CAPACITY, MANAGEMENT, AND PERFORMANCE
Exploring the Links

YILIN HOU
Rutgers, the State University of New Jersey–Newark

DONALD P. MOYNIHAN
Texas A&M University

PATRICIA WALLACE INGRAHAM
Syracuse University

Amid the focus of public management reforms on improving the performance of public organizations and their managers, there has been little empirical attention to the links between performance and management systems and activities; little attention has been paid to how and under what circumstances "management matters." This study reports data from the Government Performance Project (GPP), with information of all 50 states. The GPP model argues that fundamental management systems are not only amenable to comparison across states but can provide critical components of the capacity that is basic to longer term effectiveness and performance. This article considers the extent to which capacity facilitates performance in financial management, analyzing the factors that contribute to the maintenance of rainy day funds (RDFs). The authors argue that arriving at positive performance for such indicators requires not only administrative capacity but also rules that shape political behavior that will support performance.

Keywords: *capacity; management; performance; rainy day fund*

The announced intent of government management reforms generally falls into one of two categories: to improve performance or to improve accountability (Kettl & DiIulio, 1995). Improved accountability efforts have often translated into additional rules and regulations; in a more limited number of cases, they have included measures to clarify accountability and reporting relationships within government organizations or between members of the public service and elected/appointed officials (Boston, Martin, Pallot, & Walsh, 1996; Light, 1997). Reports of success have

---

AUTHORS' NOTE: *This is a revised version of a paper presented at the 2001 Annual Meeting of the American Political Science Association, San Francisco, August 30–September 2, 2001. The authors thank the editors and reviewers of* ARPA *for their comments and suggestions.*

Initial Submission: November 16, 2001
Accepted: November 19, 2002

AMERICAN REVIEW OF PUBLIC ADMINISTRATION, Vol. 33 No. 3, September 2003 295-315
DOI: 10.1177/0275074003251651

been mixed, at least partially because standards and expectations for accountability are in frequent flux and rarely reflect the consensus necessary for broad assessment of success or failure (Pollitt, 2000).

Efforts to improve performance have foundered on different shoals. Perhaps the most important is the difficulty of determining what improved performance would really be and which trade-offs might be acceptable to attain it. Improved efficiency and productivity are frequently stated goals, but in many cases linking improvements in either one to specific changes in government—or to attributes of government—is difficult (Pollitt, 2000). The questions "Has performance improved?" and "Why?" have rarely been answered to the satisfaction of key actors and stakeholders. Indeed, measurement of "performance-improving" changes within government, as well as measurement of changes in outputs and outcomes, have proven to be among the most nettlesome of reform issues (Hatry, 2000; Wholey, Hatry, & Newcomer, 1994).

Recently, there has been some emphasis on consideration of the conditions for improved performance, that is, on the middle of the performance equation (Ingraham, Joyce, & Donahue, in press; Lynn, Heinrich, & Hill, 2000). In this setting, a different performance question is posed—not "Has performance improved?" but "What is the likelihood that performance could improve?" and further, "To what set of conditions or actions can the improvement be attributed?"

In this analytical perspective, the internal systemic capacity of government organizations becomes one of several critical preconditions for performance. If that capacity is not present, high levels of performance are unlikely. As the current trend of results-based governance prompts administrators to raise performance by changing malleable management variables, the question "How does strengthening a public agency's management capacity and management systems lead to improved performance in terms of servicing its mission, delivering services, or generating appropriate policy outcomes" becomes ever more important.

This does not, of course, solve the measure specification and application issues. Measurement remains a problem. With the performance equation more fully specified, however, the potential for linking specific organizational characteristics with specific outputs or outcomes is greatly improved. Performance linkages become clearer. Given the theoretical development on the role of capacity, the time is ripe for empirical work that investigates the nature of these linkages.

In this article, we attempt to further define and measure capacity, examining it in terms of an aspect of a major public management system in the American states: financial management. We also analyze and clarify potential linkages between the capacity measures and specific performance indicators. In this analysis, we use the maintenance of rainy day funds (RDFs) as our dependent variable and a series of capacity variables (formal rules) that reflect rules that govern (restrict) the behavior of both administrative and political actors. We find that these rules contribute to stronger management capacity. Given the breadth of the theoretical question, our empirical work is a narrow-lens effort at establishing and characterizing the capacity-

performance link. However, whereas the variables of the model proposed may be of limited interest to many readers, the manner in which the theory is developed and modeled should inform future applications in other management areas. Given the nature of the performance goal, we define and measure capacity in terms of formal rules that restrain discretion and direct behavior of both political and administrative actors in a way expected to facilitate the achievement of the performance objective.

Modeling capacity risks becoming a subjective enterprise. Our efforts are aided by clear and widely accepted standards associated with financial management. Financial management systems consistently received the highest assessments in all of the governments analyzed by the Government Performance Project (GPP, described below) for each of the 4 years of analysis. These systems benefit from clear national standards for accountability and excellence,[1] from a series of legislative actions intended to improve their transparency and utility in decision making, and from their frequent use as an executive "driver," for guiding and supporting policy initiatives through public decision processes. As a result, if there is a management area in which strong capacity should logically lead to better performance, financial management systems must be a strong contender.

A CRITERIA-BASED ASSESSMENT OF MANAGEMENT

Much of the conceptual foundation for the analysis in this article draws on the work of the GPP, a multiyear assessment of management capacity at all levels of government in the United States.[2] The project proceeded from the fundamental assumption that public management systems are not only omnipresent in governments but play a critical role in creating the capacity of government to perform. The GPP identifies five major management systems in organizing administrative functions: financial management, capital management, human resources management, information technology, and managing for results (see Figure 1).[3] These generic management systems are expected to appear in virtually all large-scale administrations and act as enablers to policy implementation.

The GPP analysis of management capacity is based on criteria-based assessment. A criteria-based assessment means clearly and concisely defining the desirable qualities of a management system and judging the extent to which these qualities are in place in a particular government or organization. Although any effort to generate statements regarding desirable management practice may strike some as overly normative and open to disagreement, the GPP developed a set of criteria for each management system mentioned above based on areas of consensus in previous research, as well as advice from a broad panel of academics, elected officials, and administrators. The financial management criteria, which serve as the foundation of the measures utilized in this study, are included as the appendix. The empirical analysis of this article identifies and utilizes suitable quantitative indicators for both the capacity and performance implied by specific criteria.

