Testing a Model of Public Sector Performance: 
How Does Management Matter?

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ABSTRACT

Public administration finds itself in an era of government by performance management, reflected in the widespread assumption that management is a key determinant of performance, and that it is reasonable to expect managers to measurably improve organizational effectiveness. This paper joins a growing literature in seeking to conceptualize and empirically test how external environmental influences and internal management factors combine to create performance. We use a perceptual measure of organizational effectiveness based on the 2002-2003 National Administrative Studies Project survey of state government health and human services officials. Among the external environmental variables we find that elected officials’ support, public and media influence, gubernatorial power and the availability of resources have a positive impact on effectiveness. Among internal management choices, the ability to create a developmental organizational culture; establish a focus on results through goal clarity and customer-service training; decentralizing decision-making authority; and improvements in information technology capacity and job satisfaction are positively associated with performance.
An Era of Government by Performance Management

Frederick Mosher’s *Democracy and the Public Service* characterizes the history of public administration in the United States as falling into different eras. He portrays the twentieth century as dominated by two phases: government by the efficient (1906-1937), and government by managers (the post 1937 era). The era of government by the efficient treated administration as a science led by the goal of efficiency: the best management system was that which most efficiently performed a specific task (Taylor, 1919; Wilson, 1887). The era of government by managers placed greater emphasis on management expertise, and generic management principles. It recognized that public management was usually more complex than simple time and motion studies allowed. In theory, the application of the generic principles raised government performance. However, such approaches were largely untested or made contingent on context, allowing Simon (1946) to characterize them as proverbs rather than principles.

Mosher’s historical account of public administration in America, thorough-going in most respects, did not recognize the trends that were only beginning to emerge when the last edition of the book was published in 1982. One of these emergent trends was an emphasis on outcomes and performance, giving birth to a new management era in the public sector: that of government by performance management. This era reflects a fusion between the key values of the previous two, efficiency—now redefined more broadly as performance—and management. The expectation of this era is that the public sector demonstrates it can perform well, and is consistently seeking to change management systems in ways that foster performance. The concept of performance has become increasingly the central goal of public management, but the emphasis on management expertise continues. Professional training of public administrators has become more and more common, with MPA programs continuing to emphasize generic management skills. But these
managers face increased calls to justify the management choices in the context of performance. This call is reflected in both reform movements, and in a growing public management literature.

The most frequent and widely adopted reforms of the last quarter century have focused on the concepts of performance and effectiveness (Ingraham and Moynihan 2000). Reforms that have incorporated pay-for-performance, total quality management, strategic planning, performance measurement, benchmarking, contracting out, increased managerial flexibility, and decentralization have consistently claimed the improved performance of the public sector as their ultimate goal. The clear assumption of these reform movements, whether classified as New Public Management (NPM) or reinvention, was that changes in management systems could and should be made in a way that enhanced performance. Perhaps the most critical single reform was that of performance measurement. While not a new idea, recent years have seen all levels of government require specific performance measures for major programs. The increased data has made it easier to hold managers and management systems accountable for performance.

A burgeoning literature also reflects this era of performance management. A common assumption across this literature is that management matters to performance and effectiveness, and that performance is the ultimate goal of public management systems and actions. As indicated above, a widely known literature associated with government reform and the NPM was based on these assumptions (Osborne and Gaebler 1993; Barzelay 2000; Brudney, Hebert and Wright, 1999; Gore, 1993). Other strands of literature examined in this paper are the black-box theory of management capacity, the “galloping elephants” literature, and the logic of governance theory.

The black-box theory of government, associated with the Maxwell School’s Government Performance Project, begins by noting that we know little about the process by which the public
sector transforms inputs into outputs (Ingraham and Donahue 2000). The black-box approach argued that better specification of management capacity was necessary before plausible theoretical or empirical links could be established with performance. Generic management systems were identified (financial management, information technology, human resource management, capital management and managing for results), along with a set of criteria of desirable standards for each system. The explicit assumption was that management capacity was a “platform” for performance, and that performance data would inform future capacity changes.

To date, empirical work associated with this approach has identified measures of government capacity, which in turn are used either as dependent or independent variables. Examples of efforts that employ capacity as a dependent variable include Knack (2003), who seeks to explain the cumulative management capacity scores for all systems, while Hou, Moynihan and Ingraham (forthcoming) is an example of a number of works that seek to explain a capacity measure within a specific management system. Capacity can also be used as an independent variable, to explain how capacity leads to performance. However, up to this point only Coggburn and Schneider (2003) offer empirical work on this basis, and even here what they explain might be considered a proxy for performance: they find that states with higher capacity tend to favor collective over specialized benefits in allocating resources.

The “galloping elephants” theory, proposed by Rainey and Steinbauer (1999), reviews existing literature on public organizations to develop some broad hypotheses about what factors are associated with effective public organizations. Wolf (1993; 1997) employed a similar approach, but used meta-analyses to allow for actual theory testing. The common findings, echoing the assertions of Wilson (1989), are that agencies with strong political support, high autonomy, a clear and attractive mission and effective leadership will tend to perform better than
agencies without these characteristics. Rainey and Steinbauer also offer hypotheses about more internal aspects of management that are referred to later in this paper, including employee motivation, task design, use of human resources and technology.

Lynn, Heinrich and Hill (2000) argue for logic of governance that seeks to explain measurable outputs/outcomes. They propose that factors that influence performance include environmental factors and client characteristics, but also factors that to varying degrees are under the control of managers: treatments (primary work/core process and technology), structure, and managerial roles and actions. Additional contemporary examples of public management scholarship further reflect the assumption that environmental and management characteristics impact on the dependent variable of performance (e.g., Heinrich 2002; O’Toole and Meier 1999; Milward and Provan 1998).

