo 1999). Some studies are best described as best practices research (for example, see Osborne and Gaebler 1992; Popovich, ed. 1998; National Partnership for Reinventing Government 1999).

In addition, there are several empirical studies of organizational performance in public organizations. At the federal level, Pegnato (1993) studied procurement activities in thirty-five federal agencies and examined the effects of organizational environment, size, and design on organizational performance. The author found that performance was highest in agencies with a high percentage of political appointees as managers. Simon (1998) studied seventy-seven federal bureaus and compared those that received the President's Quality Award with those that did not receive the award. The author concluded that successful bureaus more

effectively formulate, articulate, and implement performance concepts relevant to the workforce; link concepts to direct actions; develop meaningful relationships with customers, employees, suppliers, and stakeholders; and measure results. Through case studies, Grindle and Hilderbrand (1995) found that effective public sector performance is more often driven by strong organizational cultures, good management practices, and effective communication networks than it is by rules and regulations or procedures and pay scales. In another research effort, Hennessey (1998) studied nine federal offices and found that leadership affects organizational performance, most likely by influencing organizational culture.

A review of these and other studies yields several conclusions. Despite the obvious importance of the topic, few empirical studies have been made of organizational performance in the public sector, and as best we can tell, none have been from the perspective of public employees. The few studies that exist are limited in several ways. Most focus only on a few agencies or bureaus, consider only a few factors that affect organizational performance, and examine only narrow measures of organizational performance—typically efficiency or productivity measures. This article seeks to fill this gap in the literature by examining organizational performance in the twenty-three largest federal agencies. Our first step is to identify and define the key variables. For this purpose, we draw primarily from Rainey and Steinbauer (1999), other public-sector literature, and some private-sector studies as needed.

Defining and Measuring Organizational Performance

Organizational performance is a socially constructed phenomenon that is subjective, complex, and particularly hard to measure in the public sector (Au 1996; Anspach 1991). Boschken (1994, 309) argues that public agencies have multiple constituencies that demand different performance emphases, but public administration scholars tend to focus narrowly on performance, selecting a single standard or consolidated index. He adds: "[P]rioritizing one performance emphasis over others rejects the very meaning of public services in an interdependent plural society" (p. 312). Previous research has tended to focus on narrow, efficiency-related measures of performance and to neglect other values such as equity and fairness. Such narrow measures of performance can produce misleading conclusions about organizational effectiveness (Kaplan and Norton 1992; Judge 1994). Finally, researchers typically impose their own definitions of organizational effectiveness. Yet they should not

impose an arbitrary set of indicators; rather, they should ask "effectiveness from whose perspective" (El-Kazaz 1988; Kaplan and Norton 1992)?

A fundamental assumption in organizational psychology is that organizations and individuals are interdependent (Pfeffer and Salancik 1978), yet little attention has been paid to the bases upon which members of the organization assess its effectiveness. For this study, we propose a perceptual measure of organizational performance grounded in a theoretical taxonomy (see exhibit 1). This taxonomy differentiates between an organization's internal and external performance, and it specifies the following performance-related values: efficiency, effectiveness, and fairness. The taxonomy captures various elements of performance mentioned in the literature, such as quality of work and productivity.[2] This taxonomy will be used to construct a perceptual measure of organizational performance in the next section of the article.

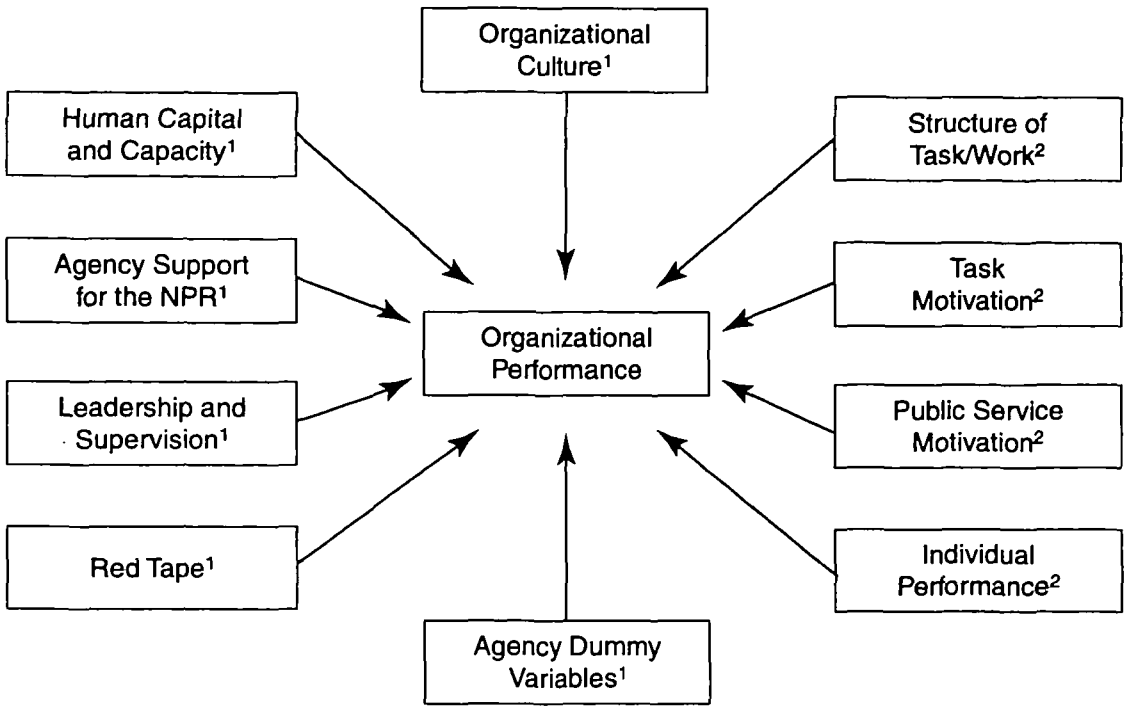
Next, we identify two types of factors that affect organizational performance in federal agencies: agency-level factors and individual-level factors. These factors appear to work in concert, but their causal paths are not agreed upon. Moreover, some factors overlap. For example, some organizations have a tradition of strong leadership, and this tradition is a facet of their organizational culture. Indeed, studies show that leadership interacts with culture to affect organizational performance (Hennessey 1998; Oskarsson 1984; Martell and Carroll 1995). Therefore, separating leadership from culture is difficult.

Exhibit 1
Theoretical Dimensions of Organizational Performance

		Administrative Values		
		Efficiency	Effectiveness	Fairness
Organizational Focus	Internal	Internal Efficiency	Internal Effectiveness	Internal Fairness
	External	External Efficiency	External Effectiveness	External Fairness

[2]Performance analysis typically is done at three levels: the individual employee or group, the program, and the organizational level (Boschken 1994; for similar arguments, see Kaplan and Norton 1992; Judge 1994; Ghosn, Aljazzaf, and Nazar 1997). Our proposed measure of organizational performance essentially combines the latter two levels, and we use the first level as an independent variable.

Exhibit 2
Theoretical Model of Organizational Performance in Federal Agencies



[1]Agency-level factors. [2]Individual-level factors.

Key Factors Affecting Organizational Performance

Exhibit 2 shows the theoretical framework for this study. First, we identify five agency-level factors that may affect federal agency performance: organizational culture, human capital and capacity, agency support for the National Performance Review (NPR), leadership and supervision, and red tape.

Organizational Culture.[3] Organizational culture refers to "patterns of shared meaning in organizations" (Rainey and Steinbauer 1999, 17), and it includes the "beliefs, symbols, rituals, and myths that evolve over time and function as the glue that holds organizations together" (Hennessey 1998, 525). Organizational culture is manifested at different levels, but the most important level is the basic assumptions and beliefs of members of the organization. Edgar H. Schein (1985, 6) explains:

[3]There is a long-standing debate about whether organizational culture and climate are independent concepts. In this study, we assume they are the same.