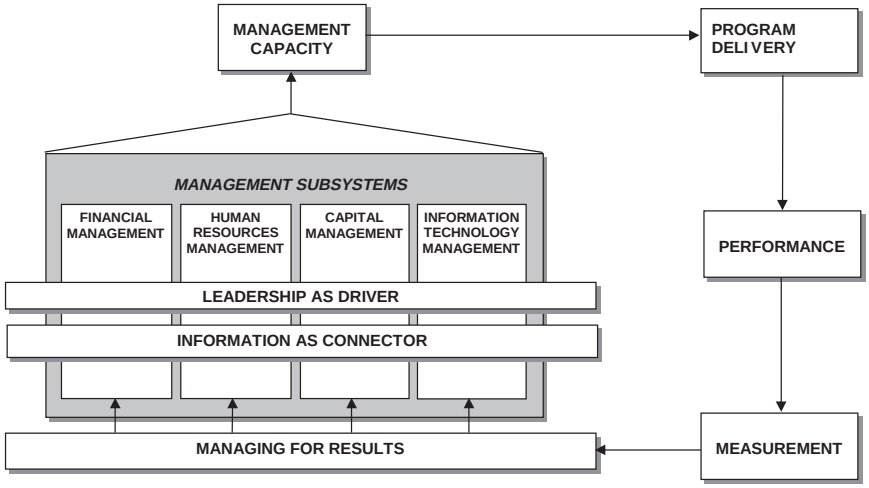

Figure 1: Government Performance Project Black Box Model of Public Management Capacity

Although criteria-based assessments seem a relatively novel research method, they offer a standardized way of tracking public management capacity and identifying indicators important for performance. Criteria-based approaches are well established in the private sector, and variations of private sector management analyses are in strong demand in the public sector (Ingraham & Moynihan, 2001). Examples of application of criteria-based approaches are variants of the TQM criteria (the Baldridge National Quality Program in the United States and European Foundation for Quality Management analyses in Europe) and the balanced scorecard. Ingraham and Moynihan's (2001) discussion of criteria-based methodology points out that such assessments have a number of common characteristics: Rather than a traditional public sector rules-based approach, they follow a business model approach to management, adapted to the public environment. Unlike simple performance assessments, they consider not just bottom-line results but also the management capacity that facilitates results. As with examples of criteria-based assessment mentioned above, the GPP holds in common the focus on capacity but departs in terms of its origin, developing a series of management criteria around public management research and advice from public sector academic and practitioner experts. The goal of the GPP is also different from other public sector criteria-based assessments, designed for cross-government comparison rather than single organization assessments.

DEFINING THE MIDDLE OF THE PERFORMANCE EQUATION—SYSTEMS AND CAPACITY

The basic assumption that management matters has a long tradition within the field of public administration, as public management theorists and practitioners alike sought policies and procedures that were aimed at improving public services while consistent with democratic control (e.g., DiIulio, 1998; Gulick, 1937; Perry & Kraemer, 1983; W. Wilson, 1887).

Evidence on the importance of public management is replete in case studies (e.g., Osborne & Gaebler, 1992; Obsorne & Plastrik, 1997). Such accounts prove persuasive to many practitioners, who accept the assumption that energized and liberated managers could redirect the performance of an organization. However, methodological flaws have been identified in much of this literature (Lynn, 1996; Overman & Boyd, 1994), particularly the assumption of transferability of management practices to entirely different contexts or levels of government and ex-post definitions of what constituted good management and performance.

Recent research in public management has instead used more formally elaborated theory to tackle the issue of how management matters to performance. As such formal theories are created and tested, an empirical body of research is developing. This focus on factors leading to performance—although not specifically in terms of management systems—marks research related to governance and performance, as well as in research exploring the relationships between alternative methods of service delivery and performance. Heinrich (2000), for example, explicitly identifies structure and coordination as important influences on successful delivery of services in job-training programs. Milward and Provan's (1998) analyses of networks in mental health programs similarly pinpoint coordination and identifiable sources of authority as significant to mental health service delivery in a hollow government setting. Both sets of research point to some coordinated, or coordinating, capacity as a significant influence on performance.[4] Other research, such as that of O'Toole and Meier (1999) has carefully explored the possibility of modeling the impact of administrative characteristics on organizational and program performance. Although there are common threads in all of this work, definitions of management, administration, and of course performance have varied. The concept of capacity, although implicit in some of the research, is not explicitly identified or defined.

In the GPP, we argued that management capacity—as defined by the strength of, and integration among, management systems—is an important component of the "black box," or the middle of the performance equation. Furthermore, management systems per se are amenable to analysis and to comparison. In addition, we argued that management capacity would show variation from government to government and, indeed, from system to system within governments. The results of two surveys of all 50 state governments demonstrated that to be true ("Grading the States,"

1999, 2001). We found, furthermore, that both elected officials and public managers recognized the potential value of management systems as a performance improvement tool and as a policy lever over which they had some substantial influence (Ingraham, 2001; Moynihan & Ingraham, 2001).

Administrative Capacity and Governance Capability: Bridging Perspectives

The burgeoning literature on factors critical to public performance offers a range of perspectives on what capacity means. We identify and distinguish two perspectives by dubbing one the *administrative capacity approach* and the other the *governance capability approach*. Our analysis here seeks to bridge perspectives by explaining maintenance of state RDFs by variables that reflect both the capacity and capability perspectives.

The administrative capacity approach, outlined above, considers the importance of policies, procedures, and resources governing administrative action and designed to improve government performance. The capacity approach tends to be discussed in the field of public management (Ingraham & Donahue, 2000; Lynn et al., 2000). However, as so much of public administration literature demonstrates, government performance rests not only on administrative competence but also on political choice, political structure, and other institutional influences (Donohue, Selden, & Ingraham, 2000; O'Toole & Meier, 1999). The challenge to the capacity approach, therefore, is to find a way of incorporating the influence of wider political/institutional structures.

Bridging the theoretical gap with the capability approach would meet this challenge (Hammond & Knott, 1999). The capability approach focuses on broader governing structures, incorporating consideration of the rules by which political actors credibly bind their own actions and the actions of others.[5] The capability perspective has been largely, although not exclusively, associated in the context of the rule-driven New Institutional Economics (NIE) perspective. Whereas the capability perspective emphasizes the importance of restricted political choice, the rule of law, and other institutional structures, it does little to map out the nature of desirable administrative behavior, apart from exhortations for noncorrupt and competent bureaucracies (Dhonte & Kapur, 1996; Evans & Rauch, 1999; March & Olsen, 1995).[6] In this article, we focus on performance outcomes for a specific administrative function, using the terminology of capacity to characterize positive government action to improve performance. However, the measures we adopt are institutional rules relevant to both administrative and political behavior. The adoption of the rules-based approach, targeted at least partly at the actions of elected officials, means that our analysis draws equally from both the capability and capacity approaches.