**Measuring Performance**

That management matters to performance is an idea as old as the concept of management. But we live in an age where the expectations, reforms and literature of public management increasingly reflect the assumption that management has a direct, measurable and verifiable relationship with performance. Providing empirical evidence of that relationship, and by extension, explaining how management matters to performance in different contexts is a central goal in much current public management research. Prompted by the theories outlined above, this paper seeks to examine how management matters in the area of health and human services, identifying broad categories of management capacity and environmental influences applicable to other settings.
In testing these relationships we use as our dependent variable a measure of organizational effectiveness based on the perceptions of individual members of the organization. We asked managers to rank on a scale of 1-10 “the effectiveness of your agency in accomplishing its core mission,” with 0 being not effective at all and 10 meaning extremely effective. At the very least this measure provides an understanding of what shapes perceptions of organizational success. However, we also feel it is a valid measure of organizational effectiveness more generally, partly because, for reasons outlined below, it is difficult to come up with a single best measure of organizational effectiveness.

Why not seek a more “objective” measure of effectiveness, based on goal achievement? Even if one disagrees with the post-modern perspective that all quantitative measures are in their own way subjective, there are still problems with the search for an all-encompassing objective measure of organizational effectiveness, prompting Campbell (1977, 18) to note: “A better way to think of organizational effectiveness is as a construct that has no necessary and sufficient operational definition but that constitutes a model or theory of what organizational effectiveness is. The functions of such a model would be to identify the kinds of variables we should be measuring and to specify how these variables, or components interrelate-or should be interrelated.” Our measure of organizational effectiveness, based on employee perceptions, permits employees to employ a model of organizational effectiveness derived from their organizational experience and understanding. A similar employee-based measure of performance has been employed in public sector research, most recently by Brewer and Selden (2001), who point out that while the organizational psychology literature argue that organizational and individuals are interdependent, the employee perspective on performance is rarely employed.
Yet another advantage of the measure we use is that it is a global measure that is not facet-specific. Different agencies rarely measure goals in the same way (an exception is where states must meet uniform reporting requirements to the federal government). It is also highly unlikely that any single facet-specific measure will reflect the varied outcome and goals of several organizations. Indeed, Wolf’s (1997) meta-analysis of effective public agencies finds that agencies with measured outcomes are negatively associated with effectiveness. A single measure may fail to reflect different policy priorities between agencies, prompting the question: does agency A perform better than agency B on a performance measure because agency A is more effective, or because the measure is not a priority for agency B? From this perspective, therefore, a single facet-specific or context-specific measure of performance struggles to satisfy a number of criteria: uniform measurement; reflects the dominant goal of an organization; and, is a similar priority for different organizations.

We do not pursue a multi-measure approach in this study, but we do suggest that a virtue of an employee-defined performance measure is that it is a broader assessment of effectiveness than single programmatic performance measures. Managers will be aware of the various goals of their agency, and success in reaching these goals. We also note the use of perceptual assessments of performance elsewhere. Much of the work relied on by Rainey and Steinbauer (1999) and Wolf’s (1993; 1997) reviews do not use objective measures of effectiveness, but rely on the judgments of case-study authors and the subjects they interviewed.

A Model of Organizational Effectiveness

We propose a model of organizational effectiveness that reflects the central assumption of theoretical models outlined above: that it is possible and desirable to divide explanatory factors of into two main categories: internal and external. External factors arise from the organizational
environment, which for public organization means interactions with political institutions and actors. We therefore test the influence of elected officials, clients, the public and the media, funding constraints, political ideology, political competition, and executive power, on performance.

The internal factors include a range of organizational characteristics that shape management capacity, including centralization of decision-making authority, organizational culture, the success of leadership in developing a results-focus, IT capacity, and worker satisfaction. The data comes from the National Administrative Studies Project (NASP) survey of state government health officials undertaken in the fall of 2002 and spring of 2003. More details on the data and methods can be found in appendix 1. Appendix 2 summarizes our theoretical approach, and provides specific information on how study constructs are measured. The various hypotheses of this model are now examined in turn.
Political Support for the Organization

The most critical and immediate constituency for any public agency is the elected officials that oversee it. Political support for an agency’s mission is useful for increasing resources and autonomy (Meier 2000). Previous work from Wolf (1993) and Rainey and Steinbauer (1999) found that political support was a key factor in instances of successful agencies, reducing the potential for micromanagement on the part of elected officials, and allowing bureaucrats to focus consistently on long-term goals. To win such autonomy, organizations seek to develop a sense of trust among elected officials in the management of the agency. We employ an index of political support that captures elected official trust in the agency, level of criticism, belief in competence and effectiveness. This measure is based on the work by Gianakis and Wang (2000).

H1: Organizations that enjoy the support of elected officials will have higher levels of performance.

Political support is not solely a matter of the support of elected officials: Meier (2000) identifies public opinion and client groups as two additional sources of political support. We use measures for these sources of political influence that are based on the work of Waterman, Rouse and Wright (1998). Depending on the nature of the agency and the diversity of views among its clients, stakeholders can serve to either support or undermine an agency’s objective (Meier 2000; Rainey and Rainey 1986). In the case of health and human service agencies, client groups receive public services at no (or low) cost. Indeed, politically mobilized client groups have significant influence on agency operations (Grogan 1993; Pandey 2002). These client groups are therefore likely to be concerned about ensuring adequate resources to provide a service, and raising the quality of a service. Both of these attributes are likely to result in improved
performance for the agency. However, the “iron triangle” (Lowi 1969) and public choice (Boston 1991) approaches present an alternative scenario, suggesting that while client groups will seek to increase resources and raise service quality, they will do so with little emphasis on either allocative or technical efficiency, and therefore will negatively affect performance.