The term culture should be reserved for the deeper level of basic assumptions and beliefs that are shared by members of an organization, that operate unconsciously, and that define in a basic "taken-for-granted" fashion an organization's view of itself and its environment. These assumptions are learned responses to a group's problems of survival in its external environment and its problem of internal integration.

One of the first studies to describe and explain the importance of organizational culture in the public sector was Herbert Kaufman's *The Forest Ranger* (1960). In recent years, scholars have shown renewed interest in organizational culture and its relationship to individual and organizational performance (Rainey and Steinbauer 1999; DiIulio 1994; Saffold 1988; Wilkins and Ouchi 1983). Yet few studies have examined the relationship between organizational culture and organizational performance using measurable outcomes (Bollar 1996; Fisher 1997). One exception is Petty, Beadles, and Lowery (1995), who found that measures of organizational culture were significantly related to objective measures of organizational performance. Several other studies have linked organizational culture to organizational performance empirically (Dobni 1996; Fisher 1997; Marcoulides and Heck 1993; Bollar 1996; Thompson 1996). Most of these studies consider culture a multidimensional construct. For example, Fisher (1997) identified four traits of organizational culture—involvement, consistency, adaptability, and mission.

The NPR asserts that organizational culture is the most important factor that affects organizational performance. "Our goal is to make the entire federal government both less expensive and more efficient, and to change the culture of our national bureaucracy away from complacency and entitlement toward initiative and empowerment" (Gore 1993, 1). Important elements of organizational culture in the public sector include valuing employees' opinions, promoting a spirit of teamwork and cooperation, and fostering a concern for the public interest (Osborne and Gaebler 1992; Gore 1993; DiIulio 1994; Rainey and Steinbauer 1999). Another important component is heavy reliance on teamwork (Petty, Beadles, and Lowery 1995; Dunphy and Bryant 1996). We believe these four elements are positively related to federal agency performance.

Human Capital and Capacity. The management literature frequently asserts that people are the most important organizational resource and the key to achieving high performance (Peters and Waterman 1982; Osborne and Gaebler 1992; Pfeffer 1994; Becker and Gerhart 1996; Rainey 1997). The U.S. General Accounting Office (1999, 1) recently said: "Leading performance-based organizations understand that effectively managing the

organization's employees—or human capital—is essential to achieving results. People are an organization's most important asset, especially with service-providing organizations." Several empirical studies have confirmed that certain human resource management (HRM) practices are related to high performance in organizations (Delaney and Huselid 1996; Martell and Carroll 1995; Kalleberg and Moody 1994; Terpstra and Rozell 1993; Haltiwanger, Lane, and Spletzer 1999). For example, Delaney and Huselid (1996) studied 590 for-profit and nonprofit firms from the National Organizations Study (NOS) and found positive associations between HRM practices such as training and staffing selectivity and perceptual measures of organizational performance. Kalleberg and Moody (1994) studied a similar sample of organizations and confirmed that certain HRM policies and practices do improve organizational performance. Terpstra and Rozell (1993) studied business firms and found a relationship between five staffing practices and organizational performance, but the relationship varied by industry type. Simon (1998) found that federal bureaus that had received a President's Quality Award had better human resource management and development. Finally, Martell and Carroll (1995) studied eighteen executive-level HRM practices and found several of them associated with higher firm performance.

The key components of HRM are building human capital through recruitment and employment processes, retaining high performing human capital, maintaining sufficient human capacity to do the agency's work, and providing employees with sufficient training. We believe that each of these components is positively related to organizational performance.

Agency Support for the NPR. In recent years, federal agencies have experienced two waves of administrative reform: the Clinton administration's NPR and additional downsizing and budget cuts mandated by the Republican-led Congress. The first wave of reform began in 1993 with the Clinton administration's NPR. The stated purpose of these reforms was to make government work better and cost less, and to improve federal agency performance (Gore 1993, 1). The second wave of reform began when Republicans seized control of both houses of Congress in the 1994 midterm elections. Their Contract With America echoed some themes of the NPR, but it generally placed greater emphasis on downsizing and budget cuts. Yet the relationship between downsizing and organizational performance has not been studied carefully in government or business (Cameron 1994; Duran 1998; Wagar 1998). Regardless of the overall impact of these changes, a critical factor is how agencies respond to NPR and

other reform-related mandates. We suspect that agencies that more strongly endorse these mandates are higher performers.

Leadership and Supervision. Leadership is one of the most frequently asserted contributors to organizational performance in all types of organizations. Several studies have examined this relationship empirically (Hrebiniak and Snow 1982; Fielder 1986; Thomas 1988; Jacobs and Singell 1993; Nahavandi and Malekzadeh 1993; Costanza 1996). In general, field studies have found that leaders' personality characteristics and behaviors have little effect on organizational productivity as measured by indirect, enterprise-wide financial measures such as profit and return on assets (Costanza 1996; Butler and Cantrell 1997). Higgins (1998) found few significant relationships between leadership orientation (transactional versus transformational) and the leaders' perceptions of organizational effectiveness. Yet Thompson (1996) found strong evidence suggesting that the presence of a caring, involved leader was the critical ingredient in organizational performance. Similarly, Butler and Cantrell (1997) found strong effects between leaders' initiating structure and consideration on both job satisfaction and productivity of group members.

Some pioneering studies of leadership emanated from the public administration and political science literatures. These studies emphasized the informal and political nature of leadership, and deemphasized the classical view of leaders as autocrats. Once again, the public administration literature is focusing on the importance of having visionary, skilled, and charismatic leaders in public agencies (Rainey 1997; Riccucci 1995; Ban 1995). In a recent study of nine federal offices, Hennessey (1998) found that leadership affects both NPR efforts and organizational performance, most likely by influencing the organizational culture. Simon (1998) found that federal bureaus that received a President's Quality Award had better leadership. As a result, we expect that better leaders and better supervision facilitate higher levels of organizational performance.

Red Tape. Robert A. Dahl and Charles E. Lindblom (1953) contended that public organizations suffer more than business firms suffer from red tape. In general, scholars believe that red tape inhibits organizational performance (Buchanan 1975; Wilson 1989; Bozeman 1993; Rainey 1997). There are two types of red tape: internal and external. Internal red tape makes organizational processes more complex, and it primarily imposes hardships on members of the organization. A classic example of internal red tape is civil service rules that make personnel actions difficult to consummate. In contrast, external red tape places burdens on

those outside the organization. An example of external red tape is the burdensome record keeping requirements that some regulatory agencies require.

One sure sign of red tape is complexity in organizational design. Pegnato (1993) recently examined the effects of organizational design on organizational performance and found that as the number of management levels increased and the span of control decreased, organizational performance decreased. On the other hand, Bhargava and Sinha (1992) found that heterarchical structures were positively related to organizational performance. Apparently organization matters (Wilson 1989, ch. 2). Accordingly, we operationalize red tape as excessive management levels in an agency and predict that lower levels of red tape are positively related to organizational performance.

Next, we identify four individual-level factors that may affect federal agency performance: structure of task/work, task motivation, public service motivation, and individual performance (see exhibit 2). These factors are explained below.

Structure of Task/Work. James Q. Wilson (1989, ch. 3) contends that the structure of task/work strongly affects organizational performance in public bureaucracies. Previous studies have shown that allowing employees to be more involved in making work-related decisions is positively associated with organizational performance (Delaney and Huselid 1996; Wagar 1998). Other scholars tend to agree (for example, see Rainey 1997, ch. 8). We predict that agencies that give employees more flexibility in accomplishing their work will be higher performing agencies.

Task Motivation. We must understand the motives of people who work in an organization in order to understand the organization itself (Schneider 1983a and 1983b). Rainey and Steinbauer (1999, 23) posit that "effective government agencies have high levels of motivation among their members, including high levels of . . . task motivation." They add: "These factors can be independent of, or weakly related to, public service motivation and mission motivation" (p. 26-27; also see Wilson 1989, ch. 3). The authors refer to the intrinsic value of work and suggest that some people are motivated by this facet of their jobs alone. An example is the starving artist who enjoys painting but never exhibits or sells his work. We predict that high levels of task motivation are positively related to federal agency performance.