Conceptualizing Capacity

As the previous section illustrates, the breadth of terms *capacity* and *capability* can lead to vagueness. Other scholars may conceptualize and operationalize capacity in many ways. A diversity of conceptualizations are reconcilable with the growth of knowledge on different aspects of a term as long as scholars are explicit in conceptualizing and empirically testing this term based on analytic choices. Given the nature of RDF levels, we focus primarily on rules designed to restrict behavior perceived to be detrimental to the specific performance outcome we are interested in. In this scenario, the critical variables, discussed in the next section, constrain both political and administrative actors in making political-administrative decisions. The nature of the function prompts, therefore, variables that simultaneously reflect both the capability and the capacity approach. Although this prevents a neat division of capacity and capability elements, it does recognize the fact that capacity is created and exercised in an inherently political atmosphere and that public performance is a coproduction of political and administrative actors.

Such a focus on rules as behavioral restraints echoes the NIE approach and also reflects the realities of financial management systems, which are traditionally built on the idea of exerting control and limiting discretion of elected and administrative actors. This is particularly true of our unit of analysis here, the level of RDF balance. Restricting governmental discretion by requiring an adequate contribution to the fund and preventing inappropriate use of the fund will lead to higher RDF balances and a greater likelihood that the fund shall be used solely for the purpose for which it was designed. Given the relative clarity of the performance outcome, and the actions needed to meet this outcome, it is reasonable to define capacity in terms of clear rules that generate positive performance.

CREATING THE PERFORMANCE LINK

In this study, at the same time that we clarify and further specify capacity measurement as an intervening variable in the examination of performance, we explore the linkage between that capacity in financial management and specific policy performance, which, logically, should be linked to the capacity measure. Much of the analytical concern with performance has been focused at the end of the performance equation; that is, on achieving precise measurement of some level of service delivery or program performance. Output measures are most straightforward and are most commonly used in both academic analysis and practical application, such as activity-based costing (Hatry, 2000). Longer term and more complex outcome measures are more rare and, in most cases, are not part of an analytical model that specifies critical links between environmental factors (such as level of resources, political environment, level of external support), client characteristics, manage-

ment characteristics, and short and longer term objectives or outcomes (Sandfort, 2000). The daunting challenges these linkages present to analysis have been carefully chronicled (Kettl, 1998).

The empirical approach here follows a similar approach to Donohue et al. (2000). Because this is exploratory work, we proceed with the awareness that the model is not fully specified but has been structured as carefully as possible with existing data. Future work will further refine the analysis. Given the difficulty in attribution of outcomes to government practices, we seek to examine a widely accepted management practice in the field of governmental financial management, linking it to measures of its intended consequences. The measures we utilize for performance, therefore, might be considered intermediate measures of overall performance. From the financial management criteria (see the appendix) we examine the effect of capacity measures of selected subcriteria on performance indicators for Criteria 2, the maintenance of RDFs.

The second criterion of the GPP financial management evaluation—"Government has mechanisms that preserve stability and fiscal health"—is a necessary and crucial supplement to the first—"Government has a multiyear perspective on budgeting." In the past, economic stability had long been assumed to be the sole responsibility of the central/national government (Oates, 1972); more recent trends of economic thinking extend such responsibility to subnational governments (Gramlich, 1987). Empirical studies have proved the positive effects of countercyclical policies at the state level (Knight & Levinson, 1999; Sobel & Holcombe, 1996), and professional organizations such as Government Finance Officers Association (GFOA) and National Association of State Budget Officers (NASBO) have recognized the importance of such measures (GFOA, 1999); even credit-rating agencies have listed these among their lists of criteria (Larkin, 2000).

RDFs[7]

Chief among such mechanisms is the RDF. Its more formal name, "budget stabilization fund," more aptly reveals its purpose: a reserve that accumulates during boom years for use in lean years to stabilize the government budget by reducing the likelihood and extent of sudden expenditure cuts and/or tax increases. Given the widely accepted importance attributed to countercyclical devices, especially for governments subject to deficit restraints, a reasonable performance indicator related to one aspect of fiscal stability and health is the existence and maintenance of countercyclical devices (as advertised in a subcriterion: "Government uses countercyclical or contingency-planning devices effectively"). The effective use of such devices is predicated on actually having an appropriate and adequate fund in place. Therefore, the actual balance in state RDFs and other unreserved balances provide a suitable performance measure.

Rules governing the presence and proper management of such funds are an essential part of governmental capacity. The case of RDFs presents a good argument for the institutionalization of administrative capacities. RDFs were created

specifically to buffer against policy and budgetary "jolts"; the capacity to implement such buffering policies effectively and strongly suggests the need for both stable financial expertise and competent system management. The nature of RDFs creates their own set of incentives and rules governing use and misuse. The budget process witnesses a constant exercise in prioritizing infinite claims on finite resources. Administrative and elected officials jointly referee this exercise, and both sets of actors face incentives to meet as many of these claims as possible (Joyce & Tompkins, 2000; Lowi, 1969; Niskanen, 1971; Wildavsky, 1975). Given the existence of unreserved resources, there is a natural inclination to use such resources to meet present claims on the budget, even if they have been collected for another purpose.[8] Given the incentives associated with RDFs, the institutionalization of capacity takes the form of largely writing rules into state law that restrict discretion that would allow actors to direct funding for RDFs elsewhere, require an adequate balance, and restrict the use of RDFs.

An effect of reducing discretion is to neutralize potential political bargaining chips, so that neither pure executive discretion nor legislative pork barreling can take an upper hand. In relation to RDFs and discretion, three features are important. First is the source of funding for the RDF. RDFs dependent upon the legislative appropriation process, or from general fund surpluses allocated by the executive branch, will always be more vulnerable to reduced allocations as politicians will likely use discretion for more immediate priorities. On the other hand, if RDFs are funded by a predetermined formula (when economic growth reaches a certain point, some portion of the growth will go into the RDF) or from a special revenue that is not subject to legislative control or executive discretion, then it is likely that the RDF will have a steady inflow of resources.