H2: The influence of client groups will influence the performance of an organization.

The influence of the public and media on performance is less ambiguous than that of client groups, given a greater cost sensitivity relative to benefits received. The common popular travails about government—that it does not focus on results, and wastes money—are indicative of public demands for quality services at an affordable price—in short, better performance. Greater public influence might reflect itself through citizen participation, which on balance improves the performance of agencies through closer oversight, innovative input, greater understanding of public preferences, and co-production possibilities (Thomas, 1995). Public managers are also likely to look toward the media as the most immediate source of public opinion. We employ an index that reflects both public and media influence on an agency.

H3: Higher levels of public and media influence will be associated with higher organizational performance.

Political Institutions

A deeply ingrained approach to public administration is what Rosenbloom (1983) has characterized as managerial, a tradition that has been traced back to the thoughts and writing of Alexander Hamilton (Kettl 2002). The managerial interpretation views the head of the executive branch as the sole legitimate head of the bureaucracy, and values clear lines of authority and
efficient execution of government. Such an approach has been consistent reform of government at least since the recommendations of the Brownlow committee in 1937. This approach remains popular, in part because it reflects a private-sector understanding of organizations, but also because the managerial approach justifies itself in terms of performance. If the claims of the managerial approach are correct, states with more powerful governors should perform better.

H4: States with more powerful Governors will have higher organizational performance

Political Conditions

Political conditions relate to the nature of political power, preferences and opportunity at a given time. We examine the nature of political competition between the two dominant parties in a state, the political ideology of a state, and the availability of resources to spend on public programs.

Political competition should provide the impetus for elected officials to ensure the quality of public services. With comfortable governing majorities, elected officials find themselves buffered from the negative effects of poor performance (Bretschneider and Gorr 1992). The oversight of the ruling party will be less zealous and bureaucrats are less likely to respond to the oversight of the minority party.

H5: Closer political competition will be associated with higher organizational performance.

A widely accepted heuristic for differentiating between political ideology is that liberals tend to be more supportive of providing resources to expand government programs and to ensure their success, while conservatives are portrayed as suspicious of government, seeking to reduce its
size (Erikson, Wright and McIver 1993). However, once we control for resources, as we do in this study, it is unclear whether either political ideology has a defining impact on performance. Governments from different sides of the political divide have embraced notions of focus on results and performance improvement, making it an integral part their rhetoric (Brudney et al. 1999).

H6: The political ideology of a state will affect organizational performance.

Another political condition likely to impact on organizational effectiveness is the ability to raise and provide resources for public services. While resources do not guarantee program success, chronic inadequacy guarantees failure (Mazmanian and Sabatier 1989). Lynn, Heinrich and Hill (2000) also identify funding constraints as a barrier to high performance. In health and human services demand routinely exceeds supply, so it seems logical to suggest that more resources can foster improved performance. This is especially true in the eyes of bureaucrats, who are likely to become frustrated if resources are not available to implement a program.

H7: The greater the adequacy of resources, the higher the organizational performance

Organizational Culture

Studies of effective organizations frequently emphasize the importance of developing a mission-based culture (Rainey and Steinbauer 1999; Wilson 1989; Wolf 1993). Given that mission will vary from agency to agency, this provides only a limited amount of information about what types of organizational cultures are more likely to lead to success. In part, this failing has been due to the perceived inability of quantitative approaches to deal with context-specific cultural attributes relative to more in-depth but less generalizable qualitative aspects of work.
Brewer and Selden (2001) provide an exception, specifying culture in terms of a number of instrumental values demonstrated by actions: teamwork, efficacy, concern for the public interest, and protection of employees. We assess the impact of culture by employing well known value-types in the organizational culture literature, based on the competing values model of Quinn and Rohrbaugh (1981), and operationalized by Zammuto and Krakower (1991). The Quinn and Rohrbaugh model argues that organizational approaches to performance vary along three dimensions: a) organizational focus (people vs. the organization), b) differing preferences about structure (control vs. flexibility) and c) difference foci on important organizational processes and outcomes (means and ends). The four cultural types that emerged from this model were group, developmental, hierarchical and rational (Quinn and Kimberly 1984; Zammuto and Kracower 1991).

Group cultures are associated with a focus on people rather than the organization, flexibility rather than control, employee cohesion and morale. Developmental cultures are associated with a focus on the organization, flexibility, adaptability and readiness, growth and resource acquisition. Hierarchical cultures tend to focus on people, control, managing information and communication, and ensuring organizational stability. Finally, rational cultures are associated with organizational goals, control, planning and goalsetting, and production and efficiency. As Zammuto and Krakower note, all organizations are likely to exhibit these types to varying degrees, rather than simply fall into one type or another. We therefore test the influence of the degree of existence of each type of organizational culture on performance. While Quinn and Kimberly (1984) hypothesize that the rational culture will be more focused on production efficiency than the other types, there is no strong empirical evidence one way or the other. We therefore test a general hypothesis on the relationship between types of culture and performance.
H8: Type of organizational culture will affect organizational performance.