Public Service Motivation. Public service motivation (PSM) is "the motivational force that induces individuals to perform public service" (Brewer and Selden 1998a, 417). Studies show

that PSM is linked to important work-related attitudes and behaviors such as achievement, commitment, job satisfaction, individual performance, and whistle-blowing (Crewson 1997; Brewer and Selden 1998a; Lewis and Alonso 1999), and extraorganizational attitudes and behaviors such as altruism, trust in government, serving the public or one's country, civic involvement, and political participation (Brewer and Maranto 2000; Brewer and Selden 1998a and b; Brewer, Selden, and Facer 2000).[4] Two studies have documented a relationship between PSM and organizational performance (Crewson 1997; Brewer and Selden 1998a). Using the same data set utilized in this study, Lewis and Alonso (1999, table 2) found that "employees with high public service motivation are more common in some agencies than others" (p. 9). Therefore, we predict that PSM is positively related to federal agency performance.

Individual Performance. In all likelihood, individual performance contributes to organizational performance (for rationales, see Perry and Wise 1990; Brewer and Selden 1998a; Brewer, Selden, and Facer 2000). Therefore, agencies with higher-performing employees are expected to be higher-performing agencies.

Other Factors That Affect Organizational Performance

Several concepts that are deemed important in the public administration literature are not discussed in detail because they cannot be fully operationalized and measured in this study. For example, scholars contend that agencies with strong support networks—both in Congress and elsewhere—will be higher-performing agencies (Wolf 1993; Rainey and Steinbauer 1999). Such a support network is tangible evidence that an agency's mission is important, and it can confer autonomy and deliver resources needed to accomplish the agency's mission. Accordingly, the existence of a support network of stakeholders who strongly endorse the agency's mission is likely to increase organizational performance. Rainey and Steinbauer (1999) also contend that clear and salient missions are conducive to agency effectiveness.

Other studies have utilized other factors to explain different measures of organizational performance empirically (for example, see Barksdale 1994; Subramanian and Nilakanta 1996; Oskarsson 1984; Terpstra and Rozell 1993; Waclawski 1996; Fisher 1997; Peach 1992; Pegnato 1993; Lytle 1994; Ostroff 1992; Wagar 1998). However, the factors we have identified appear to be the most important.

[4]Podanskoff and Mackenzie (1997) argue that organizational citizenship behavior is linked to organizational performance, saying helping behavior tends to have more systematic effects than either sportsmanship or civic virtue.

Specifying Causal Paths: You Can't Get There From Here

Scholars generally agree that the variables identified above affect organizational performance. They also report finding these variables in clusters in high-performing organizations (for example, see Kalleberg and Moody 1994). However, there is some disagreement about the ordering of these variables and their causal paths (for different specifications, see Rainey and Steinbauer 1999; Burke and Litwin 1992; Barksdale 1994; Subramanian and Nilakanta 1996; Oskarsson 1984; Kalleberg and Moody 1994; Terpstra and Rozell 1993; Waclawski 1996; Fisher 1997; and Dobni 1996). Because of these fundamental disagreements in the literature, and because the data used in this study are cross sectional, only direct relationships between the independent variables listed above and the dependent variable—organizational performance—will be estimated. Thus, we will test the model with ordinary least squares (OLS) regression, estimating the effects of each independent variable on organizational performance while holding all other independent variables constant.

DATA AND METHODS

The model and hypotheses are tested using data from the 1996 Merit Systems Protection Board's (MSPB) Merit Principles Survey. The MSPB surveyed a random sample of 18,163 permanent full-time employees in the twenty-three largest federal government agencies (for details, see U.S. Merit Systems Protection Board 1998, 2-3). These employees provide a representative cross section of the 1.7 million permanent full-time employees in the federal civilian workforce. In all, 9,710 persons completed and returned surveys for a response rate of approximately 53.5 percent. The number of respondents per agency ranges from 193 in the Social Security Administration to 584 in the U.S. Department of Agriculture. The questionnaire includes items on job-related attitudes and behaviors, agency characteristics, and the NPR.

Exhibit 3 describes how the dependent and independent variables are operationalized, and reports means and standard deviations for each.[5] Six MSPB questions were used to construct the dependent variable, perceived organizational performance (Cronbach's alpha = .70).[6] The first four items are scaled from 1, strongly disagree, to 5, strongly agree. The fifth item, coworkers' quality of work, is based on a scale ranging from 1, poor, to 5, outstanding. The last item in the index, provides for fair and equitable treatment of employees, uses a four-point- scale that ranges from 1, less than 70 percent of the time (exceptions occur regularly), to 4, always (without exception). Taken together,

[5]There were no problems of multicollinearity between the dependent and independent variables specified in the model.

[6]Carmines and Zeller (1979) indicate that it is desirable to have a reliability coefficient of .70 or more.

these items provide a broad assessment of perceived organizational performance by tapping each dimension of the concept shown in exhibit 1. The perceived measure gets at important issues such as an agency's contribution to society, internal productivity and quality, utilization of employee expertise, and organizational treatment of employees and clients. Although perceptual data introduce limitations through increased measurement error and the potential for monomethod bias, using such measures is not unprecedented (Bollar 1996; Delaney and Huselid 1996; Fisher 1997; Higgins 1998). Studies have shown that measures of perceived organizational performance correlate positively (with moderate to strong associations) with objective measures of organizational performance (Dollinger and Golden 1992; Powell 1992).

Information about the independent variables included in the model is also reported in exhibit 3. Although we are limited to the questions asked in the survey, we include many different factors identified in the literature as actual or potential determinants of organizational performance.

Although we use the construct *culture* loosely in this study, we have identified three factors from the perspective of employees that reflect an organization's internal culture and climate, including whether the organization values employees' opinions, promotes a spirit of teamwork and cooperation, and fosters a concern for the public interest.[7] The first two items are scaled 1, strongly disagree, to 5, strongly agree. The third item is scaled 1, less than 70 percent of the time (exceptions occur regularly), to 5, always (without exception). In addition, we include agency dummy variables that may capture other aspects of an agency's culture such as the nature and importance of its mission.[8]

We include four concepts that probe human capital and capacity. First, we create a *building human capital* index by adding five variables from the survey that relate to an agency's selection and promotion practices (Cronbach's alpha = .91). Second, we measure the organization's ability to retain high-performing employees by summing three survey items (Cronbach's alpha = .80). Third, we measure *adequate human capital* by including an item that taps whether employees believe that staffing levels are adequate. The responses range from 1, strongly disagree, to 5, strongly agree. Fourth, we measure training by including an item that asks whether the employee believes more training is needed to perform his or her job effectively. This item is scaled the same as the previous question.

[7]Fisher (1997) also measured organizational culture with employee ratings.

[8]We initially included all twenty-three agencies, using "other" as the reference category. In the final model, we retained only agency variables that were statistically significant.

Exhibit 3
Survey Items, Means, and Standard Deviations for Dependent and Independent Variables

---

Dependent Variable

Organizational Performance (mean=15.66, std=3.91, range 1-24, Alpha=.70)

- My organization has made good use of my knowledge and skills in looking for ways to become more efficient. (mean=3.08, std=1.20)
- In the past 2 years, the productivity of my work unit has improved. (mean=3.32, std=1.12)
- The work performed by my work unit provides the public a worthwhile return on their tax dollars. (mean=4.17, std=0.91)
- In general, people of my race/national origin group are treated with respect in my organization. (mean=3.60, std=1.06)
- Overall, how would you rate the quality of work performed by your current coworkers in your immediate work group. (mean=3.82, std=0.84)
- My organization provides fair and equitable treatment for employees and applicants in all aspects of personnel management without regard to their political affiliation, race, color religion, national origin, sex, marital status, age, or handicapping condition. (mean=2.47, std=1.05)

Independent Variables

Agency-Level Factors

Organizational Culture

Efficacy

- At the place I work, my opinions seem to count. (mean=3.41, std=1.12)

Teamwork

- A spirit of cooperation and teamwork exists in my immediate work unit. (mean=3.59, std=1.16)