The second set of rules relevant to RDF are those that govern the balance levels required and allowed by state law. Allowing a higher balance level should lead to higher actual balances. Failure to legislate a balance limit provides discretion in a way structured to result in a positive outcome in terms of higher RDF balances. Not imposing a limit on the balance level or capping the balance at a relatively high level, that is, between 7% and 12% of general fund expenditures, is therefore expected to have a positive association with RDF levels.

The third feature relevant to fund balances is the approval procedures for use of the fund. Allowing greater political discretion, whether by appropriation on recommendation by the chief executive officer or by pure executive discretion, increases the potential for RDFs to be used for purposes other than those the funds were designed for, as elected officials seek to fill revenue gaps, increase spending, or cut taxes. Instead, states may seek to reduce political discretion by creating a rule that specifies the purpose of the RDF and clear criteria for when it may or may not be used. A predetermined formula that automatically triggers the transfer of the RDF when an economy declines by a prespecified level is such a rule and is expected to lead to more appropriate use of the RDF.

Also relevant to RDF use are the purposes of the RDF as written into law. Some purposes can expand the traditional use of RDFs. Laws that state that the RDF can

be used for any purpose or specify that RDFs can be used for emergencies that threaten "the safety, health, and life" of citizens are broad enough to see RDFs used for almost any need. Specifying that RDFs may be used for unanticipated revenue shortages also increases the capacity for use, particularly in lean years. Use of RDFs for cash flow purposes at first seems likely to be negatively associated with RDF balance but in practice signifies that the RDF is used as a substitute to a working capital fund, requiring that the RDF be large enough to meet this need. In fact, a number of states have combined previously separate funds into one large single fund. Because funds that might otherwise be placed in a working capital fund end up in the RDF, we therefore expect that use for cash flows has a positive influence on RDF balance.

Rules that require greater fiscal discipline in designing a budget reduce the likelihood that the RDF will be dipped into to cover self-inflicted or preventable budgetary shortfalls. Two such rules relate to the process of revenue estimation. In states where the revenue-estimating process is centered on a consensus agreement between the executive and the legislative branches, the potential for one branch to generate estimates to undermine the position of the other is reduced, leading to more accurate estimates (Bretschneider, Gorr, Grizzle, and Klay, 1989). If such estimates are expected to be binding on the budget, it increases the incentive for a realistic resource allocation that mirrors the anticipated revenues for the coming year. Balanced budget requirements are also likely to exert a positive impact on fiscal discipline, in turn generating less incentive to draw from RDFs. Here we can examine four state balanced budget laws: (a) whether the governor must submit to legislature a balanced budget; (b) whether the state legislature must pass a balanced budget; (c) whether the governor must sign a balanced budget; and (d) whether the state can carry deficits over into the next fiscal year. The first three rules generate fiscal discipline in setting the budget for the coming year, finding balance between expected revenues and expenditures. Without such rules, governments may be more likely to create budgets that exhaust available resources, leading them to seek additional money from the RDF. The fourth rule simultaneously provides for flexibility and fiscal discipline at the conclusion of the budget cycle, allowing for the carryover of deficits to be resolved by future budgets. Without this rule, governments facing a deficit will be more tempted to raid the RDF to make up the difference between revenue and expenditure before the end of the budget cycle, in many cases just as an accounting game to meet the statutory balanced budget requirement.

To control for the nature of political influence, we include a variable that reflects the dominance of one party over the other. Dominance of one party over another reduces the oversight and threat of loss of power that a competitive opposition provides to the party in power and has been associated with negative financial management outcomes (Bretschneider et al., 1989). In addition, we also control for party politics by including which party controls the House as a variable.

Data and Methodology

All data are taken from two GPP state surveys (1998 and 2000),[9] the *Book of States* and state *Comprehensive Annual Financial Reports* (CAFR) in various years. We employ a standard ordinary least squares regression model to analyze the data, applying it to four variations on the dependent variable. For RDFs, this study follows a strict definition.[10] For historical average balance levels (Model 1), we take RDF balances in fiscal years from 1979 to 1999 and calculate the average for the number of years when the fund is in existence. The balance level is expressed as a percentage of each state's actual general fund expenditures in the same period.[11] Models 2 and 3 test the current year effects on the RDF balance levels. In these two models, we use the 1997 and 1999 annual data, respectively.

Model 4 tries an alternative way of measuring the dependent variable—coding RDF levels on a 0-10 scale based on the actual 1998 RDF balance levels of each state. The scale centers on the average RDF level of states after excluding the extreme outlier of Alaska.[12] This 49-state annual average is set as the middle of the scale (5); with every one percentage point increase or decrease of the balance level, the score rises or falls by 1 (see Table 1).[13]

Although the concept and practice of countercyclical fiscal devices have been widely accepted among governments at different levels and the effects of the RDF on stabilizing government expenditure been proved effective (Hou, 2002; Sobel & Holcombe, 1996), using the RDF as a capacity measure is yet an exploratory attempt at tracing the link between governance capacity, governmental management, and actual performance. This article is set on this path. As narrow and technical an area as the RDF is in governmental finance, we believe it is worthwhile and especially timely under the current recession, to expose the links between an emerging capacity-building device and government capacity, although it should be clear to researchers and practitioners that results of this phenomenon may not bear as much as we expect to other areas.

Results

We ran four models for the balance level of RDFs (see Table 2). The first model measures the dependent variable as a historical average balance level from 1979 to 1999; the second and third use 1997 and 1999 RDF balance level. All three are RDF balance as percentages of actual general fund expenditures. The fourth model measures the dependent variable on a 0-10 scale as the dependent variable. All models have relatively high explanatory power, with adjusted *R*-squares ranging between .54 and .86 and significant *F* values.