**Focus on Results**

A well-established hypothesis is that agencies with clearly defined missions and goals are more likely to perform better (Wilson 1989; Hale 1996; Peters and Waterman 1982; Rainey and Steinbauer 1999). Goal ambiguity is a frequent characteristic of public organizations, and undermines organizational performance (Meier 2000; Rainey, Pandey and Bozeman 1995). A clear task allows the organization to communicate goals easily, develop a mission-oriented culture, and reduce the potential for rival, confusing and contradictory management systems and actions because of conflicting goals.

H9: Goal clarity is associated with higher organizational performance

A main goal of the NPM and reinvention-style reforms was to introduce “clarity of task and purpose” to public organizations through a variety of organizational reforms (Holmes and Shand 1995). A critical reform was to inculcate a customer service orientation, an idea that was among the most widely adopted state government reform in recent years (Brudney et al. 1999). Here, we examine whether organizations with higher levels of customer service training perform better.

H10: Agencies with higher levels of customer service adoption will be associated with higher organizational performance.

**Centralization of Decision-making Authority**

The structure of authority and control is a major topic in public management, with shifting emphases between central control and managerial flexibility across time and different tasks
(Kaufman 1956; Quinn and Rohrbaugh 1981). The NPM and reinvention movements argued that
traditional bureaucracies had become too centralized, removing autonomy from the managers
with the knowledge to make positive improvements in operations (Barzelay 2000). The result
was poor performance. By contrast, organizations that empowered employees, at least with
operational decisions, were associated with high-performance (Hale 1996, Osborne and Gaebler
1992; Peters and Waterman 1982).

H11: Centralization of decision-making power will be associated with lower
organizational performance.

Information Technology Capacity

The black-box theory identified information technology as one of a handful of management
systems that contributed to management capacity, which in turn leads to performance. A major
goal of spending on information technology is to make organizations perform better. We
examine IT management capacity in terms of meeting the information needs of internal actors.
Indeed, the key assumption of performance management reforms has been that managers will use
performance information to make better decisions (Moynihan and Ingraham, forthcoming). To
use this information managers must first have access to relevant information, and access to
timely, accurate and telling information has become a test of the effectiveness of IT capacity in
government (Bouckaert, 1993).

H12: Information systems that do not provide relevant information to managers will be
associated with lower organizational performance.
Human Resource Capacity

The black-box theory also argued that the capacity of human resource management systems would have an impact on performance. This reflected well-established assumptions that effective employees made for effective organizations. Brewer and Selden (2001) find that efforts to build human capital and retain high performing human capital have a positive relationship with performance, but that training or maintaining adequate human capital did not. Job satisfaction has been argued for both as an end in itself (Phillips, 1996) and as an instrumental variable that leads to performance (Petty, McGee and Cavendar 1984). Rainey (1997, 244) notes that while job satisfaction might be “the most intensively studied variable in organizational research,” there is still not a consensus over whether there is a positive link with performance.

H13: Higher levels of job satisfaction will be associated with higher levels of organizational performance.

Findings and Discussion

Descriptive statistics on all the study variables are presented in table 1 and the results of multivariate test of specific hypotheses are presented in table 2. Information on data collection and methods can be found in appendix 1. Appendix 2 provides information on variable measurement.

*Insert table 1 and table 2 about here*

Table 2 demonstrates strong overall support for the model, with an adjusted $R^2$ of .545. The results also support the proposition that that organizational performance is shaped both by
external environmental factors and internal management factors. There is support for a number of hypotheses, spread fairly evenly between internal and external aspects.

The evidence for the importance of political support for agency performance is particularly strong. The support of elected officials is an especially robust predictor of performance. This remains true even when controlling for resources, demonstrating how elected official support can help agencies in other ways, including a widened scope of autonomy, reduced regulation, and adoption of agency goals (Wilson 1989).

We can also analyze the results in terms of the different conceptions of the public’s influence on performance. The role of elected officials’ support reflects traditional notions of overhead democracy in a representative system of government (Redford 1969). The model provides three additional conceptions of the public: from an interest-group perspective, where a section of the public seeks to use political influence on the bureau and extract particularized benefits; from the perspective of the general public and the media, likely to be more concerned about balancing service provision with a reasonable tax burden; and, from a customer-service perspective, where the bureau seeks to offer services in a manner convenient and useful to recipients. There results demonstrate stark differences between these different conceptions of the public and their impact on performance. The ability of the general public and media to influence the agency has a strong positive effect on performance. By contrast, stronger client group influence is judged to reduce organizational effectiveness, although the result is just above significance at the 5% level for a two-tailed test. Organizations that have sought to treat the public and their clients as customers, by engaging in customer service training, are also associated with higher levels of effectiveness.

What to make of these contrasting results? The negative association of interest-group influence with bureaucrat-defined measures of performance may appear surprising, given the
frequent portrayals of mutual interest and cooperation between these groups (e.g., Lowi 1969).
However, the results are consistent with Coggburn and Schneider (2003), who find that state
governments with higher management capacity tend to distribute goods in terms of collective
benefits rather than particularized benefits associated with interest group activity. The findings in
this study suggest that bureaucrats do not identify good performance with interest group
priorities, but understand performance in different terms: as public service in terms of
responsiveness to the broader public, or in terms of professional practices to improve the quality
of service through enhanced customer service.