Concern for the public interest

- My organization promotes high standards of integrity, conduct, and concern for the public interest among agency employees. (mean=2.56, std=0.95)

Protection of employees (mean=7.08, std=2.17, range 1-13, Alpha=.84)

- My organization protects employees against arbitrary personnel actions. (mean=2.32, std=0.97)
- My organization protects employees against personal favoritism. (mean=1.96, std=0.95)
- My organization protects employees against coercion for partisan political activities. (mean=2.97, std=0.98)
- My organization protects employees against reprisal for whistleblowing. (mean=2.51, std=1.08)

Human Capital and Capacity

Building human capital (mean=6.86, std=3.07, range 1-16, Alpha=.91)

- My organization selects well-qualified persons when hiring from outside the agency. (mean=2.10, std=0.83)
- My organization selects persons on the basis of their relative ability, knowledge, and skills when hiring from outside the agency. (mean=2.25, std=0.87)
- My organization promotes people on the basis of their relative ability, knowledge, and skills. (mean=2.02, std=0.88)
- My organization makes selections based on fair and open competition when hiring from outside the agency. (mean=2.25, std=0.96)
- My organization makes selections based on fair and open competition for promotions. (mean=2.05, std=0.92)

Retaining high performing human capital (mean=3.31, std=2.21, range 1-10, Alpha=.80)

- My organization retains employees on the basis of the adequacy of their performance. (mean=2.15, std=0.94)
- My organization takes appropriate steps to correct inadequate performance. (mean=1.75, std=0.88)
- My organization separates employees who cannot or will not improve their performance to meet required standards. (mean=1.50, std=0.80)

Maintaining adequate human capacity

- My work unit has a sufficient number of employees to do its job. (mean=2.81, std=1.30)

Training

- I need more training to perform my job effectively. (mean=2.89, std=1.16)

Exhibit 3 (continued)

Agency Support for the NPR
- My organization has made the goals of the National Performance Review an important priority. (mean=3.25, std=1.06)

Leadership and Supervision (mean=8.04, std=3.47, range 1-13, Alpha=.94)
- My immediate supervisor has good management skills. (mean=3.30, std=1.28)
- My immediate supervisor has organized our work group effectively to get the work done. (mean=3.23, std=1.23)
- Overall, I am satisfied with my supervisor. (mean=3.50, std=1.22)

Red Tape
- There are too many management levels in my organization. (mean=3.30, std=1.22)

Individual-Level Factors

Structure of Task
- In the past 2 years, I have been given more flexibility in how I accomplish my work. (mean=3.25, std=1.13)

Task Motivation
- The work I do on my job is meaningful to me. (mean=4.32, std=0.85)

Public Service Motivation (mean=14.59, std=2.98, range 1-21, Alpha=.70)
- Meaningful public service is very important to me. (mean=4.26, std=0.74)
- I am not afraid to go to bat for the rights of others even if it means I will be ridiculed. (mean=4.05, std=0.83)
- Making a difference in society means more to me than personal achievements. (mean=3.52, std=0.94)
- I am prepared to make enormous sacrifices for the good of society. (mean=2.97, std=0.99)
- I am often reminded by daily events about how dependent we are on one another. (mean=3.75, std=0.85)

Individual Performance
- Which of the following *most closely* describes the performance rating you received at your last appraisal? (mean=6.21 , std=0.79)

Next, we assess federal agency support for reform-related mandates with an item that asks employees whether their organizations have made the goals of the NPR an important priority. The responses range from 1, strongly disagree, to 5, strongly agree. We intend this item to capture both NPR and other reform-related mandates. A recent report by the U.S. Merit Systems Protection Board (1998, 2) said: "In assessing the effects of these changes it is important to recognize that most members of the Federal workforce rarely differentiate among the various factors behind the changes that have been occurring."

We operationalize leadership and supervision with a three-item index that includes the following variables: questions asking whether a person's immediate supervisor has good management skills, whether a person's immediate supervisor organizes his or her work group effectively, and a person's overall level of satisfaction with his or her supervisor (Cronbach's alpha = .94). This measure may seem problematic because it focuses on first-level

supervisors, but recall the nature of the sample. By studying a representative cross section of federal employees, we receive assessments on a representative cross section of agency leaders and supervisors. Such a measure is actually more indicative of an agency's leadership and supervision capacity than is a measure that focuses only on agency heads or top managers.

Our measure of red tape is a question asking respondents if there are too many management levels in their organizations. As we have already explained, excessive management levels can create both internal and external red tape and can inhibit organizational performance. Responses on this item range from 1, strongly agree, to 5, strongly disagree.

We also incorporate a measure of work or task structure. The following survey question taps this item: "In the past 2 years, I have been given more flexibility in how I accomplish my work." This variable is scaled from 1, strongly disagree, to 5, strongly agree. The related concept of task motivation is measured with the following question: "The work I do on my job is meaningful to me." The responses range from 1, strongly disagree, to 5, strongly agree.

The public administration community has long contended that some individuals have strong norms and emotions about performing public service and are more likely to be higher performers (Brewer and Selden 1998a; Perry and Wise 1990; Lewis and Alonso 1999). While PSM is a multifaceted construct, Perry (1996) translated the theory into a measurement scale and six of his questions are included in the 1996 MSPB survey.[9] As we show in exhibit 3, we use five of these items to create an additive PSM index (Cronbach's alpha = .70).[10]

Finally, we include a measure of individual performance because we believe that organizations with high-performing employees will be higher-performing organizations. This self-reported item consists of the employee's most recent performance appraisal rating and ranges from 1 (fail) to 7 (outstanding).

As we mentioned above, because they could not be measured fully we dropped several variables from the analysis; included were items such as stakeholder support, agency autonomy, and some aspects of agency mission. Then we added agency dummy variables to compensate for this loss. Now we will report findings on our performance measures and results of the OLS regression equation for perceived organizational performance.

[9]These questions tap four of the six theoretical dimensions of the construct described by Perry (1996), and three of the four dimensions included in his measurement model.

[10]The MSPB survey included the item, "The give and take of public policy-making doesn't appeal to me." When factor analyzing the six PSM items, this item did not load with the others.

FINDINGS AND DISCUSSION

Federal agencies are ranked by performance in exhibit 4, which reports means and standard deviations for the combined performance index and the six performance elements of which it is comprised. On the whole, federal agencies scored a mean of 15.66 on the 24-point scale, suggesting that they are performing adequately overall but have considerable room for improvement. On the individual performance elements, agencies scored higher overall on providing the public a worthwhile return on their tax dollars (item 3), and lower overall on making good use of employees' knowledge and skills and providing fair and equitable treatment for employees and applicants (items 1 and 6).

Looking across federal agencies, there is a fair amount of variation on the combined performance indices and on their individual elements. The highest performing agency by far is the National Aeronautics and Space Administration (NASA), followed by a second tier of agencies consisting of the Army, Veteran's Administration (VA), Commerce Department, Office of Personnel Management (OPM), Justice Department, Air Force, and General Services Administration (GSA). The lowest performing agencies are the Departments of Transportation and Education, Social Security Administration (SSA), Housing and Urban Development (HUD), and the Departments of State, Labor, Agriculture, Treasury, Health and Human Services, and Interior.[11]

On the individual performance elements, NASA scored higher than other federal agencies on each measure. The defense agencies—Army, Air Force, Navy, and other DOD—also scored well on most items, but they scored lowest on providing the public a worthwhile return on their tax dollars (item 3). In contrast, several lower performing agencies scored relatively well on this item (Agriculture, Education, Interior, and Labor). Otherwise, the lowest performing agencies overall tended to score lowest on the individual performance elements.

Exhibit 5 reports the results of the OLS regression equation predicting organizational performance in federal agencies. The adjusted multiple coefficient of determination is .70, meaning that the model has good explanatory power. The independent variables together account for 70 percent of the variation in employee perceptions of organizational performance. The equation achieves statistical significance at the .001 level.[12]

Next, we examine the standardized coefficients to judge the relative importance of each factor that affects organizational

[11]We used cluster analysis to identify these groups.