In terms of RDF sources, we find that funding by special revenue and formula has a positive effect on RDF balance level, but only special revenue is significant in one model. Funding by general fund surpluses and appropriation has negative relationships in three of the four models, significant in two cases. In terms of the

TABLE 1: Descriptive Statistics for Rainy Day Fund (RDF) Models

Variable and Description	n	M	SD
Average balance level of RDF as percentage of actual general fund expenditure, 1979-1999	39	5.16	12.91
RDF balance as percentage of actual general fund expenditure, 1997	50	.057	.184
RDF balance as percentage of actual general fund expenditure, 1999	50	.059	.160
RDF balance as percentage of actual general fund expenditure, 1998, coded on 0-10 scale	50	3.640	2.968
Unreserved undesignated general fund balance as percentage of actual general fund expenditure 1997	50	.034	.140
Unreserved undesignated general fund balance as percentage of actual general fund expenditure 1999	50	.025	.228
General fund is required of a year-end balance, dummy	50	.080	.274
Source of RDF	50		
Funding by formula, dummy	50	.080	.274
Funding from general fund surplus, dummy	50	.560	.501
Funding by appropriation, dummy	50	.280	.454
Funding from special revenue, dummy	50	.040	.198
Maximum balance allowable	50		
Balance capped at 2%-3.9%, dummy	50	.080	.274
Balance capped at 4%-6.9%, dummy	50	.440	.501
Balance capped at 7%-12%, dummy	50	.200	.404
No limit to balance level, dummy	50	.060	.240
Minimum requirement of balance, dummy	50	.120	.328
Use procedure			
Use by appropriation, dummy	50	.520	.505
Use by executive discretion, dummy	50	.200	.404
Use by predetermined formula, dummy	50	.040	.198
Purpose of fund use			
Use for revenue shortage, dummy	39	.052	.129
Use for cash flow, dummy	39	.103	.307
Use for emergencies, dummy	39	.718	.456
Use for any purpose, dummy	39	.359	.486
Primary authority for revenue estimation			
Executive-legislative consensus, dummy	50	.380	.490
Balanced budget requirements			
Governor must submit a balanced budget, dummy	50	.860	.351
Legislature must pass a balanced budget, dummy	50	.780	.418
Governor must sign a balanced budget, dummy	50	.580	.499
May carry over deficits, dummy	50	.220	.418
Party politics			
Democrats are majority in both houses, 1997, dummy	50	.400	.494
Domination of House by one party, 1997	50	1.948	1.161
Political confrontation between govornor and legislature, 1997, dummy	50	.500	.505

TABLE 2: Models of Rainy Day Fund (RDF) Balance Levels

	Dependent Variable			
Independent Variable	*1. Historical Average as Percentage of General Fund Expenditure*	*2. Fiscal Year 1997 Balance as Percentage of General Fund Expenditure*	*3. Fiscal Year 1999 Balance as Percentage of General Fund Expenditure*	*4. Fiscal Year 1998 Score, 0-10 Scale*
Unreserved undesignated general fund balance		***–.629 (0.152)	***–.566 (0.062)	
General fund is required of a year-end balance		–.016 (0.063)	–.012 (0.037)	
Source of RDF				
Funding from special revenue	.036 (0.075)	**.197 (0.100)	.034 (0.061)	.951 (2.132)
Funding by formula	–.067 (0.084)	–.080 (0.088)	–.012 (0.052)	2.088 (2.016)
Funding by appropriation	***–.135 (0.042)	*–.086 (0.048)	–.020 (0.029)	1.483 (1.119)
Funding from general fund surplus	***–.155 (0.051)	**–.123 (0.057)	–.034 (0.034)	.517 (1.232)
Maximum balance allowable				
Balance capped at 2%-3.9%	.135 (0.113)	.077 (0.119)	.012 (0.068)	.672 (2.418)
Balance capped at 4%-6.9%	.076 (0.100)	.135 (0.098)	.049 (0.057)	2.399 (1.905)
Balance capped at 7%-12%	.086 (0.105)	.104 (0.111)	.036 (0.064)	3.168 (2.215)
No limit to balance level	***.333 (0.120)	**.322 (0.140)	.115 (0.084)	*4.832 (2.564)
Minimum requirement of balance	–.037 (0.045)	–.012 (0.048)	–.014 (0.028)	–.879 (0.987)
Use procedure				
Use by appropriation	–.040 (0.064)	.059 (0.069)	.052 (0.039)	2.039 (1.362)
Use by executive discretion	–.028 (0.060)	.055 (0.070)	.052 (0.040)	1.634 (1.354)
Use by predetermined formula	–.013 (0.128)	.125 (0.142)	.109 (0.082)	*4.747 (2.841)
Purpose of use				
Use for revenue shortage	–.038 (0.043)			
Use for cash flow	.047 (0.044)			
Use for emergencies	**–.084 (0.039)			
Use for any purpose	*.099 (0.058)			
Primary authority for revenue estimation				
Executive-legislative consensus				.217 (0.718)
Balanced budget requirements				
Governor must submit a balanced budget				**2.632 (1.254)
Legislature must pass a balanced budget				*1.581 (0.927)
Governor must sign a balanced budget				–.375 (0.710)
May carry over deficits				.744 (0.781)

(continued)

TABLE 2 (continued)

	Dependent Variable			
Independent Variables	*1. Historical Average as Percentage of General Fund Expenditure*	*2. Fiscal Year 1997 Balance as Percentage of General Fund Expenditure*	*3. Fiscal Year 1999 Balance as Percentage of General Fund Expenditure*	*4. Fiscal Year 1998 Score, 0-10 Scale*
Party Politics				
Democrats are majority in both houses (t-1)				.220 (0.806)
Political confrontation between governor and legislature (t-1)				.405 (0.752)
Domination of the House by one party (t-1)				.140 (0.314)
F value	3.890	8.930	23.010	4.340
R^2	.739	.781	.902	.750
Adjusted R^2	.549	.693	.862	.577
Sample size	38	49	49	49

NOTE: In all four models, Alaska is excluded because it is an extreme outlier. Standard errors appear in parentheses. t-1 = lag 1 year.
*$p < .10$. **$p < .05$. ***$p < .01$.

balances allowed, not limiting the maximum balance has a positive and significant effect on the RDF balance in three of the four cases. In states where there is not an unlimited balance rule, allowing a high balance consistently has a positive and, in one model, significant effect on balances.

For decisions on using the fund, use by predetermined formula tends to increase the level of RDF balance, suggesting the predetermined formula will lead to less frequent uses of the RDF. This relationship is significant in two cases. Unexpectedly, use by executive discretion and appropriations are positively associated with RDF balance levels in three of four models, with higher significance associated with appropriations. It may be that the act of actually appropriating RDF funds engenders enough transparency and debate to discourage legislators from appropriating from the RDF. Use of the fund for emergencies generally decreases the balance level, as expected, but the positive sign for "use for any purpose" is unexpected. The other positive relationship, as predicted, is the use for cash flow.

Requirements designed to encourage fiscal discipline have an overall positive impact on RDF balance. Rules that require the governor to submit and legislators to pass a balanced budget are positively and significantly related to the RDF balance level. The process of seeking consensus between the legislative and executive branch is positively but not significantly associated with the RDF level.