This raises another question: is the influence of the general public and media consistent with
a customer-service approach? Criticisms of the customer service approach echo the criticisms of
the interest-group perspective: as bureaucrats seek to satisfy a narrow group of citizens defined
as clients, the broader public good may be sacrificed. deLeon and Denhardt (2000) identify a
tension between a customer-service approach and the broader public interest of citizens on these
grounds. However, they also accept that the customer service approach can be beneficial if
undertaken within the constraints of law and available resources. The results of this study
suggest that bureaucrats do accept the critique of the interest group perspective, but do not
believe it applies to a customer service approach. The customer-service and public perspective
can be complementary sources of improved organizational performance.

Other avenues of political influence are less important than that of political support for an
agency, with the exception of gubernatorial power: as proposed, states with greater gubernatorial
power appear to perform better in the eyes of its employees. This result supports the managerial
tradition in public management, which has consistently justified enhanced executive power on
the grounds of improved performance. Opponents of this perspective have rarely disputed this
performance claim, preferring instead to argue that broader governance principles such as the separation of powers should not be sacrificed for narrow performance improvement (Rosenbloom 1983).

There is no evidence that the level of party competition impacts our measure effectiveness. There is similarly weak support for the claims of government ideology. In part this is because we control for resources in our model. If we removed resources from the model, more liberal states tend to be more strongly associated with lower levels of performance, but this relationship is still considerably above accepted significance levels.

In relation to internal management there are a number of strong and interesting predictors of performance. The results offer support to the broad hypothesis that management matters to performance, and provide a series of insights about how management matters. Perhaps the most valuable finding is the nature of organizational culture. Previous work emphasizes the importance of designing mission-oriented culture, but told us little about what types of organizational culture are likely to be mission-oriented.

We find evidence that culture does matter to performance. Organizations with developmental culture are likely to achieve significantly higher levels of effectiveness in the eyes of their employees. Given that we test an employee-defined measure of culture, we might have expected that employees would have favored the organizational culture that places greatest emphasis on developing human resources and employee participation: the group culture. The developmental culture, in contrast, focuses on the needs of the organization and the ability to change to meet new demands. The evidence therefore suggests an ability on the part of employees to distinguish between cultural types that are important for organizational effectiveness rather than individual employee needs. Does this mean that the developmental culture offers a description of how to
create a mission-based culture, at least for health and human services? The evidence presented here suggests so, as does Zammuto and Krakower’s (1991, 87) description of the developmental culture: “individuals are motivated by the ideological appeal of the task being undertaken” rather than through rules, affiliation or contracts. Organizations with developmental cultures tend to have more inventive leaders, and take the form of adhocracies, rather than the more traditional organizational forms of hierarchy, markets or clans.

A focus on results is also important to performance. Writers from a variety of perspectives have bemoaned the negative effect of multiple, conflicting and ambiguous goals on public performance, and the desirability of clear and simple goals. This study offers support for this view with results that are particularly interesting for two reasons. First, the strength of the findings: goal clarity had the strongest overall impact on performance in the model. Second, the results demonstrate the importance of goal clarity even within the same function. As Wilson (1989) notes, the ability to define outcome and outputs relates to function: it is easier in some public jobs than others to define and operationalize goals. However, evidence here suggests that even in the same functional area, organizations have varying degrees of success in communicating to employees the goal of the agency, and the employee’s role in fulfilling this goal.

Public officials have been told for years to clarify goals with a variety of reforms, including strategic planning, performance measurement and customer service training. Sometimes, these efforts do more to obfuscate than to clarify due to a bewildering numbers of goals and measures. In other cases, these efforts are undertaken out of compliance, with scant leadership support and therefore have little relevance to employees (Franklin, 2000). As discussed above, however, customer service training has a significant positive impact on performance, even controlling for
an existing organizational ability to clarify goals. Bureaucrats believe that an effort to raise client satisfaction improves organizational effectiveness.

The NPM and reinvention movement both argued for an increased focus on results, but also argued for increased managerial flexibility to improve performance: decision authority should be devolved to the lowest practical level to empower managers with first hand-knowledge of tasks and the process-expertise to make informed decisions. This viewpoint receives empirical support here. Organizations with more centralized patterns of decision-making are likely not to perform as well as organizations where managers believe they have adequate authority to enact changes.

There is also support for the importance of information technology and human resource capacity to performance. To make this case we employed two capacity measures for IT and human resource management systems: delay in accessing information and job satisfaction, respectively. We find that organizations that fail to provide an adequate flow of timely information to employees are likely to be classified as poor performers. The success of human resource systems in creating employee job satisfaction is also associated with higher performance in this study. The job-satisfaction findings should be weighed in the context of how we define the dependent variable, since it would be surprising that unhappy employees would assess their organizational favorably.

**Conclusion**

What does the model presented here tell us in the context of an era of government by performance management? The data offers support for the basic assumptions of performance management—that management matters to performance, and that it is reasonable to expect managers to undertake actions to improve performance. But the evidence also suggests that a
number of important environmental factors largely beyond the control of managers also influence performance, including support among elected officials, the influence of the public and the media, gubernatorial power and resources. Quite simply, managers do not control all the levers that shape performance, a fact that must be borne in mind when demanding accountability from the governance system. The model also provides empirical evidence about how management matters to performance, at least with respect to health and human services. Organizations with clear goals and flexibility will perform better; organizations that invest in creating effective IT and human resource management systems will perform better; organizations that succeed in creating a developmental organizational culture will perform better.