[12]We only included respondents who answered all relevant survey questions. To examine the effects of this decision, we replaced missing values with the mean and reran the model with all respondents. This change had little effect on the results. The primary difference was a lower adjusted R^2 (from .70 to .62, $p < .001$).

Exhibit 4
Federal Agencies Ranked by Performance Means and Standard Deviations

Agency	Index	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6
1. NASA	16.83	3.36	3.45	4.31	3.84	4.15	2.53
	(3.44)	(1.11)	(0.99)	(0.78)	(0.94)	(0.70)	(1.01)
2. Army	16.19	3.27	3.42	4.08	3.76	3.83	2.64
	(3.92)	(1.15)	(1.11)	(0.92)	(0.99)	(0.81)	(1.03)
3. VA	16.17	3.22	3.45	4.23	3.67	3.77	2.59
	(3.85)	(1.22)	(1.14)	(0.90)	(1.05)	(0.86)	(1.07)
4. Commerce	16.13	3.22	3.44	4.28	3.70	3.80	2.61
	(4.02)	(1.17)	(1.04)	(0.94)	(1.00)	(0.86)	(1.05)
5. OPM	16.12	3.10	3.35	4.20	3.70	3.77	2.10
	(4.30)	(1.25)	(1.18)	(1.00)	(1.10)	(0.81)	(1.11)
6. Justice	15.99	3.11	3.47	4.16	3.55	3.82	2.50
	(3.92)	(1.16)	(1.12)	(0.94)	(1.12)	(0.83)	(1.06)
7. Air Force	15.89	3.13	3.26	4.07	3.73	3.84	2.54
	(4.02)	(1.19)	(1.13)	(0.89)	(1.00)	(0.78)	(1.07)
GSA	15.89	3.26	3.37	4.23	3.54	3.82	2.43
	(1.00)	(1.19)	(1.09)	(0.87)	(1.08)	(0.84)	(1.12)
9. Energy	15.83	3.15	3.36	4.17	3.65	3.85	2.46
	(3.78)	(1.21)	(1.07)	(0.91)	(0.99)	(0.79)	(1.03)
10. SBA	15.81	3.13	3.37	4.33	3.60	3.78	2.43
	(3.64)	(1.22)	(1.19)	(0.87)	(1.05)	(0.79)	(1.02)
11. EPA	15.74	3.15	3.22	4.08	3.71	3.95	2.57
	(3.45)	(1.13)	(1.06)	(0.86)	(0.93)	(0.70)	(0.98)
12. Navy	15.71	3.11	3.29	4.03	3.66	3.84	2.50
	(3.92)	(1.18)	(1.14)	(0.93)	(1.03)	(0.85)	(1.04)
13. Other DOD	15.66	3.06	3.40	4.12	3.58	3.76	2.48
	(3.91)	(1.27)	(1.13)	(0.91)	(1.01)	(0.81)	(1.09)
14. Interior	15.40	2.94	3.11	4.27	3.66	3.80	2.43
	(3.65)	(1.13)	(1.11)	(0.86)	(0.98)	(0.85)	(0.99)
15. HHS	15.30	2.93	3.27	4.15	3.55	3.79	2.38
	(3.89)	(1.22)	(1.12)	(0.95)	(1.10)	(0.93)	(1.14)
Treasury	15.30	2.92	3.34	4.14	3.43	3.79	2.37
	(3.84)	(1.23)	(1.07)	(0.96)	(1.14)	(0.78)	(1.03)
17. Agriculture	15.28	3.01	3.15	4.21	3.63	3.79	2.37
	(3.81)	(1.17)	(1.12)	(0.87)	(1.03)	(0.83)	(1.01)
18. Labor	15.27	3.02	3.20	4.23	3.52	3.69	2.55
	(3.77)	(1.18)	(1.16)	(0.83)	(1.02)	(0.82)	(1.05)
19. State	15.26	2.93	3.47	4.11	3.46	3.94	2.29
	(3.72)	(1.23)	(1.07)	(1.00)	(1.17)	(0.85)	(1.02)
20. HUD	15.17	2.93	3.40	4.12	3.38	3.79	2.43
	(4.10)	(1.23)	(1.13)	(0.90)	(1.18)	(0.92)	(1.01)
21. SSA	14.96	2.84	3.24	4.11	3.40	3.74	2.47
	(4.06)	(1.10)	(1.15)	(0.97)	(1.20)	(0.82)	(0.97)
22. Education	14.87	2.96	3.26	4.20	3.39	3.76	2.34
	(4.65)	(1.27)	(1.17)	(1.01)	(1.14)	(0.89)	(1.10)
23. Transportation	14.61	2.86	3.17	4.16	3.53	3.77	2.25
	(2.87)	(1.19)	(1.11)	(0.89)	(1.02)	(0.77)	(0.99)
OVERALL	15.66	3.08	3.32	4.17	3.60	3.82	2.47
	(3.91)	(1.20)	(1.12)	(0.91)	(1.06)	(0.84)	(1.05)

Item 1: My organization has made good use of my knowledge and skills in looking for ways to become more efficient.
Item 2: In the past two years, the productivity of my work unit has improved.
Item 3: The work performed by my work unit provides the public a worthwhile return on their tax dollars.
Item 4: In general, people of my race/national origin group are treated with respect in my organization.
Item 5: Overall, how would you rate the quality of work performed by your current coworkers in your immediate work group.
Item 6: To what extent does your organization accomplish each of the following: provide fair and equitable treatment for employees and applicants in all aspects of personnel management without regard to their political affiliation, race, color, religion, national origin, sex, marital status, age, or handicapping condition.

Exhibit 5
Predicting Organizational Performance

Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient
Agency-Level Factors			
Organizational Culture			
Efficacy	.766***	.058	.214
Teamwork	.753***	.049	.212
Concern for the Public Interest	.434***	.070	.107
Protection of Employees	.144***	.021	.123
Human Capital and Capacity			
Building Human Capital	.130***	.019	.128
Retaining High Performing Human Capital	.082***	.027	.047
Maintaining Adequate Human Capital	.018	.036	.006
Training	.020	.040	.006
Leadership and Supervision	.043***	.017	.037
Red Tape	-.060	.039	-.020
Agency Dummy Variables (two-tail significance tests)			
Agriculture	-.358*	.180	-.023
Education	-.636*	.291	-.025
HUD	-1.120**	.312	-.042
Interior	-.486*	.207	-.027
Labor	-.789***	.233	-.040
SSA	-1.009***	.304	-.039
Individual-Level Factors			
Structure of Task/Work	.428***	.047	.126
Task Motivation	.511***	.065	.100
Public Service Motivation	.096***	.016	.071
Individual Performance	.122**	.064	.024

R^2 = .70 Adjusted R^2 = .70
F Value = 251.86*** Sample Size = 2,290

*Significant at .05; **Significant at .01; ***Significant at .001

performance. The most influential factors are at the agency level, and they include all four components of organizational culture: efficacy (.214), teamwork (.212), protection of employees (.123), and concern for the public interest (.107). Thus organizational culture is a powerful predictor of organizational performance in federal agencies.

Two subscale measures of human capital and capacity are also important factors that affect organizational performance. Building human capital (.128) is the most influential item in this

group, followed by retaining high performing human capital (.047). The standardized coefficients for maintaining adequate human capital and providing employees with sufficient training are very weak (both are .006), and they fail to achieve statistical significance at the threshold 95 percent confidence level.

Agency support for the NPR (.096) is also a moderately strong predictor of organizational performance, as we expected. This relationship is significant at the .001 level. Thus, federal agencies that are supportive of current reform mandates are more likely to be high performers, ceteris paribus. However, this finding should not be interpreted too broadly. Respondents were probably thinking about broad goals of the NPR such as "creating a government that works better and costs less," rather than agency-specific reforms such as downsizing and business process reengineering.