To provide a complete model for all 50 states in Models 2 and 3, we include as a control variable each state's level of unreserved undesignated balance of the general fund (which some states use as a quasi-countercyclical device; see Hou, 2001)

and whether the state has legally required general fund year-end balance. In Models 2 and 3, the general fund balance presents negative signs at very significant levels, meaning those states that do not have RDFs do rely to some extent on the general fund balance. The year-end balance carries a negative sign, as expected, although not significant.

Discussion: Limitations and Observations on the Application of the Capacity Approach to Other Settings

By identifying relatively specific, as opposed to broad, capacity and performance indicators, we consciously make a number of trade-offs and note the ways in which the concept of capacity becomes adjusted. Future researchers seeking to develop a capacity-performance model for other areas will also have to wrestle with these trade-offs. First, the concept of integration of multiple management systems falls out of the equation as we focus on discrete outcomes within a management system. The micro-level view causes us to consider capacity in terms of specific rules designed to produce or restrict behavior relevant to RDF levels, rather than effect the overall management on an outcome (Figure 1). We ask first whether governments have administrative rules in place designed to improve specific aspects of performance and, second, whether this actually makes a difference to such performance. This seeks clear attribution between cause and effect, attempting to make linear, theoretically straightforward, and empirically testable links between capacity and intended results. As more of such analyses are completed in different management areas, the case for the link between capacity and performance is strengthened. However, this means that our empirical model is not a complete test of the GPP model for two main reasons: The first is that we adopt an intermediate measure of performance from within a management system, rather than engage in a search for an overall measure of state government performance. Second, the linear model we present might be suited for modeling RDF performance, but it does not reflect the potential interactions between different management systems, leadership, and information.

Our theoretical model and findings cast formal rules as largely contributing to capacity when they restrict the discretion of actors around clearly established desirable behavior and prevent undesirable behavior. This treatment of rules-driven behavior closely matches the world of financial management, with its well-established management practices and the clear dependent variable of maintenance of RDFs. Under such circumstances, it is relatively easy to identify rules that limit discretion while improving performance. It is important to note that the findings are at odds with the contemporary management philosophy that emphasizes increased discretion (e.g., Osborne & Gaebler, 1992). We recognize that in other instances, the nature of the unit of analysis might be such that performance might be enhanced by less restrictive rules that allow administrative/political discretion. For example, performance outcomes associated with different types of management functions may logically call for a different conceptualization of rules and capacity; for

instance, craftlike functions will generally require a definition of capacity that recognizes the importance of discretion (J. Q. Wilson, 1989). Even within financial management, there are a number of areas where more discretion in a controlled environment is conducive to higher performance, such as procurement. Therefore, we suggest that research on the impact of rules on discretion and the subsequent consequences for capacity and performance take a contingency approach. Whereas it is beyond the scope of this article to offer an exhaustive inquiry on this subject, prominent factors worth considering include function, the performance desired, the actors involved, the nature of the rule itself, the behavior it seeks to promote and limit, whether rules are observed, and the effect of informal rules.

We offer some additional caveats to our findings. Our analyses largely emphasize preventing negative behavior from taking place (which is typical of the financial management systems that focus on control), rather than the positive contributions that political and administrative leadership can make to capacity and, in turn, to governmental performance. Although such positive contributions are difficult to measure and include in formal models, the experience of the GPP provided several examples that confirmed the importance of supportive political leadership ("Grading the States," 1999, 2001). Another limitation is that our analysis is limited by our inability to test this model in a time of economic downturn, reduced tax revenues, and likely greater demand for the use of RDFs. The bulk of the analysis occurs in a 3-year period in which economic conditions were strong and most states were dealing with healthy revenue flows. That changed abruptly by 2001, and that change will be incorporated into future analyses.

CONCLUSION

Although we were able to establish the presence of fairly strong links between the measures we called capacity measures and the maintenance of RDFs, problems with endogeneity did not permit the separate analysis of capacity's two primary components: management expertise and bounded political discretion. Rather, we were able to demonstrate early links between the combination of expertise and political predictability/constraints and the desired outcome: predictable RDF balances.

It must be noted, however, that the level of constraint established by RDFs is unusual and, in comparison to many public efforts to constrain behavior, remarkably benign, that is, not punitive. Rather clear parameters for action are established, clear responsibilities are set for both sets of major actors, and—aside from the presence of statutory language—overhead controls are not a critical part of the environment of constraint. In other words, both the administrative expertise and the political decision making are allowed to operate according to their "normal" procedures and behavior but within limits.

Finally, we would emphasize once again that this is exploratory work that must be expanded and clarified. Nonetheless, another potential path from capacity to performance has been established and shows promise for further work. Financial management and RDFs are both examples of unusual clarity in public management, and the links we began to explore here may not be so readily available in other management systems and with other outcome measures. Nonetheless, the analysis has contributed to a better understanding of the utilization of administrative capacity and the environments in which it can be most effectively employed. Furthermore, the combination of administrative talent with political restraint appears to be a useful influence on achieving public outcomes that are perceived to be desirable. In Wildavsky's (1975) terms, "speaking truth to power" appears to be more effective when power's club is whittled down.

APPENDIX
Government Performance Project
Financial Management Evaluation Criteria

1. Government has a multiyear perspective on budgeting.
   - Government produces meaningful current revenue and expenditure estimates.
   - Government produces meaningful future revenue and expenditure forecasts.
   - Government can gauge the future fiscal impact of financial decisions.

2. Government has mechanisms that preserve stability and fiscal health.
   - Government's budget reflects a structural balance between ongoing revenues and expenditures.
   - Government uses countercyclical or contingency planning devices effectively.
   - Government appropriately manages long-term liabilities, including pension funds.
   - Government appropriately uses and manages debt.
   - Government's investment and cash management practices appropriately balance return and solvency.

3. Sufficient financial information is available to policy makers, managers, and citizens.
   - Government produces accurate, reliable, and thorough financial reports.
   - Useful financial data are available to government managers.
   - Government communicates budgetary and financial data to citizens.
   - Government produces financial reports in a timely manner.
   - Government is able to gauge the cost of delivering programs or services.
   - Government budget is adopted on time.

4. Government has appropriate control over financial operations.
   - Government exercises sufficient control over expenditures.
   - Government permits sufficient managerial flexibility.
   - Government effectively manages procurement, including contracts for delivery of goods and services.

NOTES

1. Standards are articulated through such professional organizations as the Governmental Accounting Standards Board (GASB) and recognized by excellent financial reporting awards from the Government Financial Officers Association.

2. For more information on the Government Performance Project (GPP), please visit its website at http://www.maxwell.syr.edu/gpp/.