Future research should test these and other competing management variables in different functional contexts, using a variety of definitions to performance. The article employed a perceptual measure of effectiveness on the premise that such a measure was one broad and legitimate measure of performance, especially given the difficulty of coming up with an adequate single measure of organizational effectiveness. The burgeoning literature on organizational effectiveness provides us with a stable set of variables to be tested in different contexts, which cumulatively will provide evidence on how management matters in different situations. This paper has been one such effort, but clearly much work remains. One approach is to vary the dependent variable measure, to reflect not only different functions and contexts, but also to reflect different definitions of effectiveness. As Heinrich (2002) has pointed out, how we assess management systems depends a great deal on how we define performance. If we do indeed live in an era of government by performance management, this is a key lesson for scholars and practitioners.
Table 1: Descriptive Statistics of Variables

<table>
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<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
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<tr>
<td>Organizational Effectiveness</td>
<td>7.2292</td>
<td>1.4855</td>
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<tr>
<td>Elected official support of agency</td>
<td>13.0806</td>
<td>3.8012</td>
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<tr>
<td>Degree of client influence</td>
<td>2.5625</td>
<td>0.8305</td>
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<td>Degree of public/media influence</td>
<td>5.0812</td>
<td>1.5447</td>
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<td>Executive power</td>
<td>3.4910</td>
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<td>Party competition</td>
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<td>Political ideology</td>
<td>45.5065</td>
<td>26.7898</td>
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<td>Resources</td>
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<td>Rational culture</td>
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<td>Hierarchical culture</td>
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<td>Clarity of organizational goals</td>
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<td>2.0601</td>
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<tr>
<td>Customer service focus</td>
<td>2.8104</td>
<td>1.0025</td>
</tr>
<tr>
<td>Centralization of decision authority</td>
<td>6.6827</td>
<td>2.0859</td>
</tr>
<tr>
<td>Information technology red tape</td>
<td>2.9963</td>
<td>1.1552</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>13.1550</td>
<td>2.0989</td>
</tr>
</tbody>
</table>
Table 2: Results of Ordinary Least Squares Regression Explaining Organizational Effectiveness

<table>
<thead>
<tr>
<th>Explanatory variable and expected sign</th>
<th>Unstandardized coefficients</th>
<th>Std. error</th>
<th>Standardized coefficients</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political support of agency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elected official support of agency (+)***</td>
<td>0.0875</td>
<td>0.0199</td>
<td>0.2211</td>
<td>0.0000</td>
</tr>
<tr>
<td>Degree of client influence (+/-)</td>
<td>-0.1600</td>
<td>0.0927</td>
<td>-0.0866</td>
<td>0.0856</td>
</tr>
<tr>
<td>Degree of public/media influence (+)***</td>
<td>0.1833</td>
<td>0.0477</td>
<td>0.1912</td>
<td>0.0002</td>
</tr>
<tr>
<td><strong>Political institutions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive power (+)*</td>
<td>0.3106</td>
<td>0.1588</td>
<td>0.0919</td>
<td>0.0517</td>
</tr>
<tr>
<td><strong>Political conditions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Party competition (+)</td>
<td>0.1752</td>
<td>0.2271</td>
<td>0.0360</td>
<td>0.4411</td>
</tr>
<tr>
<td>Political ideology (+/-)</td>
<td>-0.0012</td>
<td>0.0026</td>
<td>-0.0209</td>
<td>0.6586</td>
</tr>
<tr>
<td>Resources (+)*</td>
<td>0.7480</td>
<td>0.4277</td>
<td>0.0812</td>
<td>0.0817</td>
</tr>
<tr>
<td><strong>Internal factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational culture</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rational (+/-)</td>
<td>0.0113</td>
<td>0.0811</td>
<td>0.0067</td>
<td>0.8890</td>
</tr>
<tr>
<td>Group (+/-)</td>
<td>-0.0026</td>
<td>0.0756</td>
<td>-0.0175</td>
<td>0.7331</td>
</tr>
<tr>
<td>Developmental (+/-)***</td>
<td>0.2744</td>
<td>0.0709</td>
<td>0.2111</td>
<td>0.0001</td>
</tr>
<tr>
<td>Hierarchical (+/-)</td>
<td>.06.570</td>
<td>0.0696</td>
<td>0.0482</td>
<td>0.3391</td>
</tr>
<tr>
<td><strong>Focus on results</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarity of organizational goals (+)***</td>
<td>0.1757</td>
<td>0.0366</td>
<td>0.2429</td>
<td>0.0000</td>
</tr>
<tr>
<td>Customer service focus (+)***</td>
<td>0.1703</td>
<td>0.0685</td>
<td>0.1143</td>
<td>0.0136</td>
</tr>
<tr>
<td>Centralization of decision authority (-)*</td>
<td>-0.0722</td>
<td>0.0416</td>
<td>0.1004</td>
<td>.0839</td>
</tr>
<tr>
<td>Information technology red tape (-)***</td>
<td>-0.1668</td>
<td>0.0626</td>
<td>-0.1291</td>
<td>0.0082</td>
</tr>
<tr>
<td>Human resource capacity (Job satisfaction)(+)**</td>
<td>0.1385</td>
<td>0.0352</td>
<td>0.1964</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

N=237; R=.758, R²=.574 Adjusted R²=.545; F Value = 19.650***

***statistically significant at .001, **Statistically significant at .01, *Statistically significant at .05,

Note that significance levels are one tailed tests if matching a predicted direction, two-tailed tests otherwise.
References


Appendix 1: Data and Methods

The data for this study were collected in Phase II of the National Administrative Studies Project (NASP-II). The theoretical population of interest for this study was comprised of managers engaged in information management activities, working in state-level primary health and human service agencies. Primary health and human service agencies were identified according to the definition used by American Public Human Services Association (APHSA, formerly APWA) and include agencies housing programs related to Medicaid, TANF, and child welfare. Information management was broadly defined to include a range of key managerial roles such as the top program administrator, managers of information system applications, managers in-charge of evaluation and research, and managers dealing with public information and communication.