The leadership and supervision index (.037) is positively related to employee perceptions of organizational performance, and it is highly significant ($p < .001$). Yet the weak predictive power of this variable is disappointing, considering the emphasis placed on leadership and supervision in the literature and elsewhere. There are three possible explanations for this finding: first and most provocative, leadership and supervision may not be as important as the literature and anecdotal evidence suggests; second, our measure of the concept may be incomplete and thus obscure its true importance; third, leadership and supervision may contribute to organizational performance *indirectly*. For instance, skilled leaders may help create and sustain organizational cultures that promote high performance (Popovich, ed. 1998; Hennessey 1998; Martell and Carroll 1995; Schein 1985; Oskarsson 1984).

Red tape (-.020) was measured by asking respondents if their organizations have excessive management levels, and we expected the responses to run inverse to organizational performance. This directional prediction is supported weakly, but the variable fails to achieve statistical significance. This finding is also surprising since much of the literature on public management posits that organizational complexity and red tape impede individual and organizational performance. Our findings indicate that red tape has little effect on organizational performance in federal agencies (for similar findings on individual performance, see Lan and Rainey 1992; Selden and Brewer 2000).

Most of the agency dummy variables produced weak coefficients and failed to achieve statistical significance; therefore, they were dropped from the final equation. However, six agency

variables were retained because—despite weak predictive power—they did achieve significance: Agriculture (-.023, $p < .05$); Education (-.025, $p < .05$); HUD (-.042, $p < .01$); Interior (-.027, $p < .05$); Labor (-.040, $p < .001$); and the SSA (-.039, $p < .001$). Interestingly, all six coefficients are negative, confirming our earlier finding that these agencies are below average performers. Future research should zero in on these agencies and try to identify the reasons for this finding.

All four individual-level variables were modestly important predictors of organizational performance. The most influential were structure of task/work (.126), task motivation (.100), and public service motivation (.071). All three of these variables were significant at the .001 level. Individual performance (.024, $p < .01$) also had some predictive power, but it was less important and less significant than the other three individual-level variables.

Several demographic variables were examined in early stages of the analysis, but they explained little variation and were dropped. (The list of demographic variables included supervisory status, race and ethnicity, gender, age, education, and length of government service.) Other variables were tried at different stages of the analysis but were dropped due to poor measurement or low explanatory power. These variables included stakeholder support, degree of change, and impact of budget cuts and downsizing on agency productivity. Overall, the final solution was robust and stable. Adding or removing additional variables had little effect on the overall fit of the model or the relative predictive power of the independent variables.

CONCLUSION

Patrick Wolf (1993) examined seven theories of organizational effectiveness and concluded that we do not need more theories; we need to begin testing those that already exist. Rainey and Steinbauer (1999) agreed with Wolf and tried to synthesize these theories into a more testable framework. This study has taken the next step and examined common elements of these theories empirically. Accordingly, this study makes two noteworthy contributions to the literature on public administration. First, we have broadened the concept of organizational performance to include internal and external dimensions of efficiency, effectiveness, and fairness. Importantly, past research on organizational performance has neglected fairness and equity concerns, but past experience shows that these concerns are crucial in the public sector (Frederickson 1990; Selden, Brewer, and Brudney 1999). Second, we have advanced the state of knowledge about

organizational performance in the public sector by testing common elements of existing theoretical frameworks empirically. Specifically, we have modeled organizational performance in an important subset of public organizations—the twenty-three largest federal agencies.

The variables that most affect organizational performance are efficacy, teamwork, building human capital, structure of task/work, protection of employees, concern for the public interest, and task motivation. These variables have one thing in common: They are elements of a high-involvement workplace strategy. Performance is higher in agencies that empower employees, clients, and other stakeholders, and lower in agencies that rely on autocratic or top-down management strategies (also see Selden and Brewer 2000). Interviews and focus groups conducted incidental to this research confirm this interpretation.[13] Several NASA, Army, and Air Force employees noted the simultaneous loose-tight properties of their organizations. All three are rigid command and control bureaucracies in some ways, but they value employees and involve them in work-related decision-making processes. Conversely, an Agriculture Department focus group described how top agency management—which champions itself as a leader of the reinvention movement—failed to consult employees and clients when they closed approximately one-third of the agency's field offices; they also tried to shift the blame for chronic discrimination to farmer-elected committees and street-level employees. The SSA has also been billed as a leader of the reinvention movement, and some observers rate it as one of the most improved agencies (Rainey 1997; Rainey and Steinbauer 1999). Yet several agency employees told us that management has implemented changes in a top-down fashion, without consulting or involving front-line employees and clients in the decision-making process.

Paradoxically, several agencies that are ranked highly elsewhere do not perform as well in this study—for instance, the SSA and the Departments of Agriculture and Transportation. The nature of our performance measure may explain why. First, employees' perceptions of organizational performance are likely to be sensitive to how agencies treat their employees. Our findings show that employees want to be valued by their agencies and involved in management and decision-making processes. Second, our measure includes fairness and equity concerns, again spotlighting the relationship between agencies and their employees and clients. Our findings show that these individuals want to be treated with respect, and they want their contributions to be taken seriously. The agencies mentioned above are making progress in some respects, but they may be neglecting their most important

[13]Over the past three years, we have conducted more than two hundred personal interviews and a dozen focus groups probing public service related issues (for details, see Brewer and Maranto 2000; Brewer, Selden, and Facer 2000; Selden, Brewer, and Brudney 1999).

assets—employees and clients. Ironically, several of these agencies pride themselves on moving toward business-like models of efficiency and instilling a customer service orientation. Yet one employee remarked: "The Social Security Administration works hard to lower its level of service to that of a business." Another employee said: "USDA has no customers; she serves the people and the nation." These and other comments suggest that efforts to recast public service as business and citizens as customers seriously understate the role and importance of public administration in a democratic government. One focus group explained that "CNN-style management" is frowned on by employees who believe that performing public service and fulfilling agency missions are matters of sufficient gravity to merit a sober hearing.

Several limitations damper the findings reported in this study. First, the MSPB data do not provide objective measures of organizational performance, thus forcing us to rely on perceptual measures. We do not know the extent to which employees' perceptions of organizational performance correlate with more objective performance-related measures. Second, because we are using an existing data set that was not designed to model organizational performance, the measures of organizational performance, leadership and supervision, organizational culture, task motivation, and structure of task/work may be viewed as incomplete. Third, there is the potential for simultaneity between some of the independent variables and organizational performance (Baum and Singh 1994). For example, if higher-performing agencies adopt better human capital practices, then our cross-sectional estimates may be overstated. Because we are unable to correct for such endogeneity, our analysis does not support direct causal attributions. However, the consistency of our findings with existing theory and empirical evidence on organizational performance increases our confidence in the results of this study.

David N. Ammons (1999, 105) writes: "The public sector has come a long way in measuring performance and 'managing for results,' but there is still much to do." Future research should look for additional factors that affect organizational performance and try to improve our measures of existing factors. One important question is, Do perceptual measures of organizational performance correlate strongly with objective measures *in the public sector*? This study has relied heavily on agency dummy variables to capture certain concepts such as stakeholder support, agency autonomy, and agency mission; better measures of these concepts might account for some unexplained variance in this study. Future research should use this study as a springboard and move to more sophisticated methodologies.[14] The possibility of

[14]For example, Rainey and Steinbauer (1999) recommend studying organizational performance with structural equation modeling procedures, and Marcoulides and Heck (1993) provide an excellent example of how this can be done. Longitudinal studies are also needed to study change across time (for example, see Farias 1997).

improved governmental performance provides considerable incentive for such efforts.

REFERENCES

Ammons, D.N.
1999 "A Proper Mentality for Benchmarking." *Public Administration Review* 59:105-09.

Anspach, R.R.
1991 "Everyday Methods for Assessing Organizational Effectiveness." *Social Problems* 38:1-19.

Au, C.
1996 "Rethinking Organizational Effectiveness: Theoretical and Methodological Issues in the Study of Organizational Effectiveness for Social Welfare Organizations." *Administration in Social Work* 20:1-21.

Ban, C.
1995 *How Do Public Managers Manage?* San Francisco: Jossey-Bass.

Barksdale, W.K.
1994 "Human Resource Practices, Organizational Climate, Work Attitudes and Organizational Performance." Ph.D. diss. Georgia State University.