3. Ingraham and Donahue (2000) explore the theoretical basis and implications of Figure 1 in greater detail. It is worth noting that Figure 1 highlights the importance of leadership and information in enabling the link between capacity and performance to occur. Whereas traditional public management has been criticized for an undue focus on inputs, performance information identifies the intended and actual performance of government and establishes the basis against which existing capacity arrangements can be judged and usefully reformed. Leadership, although extremely difficult to formally model, clearly plays an important role in relation to capacity. Drawing from GPP findings, Ingraham, Sowa, and Moynihan (2002) identify the relevant actions of leader with regard to capacity: choosing the design or reform of a management system, promoting the choices made to generate acceptance with relevant constituencies, institutionalizing the new system through adjustment of formal rules and organizational culture, and visibly using the management system to signify its importance and de facto status. The authors also note that leadership, although frequently associated with executive branch elected officials, is exerted wherever management authority exists and must include central agency and line agency officials to understand how management capacity is actually exerted (see also Ingraham, 2001).

4. It should also be noted, however, that both public management and network research also demonstrate the negative impact of too much coordination on institutional and program performance.

5. The World Bank (1997) refers to state capability as

> the ability of the state to undertake collective actions at least cost to society. This notion of capability encompasses the administrative or technical capacity of state officials and of supporting systems and processes, but is much broader than that. It also includes the deeper institutional mechanisms that give politicians and civil servants the flexibility, rules and restraints to enable them to act in the collective interest. (p. 77)

6. Arguably, this has much to do with the development focus of the bulk of such New Institutional Economics (NIE) work where performance outcomes are related to a basic functioning market economy and development (Campos & Nugent, 1999; Evans & Rauch, 1999).

7. For a comprehensive treatment of this fund and its effects on state expenditures, see Hou (2002). According to Hou's study, from 1946 (when the first state adopted the rainy day fund [RDF]) to 1999, 39 states had established real RDFs under a strict definition of the fund. Under a broad definition as used by some scholars and the NASBO (National Association of State Budget Officers), almost all states had some kind of the fund. These funds were set up in different years. In this article, we test the effects of both definitions. Model 1 is on the strict definition using the average annual balance level (sum of annual balance divided by the number of years the fund was in existence) to test the historical effects. Models 2 and 3 are on the broad definition using only the 1997 and 1999 data (because these two were the years of the two rounds of the GPP state surveys) to test the current effects. Then obtaining data from the states for the year 1998, we rated the states on a 0-10 scale based on their RDF balance level and used the rating as the dependent variable. In all four models, Alaska is excluded because it is an extreme outlier; thus, the sample size is 38 in Model 1 and 49 in the three other models.

8. A case in point at the federal level is the use of social security surpluses as part of general fund expenditure or to classify predictable expenditures as "emergency" expenditures and therefore circumnavigate spending caps (Patashnik, 1999; Schick, 1993).

9. The two rounds of GPP state surveys were conducted in 1998 and 2000, respectively; the RDF data obtained were for 1997 and 1999. Historical RDF data were taken from a separate study conducted by Yilin Hou (2002).

10. For detailed issues regarding the definition, development, and balance levels of state RDFs, see Hou (2001).

11. The balance level can be quite different if we take general fund revenue as the reference. For details on this, see Hou (2001).

12. Because it is very different from other states in the nature and level of the fund balance, inclusion of it would lead to distorted results.

13. The 49-state average level for a score of 5 is from 4.49% to 5.489%. Zero balance leads to a score of 0 and a balance over 9.49% gets a score of 10.

REFERENCES

Boston, J., Martin, J., Pallot, J., & Walsh, P. (1996). *Public management: The New Zealand model*. Auckland, New Zealand: Oxford University Press.

Bretschneider, S. I., Gorr, W. L., Grizzle, G., & Klay, E. (1989). Political and organizational influences on the accuracy of forecasting state government revenues. *International Journal of Forecasting*, (5), 307-319.

Campos, N. F., & Nugent, J. B. (1999). Development performance and the institutions of governance: Evidence from East Asia and Latin America. *World Development, 27*(3), 439-452.

Dhonte, P., & Kapur, I. (1996). Towards a market economy: Structures of governance (IMF Working Paper). Washington, DC: International Monetary Fund.

DiIulio, J. (1998). Recovering the public management variable: Lessons from schools, prisons and armies. *International Journal of Public Administration, 21*(6-8), 1147-1167.

Donahue, A. K., Selden, S. C., & Ingraham, P. W. (2000). Measuring government management capacity: A comparative analysis of city human resources management systems. *Journal of Public Administration and Research Theory, 10*(2), 381-412.

Evans, P., & Rauch, J. E. (1999). Bureaucracy and growth: A cross-national analysis of the effects of "Weberian" state structures on economic growth. *American Sociological Review, 64*(5), 748-766.

Government Finance Officers Association. (1999). Develop policy on stabilization funds. *Recommended Budget Practices*.

Grading the states: A 50-state report card on government performance [Special issue]. (1999, February). *Governing*, pp. 2-3.

Grading the states 2001: A report card on government performance. (2001, February). *Governing*, pp. 21-23.

Gramlich, E. M. (1987). Subnational fiscal policy. In J. M. Quigley (Ed.), *Perspectives on local public finance and public policy* (Vol. 3, pp. 3-27). Greenwich, CT: JAI.

Gulick, L. (1997). Notes on the theory of organization. In J. M Shafritz & A. C. Hyde (Eds.), *Classics of public administration*. New York: Harcourt Brace. (Original work published 1937)

Hammond, T. H., & Knott, J. H. (1999). Political institutions, public management, and policy choice. *Journal of Public Administration Research and Theory, 9*(1), 33-85.

Hatry, H. (2000). *Measuring performance: Getting results*. Washington DC: Urban Institute.

Heinrich, C. J. (2000, September). *Performance management with imperfect information: Implications for organizational effectiveness*. Paper presented at APPAM Conference, Washington D.C.

Hou, Y. (2001). *A first study of the balances of state budget stabilization funds and general funds 1979-1999*. Paper presented at 2001 Annual Conference of the Western Social Sciences Association. (Also available at the Alan K. Campbell Institute's Web site at www.maxwell.syr.edu/campbell)

Hou, Y. (2002). *Subnational counter-cyclical fiscal policies: Testing the effects of budget stabilization funds and general fund surpluses on state expenditures*. Unpublished doctoral dissertation, Maxwell School of Syracuse University.