The sampling frame was developed with the aid of the most widely used directory of human service agency managers, namely the APHSA directory (APHSA, 2001). Application of study criteria resulted in a sampling frame made of 570 managers from the fifty states and Washington, D.C. Given the small size of the sampling frame, a decision was made to administer the survey to the entire sampling frame (i.e. conduct a census).

The study protocol was reviewed and approved by the Institutional Review Board of Rutgers University. Every effort, within reason, was made to encourage managers in the sampling frame to complete the survey. However, with each contact respondents were advised about the voluntary nature of the study and informed that while the researchers greatly appreciated participation in the study, managers could choose not to participate in the study. No follow-up efforts were directed at managers indicating a wish not to participate in the study.

As with most survey research projects, minimizing non-response, both to the survey and to specific questionnaire items, was a primary goal in the survey administration. Dillman’s (2000) comprehensive tailored design method (TDM) approach to maximizing the response rate made up of the following elements was employed in the study:

- A questionnaire with well-designed content;
- Survey questionnaire formatted in accordance with latest advances in cognitive research;
- Multiple personalized contacts, each contact accompanied with a carefully crafted message to encourage the respondent to complete the survey questionnaire;
- Use of real stamps on return envelopes;
- Use of features such as pre-notice letter, fax message, phone call at key points in the survey administration; and
- Use of special delivery (combination of 2-day delivery by Airborne Express and Priority Mail service of US Postal Service)

The data collection phase of the study began in fall of 2002 and concluded in winter of 2003. First, respondents were sent a pre-notice letter informing them about the study and requesting their cooperation in completing a questionnaire to be mailed later. Approximately a week after the initial alert letter, the survey questionnaire was mailed to the respondents. The cover letter accompanying the survey questionnaire outlined the study objectives, indicated the voluntary nature of the study, requested participation and provided contact details of the project director for further informational needs and clarifications. About ten days later a combination thank you/reminder postcard was sent to all respondents, thanking those who had responded and encouraging those who had not to respond as soon as they possibly could. Nearly a month after the mailing of this postcard, a new cover letter and replacement survey were sent to
non-respondents. The cover letter emphasized the fact that it was important for everyone to respond (unless for some reason or other the respondent chose not to respond). In order to make sure that the respondents were aware of the second mailing, concomitantly with the mailing we faxed the cover letter that went with the second mailing to the non-respondents clearly indicating that the letter and a replacement survey were in the mail. The final step in survey administration took place about two months later when non-respondents were sent a new cover letter and a second replacement survey with a request to complete the survey. This final mailing pointed out that this was the last opportunity for the respondents to complete the survey questionnaire and used a combination of two-day delivery by an express carrier and United States Postal Service Priority Mail.

Based on information cumulated during this period, the size of the sampling frame was reduced from 570 to 518. It should be noted that APHSA directory is the best available source of information on the sampling frame. Despite the best efforts by APHSA directory to provide current and up-to-date information, the information in the directory at publication time is a year old. The survey was administered several months after the publication of the directory. This was reflected in the principal reason for deletion from the sampling frame -- managers having left the organization before survey administration efforts. Other reasons for deletion from the sampling frame were retirement and death. By the time survey administration concluded in winter of 2003, a total of 274 responses were received. Thus, the response rate for the study was 53%.

We test our models with ordinary least squares (OLS) regression, estimating the effects of each independent variable on organizational effectiveness while holding the other independent variables constant. To determine whether ordinary least square was the appropriate estimation technique, we examined our data for heteroscedasticity, multicollinearity and influential data. A histogram of the standardized residuals shows that they are normally distributed. A scatter plot illustrates that the errors are relatively constant (homoscedastic) and independent of one another. Given the number of variables, and that many of the variables measure aspects of the same overarching concepts multicollinearity is a clear potential problem. We examined the bivariate correlations and the square root of the variance inflation factor (VIF) to detect multicollinearity (Fox 1991, p.11). The highest correlations are between centralization and development culture (-.516)—no other correlation exceeded .5. None of the square roots of the VIF exceeded 1.35, with the highest being centralization of decision-making authority, followed by developmental culture. In earlier versions of the model we controlled for a number of additional external variables including demographic variables (correlation with the dependent variable is show in brackets): state per capita income (-.119), population size (-.0004), and nature of the client diversity by controlling for percentage of blacks (-.117) and Hispanics (.054) in the overall population. We also controlled for the legislative professionalism (.039). None of these variables proved significant, although predictably were highly correlated with one another. Out of concern for multicollinearity we therefore dropped these variables from the final model. The exclusion of these variables from the model does not move any of the remaining variables either under or above accepted significance levels in the regression.
## Appendix 2: A Model of Organizational Effectiveness: Variables, Expected Relationships and Measurement Details