Baum, A.C., and Singh, J.V.
1994 "Organization-Environment Coevolution." In Baum and Singh, eds. *Evolutionary Dynamics of Organizations*, pp. 379-401. New York: Oxford University Press.

Becker, B., and Gerhart, B.
1996 "The Impact of Human Resource Management on Organizational Performance: Progress and Prospects." *Academy of Management Journal* 39:779-801.

Berman, E.M., and West, J.P.
1998 "Productivity Enhancement Efforts in Public and Nonprofit Organizations." *Public Productivity and Management Review* 22:207-19.

Bhargava, S., and Sinha, B.
1992 "Prediction of Organizational Effectiveness as a Function of Organizational Structure." *Journal of Social Psychology* 132: 223-31.

Bollar, S.L.
1996 "The Impact of Organizational Culture on Employee Work Attitudes, Readiness for Change, and Organizational Performance." Ph.D. diss. Georgia Institute of Technology.

Boschken, H.L.
1994 "Organizational Performance and Multiple Constituencies." *Public Administration Review* 54:308-12.

Bozeman, B.
1993 "A Theory of Government 'Red Tape.'" *Journal of Public Administration Research and Theory* 3:273-303.

Brewer, G.A., and Maranto, R.A.
2000 "Comparing the Roles of Political Appointees and Career Executives in the U.S. Federal Executive Branch." *American Review of Public Administration* 30:69-86.

Brewer, G.A., and Selden, S.C.
1998a "Whistle-blowers in the Federal Civil Service: New Evidence of the Public Service Ethic." *Journal of Public Administration Research and Theory* 8:413-39.
1998b "The Promise of Active Citizenship: Does Participation Increase Trust in Government?" Paper presented at the Annual Meeting of the American Political Science Association, Boston.

Brewer, Gene A.; Selden, S.C.; and Facer, R.L. II.
2000 "Individual Conceptions of Public Service Motivation." *Public Administration Review* 60:204-14.

Buchanan, B. II.
1975 "Red Tape and the Service Ethic." *Administration and Society* 6:423-44.

Burke, W.W., and Litwin, G.H.
1992 "A Causal Model of Organizational Performance and Change." *Journal of Management* 18:523-45.

Butler, J.K., and Cantrell, R.S.
1997 "Effects of Perceived Leadership Behaviors on Job Satisfaction and Productivity." *Psychological Reports* 80:976-78.

Cameron, K.S.
1994 "Strategies for Successful Organizational Downsizing." *Human Resource Management* 33:189-211.

Carmines, E.G., and Zeller, R.A.
1979 "Reliability and Validity Assessment." SAGE University Paper.

Cohen, S.
1993 "Defining and Measuring Effectiveness in Public Management." *Public Productivity and Management Review* 17:53-89.

Costanza, D.P.
1996 "Leadership and Organizational Decline: The Relationship Between Personality Characteristics and Organizational Performance." Ph.D. diss. George Mason University.

Crewson, P.E.
1997 "Public Service Motivation: Building Empirical Evidence of Incidence and Effect." *Journal of Public Administration Research and Theory* 7:499-518.

Dahl, R.A., and Lindblom, C.E.
1953 *Politics, Economics, and Welfare*. New York: Harper and Row.

Delaney, J.T., and Huselid, M.A.
1996 "The Impact of Human Resource Management Practices on Perceptions of Organizational Performance." *Academy of Management Journal* 39:949-69.

DiIulio, J.J. Jr.
1994 "Principled Agents: The Cultural Bases of Behavior in a Federal Government Bureaucracy." *Journal of Public Administration Research and Theory* 4:277-318.

Dobni, D.M.
1996 "An Empirical Taxonomy of Organizational Cultures in the Services Sector." Ph.D. diss. University of Calgary.

Dollinger, M.J., and Golden, P.A.
1992 "Interorganizational and Collective Strategies in Small Firms: Environmental Effects and Performance." *Journal of Management* 18:695-715.

Druckman, D.; Singer, J.E.; and Van Cott, H., eds.
1997 *Enhancing Organizational Performance*. Washington, D.C.: National Academy Press.

Dunphy, D., and Bryant, B.
1996 "Teams: Panaceas or Prescriptions for Improved Performance." *Human Relations* 49: 677-99.

Duran, C.A.P.
1998 "The Impact of Organizational Downsizing on Corporate and Strategic Business Unit Economic Performance: An Empirical Investigation of the Role of Work Force Reduction." Ph.D. diss. Texas Tech University.

El-Kazaz, H.M.
1988 "Contents of Schemas of Organizational Performance: An Exploratory Study." Ph.D. diss. Ohio State University.

Farias, G.F.
1997 "Organizational Transformation: Effects on Performance. A Quasi-Experimental Field Study." Ph.D. diss. Texas Tech University.

FEDmanager.
1998 "NPR Survey Results Out." Available online: http://www.fedmanager.com/page57.htm# December 22.

Fielder, F.E.
1986 "The Contribution of Cognitive Resources and Leader Behavior to Organizational Performance." *Journal of Applied Social Psychology* 16:532-48.

Fisher, C.J.
1997 "Corporate Culture and Perceived Business Performance: A Study of the Relationship Between the Culture of an Organization and Perceptions of Its Financial and Qualitative Performance." Ph.D. diss. California School of Professional Psychology.

Frederickson, H.G.
1990 "Public Administration and Social Equity." *Public Administration Review* 50:228-37.

Ghosn, A.A.; Aljazzaf, M.I.; and Nazar, A.
1997 "A Model for Evaluating Organizational Performance with Application to a Nonprofit Research-and-Development Organization." *International Journal of Technology Management* 13:497-510.

Gingrich, N., and others.
1998 "Towards a Smaller, Smarter, Common Sense Government: Seeking Honest Information for Better Decisions." Available online: http://freedom.house.gov/results/implement/implement1.asp. July.

Gore, A.
1993 *From Red Tape to Results. Creating a Government That Works Better and Costs Less: Report of the National Performance Review*. Washington, D.C.: Government Printing Office.

Grindle, M.S., and Hilderbrand, M.E.
1995 "Building Sustainable Capacity in the Public Sector: What Can Be Done." *Public Administration and Development* 15:441-63.

Haltiwanger, J.; Lane, J.I.; and Spletzer, J.R.
1999 "Productivity Differences Across Employers: The Roles of Employer Size, Age, and Human Capital." *American Economic Review* 89:94-98.

Hatry, H.P.
1999 *Performance Measurement: Getting Results*. Washington, D.C.: Urban Institute.

Hatry, H.P., ed.
1999 "Mini-Symposium on Intergovernmental Comparative Performance Data." *Public Administration Review* 59:101-34.

Hatry, H.P., and Wholey, J.S.
1992 "The Case for Performance Monitoring. *Public Administration Review* 52:604-10.

Hedley, T.P.
1998 "Measuring Public Sector Effectiveness Using Private Sector Methods. *Public Productivity and Management Review* 21:251-58.

Hennessey, J.T. Jr.
1998 "'Reinventing' Government: Does Leadership Make a Difference?" *Public Administration Review* 58:522-32.

Higgins, C.C.
1998 "Transactional and Transformational Leadership: An Examination of the Relationship Between Leadership Orientation and Perceptions of Organizational Effectiveness." Ph.D. diss. George Washington University.

Hrebiniak, L.G., and Snow, C.C.
1982 "Top Management Agreement and Organizational Performance." *Human Relations* 35: 1139-57.

Ingraham, P.W.; Joyce, P.; and Kneedler, A.
forthcoming *Putting Management in the Performance Equation*. Baltimore: John Hopkins University Press.

Jacobs, D., and Singell, L.
1993 "Leadership and Organizational Performance: Isolating Links Between Managers and Collective Success." *Social Science Research* 22:165-89.

Judge, W.Q. Jr.
1994 "Correlates of Organizational Effectiveness: A Multilevel Analysis of a Multidimensional Outcome." *Journal of Business Ethics* 13:1:1-10.