Ingraham, P. W. (2001). Linking leadership to performance in public organizations. Unpublished manuscript, Maxwell School of Syracuse University.

Ingraham, P. W., & Donahue, A. K. (2000). Dissecting the black box revisited: Characterizing government management capacity. In C. J. Heinrich & L. E. Lynn Jr. (Eds), *Government and performance: New perspectives*. Washington DC: Georgetown University Press.

Ingraham, P. W., Joyce, P., & Donahue, A. K. (in press). *Putting management in the performance equation*. Baltimore: John Hopkins University Press.

Ingraham, P. W., & Moynihan, D. P. (2001, April). *Comparing management systems and capacity: The benefits of a criteria-based approach*. Paper prepared for delivery at the fifth annual conference of IRSPM, Barcelona, Spain.

Ingraham, P. W., Sowa, J. E., & Moynihan, D. P. (2002, February). *Public sector integrative leadership: Linking leadership to performance in public organizations*. Paper presented at the Research Workshop on the Empirical Study of Governance, Texas A&M University, College Station, Texas.

Joyce, P., & Tompkins, S. S. (2000, May). *Using performance information for budgeting: Clarifying the framework and investigating recent state experience*. Paper presented at the 2000 Symposium of the Center for Accountability and Performance of the American Society for Public Administration, George Washington University, Washington, D.C.

Kettl, D. (1998). *Assessing the national performance review: A fifth year report card*. Washington, DC: Brookings Institution.

Kettl, D., & DiIulio, J. (1995). *Inside the reinvention machine: Appraising governmental reform*. Washington, DC: Brookings Institution.

Knight, B., & Levinson, A. (1999). Rainy day funds and state government savings. *National Tax Journal*, *52*(3), 459-472.

Larkin, R. P. (2000, May 4). Impact of management practices on municipal credit. *Public Finance.* Retrieved from www.fitchibca.com

Light, P. (1997). *The tides of reform: Making government work, 1945-1995*. New Haven, CT: Yale University Press.

Lowi, T. J. (1969). *The end of liberalism: The second republic of the United States*. New York: Norton.

Lynn, L. (1996). *Public management as art, science, and profession*. Chatham, NJ: Chatham House.

Lynn, L. E., Heinrich, C. J., & Hill, C. J. (2000). Studying government and public management: Challenges and prospects. *Journal of Public Administration and Research Theory*, *10*(2), 233-262.

March, J. G., & Olsen, J. P. (1995). *Democratic governance*. New York: Free Press.

Milward, H. B., & Provan, K. G. (1998). Principals for controlling agents: The political economy of network structure. *Journal of Public Administration Research and Theory*, *8*(1), 203-221.

Moynihan, D. P., & Ingraham, P. W. (2001). *Look for the silver lining: When performance-based accountability systems work*. Unpublished manuscript, Maxwell School of Syracuse University.

Niskanen, W. A., Jr. (1971). *Bureaucracy and representative government*. Chicago, IL: Aldine.

Oates, W. (1972). *Fiscal federalism*. New York: Harcourt Brace Jovanovich.

Osborne, D., & Gaebler, T. (1992). *Reinventing government: How the entrepreneurial spirit is transforming the public sector.* Reading, MA: Addison-Wesley.

Osborne, D., & Plastrik, P. (1997). *Banishing bureaucracy: The five strategies for reinventing government*. Reading, MA: Addison-Wesley.

O'Toole, L. J., & Meier, K. J. (1999). Modeling the impact of public management: Implications of structural context. *Journal of Public Administration Research and Theory*, *9*(4), 505-526.

Overman, E. S., & Boyd, K. J. (1994). Best practice research and postbureaucratic reform. *Journal of Public Administration Theory*, *4*(1), 67-83.

Patashnik, E. M. (1999). Ideas, inheritance and the dynamics of budgetary change. *Governance: An International Journal of Policy and Administration*, *12*(2), 147-174.

Perry, J. L., & Kraemer, K. L. (1983). *Public management: Public and private perspectives*. Palo Alto, CA: Mayfield.

Pollitt, C. (2000). How do we know how good public services are? In B. G. Peters & D. Savoie (Eds.), *Governance in the twenty-first century: Revitalizing the public service*. Ottawa: CCMD.

Sandfort, J. R. (2000). Examining the effect of welfare to work structures and services on a desired policy outcome. In C. J. Heinrich & L. E. Lynn Jr. (Eds.), *Government and performance: New perspectives*. Washington, DC: Georgetown University Press.

Schick, A. (1993). Government versus budget deficits. In R. K. Weaver & B. A. Rockman (Eds.), *Do institutions matter? Government capabilities in the United States and abroad*. Washington, DC: Brookings Institution.

Sobel, R. S., & Holcombe, R. G. (1996). The impact of state rainy day funds in easing state fiscal crises during the 1990-1991 recession. *Public Budgeting and Finance*, (3), 28-48.

Wholey, J., Hatry, H., & Newcomer, K. (Eds.). (1994). *Handbook of practical program evaluation*. San Francisco: Jossey-Bass.

Wildavsky, A. (1975). *Budgeting: A comparative theory of budgetary processes*. Boston: Little, Brown.

Wilson, J. Q. (1989). *Bureaucracy: What government agencies do and why they do it*. New York: Basic Books.

Wilson, W. (1887). The study of administration. *Political Science Quarterly, 56*(4), 481-506.

Wolkoff, M. (1987). An evaluation of municipal rainy day funds. *Public Budgeting & Finance*, (2), 52-63.

World Bank. (1997). *The state in a changing world*. Washington, DC: Author.

Yilin Hou is an assistant professor at the Department of Public Administration of Rutgers, the State University of New Jersey–Newark. From 2001 to 2002, he served as faculty specialist in financial management on the Government Performance Project at the Alan K. Campbell Institute of Public Affairs, Maxwell School of Syracuse University. His research interests include fiscal policy, budgeting, and strategic management.

Donald P. Moynihan is an assistant professor at the George Bush School of Government and Public Service at Texas A&M University. He formerly served as a research associate on the Government Performance Project at the Alan K. Campbell Public Affairs Institute, Maxwell School of Syracuse University. His areas of research interest include managing for results, public management reform, and comparative administration.

Patricia Wallace Ingraham is Distinguished Professor of Public Administration and Political Science at the Maxwell School of Syracuse University. She is the author or editor of a number of books and articles related to public management and reform. She received the Herbert Simon Award for Career Contribution to Public Administration and the Career Award from ASPA for Public Administration for contributions to the study of human resource management.