<table>
<thead>
<tr>
<th>Variable and expected relationship</th>
<th>How the variable was measured and source of question</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable:</strong> Organizational effectiveness</td>
<td>On an overall basis rank the effectiveness of your agency in accomplishing its core mission (0-10, 0=not effective at all, 10=extremely effective).</td>
</tr>
<tr>
<td><strong>External</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Political support of agency</strong></td>
<td></td>
</tr>
<tr>
<td>Elected Officials’ support of the agency(+)</td>
<td>Based on Gianakis and Wang (2000) we use a summative index (Cronbach alpha = .91) based on responses to the following statements (5 = strongly agree, 1= strongly disagree). Most elected officials in our state trust the agency. Most elected officials are very critical of the agency (reversed). Most elected officials believe the agency is competent. Most elected officials believe that he agency is effective.</td>
</tr>
<tr>
<td>Degree of client influence (+/-)</td>
<td>Based on Waterman, Rouse and Wright (1998): How much influence do client groups exert over your agency (0= no influence, 4= great deal of influence).</td>
</tr>
<tr>
<td>Degree of public/media influence (+)</td>
<td>Based on Waterman, Rouse and Wright (1998). We use a summative index (Cronbach alpha = .80) based on responses to the following statements (0= no influence, 4= great deal of influence). How much influence does public opinion exert over your agency. How much influence does the media opinion exert over your agency.</td>
</tr>
<tr>
<td><strong>Political institutions</strong></td>
<td></td>
</tr>
<tr>
<td>Executive power (+)</td>
<td>The measure for gubernatorial power is a 1-5 scale constructed by Thad Beyle and based on a combination of budget powers, political control, appointive powers, veto powers, tenure potential, and degree to which Governors team is separately elected. The data is for 2001 and is available at: <a href="http://www.unc.edu/~beyle/gubnewpwr.html">http://www.unc.edu/~beyle/gubnewpwr.html</a>, accessed July 15, 2003.</td>
</tr>
<tr>
<td><strong>Political conditions</strong></td>
<td></td>
</tr>
<tr>
<td>Party competition (+)</td>
<td>To measure political competition we employ a formula for political competition suggested by Bretschneider and Gorr (1992), which takes into equal account the balance of party power in the executive and both parts of the legislative branch, using 2001 data from the 2002 Book of States. The formula for this measure is as follows: Political competition = H + S + G if (H + S + G) &lt; 1.5, =3 – (H + S + G) otherwise, where H = the fraction of house representatives who are Democratic, S are the fraction of senators who are democratic, and G = 1 if the Governor is a Democrat (and be zero otherwise).</td>
</tr>
<tr>
<td>Political ideology (+/-)</td>
<td>Berry, Rinquist, Fording and Hanson (1998) offer an updated measure of citizen and government ideology for 1999 using the roll-call voting scores of state legislatures, the party of the governor, and various assumptions regarding voters and state political elites. Increases in this measure indicate a more liberal citizenry, and a more liberal state legislative and executive branch.</td>
</tr>
<tr>
<td>Resources (+)</td>
<td>We employ a measure of organizational slack suggested by Berry (1994) which is the ratio of difference between state government revenue and spending: total state spending. This measure is updated using Census 2001 figures. As Berry did, we assume that state organizational slack will translate into relatively higher organizational resources.</td>
</tr>
<tr>
<td><strong>Internal</strong></td>
<td></td>
</tr>
<tr>
<td>Organizational culture</td>
<td>Culture questions are taken from Zammuto and Krakower (1991).</td>
</tr>
<tr>
<td>Rational (+/-)</td>
<td>The glue that holds my agency together is the emphasis on task and goal accomplishment. A production orientation is commonly shared (1= strongly disagree, 5= strongly agree).</td>
</tr>
<tr>
<td>Group (+/-)</td>
<td>My agency is a very personal place. It is an extended family. People seem to share a lot of themselves (1= strongly disagree, 5= strongly agree).</td>
</tr>
<tr>
<td>Developmental (+/-)</td>
<td>My agencies is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks (1= strongly disagree, 5= strongly agree).</td>
</tr>
</tbody>
</table>
Hierarchical (+/-) | My agency is a very formalized and structured place. Bureaucratic procedures generally govern what people do (1= strongly disagree, 5= strongly agree).
---|---
Focus on results | 
Clarity of organizational goals (+) | Summative index (Cronbach alpha = .81) based on three statements measures of goal clarity (1= strongly disagree, 4= strongly agree). The organization’s mission is clear to almost everyone who works here. It is easy to explain the goal of this organization to outsiders. The organization has clearly defined goals.
Customer service measurement (+) | Based on a question from Deil Wright’s State Administrators Project. Indicate the extent to which your agency has implemented training programs to improve client or customer service (0 = no changes considered, 4 = changes fully implemented).
Centralization of decision-making authority (-) | Summative index (Cronbach alpha = .78) based on responses to the following statements (Aiken & Hage 1968; Hall 1963) (1= strongly disagree, 4= strongly agree). There can be little action taken here until a supervisor approves a decision. In general, a person who wants to make his own decisions would be quickly discouraged in this agency. Even small matters have to be referred to someone higher up for a final answer.
Information technology capacity | Rules of procedures on preparation of information system reports ensure that managers receive timely information (1= strongly disagree, 5= strongly agree).
Human Resource Capacity | 
Job satisfaction (+) | We measure overall job satisfaction using questions from the Michigan Organizational Assessment Questionnaire (Cammann, Fichman, Jenkins and Klesh 1979; Seashore, Lawler, Mirvis and Cammann 1982; Cook, Hepworth, Wall and Warr 1981). Summative index (Cronbach alpha = .87) based on response to the following statements:(1= strongly disagree, 5= strongly agree). In general I like working here. In general, I don’t like my job (reversed) All in all, I am satisfied with my job.

Unless otherwise noted, data are from the National Administrative Studies Project survey.