Kalleberg, A.L., and Moody, J.W.
1994 "Human Resource Management and Organizational Performance." *American Behavioral Scientist* 37:948-62.

Kaplan, R.S., and Norton, D.P.
1992 "The Balanced Scorecard: Measures That Drive Performance." *Harvard Business Review* 1:10.

Kaufman, H.
1960 *The Forest Ranger: A Study in Administrative Behavior*. Baltimore: Johns Hopkins University Press.

Kettl, D.F., et al.
1996 *Civil Service Reform: Building a Government That Works*. Washington, D.C.: Brookings.

Kopczynski, M., and Lombardo, M.
1999 "Comparative Performance Measurement: Insights and Lessons Learned from a Consortium Effort." *Public Administration Review* 59:124-34.

Lan, Z., and Rainey, H.G.
1992 "Goals, Rules, and Effectiveness in Public, Private, and Hybrid Organizations: More Evidence on Frequent Assertions About Differences." *Journal of Public Administration Research and Theory* 2:5-28.

Laurent, A.
1999 "Stacking Up: The Government Performance Project Rates Management at 15 Federal Agencies." *Government Executive*. Available online: http://www.govexec.com/gpp/0299over.htm Feb.

Lewis, G.B., and Alonso, P.
1999 "Public Service Motivation and Job Performance." Paper presented at the annual meeting of the American Society for Public Administration, Orlando, Florida.

Lytle, R.S.
1994 "Service Orientation, Market Orientation, and Performance: An Organizational Culture Perspective." Ph.D. diss. Arizona State University.

Marcoulides, G.A., and Heck, R.H.
1993 "Organizational Culture and Performance: Proposing and Testing a Model." *Organization Science* 3:209-25.

Martell, K., and Carroll, S.J.
1995 "Which Executive Human Resource Management Practices for the Top Management Team Are Associated with Higher Firm Performance." *Human Resources Management* 34:497-512.

Nahavandi, A., and Malekzadeh, A.R.
1993 "Leader Style in Strategy and Organizational Performance: An Integrative Framework." *Journal of Management Studies* 30:405-25.

National Partnership for Reinventing Government.
1999 *Balancing Measures: Best Practices in Performance Management*. Available online: http://www.npr.gov/library/papers/bkgrd/balmeasure.html

National Quality Research Center.
1999 *Federal Agencies Government-wide Customer Satisfaction Report for the General Services Administration*. Available online: http://www.customersurvey.gov/GovernmentWideResults.PDF

Osborne, D., and Gaebler, T.
1992 *Reinventing Government*. Reading, Mass.: Addison-Wesley.

Oskarsson, T.S.
1984 "Selected Objective Measures of Organizational Climate in the Prediction of Organization Effectiveness." Ph.D. diss. Hofstra University.

Ostroff, C.
1992 "The Relationship Between Satisfaction, Attitudes, and Performance: An Organizational Level Analysis." *Journal of Applied Psychology* 77:6:963-75.

Peach, E.B.
1992 "Service Quality as the Basis for Professional Service Firm Differentiation: The Service Quality-Organizational Performance Linkage." Ph.D. diss. University of Oklahoma.

Pegnato, J.A.
1993 "An Assessment of the Effects of Organizational Design on Organizational Performance." Ph.D. diss. George Mason University.

Perry, J.L.
1996 "Measuring Public Service Motivation: An Assessment of Construct Reliability and Validity." *Journal of Public Administration Research and Theory* 6:5-22.

Perry, J.L., and Wise, L.R.
1990 "The Motivational Bases of Public Service." *Public Administration Review* 50:367-73.

Peters, T., and Waterman, R.
1982 *In Search of Excellence*. New York: Harper and Row.

Petty, M.M.; Beadles, N.A.; and Lowery, C.M.
1995 "Relationships Between Organizational Culture and Organizational Performance." *Psychological Reports* 76:483-92.

Pfeffer, J.
1994 *Competitive Advantage through People*. Boston: Harvard Business School Press.

Pfeffer, J., and Salancik, G.R.
1978 *The External Control of Organizations*. New York: Harper and Row.

Podanskoff, P.M., and Mackenzie, S.B.
1997 "Impact of Organizational Citizenship Behavior on Organizational Performance: A Review and Suggestions for Future Research." *Human Performance* 10:133-51.

Popovich, M.G., ed.
1998 *Creating High-Performance Government Organization*. San Francisco: Jossey-Bass.

Powell, T.C.
1992 "Organizational Alignment as Competitive Advantage." *Strategic Management Journal* 13:119-34.

Rainey, H.G.
1997 *Understanding and Managing Public Organizations*, 2d ed. San Francisco: Jossey-Bass.

Rainey, H.G., and Steinbauer, P.
1999 "Galloping Elephants: Developing Elements of a Theory of Effective Government Organizations." *Journal of Public Administration Research and Theory* 9:1-32.

Riccucci, N.M.
1995 *Unsung Heroes: Federal Executives Making a Difference*. Washington, D.C.: Georgetown University Press.

Saffold, G.S. III
1988 "Culture Traits, Strength, and Organizational Performance: Moving Beyond 'Strong Culture.'" *Academy of Management Review* 13:546-59.

Schein, E.H.
1985 *Organizational Culture and Leadership*. San Francisco: Jossey-Bass.

Schneider, B.
1983a "Interactional Psychology and Organizational Behavior." In L.L. Cummings and B.M. Staw, eds. *Research in Organizational Behavior*, vol. 5, pp. 1-31. Greenwich, Conn.: JAI.
1983b "An Interactionist Perspective on Organizational Effectiveness." In K. Cameron and D. Whetten, eds. *Organizational Effectiveness*, pp. 106-28. New York: Academic Press.

Selden, S.C., and Brewer, G.A.
2000 "Work Motivation in the Senior Executive Service: Testing the 'High Performance Cycle' Theory." *Journal of Public Administration Research and Theory* 10:3:531-50.

Selden, S.C.; Brewer, G.A.; and Brudney, J.L.
1999 "Reconciling Competing Values in Public Administration: Understanding the Administrative Role Concept." *Administration and Society* 31:171-204.

Simon, C.A.
1998 "Organizational Performance in the Public Sector: A Comparison of 77 Federal Bureaus Receiving or Not Receiving the President's Quality Award, 1992-1997." Ph.D. diss. United States International University.

Subramanian, A., and Nilakanta, S.
1996 "Organizational Innovativeness: Exploring the Relationship Between Organizational Determinants of Innovation, Types of Innovations, and Measures of Organizational Performance." *Omega: The International Journal of Management Science* 24:631-47.

Terpstra, D.E., and Rozell, E.J.
1993 "The Relationship of Staffing Practices to Organizational Level Measures of Performance." *Personnel Psychology* 46:27-48.

Thomas, A.B.
1988 "Does Leadership Make a Difference to Organizational Performance?" *Administrative Science Quarterly* 33:388-400.

Thompson, J.W.
1996 "Employee Attitudes, Organizational Performance, and Qualitative Factors Underlying Success." *Journal of Business and Psychology* 11:171-96.

U.S. General Accounting Office.
1999 *Major Management Challenges and Program Risks: A Governmentwide Perspective*. GAO/OCG-99-1. Jan.

U.S. Merit Systems Protection Board.
1998 *The Changing Federal Workplace: Employee Perspectives*. Washington, D.C.

Waclawski, J.
1996 "Large-Scale Organizational Change and Organizational Performance." Ph.D. diss. Columbia University.

Wagar, T.H.
1998 "Exploring the Consequences of Workforce Reduction." *Canadian Journal of Administrative Sciences* 15:300-09.

Wilkins, A.L., and Ouchi, W.G.
1983 "Efficient Cultures: Exploring the Relationship Between Culture and Organizational Performance." *Administrative Science Quarterly* 28:468-81.

Wilson, J.Q.
1989 *Bureaucracy*. New York: Basic Books.

Wolf, P.J.
1993 "A Case Survey of Bureaucratic Effectiveness in U.S. Cabinet Agencies: Preliminary Results." *Journal of Public Administration Research and Theory* 3:161-81.

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